Tuesday, March 19, 2013 **[T613]**
POSTER SESSION: MERCURY
6:00 p.m. Town Center Exhibit Area

Mazarico E. M. Goossens S. J. Lemoine F. G. Smith D. E. Zuber M. T. et al. ***POSTER LOCATION #163***
The Gravity Field of Mercury Derived from Two Years of MESSENGER Data **[#2429]**
We present an updated gravity field of Mercury based on nearly two years of MESSENGER tracking data.

Neumann G. A. Cavanaugh J. F. Sun X. Mazarico E. Smith D. E. et al. ***POSTER LOCATION #164***
The Topography of Mercury Derived from two Years of MESSENGER Data **[#2842]**
The Mercury Laser Altimeter has confirmed that near-polar impact craters contain both water ice and unusually dark material postulated to include organic compounds.

Levy C. L. Blewett D. T. Denevi B. W. Ernst C. M. Chabot N. L. et al. ***POSTER LOCATION #165***
Phase-Ratio Images of Mercury Surface Features: Assessing Effects of Sub-Resolution Texture **[#1228]**
Ratios of MESSENGER images at different phase angles may reveal textural differences among Mercury surfaces including hollows, pyroclastics, and impact melt.

Watters T. R. Solomon S. C. Oberst J. Preusker F. Hauck S. A. II et al. ***POSTER LOCATION #166***
The Rembrandt Trough: Evidence of Lithospheric Folding on Mercury? **[#2673]**
A broad valley flanked by lobate scarps associated with the Rembrandt basin may be evidence of long-wavelength deformation of Mercury's lithosphere.

Watters T. R. Solomon S. C. Klimczak C. Selvans M. M. Walsh L. S. et al. ***POSTER LOCATION #167***
Distribution of Prominent Lobate Scarps on Mercury: Contribution to Global Radial Contraction **[#2213]**
MESSENGER orbital images and topographic data are used to map prominent lobate scarps and characterize the globally contractional strain on Mercury.

Giacomini L. Massironi M. Marchi S. Cremonese G. ***POSTER LOCATION #168***
Dating Thrust System on Mercury **[#1481]**
We dated an Hermean smooth plain deformed by a thrust system. The age obtained through the crater count allowed us to fix an upper limit to the fault activity.

Rothery D. A. Massironi M. ***POSTER LOCATION #169***
A Spectrum of Tectonised Basin Edges on Mercury **[#1175]**
Many >200-km basins show basin-fill lavas overthrusting the basin edge. Low-latitude examples are dominated by E-W thrusting, implicating late tidal despinning.

Susorney H. S. Barnouin O. S. Ernst C. M. Head J. W. III ***POSTER LOCATION #170***
Impact Crater Morphology on Mercury from MESSENGER Observations **[#1650]**
We combine altimetry and images from MESSENGER to measure crater shape, to further the understanding of crater formation and modification on Mercury.

Pedrosa M. M. Silva E. A. ***POSTER LOCATION #171***
Impact Crater Detection on Mercury Surface from Digital Image **[#2976]**
This paper is about the use of Mathematical Morphology and template matching to detect impact craters on Mercury surface from digital images.

Ferrari S. Massironi M. Marchi S. Byrne P. K. Klimczak C. et al. ***POSTER LOCATION #172***
Age Relations of the Rembrandt Basin and Scarp System, Mercury **[#2102]**
Crater count-derived ages of the Rembrandt basin area have been determined by means of the Model Production Function (MPF) chronology of Mercury.

Bruck Syal M. Schultz P. H. Riner M. A. ***POSTER LOCATION #173***
Painting Mercury by Comet-Delivered Carbon **[#2496]**
We propose that the enhanced cometary flux at Mercury delivers substantial amounts of excess carbon, which functions as a global darkening agent.

Gillis-Davis J. J. Goudge T. A. Head J. W. Xiao Z. Byrne P. K. ***POSTER LOCATION #174***
The Spatial and Topographic Distribution of Pit Craters on Mercury **[#2422]**
Spatial and topographic distribution of Mercury's pit craters reveals that structure plays an important role while elevation appears to have little/no influence.

Xiao Z. Strom R. G. Blewett D. T. Domingue D. L. Murchie S. L. et al. ***POSTER LOCATION #175***
Dark Spots on Mercury: A Distinctive Low-Reflectance Material and its Relation to Hollows **[#1809]**
Dark spots on Mercury are small young surficial low-reflectance deposits. They form from volatile activity during the initial stages of formation of hollows.

Keller M. R. Ernst C. M. Denevi B. W. Murchie S. L. Chabot N. L. et al. ***POSTER LOCATION #176***
Time-Dependent Calibration of Messenger's Wide-Angle Camera Following a Contamination Event **[#2489]**
A time-dependent correction function was developed to handle contamination of WAC imagery acquired during the first year of MESSENGER's orbital phase.

Domingue D. L. Murchie S. L. Denevi B. W. Chabot N. L. ***POSTER LOCATION #177***
MESSENGER's Mercury Global Color Mosaic: Photometric Update **[#1324]**
Based on orbital observations by the MESSENGER camera, updated photometric corrections are derived and applied to create an improved global color mosaic.

D'Amore M. Helbert J. Holsclaw G. M. Izenberg N. R. McClintock W. E. et al. ***POSTER LOCATION #178***
Exploiting the Mercury Surface Reflectance Spectroscopy Dataset from MESSENGER: Making Sense of Three Million Spectra **[#1900]**
The MASCS Spectrometer has mapped the surface of Mercury producing more than three million spectra. We make use of our recently developed advanced DB system.

Izenberg N. R. Weider S. Z. Nittler L. R. Solomon S. C. ***POSTER LOCATION #179***
Correlating Reflectance and X-Ray Spectroscopic Data from MESSENGER **[#3018]**
A comparison of UV through near-IR reflectance spectra with X-ray fluorescence observations from MESSENGER instruments reveals possible Fe correlation.

D'Amore M. Helbert J. Holsclaw G. M. Izenberg N. R. McClintock W. E. et al. ***POSTER LOCATION #180***
Unsupervised Clustering Analysis of Spectral Data for the Rudaki Area on Mercury **[#1896]**
Study of Mercury MASCS spectral reflectance on area including craters Kuiper, Rudaki, and Waters. We analyze possible connections among different terrain types.

Helbert J. D'Amore M. Head J. W. Byrne P. K. Holsclaw G. M. et al. ***POSTER LOCATION #181***
A Comparison of the Spectral Properties of the Caloris and Rembrandt Impact Basins **[#1496]**
Recent results from MASCS instrument on MESSENGER indicate spectral difference between Caloris and Rembrandt basin and between Caloris and the northern plains.

D'Incecco P. Helbert J. D'Amore M. Maturilli A. Head J. W. et al. ***POSTER LOCATION #182***
Spectral Properties and Geology of Two Impact Craters on Mercury **[#1499]**
We combine spectral analysis and geologic interpretation of two study areas on Mercury in order to assess the presence of compositional heterogeneities.

Vaughan W. M. Head J. W. Parman S. W. Helbert J. ***POSTER LOCATION #183***
What Sulfides Exist on Mercury? **[#2013]**
Mainly CaS and FeS, according to thermochemical theory and experimental evidence.

Klima R. L. Izenberg N. R. Murchie S. Meyer H. M. Stockstill-Cahill K. R. et al. ***POSTER LOCATION #184***
Constraining the Ferrous Iron Content of Silicate Minerals in Mercury's Crust **[#1602]**
In a survey of fresh craters on Mercury, no evidence for ferrous iron in silicates has been found. Modeling suggests that silicates contain <1 wt % ferrous iron.

Maturilli A. Helbert J. Head J. W. Vaughan W. M. D'Amore M. et al. ***POSTER LOCATION #185***
Komatiites as Mercury Surface Analogues: Spectral Measurements at PEL **[#1887]**
VIS (0.45–1.1 µm) and IR (1.5–16 µm) reflectance of three natural + one synthetic komatiite measured at PEL, on fresh and T processed (at 700 K in vacuum) samples.