

Tuesday, March 20, 2012
POSTER SESSION I: MERCURY: VOLCANISM AND MAPPING
6:00 p.m. Town Center Exhibit Area

Wilson L. Head J. W. III

[*Volcanic Eruption Processes on Mercury*](#) [#1316]

Data from MESSENGER on the presence, absence, and distribution of volcanic features, along with geochemical information on crustal composition, allow us to model the processes controlling the generation, ascent, and eruption rates of magma on Mercury.

Hurwitz D. M. Head J. W. III Byrne P. K. Xiao Z.

[*Potential for Lava Erosion on Mercury: Modeling the Formation of Both Small and Large Lava Channels*](#) [#1055]

Features consistent with channelized lava flow and erosion have been identified in images collected by MESSENGER. Analytical models are used to estimate potential erosion rates and eruption durations required to form these observed channels.

Goudge T. A. Head J. W. III Kerber L. Blewett D. T. Denevi B. W. Murchie S. L. Izenberg N. R. McClintock W. E. Holsclaw G. M. Domingue D. L. Gillis-Davis J. J. Xiao Z. Strom R. G. Helbert J. Solomon S. C.

[*Global Inventory and Characterization of Pyroclastic Deposits on Mercury: New Insights into Pyroclastic Activity from MESSENGER Orbital Data*](#) [#1325]

MESSENGER orbital data of previously identified pyroclastic deposits show detailed aspects of vent morphologies, relative ages, compositions, and geologic associations. Evidence for newly identified pyroclastic deposits are also presented.

Zambon F. De Sanctis M. C. Capaccioni F. Filacchione G. Carli C. Ammannito E. Frigeri A.

[*Pyroclastic Deposits in the Rudaki's Area*](#) [#2069]

We distinguished a bright spot in the Rudaki's Area on Mercury with the minimum distance classification method. We compared this region with some pyroclastic deposits using RGB analysis to investigate the spectral properties of this spot.

Buczowski D. L. Seelos K. D.

[*A Map of the Intra-Ejecta Plains of the Caloris Basin, Mercury*](#) [#1844]

This presentation outlines the progress associated with a mapping project of Caloris basin, intended to improve our knowledge of the geology and geologic history of the basin.

Whitten J. L. Head J. W. III Murchie S. L. Blewett D. T. Denevi B. W. Neumann G. A. Zuber M. T. Smith D. E. Solomon S. C.

[*Intercrater Plains on Mercury: Topographic Assessment with MESSENGER Data*](#) [#1479]

MESSENGER data are used to complete hypsometry/flooding/chronology analyses on multiple intercrater plains regions on Mercury. This data is used to assess the formation mechanism of these plains, distinguishing between impact and volcanic processes.

Becker K. J. Weller L. A. Edmundson K. L. Becker T. L. Robinson M. S. Enns A. C. Solomon S. C.

[*Global Controlled Mosaic of Mercury from MESSENGER Orbital Images*](#) [#2654]

The USGS is constructing a global, controlled monochrome base map of Mercury from MESSENGER orbital data. A digital elevation model is created from this process that will aid in the creation of map products.