Thursday, March 20, 2014 **[R724]**
POSTER SESSION: PLANETARY VOLCANISM: IO AND MARS
6:00 p.m. Town Center Exhibit Area

Decker M. C. Ahern A. A. Radebaugh J. Christiansen E. H. Williams D. A. ***POSTER LOCATION #417***
Paterae on Io: Geologic Mapping and Experimental Models **[#1626]**
We are attempting to understand the formation of paterae using experimental models and comparing the results to our geomorphologic map of Tupan Patera.

Slezak T. Keszthelyi L. P. Okubo C. Williams D. A. ***POSTER LOCATION #418***
Paterae On Io: Compositional Constraints from Slope Stability Analysis **[#1552]**
The near-verical slopes of scarps on Io provide clues into the upper crust. We investigate compositional constraints using numerical slope stability modeling.

White O. L. Schenk P. M. ***POSTER LOCATION #419***
Topographic Mapping of Paterae and Layered Plains on Io Using Photoclinometry **[#1540]**
We have used photoclinometry to produce topographic maps of seven locations on Io, from which we have measured the relief of paterae and layered plains.

Davies A. G. White O. L. Schenk P. ***POSTER LOCATION #420***
Ionian Patera Volumes and Implications for Formation Mechanism **[#1953]**
Considering the preferred formation process for Io's paterae, for a sample of 23 paterae we estimate the volumes of silicate lava needed for patera excavation.

Jozwiak L. M. ***POSTER LOCATION #421***
Constraining the Lithospheric Thickness of Io from a Modified Heat-Pipe Model **[#1160]**
We present a modified heat-pipe model for the lithosphere of Io. We find support for a lithospheric thickness cycle about a quasi-equilibrium value.

Tsang C. C. C. Rathbun J. A. Spencer J. R. Hesman B. E. Abramov O. ***POSTER LOCATION #422***
Io's Hotspots in the Near-Infrared Detected by LEISA During the New Horizons Flyby **[#1163]**
Analysis of LEISA from the New Horizons flyby in 2007 of Io's active volcanism in the near-infrared.

Veeder G. J. Davies A. G. Matson D. L. Johnson T. V. ***POSTER LOCATION #423***
Faint Thermal Sources on Io **[#1255]**
We identify nine new faint hot spots on Io. A near-infrared ratio technique applied to Galileo NIMS data is useful for detecting faint thermal sources.

Rathbun J. A. McGrath C. D. Spencer J. R. ***POSTER LOCATION #424***
Groundbased Observations of Io in Support of JAXA's SPRINT — A Mission **[#1180]**
Using IRTF / Studying Io's volcanos / Compare to torus.

Gregg T. K. P. Panza E. Buford B. ***POSTER LOCATION #425***
Can You Miss What You Don't See? Erosion Patterns of Lavas and Ignimbrites on Earth and Mars **[#2326]**
We present characterizations of erosional patterns for terrestrial ignimbrites and lava flow fields for comparisons with eroded terrains on Mars.

Wilkes C. A. Wright S. P. King D. T. Jr. Marzen L. J. Barineau C. I. ***POSTER LOCATION #426***
Topographic and 3-D Analysis of Siloe Patera, Arabia Terra Suggest a Volcanic Origin **[#2271]**
Siloe Patera is a newly identified volcanic feature that contains multiple collapse events and possible lava flows.

Glaze L. S. Baloga S. M. ***POSTER LOCATION #427***
Exploring Inflated Pahoehoe Lava Flow Morphologies and the Effects of Cooling Using a New Simulation Approach **[#1410]**
Lava cooling rates are incorporated into a new random walk model to explore the effects of volume flux rate on surface cooling, breakouts, and flow morphologies.

Sangha S. Diniega S. ***POSTER LOCATION #428***
Quantitative Investigations of Relationships Between Tumuli Morphometrics and Lava Flow Emplacement **[#1556]**
Tumulus orientation is proposed as a good indicator of general/local flow direction.

Wood K. L. Zimbelman J. R. ***POSTER LOCATION #429***
Inflated Lava Flows Near Elysium Mons, Mars **[#2359]**
Inflated lava flows were found west of Elysium Mons, Mars. They correspond to shallow slopes as they do on Earth.

Broz P. Hauber E. ***POSTER LOCATION #430***
Small-Scale Post-Noachian Volcanism in the Martian Highlands? Insight from Terra Sirenum **[#1104]**
Young martian highland volcanism: Observation of small-scale volcanic landforms with outgoing lava flows as evidences for highly viscous lavas?

Plescia J. B. Viviano-Beck C. Murchie S. Morgan F. Seelos K. ***POSTER LOCATION #431***
Search for Mafic Bedrock in Tharsis and Elysium using CRISM Data **[#2358]**
CRISM data for dust-free areas in Tharsis and Elysium allow for recognition of bedrock mineralogy. Olivine, HCP, and LCP have been detected.

Ody A. Quantin C. Poulet F. ***POSTER LOCATION #432***
An Olivine Ocean in the Northern Plains of Mars **[#2848]**
Here we assess the mineralogy and 3-D stratigraphy of the northern plains of Mars in studying material excavated by craters using OMEGA and CRISM spectrometers.

Fawdon P. Skok J. R. Balme M. R. Vye-Brown C. L. Rothery D. A. et al. ***POSTER LOCATION #433***
The Nili Patea Caldera; Evolving Magmas, Explosive Eruptions and Hydrothermal Deposits on Mars **[#1967]**
A geological history connecting: Caldera formation, with an ignimbrite or pluton base. Post-caldera dacite flows, resurgent dome, and mafic ring fault volcanism.

Salvatore M. R. Kraft M. D. Edwards C. S. Christensen P. R. ***POSTER LOCATION #434***
Investigating the Origin of Circum-Chryse (Mars) Olivine Exposures Through Localized Geologic and Stratigraphic Analyses **[#2110]**
A local olivine-rich exposure provides insight into the relationship between widespread mafic exposures and the circum-Chryse chaos terrain and fluvial systems.

Chadwick D. J. McGovern P. J. Simpson M. C. Reeves A. K. ***POSTER LOCATION #435***
Measurements of Lithospheric Flexure due to Late Amazonian Subsidence of Olympus Mons **[#2748]**
Paleotopography, flexural modeling, and crater retention ages were used to constrain the relatively recent subsidence of Olympus Mons on Mars.

Bernhardt H. Hiesinger H. Ivanov M. Clark J. D. Pasckert J. H. ***POSTER LOCATION #436***
Wrinkle Ridges on the Hellas Basin Floor, Mars: Morphological Assessment and Implications **[#1366]**
Morphometric analyses of wrinkle ridges on the eastern Hellas basin floor, Mars, indicate a ~2-km-thick basalt layer compressed by an isotropic stress field.

Williams J.-P. Dohm J. M. Lopes R. M. Buczkowski D. L. ***POSTER LOCATION #437***
A Large Vent Structure Within Argyre Basin, Mars **[#2807]**
A vent-like feature is identified on the floor of Argyre consisting of a quasicircular rim of high-standing material forming a conic structure.

Crown D. A. Mest S. C. ***POSTER LOCATION #438***
Geologic Mapping of the Tyrrhenus Mons Lava Flow Field **[#2471]**
Mapping of the Tyrrhenus Mons lava flow field using THEMIS and CTX images documents the distribution, nature, and diversity of volcanic and erosional features.

Garry W. B. Williams D. A. Bleacher J. E. ***POSTER LOCATION #439***
Geologic Mapping of Arsia and Pavonis Montes, Mars **[#2133]**
This is an update on the geologic mapping progress of two of the three Tharsis Montes volcanos on Mars.

Korteniemi J. Kukkonen S. ***POSTER LOCATION #440***
Potential Volcanic Constructs Associated with Fluvial Channels in the Hesperia-Hellas Trough, Mars **[#2095]**
We describe several constructs in the Dao-Niger Valles system in the Hellas region of Mars. Based on morphology we interpret them as probable volcanic edifices.

Keske A. L. McEwen A. S. Hamilton C. W. Daubar I. J. ***POSTER LOCATION #441***
Distinguishing Volcanic and Fluvial Activity in Mangala Valles, Mars via Geomorphic Mapping **[#2440]**
Using CTX images to produce a map of Mangala Valles and to interpret and date each geological unit to determine the order of events in its geological history.

Mouginis-Mark P. J. ***POSTER LOCATION #442***
HiRISE Perspectives on the Flows of Hrad Vallis, Mars **[#1139]**
HiRISE images and new 1:100K-scale mapping provide numerous insights into the origin and mode of emplacement of flows associated with Hrad Vallis, Mars.

Keszthleyi L. Jaeger W. Dundas C. M. Williams D. A. Cataldo V. ***POSTER LOCATION #443***
Evidence for Possible Mechanical Erosion by Lava at Athabasca Valles, Mars, from HiRISE and CTX Images and Topography **[#1683]**
We find multiple lines of evidence consistent with at least modest mechanical erosion by lava in Athabasca Valles.

Cataldo V. Williams D. A. Dundas C. Keszthelyi L. ***POSTER LOCATION #444***
Athabasca Valles, Mars: How Important was Erosion by Lava? **[#1154]**
We model thermal erosion by turbulent lava at proximal Athabasca, Mars. Results suggest erosion by lava was unimportant, due to the eruption's short duration.