

Thursday, March 24, 2016
**POSTER SESSION II: MARS GEOMORPHOLOGY:
 FLUVIOLACUSTRINE ACTIVITY**
 6:00 p.m. Town Center Exhibit Area

[R619]

Horan A. Head J. *POSTER LOCATION #275*
[*Late Noachian Valley Network Formation on Mars: An Assessment of the Impact Crater-Related Formation Mechanism*](#) [#1160]

We explore the mechanism of impact cratering for bringing rainfall and runoff to early Mars and provide hypotheses on the relation to valley network formation.

Grau Galofre A. Jellinek A. M. *POSTER LOCATION #276*
[*The Case for a Cold, Dry Early Mars from a Global Map of Valley Network Origin and Distribution*](#) [#2409]

A novel method to characterize and classify martian valley networks from global DEM and imagery: Results and implications for martian early climate.

O'Shea M. J. Warner N. H. Gupta S. Eckes S. Werynski A. et al. *POSTER LOCATION #277*
[*Using the Morphology of Impact Craters as a Relative Age Indicator for Fluvial Activity at Xanthe Terra, Mars*](#) [#1549]

We constrain the timing of fluvial activity on Xanthe Terra through an analysis of the age relationships between valley networks and large impact basins.

Jacobsen R. E. Burr D. M. *POSTER LOCATION #278*
[*Hydraulic Geometry Explains Inaccuracies in Empirical Correlation for Estimating Fluvial Discharge on Mars*](#) [#1139]

Empirical correlation often used to estimate fluvial discharge on Mars is inconsistent with hydraulic geometry and over-estimates discharge in analog river.

Goudge T. A. Mohrig D. Cardenas B. T. Hughes C. M. Levy J. S. et al. *POSTER LOCATION #279*
[*Sedimentology of the Jezero Crater Western Fan Deposit: 2. Secular Changes in the Style of Channelization*](#) [#1656]

We map three distinct classes of exposed channel-related stratigraphy on the Jezero crater western delta topset: point bars, inverted channels, and a valley.

Singh P. Sarkar R. Ganesh I. Porwal A. *POSTER LOCATION #280*
[*Origin of Fluvial Channels in the Walls of Juventae Chasma: Evidences of Groundwater Sapping?*](#) [#1878]

We report groundwater sapping related flow features from the walls of Juventae Chasma, Mars.

Barton M. L. Skinner J. A. Jr. Fortezzo C. M. *POSTER LOCATION #281*
[*Occurrence and Morphology of Channel-Form Features in Stratified Deposits of Hadriacus Cavi, Mars*](#) [#2833]

We have identified and described four different types of channel-form features within Hadriacus Cavi based on their stratal occurrence and morphology.

Cardenas B. T. Bryk B. A. Goudge T. A. Hughes C. M. Mohrig D. *POSTER LOCATION #282*
[*Determining Paleoflow Direction of Martian Channel Belts Using Preserved Channel-Bend Asymmetry: Case Study at Aeolis Dorsa, Mars*](#) [#2367]

Migrate, time, space, love / Beauty in asymmetry / Flow, mem'ry of flow.

Gullikson A. L. Anderson R. B. Williams R. M. E. *POSTER LOCATION #283*
[*Mapping Sinuous Ridges in Northwest Hellas, Mars*](#) [#2376]

Mapping of sinuous ridges and other fluvial and ridge-like features within the northwestern Hellas region at a scale of ~1:20,000, using 6 m/pixel CTX images.

Chuang F. C. Williams R. M. E. Berman D. C.
 Davis J. M. Balme M. R. et al. **POSTER LOCATION #284**
[Mapping of Fine-Scale Valley Networks and Candidate Paleolakes in Greater Meridiani Planum, Mars: Understanding Past Surface Aqueous Activity](#) [#1490]

Mapping of fine-scale valley networks and candidate paleolakes indicates episodic aqueous periods and not a monotonic decline in climatic conditions over time.

Peel S. E. Burr D. M. **POSTER LOCATION #285**
[Paleo-Lakes in Central Pit Craters on Mars](#) [#1024]

Testing the hypothesis that central pit craters with inlet valleys once hosted paleolakes; extending previous work to include 96 CPCs with inlet valleys. Mars.

Voelker M. Hauber E. Jaumann R. **POSTER LOCATION #286**
[Distribution and Evolution of Lacustrine and Fluvial Features in Hellas Planitia, Mars. Based on Preliminary Results of Grid-Mapping](#) [#1228]

Based on preliminary grid-mapping results, we present distribution of fluvial and lacustrine deposits in Hellas, and hypothesize possible formation scenarios.

Rodriguez J. A. P. Fairen A. G. Linares R. Zarroca M. Platz T. et al. **POSTER LOCATION #287**
[Tsunami Waves Extensively Resurfaced the Shorelines of an Early Martian Ocean](#) [#1680]

Tsunami-generated geologic features distributed over a wide range of elevations dominate the coastal geomorphology of a Late Hesperian northern ocean on Mars.

Shover K. R. Goudge T. A. Levy J. S. Holt J. W. Fassett C. I. **POSTER LOCATION #288**
[Unraveling Ancient Martian Hydrological Conditions Through Mass Balance Studies of Sedimentary Fans](#) [#2057]

Martian fans, deltas / Their sediment mass balance / Key to ancient past.

Lim Y. Levy J. S. Kim W. Goudge T. A. **POSTER LOCATION #289**
[Experimental Investigation of the Effect of Ice Cover on Delta Morphology: How "Warm and Wet" Were Martian Paleolake Environments?](#) [#2443]

We conducted 3D flume experiments to explore the effects of ice cover on delta morphology, and test the hypothesis of a "cold and wet" ancient martian climate.

Hughes C. M. Cardenas B. T. Goudge T. A. Mohrig D. **POSTER LOCATION #290**
[Deltaic Deposits Indicative of a Paleo-Coastline at Aeolis Dorsa, Mars](#) [#2139]

Delta Deposits / Paleo-coastline on Mars / Wouldn't that be cool?

Hargitai H. I. Gulick V. C. **POSTER LOCATION #291**
[Morphological Analysis of the Southwestern Drainage System of Hadriacus Mons, Mars](#) [#1670]

We describe a channel on the floor of Hellas Basin that is fed by the small channels on the flank of Hadriacus Mons, Mars.

Wagner N. Warner N. H. Gupta S. **POSTER LOCATION #292**
[History of Outflow Channel Flooding from an Integrated Basin System East of Valles Marineris, Mars](#) [#2214]

The integrated chaotic terrain basin system east of Valles Marineris exhibits multiple, younger, kilometer-deep outflow channels that drained the basins.

Komatsu G. Okubo C. H. Wray J. J. Ojha L. Cardinale M. et al. **POSTER LOCATION #293**
[Probable Mud Volcanoes in Chryse Planitia, Mars: Updates on Morphological, Sedimentological and Spectral Studies](#) [#1067]

We update on our study of small edifice features in Chryse Planitia, Mars, which have been proposed to be mud volcanoes.

Weiss D. K. Head J. W. **POSTER LOCATION #294**
[Evaluating the Role of Impact-Induced Basal Melting of Surface Ice Deposits on the Degradation State of Impact Craters on a Cold and Icy Mars](#) [#1064]

Impact ejecta can produce basal melting of underlying surface ice deposits. This may contribute to fluvial features associated with impact craters on Mars.