

Tuesday, March 20, 2018

[T310]

**POSTER SESSION I: MARS VALLEY NETWORKS, LAKES, AND MORE:
THERE'S WATER ON MARS??**

6:00 p.m. Town Center Exhibit Area

Gullikson A. L. Anderson R. B. Williams R. M. E. **POSTER LOCATION #103**
[Mapping Sinuous Ridges and Preliminary Fluvial Measurements in Northwest Hellas, Mars](#) [#2271]

We have mapped sinuous ridges, and other fluvial and ridge-like features at a scale of ~1:20,000 in NW Hellas, and calculated preliminary fluvial measurements.

Weintraub A. R. Edwards C. S. Joyal T. J. **POSTER LOCATION #104**
[Determining the Formational Processes of Martian Fluvial Terraces Using Remotely Sensed Observations](#) [#2873]

This study uses remotely sensed data from 30 martian valley networks, with well constrained ages, to differentiate between erosional and depositional terraces.

Barton M. L. Skinner J. A. Jr. Fortezzo C. M. **POSTER LOCATION #105**
[Channel Cross-Sections and Inversions in Hadriacus Cavi, Mars and Implications for Formational Environment](#) [#1653]

We identified 96 channel cross-sections in the Hadriacus Cavi, Mars study region, and believe they have implications on the formational environment of the area.

Kite E. S. Mayer D. P. Duncan C. J. Edwards D. **POSTER LOCATION #106**
[A New Global Database of Mars River Dimensions](#) [#2738]

We present a new global database of river size for Noachian-through-Amazonian Mars rivers, and discuss regional and temporal trends, and implications for climate.

Sneed J. W. Kite E. S. Mayer D. P. **POSTER LOCATION #107**
[Searching for Anisotropic Erosion in the Fan-Bearing Craters of Early Mars](#) [#2990]

We examine slope orientation and ridgelines in the alcoves of fan-bearing crater walls in a search for anisotropic erosional patterns on ancient Mars.

Cawley J. C. Irwin R. P. III **POSTER LOCATION #108**
[Geomorphic Surfaces in the Noachian Highlands of Mars](#) [#2810]

Noachian age pediment and plain structures developed under hypo-fluvial conditions and reflect their formative processes.

Jacobsen R. E. Burr D. M. **POSTER LOCATION #109**
[Synthesizing the History of a Diverse Inverted Landscape: Mapping of the Aeolis Dorsa Region, Mars](#) [#2057]

The Aeolis Dorsa region consists of aeolian/volcaniclastic deposits that hosted hydrologic and lacustrine activity during the Hesperian and Amazonian periods.

Sarkar R. Singh P. Porwal A. **POSTER LOCATION #110**
[The Palaeolake of Juventae Chasma](#) [#2248]

Formations of Maja Vallis may have happened independently, and the "palaeolake" in Juventae Chasma either did not exist or never overflowed.

Peel S. E. Burr D. M. **POSTER LOCATION #111**
[Intracratcr Deposits in the Aeolis Dorsa Region, Mars: Evidence for Lakes?](#) [#1006]

We report on sedimentary deposits mapped within select craters of the Aeolis Dorsa Region, Mars, interpreted as forming in lacustrine and nearby environments.

Weitz C. M. Bishop J. L. **POSTER LOCATION #112**
[Formation of Clays and Ferrihydrite in Hydrae Chasma, Mars](#) [#1226]

Fe/Mg-smectites, ferrihydrite, and possibly perchlorate within Hydrae Chasma formed by alteration from hydrothermal activity and/or melting ice/snow.

Walmsley J. Fueten F. Stesky R. Flahaut J. Hauber E. **POSTER LOCATION #113**
[Detailed Analysis of Hydraotes Chaos, Mars](#) [#1184]

Chaos block parameters are quantified using the highest resolution elevation data. Elevations of terraces on blocks decrease towards the center of the basin.

Davis J. M. Fawdon P. Balme M. Barnes R. Banham S. et al. **POSTER LOCATION #114**
[The Formation of Inverted Fluvial Channels in Green River and Hanksville, Utah as an Analogue for Arabia Terra, Mars](#) [#1901]

We investigate inverted fluvial channels in Utah as an analogue for Arabia Terra, Mars by comparing orbital remote sensing data to field observations.

Chida T. Sekine Y. Fukushi K. Matsumiya H. Solongo T. et al. **POSTER LOCATION #115**
[Hydrology of Subsaline Lakes in Southern Mongolia: A Terrestrial Analog Study for Lacustrine Environments and Chloride Depositions on Early Mars](#) [#1926]

As an analog of early Mars, we performed a survey on subsaline lakes and their surrounding areas in Mongolia, and simulated the level and flux of groundwater.

Trigo-Rodriguez J. M. Moyano-Camero C. E. Benito-Moreno M. I. Alonso-Azcárate J. Lee M. R. **POSTER LOCATION #116**
[Ancient Martian Floods in a Plausible Variable Climatic Environment as Revealed from the Sequential Growth of Allan Hills 84001 Carbonate Globules](#) [#1448]

Compositional properties of Allan Hills 84001 carbonates indicate that they formed by precipitation of a Mg- and Fe-rich solution in two or three different episodes.

Perrin S. L. Bishop J. L. Parker W. G. King S. J. Lafuente B. **POSTER LOCATION #117**
[Mars Evaporite Analog Site Containing Jarosite and Gypsum at Sulfate Hill, Painted Desert, AZ](#) [#1801]

VNIR and XRD analysis of samples from the Painted Desert, AZ suggest a terrestrial analog for co-occurrence of jarosite and gypsum on Mars.

Denton C. A. Head J. W. **POSTER LOCATION #118**
[Subsurface Hydrologic Activity in Northern Arabia Terra: Implications for Formation of Fretted Channels](#) [#1607]

Observations of Mamer Valles suggest that the erosive activity that produced the fretted channel was localized in the subsurface by migration of liquid water.

Pascuzzo A. C. Mustard J. F. Ebinger E. **POSTER LOCATION #119**
[The Origin of Enigmatic Ridges Networks, Nili Fossae, Mars: Implications for Extensive Subsurface Fluid Flow in the Noachian](#) [#2268]

Ridge geometry / And their spectral properties / More secrets revealed!

Stacey K. Khuller A. R. Kerber L. **POSTER LOCATION #120**
[The Medusae Fossae Formation in SW Elysium Planitia, Mars as a Record of Recurring Hydrogeologic Activity](#) [#2815]

The MFF is a deposit of hypothesized pyroclastic origin that has recorded a suite of landforms related to processes involving surface and subsurface H₂O.

Kreslavsky M. A. Head J. W.

POSTER LOCATION #121

[Limited Erosion and Thick Atmosphere on Mars in the Late Noachian: Insight from Crater Wall Slope Statistics](#) [#2515]

The steepest slopes of 4–32 km craters used. The total duration of intensive erosion in the Late Noachian was <1 Ma. Erosion cessation age depended on elevation.

Boatwright B. D. Head J. W.

POSTER LOCATION #122

[Synthesis of Nonlocal, Nonlinear, and Noisy Models of Sediment Transport: Application to Planetary Landform Evolution Modeling](#) [#2617]

We synthesize a general equation of diffusional sediment transport and describe how this synthesis may be important for planetary landform evolution modeling.