

## PRINT ONLY: MARS

Centeno J. D. de Pablo M. A.

[\*Possible Evidences of Ice Dynamics in the Putative Glaciers at the Lower NW Flank of Hecates Tholus Volcano, Mars\*](#) [#1031]

Glacial forms, like crevasses and bergschrunds give evidence of recent glacial flow in the northwest flank of Hecates Tholus. We show several working hypothesis on the origin of these forms and its relation with slope gravitational processes and deglaciation.

Chuang F. C.

[\*Point Pattern Analysis of Intracrater Deposits in Western Arabia Terra, Mars\*](#) [#1468]

R and K statistical tests were applied to intracrater layered deposits in western Arabia Terra, Mars. Results showed that deposits are clustered with the K test having two distinct clustered masses. Future work will involve spatial autocorrelation.

Clarke J. D. A. Stoker C. R.

[\*Mars Analog Significance of Concretions in Exhumed and Inverted Channels Near Hanksville, Utah\*](#) [#1611]

The landscape of Hanksville, Utah, has inverted anastomosing paleochannels exhumed from the Late Jurassic Morrison Formation. The paleochannels host carbonate concretions. Both channels and the concretions are analogs to martian features.

Coleman N. M.

[\*Phaenna Dorsum, An Esker on Mars: Insights from THEMIS and HiRISE Images and MOLA Data\*](#) [#1906]

Phaenna Dorsum is an esker-like ridge in S. Argyre Planitia. Two MOLA passes that cross the ridge at right angles reveal it has a height of 110 m and a basal width of ~8 km. Thermal inertias inferred from THEMIS support the view that the ridge is an esker.

Fairén A. G. Dohm J. M. Thompson S. D. Davila A. F. Anderson R. C. Baker V. R. McKay C. P.  
[\*Meteorites at Meridiani Planum Indicate Extensive Surface Water on Early Mars\*](#) [#2088]

The four Fe-Ni meteorites discovered in Meridiani impacted into a soft and wet target sometime during the Noachian or the Hesperian; they were subsequently encased underground, to be ultimately exposed at the surface through differential erosion.

Hays N. R. Drake M. J. Gehrels G. G.

[\*U-Th-Pb Analysis of Baddeleyites in Shergottite Meteorites\*](#) [#1243]

In situ LA-MC-ICP-MS analysis of U-Pb systematics in baddeleyite grains from NWA 2986 and RBT 04262 returned maximum ages of  $187 \pm 50$  to  $1236 \pm 430$  respectively. These results are consistent with previous analyses and imply young crystallization.

He Q. Hsu W. Xiao L. Guan Y.

[\*Petrography and Geochemistry of the Shergottite Northwest Africa 2975\*](#) [#1646]

NWA 2975 is an enriched basaltic shergottite. We report the major and trace element concentrations of individual minerals in NWA 2975, combining with oxybarometry to provide new insights into martian differentiation history.

Kraal E. R.

[\*Evolving Interpretations of the Eberswalde Deposit\*](#) [#2302]

Given the importance for martian surficial and climate history, as well as proximity to a possible MSL landing site, this abstract argues for a reconsideration of the Eberswalde deposit in light of new data and possible conflicting interpretations of various research groups.

Lee C. B. Park S. J.

[Observations of Phyllosilicate Bearing Deposits in Mawrth Vallis and Nili Fossae: Stratigraphy and Possible Formation Scenarios](#) [#1768]

In this paper, we suggest that deposition of clay minerals in a large fluvial-lacustrine or marine environment contributed to the stratigraphic development of phyllosilicates in Mawrth Vallis and Nili Fossae.

Machado A. Barata T. Saraiva J. Lira C. Pina P. Alves I. Mora C. Vieira G.

[Characterization of the Martian Hummocky Terrains Based on Analogues from Earth](#) [#1994]

The present work aims to identify hummocks and putative mud boils on martian hummocky terrains based on Earth analogues from Adventdalen Valley, Longyearbean, Spitsbergen Island, Svalbard.

Mahaffy P. R. Trainer M. G. Eigenbrode J. L. Franz H. B. Stern J. C. Harpold D. N. Conrad P. G. Raaen E. Lyness E.

[Calibration of the Quadrupole Mass Spectrometer of the Sample Analysis at Mars Instrument Suite](#) [#1556]

The calibration of the Quadrupole Mass Spectrometer of the Sample Analysis at Mars (SAM) Instrument Suite is described with a focus on the four major martian atmospheric constituents. A detector dead time correction method is presented.

Neather A. C. Lane S. Wilson L.

[The Surface Expression of the Arsia-Mangala Dike, Mars, is Controlled by the "Sawtooth" Profile of Surface Topography](#) [#1380]

We show how surface topography controls three close approaches to the surface by the dike that formed the Mangala Fossa graben as the dike propagated laterally from the Arsia Mons mantle plume.

Shean D. E. Fahle J. Malin M. C. Edwards L. J. Posiolova L.

[MRO CTX Stereo Image Processing and Preliminary DEM Quality Assessment](#) [#2646]

We describe ongoing efforts to process and characterize the quality and accuracy of MRO CTX anaglyphs and digital elevation models (DEMs).

de Pablo M. A. Centeno J. D.

[New Observations of Glacial Features on the Lower NW Flank of Hecates Tholus Volcano \(Mars\) Based on CTX and HiRISE Images](#) [#1030]

HiRISE and CTX images of the NW flank of Hecates Tholus volcano, Mars, show abundant evidence of a present or recent glacier: crevasses, moraines, eskers, etc. Here we made an inventory of all these features and a general interpretation of their origin.