

Wednesday, March 22, 2017
MARS SEDIMENTOLOGY AND STRATIGRAPHY
 1:30 p.m. Waterway Ballroom 4

[W452]

Chairs: Cathy M. Weitz
 James Skinner Jr.

- 1:30 p.m. Quinn D. P. * Ehlmann B. L.
[*The Deposition and Alteration History of the Northeast Syrtis Layered Sulfates*](#) [#2932]
 Structural characteristics of the layered sulfates at northeast Syrtis Major suggest a multistage sedimentary history during the Noachian-Hesperian transition.
- 1:45 p.m. Pascuzzo A. C. * Mustard J. F.
[*Ongoing CRISM Investigation of Ridge Networks and Their Phyllosilicate-Bearing Host Unit in the Nili Fossae and Northeast Syrtis Regions*](#) [#2807]
 Careful mapping and spectral investigation of ridge networks and their host unit using CRISM and HiRISE data to evaluate hypothesized formation mechanisms.
- 2:00 p.m. Goudge T. A. * Mohrig D. Cardenas B. T. Hughes C. M. Fassett C. I.
[*Stratigraphy and Evolution of Delta Channel Deposits, Jezero Crater, Mars*](#) [#1195]
 Jezero delta / Channels record lake filling / Shoreline transgression.
- 2:15 p.m. Rogers A. D. * Head J. W.
[*Bedrock Degradation, Mantling, and Exposure Processes on Martian Highland Plains: Regional Variations and Potential Causes*](#) [#1347]
 Flat-lying expanses of bedrock are more commonly found in Noachian highland units than in younger, Hesperian units. Why?
- 2:30 p.m. Thomas R. J. * Hynek B. M. Osterloo M. M. Kierein-Young K. S.
[*Extensive Exposure of Clay-Bearing Noachian Terrain in Margaritifer Terra, Mars*](#) [#1180]
 Clays in abundance / In Margaritifer, Mars / Exposed by erosion.
- 2:45 p.m. Davis J. M. * Grindrod P. M. Williams R. M. E. Fawdon P. Gupta S. et al.
[*Fluvial Mapping and Stratigraphy of the South-Western Melas Basin and Plateau, Valles Marineris, Mars: Episodic Fluvial Phases and Implications for Climate*](#) [#1991]
 HiRISE fluvial mapping and stratigraphy of the southwestern Melas Basin, Mars indicate episodic aqueous phases in the early Hesperian period.
- 3:00 p.m. Sarkar R. * Edgett K. S. Singh P. Porwal A.
[*Reappraisal of the Stratigraphic Position of Light Toned Materials in Juventae Chasma, Mars*](#) [#2170]
 In this work, we reevaluate the stratigraphic position of these light toned materials in Juventae Chasma.
- 3:15 p.m. Weiss D. K. * Head J. W.
[*Hydrology of the Hellas Basin and the Early Mars Climate: Was the Honeycomb Terrain Formed by Salt or Ice Diapirism?*](#) [#1060]
 We test whether the honeycomb terrain (located within Hellas Basin) could have formed through salt or ice diapirism, and explore climate/hydrologic implications.
- 3:30 p.m. Skinner J. A. Jr. * Fortezzo C. M. Barton M. L.
[*Basin-Filling Strata Exposed in Hadriacus Cavi, Mars Record Complex Transitional Environments During the Middle Noachian*](#) [#2694]
 We identify and temporally and spatially constrain basin-filling units for principally non-crater basin in a typical sequence of cratered highland material.

- 3:45 p.m. Weitz C. M. * Noe Dobrea E. Z. Berman D. C.
[Geologic Mapping and Spectral Analysis of Gorgonum Basin, Mars](#) [#2010]
We have performed a detailed investigation and geologic mapping of the Gorgonum Basin region. We found both Fe/Mg-smectites and Al-phyllosilicates in Gorgonum.
- 4:00 p.m. Cardenas B. T. * Mohrig D. Goudge T. A.
[Fluvial Stratigraphy at Aeolis Dorsa, Mars, Records Base Level Changes and Backwater Sedimentation Controlled by a Fluctuating Downstream Body of Water](#) [#1938]
Collections of channel-filling deposits at Aeolis Dorsa, Mars are interpreted as incised valley fill based on spatial arrangement and stacking patterns.
- 4:15 p.m. Caprarelli G. * Cartacci M. Orosei R.
[Preliminary Observations of Lunae Planum, Mars: Interpretive Framework for Radar Sounder MARSIS Investigation of the Region](#) [#1720]
We report our preliminary surface observations of Lunae Planum (Mars), aimed at constraining ongoing and future interpretations of MARSIS subsurface data sets.
- 4:30 p.m. Yue Z. * Gou S. Di K. Xie H. Gong H. et al.
[An Investigation of the Hypotheses for Formation of the Platy-Ridged-Polygonized Terrain in Elysium Planitia, Mars](#) [#1770]
Through checking many HiRISE images and the counterparts in Earth, we propose that the platy-ridged-polygonized (PRP) terrain in Mars is from muddy flow.