

Friday, March 23, 2018
DREAMS OF A GLACIAL MARS
8:30 a.m. Waterway Ballroom 6

[F704]

- Chairs:** **Joseph Levy**
Eric Petersen
- 8:30 a.m. Dundas C. M. * Mellon M. T.
[Active Boulder Movement Associated with Martian Lobate Landforms](#) [#2018]
 Active boulder movement occurs in decameter-scale lobate landforms on steep slopes at high latitudes on Mars.
- 8:45 a.m. Brooker L. M. * Balme M. R. Conway S. J. Hagermann A. Barrett A. M. et al.
[Possible Formation Mechanisms of Clastic Polygonal Networks Around Lyot Crater, Mars from Morphometric Analysis](#) [#1873]
 Clastic polygons / Look to the morphology / Thermal contraction?
- 9:00 a.m. Levy J. S. * Fassett C. I. Rader L. X. King I. R. Chaffey P. M. et al.
[Distribution and Characteristics of Boulder Halos at High Latitudes on Mars: Reworking of Sediment and Ice Indicates Boulders Outlast the Craters that Excavate Them](#) [#1093]
 Boulder halos form on surfaces with abundant, shallow ground ice and suggest icy mantles tens of m thick, surface sediment reworking, and slow boulder breakdown.
- 9:15 a.m. Berman D. C. * Smith I. B. Chuang F. C. Crown D. C.
[Radar Detections of Ice Within Lobate Flows in Nereidum Montes, Mars](#) [#1544]
 Nereidum Montes is densely populated with lobate flow features. With SHARAD data, we have detected a basal reflector consistent with a water ice boundary.
- 9:30 a.m. Petersen E. I. * Holt J. W. Levy J. S.
[All Our Aprons are Icy: No Evidence for Debris-Rich "Lobate Debris Aprons" in Deuteronilus Mensae](#) [#2354]
 Mars' lobate aprons / Are all high purity ice / Not just some of them.
- 9:45 a.m. Hibbard S. M. * Williams N. R. Golombek M. P. Osinski G. R.
[Evidence for Flow in Buried Ice in the Mid-Latitudes of Arcadia Planitia](#) [#2606]
 Flow in buried ice / Massive glacial deposit? / Low relief region.
- 10:00 a.m. Bernhardt H. * Ivanov M. Reiss D. Hiesinger H. Hauber E. et al.
[The Banded Terrain on the Hellas Basin Floor, Mars: Gravity-Driven Flow Not Supported by New Observations](#) [#1143]
 Grid mapping shows patterns of banded terrain not correlating with topography. Observations indicate slope-independent stresses deformed volatile-rich veneer.
- 10:15 a.m. Stillman D. E. * Codd S. L. Seymour J. D. Lei P. Young M. et al.
[Magnetic Resonance and Dielectric Spectroscopy Derived Values of Unfrozen Water Content in Ice-Regolith Mixtures](#) [#2658]
 Lab measurements demonstrate how brine freezes within a porous medium. We then use this to determine if cryosuction or regelation created the excess ice on Mars.
- 10:30 a.m. Campbell B. A. * Morgan G. A.
[Signatures of Ice Content in Non-Polar Material on Mars from Multi-Band SHARAD Data Processing](#) [#2120]
 We present a method for deriving dielectric loss tangents indicative of ice content from SHARAD radar data.

- 10:45 a.m. Baker D. M. H. * Carter L. M.
[*Formation of Impact Crater Landforms Within Glaciers on Mars*](#) [#1589]
We test hypotheses for the formation of crater landforms within glacial deposits on Mars. Observations are most consistent with evolution of icy mantle units.
- 11:00 a.m. Butcher F. E. G. * Arnold N. S. Balme M. R. Gallagher C. Conway S. J. et al.
[*Glacier-Linked Eskers on Mars: Environments of Recent Wet-Based Glaciation from Numerical Models*](#) [#1490]
We present estimates of the environmental conditions required for basal melting of mid-latitude glaciers on Mars, and thus formation of glacier-linked eskers.
- 11:15 a.m. Bouquety A. B. * Séjourné A. S. Costard F. C. Bouley S. B.
[*Morphometrics Evidence of Glacial Features in Martian Highlands: Dawes Crater*](#) [#2125]
The goal of this study is to find geomorphologic evidence of an early Mars cold climate to constrain the climatic conditions thanks to a morphometric analysis.
- 11:30 a.m. Denton C. A. * Head J. W.
[*Mapping the Fretted Terrain North of Arabia Terra, Mars: Results and Implications for Dichotomy Boundary Evolution*](#) [#1597]
Analysis of the fretted terrain and the Arabia Terra plateau indicates that material removal was facilitated by extensive disruption of the subsurface.