Thursday, March 24, 2016  
MARS ICE: UNDER PRESSURE IT FLOWS  
8:30 a.m.  Waterway Ballroom 6

Chairs: Richard Soare  
James Head III

8:30 a.m.  Brough S. * Hubbard B. Hubbard A.  
Two-Dimensional Numerical Ice Flow Modeling of an Empirically Reconstructed Martian Glacier-Like Form [#1994]  
We present results of a higher-order, 2D numerical ice flow model for an empirically reconstructed glacier-like form in eastern Hellas Planitia, Mars.

8:45 a.m.  Parsons R. A. * Holt J. W.  
Evidence for Variable Ice Accumulation or Viscosity of Martian Glaciers on Opposing Slopes of Euripus Mons, Mars from Numerical Ice Flow Modeling [#1462]  
A higher ice viscosity is predicted for S. Euripus Mons, but multiple ice deposition events affecting only the S. lobe provides a better fit to HRSC topography.

9:00 a.m.  Soare R. J. * Conway S. J. Gallagher C. J. Dohm J. M.  
“Ice-Rich” (Periglacial) and “Icy” (Glacial) Depressions in the Argyre Region, Mars [#1175]  
We discuss depressions in the Argyre region that are scalloped, metres to decametres-deep, decametres to kilometres in scale, flat-floored and polygonised.

9:15 a.m.  Voelker M. * Hauber E. Jaumann R.  
Distribution and Geomorphology of the Latitude-Dependent Mantling Deposit in Hellas Planitia, Mars [#1360]  
The abstract presents the geospatial distribution and evolution of LDM within Hellas Planitia, based on results of the newly developed grid-mapping method.

9:30 a.m.  Bernhardt H. * Reiss D. Hiesinger H. Ivanov M. A.  
The Honeycomb Terrain on the Hellas Basin Floor, Mars: Arguments for Salt or Ice Diapir Scenarios [#1871]  
Based on plausibility studies of potential formation mechanisms of the honeycomb terrain on Hellas Planitia, we present arguments for a salt/ice diapir origin.

9:45 a.m.  Jawin E. R. * Head J. W.  
Patterns of Martian Deglaciation: Assessing the Distribution of Paraglacial Features in Mid-Latitudes Craters [#1246]  
The distribution of paraglacial features in martian mid-latitude glaciated craters suggests variable patterns of deglaciation at multiple spatial scales.

10:00 a.m.  Viola D. * McEwen A. S. Dundas C. M. Byrne S.  
Subsurface Volatile Abundance in a Martian Double Layer Ejecta Crater [#2202]  
Ice content within a DLE crater is measured based on superposed thermokarstically-altered secondary craters, with implications for the DLE-forming mechanism.

10:15 a.m.  Head J. W. III * Weiss D. K. Horan A. M.  
Lyot Crater, Mars: Major Amazonian-Aged Impact and the Nature of Target Substrate, Ejecta Emplacement, and Modification [#1190]  
Lyot Crater is examined to assess the substrate, ejecta emplacement, and hydrological cycle modification processes.
10:30 a.m. Weiss D. K. * Head J. W.

_Evaluating the Thickness of the Martian Ice-Cemented Cryosphere Using Thermal Modeling and Impact Crater Morphology_ [#1066]

Mars crater morphology suggests supply-limited ice-cemented cryosphere ~1–3 km thick. Thermal models match cryosphere only under ancient martian conditions.

10:45 a.m. Ackiss S. E. * Campbell A. Horgan B. Seelos F. P. Wray J. J. et al.

_Mineralogical Evidence for Subglacial Volcanoes in the Sisyphi Montes Region of Mars_ [#1305]

Fire under ice? / Exploring Sisyphi’s role / Near martian south pole.

11:00 a.m. Scanlon K. E. * Head J. W. Fastook J. L. Wordsworth R. D.

_The Dorsa Argentea Formation and the Noachian-Hesperian Transition: Climate and Glacial Flow Modeling_ [#1315]

We used early Mars GCM and glacial flow model simulations to constrain the climates allowing a large south polar ice sheet consistent with DAF geomorphology.

11:15 a.m. Butcher F. E. G. * Conway S. J. Arnold N. S. Balme M. R.

_The Dorsa Argentea, Mars: Comparison to >5900 Terrestrial Esker Systems and Statistical Tests for Topographic Relationships_ [#1247]

Plan view geometries of the Dorsa Argentea, Mars are similar to >5900 eskers in Canada and esker-like topographic relationships are statistically significant.

11:30 a.m. Grimm R. E. * Harrison K. P. Kirchoff M. R. Stillman D. E.

_Secular Retention of Tropical Ground Ice on Mars_ [#2592]

D/H and inferred depths to tropical ground ice both imply sublimation loss of only 10 m GEL. H2O escape was likely restricted by pore-occluding mineralization.