Thursday, March 24, 2016 **[R504]**
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. H_2O escape was likely restricted by pore-occluding mineralization.