

Monday, March 10, 2008
MARS: ICE ON THE GROUND AND IN THE GROUND
2:30 p.m. Crystal Ballroom B

Chairs: J. L. Fastook
 J. J. Plaut

- 2:30 p.m. Fastook J. L. * Head J. W. III Marchant D. R.
Dichotomy Boundary Glaciation Models: Implications for Timing and Glacial Processes [#1109]
 Glacial flow models track snow accumulation and flow in lineated valley fill. Accumulation in alcoves leads to coherent down-valley flow and a well-developed valley glacier system extending into the northern lowlands, illustrating time scales and velocities.
- 2:45 p.m. McMenamin D. S. * McGill G. E.
Methane Clathrate Behavior in Martian Surface Ice, and Supporting Morphological Observations [#1163]
 We explore the behavior of methane clathrate in remnant glaciers and other surface ice, and report on morphologies that support its presence and current dissociation into atmospheric methane and water.
- 3:00 p.m. Ostrach L. R. * Head J. W. III
Volumetric Estimates of Amazonian Lobate Debris Aprons (LDA) in the Mid-Latitudes of Mars: Support for the Presence of Significant Water-Ice [#1652]
 Lobate debris apron morphometric/morphologic analyses indicate that models of origin as simple talus debris aprons and pore-ice assisted debris flow are unlikely; our data support a debris-covered glacier origin and significant volumes of subsurface ice.
- 3:15 p.m. Piatek J. L. *
Thermophysical Properties of Proposed Glacial Features on Mars [#1485]
 THEMIS nighttime IR images show variations in thermophysical properties (related to surface morphologies) of proposed glacial features. Different thermophysical appearances of features in different locations suggest different modes of formation.
- 3:30 p.m. Plaut J. J. * Safaeinili A. Holt J. W. Phillips R. J. Campbell B. A. Carter L. M. Leuschen C. Gim Y. Seu R. SHARAD Team
Radar Evidence for Ice in Lobate Debris Aprons in the Mid-Northern Latitudes of Mars [#2290]
 Radar sounding data from SHARAD aboard Mars Reconnaissance Orbiter provide evidence for a substantial component of ice in lobate debris aprons in the Deuteronilus Mensae region of the mid-northern latitudes of Mars.
- 3:45 p.m. Holt J. W. * Safaeinili A. Plaut J. J. Young D. A. Head J. W. III Phillips R. J. Campbell B. A. Carter L. M. Gim Y. Seu R. SHARAD Team
Radar Sounding Evidence for Ice within Lobate Debris Aprons Near Hellas Basin, Mid-Southern Latitudes of Mars [#2441]
 Radar sounding from MRO/SHARAD shows evidence for ice-rich deposits within lobate debris aprons in the Eastern Hellas region, mid-southern latitudes on Mars.
- 4:00 p.m. Kress A. M. * Head J. W. III Marchant D. R.
Ring-Mold Craters on Lineated Valley Fill (LVF) and Lobate Debris Aprons (LDA) on Mars (II): Implications for the Presence of Subsurface Ice [#1293]
 "Ring-mold craters" (RMC) occur almost exclusively on lineated valley fill and lobate debris aprons and are interpreted to be due to spallation in ice substrate, suggesting that LDA/LVF are debris covered glaciers, not ice-assisted creep of talus.

- 4:15 p.m. Searls M. L. * Mellon M. T. Martinez-Alonso S. HiRISE Team
Slope Analysis and Ice Stability of the Mid-Latitude Dissected Terrain on Mars [#2376]
We quantify the distribution of dissected terrain on Mars as a function of slope and latitude. This analysis in conjunction with ice stability modeling can provide a global view of the climate and obliquity of Mars at the time these features formed.
- 4:30 p.m. Schon S. C. * Head J. W. III Milliken R. E.
Layered Morphology of the Latitude-dependent Mantle: A Potential Late-Amazonian Paleoclimate Signal [#1873]
Depositional layering is observed within latitude-dependent mantling deposits of the mid-latitudes that may be the result of short duration, geologically recent, obliquity excursions.