Thursday, March 4, 2010
POSTER SESSION II: MARS: GEOLOGIC, GEOMORPHIC, AND LANDING SITE MAPPING
7:00 p.m. Town Center Exhibit Area

Skinner J. A. Jr. Tanaka K. L.
Sub-dividing the Geology of Vastitas Borealis, Mars: Evidence for a Varied Record of Amazonian Deposition and Erosion [#2734]
We observe multiple lines of evidence that allude to the existence of unique outcrops of materials that superpose previously mapped Early Amazonian geologic units.

Nature of Hesperian Resurfacing in the Scandia-North Polar Region of Mars [#2323]
Formational hypotheses based on preliminary observations and first-year mapping results of the Scandia-North Polar Region of Mars. The map area includes the Scandia Cavi, Scandia Tholi, Scandia Colles, northern Alba Patera, and Vastitas Borealis.

Hielscher F. J. Hiesinger H. Erkeling G. Ivanov M. A. Reiss D.
Distribution and Classification of Thumbprint Terrain in Isidis Planitia, Mars [#2394]
We have produced the most detailed map of thumbprint terrain in the Isidis basin currently available. We have performed detailed morphometric measurements of thumbprint terrain.

Ivanov M. A. Erkeling G. Hiesinger H. Hielscher F. J. Reiss D.
Major Episodes of the Geological History of Isidis Planitia, Mars [#1294]
We describe morphology of the mapped units in Isidis Planitia and its immediate surroundings, give age estimates for them, and formulate the major steps in the geologic history of the region.

Zimbelman J. R.
Geologic Mapping of the MC-23 NW Quadrangle: Emplacement and Erosion of the Lower Member of the Medusae Fossae Formation on Mars [#1157]
The lower member of the Medusae Fossae Formation (MFF) has two mappable subdivisions within the quadrangle, including several outliers interpreted to be MFF materials. Layering in outliers is similar to layering in nearby portions of globally mapped MFF deposits.

The Search for Methane Gas Emission Features on Mars [#1355]
The methane gas in martian atmosphere is likely to have derived from the surface of the planet through unknown processes. We conducted an investigation to identify possible methane emission features beginning with the suggested source areas.

Harrold B. C. King D. T. Jr. Marzen L. J.
Remote Sensing Applications for the Martian Fretted Terrain [#2004]
The fretted terrain is located along the global escarpment. ArcGIS 9.x and MOLA was used to geoprocess and overlay images along with personal geodatabases to organization thousands of features to access the blocks present orientation/location.

Williams K. K.
Geomorphic Mapping of MTMs -20022 and -20017: South of Jones Crater, Mars [#2645]
The area south of Jones Crater in Margaritifer Terra, Mars, is being geomorphologically mapped in order to understand the relative timing of fluvial, impact, and depositional processes.

Mest S. C. Crown D. A.
Geologic Mapping of the Reull Vallis Source Area in Southern Hesperia Planum, Mars [#1945]
Geologic mapping of MTMs -30247, -35247 and -40247 characterizes the upper reaches of the Reull Vallis system, including its source area and main canyon. Crater size-frequency distributions are being generated for mapped units for age determinations.
Crown D. A., Bleamaster L. F. III, Mest S. C., Mustard J. F., and Vincendon M.
Geologic Mapping of the NW Rim of Hellas Basin, Mars: Evidence for an Ancient Buried Landscape
Geologic mapping and investigations of impact craters on the NW Hellas rim reveal an extensively buried landscape and suggest that regional sedimentary deposition extended beyond the topographic margin of Hellas basin and well into the surrounding highlands.

Williams D. A., Bleacher J. E., Shean D., Byrne P. K., Greeley R., Tanaka K. L., and Musiol S.
Geologic Mapping of Olympus Mons: A New Project to Investigate the Evolution of a Martian Shield Volcano
We discuss the goals, objectives and data sources for our project to produce a new 1:1,000,000 geologic map of Olympus Mons.

Parker T. J., Golombek M. P., Powell M. W.
Geomorphic/Geologic Mapping, Localization, and Traverse Planning at the Opportunity Landing Site, Mars
Mapping of the Opportunity traverse, using the project’s planning tool, “maestro,” and GIS software. Experience gained by the science and engineering teams will be invaluable for planning and conducting future mobile explorer missions to Mars and other planetary bodies.

Gwinner K., Oberst J., Jaumann R., and Neukum G.
Regional HRSC Multi-Orbit Digital Terrain Models for the Mars Science Laboratory Candidate Landing Sites
Regional DTM at 50 m resolution have been derived from multi-orbit HRSC data. Characteristics and related methods are reported.

Landing Sites Under Consideration for Mars Science Laboratory
Detailed scientific investigations of target materials and surface characteristics are focusing on four potential landing sites (Holden, Gale and Eberswalde craters and Mawrth Vallis) for the Mars Science Laboratory.