Thursday, March 22, 2012
POSTER SESSION II: ROVING ON MARS: CURRENT AND FUTURE SITES
6:00 p.m. Town Center Exhibit Area

Saper L. M. Allen C. C. Oehler D. Z.
Rover Exploration of Acidalia Mensa and Acidalia Planitia: Probing Mud Volcanoes to Sample Buried Sediments and Search for Ancient and Extant Life **[#1218]**
Mud volcanoes are provocative targets for exploration because they concentrate sedimentary materials from depth that are otherwise inaccessible to a rover. We propose a plan to explore possible mud volcanoes observed in Acidalia Planitia.

Schurmeier L. R. Heldmann J. L. Stoker C. McKay C. Davila A. Marinova M. Karcz J. Smith H. Wilhem M.
Characterization of a Mid-Latitude Ice-Rich Landing Site on Mars to Enable In Situ Habitability Studies **[#1271]**
We developed a set of criteria to rank landing sites for a Mars lander mission to study permafrost. We ranked sites based on the presence of polygonal ground, rock density and landing dangers seen in HiRISE images. An optimal landing site was found.

Weitz C. M. Bishop J. L.
Investigation of Layered Sediments at a Proposed Future Landing Site in Ladon Valles **[#1243]**
We have identified candidate rover traverses and scientific targets within two proposed landing ellipses at the distal end of Ladon Valles. Both sites would enable potential access to sedimentary units of diverse morphologies and mineralogies.

Ruff S. W.
Evidence for an Extended Carbonate-Bearing Unit in the Columbia Hills of Gusev Crater, Mars **[#2898]**
Spectra from Mini-TES reveal outcrops on Haskin Ridge and boulders from McCool Hill that are spectrally intermediate between those of olivine-rich Algonquin and carbonate-rich Comanche outcrops, consistent with a larger carbonate occurrence.

Cole S. B. Watters W. A. Squyres S. W.
Structure of Husband Hill and the West Spur of the Columbia Hills, Gusev Crater **[#1134]**
We measure bedding plane orientations of outcrops across the West Spur and Husband Hill. The measured dips are steeper than the local topography, and are consistent with the hypothesis that the exposures drape an underlying structure.

Watters W. A. Squyres S. W.
Pattern and Distribution of Shrinkage Fractures at Meridiani Planum **[#2915]**
We assess the significance of the pattern and distribution of shrinkage fractures at the Opportunity landing site in terms of the role of desiccation and mineral dehydration in the evolution of the Meridiani sandstones.

Li R. Wang W. Lin L. Gong W. Li D. Wu R. Meng X. Matthies L. H.
Recent Topographic Mapping of the NASA MER 2003 Opportunity Landing Site Using HiRISE and Rover Imagery **[#2385]**
This abstract presents recent high-precision mapping and localization efforts at the Mapping and GIS Laboratory of The Ohio State University for the NASA 2003 MER mission, particularly the Opportunity rover.

Shaw A. Arvidson R. E. Wolff M. J. Seelos F. P. Wiseman S. M. Cull S.
Determining Surface Roughness and Additional Terrain Properties: Using Opportunity Mars Rover Results to Interpret Orbital Data for Extended Mapping **[#1644]**
The Opportunity rover traverse is ideal for observing the relation between surface properties and orbital data because we have ground truth for a part of each orbital image. We use this information to make conclusions over extensive orbital coverage.

Fernando J. Schmidt F. Ceamanos X. Pinet P. C. Douté S. Daydou Y. Souchon A.
Martian Surface Photometry Properties from Orbit by CRISM/MRO at Gusev Crater and Meridiani Planum **[#1960]**
The physical parameters at the MER landing sites were estimated from retrieved surface BRDF by using CRISM multiangle images, correcting the atmospheric contributions and inverting the Hapke model. They were compared to Pancam photometric results.