

Tuesday, March 11, 2008
POSTER SESSION I: MARS STRATIGRAPHY AND SEDIMENTOLOGY
6:30 p.m. Fitness Center

Perl S. M. McLennan S. M. Athena Science Team

Comparison of Secondary Porosity and Permeability from Eagle to Victoria Craters, Meridiani Planum, Mars [#2246]

This paper describes secondary porosity in sedimentary rocks abraded by the Opportunity rover between Eagle and Victoria craters to help constrain permeability and the environment of groundwater flow.

Tobias M. Jones M. Tsang S. Annex A. Bodager C. Bori F. Eckert-Erdheim A. Guthrie S. Spencer M. Sweitzer-Lamme J. Williams L. H. Nackman J.

Thermal Modeling of Fluvial Sediments [#1220]

Using different size sediments from a terrestrial river system, we are developing thermal models that may allow us to identify fluvial systems on Mars. This project has been undertaken by the MONS team, a group of high school students from Durham, NC.

Herkenhoff K. E. Squyres S. W. Sullivan R. Arvidson R. E. Yingst A. Athena Science Team

Overview of Recent Athena Microscopic Imager Results [#2106]

Despite contamination suffered during the 2007 global dust storm on Mars, the Microscopic Imagers on the Mars Exploration Rovers continue to acquire interesting images. An overview of the results of the MI experiments will emphasize recent observations.

Yingst R. A. Crumpler L. S. Li R. Farrand W. H. Athena Science Team

Shape, Roundness and Texture of Particles along the Spirit Rover Traverse from Sol 450 to Sol 750 [#1867]

Particle morphologies can be assessed quantitatively and qualitatively to classify rock types. Here we assess the size, shape, roundness, and texture of particles along the Spirit rover traverse from sol 450 to sol 750.

Royer D. Burt D. M. Wohletz K. H.

The Mars Spherule Size Distribution and the Impact Hypothesis [#1013]

Opportunity Pancam images are used to determine the spherule size distributions from Endurance to Victoria. The Sequential Fragmentation/Transport model offers a coherent interpretation of these distributions implying formation by accretion.

Roach L. H. Mustard J. F. Murchie S. L. Aharonson O. Lowenstein T. Weitz C. M. Arvidson R. E.

Bishop J. L. Lewis K. W. Lichtenberg K. Seelos F. P. CRISM Science Team

Sulfate Mineral Stratigraphy in Valles Marineris Interior Layered Deposits [#1891]

Mineralogic, stratigraphic and tectonic study of exemplar sulfate-rich ILD in E Candor Chasma suggests either a complex evaporite sequence or kieserite formation with later atmospheric alteration to polyhydrated sulfate.

Le Deit L. Bourgeois O. Le Mouélic S. Mège D. Combe J.-Ph. Sotin C. Massé M.

Light-Toned Layers on Plateaus Above Valles Marineris (Mars) [#1740]

From HiRISE, CTX, HRSC and MOLA data, we perform a geological study of the sites where extensive covers of layered deposits crop out on plateaus above Valles Marineris in order to constrain their history and their relationship with ILDs.

Sowe M. Hauber E. Jaumann R. Neukum G.

Light-toned Layered Deposits of Chaotic Terrains on Mars [#1715]

Light-toned layered deposits in chaotic terrains were analysed using high-resolution images and elevation as formation hypotheses are discussed. We looked at morphology, thickness, elevation, and thermo-physical properties.

Massé M. Le Mouélic S. Bourgeois O. Combe J.-Ph. Le Deit L. Sotin C. Bibring J.-P. Gondet B. Langevin Y. OMEGA Team
Geological History of Aram Chaos (Mars) Based on Joint Mineralogical and Morphological Analysis [#1674]
OMEGA hyperspectral data indicate the presence of a layered cap containing sulfates and ferric oxides in Aram Chaos.

Rossi A. P. Pondrelli M. van Gasselt S. Zegers T. E. Hauber E. Neukum G.
Gale Crater Bulge: A Candidate Multi-Stage Large Spring Mound [#1611]
Light-toned deposits cropping out in Gale Crater (Mars) are analyzed here. We suggest that they have a local origin, possibly as a large multi-stage spring mound.

Fairén A. G. Davila A. F. Dupont L. G. Uceda E. R. Lim D. S. Amils R. McKay C. P.
A Cold and Wet Mars [#1453]
Here we consider the hypothesis that cold and hypersaline liquid solutions have been stable on the surface of Mars under subzero mean temperatures and for relatively extended periods of time, completing a hydrogeological cycle in a water-enriched but cold planet.

Fan C. Schulze-Makuch D. Fairén A. G. Wolff J. A.
A New Hypothesis for the Origin and Redistribution of Sulfates in the Equatorial Region of Western Mars [#1397]
We propose that sulfates formed as evaporites in Valles Marineris following the alteration of martian basaltic crust, were then elevated by the Tharsis uplift, and transported to deposit in Meridiani Planum by periodic outbursts of water.

Fan C. Schulze-Makuch D. Wolff J. A.
Cation Sources for the Sulfate Evaporites in Valles Marineris, Mars [#1965]
The cations of sulfate evaporites in Valles Marineris were derived from alteration of the ancient martian basaltic crust from a comparison of the chemical compositions of the bed-rocks at Gusev Crater and the layered deposits in Meridiani Planum.

Schon S. C. Fassett C. I. Head J. W. III
Meander Loops and Point Bar Sequences: Evidence of a Stable Delta Plain Environment in Jezero Crater [#1354]
Fluvial sedimentary features (meander loops, scroll bars, point bar sequences, and epsilon cross-bedding) indicate a stable delta plain environment persisted within the Jezero crater lacustrine system during an interval of the Noachian.