

Thursday, March 13, 2008

POSTER SESSION II: ANALOGS: METHODS AND INSTRUMENTS

6:30 a.m. Fitness Center

Sobron P. Acosta T. Vegas A. Rull F. Sanz A.

*Remote Raman Spectroscopy in Mars Analog Sites: Instrumentation for the Study of the Hydrology and the Mineralogy* [#1394]

Sulfates may play an important role in astrobiology related to the possibility of extinct/extant martian life. Research on sulfate Mars analogs is then crucial. We show the analysis of sulfates from martian analogs through remote Raman spectroscopy.

Sarrazin P. Brunner W. Blake D. Gailhanou M. Bish D. L. Vaniman D. T. Chipera S. J. Ming D. W. Steele A. Midtkandal I. Amundsen H. Peterson R.

*Field Studies of Mars Analog Materials Using a Portable XRD/XRF Instrument* [#2421]

CheMin is the X-ray diffraction instrument on the NASA Mars Science Laboratory rover. A portable instrument called Terra was based on CheMin. The CheMin Science Team uses Terra instruments to practice field mineralogy in Mars analog terrains.

Brown R. B. Holland D. McKellip R. Navard A. R.

*Creation of High Resolution Terrain Models of Barringer Meteorite Crater (Meteor Crater) Using Photogrammetry and Terrestrial Laser Scanning Methods* [#2453]

High resolution (2 m to 1 dm) DEMs of Meteor Crater's interior and western ejecta field in whole or in part were created at NASA SSC to support lunar surface analog modeling activities, using photogrammetric and ground-based laser scan techniques.

Wyatt M. B. Horodyskyj U. N. Kelley K. A. Neal K. M.

*Comparisons of TIR and LA-ICP-MS Derived Bulk Chemistries for Natural Surfaces of Igneous Rocks* [#2105]

Bulk chemistries of natural and fresh surfaces of Ferrar Dolerite are analyzed using LA-ICP-MS and compared to TIR derived data. We examine if TIR chemistries of natural surfaces are accurate indicators of chemical alteration processes.

Gomez-Ortiz D. Fernández-Remolar D. C. Prieto-Ballesteros O. Gomez-Gomez F.

*Resistivity Electrical Imaging Study of the Rio Tinto Mars Analog: Evidences for a Fault-Controlled Drainage Pattern* [#1129]

A resistivity survey carried out at the Rio Tinto Mars analog has allowed to confirm that subvertical faults control both the drainage pattern and the occurrence of acidic water springs. The method can be useful to characterize the martian aquifers.

Glass B. Christa S. Hanagud S. Statham S. Mukherjee S. Shirashi L. Paulsen G. Cohen J.

*Planetary Drilling Automation Blind Tests* [#2126]

Extending its prior Arctic test experience, the Drilling Automation for Mars Exploration project ran controlled, repeatable simulant tests. Material layers were kept from the drilling team in blind tests. DAME automation correctly responded to changes in drilling conditions.

Williamson M.-C. Germain M. Lavoie D. Gulick V. C.

*Comparative Geoscientific and Geomatic Analysis of Hydrothermal Zones in Volcanic Terrain on Earth and Mars* [#2188]

Preliminary results of a comparative analysis of volcanic terrains in the Canadian Arctic Islands and at Apollinaris Patera suggest the presence of complex features of similar scale and origin, the identification of which is facilitated by GIS applications.

Westall F. Demets R. Brandstetter F. Edwards H. G. M. Cockell C. S. Parnell J. Pillinger J.

Sancisi-Frey S. Franchi I. A. Kurat G. Brack A.

*STONE 6: Artificial Sedimentary Meteorites in Space* [#1538]

The STONE 6 experiment demonstrated the survivability of carbonaceous and microfossiliferous martian analogue sediments during atmospheric re-entry. Doped endoliths died but their carbonised cells remained.