Tuesday, March 13, 2007
POSTER SESSION I: MARS SCIENCE LABORATORY, PHOENIX, AND EXOMARS: SCIENCE, INSTRUMENTS, AND LANDING SITES
6:30 p.m. Fitness Center

Franz H. B. Mahaffy P. R. Farquhar J.
Preliminary Estimate of Sulfur Isotope Ratio Precision Expected with the Sample Analysis at Mars (SAM) Instrument Suite of the 2009 Mars Science Laboratory **[#1874]**
This presentation reports preliminary results of analysis to determine the sulfur isotope ratio precision expected with the Sample Analysis at Mars (SAM) quadrupole mass spectrometer.

Maurice S. Wiens R. C. Saccoccio M. Parès L. Kouach D. Barraclough B. Sallé B. Clegg S. M. ChemCam Team
Expected Performances of the ChemCam Instrument for the Mars Science Laboratory (MSL) Rover **[#1563]**
First end-to-end performances of a Laser Induced Breakdown Spectrocopy (LIBS) and micro-imaging instrument at remote distances, developed for the Mars Science Laboratory (MSL) at the surface of Mars.

Sirven J.-B. Sallé B. Mauchien P. Lacour J.-L. Maurice S. Manhès G. Wiens R. C. Clegg S. ChemCam Team
Rocks Identification at the Surface of Mars by Remote Laser-induced Breakdown Spectroscopy and Chemometrics **[#1565]**
In the framework of the ChemCam instrument development — part of the Mars Science Laboratory rover to be sent in 2009 — remote identification of martian rocks is performed through chemometric treatments of laser-induced breakdown (LIBS) spectra.

Clegg S. M. Wiens R. C. Dyar M. D. Vaniman D. T. Thompson J. R. Sklute E. C. Barefield J. E. Salle B. Sirven J.-B. Mauchien P. Lacour J.-L. Maurice S.
Sulfur Geochemical Analysis with Remote Laser Induced Breakdown Spectroscopy on the 2009 Mars Science Laboratory Rover **[#1960]**
This paper will discuss the capability to remotely detect sulfur with the ChemCam Laser Induced Breakdown Spectrometer (LIBS) on the Mars Science Laboratory Rover.

Wiens R. C. Maurice S. Clegg S. Vaniman D. Thompson J. Dyar M. D. Sklute E. Newsom H. Lanza N. Sautter V. Dubessy J. Boiron M. C. Fabre C. Lacour J.-L. Salle B. Mauchien P. Blaney D. Langevin Y. Herkenhoff K. Bridges N. Manhes G. ChemCam Team
Preparation of Onboard Calibration Targets for the ChemCam Instruments on the Mars Science Laboratory Rover **[#1180]**
Onboard calibration targets for LIBS and imaging are being prepared for the ChemCam on the 2009 Mars Science Laboratory (MSL) rover. LIBS standards include basalt glasses and ceramics consisting of mixtures of nontronite, anhydrite, and basalt.

Sklute E. C. Dyar M. D. Clegg S. M. Wiens R. C. Barefield J. E.
Laser Induced Breakdown Spectroscopy of Samples with Variable Composition **[#1949]**
The ChemCam instrument selected for the Mars Science Laboratory (MSL) includes a Laser Induced Breakdown Spectrometer (LIBS). This is a preliminary study that focuses on determining the correction factor for the chemical matrix effects for LIBS.

Blake D. F. Sarrazin P. Bish D. L. Chipera S. J. Vaniman D. T. Collins S. Elliott S. T. Yen A. S.
Progress in the Development of CheMin: A Definitive Mineralogy Instrument on the Mars Science Laboratory (MSL'09) Rover **[#1257]**
CheMin is an X-ray diffraction/X-ray fluorescence (XRD/XRF) instrument that has been chosen for the analytical laboratory of the Mars Science Laboratory (MSL '09). Progress in the development of the instrument and its performance on a variety of Mars analog rocks and soils will be presented.

Bish D. L. Blake D. Sarrazin P. Treiman A. Hoehler T. Hausrath E. M. Midtkandal I. Steele A.
Field XRD/XRF Mineral Analysis by the MSL CheMin Instrument **[#1163]**
The MSL CheMin instrument was deployed in the field during the 2007 Arctic Mars Analogue Svalbard Expedition, providing quantitative shipboard and real-time field X-ray diffraction analyses of 36 field samples.

Sarrazin P. Ming D. W. Morris R. V. Fernández-Remolar D. Amils R. Arvidson R. E.
Blake D. Bish D. L.
Mineralogical In-Situ Investigation of Acid-Sulfate Samples from the Rio Tinto River, Spain, with a Portable XRD/XRF Instrument **[#2147]**
The CheMin 4 XRD/XRF prototype was deployed in Rio Tinto, Spain, for a field campaign to study river bed sediments and test the potential of an instrument suite in an astrobiological investigation context for future Mars surface robotic missions.

Golombek M. Grant J. Vasavada A. R. Watkins M.
Landing Sites Proposed for the Mars Science Laboratory Mission **[#1392]**
Landing sites (33) were proposed and prioritized on the basis of their science potential at the First Mars Science Laboratory Landing Site Workshop. Orbiting spacecraft are imaging the sites before down-selection at the second workshop (October 2007).

Paris K. N. Allen C. C. Oehler D. Z.
Candidate Landing Site for the Mars Science Laboratory: Vernal Crater, S.W. Arabia Terra **[#1316]**
Vernal crater contains a variety of geologic features (revealing possible past aqueous activity) that would be easily accessible via rover because of a gentle slope within the crater.

Lanza N. L. Newsom H. Wiens R. Gilmore M. S.
What Part of Gullies are "Special," Implications for MSL Landing Sites **[#1926]**
We examine properties of gullies (a special region for planetary protection) relevant to landing site selection/exploration, taking into account gullies' scientific importance, planetary protection issues, MSL goals/instruments, and trafficability.

Gwinner K. Hauber E. Neukum G. Jaumann R. Scholten F. Oberst J.
Contribution of High Resolution Stereo Camera (HRSC) Data Analysis for Landing Site Selection on Mars **[#1685]**
We demonstrate the properties of High Resolution Stereo Camera (HRSC) DTM and slope data for one of the proposed MSL landing sites, and discuss results obtained from preliminary stereo analysis for most of the presently proposed MSL landing site candidates.

Litvak M. L. Kozyrev A. S. Malakhov A. V. Mitrofanov I. G. Mokrousov M. I. Sanin A. B.
Tretyakov V. I. Vostrukhin A.
Dynamic Albedo of Neutrons Instrument Onboard MSL Mission: Selection of Landing Site from HEND/Odyssey Data **[#1554]**
This abstract contains description of DAN instrument selected for MSL mission and results of analysis of prioritized landing site selections (First MSL Landing Site Workshop) based on HEND/Odyssey data.

Peters G. H. Mungas G. S. Bearman G. H. Beegle L. W. Smith J. A.
RASP Sample Acquisition on the Phoenix Mars Scout Mission **[#2008]**
Characterization of RASP sample acquisition on the Phoenix Mars Scout mission. Sublimation measurements of RASP-excavated permafrost samples.

Smith P. H. Tamppari L. K. Arvidson R. E. Boynton W. V. Phoenix Science Team
Phoenix Landing Site Selection Update **[#1176]**
Images returned by MRO's HiRISE instrument combined with THEMIS highttime IR maps have invigorated the search for a safe and scientifically important landing site.

Titus T. N. Prettyman T. H.
Thermal Inertia Characterization of the Proposed Phoenix Landing Sites **[#2088]**
We use Mars Global Surveyor (MGS) Thermal Emission Spectrometer (TES) temperature observations immediately following the springtime disappearance of seasonal CO_2 to estimate the thermal inertia and soil depth at the three proposed Phoenix landing sites, with a detailed focus on Sites A and B.

Biele J. Ulamec S. Spohn T. Mimoun D. Lognonné P. GEP Team
GEP-ExoMars: A Geophysics and Environment Observatory on Mars **[#1587]**
The Geophysical and Environmental Package (GEP) onboard ESA's ExoMars mission (launch 2013) is an autonomous station that will be described in detail here.

Marinangeli L. Hutchinson I. Baliva A. Stevoli A. Ambrosi R. Critani F. Delhez R. Scandelli L. Holland A. Nelms N. MARS-XRD Team
An European XRD/XRF Instrument for the ExoMars Mission **[#1322]**
MARS-XRD is a European X-ray diffractometer pre-selected for the ESA ExoMars mission. The innovative concept design is based on a fixed reflection geometry. Preliminary results have been obtained with a prototype developed in 2006 with an ESA contract.

Mimoun D. Lognonne P. Giardini D. Pike W. T. Christensen U. Van den Berg A. Schibler P. SEIS Team
The SEIS Experiment: A Planetary Seismometer for Mars . . . and the Moon **[#2204]**
The ExoMars GEP Seismometer will study the seismic activity of Mars and frequency of meteorites impacts. It is scheduled for launch on the 2013 ESA ExoMars Mission. With small adaptations, it also fits the investigation of lunar geophysical structure.