Tuesday, March 19, 2013 **[T615]**
POSTER SESSION: MARS SCIENCE LABORATORY:
INSTRUMENTS AND CALIBRATIONS
6:00 p.m. Town Center Exhibit Area

Buch A. Freissinet C. Szopa C. Glavin D. P. Coll P. et al. ***POSTER LOCATION #203***
Detection of Organics at Mars: How Wet Chemistry Onboard SAM Helps **[#1512]**
Sample analysis at Mars, on the Curiosity rover of the MSL mission, has two wet chemistry experiments onboard: derivatization and thermochemolysis.

Cabane M. Coll P. Szopa C. Coscia D. Buch A. et al. ***POSTER LOCATION #204***
Initial Performances/Observations/Results of the SAM Gas Chromatograph (SAM-GC) at Rocknest Site **[#2334]**
How the French contribution (a gas chromatograph) to the SAM suite of instruments is working at Mars, and how it is addressing the quest for organic matter.

Brunner A. E. Johnson M. S. Mahaffy P. M. Raaen E. Teinturier S. ***POSTER LOCATION #205***
SAGE and GATES: How SAM Scientists Analyze GCMS Data **[#2053]**
An overview of two data analysis software tools in use by the SAM team.

Wong M. H. LeFavor M. Newman C. Prats B. Kahanpää H. et al. ***POSTER LOCATION #206***
MSL/REMS Measurements of Conditions During MSL/SAM Atmospheric Ingestion Events **[#1697]**
Pressure/temperature measurements from REMS, at the times when SAM ingested samples of the Mars atmosphere in the first 100 sols of the MSL mission.

Rampe E. B. Bish D. L. Chipera S. J. Morris R. V. Achilles C. N. et al. ***POSTER LOCATION #207***
Detecting Nanophase Weathering Products with CheMin: Reference Intensity Ratios of Allophane, Aluminosilicate Gel, and Ferrihydrite **[#1188]**
We measured XRD patterns and RIRs of nanophase weathering products using the CheMinIV lab instrument to help constrain their abundances in Rocknest samples.

Vaniman D. T. Blake D. F. Morookian J. M. Yen A. S. Ming D. W. et al. ***POSTER LOCATION #208***
CheMin Instrument Performance and Calibration on Mars **[#1369]**
The CheMin X-ray diffraction and X-ray fluorescence instrument on Mars Science Laboratory has been performing within mission design requirements.

Achilles C. N. Morris R. V. Chipera S. J. Ming D. W. Rampe E. B. ***POSTER LOCATION #209***
X-Ray Diffraction Reference Intensity Ratios of Amorphous and Poorly Crystalline Phases: Implications for CheMin and the Mars Science Laboratory **[#3072]**
Amorphous phases, likely to be analyzed by the MSL CheMin XRD instrument, are characterized using the Reference Intensity Ratio (RIR) method.

Kinch K. M. Madsen M. B. Bell J. F. III Johnson J. R. Goetz W. et al. ***POSTER LOCATION #210***
Dust on the Curiosity Mast Camera Calibration Target **[#1061]**
Deposition of aeolian dust is monitored on Curiosity's Mast Camera calibration target. Magnets help to keep parts of the target dust-free.

Maki J. Culver A. Murdock R. Pariser O. Powell M. et al. ***POSTER LOCATION #211***
Mars Science Laboratory Navcam/Hazcam Operations and Results **[#1236]**
This paper describes the early results from the Mars Science Laboratory (MSL) Hazcam and Navcam instruments.

Edgett K. S. Yingst R. A. Minitti M. E. Robinson M. L. Kennedy M. R. et al. ***POSTER LOCATION #212***
Curiosity's Mars Hand Lens Imager (MAHLI): Initial Observations and Activities **[#1199]**
Viewing targets near and far, Curiosity's MAHLI was used for science and engineering support during the first 100 sols at the Gale Crater, Mars, field site.

Anderson R. C. Beegle L. W. Hurowitz J. A. Limonadi D. Jandura L. et al. ***POSTER LOCATION #213***
Results to Date for the Mars Science Laboratory Sample Acquisition, Sample Processing and Handling System (SA/SPaH) **[#1728]**
The MSL SA/SPaH subsystem is designed to acquire interior rock and soil samples and then process and distributed to the onboard analytical science payload.

Eigenbrode J. L. McAdam A. Franz H. Freissient C. Bower H. et al. ***POSTER LOCATION #214***
Fluorocarbon Contamination from the Drill on the Mars Science Laboratory: Potential Science Impact on Detecting Martian Organics by Sample Analysis at Mars (SAM) **[#1652]**
Teflon has been detected in rocks drilled during terrestrial testing of the MSL hardware. Complications to SAM experiments were studied.

Fabre C. Cousin A. Sirven J. B. Sautter S. Forni O. et al. ***POSTER LOCATION #215***
From Univariate Analyses of the Onboard Chemcam Calibration Targets to Estimates of Martian Rock and Soil Compositions **[#1170]**
This paper presents the potential of using the onboard ChemCam calibration targets to assess martian rock and soil compositions using univariate analysis.

Freissinet C. Buch A. Glavin D. P. Cabane M. Coll P. et al. ***POSTER LOCATION #216***
From Background to Signal: Challenges of a Solid Sample Analysis Using SAM GC-MS **[#1249]**
The identification of the compounds present in SAM background is necessary to perform qualitative and quantitative analysis of Mars solid samples.

Lasue J. Forni O. Anderson R. B. Berger G. Clegg S. M. et al. ***POSTER LOCATION #217***
Partial Least Squares Sensitivity Analysis and Improvements for ChemCam LIBS Data Analysis on Mars **[#2230]**
In this work, we report on the current status of the PLS technique used to quantify the elemental composition of ChemCam's targets.

Ehlmann B. L. Clegg S. M. Anderson R. B. Forni O. Lasue J. et al. ***POSTER LOCATION #218***
An Expanded Training Set for Processing of MSL ChemCam and LIBS Data: Spectral Library Samples Added and Effects on Elemental Composition Results from Mars **[#2600]**
Alkali volcanics, clay-bearing volcanics, and salt-bearing mixtures were measured to determine detectability thresholds and improve ChemCam geochemical results.

Langevin Y. Gondet B. Le Mouélic S. Gasnault O. Herkenhoff K. E. et al. ***POSTER LOCATION #219***
Processing Approaches for Optimal Science Exploitation of the Chemcam Remote Microscopic Imager (RMI) During the First 90 Days of Curiosity Operations **[#1227]**
The RMI camera of ChemCam uses a camera head inherited from the Rosetta mission. Specific processing approaches will be presented for optimal interpretation of the data.

Thompson L. M. King P. L. Burkemper L. Spray J. G. Yen A. S. et al. ***POSTER LOCATION #220***
BT-2 Calibration Target for Mars Science Laboratory Alpha Particle X-Ray Spectrometer: Characterization and Alkali Basalt Martian Analogue **[#2190]**
We describe the selection, context, and characterization of the APXS MSL calibration target and compare with initial MSL APXS rock analyses at Gale Crater.

Berger J. A. King P. L. Gellert R. Campbell J. L. Boyd N. et al. ***POSTER LOCATION #221***
MSL Titanium Observation Tray Measurements with APXS **[#1321]**
The MSL rover, Curiosity, has a titanium tray for APXS analyses of samples delivered to SAM and CheMin. We evaluate APXS spectra of samples on the Ti tray.

Campbell J. L. Berger J. A. Gellert R. King P. L. Perrett G. M. et al. ***POSTER LOCATION #222***
First Measurements of the MSL APXS Calibration Target on Mars **[#1506]**
Post-landing spectra of the APXS calibration target reveal contamination. Modeling of this material suggests that the lab calibration is largely unchanged.

Stein T. C. Arvidson R. E. ***POSTER LOCATION #223***
PDS Analyst's Notebook for MSL **[#1570]**
The Analyst's Notebook enriches MSL data archives to facilitate "mission replay."

Tao Y. Muller J.-P. ***POSTER LOCATION #224***
A Machine Vision Toolkit for MSL Imagery: Demonstration Using PIO Pictures **[#1573]**
We demonstrate here a layer and rock detection toolkit and how it may be used to collect and analyze key marker information about a particular scene from MSL imagery.