Tuesday, March 19, 2013 **[T617]**
POSTER SESSION: MARS SCIENCE LABORATORY: SOILS AND ROCKS
6:00 p.m. Town Center Exhibit Area

Lewin E. Ollila Toplitz Meslin P.-Y. Maurice S. et al. ***POSTER LOCATION #238***
Modal Mineralogy of Igneous Rocks with ChemCam at Gale Crater **[#3102]**
ChemCam spectra shot sequences give clues upon rock mineralogy.

Gasnault O. Forni O. Meslin P.-Y. Maurice S. Wiens R. C. et al. ***POSTER LOCATION #239***
ChemCam Target Classification: Who's Who from Curiosity's First Ninety Sols **[#1994]**
Compositions measured by ChemCam reveal multimodal distributions, suggesting the existence of several uniform groups. We confirm it with a clustering analysis.

Clegg S. M. Mangold N. Le Mouélic S. Olilla A. Anderson R. et al. ***POSTER LOCATION #240***
High Calcium Phase Observations at Rocknest with ChemCam **[#2087]**
ChemCam observed several Ca-rich phases at Rocknest that suggest the presence of anhydrite, phosphates such as apatite, and Ca-perchlorate.

Sautter V. Cousin A. Dromard G. Fabre C. Forni O. et al. ***POSTER LOCATION #241***
Is Bathurst Inlet Rock an Evidence of Explosive Volcanism in the Rocknest Area of Gale Crater? **[#1985]**
Bathurst Inlet, a fine-grained sandstone-like rock with K-rich basaltic composition, could be volcaniclastic, which may indicate explosive volcanism at Gale.

Bridges J. C. Schwenzer S. P. Westall F. Dyar M. D. ***POSTER LOCATION #242***
Gale Crater's Bathurst Inlet and Rocknest$_3$ Compositions **[#1973]**
Bathurst and Rocknest$_3$ in Gale Crater are low SiO_2, high Ni, derived from an olivine-rich, mildly alkaline basalt sediment source with little chemical weathering.

Tokar R. L. Wiens R. C. Maurice S. Lasue J. Johnson J. R. et al. ***POSTER LOCATION #243***
Searching for Chemical Variation Across the Surface of RockNest$_3$ Using MSL ChemCam Spectra **[#1283]**
MSL ChemCam LIBS spectra for the rock "RockNest$_3$" indicate either a fine-grained sediment or a homogenous tuff deposit, both with Ca-sulfate enrichment.

Blaney D. L. Anderson R. Berger G. Bridges J. C. Bridges N. T. et al. ***POSTER LOCATION #244***
Assessment of Potential Rock Coatings at Rocknest, Gale Crater with ChemCam **[#1568]**
ChemCam was used to investigate possible rock coatings at Gale Crater. Observed variations in CaO, Fe_2O_3, and SiO_2 may be associated with rock coatings.

Berger G. Blaney D. Bridges J. C Cousin A. Forni O. et al. ***POSTER LOCATION #245***
Possible Alteration of Rocks Observed by Chemcam Along the Traverse to Glenelg in Gale Crater on Mars **[#1502]**
The possibility that rocks and soils (90 first sols) have been altered is evaluated through the ChemCam observations and theoretical chemical considerations.

Lanza N. L. Anderson R. B. Blaney D. Bridges N. T. Clark B. et al. ***POSTER LOCATION #246***
Evidence for Rock Surface Alteration with ChemCam from Curiosity's First 90 Sols **[#1723]**
Here we present examples of chemical depth profiles obtained on rocks by ChemCam, some of which suggest the presence of surface alteration.

Cousin A. Wiens R. C. Sautter V. Mangold N. Fabre C. et al. ***POSTER LOCATION #247***
ChemCam Analysis on Jake Matijevic, Gale Crater **[#1409]**
Jake Matijevic is the first target analyzed by ChemCam and APXS, on sol 45/48. This study focuses on the ChemCam results, using several kinds of approaches.

Wong M. H. Atreya S. K. Mahaffy P. R. Trainer M. Franz H. et al. ***POSTER LOCATION #248***
MSL/SAM Measurements of Nitrogen and Argon Isotopes in the Mars Atmosphere **[#1712]**
Direct measurements of the martian atmosphere by the SAM mass spectrometer give a preliminary upper limit of 277 for the $^{14}N/^{15}N$-isotopic ratio.

Le Mouélic S. Gasnault O. Herkenhoff K. E. Langevin Y. Maurice S. et al. ***POSTER LOCATION #249***
Mars Imaging by the ChemCam Remote Microscopic Imager (RMI) Onboard Curiosity: The First Three Months **[#1213]**
This work presents the imaging capabilities of the ChemCam instrument onboard Curiosity, with examples of images, mosaics, colorized products, and 3-D reconstruction.

Bridges N. T. Le Mouélic S. Langevin Y. Herkenhoff K. E. Maurice S. et al. ***POSTER LOCATION #250***
Rock Abrasion Textures Seen by the ChemCam Remote Micro-Imager on MSL **[#1214]**
We summarize observations of ventifacts and abrasion textures seen by RMI through sol 100 of MSL's mission.

Johnson J. R. Wiens R. C. Maurice S. Bender S. DeFlores L. et al. ***POSTER LOCATION #251***
Chemcam Passive Reflectance Spectroscopy at Bradbury Landing, Mars **[#1372]**
The MSL ChemCam instrument has been successfully used to acquire high-spectral-resolution passive VIS/NIR reflectance spectra of surface dust, soils, and rocks.

Maurice S. Wiens R. C. Blaney D. Bridges J. C. Bridges N. T. et al. ***POSTER LOCATION #252***
Overview of 100 Sols of ChemCam Operations at Gale Crater **[#1979]**
The ChemCam instrument on MSL is performing very well at the surface of Mars. The first 100-sol dataset is rich of thousands of spectra and hundreds of images.

Ollila A. M. Newsom H. E. Wiens R. C. Lasue J. Clegg S. M. et al. ***POSTER LOCATION #253***
Early Results from Gale Crater on ChemCam Detections of Carbon, Lithium, and Rubidium **[#2188]**
Univariate calibration models were built from ChemCam calibration sets for C, Li, and Rb. Preliminary results from Gale Crater are presented.

Forni O. Gasnault O. Meslin P.-Y. Sautter V. Mangold N. et al. ***POSTER LOCATION #254***
Chemical Variability and Trends in ChemCam Mars Observations in the First 90 Sols Using Independent Component Analysis **[#1262]**
We apply a MVA technique, called independent component analysis, to analyse and decipher the chemical trends and variability of the 90 first sols ChemCam data.

Anderson R. B. Lasue J. Wiens R. C. Clegg S. M. Lanza N. L. et al. ***POSTER LOCATION #255***
Spectral Classification and Variability in ChemCam Data from Bradbury Landing to Rocknest **[#2750]**
Principal components analysis and k-means clustering are used to identify compositional trends in ChemCam data collected during the first 100 sols.

Newsom H. E. Berger J. Ollila A. Gordon S. Wiens R. C. et al. ***POSTER LOCATION #256***
Regional and Global Context of Soil and Rock Chemistry from Chemcam and Apxs at Gale Crater **[#1832]**
The first geochemical data from Curiosity reveals two different compositions, which may reflect the dichotomy between the SNC type and Adirondack type magmas.

de la Torre Juárez M. Ramos M. Sebastian E.
Armiens C. Gómez-Elvira J. et al. ***POSTER LOCATION #257***
Preliminary Interpretation of the REMS Ground Temperature Sensor in Gale: Exploring the Thermodynamic Processes Behind the Thermal Wave **[#2553]**
We explore the ground-temperature data from REMS on MSL to characterize their diurnal cycle and possible balances with solar radiation and air temperature.

Moersch J. Hardgrove C. J. Kah L. C. Gupta S. Tate C. et al. ***POSTER LOCATION #258***
Detection of Subsurface Vertical Geochemical Inhomogeneity with the MSL DAN Experiment: Modeling and Results from Bradbury Landing to Rocknest **[#1852]**
Early results from MSL DAN show evidence for buried enhancements in hydrogen. Closely spaced traverse measurements can reveal subsurface contact geometries.

Litvak M. L. Mitrofanov I. G. Behar A. Boynton W. V. DeFlores L. et al. ***POSTER LOCATION #259***
Estimation of Natural Neutron Emission from the Surface of the Gale Crater from the Ground Data from DAN and the Orbital Data from HEND **[#1864]**
Latest DAN/MSL estimations of water abundance at Gale Crater are compared with predictions obtained from orbital observations performed by HEND/Odyssey.

Kuzmin R. O. Mitrofanov I. G. Litvak M. L. Sanin A. B. Varenikov A. et al. ***POSTER LOCATION #260***
Searching for Correlation of the MSL DAN Active Measurement Results with Local Diversity of the Surface Micro-Morphology and Regolith Texture Along the Rover Curiosity Traverse **[#1484]**
Presented initial results of searching for correlation of MSL DAN active measurement with micromorphology and regolith texture along the Curiosity traverse.

Johnson J. R. Bell J. F. III Hayes A. G. Deen R. Godber A. et al. ***POSTER LOCATION #261***
Preliminary Mastcam Visible/Near-Infrared Spectrophotometric Observations at the Curiosity Landing Site, Mars **[#1374]**
The MSL Mastcam acquired multiple time-of-day images to investigate light scattering properties at multiple wavelengths within and outside the landing zone.

Bell J. F. III Godber A. Rice M. S. Fraeman A. A. Ehlmann B. L. et al. ***POSTER LOCATION #262***
Initial Multispectral Imaging Results from the Mars Science Laboratory Mastcam Investigation at the Gale Crater Field Site **[#1417]**
We report initial results of MSL/Mastcam 445-nm to 1013-nm multispectral imaging observations along the early Gale Crater traverse from Bradbury to Glenelg.

Lane M. D. ***POSTER LOCATION #263***
Testing a Technique for Identifying Olivine Composition from Remote Sensing Data: Awaiting Ground Truth from Gale Crater, Mars **[#2596]**
Gale's dark basalt dunes / Olivine index tested / Fo no. predicted.

Schieber J. Malin M. C. Olson T. S. Calef F. Comeaux K. et al. ***POSTER LOCATION #264***
The Final 2½ Minutes of Terror — What we Learned About the MSL Landing from the Images Taken by the MARDI Descent Imager **[#1260]**
MARDI imaging documents MSL interaction with atmosphere/winds and rocket exhaust modification of surface sediments and rocks at the landing site.