Thursday, March 23, 2017 **[R633]**
POSTER SESSION II: GEOCHEMICAL MEASUREMENTS FROM LANDED MISSIONS ON MARS
6:00 p.m. Town Center Exhibit Area

Navarro-Gonzalez R. Navarro K. F. Stern J. Sutter B. Archer D. et al. ***POSTER LOCATION #536***
Nitrogen Fixation Rate by Bolide Impacts in Martian Atmospheres Containing CO_2, N_2, and H_2. Implications to the Observed Nitrogen at Gale Crater **[#2169]**
Here we present the efficiency of different martian atmospheres to fix nitrogen at the time the Gale sediments formed.

Franz H. B. Trainer M. G. Malespin C. A. Mahaffy P. R.
Atreya S. K. et al. ***POSTER LOCATION #537***
Revised $^{40}Ar/^{14}N$ for the Martian Atmosphere Based on SAM Calibration Gas Cell Results **[#1449]**
Based on two in situ experiments with the onboard calibration cell, the SAM estimate of $^{40}Ar/^{14}N$ for the martian atmosphere has been revised to 0.38 +/- 0.02.

Suttter B. Archer D. Niles P. B. Stein T. C. Hamara D. et al. ***POSTER LOCATION #538***
Mars Phoenix Scout Thermal Evolved Gas Analyzer (TEGA) Database: Thermal Database Development and Analysis **[#2201]**
This process for obtaining useful thermal TEGA data from the PDS are described along with interpretation of unreported TEGA data of Phoenix landing site soils.

Malespin C. A. Freissinet C. Mahaffy P. R. Teinturier S.
Glavin D. P. et al. ***POSTER LOCATION #539***
The Sample Analysis at Mars (SAM) Wet Chemistry Experiment **[#2369]**
The SAM wet chemistry experiment uses onboard derivatization reagents to provide a new capability in the search for martian organics.

Beck P. Fau A. Meslin P.-Y. Forni O. Lasue J. et al. ***POSTER LOCATION #540***
Searching for Carbon on Mars with MSL/ChemCam **[#1216]**
We present a laboratory calibration of Carbon with LIBS and investigate potential signatures in the MSL/ChemCam dataset.

Perrett G. M. Schmidt M. E. Bradley N. Bray S. Campbell J. L. et al. ***POSTER LOCATION #541***
Dust Modelling on Martian Rock Surfaces Studied by the Mars Science Laboratory Alpha Particle X-Ray Spectrometer **[#1678]**
We modelled dust properties on rocks studied by MSL's APXS to improve understanding of the dust composition and back out bulk rock composition of dusty targets.

Bray S. L. Schmidt M. E. Bradley N. J. Perrett G. M. ***POSTER LOCATION #542***
Analysis of Rock Surface and Lighting Conditions on Dust Coverage Estimates on APXS Rock Targets in Gale Crater **[#1670]**
An examination of various rock surface and lighting conditions and the influence they have on dust coverage analysis done on APXS rock targets in Gale Crater.

Bradley N. J. Schmidt M. E. Bray S. L. Perrett G. M. ***POSTER LOCATION #543***
Determining Dust Coverages on Rocks from MAHLI Images: Methodology and APXS Comparison **[#1662]**
An analysis of APXS rock targets in Gale Crater to determine dust coverage estimates using various methodology. Dust coverages determined using MAHLI images.

Lasue J. Cousin A. Meslin P.-Y. Mangold N. Wiens R. C. et al. ***POSTER LOCATION #544***
What ChemCam's First Shots Tell Us About Martian Dust? **[#1397]**
The chemical composition of the martian fine dust component can be analyzed with the ChemCam instrument and compared to other measurements.

Oyen D. A. Lanza N. L. ***POSTER LOCATION #545***
Automatically Identifying Rock Coatings in Laboratory LIBS Data Using Machine Learning Algorithms **[#1479]**
LIBS data so big / How to spot rock coatings? / Use machine learning.

Vogt D. Rammelkamp K. Schröder S. Hübers H.-W. ***POSTER LOCATION #546***
Suitability of Molecular Emission in Laser-Induced Breakdown Spectroscopy for the Quantification of Chlorine Under Martian Conditions **[#1823]**
Molecular bands in LIBS spectra of 81 chlorine-bearing samples under martian conditions are analyzed. The suitability for chlorine quantification is discussed.

Goetz W. Payré V. Wiens R. C. Gasnault O. Gellert R. et al. ***POSTER LOCATION #547***
Detection of Copper by the ChemCam Instrument Along the Traverse of the Curiosity Rover, Gale Crater, Mars **[#2894]**
We examine ChemCam's ability to detect Cu and present its abundance along the rover's traverse since landing and until sol 1555 (December 20, 2016).

Payré V. Fabre C. Cousin A. Forni O. Mangold N. et al. ***POSTER LOCATION #548***
Copper Enrichments at Kimberley, Gale Crater, Mars **[#2097]**
This presents a copper LIBS calibration with ChemCam. The abundances provide a geological context to understand possible origins of Cu enrichments at Kimberley.

Lamm S. N. Lanza N. L. Frydenvang J. Gasda P. J. Wiens R. C. et al. ***POSTER LOCATION #549***
Recent Manganese Observations from the ChemCam Instrument in Gale Crater, Mars: Implications for Redox Environment **[#2668]**
Manganese oxides / In the Murray and Stimson / With ChemCam in Gale.

Payré V. Cousin A. Anderson D. E. Thomas N. H. Rapin W. et al. ***POSTER LOCATION #550***
Review of Trace and Minor Elements Analyzed by ChemCam: Detection and Quantification Using Laser Induced Breakdown Spectroscopy **[#1963]**
This abstract presents a review of minor and trace elements detected by LIBS and how the ChemCam team is quantifying them to assess their amount in Gale Crater.

Meslin P.-Y. Johnson J. R. Forni O. Beck P. Cousin A. et al. ***POSTER LOCATION #551***
Egg Rock Encounter: Analysis of an Iron-Nickel Meteorite Found in Gale Crater by Curiosity **[#2258]**
Analysis of the first centimeter-sized iron-nickel meteorite found at the surface of Mars reveals limited alteration and differential erosion of schreibersite.

Cousin A. Sautter V. Payré V. Forni O. Le Deit L. et al. ***POSTER LOCATION #552***
Classification of Igneous Rocks Analyzed by ChemCam at Gale Crater, Mars. **[#1941]**
Chemistry, mineralogy, texture, and petrology of the 59 igneous rocks analyzed by ChemCam (MSL), and comparison with the MER igneous rocks and Mars meteorites.

Clegg S. M. Anderson R. B. Forni O. Frydenvang J. Newsom H. et al. ***POSTER LOCATION #553***
Sulfur Chemical Analysis and Interpretation with ChemCam on the Curiosity Rover **[#2439]**
A new SO_3 calibration model for the LIBS technique used by the ChemCam instrument enables improved quantitative analysis of SO_3.

Gabriel T. S. J. Hardgrove C. Litvak M. Mitrofanov I.
Boynton W. V. et al. ***POSTER LOCATION #554***
Bulk Hydrogen Content of High-Silica Rocks in Gale Crater with the Active Dynamic Albedo of Neutrons Experiment **[#2875]**
We report the bulk hydrogen content of silicon-enriched materials along the rover traverse and introduce a new model to determine the depth of alteration.

Tate C. G. Moersch J. Ehresmann B. Jun I. Hardgrove C. et al. ***POSTER LOCATION #555***
Refined Water Equivalent Hydrogen Estimates Using Passive Data from the MSL Dynamic Albedo of Neutrons Experiment: Sols 0–753 **[#1455]**
We present refined DAN passive WEH estimates from Gale Crater floor units investigated during Curiosity's traverse to Mt. Sharp.

Martin A. C. Moersch J. E. Tate C. G. Perfect E. ***POSTER LOCATION #556***
Simulated MSL/DAN Neutron Die-Away Curves and Thresholds of Discrimination **[#2561]**
Neutron counts with DAN / How much water was on Mars? / Let's simulate it.