Tuesday, March 19, 2013 **[T616]**
POSTER SESSION: MARS SCIENCE LABORATORY:
THE ATMOSPHERE AND ENVIRONMENT
6:00 p.m. Town Center Exhibit Area

McCullough E. M. Moores J. E. Francis R. MSL Science Team ***POSTER LOCATION #225***
Inferences of Martian Atmospheric Dust and Water Ice Content Derived from Radiative Transfer Models of Passive MSL Observations by MastCam **[#1288]**
Bispectral MSL MastCam images of the martian sky are used with a radiative transfer model to infer the dust and ice water content of the martian atmosphere.

Harri A-M. Genzer M. Schmidt W. Gómez-Elvira J. Haberle R. M. et al. ***POSTER LOCATION #226***
Mars Science Laboratory (MSL) — First Results of Pressure and Humidity Observations **[#1482]**
The first results from the MSL REMS pressure and humidity observations and comparison of the measurements with modeling results.

Francis R. Moores J. Maki J. Choi D. McCullough E. et al. ***POSTER LOCATION #227***
Observations of Clouds and Winds Aloft at Gale Crater **[#1717]**
MSL's campaign of regular imaging of the atmosphere to study clouds, winds aloft, and atmospheric dynamics is described, along with some initial results.

Kahanpää H. de la Torre Juárez M. Moores J. Rennó N. Navarro S et al. ***POSTER LOCATION #228***
Convective Vortices in Gale Crater **[#3095]**
Sudden drops in atmospheric pressure, probably caused by dust devils or dustless convective vortices, have been detected by the REMS instrument onboard MSL.

Gómez-Elvira J. Armiens C. Carrasco I. Genzer M. Gómez F. et al. ***POSTER LOCATION #229***
Rover Environmental Monitoring Station. Overview of First 100 Sols on Mars **[#1532]**
Presentation of REMS instrument performance, and science findings during the first 100 sols of operations.

Atreya S. K. Squyres S. W. Mahaffy P. R. Leshin L. A. Franz H. B. et al. ***POSTER LOCATION #230***
MSL/SAM Measurements of Non-Condensable Volatiles in the Atmosphere of Mars -Possibility of Seasonal Variations **[#2130]**
MSL/SAM finds 30% lower N_2, 21% greater ^{40}Ar, and 40% lower N_2/Ar compared to Viking, which seem to be related to observing conditions, seasons, or both.

Webster C. R. Mahaffy P. R. Atreya S. K. Flesch G. J. Christensen L. E. et al. ***POSTER LOCATION #231***
Measurements of Mars Methane at Gale Crater by the SAM Tunable Laser Spectrometer on the Curiosity Rover **[#1366]**
We report on the non-detection of methane in the martian atmosphere using SAM's Tunable Laser Spectrometer (TLS) on the Curiosity Rover.

Franz H. B. Stern J. C. Raaen E. Trainer M. G. Wong M. H. et al. ***POSTER LOCATION #232***
Preliminary Results for the Isotopic Composition of Martian Atmospheric CO_2 as Determined with the Sample Analysis at Mars (SAM) Quadrupole Mass Spectrometer **[#2057]**
We present measurements of the martian atmospheric CO_2 composition obtained with SAM's quadrupole mass spectrometer during Curiosity's first 100 sols on Mars.

Conrad P. G. Malespin C. Manning H. Schwenzer S. P. Atreya S. K. et al. ***POSTER LOCATION #233***
Heavy Noble Gas Measurements on Mars with SAM **[#2149]**
Here we discuss the Sample Analysis at Mars experimental approach to the measurement of heavy noble gases Xe and Kr.

Ehresmann B. Hassler D. M. Wimmer-Schweingruber R. F.
Zeitlin C. Boettcher S. et al. ***POSTER LOCATION #234***
Analyzing the Present-Day Martian Radiation Environment with MSL/RAD — Implications for Differences in the Early-Mars Period **[#2324]**
A radiation environment has a significant influence on chances for an emergence of life. What indications can be gained from present-day measurements on Mars?

Wimmer-Schweingruber R. F. Hassler D. M. Böttcher S. I.
Martin C. Zeitlin C. et al. ***POSTER LOCATION #235***
Onset Times of Solar Particle Events Observed by MSL/RAD — Constraints on Particle Transport **[#1450]**
En route to Mars, MSL's RAD was already operational and observed a number of solar particle events. We report on a preliminary analysis of their onset times.

Jun I. Mischna M. Tate C. Behar A. Boynton W. V. et al. ***POSTER LOCATION #236***
Neutron Background Environment Measured by the Mars Science Laboratory's (MSL) Dynamic Albedo of Neutrons (DAN) Instrument During the First 100 Sols **[#1608]**
Neutron background measurement from MSL's DAN instrument during the first 100 sols is described.

Tate C. G. Moersch J. Jun I. Hardgrove C. J. Michna M. et al. ***POSTER LOCATION #237***
Diurnal Variations in MSL DAN Passive Measurements with Atmospheric Pressure and Soil Temperature **[#1601]**
Modelling and investigation of the effects of atmospheric pressure and soil temperature changes on MSL DAN passive measurements.