

Tuesday, March 19, 2013

[T618]

POSTER SESSION: MARS SCIENCE LABORATORY: RESULTS FROM ROCKNEST**6:00 p.m. Town Center Exhibit Area**

- Hamilton V. E. Vasavada A. R. Haberle R. M.
de la Torre Juárez M. Zorzano-Mier M.-P. et al. **POSTER LOCATION #265**
[Preliminary Results from the Mars Science Laboratory REMS Ground Temperature Sensor at Rocknest](#) [#1364]
The MSL REMS ground temperature sensor (GTS) provides insight into the thermophysical properties of the surface materials observed along the rover's traverse.
- Treiman A. H. Bish D. L. Ming D. W. Morris R. V. Schmidt M. E. et al. **POSTER LOCATION #266**
[Basaltic Soil of Gale Crater: Crystalline Component Compared to Martian Basalts and Meteorites](#) [#1113]
Crystalline material in Gale Crater eolian fines is similar to that in martian basalts and meteorites, especially the Adirondack-type basalts of Gusev Crater.
- Yen A. S. Gellert R. Clark B. C. Ming D. W. King P. L. et al. **POSTER LOCATION #267**
[Evidence for a Global Martian Soil Composition Extends to Gale Crater](#) [#2495]
Martian basaltic fines appear to be a distinct global unit. MSL results from soil analyses within Gale Crater can be applied at the planetary scale.
- Yingst R. A. Edgett K. S. Hamilton V. E. Kah L. C. Rowland S. K. et al. **POSTER LOCATION #268**
[A Preliminary Assessment of Sub-mm Spherules at Rocknest, Gale Crater, Mars](#) [#1257]
Round, glassy spherules / Impact melt? Volcanic glass? / Or just some marbles?
- Fisk M. Popa R. Meslin P.-Y. Lasue J. Mangold N. et al. **POSTER LOCATION #269**
[Missing Components in Chemical Profiles of a Sand Drift in Gale Crater](#) [#2156]
Chemical analysis of sand at Rocknest suggests that CaO is associated with a component, possibly sulfate, that is not quantified by ChemCam.
- Sullivan R. Goetz W. Hallet B. Madsen M. B. Roland S. et al. **POSTER LOCATION #270**
[Wind-Driven Evolution of Martian Near-Subsurface Regolith](#) [#2198]
MSL observations of "Rocknest" regolith similar to MER sites suggest grain size-frequency has evolved via wind to an end state that might be common across Mars.
- Leshin L. A. Grotzinger J. P. Blake D. F. Edgett K. S. Gellert R. et al. **POSTER LOCATION #271**
[Integrated Results from Analysis of the Rocknest Aeolian Deposit by the Curiosity Rover](#) [#1774]
An integrated view of the results of the comprehensive analysis of the fines from the Rocknest aeolian deposit, including results from many MSL instruments.
- Archer P. D. Jr Franz H. B. Sutter B. McAdam A. Ming D. W. et al. **POSTER LOCATION #272**
[Abundances of Volatile-Bearing Species from Evolved Gas Analysis of Samples from the Rocknest Aeolian Bedform in Gale Crater](#) [#1720]
Molar abundances of volatile species outgassed during pyrolysis of Rocknest aeolian bedform material by the Sample Analysis at Mars instrument suite on MSL.
- Sutter B. Archer D. McAdam A. Franz H. Ming D. W. et al. **POSTER LOCATION #273**
[Detection of Evolved Carbon Dioxide in the Rocknest Eolian Bedform by the Sample Analysis at Mars \(SAM\) Instrument at the Mars Curiosity Landing Site](#) [#2095]
The (SAM) instrument detected four releases of carbon dioxide from the Rocknest eolian bedform material. Possible sources will be discussed.

Wray J. J. Archer P. D. Jr. Brinckerhoff W. B.
Eigenbrode J. L. Franz H. B. et al. **POSTER LOCATION #274**
[The Search for Ammonia in Martian Soils with Curiosity's SAM Instrument](#) [#2942]
Curiosity's first evolved gas analysis of martian soil showed a release of particles with mass 15, to which NH^+ fragments from ammonia may contribute.

Navarro-González R. Stern J. Sutter B. Archer D. McAdam A. et al. **POSTER LOCATION #275**
[Possible Detection of Nitrates on Mars by the Sample Analysis at Mars \(SAM\) Instrument](#) [#2648]
The SAM Instrument data is analyzed to search for the possible presence of nitrates in the global dust collected from the Rocknest location at Gale Crater.

Stern J. C. McAdam A. C. Archer P. D. Jr. Bower H. Buch A. et al. **POSTER LOCATION #276**
[Carbon Isotopic Composition of \$\text{CO}_2\$ Evolved During Perchlorate-Induced Reactions in Mars Analog Materials: Interpreting SAM/MSL Rocknest Data](#) [#2654]
 CO_2 from pyrolysis of Rocknest samples at Gale Crater represent a mixture of sources, including carbon from perchlorate-induced combustion of organics.

Sutter B. Archer D. Ming D. W. Eigenbrode J. L. Franz H. et al. **POSTER LOCATION #277**
[The Detection of Evolved Oxygen from the Rocknest Eolian Bedform Material by the Sample Analysis at Mars \(SAM\) Instrument at the Mars Curiosity Landing Site](#) [#2046]
The SAM instrument onboard the Curiosity rover detected an O_2 gas release from the Rocknest eolian bedform. Possible O_2 producing phases will be discussed.

Eigenbrode J. L. Glavin D. Coll P. Summons R. E. Mahaffy P. et al. **POSTER LOCATION #278**
[Detection of Organic Constituents Including Chloromethylpropene in the Analyses of the Rocknest Drift by Sample Analysis at Mars \(SAM\)](#) [#1666]
SAM detected hydrocarbons in gases thermally evolved from the Rocknest drift sample. The nature and possible sources are discussed.

Steininger H. Goesmann F. Goetz W. **POSTER LOCATION #279**
[Pyrolysis of Organic Material and Perchlorate](#) [#2004]
The discovery of chloromethanes with SAM makes it necessary to find a chemical pathway to create this compound during pyrolysis of organics and perchlorates.

McAdam A. C. Franz H. Archer P. D. Jr. Freissinet C. Sutter B. et al. **POSTER LOCATION #280**
[Insights into the Sulfur Mineralogy of Martian Soil at Rocknest, Gale Crater, Enabled by Evolved Gas Analyses](#) [#1751]
MSL SAM analyses of Rocknest soil fines have enabled the first detection of SO_2 and H_2S evolved from in situ thermal analysis of martian surface materials.