Tuesday, March 22, 2016

MARTIAN MINERALOGY ON THE SURFACE AND FROM ORBIT
8:30 a.m.   Waterway Ballroom 6

Chairs: Abigail Fraeman
Damien Loizeau

8:30 a.m.   Milliken R. E. *   Hurowitz J. A.   Bish D. L.   Grotzinger J. P.   Wiens R.
The Chemical and Mineralogical Stratigraphy of Lower Mt. Sharp: Relating Rover Observations to Orbital Predictions [1495]
Integrated analysis of rover data reveals important links to predicting geologic processes from orbit.

8:45 a.m.   Fraeman A. A. *   Ehlmann B. L.   Arvidson R. E.   Edwards C. S.   Grotzinger J. P. et al.
The Stratigraphy and Evolution of Lower Mt. Sharp from Spectral, Morphological, and Thermophysical Orbital Datasets [2224]
We generate a refined stratigraphy of Mt. Sharp using orbital geologic and spectral mapping. Results provide insights into its formation and evolution.

ChemCam Investigation of the Pahrump Hills Drill Sites [1767]
What can ChemCam say / About the rocks that were drilled / At the Pahrump Hills.

Reactions Involving Calcium and Magnesium Sulfates as Potential Sources of Sulfur Dioxide During MSL SAM Evolved Gas Analyses [2277]
Sulfates expected to evolve SO2 at temperatures above the SAM range may produce SO2 at lower temperatures due to interactions with other phases during heating.

9:30 a.m.   Hanley J. *   Horgan B.
A Novel Method to Remotely Sense Martian Chlorine Salts [2983]
We explain a new method for systematically detecting chlorine salts by remote sensing.

Potential Link Between High-Silica Diagenetic Features in Both Eolian and Lacustrine Rock Units Measured in Gale Crater with MSL [1675]
Ancient Gale lake bed / Linked to Gale sandstone by same / Diagenesis?

10:00 a.m.   Sun V. Z. *   Milliken R. E.   Robertson K. M.
Hydrated Silica on Mars: Relating Geologic Setting to Degree of Hydration, Crystallinity, and Maturity Through Coupled Orbital and Laboratory Studies [2416]
Spectral variations in hydrated silica are strongly linked to geomorphologic setting globally across Mars and may reflect formation or diagenetic conditions.

10:15 a.m.   Farrand W. H. *   Rogers A. D.   Wright S. P.   Glotch T. D.
Partially Devitrified Glass as a Component of the Martian Surface Layer: Thermal Infrared Evidence [1956]
Partially devitrified volcanic glass sample spectra were used in modeling of TES Mars surface spectra and form a significant fraction of the Mars surface layer.

Mineralogy of Layered Outcrops at Mawrth Vallis and Implications for Early Aqueous Geochemistry on Mars [1332]
New imagery at Mawrth Vallis enabled a refined stratigraphy including five mineralogical units mapped with HRSC and HiRISE DTM's and a wider grasp of geochemistry.
10:45 a.m. Loizeau D. * Carter J. Millot C. Flahaut J. Quantin C. et al. *Extended Aqueous Surface Weathering South of Coprates Chasma, Mars [2280]*
Pedogenic clay sequences are studied on the plateau south of Coprates Chasma, Mars. Age and thickness are evaluated.

11:00 a.m. Pan L. * Ehlmann B. L. Carter J. Ernst C. M. *The Stratigraphy of the Northern Plains Inferred from Mineralogy of Impact Craters [2338]*
Widespread mafic and hydrated minerals have been detected in craters using CRISM at different depths of the stratigraphy within the northern plains of Mars.

Detailed mineral mapping from Isidis to Hellas Basin reveals low-temperature metamorphism in the crust and carbonate associated with large impact basins.

The current work is directed towards shedding light on the origin and timing of aqueous alteration processes at Bradbury Crater on Mars.