

Thursday, March 23, 2017

[R553]

**RED ROVERS, RED ROVERS, SEND DATA RIGHT OVER:  
IN SITU OBSERVATIONS AND TERRESTRIAL STUDIES TO EXPLAIN THEM  
1:30 p.m. Waterway Ballroom 4**

**Chairs: Sally Potter McIntyre  
Albert Yen**

- 1:30 p.m. Arvidson R. E. \* Squyres S. W. Athena Science Team  
[Recent Results from the Opportunity Rover's Exploration of Endeavour Crater, Mars](#) [#1149]  
Recent results from Opportunity's exploration of Endeavour's rim are covered, focusing on evidence for aqueous alteration in Marathon Valley and points south.
- 1:45 p.m. Farrand W. H. \* Johnson J. R. Bell J. F. III Mittlefehldt D. W. Gellert R. et al.  
[Pancam Multispectral and APXS Chemical Examination of Rocks and Soils in Marathon Valley and Points South Along the Rim of Endeavour Crater](#) [#2453]  
Pancam multispectral and APXS chemical analyses made by Opportunity in Marathon Valley and further south along the rim of Endeavour Crater are described.
- 2:00 p.m. Yen A. S. \* Ming D. W. Gellert R. Mittlefehldt D. W. Rampe E. B. et al.  
[Acidic Fluids Across Mars: Detections of Magnesium-Nickel Sulfates](#) [#2553]  
In-situ detections of Mg-Ni sulfates at Gale Crater, Meridiani Planum, and Gusev Crater indicate a history of acidic alteration at all three landing sites.
- 2:15 p.m. Siebach K. L. \* McLennan S. M. Fedo C. M.  
[Geochemistry of the Stimson Sandstone, Gale Crater, Mars](#) [#2499]  
The chemistry of / Gale Stimson sandstone is near / Average Mars basalt.
- 2:30 p.m. Hausrath E. M. \* Ming D. W. Peretyazhko T. Rampe E. B.  
[Using Reactive Transport Modeling to Understand Formation of the Stimson Sedimentary Unit and Altered Fracture Zones at Gale Crater, Mars](#) [#2420]  
Reactive transport modeling of the Stimson sedimentary unit and altered fracture zones places constraints on past aqueous alteration at Gale Crater, Mars.
- 2:45 p.m. Gasda P. J. \* Haldeman E. B. Wiens R. C. Rapin W. Bristow T. et al.  
[The Distribution of Boron in Veins in Gale Crater with Implications for Mars Aqueous Processes and Astrobiology](#) [#1539]  
Boron detected in Gale Crater with ChemCam sheds light on habitability of post-lake groundwater and its interaction with clay in the bedrock.
- 3:00 p.m. Vaniman D. T. \* Martínez G. M. Rampe E. B. Bristow T. F. Blake D. F. et al.  
[Calcium Sulfates at Gale Crater and Limitations on Gypsum Stability](#) [#1661]  
Anhydrite, bassanite, and gypsum are observed in XRD analyses at Gale Crater, often in three-phase association that may represent incomplete gypsum dehydration.
- 3:15 p.m. Fraeman A. A. \* Arvidson R. E. Fox V. K. Horgan B. H. Johnson J. R. et al.  
[The Distribution of Iron Oxides in Lower Mt. Sharp and Implications for Past Aqueous Conditions](#) [#2185]  
We use Curiosity and orbital data to study the distribution of iron oxides in Mt. Sharp and discuss implications for formation.
- 3:30 p.m. Nie N. X. \* Dauphas N. Morris R. V.  
[Clues on Acid-Sulfate Alteration and Hematite Formation on Earth and Mars from Iron Isotope Analyses of Terrestrial Analogues from Hawaii](#) [#2802]  
Hematite spherules from Hawaii and from Mars may have formed in very similar ways.

- 3:45 p.m. Martin P. E. \* Farley K. A. Cohen B. A. Mahaffy P. R. Malespin C. A. et al.  
[Young K-Ar Age of Jarosite in the Mojave 2 Sample at Gale Crater, Mars](#) [#1531]  
A bulk K-Ar age of 1.48 [+0.94, -0.48] Ga was obtained on the volatile components of a sample by MSL; detrital plagioclase was dated to 4.04 [+0.32, -0.34] Ga.
- 4:00 p.m. Potter-McIntyre S. L. \* McCollom T. M.  
[Jarosite in Ancient Terrestrial Rocks: Implications for Understanding Mars Diagenesis and Habitability](#) [#1237]  
Jurassic sandstones contain jarosite-alunite cements similar to the stratified deposits on Mars, which may have had more neutral fluids than previously assumed.
- 4:15 p.m. Cavanagh P. D. \* Bramble M. S. Pratt L. M.  
[Efflorescence of Gypsum and Jarosite During Exposure of Sulfidic Lacustrine Sediment, Western Greenland](#) [#2677]  
Sulfidic lake sands / Oxidize to jarosite / Relevant to Mars.
- 4:30 p.m. Berger J. A. \* Schmidt M. E. Flemming R. L. Gellert R. Morris R. V. et al.  
[Hawai'i and Gale Crater: A Mars Analogue Study of Igneous, Sedimentary, Weathering, and Alteration Trends in Geochemistry](#) [#2273]  
Alteration, weathering, and sedimentary mixing of basaltic and alkalic rocks on Maunakea and Kohala are a window into Gale Crater processes.