Thursday, March 22, 2018
MARS ROVER RESULTS I: DEPOSITIONAL AND ENVIRONMENTAL HISTORY
1:30 p.m.   Waterway Ballroom 4

Chairs:  
Kristen Bennett
Lauren Edgar

1:30 p.m.   Fraeman  A. A. *  Edgar  L. A.  Grotzinger  J. P.  Vasavada  A. R.  Johnson  J. R.  et al.  
Curiosity’s Investigation at Vera Rubin Ridge [#1557]
Overview of Curiosity’s campaign at Vera Rubin Ridge. What we’ve learned about its deposition, subsequent alteration, and past redox conditions.

1:45 p.m.   Edgar  L. A. *  Fraeman  A. A.  Gupta  S.  Fedo  C. M.  Grotzinger  J. P.  et al.  
Sedimentology and Stratigraphy Observed at Vera Rubin Ridge by the Mars Science Laboratory Curiosity Rover [#1704]
Overview of sedimentary facies and stratigraphic trends at Vera Rubin Ridge using data from the MSL Curiosity rover.

2:00 p.m.   L’Haridon  J. *  Mangold  N.  Rapin  W.  Cousin  A.  Johnson  J. R.  et al.  
Diagenetic Iron Enrichments Observed by ChemCam on Vera Rubin Ridge, Gale Crater, Mars [#1333]
Iron enrichments associated with diagenetic features were observed by ChemCam on Vera Rubin Ridge, where orbital data (CRISM) showed a hematite signature.

2:15 p.m.   Frydenvang  J. *  Mangold  N.  Wiens  R. C.  Clark  B. C.  Fraeman  A. A.  et al.  
Geochemical Variations Observed with the ChemCam Instrument on Vera Rubin Ridge in Gale Crater, Mars [#2310]
ChemCam geochemistry observations on Vera Rubin Ridge show considerable shifts in major and minor elements compared to the underlying Murray formation bedrock.

2:30 p.m.   Thompson  L. M. *  Fraeman  A. A.  Berger  J. A.  Boyd  N. I.  Desouza  E.  et al.  
APXS Determined Chemistry of the Vera Rubin (Hematite) Ridge, Gale Crater, Mars: Implications for Hemitite Signature Origin [#2826]
APXS compositional data acquired since climbing onto Vera Rubin Ridge, Gale Crater, Mars provides insight into possible ridge formation processes.

2:45 p.m.   Fox  V. K. *  Bennett  K. A.  Vasavada  A. R.  Stack  K. M.  Ehlmann  B. L.  
The Clay-Bearing Unit of Mount Sharp, Gale Crater, I: Orbital Perspective and Initial Results [#1728]
The Curiosity rover will explore a layer in Mount Sharp with an orbital spectral signature indicating the presence of smectite clays and make in-situ observations.

The Clay-Bearing Unit in Gale Crater II: Plans for the Investigation of the Clay-Bearing Unit by the Curiosity Rover [#1277]
The plans for the upcoming investigation of the clay-bearing unit by the Curiosity rover.

3:15 p.m.   Squyres  S. W. *  Arvidson  R. E.  Golombek  M.  Fraeman  A.  Lamb  M.  et al.  
Opportunity’s Exploration of Perseverance Valley [#1758]
Recent results from Opportunity’s exploration of Perseverance Valley, a fluid-carved gully on Mars.

3:30 p.m.   Arvidson  R. E. *  Athena Science Team  
Stone Stripes Observed by the Opportunity Mars Rover in Perseverance Valley, Cape Byron, Endeavour Crater [#1517]
Stone stripes observed by Opportunity in Perseverance Valley are similar to stone stripes formed in periglacial environments on Earth during freeze-thaw cycles.
3:45 p.m. Sullivan R. * Golombek M. Herkenhoff K. Athena Science Team
*Multiple Working Hypotheses at Perseverance Valley: Fracture and Aeolian Abrasion [#2516]*
Multiple working hypotheses for the origin of the Perseverance Valley trough system include the effects of faulting and aeolian abrasion.

4:00 p.m. Parker T. J. * Golombek M. P. Athena Science Team
*Origin of Perseverance Valley by Spillover of a Small Lake [#2623]*
Perseverance Valley is a 180 m channel that suggests fluid flow through a notch in the rim of Endeavour Crater from a small lake draining through the notch.

4:15 p.m. Hughes M. N. * Arvidson R. E. Grant J. A. Wilson S. A. Howard A. D.
*Degradation of Endeavour Crater Based on Orbital and Rover-Based Observations Together with Landscape Evolution Modeling [#1563]*
Landscape evolution modeling shows Endeavour experienced early fluvial erosion followed by mass wasting and diffusion, and ongoing aeolian erosion/deposition.

4:30 p.m. Bouchard M. C. * Jolliff B. L.
*Rock Suites of Endeavour Crater, Mars: Comparing Perseverance Valley to the Floor of Spirit of St. Louis Crater [#2590]*
The geochemistry of the material in Perseverance Valley is highly similar to the floor of Spirit of St. Louis Crater.