Wednesday, March 21, 2012
ROVING ON MARS: CURRENT AND FUTURE SITES
1:30 p.m. Waterway Ballroom 6

Chairs: **Matthew Golombek**
Paul Niles

1:30 p.m. Squyres S. W. * Athena Science Team
Initial Opportunity Rover Results at Endeavour Crater, Mars **[#1892]**
Initial findings from the Mars Exploration Rover Opportunity at Endeavour Crater include a variety of impact breccias in the crater rim, and gypsum veins emplaced by aqueous fluids.

1:45 p.m. Crumpler L. S. * MER Science Team
Field Geologic Context of Gypsum Veins and Impactites on the Rim of Endeavour Crater, Cape York, MER Opportunity Rover **[#1258]**
Rocks at the geologic unconformity between the rim of Endeavour crater and the Meridiani plains are separated significantly within the global stratigraphic sequence. We now have direct outcrop evidence of conditions existing early in martian geologic time.

2:00 p.m. Herkenhoff K. E. * Ashley J. W. Johnson J. R. Parker T. J. Athena Science Team
Recent Athena Microscopic Imager Results **[#2802]**
The Mars Exploration Rover Opportunity arrived at the rim of Endeavour Crater in August 2011. This presentation summarizes Opportunity Microscopic Imager observations of ejecta, bedrock, a gypsum vein, and other materials in the crater rim rocks.

2:15 p.m. Farrand W. H. * Johnson J. R. Bell J. F. III Rice M. S.
Visible and Near Infrared Spectral Classes of Rocks Observed at Cape York, Endeavour Crater, Mars **[#2280]**
VNIR spectral classes of rocks observed on the rim of Endeavour crater by Opportunity's multispectral Pancam are described. These spectral classes include those indicative of basaltic compositions, and some unlike previously observed rock spectra.

2:30 p.m. Golombek M. P. *
Timescale of Small Crater Modification on Meridiani Planum, Mars **[#2267]**
Field observations by the Opportunity rover and HiRISE images of small craters on Meridiani Planum, Mars, yields a timescale for their formation (10 yr to 10 Ma) based on crater retention age, modification by granule ripples, and degradational state.

2:45 p.m. Bustard A. * Elliott B. E. Spray J. G. Thompson L. M.
Crater Count Mapping and Regional Geologic Context of the Area Surrounding the Gale Impact Structure, Mars **[#2297]**
Crater counting has been employed to understand the regional geologic context of a 500,000-square-kilometer area surrounding Gale Crater. The goal is to place the Gale landing site in a broader setting to complement results obtained from focused MSL rover activities.

3:00 p.m. Calef F. J. III * Day M. Buhler P. Grotzinger J. P.
Small Crater Ejecta Retention Ages Inside Gale Crater: Recent Erosional History and Potential Sampling Locations for the Mars Science Laboratory **[#2674]**
We recorded all fresh craters with ejecta or blocks outside their crater rim within or near the MSL Gale landing ellipse in a GIS. Ejecta retention rates are <10 m.y. for craters D < 100 m. These craters would be ideal for sample acquisition by MSL.

3:15 p.m. Silvestro S. * Vaz D. A. Rossi A. P. Flahaut J. Fenton L. K. Ewing R. Geissler P. E.
Active Aeolian Processes Along Curiosity's Traverse in Gale Crater **[#1804]**
In this report we demonstrate that aeolian activity is quite vigorous within the landing ellipse of the MSL mission, by describing and quantifying a variety of aeolian modifications to several dunes located in the NW portion of Gale Crater's floor.

3:30 p.m. Poulet F. * Carter J.
Mineral Abundances of the Final Four MSL Landing Sites and Implications for Their Formation **[#1397]**
We present the modal mineralogy of the major phyllosilicate-bearing deposits of the final four MSL landing sites derived from the modeling of CRISM spectra using a radiative transfer model and then discuss the implications for their formation processes.

3:45 p.m. Fergason R. L. *
Surface Properties of the Mars Science Laboratory Landing Site Gale Crater: Characterization from Orbit and Predictions **[#2606]**
This work integrates a variety of data sets to identify and assess surface materials within the MLS Gale landing ellipse and surrounding region, and to determined how thermophysical variations correspond to morphology, and when applicable mineralogical diversity.

4:00 p.m. Putzig N. E. * Campbell B. A. Phillips R. J. Mellon M. T.
SHARAD Sounding and Surface Roughness of Once and Future Mars Landing Sites **[#2864]**
The Shallow Radar instrument on MRO maps out likely subsurface returns at the Phoenix site and Gale Crater. Gale and the other sites proposed for MSL Curiosity are rougher than past landing sites at the scale of meters to tens of meters.

4:15 p.m. Niles P. B. * Michalski J.
Origin and Evolution of Sediments in Gale Crater Through Ice-Hosted Processes **[#2575]**
The Gale Crater sediments on Mars were formed by ice-dust deposition, weathering, and diagenesis. This is supported by modeling, geomorphic relationships, and comparisons to similar martian sedimentary deposits and will be tested by MSL.

4:30 p.m. Léveillé R. J. *
Integrated Mineralogical and Geochemical Studies of Authigenic Magnesium-Phyllosilicates by the Curiosity Rover at Gale Crater **[#2608]**
Mg-phyllosilicates are proposed as priority targets for detailed geochemical and mineralogical investigation by the Curiosity rover at Gale Crater as these minerals may provide key information on habitability.