Thursday, March 19, 2015 **[R722]**
POSTER SESSION II: INSTRUMENTS AND PAYLOAD CONCEPTS: DRILLING AND SAMPLING
6:00 p.m. Town Center Exhibit Area

Anderson R. C. Beegle L. Abbey W. ***POSTER LOCATION #279***
Drilling on Mars: What We Have Learned from the Mars Science Laboratory Powder Acquisition Drill System (PADS) **[#2417]**
The collection of martian samples from a mobile robotic platform on rough terrain creates unique engineering challenges to ensure scientific quality of data.

Glass B. Mellerowicz B. Davis A. Zacny K. McKay C. et al. ***POSTER LOCATION #280***
Icebreaker-3 Mars-Analog Sample Acquisition Tests **[#1669]**
The Icebreaker-3 drill was tested with a Phoenix mockup and the Haughton Crater Mars-analog site in the Arctic (with sample transfer arm) and in a Mars chamber.

Stein N. T. Zanetti M. Battel D. Carsello A. Cooperberg A. et al. ***POSTER LOCATION #281***
A Screw Propulsion Design for Mobility in High-Sinkage Media **[#2352]**
This abstract details the design and testing of a screw-pontoon mobility system for navigation in high-sinkage media such as lunar regolith.

Willson D. Lemke L. G. Stoker C. R. Dave A. McKay C. P. ***POSTER LOCATION #282***
A Sample Sifter for the Proposed Icebreaker Mars Mission **[#2503]**
We describe a unique sifting scoop end effector developed and tested for possible inclusion in the proposed Icebreaker Mars mission.

Manchado J. M. Sebastián E. Romeral J.
Sobrado-Vallecillo J. Herrero P. L. et al. ***POSTER LOCATION #283***
SOLID SPU: A TRL 5-6 Sample Preparation Instrument for Wet Chemistry Analysis on Mars **[#1222]**
We report the performance of an instrument for liquid extract preparation for planetary exploration under Mars relevant conditions.

Kang J. D. ***POSTER LOCATION #284***
Preserving Rock Cores for Mars Sample Return **[#2978]**
The project has provided design input to protect the sample integrity of rock cores collected during a proposed multi-phased MSR (Mars Sample Return) mission.

Valenzuela L. A. Freeman P. M. Gulick V. C. Ishikawa S. T. Bass S. M. ***POSTER LOCATION #285***
Towards Building an Automated Rock Classifier for Planetary Rover Missions **[#3009]**
This work focuses on building an automated classifier using Raman spectral data to identify key minerals contained in igneous rocks.

Dworkin J. P. Adelman L. Ajluni T. M.
Andronikov A. V. Bartels A. E. et al. ***POSTER LOCATION #286***
OSIRIS-REx is a Pathfinder for Contamination Control for Cost Controlled Missions in the 21st Century **[#1147]**
The contamination control and contamination knowledge strategies and requirements to enable OSIRIS-REx to return a pristine sample of Bennu are discussed.

Calaway M. J. Fries M. D. ***POSTER LOCATION #287***
Adventitious Carbon on Primary Sample Containment Metal Surfaces **[#1517]**
Metal surfaces used for flight hardware and curating astromaterials were cleaned and analyzed for adventitious carbon residue by XPS and Raman spectroscopy.

Blanco Y. Gallardo-Carreño I. de Diego-Castilla G.
Abraham M. H. Davila A. F. et al. ***POSTER LOCATION #288***
Planetary Protection Cleaning Procedures for Life Detection on Mars **[#1318]**
We describe a cleaning procedure for decontamination of organic and biological that can be potential targets for life detection on Mars.