

Thursday, March 24, 2016

[R602]

POSTER SESSION II: (IS THERE) LIFE ON MARS?
 MARTIAN EXOBIOLGY TOOLS, ANALOGS, AND ENVIRONMENTS
 6:00 p.m. Town Center Exhibit Area

Michalski J. R. Niles P. B. Rogers A. D.

Johnson S. S. Ashley J. W. et al.

POSTER LOCATION #54

[*Geology of McLaughlin Crater, Mars: A Unique Lacustrine Setting with Implications for Astrobiology*](#) [#1292]

McLaughlin Crater contains ancient carbonate-clay lacustrine deposits with remarkable sedimentary textures and exceptional astrobiological potential.

Caprarelli G. Jones E. Mills F.

POSTER LOCATION #55

[*A Thermophysical Study of Martian Surface Materials in Schiaparelli Crater*](#) [#1284]

We show the power of our unsupervised classification method applied to the analysis and interpretation of thermophysical data in Schiaparelli Crater, Mars.

Williams J.-P. Pathare A. Dohm J. M. Lopes R. M. C. Buczkowski D. L.

POSTER LOCATION #56

[*Volcanism and Giant Polygons Within Argyre Basin, Mars*](#) [#2423]

Argyre Mons, a large volcanic structure, and giant polygons have recently been identified on the floor of Argyre and appear to have formed contemporaneously.

Wimmer-Schweingruber R. F. Köhler J. Hassler D. M.

Guo J. Appel J. et al.

POSTER LOCATION #57

[*Initial Determination of the Zenith Angle Dependence of the Martian Radiation Environment at Gale Crater Altitudes*](#) [#1151]

We report the zenith angle dependence of the radiation environment at Gale Crater on Mars. This is the first determination on another planet than Earth.

Campbell J. Sidiropoulos P. Muller J. P.

POSTER LOCATION #58

[*The Search for Polycyclic Aromatic Hydrocarbons in the Martian South Polar Residual Cap Using CRISM Infrared Spectra*](#) [#2110]

Using infrared spectral data, sublimation features on the martian south polar cap are being examined for evidence of hydrocarbons.

Belmahdi I. Buch A. Szopa C. Freissinet C. Glavin D. P. et al.

POSTER LOCATION #59

[*Potential Sources of Artifacts and Backgrounds Generated by the Sample Preparation of SAM*](#) [#1952]

Potential sources of artifacts and backgrounds generated by the sample preparation of SAM.

Noe Dobrea E. Z. McAdam A. C. Freissinet C. Franz H. Belmahdi I. et al.

POSTER LOCATION #60

[*Characterizing the Mechanisms for the Preservation of Organics at the Painted Desert: Lessons for MSL, ExoMars, and Mars 2020*](#) [#2796]

Based on field studies performed at the Painted Desert, we find that evaporites such as jarosite may play an important role in the preservation of ancient organics.

Navarro R. Lalla E. A. Sanz Arranz A. López G. Medina J. et al.

POSTER LOCATION #61

[*Raman-XRD Analysis of Selected Samples from Chamorga \(Anaga Massif\) Tenerife \(Spain\): Planetary and Astrobiological Implications for Mars*](#) [#1885]

The Island of Tenerife as a martian analog.

Glamoclija M. Steele A. Starke V. Zeidan M. Potochniak S. et al.

POSTER LOCATION #62

[*Sulfate-Rich Playas: A Microbial Habitat and Terrestrial Analog to Martian Playas*](#) [#2529]

Playas from the White Sands (New Mexico) are an excellent model system to study habitability parameters and biosignatures in sulfate rich evaporitic settings.

Kelly H. S. Boston P. J. Parness A. J.

POSTER LOCATION #63

[*Diagnostic Characteristics of Macroscopic Biopatterns Detected with Novel Robotic Platform*](#) [#2955]

Visual detection of distinctive biosignatures via a novel robotic platform to further advance robotic capabilities for missions to Mars.

Harrison T. N. Pontefract A. J. Osinski G. R.

POSTER LOCATION #64

Tornabene L. L. Carr C. E. et al.

[*Hydrogeological Constraints on Gully Formation and the Effects of Microbial Colonization*](#) [#2247]

We propose to study the effects of substrate properties and gully activity drivers on gully morphology and microbial colonization at three Mars analog locations.

Che C. Parvez S. Glotch T. D.

POSTER LOCATION #65

[*Spectroscopic Study of Biosignatures in Clay-Rich Sediments: Implication for Martian Astrobiological Exploration*](#) [#1692]

We examine organic matters stored in terrestrial clay-rich sediments using XRD, IR, and Raman spectroscopy, and aid the search for biosignatures on Mars.

Abrevaya X. C. Caneiro A. Horvath J. E.

POSTER LOCATION #66

Galante D. Wilberger D. O. et al.

[*Synthesis of Halite Under Martian Simulated Conditions: A Study with Astrobiological Implications*](#) [#2134]

We analyze the structure of halite formed under terrestrial and martian conditions and we discuss the possibility of survival of microorganisms.

Bartlett C. L. Hausrath E. M. Adcock C. T.

POSTER LOCATION #67

[*Phosphate Release: The Effect of Prebiotic Organic Compounds on Dissolution of Mars-Relevant Minerals*](#) [#2754]

Dissolution experiments conducted on Mars-relevant phosphate bearing minerals with implications for early life on Mars.

Mojarro A. Ruvkun G. Zuber M. T. Carr C. E.

POSTER LOCATION #68

[*Methods for Extracting Nucleic Acids from Mars Analog Regolith*](#) [#1643]

In this study we utilize a miniature two-step cell lysis and nucleic acid extraction module to extract deoxyribonucleic acid (DNA) from Mars analog regolith.