

Tuesday, April 25, 2017  
**NEW TECHNOLOGIES AND TECHNIQUES: LIFE DETECTION:  
 BIOSIGNATURE DETECTION ON MARS: STRATEGIES AND ANALOG  
 STUDIES TO GUIDE MARS 2020 AND EXOMARS**  
 10:15 a.m. Palo Verde

**Chairs:** Brandi Carrier  
 Svetlana Shkolyar

- 10:15 a.m. Freissinet C. \* Pinnick V. T. Buch A. Raulin F. Szopa C. Arevalo R. D. Stalport F. Danell R. M. Siljeström S. Brinckerhoff W. B. Goetz W. Goesmann F.  
[\*The ExoMars 2020 Mars Organic Molecule Analyzer \(MOMA\) Instrument's Role in the Search for Martian Biosignatures\*](#) [#3397]  
 Mars Organic Molecule Analyzer (MOMA) instrument onboard ExoMars will search for biosignature with dual modes LDMS and pyr/der-GCMS.
- 10:30 a.m. Carrier B. L. \* Beegle L. W. Bhartia R. Abbey W. J. Hara E. K.  
[\*Detection of Subsurface Organics Using Deep UV Raman and Fluorescence Spectroscopy: Implications for SHERLOC on Mars 2020\*](#) [#3551]  
 Subsurface organic detection using Raman and fluorescence-experimental results will be discussed, with a focus on sensitivity and limits of detection.
- 10:45 a.m. Kehl F. \* Tavares da Costa E. Wu D. Mora M. F. Creamer J. S. Willis P. A.  
[\*Automated In-Situ Subcritical Water Extraction and Pre-Characterization Platform for Martian Regolith\*](#) [#3198]  
 We present an Atacama Desert tested extractor and analysis unit that could be used to support robotic missions seeking chemical signatures of life on Mars.
- 11:00 a.m. Bhartia R. \* Orpha V. Wanger G. Beegle L. Fries M. Amend J.  
[\*Visualizing Organic Textures and Biosignatures: Analysis of the Deep Biosphere, Meteorites, and Mars\*](#) [#3642]  
 Understanding life in the subsurface offers a unique understanding of how we can search for potential biosignatures on Mars.
- 11:15 a.m. Foucher F. \* Westall F. Zipfel J. Bost N. EURO-CARES Team  
[\*General Reflections on the Definition of Analogues and Consequences for the EURO-CARES Project\*](#) [#3245]  
 Analogues are sites and samples having properties more or less similar than those expected on an extraterrestrial body. We describe their uses and limits for various purposes.
- 11:30 a.m. Potter-McIntyre S. L. \* Thomas R. Hynek B. M. Osterloo M.  
[\*Mineralized Fractures on Earth and Mars as Windows into Potentially Habitable Subsurface Environments\*](#) [#3057]  
 Mineralized fractures record the evolution of subsurface fluids and chemistry over geologic time — conditions that control habitability in the subsurface.
- 11:45 a.m. Filiberto J. \* Crandall J. R. Potter-McIntyre S. L. Schwenzer S. P. Olsson-Francis K. Bridges J. C.  
[\*Magmatic Intrusions into Sulfur-Rich Sediments: An Exposed Potential Subsurface Habitable Environment as an Analog for the Martian Crust\*](#) [#3095]  
 This study of terrestrial igneous intrusions into sulfate-bearing substrates provides an analog for martian sites such as Mawrth Vallis and Jezero Crater.
- 12:00 p.m. Osinski G. R. \* Battler M. Caudill C. Pilles E. Francis R. Haltigin T. Hipkin V. Kerrigan M. Picard M. Sapers H. M. Tornabene L. CanMars Team  
[\*The 2016 #CanMars Mars Sample Return Analogue Mission: A Guide for Mars 2020 and ExoMars\*](#) [#3332]  
 We provide an overview of the CanMars series of Mars Sample Return analogue missions and the implications and lessons learned for biosignature detection on Mars.
- 12:15 p.m. *Lunch*