

Monday, April 24, 2017
SOLAR SYSTEM SITES: MARS:
BIOSIGNATURE DETECTION ON MARS I: MISSION DATA AND INSTRUMENTS
1:30 p.m. Palo Verde

Chairs: **Caroline Freissinet**
Jorge Vago

- 1:30 p.m. Steele A. * Freissinet C. Mahaffy P. Conrad P. Eigenbrode J. S.A.M. Team
[*Developing a Robust Criteria for Mars Life Detection with Sample Analysis at Mars Data*](#) [#3655]
 We discuss the data published by the Sample Analysis at Mars instrument in terms of two competing null hypotheses: There is life, there is no life.
- 1:45 p.m. Summons R. E. * Herrera J. Sistiaga A. Miller K. E. O'Reilly S. S. Eigenbrode J. L.
 Glavin D. P. Freissinet C. Coll P. Szopa C. Millan M. Buch A.
 Navarro-González R. SAM and MSL Science Teams
[*Analogue Experiments Identify Meteoritic Precursors for all Organic Compounds Detected by SAM in Gale Crater*](#) [#3100]
 Analog experiments suggest organics detected by SAM in Gale Crater can originate from carbonaceous meteorite infall reacting with perchlorate during pyrolysis.
- 2:00 p.m. Millan M. * Szopa C. Buch A. Belmahdi I. Glavin D. P. Freissinet C. Eigenbrode J. L.
 Archer P. D. Jr. Sutter B. Summons R. E. Navarro-Gonzalez R. Coll P. Cabane M. Mahaffy P.
[*Influence of Oxychlorine Phases During the Pyrolysis of Organic Compounds and the Quest of Organics on Mars with the SAM Instrument*](#) [#3423]
 Effect of perchlorates/chlorates salts on the pyrolysis of organic matter to help the data interpretation of the SAM experiment onboard Curiosity.
- 2:15 p.m. Stern J. C. * Sutter B. Jackson W. A. Navarro-Gonzalez R. McKay C. P. Fairen A. G.
[*Nitrogen as a Biosignature: Insights from Curiosity*](#) [#3412]
 "Follow the nitrogen" has been proposed as a strategy in the search for life on Mars. Here we compare martian nitrate to nitrate in terrestrial Mars analogs.
- 2:30 p.m. Vago J. L. * Westall F. Goesmann F. Steininger H. Goetz W. Brinckerhoff W.
 Loizeau D. Sefton-Nash E. Svedhem H. Rodionov D.
 Landing Site Selection Working Group ExoMars Project Team
[*Searching for Traces of Life with the ExoMars Rover: Chemical Biosignatures*](#) [#3235]
 This presentation will discuss the ExoMars rover, its surface mission, and strategy to search for biosignatures with a focus on chemical ones.
- 2:45 p.m. Morisson M. Buch A. * Szopa C. Freissinet C. Raulin F. Pinick V. Glavin D. P. Goetz W.
 Grand N. Stalport F. Stambouli M. Steininger H. Brinckerhoff W. Goesmann F.
[*How TMAH Thermochemolysis can Improve the Detection of Trace Organic Matter on Mars Using the MOMA-Pyr-GC-MS Experiment Aboard the ExoMars-2020*](#) [#3277]
 To analyze refractory organic compounds, the MOMA instrument will submit the sample soil to a thermochemolysis (TMAH) reaction. We have optimized that process.
- 3:00 p.m. Beegle L. W. * Bhartia R. Carrier B. DeFlores L. Abbey W. Asher S. Burton A. Fries M.
 Conrad P. Clegg S. Edgett K. S. Ehlmann B. Hug W. Reid R. Kah L. Neelson K. Nelson T.
 Minitti M. Popp J. Langenhorst F. Sobron P. Steele A. Wiens R. Williford K. Yingst R. A.
[*The SHERLOC Investigation for Mars 2020*](#) [#3320]
 SHERLOC is an arm mounted instrument that is part of the Mars 2020 payload.
- 3:15 p.m. Rehnmark F. * Zacny K. Adams G. Wei B. Kim D. Cabrol N.
[*Coring System for Aseptic Acquisition of Core Samples*](#) [#3131]
 We present a coring tool for aseptic acquisition of core samples in the field using a HomeDepot drill.

- 3:30 p.m. Banfield D. * Lamb B. Hovde D. C. Ferrara T.
[Biological Site Localization on Mars Using Bio-Effluent Plume Tracing](#) [#3293]
We have developed techniques to find the location of bio-effluent plume sources under the scenario of high TRL instrumentation feasible for a Mars rover.
- 3:45 p.m. *Coffee Break*