

Tuesday, April 25, 2017
SOLAR SYSTEM SITES: MARS:
BIOSIGNATURE DETECTION ON MARS III: HABITABILITY STUDIES
4:15 p.m. Palo Verde

Chairs: Alberto Fairen
Dirk Schulze-Makuch

- 4:15 p.m. Gulick V. C. * Hargitai H. I. Glines N. H.
[*Understanding the Magnitude and Duration of Potentially Habitable Aqueous Environments on Mars*](#) [#3638]
We report on our detailed geomorphic studies where water activity persisted periodically through Mars' geologic history.
- 4:30 p.m. Westall F. * Foucher F. Vago J. L. Bost N. Gaboyer F. Hickman-Lewis K. Campbell K. A.
[*Punctuated Habitability and Scenarios for the Search for Life on Mars*](#) [#3257]
Owing to the punctuated habitability of Mars, landing sites could host zero to multiple traces of microbial colonizations dating from different geological era.
- 4:45 p.m. Farmer J. D. *
[*Microbial Taphonomy and its Importance in Mars Exploration*](#) [#3182]
This abstract highlights the field of microbial taphonomy and its importance as a strategic element in the astrobiological exploration of Mars.
- 5:00 p.m. Kashyap S. * Sklute E. C. Dyar M. D. Holden J. F.
[*In Search for Life Elsewhere in Our Solar System: Characterizing Transformations of Iron Oxides by Hyperthermophiles*](#) [#3538]
We examine iron oxide bioreduction by hyperthermophilic microbes to address their physiological potential and the mineral signatures they leave behind.
- 5:15 p.m. Bishop J. L. *
[*Seeking Biosignatures on Mars Today that are Preserved from Ancient Environments at Mawrth Vallis*](#) [#3042]
The mineralogic record provides constraints on the early environment of Mars, guiding identification of conditions favorable for life and biosignatures.
- 5:30 p.m. Cabrol N. A. * SETI Institute NAI Team
[*From Habitability to Habitats — The Current Knowledge Leaps and Gaps in the Search for Biosignatures on Mars*](#) [#3033]
As the landing site for Mars 2020 is being selected, intellectual leaps and data and knowledge gaps exist in the approach to biosignature detection.