

**Tuesday, October 25, 2016**  
**LIFE DETECTION INSTRUMENTATION AND**  
**RELATED TECHNOLOGIES FOR MARS AND OCEAN WORLDS: II**  
**3:05 p.m. International West**

**Chair: Danny Glavin**

- 3:05 p.m. Mora M. F. \* Willis P. A.  
[Microchip Electrophoresis Instrumentation for Determination of Chemical Distributions on Future Spaceflight Missions](#) [#4083]  
Here we will describe the status of microchip electrophoresis instruments at JPL and the steps we are taking to someday enable the implementation of this technology on other worlds.
- 3:20 p.m. Arevalo R. Jr. \* Danell R. M. Gundersen C. Hovmand L. Southard A. Tan F.  
Grubisic A. Brinckerhoff W. B. Getty S. A. Mahaffy P. Cottin H. Briois C. Colin F.  
Szopa C. Vuitton V. Makarov A. Reinhardt-Szyba M.  
[Advanced Resolution Organic Molecule Analyzer \(AROMA\): Simulations, Development and Initial Testing of a Linear Ion Trap-Orbitrap Instrument for Space](#) [#4072]  
AROMA combines a linear ion trap and Orbitrap mass analyzer to enable: quantitative measurements of organic and inorganic compounds; selective isolation of targeted mass ranges; tandem mass spectrometry; and, ultrahigh mass resolution and accuracy.
- 3:35 p.m. Dasgupta P. K. \* Huang W. Stamos B. N. Zhang M. Noell A. C. Davila A.  
[An Ion Chromatograph for Extraterrestrial Explorations](#) [#4012]  
Describes a low power low footprint open tubular capillary liquid/ion chromatograph.
- 3:50 p.m. Serabyn E. \* Liewer K. Wallace J. K. Rider S. Lindensmith C. Nadeau J.  
[Lensless Digital Holographic Microscopy for Life Detection](#) [#4027]  
Microscopy capable of volume imaging can be used to search for microbial life on ocean worlds. Here we discuss our recent digital holographic microscope (DHM) systems, which provide micron-scale resolution in a very compact package.