

**Wednesday, October 26, 2016**  
**ELEMENTAL SPECTROSCOPY FOR FUTURE MISSIONS**  
**3:05 p.m. International East**

**Chair: James Ashley**

- 3:05 p.m. Parsons A. M. \* Grau J. Lawrence D. J. Miles J. Peplowski P. N. Perkins L. Schweitzer J. S. Starr R. D.  
[Measuring Venus' Bulk Elemental Composition with BECA](#) [#4060]  
The Bulk Elemental Composition Analyzer (BECA) instrument uses high energy neutrons and gamma rays to measure the bulk elemental composition of Venus beneath a landed probe. We will present the results of a BECA prototype tested at NASA/GSFC.
- 3:20 p.m. Hardgrove C. \* Prettyman T. Johnson E. Parsons A. Barnaby H. Christian J. Gupta K.  
[SINGR: A Single Scintillator Neutron and Gamma-Ray Spectrometer for Acquiring Rapid, Remote Geochemical Data on Future Planetary Science Missions](#) [#4113]  
SINGR is a single scintillator detector coupled with a pulsed neutron generator that is currently being prototyped, modeled, developed and tested in order to acquire rapid geochemical data, hydrogen abundance and depth profiles on planetary missions.
- 3:35 p.m. Blake D. F. \* Sarrazin P. Bristow T. Downs R. Gailhanou M. Marchis F. Ming D. Morris R. Solé V. A. Thompson K. Walter P. Wilson M. Yen A. Webb S.  
[The Mapping X-Ray Fluorescence Spectrometer \(MapX\)](#) [#4006]  
MapX is a full-frame X-ray imager that collects  $2.5 \times 2.5$  cm elemental maps with  $\leq 100$   $\mu\text{m}$  spatial resolution. Quantitative XRF spectra from ground- or instrument-selected Regions of Interest (ROI) can be used to identify rock types and mineralogies.
- 3:50 p.m. Kameda S. \* Horiuchi M. Cho Y. Ishibashi K. Wada K. Mikouchi T. Nakamura T. Sugita S.  
[LIBS for Martian Moons eXploration \(MMX\)](#) [#4036]  
JAXA's Martian Moons Exploration (MMX) is planned to be a sample return mission from Phobos, one of the satellites of Mars. We propose adding a laser-induced breakdown spectrometer (LIBS), which enables to determine the origin of the moons.