**Wednesday, October 26, 2016**
**SMALLSAT AND CUBESAT INSTRUMENTS**
**3:05 p.m. International West**

**Chair: Barbara Cohen**

3:05 p.m. Hosseini S. *
*High Spectral Resolution Spectrometry in Compact Sizes in Future Interplanetary Missions Using Spatial Heterodyne Spectrometer* **[#4116]**
Spatial Heterodyne Spectrometers (SHS) is a compact reflective two-beam cyclical interferometer that can obtain high spectral resolution spectra (R~100000) at wide FOV (~0.5 degree) using no or small aperture telescopes in very compact sizes.

3:20 p.m. Clark P. E. * Malphrus B. Reuter D. MacDowall R. Hurford T. Brambora C. Folta D. Farrell W.
*BIRCHES: Compact Broadband IR Spectrometer and the Search for Lunar Volatiles* **[#4007]**
BIRCHES (Broadband InfraRed Compact, High-resolution Exploration Spectrometer) is the payload instrument on Lunar Ice Cube, a science requirements-driven lunar orbiting CubeSat designed to determine volatile distribution as a function of time of day.

3:35 p.m. Atchison J. * Mitch R. Apland C. Kee L.
*Small Body In-Situ Multi-Probe Mass Estimation Experiment (SIMMEE)* **[#4058]**
A concept and instrument for improving our ability to resolve the mass of asteroids and comets during flybys or orbital phases. A host spacecraft ejects a set of small spheres and optically tracks them pre-and-post flyby to estimate asteroid mass.

3:50 p.m. Riris H. * Abshire J. B. Mumma M. Villanueva G. Hanisco T.
*Laser Limb Sounding Approach for Planetary Atmospheres Using CubeSats or SmallSats* **[#4035]**
We describe an efficient and sensitive way to map trace gas abundances in planetary atmospheres using small satellites flying in formation and tunable single frequency diode lasers and a sensitive optical detector.