Tuesday, October 25, 2016
SUB-MM AND RADAR INSTRUMENTS FOR ORBITER AND FLYBY MISSIONS
3:05 p.m. International East

Chair: Manuel Grande

3:05 p.m. Tamppari L. K. * Livesey N. J. Read W. G.
A Submillimeter Sounder for Measuring Martian Winds and Water **[#4048]**
We review the scientific need for global vertically resolved observations of martian atmospheric winds, and show that a submillimeter limb sounder can provide such measurements, along with measurements of water vapor and other trace gases.

3:20 p.m. Huang M. * Gautam N. Sherwin M. S. Kawamura J. Stone K. Focardi P. Chahat N. Gulkis S. Karasik B. S. Pfeiffer L.
A Heterodyne Detector for Terahertz Spectroscopy of Planets and Comets **[#4021]**
We are developing a new class of heterodyne detector called a Tunable Antenna-Coupled Intersubband Terahertz (TACIT) detector. TACIT detector promises nearly quantum-limited noise performance and tunable detection frequency in the THz range.

3:35 p.m. Chattopadhyay G. * Reck T. Jung-Kubiak C. Gonzalez-Ovejero D. Lee C. Alonso-Del Pino M.
A Low-Power Low-Mass Dual-Polarization Sensitive Submillimeter-Wave Radiometer/Spectrometer **[#4016]**
Applying CMOS components and silicon micromachining technology that enable low-mass and highly integrated receivers, we are developing a state-of-the-art submillimeter wavelength radiometer/spectrometer instrument for planetary orbiter missions.

3:50 p.m. Carter L. M. * Rincon R. F. Novak M.
A Reduced Power Digital Electronics System for a Digital Beamforming Space Exploration Synthetic Aperture Radar **[#4068]**
We will discuss design of an orbital P-band (70 cm wavelength) digital beamforming radar system that is modular and can be used for imaging polarimetry of Earth and rocky planets and moons, as well as asteroids and comets.