Tuesday, April 7, 2015
POSTER SESSION: MULTISCALE — POWER — ELECTRONICS — PLATFORM — OTHER
10:30 a.m. Room 101

Lawrence D. J. Peplowski P. N.
Addressing High-Priority Venus Science Objectives with Orbital and Surface-Based Nuclear Spectroscopy **[#4005]**
We explore the use of gamma-ray and neutron measurements at Venus to address important Venus science questions. Low-resource instrumentation provides high heritage solutions for addressing questions related to Venus' atmosphere and surface.

Miura Y. Tanosaki T.
Local and Global Waters on Venus and Earth: Poor Planetary Supply on Venus **[#4006]**
Global materials of rock, air and water can found in the inner solar system. Local water can be formed by mixing to the rocks, whereas global water found only Earth is required huge supply from two planets. Venus has no mixed source of global water.

Kott T. M. Izenberg N. R. Papadakis S. J. Gold R. E.
Unspooling Generators for Venus Power Applications **[#4009]**
Unspooling generators provide a novel, potentially low cost and risk long duration power source for future Venus missions.

Walker A. R. Haberbusch M. S. Sasson J.
Thermoacoustic Duplex Technology for Cooling and Powering a Venus Lander **[#4018]**
A Thermoacoustic Stirling Heat Engine (TASHE) is directly coupled to a Pulse Tube Refrigerator (PTR) in a duplex configuration, providing simultaneous cooling and electrical power, thereby suiting the needs of a long-lived Venus lander.

Newman J. M.
Development of a Lightweight Radiometer for In-Situ Measurements in Extreme Environments **[#4028]**
NASA has identified the need for technology to explore extreme environments. A robust radiometer can meet this need and make flexible measurements through selection of optical band-pass filters. As such, development of a radiometer has been proposed.

Holsclaw G. M. Esposito L. W. McClintock W. M.
The Balloon Infrared Spectrograph for Surface Thermal Emission (BIRSTE) of Venus **[#4029]**
To address fundamental questions regarding geologic processes on Venus, we propose a near-infrared spectrograph with low resource requirements mounted on a balloon gondola platform to measure thermal emission from the surface.

de Jong M. L.
Venus Altitude Cycling Balloon **[#4030]**
A novel balloon concept is demonstrated that uses mechanical compression as altitude control mechanism to sustain long duration balloon probe flight in the cloud level region of Venus' atmosphere between 45 and 58 km altitude.

Monica A. H. Deglau D. M. Maier D. Kohn E. Izenberg N. R. Papadakis S. J.
High Temperature Electronics for Future Venus Exploration **[#4032]**
We discuss two different high temperature electronics paradigms for use in future missions to Venus.