

Seminar Talk

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**Tuesday, March 28, 2017
3:00 p.m. KH 224**

Title: HAVOC: High Altitude Venus Operational Concept

Abstract:

Humans are on their way to becoming a spacefaring civilization, and Venus presents an intriguing destination for expanding humanity's journey beyond Earth. The atmosphere of Venus is a suitable environment for both further scientific study and future human exploration. Fifty kilometers above the Venusian surface is one of the most hospitable, Earth-like locations in the Solar System; the pressure, density, gravity, and radiation protection are all similar to Earth surface conditions. A recent internal NASA study of a High Altitude Venus Operational Concept (HAVOC) led to the development of an evolutionary program for the exploration of Venus, with a focus on the mission architecture and vehicle concepts for robotic missions and 30-day crewed missions into the Venusian atmosphere. This talk presents some of the key findings of that study.

Bio:

Dr. Christopher Jones works in the Space Mission Analysis Branch at NASA's Langley Research Center in Hampton, VA. His current work includes strategic analysis of space technology investments, applications of in-space assembly to Mars exploration, and mission design for an Earth Science satellite. His previous work includes leading development of a Venus atmospheric exploration concept, performing trajectory analysis in support of future NASA missions, and modeling in-situ resource utilization architectures for the Moon and Mars. He obtained his Masters and Ph.D. in aerospace engineering from Georgia Tech in 2009 and 2016, respectively, and his Bachelors in mechanical engineering from the University of South Carolina in 2007.