

**Abstract for 11<sup>th</sup> Low Cost Planetary Missions Conference  
June 9-11, 2015, Berlin, Germany**

## **VAMP Science Instrument Accommodations and Performance Capabilities**

*Ross, F., Lee, G., Polidan, R., Sokol, D., Miller, J., Samuele, R., Northrop Grumman Aerospace Systems, Redondo Beach, CA, USA*

*Barnes, N., Bolisay, L., Michi, Y., L-Garde Inc., Tustin, CA, USA;*

*Limaye, S., University of Wisconsin, Madison, WI, USA;*

*Widemann, T., LESIA – Observatoire de Paris, CNRS, UPMC, UPD, Meudon, France*

The Northrop Grumman Aerospace Systems and L-Garde team has been developing an innovative mission concept to provide a capability for a long-lived, maneuverable platform to explore the Venus upper atmosphere. This capability is an implementation of our Lifting Entry/Atmospheric Flight (LEAF) system concept, and the Venus implementation is called the Venus Atmospheric Maneuverable Platform (VAMP). The VAMP concept utilizes ultra-low ballistic coefficient ( $< 50$  Pa), semi-buoyant aircraft that deploys prior to entering the Venus atmosphere, enters without an aeroshell, and provides a long-lived (months to a year) maneuverable vehicle capable of carrying science instruments to explore the Venus upper atmosphere.

Since VAMP offers scientific platform capabilities unlike previous Venus atmospheric mission concepts the development team is seeking to broaden the scope of the possible VAMP instrument suite to new science measurements and techniques to ensure the VAMP mission provides the most comprehensive science capabilities for the Venus community. A VAMP Science Advisory Board (VSAB) composed of prominent Venus scientists from both the US and Europe has been formed to advise the development team but we would like to further expand the understanding of the possible VAMP platform capabilities to the community.

In this presentation, we will provide detailed description of the potential VAMP experimenter physical accommodations, options to access to the atmosphere for in situ and remote sensing, and other science relevant capability options such as atmospheric mobility, day/night operations, and data rates. Additionally, we discuss the current notional instrument suite and the process by which Venus scientists can access VAMP platform information during this development phase.