**NASA DEVELOP National Program**

NASA Langley Research Center

**Summer 2015**

**Short Title: CALIPSO Cross-Cutting II**

**Updated Abstract**

The Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO) satellite is a NASA Earth observation that analyzes aerosol particles suspended in the Earth’s atmosphere. Researchers use visualized CALIPSO data to track the global distribution, dispersion, and source of aerosols. However, the current visualization tool for displaying CALIPSO data does not support needed features for tracking aerosols such as selecting areas of data and sharing those selected sections, making tracking specific airborne objects difficult for researchers. Adding these necessary features to the current CALIPSO visualization tool is difficult, as the tool is written in Interactive Data Language (IDL), a proprietary and obscure language, and writing additional features for the tool would require a specialized development team. For the 2015 summer term, our team is focused on the development of the *Visualization of CALIPSO* (VOCAL) Python program. VOCAL will serve as the successor to the current visualization tool for CALIPSO data. We will be building off the previous 2015 spring team’s work to implement a number of new features and offer new functionalities to Earth scientists to more easily identify the sources of aerosols and their impact on Earth’s climate.