

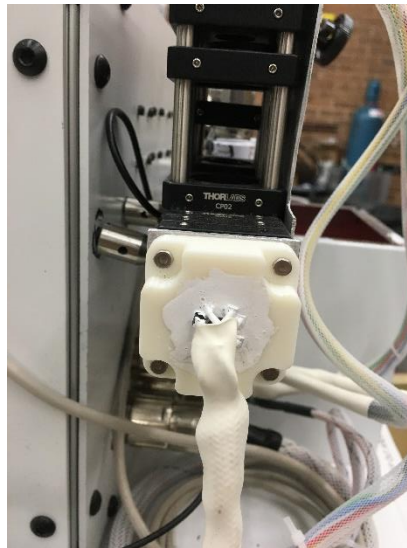
Payload Flight Number: 20016-09	Institution: University of Central Florida
Payload Title: Hazardous Gases for Harsh Environments LED Sensor	
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Report Month: October	Report Date: 10/28/2016

Team Member Activities:

Michael Villar and Akshita Parupalli gathered the collected data from the DAQ and began processing and analyzing it. A breakdown of the system was undertaken to understand what if any components broke or failed during flight. The test began with structural integrity which revealed minor structural damage due to the landing impact. The main points of damage were an optical post had sheared off near the LED end of the optics and a few screws had come loose. It is unclear if the vibrations that caused the screws to loosen was from shipping or during flight. Analysis of the Driver circuits showed that the connection pins had come undone in the impact and had bent during transport but after straightening out the connections and testing the integrity of the drivers they were shown to be fully functional. All of the internal electronics were tested and still function properly. All regulators still work correctly and show no signs of damage. Lastly the LED's and detector were tested by independently attaching the LED's to a function generator and a secondary detector to test functionality. All LED's and the detector are still functioning properly.

System Updates:

- Update: The majority of the system is still functional, despite many items coming loose from the landing and shipping. All important components, such as the LEDs, function properly.
- Update: According to preliminary data analysis, the sensor performed as expected. Performance data related to the varying altitudes is still being examined.



Picture showing how the optical rail screws broke off from the box



Several screws came loose, either from the force of landing or from transportation



Picture Above shows mid breakdown of system for analysis