

HASP 2016 Student Payload Monthly Report

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: November	Report Date: 11/29/2016

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Team Member Activities:

Michael Villar and Akshita Parupalli worked on analyzing the data retrieved from the DAQ to prepare for the report. We have been using a work around to an issue that arose with the temperature control of the LED's. The TEC's under standard operation should keep the LED's at a constant set temperature of 0°C. The actual temperature profile is shown below. Each LED's output varies with temperature so a calibration equation has been worked on to eliminate the temperature variance in our measurements.

The system was placed back into the environmental chamber to test to make sure that the systems LED's post flight measurements were consistent with pre-flight measurements (LED outputs pre-flight and post-flight were found to be equal). Once this was established we were confident that the tests for the temperature variance calibration equation would be applicable to the flight data. This was also proof that the system did not alter during flight as pre and post flight base measurements were equal. The temperature corrected data will be added to the scientific report.

System Updates:

- Update: Post flight baseline measurements completed without hassle, results are as expected. Temperature Calibration completion pending.
- Update: Testing a new circuit design is underway, if this works as planned it could help to reduce the size of the next version of the system.
- Pending: Include temperature corrected data to science report.

