November 29, 2016

To: Dr. T. Gregory Guzik - HASP Project Director
From: Hannah Weiher-Project Manager
RE: HASP Monthly Status Report

1. Activities

The Final Science Report is still in progress. Included in this Monthly Status Report are some of the plots and activities we have completed this past month. The goal is to try and interpret how the APD and the IMU temperatures fluctuated and if there was a correlation on the APD temperature and number of counts.

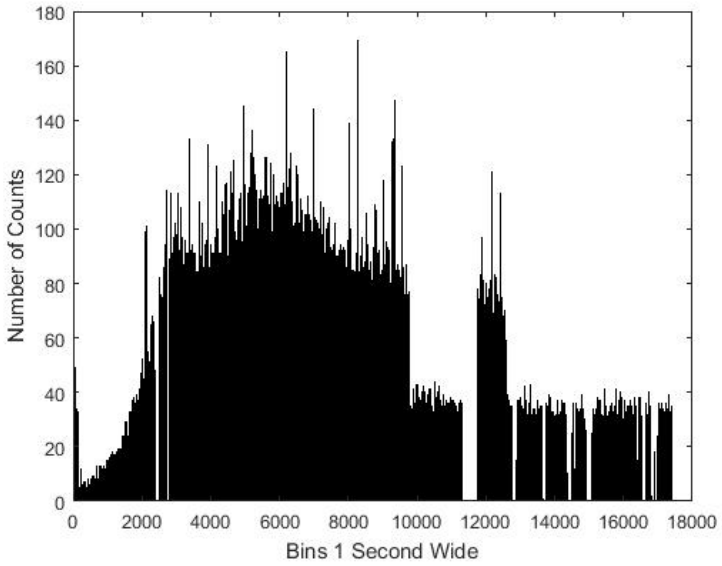

Figure 1: The black lines represent the number of counts per bin which was one second wide.

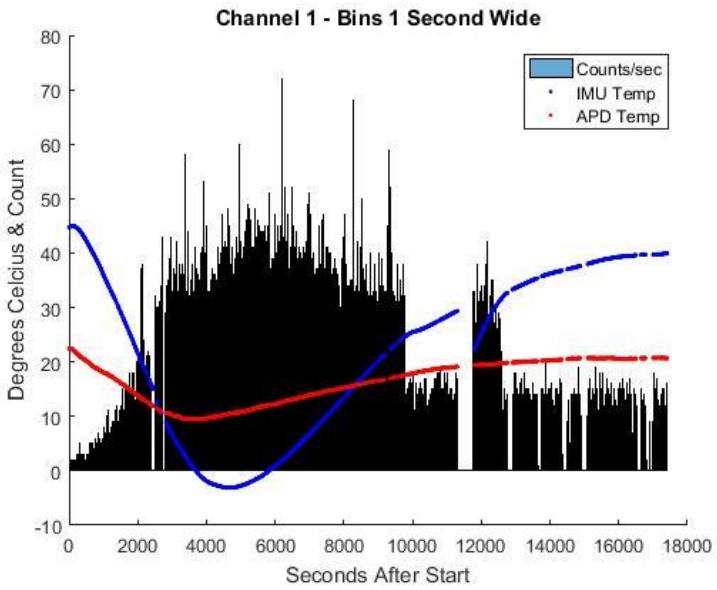

Figure 2: For channel 1: The blue line is the temperature of the IMU and the red line is the temperature of the APD both in degrees Celsius vs. bin. The black lines for the counts per bin are also superimposed on the plot.

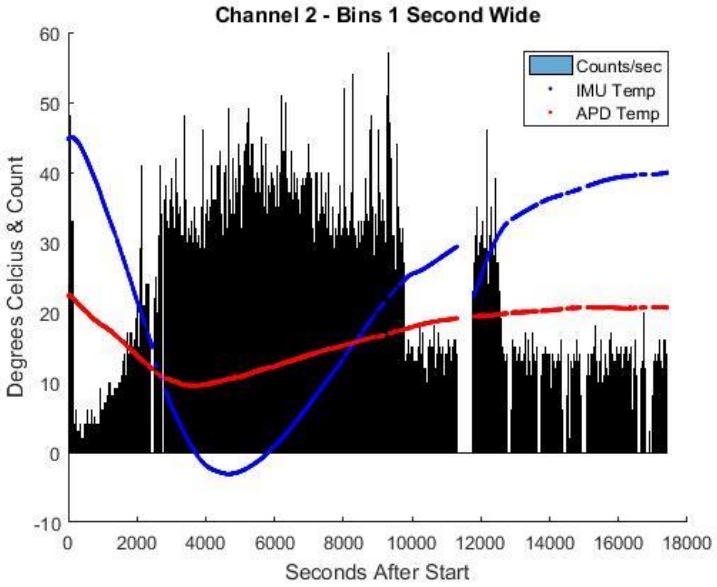

Figure 3: For channel 2: The blue line is the temperature of the IMU and the red line is the temperature of the APD both in degrees Celsius vs. bin. The black lines for the counts per bin are also superimposed on the plot.

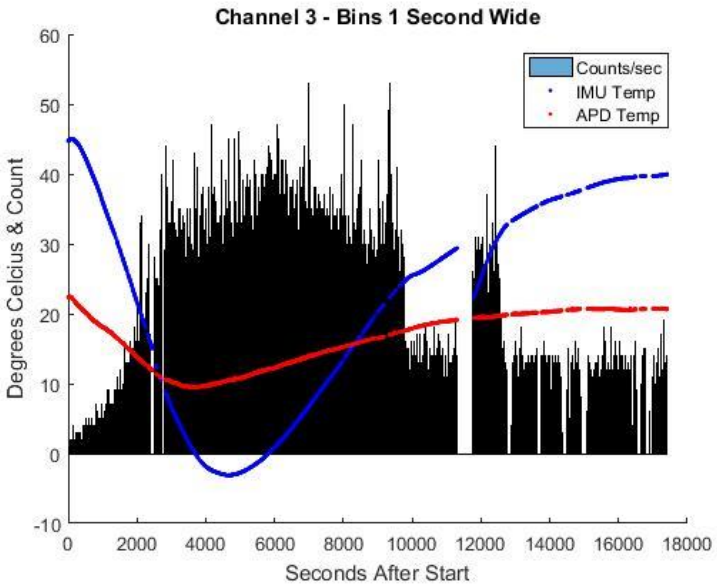

Figure 4: For channel 3: The blue line is the temperature of the IMU and the red line is the temperature of the APD both in degrees Celsius vs. bin. The black lines for the counts per bin are also superimposed on the plot.

The plots show a discrepancy between the temperature with the APD and the IMU showing that the APD is temperature dependent. Figure 1 shows the black lines for the counts per bin and its respective amplitude. The counts are then superimposed on Figures 2 – 4 to show how temperature changes are related to the amplitude of the counts at the same time scale.

This is a brief description of what analysis will be included in the final report due in December and some of the activities we have been accomplishing this past month.

2. Issues Encountered
None.

3. Milestones Achieved
None currently. (In process of finalizing Final Science Report which is the next milestone.)

4. Current Student Team

Name	Gender	Ethnicity	Race	Student Status	Responsibilities
Hannah Weiher	F	Non-Hispanic	Caucasian	Graduate Student	Team lead
Tim Kukowski	M	Non-Hispanic	Caucasian	Undergraduate Senior	Chief Engineer
Joel Runnels	M	Non-Hispanic	Caucasian	Graduate Student	Technical Consultant (Detector engineering and physics)/Payload Lead

Name	Gender	Ethnicity	Race	Student Status	Responsibilities
Ryan Vogt	M	Non-Hispanic	Caucasian	Undergraduate Sophomore	Detector Systems Physicist (Calibration and testing)
Kendra Bergstedt	F	Non-Hispanic	Caucasian	Undergraduate Sophomore	Detector Systems Physicist (Calibration and testing)
Maxwell Yurs	M	Non-Hispanic	Caucasian	Undergraduate Junior	Detector Systems Lead (Calibration and testing)
Jeffery Chaffin	M	Non-Hispanic	Caucasian	Undergraduate Senior	Detector Systems Physicist (Calibration and testing)
Ilya Zubarev	M	Non-Hispanic	Caucasian	Undergraduate Senior	Detector Systems Physicist (Calibration and testing)
Gaurav Manda	M	Non-Hispanic	Asian	Undergraduate Sophomore	Detector board redesigns
Luke Granlund	M	Non-Hispanic	Caucasian	Undergraduate Senior	Payload Systems Software
Aaron Nightingale	M	Non-Hispanic	Caucasian	Undergraduate Junior	Payload Systems Hardware
Seth Willing	M	Non-Hispanic	Caucasian	Undergraduate Junior	Flight Structures Engineer