

October 28, 2016

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

1. Activities

Analysis on radio data is currently underway. We want to mention that (new to this year) our team consists of a collaboration of students from both the aerospace engineering department and the physics department. The physics members are analyzing the data along with us on the engineering side. This monthly update is what we are both currently working on with the analysis:

We currently have an initial plot of energy count rate versus time shown in Figure 1. This is a very general plot that shows what we are working with and what we are trying to do with the data. The y-axis of the plot is the digital output of the ADC, correlating to some energy value. Based upon this, the y-axis essentially represents energy, however, the relationship between ADC value and energy value is still unknown. This is a part of the research that the physics team is trying to discern with the help of this data. (What the ADC values are related to energy.) The x-axis is time in units of seconds. We are currently trying to isolate specific channels as well from the data. (There were 3 channels being used for the duration of the flight.)

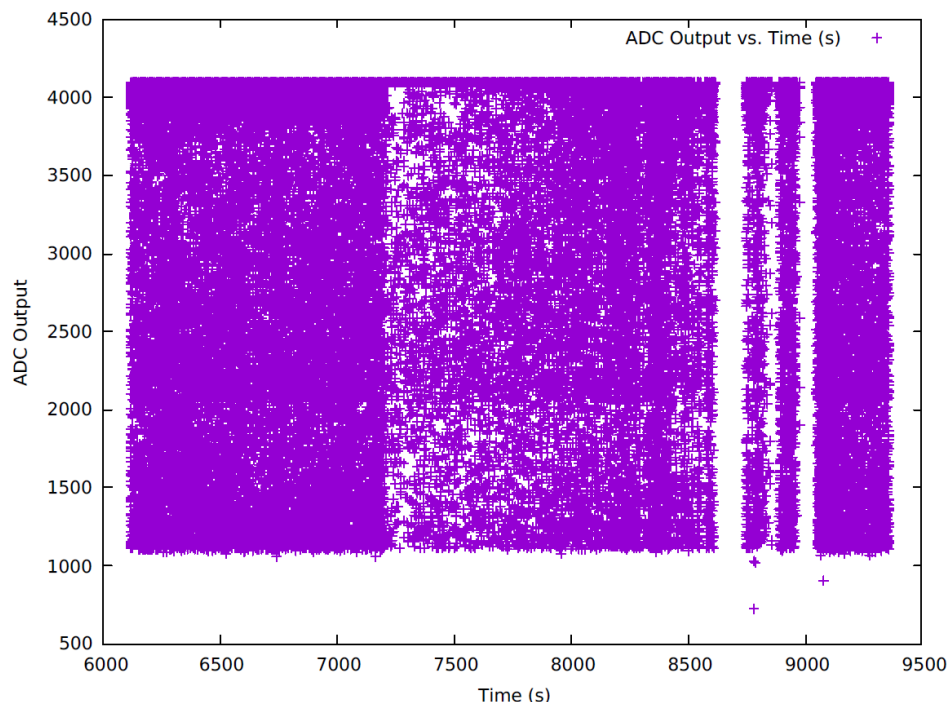


Figure 1: Energy count vs time.

What we are moving forward with is analyzing the data to see if we can distinguish certain patterns that may be happening with the ADC and the separate channels. With this information, it will help us build a better detector. Also, continuation on the final science report goals and drafts are underway.

2. Issues Encountered

On the engineering side of things: analysis continuing on why SD card failed mid-flight.

3. Milestones Achieved

None currently. (Next planned Milestone is Final Science Report.)

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
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)
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