

December 1, 2014

**To:** Dr. T. Gregory Guzik - HASP Project Director  
**From:** Seth Frick – Team Lead  
**RE:** HASP Monthly Status Report

## **1. Activities**

Continued analyzing flight data from the detector systems.

Worked with the physics department at the University of Minnesota to perform calibration tests with the HAXDT detectors.

Flew the GPS locally on a sounding balloon and collected good data. A better antenna was used on this flight than on the HASP flight, so it is believed that the low-end antenna used on the HASP flight is the reason that the GPS did not collect good data for the full flight.

Continued planning for the 2015 proposal, and began developing ideas for secondary experiments on the HASP payload.

Began working on the 2014 final science report.

Continued recruitment for the next project cycle.

## **2. Issues Encountered**

While testing the HAXDT detectors with the physics department, we were unable to properly characterize the known radioisotopes that were being used as test specimens in the time that we had available. Instead, we used a lab-grade NaI(Tl) detector to characterize thorium-doped gas lantern mantles, which had previously been used as the test specimens for laboratory testing of the HAXDT detectors.

## **3. Milestones Achieved**

None—flight data processing still in progress.

#### 4. Current Student Team

Name	Gender	Ethnicity	Race	Student Status	Responsibilities
Seth Frick	M	Non-hispanic	Caucasian	Graduate 2 <sup>nd</sup> year	Team lead, detector systems and photon energy measurement, GPS and IMU operation
Andrew Mahon	M	Non-hispanic	Caucasian	Undergraduate Senior	Detector systems, hardware configuration, and structure fabrication
Haley Rorvick	F	Non-hispanic	Caucasian	Undergraduate Senior	Structure design and fabrication, hardware configuration
Josiah DeLange	M	Non-hispanic	Caucasian	Undergraduate Senior	Flight computer and power systems, flight software
Alec Forsman	M	Non-hispanic	Caucasian	Undergraduate Senior	Flight computer and power systems, flight software
Seth Merrifield	M	Non-hispanic	Caucasian	Undergraduate Senior	Thermal monitoring and protection.
John Jackson	M	Non-hispanic	Caucasian	Undergraduate Senior	Detector energy measurement and testing
Guy Squillace	M	Non-hispanic	Caucasian	Graduate – 1 <sup>st</sup> year	New team member