

February 28, 2014

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

1. Activities

Received new hardware components including GPS receiver, camera, and scintillation material for second detector. Amptek ICs are in the mail, and upon their arrival all parts necessary for the second x-ray detector will be in hand.

Began long-duration bench tests with first x-ray detector and pulse height analysis circuitry to characterize the background energy spectrum. Bench tests with a known source will begin in the next few weeks, allowing us to validate our energy measurement methods.

Began fabrication of structural components needed for the second detector.

2. Issues Encountered

Prototyped pulse height analysis circuitry used for detector bench testing has shown some minor performance issues. These issues have not affected the ability to accurately measure the voltage peaks corresponding to the energy levels of photon events during bench testing, but will need to be corrected before the circuitry can be integrated with flight hardware.

3. Milestones Achieved

Received confirmation of continued sponsorship by Amptek, Inc. through the donation of additional ICs needed to populate the second channel of the detector front board.

Received confirmation of a new sponsorship by Saint-Gobain Crystals through the donation of plastic scintillation material for the second detector.

4. Current Student Team

Name	Gender	Ethnicity	Race	Student Status	Responsibilities
Seth Frick	M	Non-hispanic	Caucasian	Graduate 1 st year	Team lead, GPS and IMU operation
Andrew Mahon	M	Non-hispanic	Caucasian	Undergraduate Junior	Detector systems, hardware configuration, and structure fabrication
Haley Rorvick	F	Non-hispanic	Caucasian	Undergraduate Junior	Structure design and fabrication, hardware configuration
Josiah DeLange	M	Non-hispanic	Caucasian	Undergraduate Junior	Flight computer and power systems, flight software
Alec Forsman	M	Non-hispanic	Caucasian	Undergraduate Junior	Flight computer and power systems, flight software
Seth Merrifield	M	Non-hispanic	Caucasian	Undergraduate Junior	Thermal monitoring and protection.
John Jackson	M	Non-hispanic	Caucasian	Undergraduate Junior	Detector energy measurement and testing