

HASP Directional Cherenkov Detector

March 2011 Status Report

Activities

Research was done into various epoxies and encapsulation procedures. Past epoxy encapsulation tests have had too many air bubbles, so new tests will focus on removing these bubbles. Previous tests have only been done on circuit boards, so another testing priority is to simulate the PMT leads.

The power system will now incorporate two high voltage converters which will split the ten PMTs so that if one converter were to fail, data could still be obtained from both radiators. The power system now includes relays that will allow the payload to power up in sections. The trigger system has been worked out to include multiple logic gates and interface with the front end module already built by LSU.

The structure of the payload was redesigned to fit the 16 cm x 16 cm front end module (used for PMT pulse shaping and discrimination) in the payload and to fit light guides onto the PMTs so the wave shifting bars would not need to be bent. The payload will now stand on four supports within the 15 cm x 15 cm required HASP footprint, lifting the payload a maximum of 3 inches off the HASP interfacing plate.

Team Management Structure

Team Electron Volt is comprised of Jace Boudreaux and Sean McNeil. Contact information and individual roles are shown in [Table 1](#).

Table 1 – Team Management Structure

Name	Sean McNeil	Jace Boudreaux	Dr. Gregory T. Guzik
Roles	<ul style="list-style-type: none">• Software• Testing• Calibrations• Data Analysis	<ul style="list-style-type: none">• Project Management• Electrical• Mechanical	<ul style="list-style-type: none">• Faculty Advisor
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