HASP Directional Cherenkov Detector
January 2011 Status Report

Activities

Over the past month we have been experimenting with different coatings to prevent arcing on the high voltage circuit boards that will be used to power the photomultiplier tubes. A polystyrene coating, made by dissolving packing peanuts in xylene, did not work due to it burning when coming into contact with an arc. RTV silicone was not suited for this purpose as it was too viscous to get between capacitors on the circuit. Krylon spray paint works well, but requires many coats due to its low viscosity. Over the next week, polyurethane and epoxy will be tested.

The design of the control system for the payload is being performed at the present time. A decision on the controller will be made in the next couple of days.

A 4-channel pulse analyzer board was tested to ensure that it will not overheat in a near vacuum environment. More tests will need to be done to conclusively determine this.

Team Personnel

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	• Software • Testing • Calibrations • Data Analysis	• Project Management • Electrical • Mechanical	• Faculty Advisor
Department	LSU Physics and Astronomy	LSU Mechanical Engineering	LSU Physics and Astronomy
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