

Raymond J. Weber  
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MSU – Payload #4

Dr. Gregory Guzik  
LSU HASP Program

### **Re: Monthly Status Report – April 2013**

Research this month continues previous month's research in benchmarking, readback scrubbing and culminating with a cyclotron test of the full system at Texas A&M Universities Cyclotron Institute.

FPGA configuration memory readback has now been demonstrated and is currently being integrated with the HASP flight code. This will allow us to detect if the FPGA's radiation strikes during flight actually create FPGA faults. Benchmarking testing also continued further optimize the performance of the cores flow and balance power and performance metrics.

Cyclotron testing consisted of testing the flight version of the powerboard, FPGA board, radiation sensor and amplifier board as an assembled system. Preliminary data indicates the system operated as expected.

Raymond Weber – Continued work on benchmarking, started work on integrating readback scrubbing into the flight software and participated in cyclotron testing.

Justin Hogan – Continued work on readback scrubbing and integration into the flight software, participated/lead member for the cyclotron testing.

Blaine Ferris – No assigned tasks.

### **Issues encountered during payload design and development**

- No significant issues were encountered this month - minor issues were found leading up to and during cyclotron testing which will be addressed in routine development.

### **Milestones Achieved**

- Configuration memory readback has been verified in an independent system and is being integrated with the HASP flight software
- A hardware stack capable of achieving proposal requirements was tested in a cyclotron

## Current Team Members

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