

HADES 2013 Status Report
Month: August

1. Activities of the Team Members:

A. Mechanical:

- Replacie the damaged coupler on HADES

B. Electrical: David Branch, Craig Jones

- Finalized and constructed power boards for HADES/HASP integration.
- Finalized FLOP instructions for HADES operation.
- Added heaters to design in order to address chamber door malfunction.
- Successfully tested electrical design for HADES.
- Included tracking beacons to HADES/LAMB design for individual payload tracking.

C. Software: David Branch

- Finalized serial communication and telemetry downlink software for HADES/HASP integration
- Reorganized how software logs information for easier post flight analysis.
- Successfully tested final software with HADES.
- Finalized FLOP instructions for HADES operation

D. Biology:

- Finalize the preparations of reagents to transport to Ft. Sumner
- Prepare the mobile lab for ATP, culturing, and microscopic analysis

2. Issues Encountered:

A. Mechanical:

- A new coupler was ordered and the correct orientation had to be determined before installation

B. Electrical:

- Had quite a bit of trouble designing power board for HADES design. Blew a few DC/DC converters due to a lack of electrical load being placed on converter while building and testing.
- RPM sensor (photodiode interrupter) did not function as expected. Will have to manually determine RPM's from flight video.

C. Software:

- No software issues encountered during August. Most software was previously finalized and only changes made were minor and did not cause any trouble with operation of flight software.

D. Biology:

- Protocols for manual ATP and ADP extractions had to be optimized for using rod samples

3. Milestones Achieved:

A. Mechanical:

B. Electrical:

- Finalized all electrical designs for HADES and LAMB.

C. Software:

- Finalized all software functions for HADES and LAMB.

D. Biology:

- All protocols and materials ready for sample analysis in Ft. Sumner

4. Current Team Members and Advisors:

Name	Year	Demo	Role
Noelle Bryan	Graduate Student	Caucasian	Team Lead, Biology
Scott Burke	Jr.	Caucasian	Mechanical
Craig Jones	Fr.	Caucasian	Electrical
David Branch	Sr.	Caucasian	Electrical & Software
B. Christner			PI