

## Monthly Status Report - August 2013

ASTRO Team - MIT - Payload 06

23 August 2013

### **Team Updates:**

- Updated FLOP and PSIP to most current form. Flight date logistics solidified and logistic plan created
- In preparation for the flight set for late August, we have sterilized our four canisters using the following sterilization protocol within the clean environment of a laminar airflow cabinet with UV sterilization:
  - 1.) Wash dirt and oil residue from entire payload using 70% ethanol and KimWipe scrub.
  - 2.) Wash canisters and airflow channels using bleach solution.
  - 3.) Wash canisters and airflow channels using DNA Zap Solutions 1 and 2 in order to denature residual genetic material.
  - 4.) Reassemble payload. Once these steps were completed, the inside of the rotating canisters (containing the electrode) were considered sterilized.
- In preparation for flight, we finalized our packing and field protocols to ensure proper sample collection in the field.

### **Milestones:**

- Successfully passed integration inspections and received flight certification
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**Mechanical Build - Jessica Sandoval** (Biological Engineering, 2015) - Team leader

Update: The fourth canister used as a control for in the lab was manufactured.

**Electrical Design - Ethan DiNinno** (Aeronautical and Astronautical Engineering, 2016)

Update: Electrostatic Dissipative Film (ESD) ground electrodes attached to payload body.

**Programming/Website Development -**

**Rodrigo Gomes** (Computer Science, 2015)

**Jeremy Kaplan** (Computer Science, 2015)

Update: Constants (height/temperature thresholds) updated to their production values.

Small change in the amount one of the motors rotates to align the openings in the inner and outer canisters correctly.

Issues Encountered: None notable.

Milestones: Website now available for smart phone in order to track payload commands.

**Christopher Carr** - Research advisor for ASTRO team