

Monthly Status Report - September 2013
ASTRO Team - MIT - Payload 06
25 October 2013

Team Information:

Updates:

- Identified primer sequences for 16S (prokaryotic), 18S (eukaryotic), and fungal protocols. Set-up is as follows: identical forward primer for each of the individual protocols. Each reverse primer has unique barcode for each of the 25 samples, allowing for identification. Use IDT to order 1-96 well PCR plate with unique barcode for reverse primers.
- Baseline experiments providing our positive and negative controls currently being conducted. Process includes sample lysis, amplification using PCR, gel verifications, and sequencing reactions.
- Began compiling technical documents for final paper. Structure of the paper is divided between technical spreadsheets and biological analysis, which is still being performed.

Issues Encountered:

- Student performing biological sample analysis (Jessica Sandoval) out of lab for one and a half weeks due to illness.

Milestones:

- Sample analysis procedure solidified, allowing for the commencement of experimental protocol.

Planning for future HASP teams:

- In order to promote MIT participation in future HASP flights, we are preparing an informational session explaining the HASP flight opportunities and our past year's experiences. We hope to increase awareness of the HASP program on campus in order to promote alternative project ideas.

Members and Roles

Jessica Sandoval (Biological Engineering, 2015) - Team leader, Mechanical Build/Design, Recovery Team member, Biotic analysis of samples

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

Rodrigo Gomes (Computer Science, 2015) - Programming/Website Development, Recovery Team member

Jeremy Kaplan (Computer Science, 2015) - Programming/Website Development

Christopher Carr - Research advisor for ASTRO team