

Monthly Status Report - May 2013
ASTRO Team - MIT - Payload 06
30 May 2013

Important Note:

The focus of this past month has been preparing for final exams and finishing classes. Two team members (Cheryl and Linda) will be working at their internships in California and will no longer be able to participate in the build of the ASTRO payload. Laura will also be working further away in Massachusetts over the summer and so it is difficult to gauge her level of availability. However, given that summer has just started, we will be able to turn much more attention to the finishing of the project now that finals and classes have ended.

Prototyping Team

Jessica Sandoval (Biological Engineering, 2015) - Team leader

Laura Standley (Mechanical Engineering, 2016)

Updates: Performing rotation tests of the concentric collection chambers (need to reduce friction between two chambers, ie dry lubricant). Also, after our inability to get into contact with faculty in the Space Propulsions Lab at MIT, we have a new student contact with whom we will be working in order to perform thermal vacuum tests in order to test for arcing with prototype

Bell Jar vacuum tests (for electrode) unsuccessful because benchtop vacuum has cracked tubing (need replacement)

Prototype completion date set for Friday, June 7 (includes mechanical and electrical attachments).

Issues Encountered: Having difficulty with the mount of the stepper motor within the inner rotating cylinder

Milestones: Finished the lathing and milling of collection chambers (Focus now on support structures)

Electrical Design

Ethan DiNinno (Aeronautical and Astronautical Engineering, 2016)

Updates: All of the electrical components have arrived in the mail. Currently assembling the board

Programming/Website Development

Rodrigo Gomes (Computer Science, 2015)

Jeremy Kaplan (Computer Science, 2015)

Updates: Ready to upload code to prototype upon completion of fabrication

Milestones: Website completed

Christopher Carr - Research advisor for ASTRO team

Cheryl Gaul (Aeronautical and Astronautical Engineering, 2016) - Will be working in California over summer

Linda Xu (Physics, 2015) - Will be working in California over summer