## General Experiment B: 02/23/2020

Time Start: 11:00AM

Time End:

Members: Johnathan Le, Johnny Valencia, Vadim Naumchuk, Mohammad Afdup

Advisor: Lemmy Meekisho

Sponsor: Tim Sippel

Agenda:

* Work on Experiment B - Project Overview
  + Discuss what the motivation and goal of the experiment should B
* Divide responsibilities for the experiment
* Schedule the experiment timeline
  + This includes data gathering dates, deadlines for parts of the report, and a kill date.
* Work on the procedure? if time permits
* Capstone Progress Report

Discussion:

* Project Overview:
  + Motivation - A Solarsail is a spacecraft that makes use of a lightweight design and solar pressure to power its flight. By using sails of reflective material it harnesses solar pressure to sail through space. One such reflective material is CP-1, an extremely thin sheet material, composed of a polymer sheet with an aluminum material sprayed over it. TO control the flight of the solar sail the individual sails must be controlled accurately much like sailboats on earth. Using the (Vladi’s mathematical model) we can calculate what orientation each sail must be in given various material and design properties. One such material property necessary that is not given by the manufacturer is material’s emissivity. In this experiment, we will attempt to determine the material emissivity for a 2.5-micron thick sheet of CP-1.
  + Methods-
* Responsibilities:
  + Experimental - We will work with Dr. Sanchez to understand and operate the machines for the experiment. Will also work in Data analysis, which includes preparing a data recording format that transition easily into the report.
  + Report- Begins writing introduction, methods & experiments.
    - Write the introduction at least by Wednesday the 26th as well as the method and get feedback from Trethway.
  + Prep - Designs jigs & prepares CP-1 Material required for the experiment
* Schedule:
  + Deadline - The entire Project B report is due on March 16th, in 21 days.
  + Important Dates
    - Data collection - Thursday 27th in the morning, Friday the 28th in the evening, and Saturday the 29th all day from 10 - 8.
    - 3-D printing deadline - is Monday, 24th or Tuesday, 25th at the latest to print material in time for the experiment.
    - Introduction and methods- These lab sections should be completed by Wednesday the 26th, evening.
* Lab Procedure:
  + Do as much research on the equipment and ways of conducting emissivity experiments, to be ready for the lab day.
* Progress Report (Capstone) :

Completed Tasks:

* Talk with Dr.Sanchez about equipment for project B
* Measure dimensions and other key details of the testing equipment.

Tasks for the upcoming week:

* Run data-gathering experiment for project B.
* Design a custom jig for the CP-1
* Prep a CP-1 sample for testing
* Complete written sections for introduction and methods.

Next meeting date: