

Team Orion Monthly Status Report

Team Demographics						
	Responsibilities	Gender	Age	Ethnicity/ Race	Class	Entry/ Exit Date
Victor Fernandez-Kim Undergraduate Mechanical Engineering	Project Manager	M	21	Hispanic	Senior G.D. Spring 2017	September 2014
Joshua Collins Undergraduate Electrical Engineering	Electrical Manager	M	20	White	Senior G.D. Spring 2017	September 2014
Stephen Harb Undergraduate Computer Engineer	Software Manager	M	21	White	Junior G.D. Spring 2017	September 2014
Allen Davis Undergraduate Mechanical Engineering	Mechanical Manager	M	19	White	Junior G.D. Spring 2017	February 2015
Jordan Causey Undergraduate Mechanical Engineering	Mechanical Assistant	M	18	Black	Sophomore G.D. Spring 2018	February 2015
Brad Landry Undergraduate Mechanical Engineering	Mechanical Assistant	M	19	White	Junior G.D. Spring 2018	February 2015
Jack Brady Undergraduate Computer Engineering	Electrical Assistant	M	19	White	Junior G.D. Spring 2018	February 2015
David Bordelon Undergraduate Computer Science	Software Assistant	M	21	White	Senior G.D. Spring 2016	February 2015

1) Activities of team members:

- a. PSIP revisions
- b. Critical Design Review document
- c. Updating mechanical structure and assembly of final payload design
- d. Troubleshooting electrical systems
- e. Integrating and testing systems
- f. Identifying and obtaining final flight components (i.e. PCB designs and spare flight components)

2) Issues encountered during payload design/development:

- a. Major issues
 - i. PCB board designs for the UV Acquisition System and Power Regulation System have not been ordered yet. The boards shall be ordered before the end of June.
- b. Minor issues
 - i. The solar tracking circuit response curve is oscillating. Both photodiodes are producing close response curves and are functioning properly when a light source is detected. This issue is not a major problem since the Solar-Tracking System is

designed only so that the sensor values can be compared. However, it will still be resolved to avoid potential issues arising from the sensors oscillating to zero.

3) Milestones achieved:

- a. Mock-payload built and assembled for testing. This mock up is constructed primarily from polystyrene foam rather than the PVC and steel intended to be used in the flight payload. For indoor and non-thermal vacuum, ground testing this set up will be sufficient.
- b. Solar-Tracking System has been assembled and is currently being tested to find any issues. Azimuthal and elevation tracking are functioning when tested separately. Full two-axis track testing will begin shortly.
- c. Integration of the UV Acquisition System, GPS shield, motor board, and Arduino Mega have been completed to successfully provide data reading, writing, and motor control.

4) What will be worked on in **July**

- a. Submit CDR and PSIP documents
- b. Further integration of all systems and ground level testing
- c. Full system tests in thermal-vacuum chamber
- d. Integration to HASP gondola
- e. Pre-flight simulation run through
- f. Flight Operations Plan Document
- g. Flight Readiness Review Document