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	20	Hispanic	Junior G.D. Spring 2017	September 2014
Brian Stutzman Undergraduate Electrical Engineering	Assistant Project Manager	M	22	White	Senior G.D. Spring 2015	September 2014/ May 2015
Joshua Collins Undergraduate Electrical Engineering	Electrical Manager	M	20	White	Junior G.D Spring 2017	September 2014
Stephen Harb Undergraduate Computer Engineer	Software Manager	M	20	White	Junior G.D. Spring 2017	September 2014
Allen Davis Undergraduate Mechanical Engineering	Mechanical Manager	M	19	White	Sophomore G.D. Spring 2017	February 2015
Jordan Causey Undergraduate Mechanical Engineering	Mechanical Assistant	M	18	Black	Freshmen G.D. Spring 2018	February 2015
Brad Landry Undergraduate Mechanical Engineering	Mechanical Assistant	M	19	White	Sophomore G.D. Spring 2018	February 2015
Jack Brady Undergraduate Computer Engineering	Electrical Assistant	M	19	White	Sophomore 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. Addressing immediate issues found in Payload Specification and Integration Plan (PSIP) document and providing more details on integration
    b. Developing Image Verification System (IVS). The IVS aims to provide post-flight evidence that the payload was successful in tracking the Sun throughout HASP's flight profile. By using a fish-eye lens camera (HackHD) a wide range view will be captured in the same direction the UV sensor array is facing. Orion plans to use a solar film to minimize lens saturation and provide a clear image. Testing and troubleshooting will be carried out to ensure the functionality of this system.
    c. Designing Thermal Protection System (TPS).
    d. Troubleshooting UV Acquisition System (UVAS)

2) Issues encountered during payload design/development:
    a. Major issues
        i. The UV acquisition circuit took a long time to complete and troubleshoot. The UVC had issues effectively collecting the low levels of expected UVC values without any ambient interference.
        ii. TPS: Due to the extreme temperatures experienced during the flight, a major concern for this payload is the continued functionality of the onboard servos. In the previous design, one of the servos is separated from the main electronics bay and as a result may experience issues with the operating temperature. Orion is currently working to either move the servo or provide active and passive insulation for the servo/payload.
    b. Minor issues
        i. Limited availability of team members during May

3) Milestones achieved:
    a. The design of the mechanical system has been reworked to resolve issues with wiring, servo placement, and servo current draw.
    b. Completed and calibrated UVAS circuit

4) What will be worked on in **June**
    a. Revise Preliminary Specification and Integration Plan (PSIP) and provide stronger evidence SURMA will be ready for integration in August 2015
    b. Complete all the individual systems, troubleshoot, and integrate
    c. Perform full system tests