



HASP 2018 Monthly Status Report

Report Month: February 2018
Submitted by: Conner Shaver
Submit Date: 02 /24/ 2018
Institution: CU-Boulder
Payload Number: 2018-10
Payload Name: Miura II

I) Activities During Previous Month:

- Hiring of the Team Completed
- Weekly Meeting Started
-
- Conceptual Design Review Complete
- Proposal Edits Completed and Submitted

II) Issues Encountered:

- Developing a method to retract the soft-shell structure without compromising the integrity of the material.
- Developing a detailed FBD for the active pressure control system and implementing a 2-fault failure tolerance on the system.
- Higher level thought concerning the conceptual design of the payload
 - Too much work so far has gone into solutions before identifying the exact problem that needs to be solved and defining constraints for the solutions to the problem.

III) Milestones Achieved:

- Hired the Team of Engineers as of February 5th.
- Completed the conceptual Design Review February 23rd.
- Introduced all teams to the materials available at Space Grant.
- Introduced all team members to methods to properly design given a set of requirements, i.e. Trade Studies etc.
- Developed a method to quantitatively measure the maximum normal force the material will be able to withstand.
- Each sub team began to develop conceptual solutions to their relevant requirements.

IV) Plans for Coming Month:

- Implement feedback from the Conceptual Design Review.

- More detailed Pressure System Control Diagram
- Retraction Method Prototype
- More detailed Testing Plan
- Refine requirements and include leak rate information
- Prepare for the Preliminary Design Review which will occur between March 19th-March 23rd.
- Begin prototyping methods to retract the habitat.
- Develop a further understanding of how the pressure system is going to work.
- Continue developing ways to safely and properly test the pressure control system and the safety measures in the system.
- Develop a greater understanding of the problem we are trying to solve with the project and how our solution can solve it while still staying within given constraints.
- Personal Improvements required as a Project Manager
 - Correct time management skills to prevent missed due dates again.
 - Implement a more structured method for trade studies
 - Have a talk with systems engineers about my personal expectations of them.
 - Take on the responsibility of leading a Testing sub team with members from the existing sub teams to begin developing the methods needed to properly test the payload.

V) Other Comments:

Overall Miura II is progressing nicely. Everyone has an excellent work ethic and brings new and inventive ideas to the table. However, in order to make Miura II a success more thought and time needs to go into how the pressure system is going to be controlled and developed. Also, more work needs to be done in developing a working prototype of the retraction method.

I would like to personally apologize for missing the deadline for this Monthly Status report. It will not happen again.

VI) Team Composition and Organization:

Fill in text as necessary plus update table below.

Name	Start Date	End Date	Role	Student Status	Race	Ethnicity	Gender	Disabled
Conner Shaver	1/29/18	Current	Project Manager	Undergrad	White	Caucasian	M	No
Shu-Yu Lin	2/5/18	Current	Systems	Undergrad	Asian	Pacific Islander	F	No
Jaret Anderson	2/5/18	Current	Systems	Undergrad	White	Caucasian	M	No
Lucas Zardini	2/5/18	Current	FSW Lead	Undergrad	White	Hispanic	M	No
Charles Puskar	2/5/18	Current	FSW	Undergrad	White	Caucasian	M	No
Srikanth Venkataraman	2/5/18	Current	FSW	Undergrad	Asian	South Asian	M	No
Raymie Fotherby	2/5/18	Current	EPS Lead	Undergrad	White	Caucasian	F	No

Tristan Schoeman	2/5/18	Current	EPS	Undergrad	White	Caucasian	M	No
Ashkan Bafti	2/5/18	Current	EPS	Undergrad	White	Caucasian	M	No
Nick Bearns	2/5/18	Current	Structures Lead	Undergrad	White	Caucasian	M	No
Griffin Van Anne	2/5/18	Current	Structures	Undergrad	White	Caucasian	M	No
Mary Hanson	2/5/18	Current	Structures	Undergrad	White	Caucasian	F	No
Madisen Frie	2/5/18	Current	Science Lead	Undergrad	White	Caucasian	F	No
Lindsay Cobb	2/5/18	Current	Science	Undergrad	White	Caucasian	F	No
Lewis Redner	2/5/18	Current	Science	Undergrad	White	Caucasian	M	No
Jason Magno	2/5/18	Current	Science	Undergrad	Asian/White	Asian	M	No