



# HASP Monthly Status Report

**Report Month:** April 2023  
**Submitted by:** Melissa Rocha  
**Submit Date:** 04/ 28 / 2023  
**Institution:** College of the Canyons  
**Payload Number:** 2023-09  
**Payload Name:** Sol Seeker

## I) Activities During Previous Month:

- Fifth District Supervisor Kathryn Barger of the Los Angeles County Board of Supervisors has pledged financial assistance in the amount of \$4,000.00 to College of the Canyons Foundation “HASP and RSX” account to support students travel to NASA sites for HASP 2023 and RockSatX 2023.
- A \$2500 grant from CA Space Grant was received to fund travel expenses for students to NASA sites for HASP 2023 and RockSatX 2023.
- Recruitment of new members to shadow the current team and be ready for next year is underway.

## II) Issues Encountered:

- Trouble with Fusion 360 CAD software free student version. Difficulty conducting simulations. Switched to Inventor CAD software for mechanical drawings for more accurate detailed modeling.
- Unable to turn on 2-phase motors, troubleshooting electrical design.
- Delay in receiving Askar guide scope from UPS. The package was held from delivery because the vendor listed the incorrect address. Askar guide scope received by college warehouse but was not delivered to the team and was lost for a time. The package has been located and the team will work with the scope at the next team meeting (April 30).
- Continued delay in Tooling-U safety course required for team members to begin machining structure. Should have access this upcoming week and students can begin machining.
- Incorrect DC-DC converters sent from vendor due to administration error; new converters ordered.
- Administration closing parts ordering at the end of April due to early fiscal reconciliation. Any additional parts needed will need to be purchased out of pocket and will face difficulty in obtaining reimbursement. This early closing of purchasing is new this year and will be considered in planning next year.

## III) Milestones Achieved:

- Testing of integrated electrical systems continued.
- Final designs of mechanical structure are nearly completed and planning for machining was initiated.

- Donations of aluminum were secured from The Local Group Astronomy Club who are the team's community consultants.
- Tested PCB design with large 3-phase motor drivers but uses electrolytic capacitors not compatible in near space conditions.
- Purchased & tested 2 phase motors to be run without capacitors; these failed so the team is working on a solution.
- Tested DC-DC converters in vacuum chamber.

**IV) Plans for the Coming Month:**

- Test final electrical components as they arrive and continue with integrated prototype testing.
- Integrate all electrical sub-systems and construct flight computer.
- Completion of Tooling-U safety course by team members planning to do work in the machine shop and complete the advanced manufacturing of HASP metal parts and structures.
- Continue to work with The Local Group Amateur Astronomers on the construction and testing of the tracking telescope.

**V) Other Comments or Questions for HASP Management:**

- The Local Group astronomy club is an equal partner with the student team this year, equally invested in the success of the mission, and three of the community partner members are planning to travel to Fort Sumner for Launch.

**VI) Team Composition and Organization:**

Name	Start Date	End Date	Role/Academic Year	Race	Ethnicity	Gender	Disabled
<b>Project Management</b>							
Teresa Ciardi	Fall 2015	Present	Logistics & Science Faculty Advisor	White	N/A	Female	No
Greg Poteat	Winter 2016	Present	Machining Faculty Advisor	White	N/A	Male	No
Amy Foote	Fall 2015	Present	Recruitment MESA Director	White	N/A	Female	No
William Harwood	Spring 2023	Present	Industry Professional-Aerospace Engineer	White	N/A	Male	No
Melissa Rocha	Fall 2021	Present	Project Manager Undergrad	N/A	Hispanic	Female	Yes
Maranda Laws	Fall 2021	Present	Assistant Project Manager Undergrad	White	N/A	Female	No

Engineering Team							
Clarissa Zuo	Summer 2022	Present	Mechanical Lead High School/ Undergrad	Asian	N/A	Female	No
Derek Peraza	Summer 2022	Present	Electrical Lead Undergrad	N/A	Hispanic	Male	No
Drake Lovelady	Summer 2022	Present	Coding/Software Lead Undergrad	White	Hispanic	Male	No
Terry Guerrero	Fall 2021	Summer 2022	Mechanical Team Member Undergrad	White	Hispanic	Female	No
Miguel Paz	Fall 2022	Winter 2023	Mechanical Team Member Undergrad	N/A	Hispanic	Male	No
Isaiah Romero	Fall 2021	Present	Software Undergrad	N/A	Hispanic	Male	No
Marketing / Media							
Marni Kallestad	Winter 2022	Present	Marketing Lead Undergrad	White	Hispanic	Female	No
Gabriel Jimenez	Spring 2022	Fall 2023	Marketing Co-Lead Undergrad	N/A	Hispanic	Male	No
Tawshia Chowdury	Winter 2023	Winter 2023	Marketing Co-Lead Undergrad	Asian	N/A	Female	
Arely Castillo	Spring 2021	Present	Marketing/Media Team Member Undergrad	N/A	Hispanic	Female	No
Mentor Team							
Sarah Boyer	Fall 2021	Present	Mechanical/ Electrical Mentor Undergrad	White	N/A	Female	Yes
Shawn Ford	Winter 2019	Present	Mechanical/ Electrical/ Software Mentor Undergrad	White	N/A	Male	No
Patrick Gagnon	Summer 2021	Present	Mechanical/ Project Management Mentor Undergrad	White/ African-American / Asian	N/A	Male	Yes

Brandon Gelfand	Fall 2016	Present	Electrical / Software Mentor Undergrad	White	N/A	Male	No
Daniel Larimer	Spring 2019	Present	Mechanical/ Electrical Mentor Undergrad	White	N/A	Male	No
Andrew Nowakowski	Spring 2022	Present	Electrical/ Software Mentor Bachelor's Business Management & Computer Science	White	N/A	Male	No
Svarun Soda	Fall 2021	Present	Software/ Electrical Mentor Undergrad	White	N/A	Male	No
<b>Consulting Team</b>							
The Local Group Astronomy Club of Santa Clarita Valley, California							
Dave Flynn	Fall 2022	Present	Lead Engineering Consultant	White	N/A	Male	No
Glenn Basore	Fall 2022	Present	CAD design Consultant	White	N/A	Male	No
Abhishek Khanna	Fall 2022	Present	Astrophotography Consultant	Asian	N/A	Male	No
Robi Mukherjee	Fall 2022	Present	Mechanical Consultant	Asian	N/A	Male	Yes
Vahid Talaie	Fall 2022	Present	Software Consultant			Male	No