COLLEGE OF ENGINEERING

Electrical Engineering and Computer Science

TEAM NUMBER ~~#XXX~~

NASA University Student Launch Initiative - Computer Science

Mission Profile

Launch Vehicle Specifications:

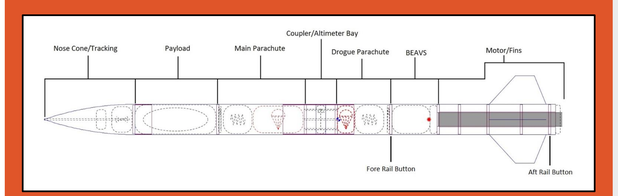
- Length: 119 in
- Weight: 60.9 lb
- Max Velocity: 542 ft/s
- Motor: Aerotech L2200
- T/W Ratio: 11.4
- 0 - 60 metric: 0.34 s
- Airframe materials: Fiberglass, Carbon Fiber, and Aluminum

Recovery Specifications:

- Parachute Sizes: 12 ft / 36 in
- Descent Time: 81 s
- Descent Speed: 99.1ft/s
- Impact Velocity: 13.7 ft/s
- Apogee Altitude: 4,000 ft
- Black Powder Charge Sizes: 2.6 g/6.4 g

Payload Specifications:

- Top Speed: 1.3 mph
- Battery Life: 5 hours
- Range: 2.8 miles
- Total Carrying Capacity: 15 mL
- Endurance: 2.115 hours
- Horse Power: 0.02



Oregon State University

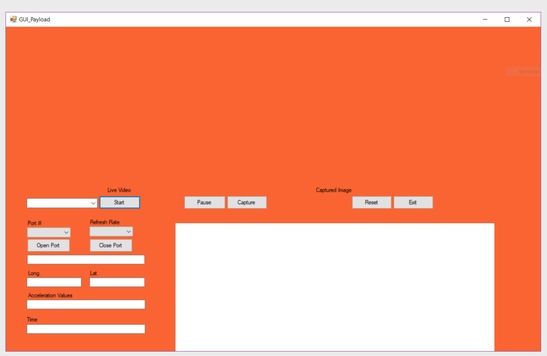
The USLI competition is a NASA-sponsored, nationwide rocketry competition. This year's challenge is to fly as close as possible to a team-declared altitude and deploy an R/C rover to collect a lunar ice sample.

Blade Extending Apogee Variance System (BEAVS) 2.0

- The BEAVS System controls our inflight active air brake system.
- Uses Kalman Filter
- Uses a PID control scheme
- Activates the blade motor to extend or retract our blades to control our drag.

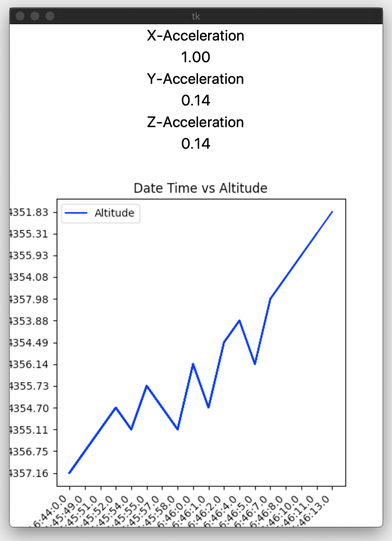
Payload

- The payload GUI displays the coordinates of the rover as well as the speed.
- The GUI allows the user to watch a video stream from the camera on the rover, screenshots can be taken and displayed on the right side of the screen.
- The GUI allows for easy connection of the transceiver.



Avionics

- Graphs the altitude of the launch vehicle through flight.
- Displays the X, Y, and Z axis acceleration during flight.
- Saves and graphs data post flight.



Insert team photo

TEAM MEMBERS
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PROJECT SPONSORS
NASA
The Oregon Space Grant Consortium

PROJECT STATUS

- Percent Completed:
- Number of Requirements:
- Number of Requirements Met:
- Major Milestones: