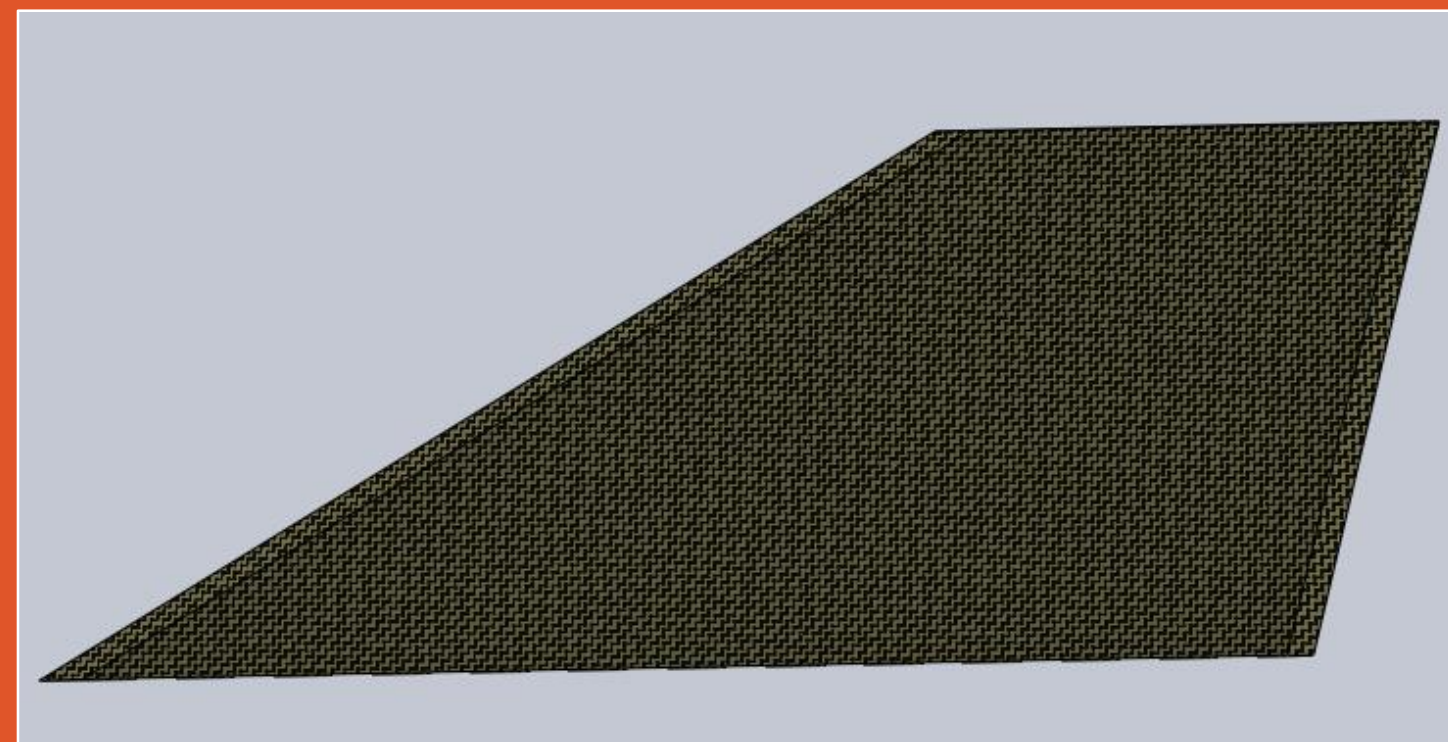
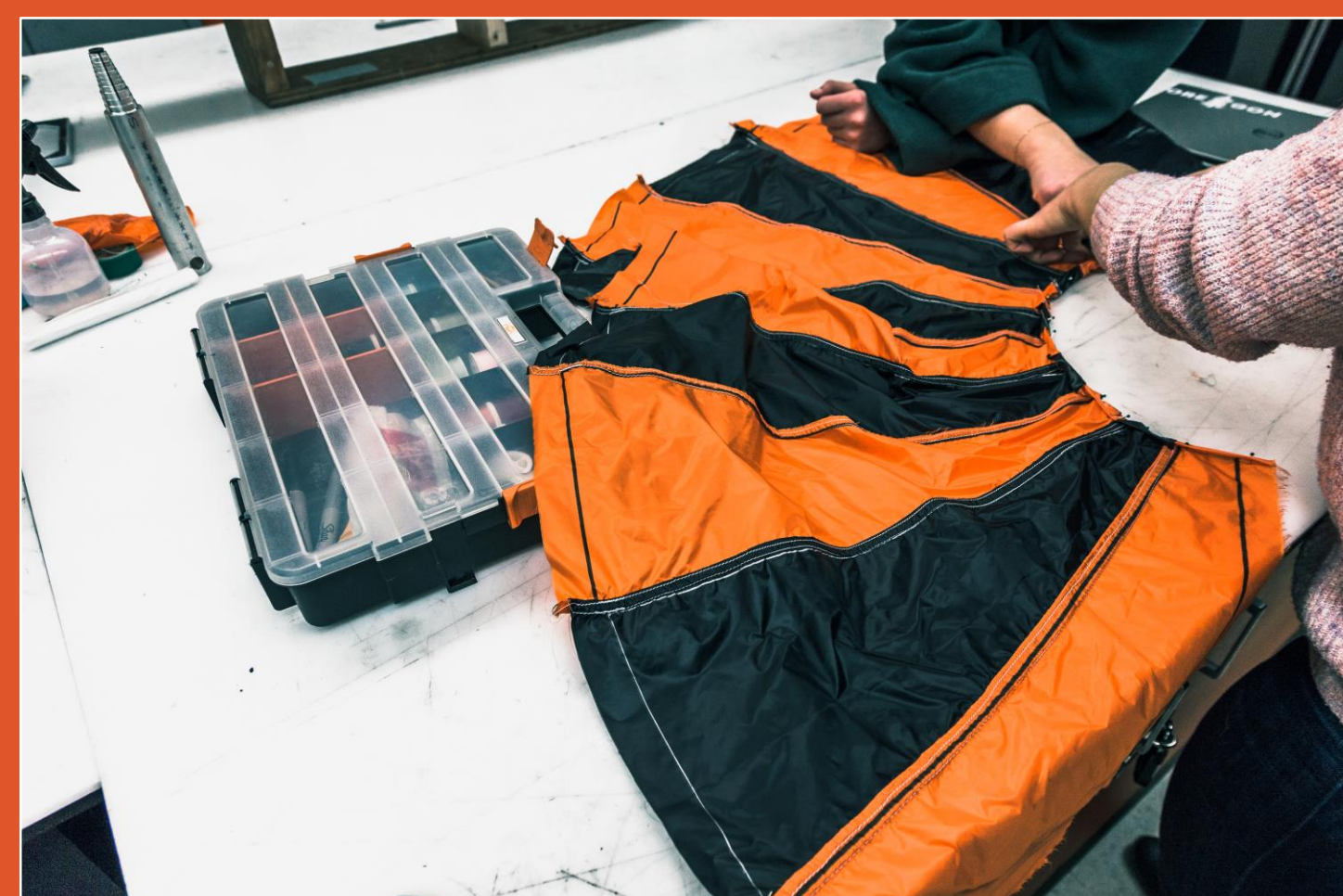


RESPONSIBILITIES

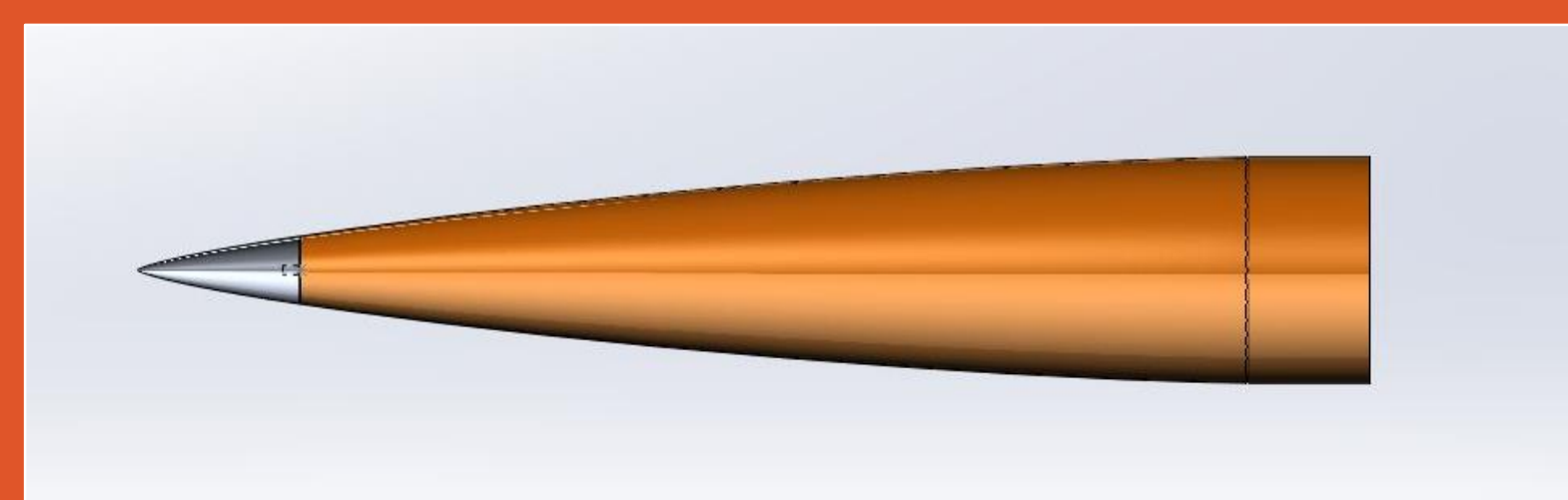
Mikayla Farr – Aero & Recovery Team Lead: Performed RASAero and OpenRocket simulations to verify the flight profile and stability. Optimized design of fins.



Annalise Daul – Parachute Designer: Designed main and drogue parachutes. Developed descent analysis to predict and compare the descent profile to simulations.

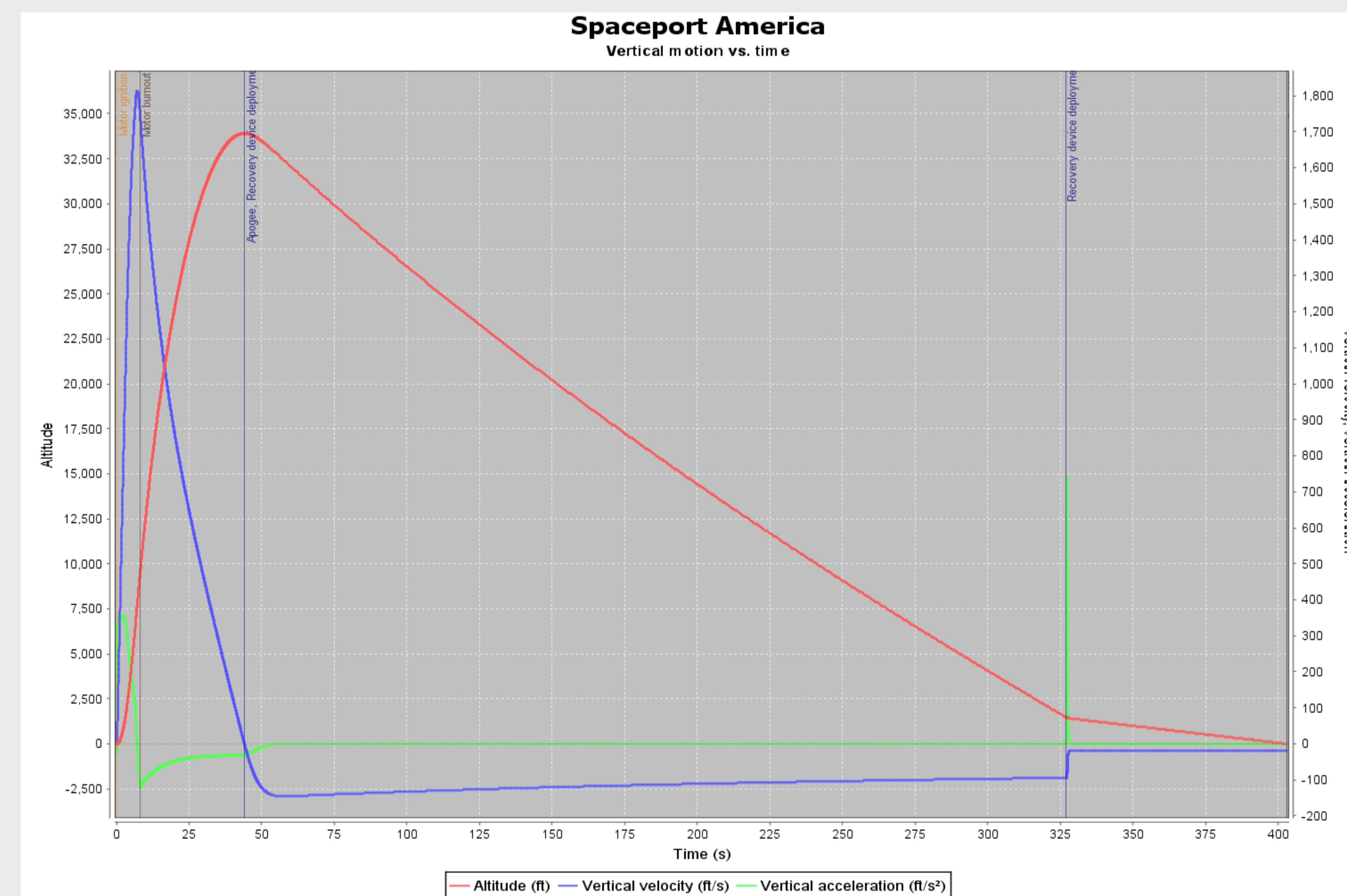
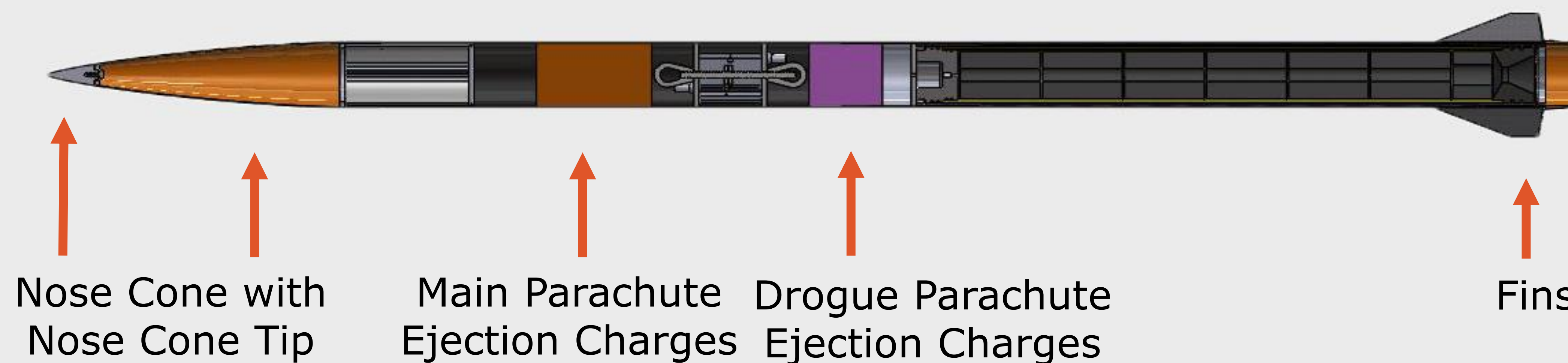


Hayden Ferrell – Nose Cone Designer and Drogue Manufacturer: Headed the deployment system. Programmed altimeters. Performed fin flutter analysis.



ESRA 30K: AERO & RECOVERY

Designed and tested recovery and ejection systems, nose cone, fins, and parachutes to provide favorable aerodynamic characteristics, stability, and safe recovery of rocket from apogee of 30,000 ft.



The above plot shows the current flight profile of the rocket in OpenRocket. It reaches an altitude of 33,932 ft in about 44 s. The maximum velocity of the rocket is 1822 ft/s and it reaches supersonic speed 4.2 s after motor ignition.



TEAM MEMBERS

- Hayden Ferrell
- Annalise Daul
- Mikayla Farr

TECHNICAL ADVISORS

- Dr. Nancy Squires, Senior Instructor
- Joe Bevier, OROC Mentor

PROJECT SPONSOR

OSU AIAA



PROJECT STATUS

- Recovery System, Fins, and Nose Cone Competition Ready
- Drogue Parachute Designed and Manufactured
- Altimeters and Separation Charges Tested
- Flight Simulations & Descent Analyses Performed

