UML ROCKETRY

2025 - 2026 Sponsorship Guide

The 2024 – 2025 UMass Lowell Rocketry NASA University Student Launch Initiative Team

About Our Club

UMass Lowell Rocketry is an undergraduate high-power rocketry research group. We prioritize studying structural components and on-board electronics of our vehicles. Our team comprises over 40 members engaged in a variety of curricula, including engineering, mathematics, computer science, and more. Our club focuses on education and provides training for members to obtain certifications in high-power rocketry, HAM radio, and Part 107 drone licenses.

We are more than a Rocketry club, we look to create the next generation of leaders in engineering and project management. We look to help our members improve their engineering skills and to help them get into engineering roles.

Project Cloudjumper

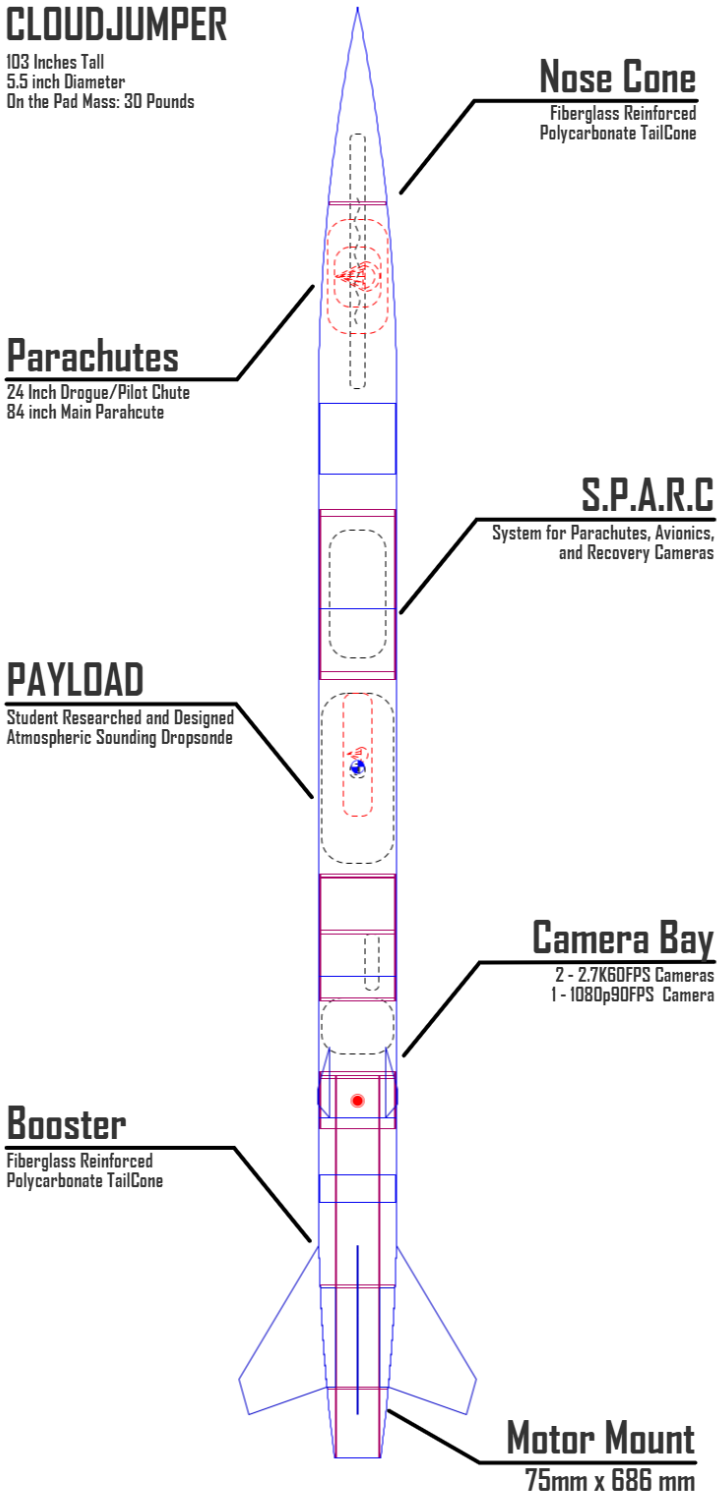
Project CloudJumper is our practice year before we attempt the Internation Rocketry Engineering Challenge. Our goal for CloudJumper is to build a passively stable dropsonde that will be released from the main vehicle on descent to sample the atmosphere on the way down to the ground.

Testing new methods across all subsystems this year, CloudJumper is a true pathfinder and will be our first attempts at:

- Fiberglass Reinforced Plastic (FGRP) Structural Components
- Ejecting a payload with its own independent recovery system
- Using a Single-Separation, Dual Deployment recovery system on a rocket weighing over 20 lbs.

In addition to the complexities of manufacturing the vehicle, CloudJumper looks to break UML's:

- Single Stage Altitude Record: 5580ft
- Single Stage Velocity Record: Mach 0.7



CloudJumper Mission Profile

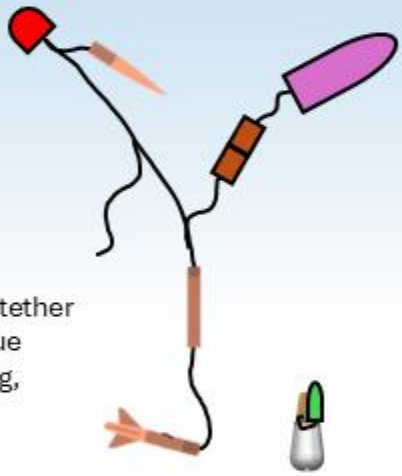
REV: 25.11.A

Apogee and Drogue Deployment
Apogee detected, apogee charges fire, drogue is ejected and begins to inflate

Payload Bay Ejection and Main Chute Bag Ejection
Drogue Pulls main chute bag out on deploy, and secondary tether takes drag load to bulkhead. Main parachute bag is deployed but takes no drag load.

Coast
Apogee: 8937 ft
Time to Apogee: 22.9 s

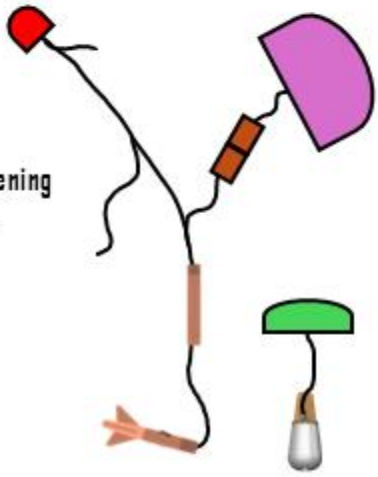
Payload Deployment



Main Chute Deployment
Main Altitude reached, secondary tether is cut with tender defenders, drogue pulls harness and shocks main bag, deploying main chute

Motor Burn Out
Altitude: 1610 ft
Velocity: 630 Mph

Maximum Vehicle Stress
Total force on Vehicle: 389 lbf
Altitude: 337 ft
Velocity: 322 Mph



Main Chute Opening and Payload Chute Opening
Main chute opens, deployment force transfers through deployment bag, vehicle achieves stable decent rate under main.

Pad, Ignition, Take-Off
Ignition of the Aerotech L1420 Redline. The vehicle leaves the guide rail and continues to accelerate.

UMLRC

Other Projects

UMass Lowell Rocketry is a growing club, and we've structured ourselves so that we can continue to, as we need. Our club is formed from smaller teams, between 5-30 members, focused on their own project. This allows each of our members to get as much experience as possible, and that no member gets saddled into a role where they aren't doing something valuable.

In addition to our Student Launch Team, we also support:

- Thurst Vector Control Project
- High-Power Rocketry Certification Program
- Liquid Rocket Motor Development
- STEM Outreach Programs

Building Mid-Power Rockets (October 2022)

From Terra, With Love Flight 2 (May 2024)

Why Support Us?

Your sponsorship enables us to acquire essential materials, cutting-edge technology, and the resources needed to compete on a national stage. It directly contributes to empowering future innovators, fostering interdisciplinary learning, and showcasing the potential of students at UMass Lowell. By partnering with us, you align your organization with a forward-thinking group of students who are passionate about advancing aerospace technology and STEM education. Join us in launching the next generation of engineers and innovators. Together, we can reach for the stars!

Sponsorship Packages

Orbit

$6000 Annually

All Ascent Benefits, Plus:
- Logo on the home page of our website
- Large logo on all team rockets
- Large logo on the back of the club T-shirt

Ascent

$4000 Annually

All Launch Benefits, Plus:
- Small logo on all non-competition team rockets
- Small front logo on our Competition Rockets
- Medium logo on the back of the club T-shirt

Launch

$2500 Annually

All Ignition Benefits, Plus:
- Opportunity to network with student members
- Small Side logo on our Competition rockets
- Small Logo on the back of the club T-shirt

Ignition

$1000 Annually

- Logo on the sponsors page of our website
- Social media thank you post (All channels)

Large Logos are defined as a patch between 3-5 Inches in size, and will be equivalent to the size of our logo and the mission patch

Small logos are defined as a patch less than 3 inches in size but remaining legible to read

The front of the rocket is the side opposite of the launch rail, and the sides are a quarter turn left and right. No logos will be placed on the back as they will be covered by the rail

Contact

President - Joshua Barosin (Joshua_Barosin@Student.uml.edu)

Josh is a current Senior at UMass Lowell studying Mechanical Engineering with a minor in Business Administration. Josh got into Rocketry at an early age, going to a High-Power rocket launch in the first grade, and since then, he was hooked. Josh got into the Club in 2021 as a freshman, earning his Level 1 Certification in April 2023 and his Level 2 Certification in April 2024. Josh has been one of the cornerstones of the club, providing experience, drive, and motivation for the club to grow into what it is today.

Student Launch Team Lead - Ethan Norton (Ethan_Norton@student.uml.edu)

Ethan is a Senior at UMass Lowell studying Mechanical Engineering with a minor in Aerospace Studies. Ethan has had an interest in Aerospace and Rocketry for most of his life, having been fascinated by NASA's mars rover missions from a young age. Since then, he's been learning everything he can about rocketry and spaceflight. Ethan started in the Rocketry Club in Fall 2022 and since then has earned his Level 1 Certification in December 2024 and has been a licensed HAM Technician since February 2025. Applying lessons learned participating in his high school's FIRST Robotics Team, he is determined to lead his team to launch UMass Lowell's first competition rocket.

Public Relations Officer – Riley Mathieson (Riley_Mathieson@student.uml.edu)

Riley is currently a Junior studying Mechanical Engineering. Her interest in rocketry sparked her freshman year of college but originally began at the New England Dragway, watching Jet Cars Under the Stars. Since joining, Riley continues to expand her knowledge of rocketry and combine it with her love of motor vehicles. She joined March of 2024 and has since received her Level 1 Cerification in October of 2024. Riley hopes to aid in the growth of the club and continue to watch it succeed.