Caelus Rocketry

Sponsorship Packet

caelusrocketry.org

Our Mission

The mission at **Caelus Rocketry** is to design, build, test, and launch a bipropellant liquid-fueled rocket to the edge of space while also creating opportunities that introduce young kids to the ever-growing aerospace industry and teaching the community about the importance of STEM education in an increasingly technological world. Through our project, we hope to show young people that it's possible to do something that has never been done before and that there is no age threshold to exploring science and pushing technological boundaries.

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Our Team

Propulsion

The Propulsion team does the calculations for designing our rocket, runs simulations in softwares like ANSYS and MATLAB, and decides on valves and plumbing systems. They are also in charge of reviewing the safety of our procedures.

Avionics & Software

The Avionics and Software team works on programming our ground station that we use to remotely monitor and actuate our rocket system. They also design the printed circuit board for both the rocket and our test stand.

Structures

The Structures team is responsible for designing and manufacturing the rocket airframe, test stand, and engine support and testing equipment.

Outreach

Our outreach team specializes in community events, communication, and management of the team's finances. Our outreach team's priority is to promote the visibility of our project.

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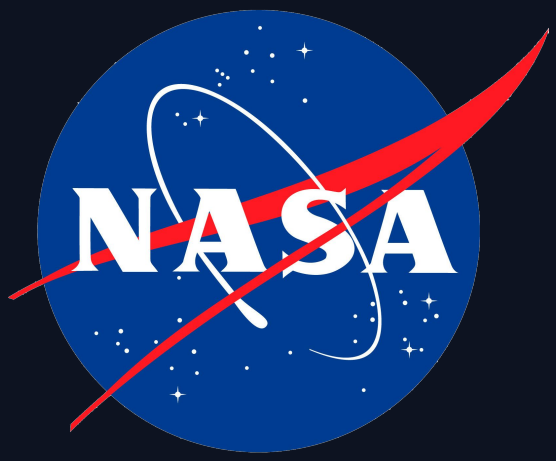
Partners & Mentors



Sponsoring Caelus Rocketry

Caelus Rocketry's groundbreaking work is made possible by our sponsors. Join us and become a part of our mission! By sponsoring us you will gain the following:

Tax Benefits: All donations to Caelus Rocketry are eligible for tax-deductions, due to our 501(c)(3) tax-exempt status.

Collaboration with engineering students: All of our members come from TJHSST, the top public high school in the US.

Industry Exposure: As an organization, Caelus Rocketry receives much recognition from the DMV community, and your company will receive it with us! We have reached over 10,000 people through events like George Mason University's Space Day.

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How to Help

Caelus Rocketry benefits from:

- **Monetary donations** for materials and parts, as well as manufacturing and software packages

- **Material donations**, such as valves, PCBs, piping, fittings, propellant, and manufactured parts

- **Design reviews** from professionals and industry experts

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Sponsorship Tiers

Stratosphere Tier
Donations up to $250*

- **Tax Benefits**
- **Social Media and Content Coverage**
- **Logo/name on merch and website**

Mesosphere Tier
Donations from $250 to $1,000*

- **Stratosphere Tier Benefits**
- **Access to member resumes**
- **Logo on Callisto Rocket**

Karman Tier
Donations above $1,000*

- **Mesosphere Tier Benefits**
- **Invitation to exclusive launch/testing events**
- **Priority logo placement and branding**
- **Co-branding of Caelus Rocketry, special statement on website**

* Materials of equivalent monetary value are applicable

Technical Progress

Cold Flows

We've completed water cold flows of every part of our system to test leakage plumbing and of each of our subsystems in practice.

Test Stand

Our Test Stand holds our plumbing and allows us to work on it in a more easy-to-access fashion. It provides structural integrity during tests as well.

Ground Station

Our ground station accepts data in real-time from the rocket and test stand and displays it to the team so we are aware of the state of the system even from far distances.

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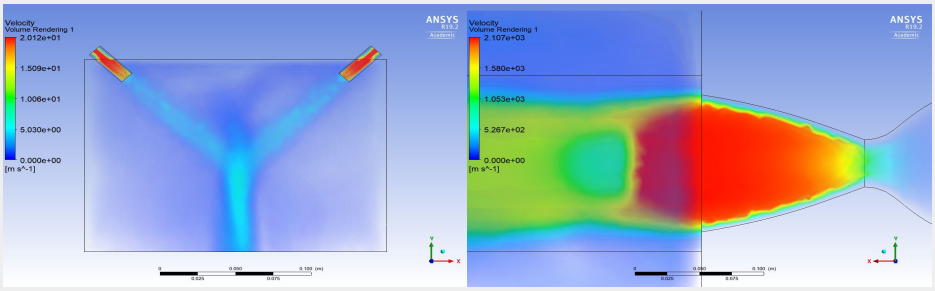
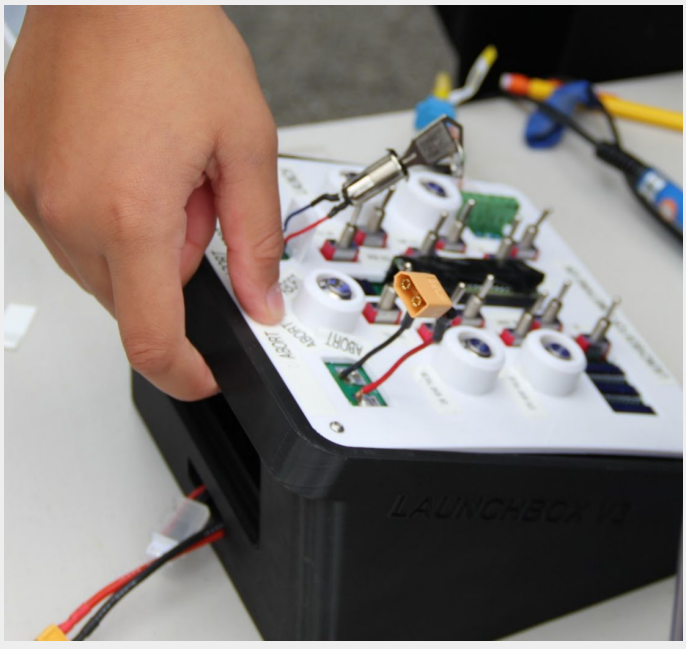
Technical Progress



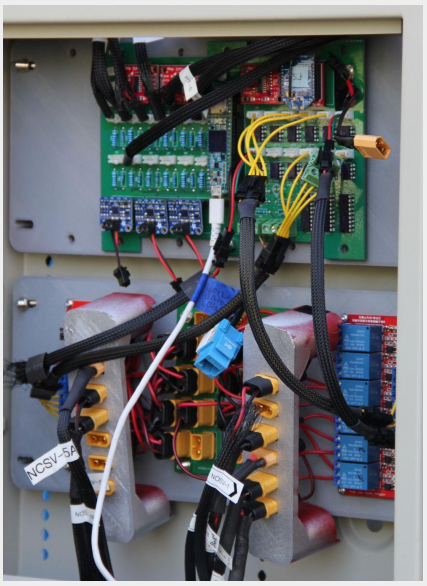
Simulations of our Injector and Nozzle in ANSYS

Our plumbing system off the test stand

Test stand PCB and one of our members :)

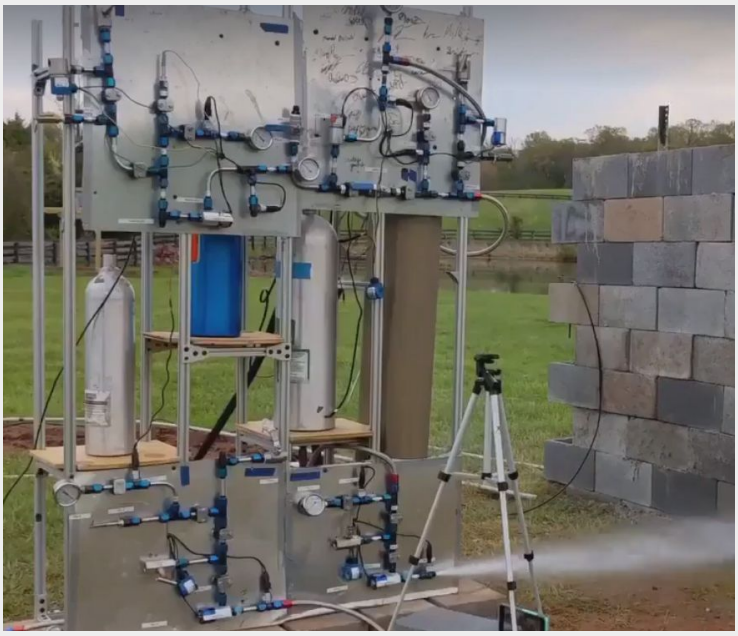


Our launchbox



The Test Stand PCB contains all of our relays, our Xbee radio, Teensy, and other components

Technical Progress

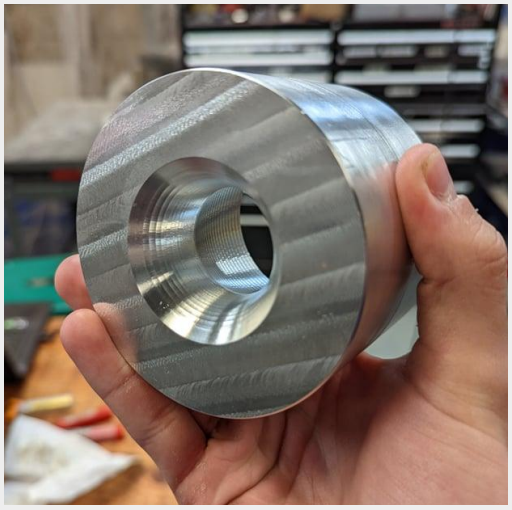


Our entire test stand, composed of our Test Stand PCB, plumbing system, and our tanks holding propellant

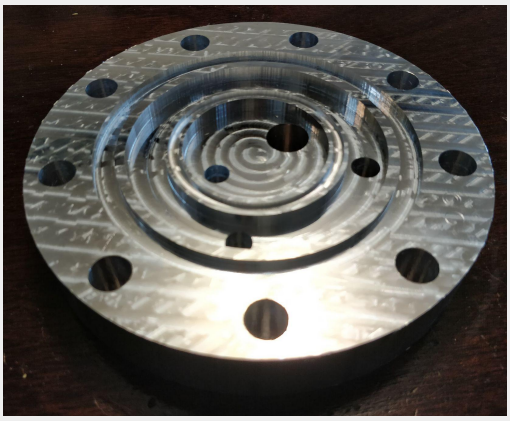
Some of our members with our model of Callisto

Our members assembling our model rocket

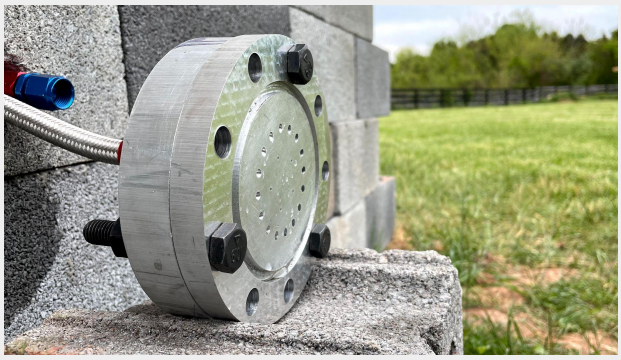
Technical Progress



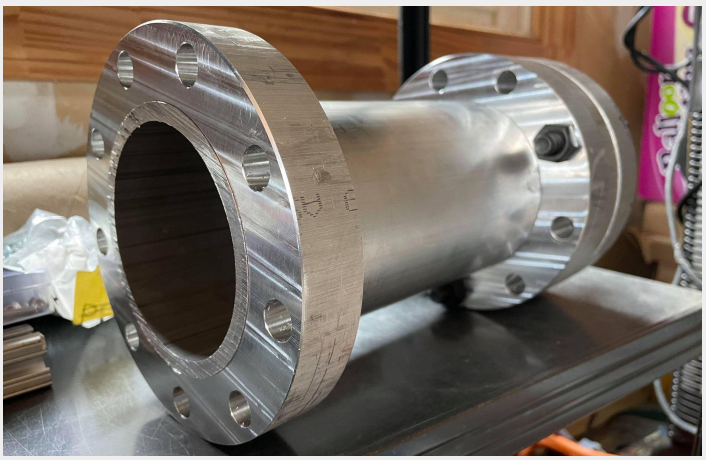
Our nozzle, which welded to our engine chamber



Our machined Injector Manifold



Our injector connected to our test stand



Our engine without the Injector

Our combustion chamber

A render of our entire engine with load cells

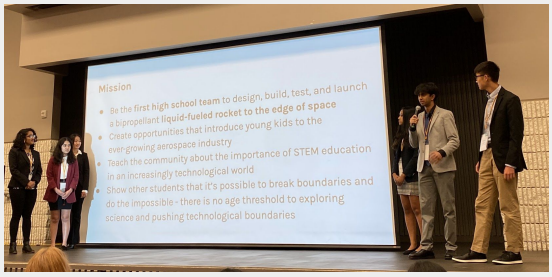
Our Outreach

By attending a variety of aerospace and STEM events in the DMV area, we've reached over 10,000 people

We have over $15,000 in net assets, and we have raised our money mostly through running camps

We had a booth at the Astronomy Festival on the National Mall

Our Outreach



We partnered with George Mason University to run the inaugural Space Day and reached 10,000 people as one of the main events, showcasing local aerospace work.

Safety & Procedures

At Caelus Rocketry, safety is our *number one priority*.

When a high school team aims to build and launch a liquid-fueled rocket, safety becomes paramount. We conduct thorough research, provide comprehensive training, and incorporate safety features into the rocket design. Regular inspections and quality checks are performed, and we always run our procedures and checklists by our partners and mentors. Prior to any test, a detailed safety checklist is followed, and communication with authorities is maintained. By prioritizing safety at every stage, the team demonstrates their commitment to responsible rocketry practices.

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Contact Us

We'd love to discuss more with you about sponsorship opportunities. Please contact us at contact@caelusrocketry.org.

Thank you for your interest!

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