2022/2023

STARR | Student Team for Alberta Rocketry Research

Sponsorship Package

Development of Ringo II
Launch Canada 2023

www.uastarr.ca

uastarr@ualberta.ca

linkedin.com/company/uastarr

@uastarr

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About Us

The Student Team for Alberta Rocketry Research (STARR) is a team of like-minded students from a wide array of disciplines and faculties who have come together with the common goal of expanding Alberta's space industry through the development, testing, and launching of high-altitude sounding rockets.

STARR was founded in 2018 by several engineering students passionate about designing and manufacturing a rocket worthy of launching in intercollegiate competitions. Due to the COVID-19 pandemic, STARR was unable to participate in a rocketry competition until the inaugural 2022 Launch Canada Rocketry Challenge.

STARR successfully launched the University of Alberta's first sounding rocket, Ringo I, to 10,671 ft on August 2nd, 2022 - placing top 5 in Launch Canada's Basic Launch Challenge.

Ringo I's payload employed a 3U CubeSat structure and housed an experiment studying the behaviour of liquids in low-gravity environments. This project won first place in Launch Canada's Payload Design Challenge.

Ryan Tan
President

A 5th-year mechanical engineering student heavily involved in the manufacturing and testing of Ringo I. Ryan oversees all day-to-day club activities with the vision of expanding the University of Alberta's aerospace talent. Ryan has been a part of the club since 2019 working as a structural team member, moving to the role of testing team lead, and finally taking the mantle of president.

Colby Gauthier
Chief Technical Director

A 4th-year mechanical engineering student who worked closely on the design and development of Ringo I. Colby oversees all day-to-day rocket development within the club. Colby has worked with STARR since 2020 as a mechanical team member and was eventually promoted to the mechanical team lead and finally, to the club's chief technical director.

Meet the rest of the team on the next page!

Team Profile

STARR consists of 70+ active members including students from all faculties, disciplines, and levels of experience at the University of Alberta. Alongside the President and Chief Technical Director, we are composed of executive members and six sub-teams that work closely together throughout the year.

Joseph Hoven
VP Finance

A 3rd-year mechanical engineering student who coordinates all financial related matters and handles the clubs budget and funding opportunities.

Dan Liang
Safety Officer

A 2nd-year mechanical engineering student who carries out workplace inspections and ensures our club follows safe work practices.

Sukhnoor Khehra
Administration Team Lead

A 3rd-year computing science student who is responsible for managing our online platforms and club organization.

Egor Yaritsa
Mechanical Team Lead

A 5th-year mechanical engineering student who works on the design and development of components used in our rockets.

Grace Ciarniello
Payload Team Lead

A 4th-year engineering physics student who oversees the development of our payload projects and experiments that take place within our rockets.

Matthew Le
Avionics Team Lead

A 4th-year astrophysics student who is dedicated to the computer and electrical engineering aspects of our rocket.

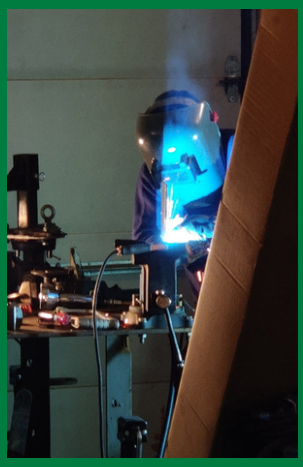
Zachary Gellner
Software Team Lead

A 4th-year computer engineering student who helps develop and implement plugins and software for our rocket.

Jakob Zimmerman
Testing Team Lead

A 2nd-year mechanical engineering student who conducts the testing of the rocket and its various components.

Our Mission and Vision



MISSION

Our mission is to provide experience for students in developing launch vehicles and scientific payloads, educate the public through outreach activities, and promote STEM to students across Alberta.

VISION

Our vision is to provide to our members the necessary experience and skills to pursue a career in the aerospace industry and strengthen Alberta's position as a leader in the Canadian aerospace community.

Scan me to see
Ringo I in flight

Ringo I

- STARR's first launch project, designed and manufactured in the 2021-2022 academic year
- University of Alberta's first sounding rocket
- Competed in the Inaugural 2022 Launch Canada Rocketry Challenge
- Awarded **1st place in the Payload Challenge**
- Awarded **top 5 in the Basic Launch Challenge**
- Second-ever amateur experimental rocket launch on Canadian soil
- Employed a dual event recovery system
- Propelled to **10,671 ft**

"The University of Alberta [team] showed a remarkable amount of progress over the course of the event and in spite of initial setbacks when they went through the first safety inspection, they were really determined to learn, grow and progress and ended up being one of the first teams to fly! That was an amazing accomplishment!"

- Adam Trumpour,
President of Launch Canada

Ringo II

STARR's second sounding rocket.

Goal #1

Develop Ringo II for launch at Launch Canada in August 2023.

Goal #2

Exceed the altitude that was reached in 2022 by optimizing the layout, weight, and aerodynamics of the rocket.

Goal #3

Have Ringo II carry a deployable 3U CubeSat payload.

STARR's main goal is to develop and launch a new sounding rocket, Ringo II, at the 2023 Launch Canada Rocketry Competition. Ringo II will be a 6" diameter sounding rocket powered by a commercial "off the shelf" solid motor from Cessaroni. STARR would like to exceed the altitude that was reached last year by optimizing the layout, weight, and aerodynamics of the sounding rocket while flying with the same motor casing that was used in 2022.

Ringo II will carry a student-developed 3U CubeSat payload that will be ejected from the airframe at apogee. Inspired by the 2027 NASA Dragonfly mission to Saturn's moon, Titan, this payload forms the foundations of a 5-year project to be taken on by STARR. The first year of the project will test a sampling mechanism for detecting airborne microbial samples in the atmospheric. In future years, the payload will deploy a rotorcoptor drone capable of performing autonomous atmospheric testing.

Why Sponsor STARR?

1

Brand Visibility

Your organization will be featured on our website and social media pages. Depending on your size of contribution, your logo will also be on our team uniform and rocket.

2

Aerospace Promotion

We aim to develop a strong aerospace educational program at the University of Alberta. Our partnership will encourage innovation in aerospace and will provide university and grade school students with the opportunity to get involved.

3

Networking

STARR is composed of multidisciplinary students who are passionate about the aerospace industry. This is an opportunity for sponsors to gain exposure to some of the most promising students that the University of Alberta has to offer.

4

Youth Empowerment

Through your meaningful support, youth can grow their curiosity in the space industry and plan a future around it. Not only will you be providing the resources to inspire youth, but you are helping develop the next generation of STEM leaders.

Building a rocket isn't easy. After all, it's rocket science. We need your help in the form of services, materials, and financial contributions.

Whether it's small or large, your support would be invaluable in helping us reach new heights and fulfill both our mission and vision.

STARR is eager to represent our sponsors with class and pride.

Outreach Activities

STARR participates in a number of university and high school outreach events, for both recruitment and educational purposes.

Clubs Fair and Engineering Carnival

STARR takes part in the University of Alberta's annual clubs fair and engineering carnival where we recruit prospective members to join our club. STARR sets up a booth at both events, showcasing our projects and diverse team. Representatives of STARR from a variety of sub-teams speak to students about the type of work we do, the benefits of joining a design team, and the different subteams and parts of the project that they could work on.

Mechanical Engineering Night & Space Symposium

STARR has made presentations at events set up by the University of Alberta's Mechanical Engineering department and Institute for Space Science, Exploration and Technology (ISSET), where we presented our work to current students and shared the story behind the University of Alberta's first sounding rocket, Ringo I.

Alumni Weekend

STARR attends the University of Alberta's annual Alumni Weekend where members gain valuable connections with alumni engineers and showcase the promising aerospace talent we have to offer.

High School Outreach Events

Members of STARR reach out to their old high schools and conduct outreach events to present Ringo I. Members are able to showcase what they have been pursuing since high school graduation and have inspired students to pursue a career in STEM at the University of Alberta.

DiscoverE

During the summer, STARR presents at the University of Alberta's DiscoverE camp for students in grades 1 through 9 who are interested in STEM. DiscoverE is a high-impact program, organized by the Faculty of Engineering, that inspires and engages youth through fun, meaningful, and accessible STEM programs. In our presentations, we break down our work and present it in an easy-to-understand format, showing off our first sounding rocket, Ringo I, and explaining all of the exciting careers and projects you can work on as a STEM student.

Engineering Showcase

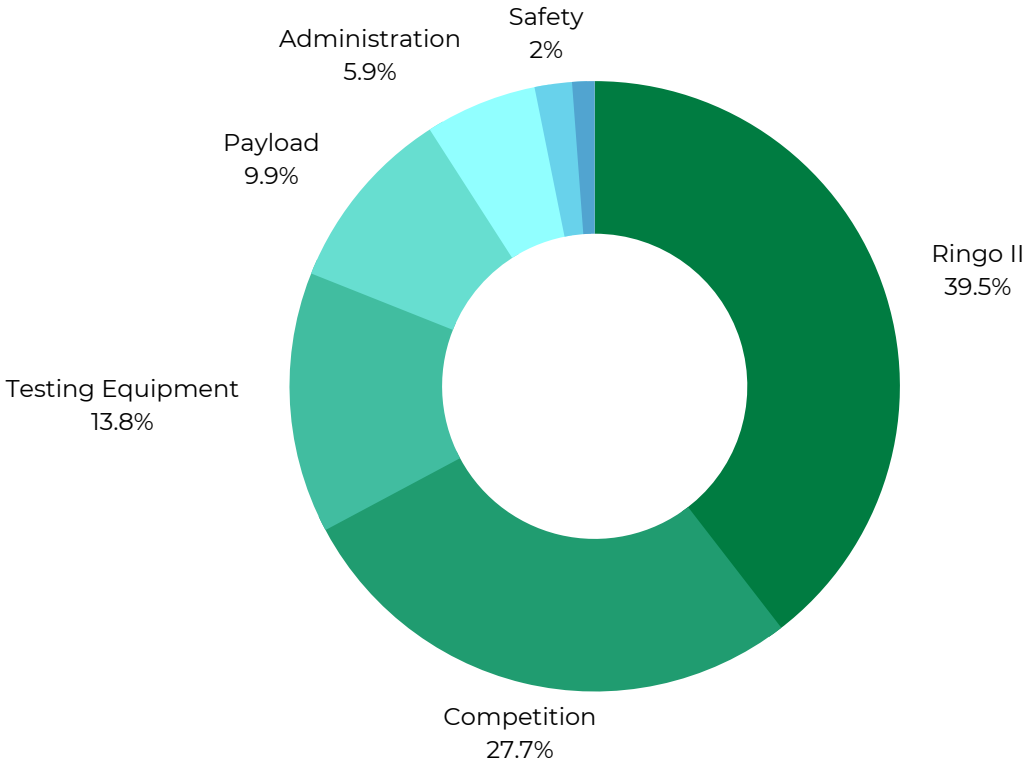
STARR takes part in the annual University of Alberta Engineering Showcase, where prospective engineering students receive a tour of engineering buildings and get the opportunity to learn about the different extracurricular design teams available to them. As one of the design teams at this event, we speak to parents and students about the opportunities available through STARR, the importance of extracurricular design teams in an engineering degree, and showcase our first sounding rocket, Ringo I.

STARR at Jasper Place High School in Edmonton for a High School Outreach Event

STARR holding a "Model Rocket" event to briefly explain to students as to how rockets work

Our Budget

FOR THE 2022/2023 ACADEMIC YEAR



STARR requires $25,300 to design, build, and launch Ringo II at the 2023 Launch Canada Challenge.

The rocket itself will be the club's most significant expense and will implement new features, including a deployable 3U CubeSat payload.

We will also require $7000 to safely transport Ringo II and our hardworking team across the country to participate in the competition.

Expense	Value
Ringo II	$10,000.00
Competition	$7,000.00
Testing Equipment	$3,500.00
Payload	$2,500.00
Administration	$1,500.00
Safety	$500.00
Tools	$300.00
TOTAL	**$25,300.00**

Sponsorship Tiers

Bronze ($100-499)	Silver ($500-1499)	Gold ($1500-2999)	SuperSTARR ($3000+)
Small Logo on Club Banner + Website + Team Uniform	Medium Logo on Club Banner + Website + Team Uniform + Small Logo on Rocket	Large Logo on Club Banner + Website + Team Uniform + Medium Logo on Rocket	Header Logo on Club Banner + Website + Team Uniform + Large Logo on Rocket
Social Media Promotion			

WE LOVE IN-KIND SPONSORS!

Want to be an in-kind sponsor instead? Contact us, and we'll be more than happy to talk to you about how you can make a direct impact on our project!

INTERESTED IN MAKING A BIGGER IMPACT?

Contact us so we can give you all the details about how we can reach new heights together. We'll even make you a bespoke sponsorship benefits package!

STARR and Ringo I at Launch Canada 2022

THANKS TO OUR CURRENT SPONSORS & PARTNERS

Reaching new heights together.

University of Alberta

The Faculty of Engineering at the University of Alberta

SOLIDWORKS

Edmonton Rocketry Club

Elko Engineering Garage
Collaboration. Fabrication. Exploration.

Altium

IEEE Canadian Foundation
Fondation Canadienne de l'IEEE

Polymershapes

The Spirit of George Ford Endowment Fund

RockSolid Cases

ABB

ROCKSOLAR®

For sponsorship inquiries, contact us.

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