

# Rocket flight test



On Saturday, April 27, the rocket team from the Clark College Aerospace & Robotic program traveled to Brothers, Oregon, and successfully launched their rocket, named “Emperor Penguin,” for the first time this year.

## Here are some noteworthy highlights from our expedition:

**The crew:** Five students Ethan Walters, Vyacheslav Lukiyanchuk, Alex Kari, Rebekah Irvin, and Bladen Mitchell, and advisor Sophie Lin

**The rocket:** “Emperor Penguin” is 14 feet long and weighs about 63 pounds

**The journey:** It is a long drive (about four hours) to the launch site in Brothers, Oregon. Departing from campus at 5:30 a.m., the crew arrived at Brothers around 9:30 a.m.

**Tasks accomplished:** Demonstrating remarkable efficiency, the team accomplished two major tasks during the trip:

- An ejection charge test to figure out the black powder needed for rocket separations, and
- A flight test to assess the rocket's design, construction, and avionics system.

**The flight test:** The rocket soared to an altitude of roughly 7,200 feet before safely landing approximately 0.5 miles from the launch pad.

**Retrieving the rocket:** Despite a glitch in the GPS system onboard the rocket, the team successfully located it utilizing a radio tracker, with an unexpected assist from a team member and her dog, who managed to find the rocket before the radio tracker.

**Other college teams at the launch site:** Two other college teams, one from Oregon State University and another from Portland State University, were present at Brothers, though neither managed to launch their rockets that Saturday. During the weekend, the Clark College rocket team was the only college team to launch and recover a rocket without any deployment failure successfully.

**Returning to campus:** Wrapping up their activities, the team departed Brothers at 7:30 p.m. and returned to campus by 1:30 a.m. the next day.

**Next flight test:** Looking ahead, the team plans to return to Brothers in mid-May for another flight test, utilizing a motor designed and constructed by their students.

**Ultimate goal:** The team plans to fly “Emperor Penguin” at the 2024 Spaceport America Cup competition in New Mexico, alongside approximately 160 teams from across the globe. Stay tuned for further updates as we progress towards this competition!

**Special Note:** Last year, Clark’s team was the only community college team among 1,700 teams.



## Learn more

- Spaceport America Cup, the world’s largest intercollegiate rocket engineering conference and competition
- 2023 Flight test in Brothers, Oregon: <https://news.clark.edu/2023/05/rocket-breaks-record/>
- 2023 Spaceport America Cup: <https://news.clark.edu/2023/07/spaceport-america-cup/>

*Photos courtesy of Xiunu “Sophie” Lin, Ph. D.*