



## Surrey student satellite stars

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Meet DARWIN – the award-winning, small satellite that could detect and track wildfires, built by students from the University of Surrey.

Surrey's Peryton Space team has won the prestigious UK Students for the Exploration and Development of Space (UKSEDS) satellite design competition, beating teams from around the country for the second year in a row.

DARWIN – also known as Detection, Analysis and Research for Wildfire Investigation Network – is just 10cm x 10cm x 30cm.

Team leader Mya White, who recently finished the second year of her BEng degree in Aerospace Engineering and who has started a year-long industry placement, said:

"We used a thermal camera to detect heat spots and an optical camera to determine distance so that we could calibrate the temperature readings. We also wrote software to split the area we monitored into a grid so we could pinpoint exactly where the simulated fires were."

Peryton Space also enjoyed success at other UKSEDS competitions.

They won the In-Orbit Servicing and Manufacturing competition, which gives students experience in mission design, engineering, business development, and other industry-relevant skills.

Peryton students came second at the competitive Mach-24 rocketry competition, where their high-powered rocket reached an altitude of 2.5km, Peryton's highest rocket launch to date. It successfully launched and deployed the CanSat built by the team.

Away from UKSEDS, Peryton Space also won an award for the best presentation at the Race2Space National Propulsion competition, which challenges students to design, manufacture and test rocket engines.

Harvey Nixon, who leads the research and development branch of Peryton Space and who is studying for an MSc in Space Engineering at Surrey, said:

"We are delighted with our 2024 results and really proud of the team at the University of Surrey's Peryton Space. On our team, there are students of all backgrounds and disciplines, which ensures we have a range of expertise, and our members get invaluable experience ready for careers in the space sector."

"Some members of Peryton Space are working on the Jovian-1 satellite project here at the University of Surrey. This involves collaborating with industry professionals and students from partnering universities and applying the skills learnt from Peryton Space to working on a space-bound project."