

AGENCY

Lift-off for OSCAR-QUBE, now en route to the International Space Station

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Student experiment OSCAR-QUBE has blasted off from NASA's Kennedy Space Centre onboard a SpaceX Dragon cargo vehicle, and is now on course to rendezvous with the International Space Station in low Earth orbit.

The team behind OSCAR-QUBE are a group of students from the University of Hasselt, in Belgium. They are trailblazers, being the first to launch their experiment as part of [ESA Education Office's Orbit Your Thesis!](#) programme, and the first student team to test a quantum technology sensing device in space.

— Liftoff of SpaceX Dragon CR23

active participants, the OSCAR-QUBE students have been assisted at every stage of their journey by ESA experts on-hand to offer professional guidance and mentoring, helping not only to develop the experiment, but also investing in the students themselves, equipping them with the skills and mindsets needed for future careers in the space sector.

OSCAR-QUBE's mission is to create a detailed map of Earth's magnetic field. It makes use of a new type of magnetometer that exploits quantum sensing, meaning that it is highly sensitive, offers excellent nanoscale-level resolution, better than 100-nanosecond response time, and a large bandwidth. These features combine to create a powerful experiment that, once in its excellent observational position in orbit, will allow it to map the Earth's magnetic field to an unrivalled level of precision. It has been designed and built exclusively by the university students, and they will go on to manage operations during its four-month stay onboard the International Space Station.

"Thanks to the Orbit Your Thesis programme OSCAR-QUBE has won the opportunity to prove the viability of this sensor in space on-board the ISS." The team said in interview, "The fact that our project will be launch to the ISS is very exciting... To have a place on the ISS is a very big honour, and it motivates you even more to work harder."

The students are still buzzing with excitement from the launch, and anticipation is growing for the next stage of their adventure. OSCAR-QUBE will now spend several days journeying to the International Space Station, and once onboard it will be downloaded by ESA astronaut Thomas Pesquet. He has been tasked with carefully installing OSCAR-QUBE into the [ICE Cubes facility](#), and then its mission will commence!

Orbit Your Thesis! is a hands-on ESA educational programme that helps university students realise the dream of putting an experiment of their own design into space. As

— Team Oscar Qube stands on the grass for a socially distanced team photo

For more OSCAR-QUBE updates be sure to check the [Orbit Your Thesis! portal](#)