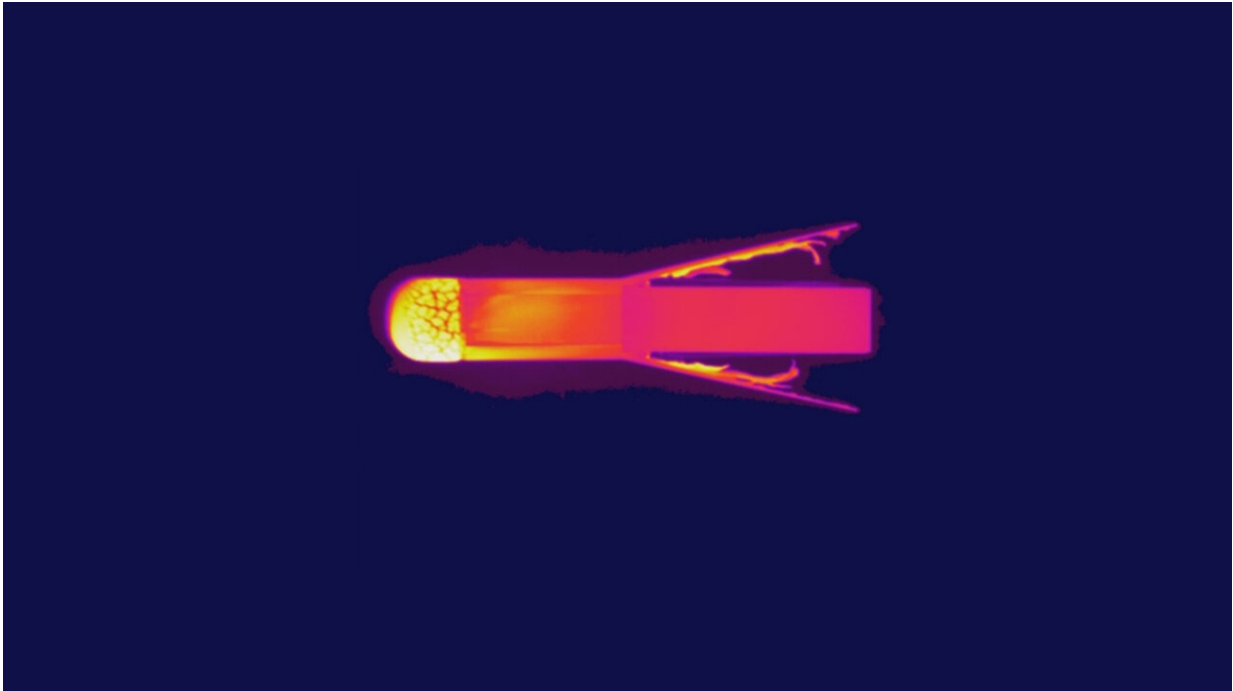


New reentry CubeSat in orbit

December 9 2019



Credit: CIRA

ESA's latest space mission has reached orbit. The Qarman CubeSat flew to space aboard SpaceX's Dragon launched from Florida, U.S., on Thursday 5 December, ahead of a planned rendezvous with the International Space Station on Sunday 8 December. From there, Qarman—seen here during plasma wind tunnel testing—will be deployed into space in late January 2020.

CubeSats are low-cost nanosatellites based around standard 10 cm units and typically end their spaceflights burning up in the atmosphere as their orbits gradually decay. But the three-unit Qarman (QubeSat for Aerothermodynamic Research and Measurements on Ablation) is designed with this fiery fate in mind.

Designed for ESA by Belgium's Von Karman Institute, Qarman will use [internal temperature](#), pressure and brightness sensors to gather precious data on the extreme conditions of reentry as its leading edges are enveloped in scorching plasma.

Qarman's blunt-nosed front contains most of its sensors, protected by a cork-based heatshield. The CubeSat is expected to survive its reentry, although not its subsequent fall to Earth—making it imperative that its results make it back in the time in between, using the Iridium commercial satellite network.

Other ESA cargo launched for the International Space Station includes radiation-resistant aquatic organisms to study their secrets and learn how they could protect astronauts and people on Earth from harmful radiation.

Provided by European Space Agency

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