

AGENCY

Ireland’s first satellite undergoes environmental test campaign

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In brief

The EIRSAT-1 student team from University College Dublin, Ireland, recently visited the [CubeSat Support Facility](#) in ESEC-Galaxia, Belgium. Their mission: complete a series of stringent environmental tests to ensure their CubeSat can withstand the rigours of a rocket launch, and eventual operation in space!

In-depth

— EIR team performing antenna deployment tests

EIRSAT-1 itself is a 2-unit CubeSat participating in the second cycle of [ESA's Fly Your Satellite! Programme](#). It has a number of mission objectives, including studying gamma-ray bursts; analysing the performance of novel surface treatments; and determining the potential of an attitude control algorithm as an alternative to standard Attitude Determination and Control methods. EIRSAT-1 is also noteworthy as being Ireland’s first ever satellite.

Following a successful [assembly and integration](#), the team ran functionality tests on the satellite at their home university in preparation for this environmental test campaign at the CubeSat Support Facility. Running from 25 July to 19 August 2022, the CubeSat was exposed to conditions representing space: one week of vibration, and then three weeks of extreme hot and cold temperatures. Said one of the attending students, *"After 5 years of design, development, and testing it is very satisfying to see the assembled flight model going through environmental testing, the final big step towards launch."*

The first week of testing involved the EIRSAT-1 flight model being placed on an electrodynamic shaker system. This

— EIR team member performing functional tests on the