

AGENCY

Fly Your Satellite! 2 update: teams complete Phase D workshop

26/04/2019 1719 VIEWS 12 LIKES

ESA / Education / CubeSats - Fly Your Satellite!

ESA's [Fly Your Satellite!](#) programme (FYS) gives the next generation of scientists and engineers the chance to develop [CubeSats](#) and operate them from space. The six CubeSat teams participating in Fly Your Satellite! 2 attended the FYS Phase D Workshop hosted at ESA Education's Training Centre in [ESEC-Galaxia](#), Belgium, from 8-12 April 2019. The workshop was prepared by the Fly Your Satellite! team in collaboration with the [Training and Learning Programme](#), as part of the [ESA Academy](#) programme.

Phase D of Fly Your Satellite! comprises satellite integration; functional tests in ambient conditions; environmental tests; and concludes with the Flight Acceptance Review. The workshop's objective was to help prepare students for this upcoming Phase by giving them both theoretical insight and hands-on experience of working in a laboratory, and to perform visual inspections of the CubeSat models.

Participants were able to bring their hardware into the new CubeSat Support Facility to perform the inspections and checks together with ESA professionals. This allowed the students to become familiarised with good working standards, and to discover any critical hardware issues early in the process. At the Training and Learning Facility they attended insightful lectures, exercises and group simulations on topics such as vibration testing, product assurance, and spacecraft operations.

They also participated in demonstrations held at the CubeSat Support Facility: with a dummy load installed, the 20 kN Electrodynamic Shaker system was used to simulate the vibrations that their satellites will experience during testing and launch, and they were introduced to the Thermal Vacuum Chamber that will be used to simulate the harsh conditions of space by recreating vacuum and temperature conditions from intense heat to extreme cold.

— Inspections and checks performed on the EIRSAT-1 CubeSat

Said one of the participating students, "*The Phase D workshop has been a really useful week. It gave us the possibility to meet experts from ESA and to learn from real cases. Moreover, we were able to talk to other teams that were facing similar challenges as our team.*"

During the week, each team finally presented their CubeSat design and development status, sharing challenges and solutions with the other teams. The participating currently participating in Fly Your Satellite! 2 are:

— The CELESTA team sharing their lessons learned

- [3Cat-4 \(Spain\)](#)
- [CELESTA \(France\)](#)
- [EIRSAT-1 \(Ireland\)](#)
- [ISTsat-1 \(Portugal\)](#)
- [LEDSAT \(Italy\)](#)
- [UoS³ \(United Kingdom\)](#)

The students are taking their new knowledge and skills back to their universities, where they will prepare for their upcoming integration and test campaigns, and where they will address any issues found during the inspections.

— EIRSAT-1 team integrating their CubeSat

— ISTsat-1 team performing some soldering on their CubeSat