**ESEO:   
The European Student Earth Orbiter is getting ready for launch**

The European Student Earth Orbiter (ESEO) is an educational micro-satellite, which involved European university students during the whole project lifecycle. This 50-kilogram microsatellite is now ready and waiting for launch on 19 November aboard SpaceX Falcon 9 flight from California.

The student teams developed experiments on board ESEO include cameras for Earth imaging, a radiation dosimeter, a plasma detector, and demonstrators of technologies that can be used for future education satellite missions.

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| 10:00:00:00 | ESA leader |
| 10:00:04:07 | Title: **ESEO – The European Student Earth Orbiter is getting ready for launch** |
| 10:00:10:00   * INT. SITAEL cleanroom in Forlí, Italy * Animation, ESEO | University student teams around Europe have been busy in the last months as they have made the final preparations for ESEO, the European Student Earth Orbiter.  ESEO is part of the ESA Academy’s Hands-on programme, preparing the space workforce of tomorrow.  The student teams have designed, constructed and tested essential parts for the mission, including subsystems, instruments and ground control stations. |
| 10:00:35:00   * INT. ESTEC, Noordwijk, NL | **Interview Piero Galeone, Head of tertiary education, ESA**  *I’m very happy to see that ESEO is approaching its launch. During its whole project life cycle ESEO engaged several hundred students. Now already before launch we can say that it has achieved all its educational objectives.* |
| 10:00:54:04   * Animation – ESEO * INT. SITAEL cleanroom in Forlí, Italy | After its launch, when ESEO will be released into a polar orbit. When it wakes up, one of the first parts to act is the Power Distribution Unit, made at Budapest University of Technology and Economics in Hungary.  Then ESEO needs to stabilize and reach the correct pointing for its mission to start.  ESEO communicates with its main ground station in Forlì, Italy, where the ESEO Mission Control Centre by the University of Bologna is located.  The back-up ground station is in Spain. It is managed by University of Vigo. |
| 10:01:28:15   * Animation – ESEO * INT. SITAEL cleanroom in Forlí, Italy | Aboard the satellite there is a radio amateur communications system by the University of Surrey and AMSAT-UK, in the United Kingdom. This enables ESEO to transmit real-time data to schools and universities for science and engineering lessons.  A GPS Receiver and Orbit Determination system by the University of Bologna can determine the satellite position with high accuracy.  And the Attitude Determination Experiment from the Delft University of Technology in the Netherlands tests a novel software to estimate the orientation of the satellite. |
| 10:02:02:04   * Animation – ESEO | The data from all student experiments are received in Germany at the S-band Ground Station by the Munich University of Technology.  The Communication Subsystem for this high data rate transmission aboard the satellite is made by Wroclaw University of Technology in Poland. |
| 10:02:19:04   * Animation – ESEO | ESEO also carries several scientific experiments:  Space radiation in low Earth orbit is studied by the TriTel Radiation Dosimeter from the Hungarian Academy of Sciences.  The ionospheric plasma environment is studied by the Langmuir Probe made at Budapest University of Technology and Economics in Hungary;  The Estonian micro cameras will take images of the Earth. These are conceived and built at the University of Tartu. |
| 10:02:47:16   * INT. SITAEL cleanroom in Forlí, Italy | **ITW Tamás Kőnig, Budapest University of Technology and Economics, Hungary**  *I’ve been participating in the LMP experiment.*  *It is very personal for me as inside there is a component that I have designed myself and I wrote my thesis about this component.* |
| 10:03:04:07   * INT. SITAEL cleanroom in Forlí, Italy | **ITW Márton Borsi, Budapest University of Technology and Economics, Hungary**  *I have been involved in the development and testing phases of the Power Distribution Unit of the ESEO satellite.*  *It’s an amazing feeling that your device will go up into space and it’s ready, it’s working well, and I’m so happy.* |
| 10:03:21:08   * INT. ESTEC, Noordwijk | **IYW Nicola Melega, ESEO Project Manager at SITAEL, ESEO industrial contractor**  *ESEO is a complex system and in the end I think it was challenging activity for the all payload teams.*  *We had a change to stay with them, we had a change to teach them a few things that typically are not common in the academia.* |
| 10:03:41:04   * EXT. Tartu Observatory * INT. Tartu Observatory, Estonia | **ITW Hendrik Ehrpais, Tartu Observatory, Estonia**  *ESEO gave us the competence to actually build any scientific instruments here in the observatory. It gave us both the competence and connections with ESA and we learnt a lot from the project in order to develop out further missions.* |
| 10:03:59:23   * INT. SITAEL cleanroom in Forlí, Italy | Now the focus is on the ESEO mission to start. It will be launched on the 19 November to low Earth orbit. The students will be busy with the operations of the satellite at least to the end of 2019, when the last experiment aboard will be activated: |
| 10:04:17:13   * Animation – ESEO | *The De-Orbiting experiment by the Cranfield University in the UK will deploy a lightweight, large sail to accelerate ESEO’s re-entry and burn-up in the atmosphere at the end of the mission.* |
| 10:04:32:16 | **B-ROLL (TBD)** |
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| 10:04:40:00 | ESEO animation |
| 10:09:12:22 | ESEO being integrated at SITAEL |
| 10:10:59:15 | ESEO vibration test, Italy |
| 10:12:15:08 | Piero Galeone, Head of tertiary education, ESA (English) |
| 10:12:36:24 | Tamás Kőnig, Budapest University of Technology and Economics, Hungary (English) |
| 10:13:12:08 | Márton Borsi, Budapest University of Technology and Economics, Hungary (English) |
| 10:13:57:22 | Nicola Melega, ESEO Project Manger at SITAEL, ESEO industrial contractor, Italy (English) |
| 10:14:29:14 | Hendrik Ehrpais, Tartu Observatory, Estonia (English) |
| **10:14:48:09** | **END** |