

SMALL SATELLITE MISSIONS SYMPOSIUM (B4)  
Small Satellite Operations (3)

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## LEEMSAT-I: PAYLOAD CONTEST FOR A FULLY-STUDENT CUBESAT

**Abstract**

The Laboratory for Space and Microgravity Research (LEEM) is a Spanish student and young professionals association, involving more than 200 members from eleven universities, with local offices in six Spanish major cities and collaboration agreements with students from three continents. LEEM has become the Spanish work-network for students involved in different microgravity or space-related projects.

In developing LEEMSat-I, students gather experience working on a real space project and managing the appropriate documentation. The aim of LEEMSat-I project is to get the know-how needed for the further development of CubeSat projects by Spanish students, as well as to test different CubeSat subsystems aiming to develop our own Satellite; the only satellite fully developed by students for students.

During the last edition of “S3” (Spanish Space Students) Congress held in Saragossa, thirty students from different Spanish universities agreed to carry out this project and discussed the mission objectives. The agreed configuration of the first CubeSat of LEEMSat series is a multi-unit CubeSat, where the first unit will include all the commercial subsystems necessary for its correct operation. The other two units will be kept for an exclusive design contest open to any interested team of students. LEEMSat-Payload standards will be defined in order to set up the contest requirements.

The working methodology is completely on-line using all types of open source and non traditional tools adapted to the project requirements. It is worth highlighting the wiki where the documentation is created, modified and archived.

In short, this is a pioneering project in Spain which results will exceed expectations.