47th STUDENT CONFERENCE (E2)
Educational Pico and Nano Satellites (4)

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CUBEAR, A PROJECT TO TEACH ABOUT SATELLITE APPLICATIONS

Abstract

This paper is about a 1U multi-mission cubesat, proposed to be launched in Kibo program, 4th round. Cubesat is called Cubear, as it is going to listen to the signals in VHF band and decode the one from Ships in AIS format. The satellite also includes a low-resolution camera in order to take images applied in water resources management. The satellite project will include 2 models, the former is a flat model which integrates subsystems over a flat board to evaluate functional specifications and performance of the satellite and the latter is the flight model that will be ready for launch and in orbit operation. The flat model not only will be used in this project, but also will be designed in a way to form a hands-on for training the next rounds. Satellite project is going to educate both in space technology and space applications, where imaging data will be used as a real example for application of space data in water management. Training team is then composed of two groups for technological workshops and programs on space applications. The whole project including training and workshops is expected to last less than one year and it may be considered as part of short time degree programs, too.