

23rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
17th Workshop on Small Satellite Programmes at the Service of Developing Countries (1)

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INCA PROGRAM FOR DEVELOPING A NANOSATELLITE AT THE UCH

Abstract

The development of nanosatellite has increased in recent years, especially from universities and space agencies of developing countries. This increase is mainly due to reduced costs - compared to standard space missions - of the implementation of nanosatellites missions.

Despite the cost reduction on a nanosatellite mission, although it's hard to implement a mission of this dimension for universities in developing countries. This difficulty is mainly due to low economic resources, the poor organization of research groups, the rapid stage of students who after graduation are not longer interested in unfinished projects.

By the above reasons, in this paper, we present the proposal to form the INCA Team for its acronym in Spanish 'Investigacion en Ciencias Aeroespaciales' (research on Aerospace Sciences), and also the name of the team refers to one of the most important cultures of Peru.

With the creation of the INCA Team, the idea is to start a project to design and implement a nanosatellite for the Universidad de Ciencias y Humanidades - UCH. We will compose groups of pair students for each module of the nanosatellite, also for the test modules. In a first stage, students begin with the design of the modules for a year and a half. These designs will be the undergraduate thesis of the students. In a second stage, new students for the last cycles will be recruited to implement the modules designed for their colleagues who preceded them in the INCA Team. Similarly, this implementation correspond to the undergraduate thesis of the students. For these implementations, we will also invest year and a half.

Finally, after three years we could have a nano-satellite implemented and ready to put into orbit.