

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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COSTA RICA AEROSPACE CAMP 2015: EXPERIENCES AND RESULTS

Abstract

The first Costa Rican Aerospace Camp 2015 was an outreach and education activity where participants had active contact with the entire process of constructing and operating sounding rockets. It included lectures on theoretical concepts, simulation, instrumentation, and hands-on construction of the rockets, culminating with their launch. In this paper, we present the lessons learned during the organization, development, and follow-up of over 50 participating students from several technical and socio-economic backgrounds. A first of its kind in Costa Rica, the camp was organized by the Department of Mechanical Engineering of the University of Costa Rica (UCR) and it was held from July 20th-22nd, 2015 in the campus of the UCR located in the province of Guanacaste. The main objective of the camp was to engage students in the classroom and inspire them to continue their undergraduate studies in the Science, Technology, Engineering and Mathematics (STEM) fields as well as propel them to integrate the growing cluster of aerospace companies in Costa Rica. There were over 90 participants including staff, invited lecturers, organizers, and students. The camp attracted a large amount of national media coverage since it was the first time senior highschool and freshmen university students, both female and male, from all over the country came to work together to, at the end of the camp, launch their sounding rockets with an altimeter as payload. The rockets reach up to 400 meters and after recovery their data was analyzed by the students. In this paper, we will present the application process the students went through, the teaching methodologies applied during the camp, the data representing the background of the participating students, the outcome of the camp, a follow up on the students and the conclusions we have drawn from this initial experience and how we expect to improve it during the upcoming 2016 edition of the camp.