

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
New Worlds - Non-Traditional Space Education and Outreach (7)

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VIRTUAL MRZ-SAT: DISSEMINATION AND LEARNING THROUGH VIRTUAL REALITY

Abstract

Lately, Central American countries have developed multiple space missions involving CubeSats. Honduras is no exception with its Morazán project, a space mission tasked with elaborating the MRZ-SAT: the first Honduran satellite. The latter aims to provide early warning of flooding in three watersheds in Central America. Honduras is an emerging country in the development of space technology. It is necessary to ensure the awareness of citizens on the importance of space missions and encourage youth to study scientific fields involved in such projects.

For this reason, developing innovative outreach and learning activities involving citizens can raise the comprehension of space and aeronautic concepts. However, implementing learning teams in this field is very expensive. Nevertheless, the National Autonomous University of Honduras (UNAH), through the Institute for Research in Applied and Technological Sciences (IICAT) and within the framework of the Morazán Project, intends to develop and use digital twins of satellite components for mass learning. Therefore, virtual reality equipment will be used within the IICAT-UNAH facilities.

The objective is to implement a methodology that shows the impact of space missions, the benefits for the population, and how its execution is carried out. Training and learning lessons will be developed for the university community to achieve this. Virtual reality will allow interactions with parts of different CubeSat models, accompanied by support material such as video, audio, or written documents and other tools helpful in understanding the covered concepts. The expected result is to raise awareness in the university community about the importance of space missions involving small satellites, especially the one carried out by the MRZ-Sat. An experience that will permit a first approach to space technology and encourage to venture into new satellite projects, inducing the growth of the space industry in Honduras.