

## SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)

## Ignition - Primary Space Education (1)

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## BUILDING A CANSAT IN THE CLASSROOM

**Abstract**

Thanks to the launch of the two Ecuadorian satellites by the Ecuadorian Space Agency (EXA), the space age in Ecuador has just begun. This is the opportunity for children and young people to turn their eyes and aspirations to space.

UENMA School took its first step when its teachers and managers contacted the Ecuadorian Space Agency. This is how UENMA Astronautics Club was born and among its activities, the Club has performed connections to the EXA's Hermes Ground Station in order to be able to link with the NOAA satellites and to decode their signals, so that our students can observe and study the received images.

The following proposal consisted on the construction of a QFH antenna by the students themselves. Thus, thanks to the assistance and guidance of EXA, we moved on with the construction of the UENMA Ground Station. In fact, this project was presented at Guadalajara's IAC2016 with the name of "A Ground Station in the Classroom", and with its code IAC-16, E1,1,3, x32408.

As a result of this experience, we have proceeded to include Robotics and Astronautics as official subjects of the educational curriculum, generating scientific curiosity in students, parents and other teachers.

Given these innovations, the Club members proposed the construction and launch of a CanSat: this is the first Ecuadorian educational institution that has ever carried out such a development.

In this paper, we will review the student's experiences, the impact of this project in their academic stance, the methodology applied and the results yielded.