

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)

Ignition - Primary Space Education (1)

Author: Mr. Roberto Falconi

Ecuadorian Civilian Space Agency (EXA), Ecuador, rfalconi@uenma.edu.ec

Mr. Ronnie Nader

Ecuadorian Civilian Space Agency (EXA), Ecuador, rnader@exa.ec

A GROUND STATION IN THE CLASSROOM

Abstract

Following the launch of Ecuador's first two satellites, the eyes of the children and kids in the schools throughout the country were set into space, in the wake of this events, the Nuestra Madre de la Alborada school in Guayaquil, Ecuador's teachers established contact with the Ecuadorian Civilian Space Agency (EXA) in July 2014, and after some initial idea exchanges we came to the conclusion that developing and building our own ground station following the model of the EXA's HERMES ground station was within our capabilities and that that such project will be of enormous educational value for our students.

The project was set as the design and building of a Quadrifilar Helical Antenna by the students themselves to capture live satellite images through a decoder donated by the EXA and set up an internet server system to post and update new NOAA-19 images as soon as the satellite completed its pass over Ecuadorian territory. Currently, the ground station is in use in the school and is one of the basis of the Astronautics Club and also informs the public through our web server where the daily images are published.

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