

26th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
20th Workshop on Small Satellite Programmes at the Service of Developing Countries (1)

Author: Mr. Saul Santillan- Gutierrez
Facultad de Ingeniería-UNAM, Mexico, saulsan@unam.mx

Prof. JOSE F. VALDES-GALICIA
University Space Program, Universidad Nacional Autonoma de Mexico, Mexico,
jvaldes@geofisica.unam.mx

Dr. ALEJANDRO FARAH SIMON
Universidad Nacional Autónoma de México (UNAM), Mexico, farah@astro.unam.mx

Mr. JUAN ANTONIO SANCHEZ GUZMAN
Universidad Nacional Autónoma de México (UNAM), Mexico, juanantonio@cic.unam.mx

Mr. FRANCISCO MOISES GARCIA HERNANDEZ
Universidad Nacional Autónoma de México (UNAM), Mexico, moises.garcia@cic.unam.mx

THE DEVELOPMENT OF A SMALLSAT PLATFORM FOR IR EARTH OBSERVATION FOR CIVIL
USERS IN MEXICO

Abstract

The mission statement and initial development of an smallsat platform with the cooperation of mexican universities and government institutions for monitoring in the near and IR bands is described. The mission is aiming to provide images for the National Center for Disaster Prevention (CENAPRED) and other government agencies focused on civil protection and social development monitoring. Currently the information is provided from LANDSAT satellites, however the need for a different resolution and frequency of monitoring, is providing enough interest for the mission to be developed. The selected bands would help to assess human settlement growth, agricultural and forest land uses, water bodies, amongst others. An important part of the mission is the volcano monitoring for early warning civil protection. The satellite would be a mix of proven systems from international smallsat companies and selected local development in order to keep a positive success probability for the mission. An important part of the mission would be the use of local facilities for integration, testing and the joint work with the local agencies for imaging processing and information distribution. So far the mission has been defined at the conceptual and embodiment level, budget has been established for the mission and funding is under approval on a multi agency scheme within the country. We are reaching with the help of the AEM (Space MEXican Agency) for cooperation in the launch and deployment, plus the information processing of the mission. The success of the mission would benefit other projects for different needs and would enhance the cooperation and beginning of a value chain within the country and attract the interest for cooperation with other latin american and space emerging countries.