

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
On Track - Undergraduate And Postgraduate Space Education (2)

Author: Mr. Sajjad Ghazanfarinia
Satellite Research Institute, Iran

Mr. HOOMAN JAZEBIZADEH
Sharif University of Technology, Iran
Ms. Mahsa Taheran
Iran

Mrs. Ghazale MollaAhmadi
Amirkabir University of Technology, Iran
Mrs. Sahar Bakhtiari Mojaz
Iran

Mr. Mohammad Reza Simard
Aerospace Research Institute, Ministry of Science, Research and Technology, Iran

FORMATION OF CANSAT COMMUNITY IN IRAN

Abstract

Education in Space Emerging Nations has the most important effect on development of this technology in related countries. However, Space Education in most of them is done on a theoretical basis and is not coherent, which has made a big gap for consistency of taught material and their application during education period. Student Projects are a cost-effective solution to this problem. These projects can be planned in different levels, based on Political Issues, Funding and General Knowledge of each country. In Iran, Space Technology Student Team (STST), composed of Space Engineering Student in January, 2010, chose Cansat as the first step to its Space Professional Projects, considering Technology Readiness Level and Low Financial Support in Universities and Research Centers. Cansat as one of the smallest space systems known, with short Life Cycle and simple basic technology and theoretical needs, make it possible for STST to find an appreciable sponsor with a professional backbone on space subjects. Cansat projects usually are inter-disciplinary ones including hands on experience which the last two features not only cover deficiencies in Space Education, but also increase Attitude and Skill of team members. To increase STST motive, sponsor accepted attendance of the team in LEEM Cansat Competition held in Madrid, Spain on April, 2010, and STST won Silver Award in Telemetry Category. Afterwards and with the supports made by sponsor, STST proposed Comeback Cansat on base of lessons learned in the competition. The next step was submission of Cansat Competition proposal in Iran with Spiral Development Method. STST grown and was restructured to design and manufacture basic elements needed for competition; Balloon Launch System (BLS) and Amateur Rocket Launcher (ARL) beside Comeback Cansat. In the way of development and manufacturing of these systems, many of technologies used under different industrial application were adopted with required changes. With successful tests of BLS in February, 2011, Competition prerequisites are done and it will be announced in mid-March. It is intended in this article to describe experiences in the path from a scratch to flying Cansat. In Conclusion, STST earnings could be used by other teams in emerging nations with similar goals. As a Vision, STST thinks of International Cansat Competition and Balloonsat and Cubesat projects in near future, that requires an International Space Engineering Students Network. This article introduces some suggestions for establishment of this Network and sharing solutions and novel ideas.