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NEPALISAT-1:BEGINNING OF THE SPACE ERA IN NEPAL

Abstract

This paper is mainly focused on the successful launch, deployment and operation of the Nepal's first satellite, 'NepaliSat-1'. The history of Nepal in the area of development and involvement of satellite and aerospace program initiates from the deployment of Nepalisat-1 from International Space Station (ISS) on 17 June, 2019. This deployment was a part of the BIRDS-3 project at Kyushu Institute of Technology (KyuTech), Japan. NepaliSat-1 has one kilogram of weight with cube shape structure having five sides attached solar PV and one side with 5 mega pixel camera to take the photographs along with antenna. It is the low earth orbit satellite which is at about 430 km from earth. It can transmit the data in CW mode using UHF band.

Nepal government has recently established Satellite Ground Station Centre (SGSC) at Nepal Academy of Science and Technology (NAST) which is responsible for the overall operation of the satellite. Though, it is the small satellite for Nepal, it has opened officially a space era in Nepal. It has opened new possibilities for research activities in satellite technologies and application in Nepal.

This paper highlights the impact of NepaliSat-1 among young generation creating new hope for future development. It will also highlight the challenges that SGSC faced while operating the satellite from Nepal. The development of the satellite and initiation of aerospace program in Nepal has wave path for research in field of space science technology and small satellite for future sustainable goals.