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OPPORTUNITIES FOR CUBESAT DEPLOYMENT UNDER THE UNITED NATIONS ACCESS TO
SPACE FOR ALL INITIATIVE: ACHIEVEMENTS IN 2019-2020

Abstract

The United Nations Office for Outer Space Affairs (UNOOSA) launched the Access to Space for All Initiative in 2018 providing opportunities and space science data services. Under the Initiative, UNOOSA has been collaborating with space-faring governmental, intergovernmental and private sector entities to open ground- and space-based facilities to all Member States of the United Nations for micro- and hyper-gravity experiments, space missions, human spaceflight activities, and small satellite deployment. This paper focuses on the CubeSat deployment opportunities that are made available through the Access to Space for All Initiative. The missions selected under this initiative are supporting the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development.

UNOOSA, in partnership with JAXA carries out the Cooperation Programme on CubeSat Deployment from the International Space Station (ISS) Japanese Experiment Module (Kibo) "KiboCUBE". The program was established in 2016, and deployed its first satellite in 2018, 1KUNS-PF, which also became the first satellite of Kenya. Since the establishment of the programme, 5 rounds have been conducted. The fifth round was launched in March 2019, receiving three applications from different institutions located in developing countries. The selected winner was a partnership of several Central American partners under the Central American Integration System (SICA) and proposed a CubeSat as a technology demonstrator for early warning system for the Central American region.

For 2020, UNOOSA and JAXA have agreed to continue the programme for, at least, another two rounds, upgrading the capacity-building component of it. For each upcoming round, there will be a series of webinars that will help prospective applicants to improve the quality of their applications.

To enrich the portfolio of the Access to Space for All Initiative and provide more deployment opportunities, UNOOSA announced a partnership with AVIO S.p.A in September 2019. AVIO S.p.A. is an established Launch System Provider which has been working in space for more than 50 years. Thanks to the Ariane and Vega programmes, AVIO has acquired know-how and expertise to design, manufacture, integrate and operate a Launch System. The partnership programme is aimed to provide an opportunity for orbital deployment of a CubeSat or their aggregates not exceeding 3U standard in total per launch under the Access to Space for All initiative of the United Nations.

The presentation will go through these opportunities, the missions that have been selected and deployed and their contributions to society, in particular, to the SDGs.