

27th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
21st Workshop on Small Satellite Programmes at the Service of Developing Countries (1)

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DEVELOPMENT STATUS OF A FIRST DOMESTICALLY-BUILT SATELLITE PROJECT OF MONGOLIA

Abstract

In 2015, three young engineers from Mongolia started to work on CubeSat, which was the very first Mongolian satellite under the BIRDS project at Kyushu Institute of Technology, Japan. The main goal of the BIRDS project was to help to prepare human resources in space technology for developing countries, which was accomplished. Not only those three engineers, but more Mongolian young people are graduated, and some are still studying abroad in the space technology field, nowadays. As we defined, our next step is to build a satellite inside the country to own the space technology which was never done before. A CubeSat is the best option for us, and we started the 1U Cubesat project called TemuulelSat in 2019. The stakeholders of the project are the National University of Mongolia and the Mongolian Space Technology Association (MOSTA). The satellite will be launched in late 2021. TemuulelSat is a technology demonstration satellite with ambitious five missions. Missions consist of earth imaging from space, remote data collection system, failure rate determination of high voltage semiconductor device on orbit, reprogramming of standardized interface board on orbit, and sending wishes of citizens into space with non-volatile memory. The paper shows an overview of the development status of the TemuulelSat project.