

Development of Mongolian Nano-Satellite

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Abstract.

Mongolia does not have its own satellite now and uses other satellites. So, we are developing Mongolian space engineering with using Mongolian space capacity of National University of Mongolia and Mongolian University of Science and Technology. We made CanSat with data from pressure sensor, temperature, and GPS position. If we launch Mongolian Nano Satellite, we will be receiving weather data in order to monitor natural hazards forest and steppe fire and climate change and environmental issues.

The Mission Objective is to develop our Nano satellite with two functions. These are TV/Radio transceivers and Device control. TV/Radio transceivers allow Mongolian people to get information on weather in a faster way using Nano satellites. Device control will provide control security. For example they will be used inaccessible place for nomadic people, as Mongolia has many vast and inaccessible remote areas. The mass of Nano satellite size would be less than 10kg, have a transceiver with 100-150MHz frequency, and a life cycle of 24 months.

I. Introduction

In Mongolia, we do not have majors such as international information technology, space engineering line and astronomy which are vitally important. However, we will introduce Cansat and create knowledge based on students who study technology and organize training is becoming closer to create satellite and important to improve Mongolians knowledge about astronomy. In November 1998, Professor Bob Twinggs (Laboratory of Space Development at Harvard), mentioned terminology of CanSat where held the meeting of the university's space system.

This exhortation founded international craft and competition, also last 10 years during the competition and craft, universities students built CanSat, we will fly use model of rocket, air balloon and calculate the experiments in the space by gathering data and students will implement all the actions by themselves and will be the leader of the project and contribute develop that project using little money and time.

II. Method and technology

To get and produce a variety of information, we need sensor(*Figure 1*). For example: if we study thermo-cline depending on the time, we need temperature change detector.

Our CanSat has:

Pressure sensor - sensor of pressure and temperature.

Camera module - to collect active shape and image

Xbee Pro - without wireless information conductor



Figure 1. Cansat's sensors

III. Conclusion

The CanSat will be help build capacity to produce Mongolian satellites. Also, in general, it will be help strengthen aerospace engineering in Mongolian.