

**R010-P03**

**ポスター 3 : 9/26 AM1/AM2 (9:00-12:30)**

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## **Geomagnetic Field Observation Project by YOTSUBA-KULOVER Satellite with COTS Magnetomete**

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Geomagnetic observation by the satellite has been conducted by many institutes to understand the global structures of the ionospheric and magnetospheric currents. It is well known that understanding temporal and spatial variations of these current systems is much important to improve the space weather forecast.

We started a development of CubeSat as a student program mostly for undergraduate students to observe the small perturbation of the geomagnetic field at the LEO, especially, altitude of less than 400km. Focus of the observation is to measure the global distribution of the Sq (Solar quiet) currents in the dayside ionosphere as well as the disturbed magnetic field variations (such as 3D-structure of the substorm current wedge and Pc5 pulsations) associated with Storm/Substorms.

In this study, we propose the 2U-size CubeSat in which the COTS (Commercial Of-The Shelf) fluxgate magnetometer is installed to observe the small perturbation of the geomagnetic field. The fundamental feasibility studies depending on the electric power budget, the link budget, and specification of the magnetometer show that the observation of the Sq current by CubeSat is well feasible with a short duration of the development and quite low-cost.