

Development of QSAT-EOS : Residual magnetism measurement toward the analysis of low altitude magnetic disturbance

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QSAT-EOS is small size satellite made by Kyushu University and Kyushu enterprises. The missions are Earth observation and magnetic observation.

The purpose of this study is to observe fluctuation of magnetic field and identify field-aligned current by using QSAT-EOS.

In general case, to avoid the magnetic noises from satellites, the magnetometer is loaded at the edge of the mast out side of the satellites.

However, in the case of QSAT-EOS, it is the small size satellites, thus the magnetometer has to be loaded inside satellite. So the magnetic data from satellite includes strong noises. To use the magnetic data for the science purpose, we need to set bias and separate the noises from the raw data.

In this presentation, I'll show the summary of the magnetometer development for QSAT-EOS and the result of analysis of residual magnetism measurement.