The result of ground calibration for ERG/MGF sensor

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Variations and disturbances of the magnetic field may accelerate plasma in the inner magnetosphere. To achieve scientific goal of revealing mechanism of plasma acceleration for the ERG satellite, high accuracy of magnetic field observations is required.

The sensor of the three-axis magnetic field experiment (MGF), which will be onboard the ERG satellite, have displacements on orthogonal axes and offset due to an attachment error and so on. Moreover, the sensitivity and offset of the fluxgate sensor, which will be exposed to space in an environment of violent temperature change, have temperature dependence. In order to acquire data in a high accuracy, the sensitivity, alignment, offset, and their temperature dependence need to be obtained from the ground examination before the satellite launches.

We have examined the sensitivity, alignment, offset, and their temperature dependence of ERG/MGF sensor by ground examination. We will show the result in this presentation.

