

## Performance of the engineering model of the magnetometer (MGF-I) on BepiColombo MMO

# Ayako Matsuoka[1]; Manabu Shinohara[2]; Yoshimasa Tanaka[3]; kyosuke Iguchi[4]

[1] ISAS/JAXA; [2] Space Environ. Res. Center, Kyushu Univ.; [3] ROIS; [4] Tokai Univ.

By BepiColombo Mercury Magnetospheric Orbiter (MMO) mission we aim to understand the essential properties of the Herman magnetosphere. The primary objective of MERMAG-M/MGF is to reveal the physical process occurring in the Herman magnetosphere. MGF consists of dual magnetometers to increase the reliability of the magnetic-field measurement by MMO. It is light, low power-consumption, and tolerate for the radiation as well as the wide temperature range at the Herman orbit. MGF has the original sampling ratio of 128 Hz, dynamic range of 2048 nT, and resolution of 4 pT. The characteristics and performance of MGF satisfy the requirements to achieve the scientific goal of MMO.

The engineering model, being electrically equivalent to the flight model, was manufactured in 2008 summer. The performance of this model has been tested since September 2008.