

MMO 搭載 MIA センサー特性の数値モデルと実験結果 Numerical model and calibration experiment on the sensor characteristics of MIA/MMO

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The Mercury Ion Analyzer (MIA) is one of the plasma instruments on board the Mercury Magnetospheric Orbiter (MMO), and measures the three dimensional velocity distribution of low-energy ions (5 eV to 30 keV) by using a top-hat electrostatic analyzer for half a spin period (2 sec). By combining both the mechanical and electrostatic sensitivity controls, MIA has a wide dynamic range of count rates for proton flux expected around Mercury, in the the solar wind between 0.3 and 0.5 AU from the sun and in the plasma sheet of Mercury's magnetosphere. In this presentation, we discuss the sensor characteristics from both model calculations and calibration experiment of the flight model.

Keywords: MMO, Mercury, solar wind