

内部磁気圏での直接探査を目的とした 0.01-25keV/q イオン質量分析器の開発 Development of 0.01-25keV/q ion mass spectrometer for inner magnetospheric reserach

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Measurements of plasma particles with energies lower than 100keV is not easy in the terrestrial magnetosphere, since fluxes of high-energy particles are large. High-energy particles can penetrate through, or kick out the secondary particles when they hit materials. This means they can be detected by a detector inside an instrument without any analysis, namely, noise. We are developing an ion energy-mass spectrometer with energy range of 0.01-25keV/q for terrestrial inner magnetosphere. In order to reduce the noise generated by the high-energy particles, we apply a time-of-flight (TOF) technique. In addition, we try to minimize size of the detector.

We will discuss how an instrument in the current design can survive under severe environment like terrestrial inner magnetosphere.

キーワード: プラズマ粒子計測器, 内部磁気圏, ERG

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