

R006-18

A 会場 : 9/26 AM1 (9:00-10:30)

9:15~9:30

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A two - stage deflection system for the extension of the energy coverage in space plasma three - dimensional measurements

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The in situ measurement of charged particles plays a key role in understanding space plasma physics. Velocity distribution functions of ions and electrons have been acquired with electrostatic analyzers onboard spacecraft. Since conventional energy analyzers (e.g., top-hat electrostatic analyzers) have essentially a two-dimensional field of view, the solid angle coverage is achieved with the aid of spacecraft spin motion or with additional entrance deflection systems in front of the electrostatic analyzer. In the latter case, however, the full angular scan is realized only in the lower energy range (typically only up to 5 – 15 keV/e), due to the limitation of the electric field applied to the deflector. Here we propose a novel deflection system for extending the energy coverage up to tens of keV. This is especially useful for plasma observations in situations where the anisotropy of the energetic part (>10 keV) of charged particles plays an essential role in plasma dynamics and hence is of significant interest.