

Abstract Submitted  
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**X-ray observations from RT-1 magnetospheric plasmas** TETSUYA SUGATA, Univ. of Tokyo, MASAKI NISHIURA COLLABORATION, ZENSHO YOSHIDA COLLABORATION, NAOKI KENMOCHI COLLABORATION, SHOTARO KATSURA COLLABORATION, KAORI NAKAMURA COLLABORATION — Planetary magnetospheres like Earth and Jupiter realize stable confinement of high beta plasma. The RT-1 device produces a laboratory magnetosphere by using a levitated superconducting coil for dipole magnetic fields and 8.2 GHz electromagnetic wave for plasma production ( $n_e \sim 10^{17} \text{m}^{-3}$ ) and electron heating. In the recent experiments, the RT-1 device has achieved the local beta that exceeds 1. It is considered that the high energy component of electrons contributes to the beta value. Therefore, Si(Li) detectors measured the X-ray spectra from the peripheral plasmas in the range from a few keV to a few ten keV. The density of a few keV component and a few ten keV component are comparable and a few ten keV component dominates the majority of the high beta value that is operated up to 0.8. We found that 150 keV component of electrons exists near the outer of the levitated dipole magnet by using a CdTe detector.

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