

極端紫外光望遠鏡の残した成果

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Result of EUV telescope onboard Kaguya

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We grew understanding of the plasmaspheric dynamics thanks to the IMAGE-EUV mission.

Even though this successful mission ended, we have succeeded in imaging of the terrestrial helium ions (He^{++}) by the Telescope of Extreme Ultraviolet (TEX) aboard Japan's lunar orbiter KAGUYA, by detecting resonantly-scattered emission at 30.4 nm.

We completed the instrumental study, UPI-TEX is being routinely operated, and EUV images have become available.

The view afforded by the KAGUYA orbit encompasses the plasma (He^{++}) distribution in a single exposure, enabling us to examine for the first time the globally-averaged properties of the plasmasphere from the {¥it "side"} (meridian) perspective.

Here we report the inward motion of the plasmopause on 2 May 2008 seen from the meridian view of the Earth.

The plasmopause at the nightside shrunk from the initial L-value to the lower at the rate of 0.3 R_E /hour.

The timing is correlated to the southward turning of IMF, and the displacement is explained by estimation using solar wind parameters.

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