

## Solar wind influence on the Jovian inner magnetosphere derived from EUV spectroscopy

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The dawn-dusk asymmetry of the Io plasma torus has been seen by several observations [e.g., Sandel and Broadfoot, 1982; Steffl et al., 2004]. Ip and Goertz [1983] explained this asymmetry can be caused by a dawn-to-dusk electric field in the Jovian inner magnetosphere. However, the question what physical process can impose such an electric field deep inside the strong magnetosphere still remains. The long-term monitoring of the Io plasma torus is a key observation to answer this question. The extreme ultraviolet (EUV) spectrometer EXCEED onboard the Hisaki satellite observed the Io plasma torus continuously during the two periods: from December 2013 to March 2014 and from November 2014 to May 2015. We found clear responses of the dawn-dusk asymmetry to rapid increases of the solar wind dynamic pressure. Our results suggest that the solar wind can effect on the dawn-to-dusk electric field in the Jovian inner magnetosphere. We statistically analyzed the relations between solar wind and IPT response. Furthermore, we investigated the influence of volcanic activity of Io, detected by Hisaki in January 2015, on the solar wind response of Jovian inner magnetosphere. We will report the initial results of this study.