[EE] Evening Poster | P (Space and Planetary Sciences) | P-EM Solar-Terrestrial Sciences, Space Electromagnetism & Space Environment

[P-EM15]Dynamics in magnetosphere and ionosphere

convener:Yoshimasa Tanaka(National Institute of Polar Research), Tomoaki Hori(Institute for Space-Earth Environmental Research, Nagoya University), Aoi Nakamizo(情報通信研究機構　電磁波研究所, 共同), Mitsunori Ozaki(Faculty of Electrical and Computer Engineering, Institute of Science and Engineering, Kanazawa University)

Mon. May 21, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

This session provides an opportunity to present recent results from satellite and ground-based observations and theoretical and simulation studies on the magnetosphere, ionosphere, and their coupling system. We invite contributions dealing with various phenomena related to the magnetosphere-ionosphere system: solar wind-magnetosphere interaction, magnetosphere-ionosphere convection, field-aligned current, magnetic storms/substorms, neutral-plasma interaction, ionospheric ion inflow and outflow, aurora phenomena, and so forth. Discussions on planetary and satellite ionosphere and magnetospheres, future missions and instrument developments are also welcome.

[PEM15-P19]Low frequency waves observed in the downstream region of magnetic reconnection at the dayside magnetopause

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Some of low frequency waves observed near the magnetopause are suggested to contribute to diffusion of the magnetosheath plasma into the magnetosphere or to heating of plasma sheet particles. These waves can be important in magnetospheric physics, but little is not known about fundamental processes of the waves. Diffusion by kinetic Alfvén waves (KAWs) has been proposed as a transport process of solar wind particles into the magnetosphere [Johnson and Cheng, 1997]. However, conclusive evidence of such a diffusion process has not been shown observationally. In this study, we investigate whether the solar wind particle diffusion process induced by low frequency waves can be at work. For the analysis, an event in which KAWs were identified by Gershman et al. [2017] from data taken by NASA’s Magnetospheric Multiscale (MMS) spacecraft observed in the downstream plasma flow of dayside magnetopause reconnection is used. We examine whether particles satisfying the resonance condition with KAWs have a cross-field velocity.