[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-P04]Characteristic distance between mesoscale auroral brightenings along the equatorward boundary of the cusp

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Each auroral brightening event near the equatorward boundary of the cusp is thought to be the ionospheric signature of the beginning of intermittent reconnection on the dayside magnetopause, i.e., a flux transfer event. In order to understand whether two neighboring flux transfer events occur at intervals of any characteristic length scales, we examined mesoscale auroral brightenings that occur near the equatorward boundary of the cusp by analyzing 630-nm auroral image data obtained from an all-sky imager at Longyearbyen, Svalbard. Statistical analyses of the distributions of the mesoscale auroral brightenings for stable southward IMF show that two mesoscale auroral brightenings tend to occur approximately at 0.4-hour MLT intervals. We discuss this distance at ionospheric heights in terms of the formation of the flux transfer events on the dayside magnetopause.