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

[P-EM13]Study of coupling processes in solar-terrestrial system

convener:Mamoru Yamamoto(Research Institute for Sustainable Humanosphere, Kyoto University), Yasunobu Ogawa(National Institute of Polar Research), Satonori Nozawa(名古屋大学宇宙地球環境研究所, 共同), Akimasa Yoshikawa(Department of Earth and Planetary Sciences, Kyushu University)
Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)
The Earth accepts vast input of energy and material from the Sun. The Earth's environment is maintained by the balance between their inputs and outputs. It is important to study energy and material transport of the Earth. This is an international session that discusses studies of the coupling processes in the Sun-Earth system based on the project "Study of coupling processes in solar-terrestrial system" that was approved by the Master Plan 2017 of Science Council of Japan. The facilities and networks included are the Equatorial MU Radar (EMU) in Indonesia to study the whole equatorial atmosphere, the EISCAT_3D radar in northern Scandinavia to study detailed structures and elementary processes of the magnetosphere-ionosphere coupling in the polar region, and global networks of various ground-based instruments and observation data. We will show current status of the project and discuss sciences by soliciting variety papers. This session is open to the world, and we strongly encourage submission of papers related to other facilities and projects, i.e., atmospheric or incoherent scatter radars, observation networks, satellites, and simulation or theoretical studies, etc.

[PEM13-P07]A survey of conditions for artificial aurora experiments at EISCAT Tromsø site using dynasonde data

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We report a brief survey of conditions for artificial aurora optical experiments in F region heating with O-mode at EISCAT Tromsø site using dynasonde data from 2000 to 2017. According to the results from our survey, we can find the following: the possible condition for the artificial aurora experiments is concentrated on twilight hours in both evening and morning, compared with late night hours; the possible condition appear in fall, winter, and spring while there is no chance in summer, and the month-to-month variation among fall, winter, and spring is not so clear. The year-to-year variation is well correlated with the solar cycle, and experiments during the solar minimum would be almost hopeless. These findings are useful for planning future artificial aurora optical experiments.