

International Session (Oral) | Symbol P (Space and Planetary Sciences) | P-EM Solar-Terrestrial Sciences, Space Electromagnetism & Space Environment

[P-EM06_30PM2]Study of coupling processes in Sun-Earth system with large radars and large-area observations

Convener:*Mamoru Yamamoto(Research Institute for Sustainable Humanosphere, Kyoto University), Yasunobu Ogawa(National Institute of Polar Research), Satonori Nozawa(Solar-Terrestrial Environment Laboratory), Hiroyuki Hashiguchi(Research Institute for Sustainable Humanosphere, Kyoto University), Chair:Hiroyuki Hashiguchi(Research Institute for Sustainable Humanosphere, Kyoto University)

Wed. Apr 30, 2014 4:15 PM - 6:00 PM 312 (3F)

The Earth accepts huge 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 projects of large radars and large-area observation network. The facilities and networks included are the Equatorial MU Radar (EMU) in Indonesia to study the whole equatorial atmosphere, the EISCAT_3D radar system to study detailed structures and elementary processes of the magnetosphere-ionosphere in the polar region, and global observation networks of magnetometers and radio and optical instruments to study the coupling processes with the global scale. We will show outline 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.

5:15 PM - 5:30 PM

[PEM06-P06_PG]Microstructure of Precipitation over Indonesia from a Network of Parsivel disdrometers

3-min talk in an oral session

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Keywords:Indonesia, Parsivel, Raindrop

Insight into the regional variability of raindrop size distribution (DSD), is of primary importance for estimation of rainfall using remote sensing techniques, cloud/precipitation microphysical processes and numerical weather modeling. In order to quantify the regional variability of the DSD over Indonesia, a network of 4 Parsivel disdrometers along equatorial Indonesia has been designed. The disdrometers were installed at Kototabang (KT; 100.32E, 0.20S), Pontianak (PT; 109.37E, 0.00S), Manado (MN; 124.92E, 1.55N) and Biak (BK; 136.10E, 1.18S). It was found that the DSD at PT has more large drops than at the other three sites. The DSDs at the four sites are influenced by both oceanic and continental systems, and majority of the data matched the maritime-like DSD that was reported in a previous study. Continental-like DSDs were somewhat dominant at PT and KT. The combination of World Wide Lightning Location Network, wind profiler and the Tropical Rainfall Measuring Mission (TRMM) Precipitation Radar (PR) allows a discussion on physical basis behind the regional variability of DSD over Indonesia.