
[JJ] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-IS Intersection

[M-IS19] Atmospheric electricity

convener: Yasuhide Hobara (Graduate School of Information and Engineering Department of Communication Engineering and Informatics, The University of Electro-Communications), Masashi Kamogawa (Department of Physics, Tokyo Gakuai University)

Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall 7, Makuhari Messe)

All aspects of research area on Atmospheric Electricity will be discussed in this session, including global circuit, ion and fair weather electricity, thunderstorm electrification, lightning physics, lightning and meteorology, electrical effects of thunderstorms on the middle and upper atmosphere such as transient luminous events and high energy phenomena, lightning protection, terrestrial electromagnetic environment and so on.

[MIS19-P05] Charge change estimation at short-burst energetic radiation during the Blizzard

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Keywords: Atmospheric electric field, Blizzard, Snow particle

We investigate the atmospheric electric field (AEF) variation caused by the blizzard at Syowa station, Antarctica, using the field mill, laser precipitation monitor (LPM). Two field mill sensor was installed at the 10 and 1 meter height. During the blizzard (wind speed more than 6 m/s), the AEF mostly showed the intense positive (fair-weather-direct) values, which originates from the negatively charged snow gradient. However, during some periods, the AEF showed negative values. Comparing two different height AEF with LPM, the sudden LPM showed seldom particles after the blizzard, so that the AEF showed negative. Our interpretation was that the termination of the blizzard disturbed the gradient, i.e. negative AEF occurrence.