

Magnetosphere-Ionosphere coupling events and Atmospheric electricity at Syowa station, Antarctica

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At Syowa Station(69.0S, 39.6E), located on East Ongul Island near the continent of Antarctica, atmospheric electric field observation has been carried out with an electric field mill. We extracted 'fair-weather' electric field data over six years, from 2006 to 2012. We considered the 'fair-weather' electric field data and Geomagnetic field by comparison, and found an event which suggests variations of electricity in ionosphere caused by magnetosphere-ionosphere coupling. In this presentation, we will show atmospheric electric field, aurora activity, HF radar, etc. during the event, and discuss the influence of Solar-Terrestrial environment on atmospheric electricity.

Keywords: fair-weather, Antarctica, atmospheric electricity, Magnetosphere-Ionosphere coupling, global circuit