

Observation Condition of Geomagnetic Anomaly Phenomena in South America

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In order to examine upper atmosphere phenomena in South Atlantic Anomaly, we installed several instruments(Imaging riometer, CCD camera, Magnetometer, Electric Field detector and etc.) at Southern Space Observatory(SSO), Brazil and surrounding area. We concentrated imaging riometer(IRIS) observation recently. At present, 6 IRIS's are installed from the equator to the southern end of South America. It is essential to determine the cosmic noise intensity curve during quiet period(quiet day curve: QDC). We are carefully examine original IRIS data and want to advance data analysis.

On the other hands, we are interested in atmospheric electric field. Although events are few, we found that variation of atmospheric electric field at SSO is related with magnetic field disturbance in polar region. If this phenomena are really occurred, we consider that global electric field in magnetosphere penetrates into SSO region and/or ionospheric electric field may change due to the particle precipitation in SSO. We are now preparing for electric detectors and hope to install these detectors at several places around geomagnetic anomaly area.

Keywords: geomagnetic anomaly, Imaging riometer, Atmospheric Electric Field