Storm-time variations of magnetic field and relativistic electrons at geosynchronous orbit

Tsutomu Nagatsuma [1], Takahiro Obara [2]

[1] HSTRC, CRL, [2] Hiraiso Solar Terrestrial Res. Ctr., CRL

The purpose of our study is to estimate contributions from the adiabatic and non-adiabatic response in the variations of storm-time relativistic electron flux at geosynchronous orbit. We studied the storm-time variations of magnetic field and relativistic electrons at geosynchronous orbit using GOES data. The initial results of our data analysis shows that the variation of magnetic field intensity depend on Dst and this dependence has a day-night asymmetry. We will discuss when the non-adiabatic effect contribute the variation of relativistic electrons significantly and the effect of day-night asymmetry.