Pc1 band pulsation newly observed by induction magnetometer at magnetic low latitude

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Kyushu University Space Environmental Research Center has been observing geomagnetic data at Kuju (MLat=26.13) with induction magnetometer since 2003. We found some impulsive pulsation (We call this I-type event) during magnetic storm. The characteristic of I-type event similar to that of Intervals of Pulsations of Diminishing Period (IPDP) which observed at high latitude. The goal of this study is to investigate the characteristic of I-type event.

We analyzed data of year 2003, 2004, 2010 and 2011. The data were characterized based on ”Magnetic storm day data(S-data)” and ”Quiet day data(Q-data)”. There were 21 S-data in the analyzed period.

We found 7 I-type event from 21 S-data. During I-type event frequency increases with time. (\( \delta f=0.8-5\) Hz, \( t=10-30\) min) I-type event is only observed from S-data (not from Q-data) and occurred after 5 to 30 minutes from sub-storm onset. Considering these facts, it is clear that I-type event associates with magnetosphere disturbances.

We will discuss the details of I-type event at the presentation.

Keywords: Pc1, Induction magnetometer, magnetic low-latitude, IPDP