MAGDAS によって得られた赤道ジェット電流発生特性について

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Occurrence characteristics of the Equatorial Electro Jet derived from MAGDAS

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We investigated the occurrence characteristics of the Equatorial Electro Jet (EEJ) observed by MAGDAS from the aspect of the space weather study. The data obtained at Davao (DAV) station (GMLAT=-1.37deg, GMLON=196.53deg) located on the magnetic equator were analyzed for the period from July 1, 2005 to March 4, 2006. During the period, several magnetic storm activities occurred and sometime EEJs were strongly disturbed. In those cases, it is not clear to identify the occurrence of EEJ from the raw magnetogram. To extract the EEJ component from the raw magnetogram, we subtracted the value of the Dst index from the H component magnetic data. Then it made possible to identify the EEJ component similar to those of the quiet period. It is found that the amplitude of the extracted component fluctuated with dominant peak periods of 7.5, 14.5 and 35.3 day. The result suggests that the activity of the EEJ correlates with the Rossby wave. This issue should be clarified in the future work. On the other hand, it is confirmed that the Equatorial Counter Electrojet tended to occur during the period of the magnetic active time rather than the quiet time. In our talk at the session, we will present the occurrence characteristics of the EEJ derived from MAGDAS/CPMN from the morphological aspects.