Online EE-index for the Real-time Geospace Monitoring

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EE-index (*EDst*, *EU*, and *EL*) is a new index proposed by Space Environment Research Center (SERC), Kyushu University for real-time and long-term geospace monitoring. The basic algorithm to obtain *EE-index* was constructed by Uozumi et al. (2008). *EU* and *EL* mainly represent the range of the EEJ (equatorial electrojet) and CEJ (equatorial counter electrojet) components, respectively. The baseline levels of *EU* and *EL* are obtained by averaging the H-component magnetic variations observed at the nightside (LT = 18-06) MAGDAS/CPMN (MAGnetic Data Acquisition System of the Circum-pan Pacific Magnetometer Network) stations along the magnetic equator (Addis Ababa, Ethiopia; AAB, Abidjan, Ivory Coast; ABJ, Ancon, Peru; ANC, Davao, PH; DAV, Eusebio, Brazil; EUS, Ilorin, Nigeria; ILR, Langkawi, Malaysia; LKW, Tirunelveli, India; TIR, Yap Island; YAP) and mid-latitude (Ewa Beach, HI, USA; EWA). Data form EWA is used to improve the accuracy of *EE-index*. The baseline value is defined as *EDst* and its variations are found to be similar to those of *Dst*. *EDst* can be used to quantify the scale of magnetic storms.

The greatest benefit of MAGDAS is its real-time data transfer system (see Yumoto et al., 2006 and 2007). In recent days, we developed automated routine programs to calculate *EE-index* in real-time. The online *EE-index* is available on our website in SERC (http://www.serc.kyushu-u.ac.jp/). By using this index, users can monitor the current state of magnetic activity in geospace and long-term variations of EEJ. One of the results of *EE-index* is a depression of *EU* (EEJ component) under the severe southward IMF.