

Time variation of terrestrial electron radiation belts

Yoshizumi Miyoshi [1], Akira Morioka [2], Hiroaki Misawa [3]

[1] Planet. Plasma and Atmos. Res. Cent., Tohoku Univ., [2] Planet. Plasma and Atmos. Res. Cent., Tohoku Univ., [3] Planet. Plasma and Atmos. Res. Cent., Tohoku Univ.

We have performed the analysis of the energetic electron flux variation to derive characteristic time scales in the radiation belts, using the data set of the TIROS/NOAA satellites during the long period of 1979-1998. As the result, the existence of the variation synchronized with the solar cycle in both the inner and outer radiation belts was confirmed. It was also shown that the radiation belts change in relation to various variability of the geomagnetic activity; i.e., annual and semi-annual variations, and the recurrent activity.

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