

Flux Enhancements of Energetic Electrons in the Inner Magnetosphere during Magnetic Storms - Two Storms in November 1993 -

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We have investigated the rebuilding process of relativistic electrons during geomagnetic storms, using the two successive recurrent storms in November 1993. The strong flux enhancement in the outer belt occurred in the former storm, while the flux enhancement was very weak in the later storm. In the former storm, where the substorm activity was continuous, it has been confirmed that the intense hot electrons were injected continuously and the strong whistler mode waves were generated. These results suggest that the storm-time substorms supply the energy for producing the reappeared relativistic electrons in the outer belt.