

Dynamic of the outer radiation belt relativistic electrons during magnetic storm on December 15, 2006

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The strong magnetic storm ($Dst = -146$ nT) occurred on December 15, 2006. This storm was probably caused by two strong solar flares on December 13 and 14 of X-class with West position (W23 and W46). Dynamic of relativistic electrons with energies 0.3- 0.8 MeV measured on "Universitetskiy - Tatiana" microsatellite during this time interval were analysed using radial profiles and energy spectra calculations in different phases of this magnetic storm. The results coincide with those obtained for May 2005 magnetic storms using CORONAS-F relativistic electron data. The spectrum of these electrons is harder during the beginning of main storm phase in comparison with other times. The fluxes of relativistic electrons decreased about 1-2 orders during the magnetic storm main phase and during recovery phase these fluxes increased about 1-2 orders depending on their energy. We observed the shift of electron fluxes maxima to the Earth direction during main and beginning of recovery phase and the long time (~ 1 week) return of these maxima on the prestorm position during second part of storm recovery phase.