

Multisatellite observations of outer radiation belt dynamics during the geomagnetic storm on May 15, 2005.

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Outer radiation belt dynamics during the geomagnetic storm on May 15, 2005 were analyzed. Experimental data obtained from two polar orbiting satellites "MSU-250" and "CORONAS-F" at the altitudes ~ 980 km and ~ 350 km correspondingly were studied. Data from geosynchronous satellites LANL and GOES were also used. The magnetic storm on May 15, 2005 was produced by CME from the solar flare on May 13, 2005 at 17:12 a.m. SSC was observed at 2:38 a.m. The first phase of the geomagnetic storm lasted up to 6:20 a.m. The main phase finished at 8:20 a.m. and the H_{sym} value reached -305 nT. During the main phase relativistic electrons disappeared from the outer radiation belt. During the recovery phase the reconstruction of the outer radiation belt was observed only for electron fluxes at the energy of 0.3-0.6 MeV according to both low altitude satellite data and LANL data. Relativistic electrons appeared at $L > 4$ and at the geostationary orbit during the magnetic substorm at $\sim 6:30$ a.m. on May 16, 2005. Magnetosphere dynamics and radiation belt variation features depending on interplanetary medium conditions and magnetic storm and substorm development are discussed.