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Energy and time characteristics of high-energy electron bursts in near-Earth space

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Many satellite experiments showed interrelation between changes of particle fluxes in near-Earth space and various magnetospheric and geophysical phenomena. In this report we focus on temporal and energy characteristics of bursts of high-energy electrons in the inner region of the Earth's magnetosphere ($L < 2$). In order to study the variations of electron characteristics during the observation of the bursts, caused by lightning or seismic activity, numerical modeling the propagation of particle cloud formed by electrons, precipitated from radiation belt, has been carried out. There is a relationship between energy distribution and temporal profile of electrons of burst in case of local precipitation. In this report the results of simulation are analyzed and compared with data from ARINA and VSPLESK satellite experiments, which are carrying out since 2006 till now.