



Energetic electron and solar proton acceleration in the inner magnetosphere during strong magnetic storms

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Solar MeV protons were trapped during the recovery phases of several strong magnetic storms and then accelerated simultaneously with relativistic electrons. Particle dynamics during magnetic storms on October 2003, July and November 2004 were investigated by measurements on board of the low-altitude satellites CORONAS-F and SERVIS-1. At the recovery phase of magnetic storms similarity of radial profile dynamics of electrons and freshly trapped protons was observed indicating that both particle species are accelerated in the inner magnetosphere by the same radial diffusion mechanism.