

## **ENERGETIC PARTICLE BURSTS BEFORE THE MAIN SUBSTORM INJECTION**

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We examine the relationship between the energetic electron bursts observed before the main injections and the changes in the magnetic field during substorms on the CRRES. We present here three events with time duration of 15 - 30 s. Pitch angle distribution (PAD) of electron fluxes observed during these bursts and injections depends on the CRRES position relative to the cross-tail current sheet and boundaries of energetic particle trapped region. Near the inner edge of plasma sheet (PS) the pancake PADs were observed (electron acceleration perpendicular to the magnetic field). Inside the PS, the bursts have the pancake and isotropic PADs. Near the outer boundary the cigar and isotropic PADs were observed. The lack of the pitch angle and energy dispersion in the observed injection events are evidence for local acceleration. The burst onsets correlate with the magnetic bursts ( $\partial B_z/\partial t$ ) with the time duration  $\sim 2-4$  s. It is likely that particles are accelerated by induced E field arising from these observed magnetic bursts. The more global dipolarization (during  $\sim 1$  min) or any other large-scale field reconfiguration can lead to additional particle energization through the induced E fields arising from this global magnetic variations.