

Plasma Sheet Injections

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Talks

- **Partial RC (Kalegaev):**

Dominance of PRC during storm main phase
(Separation of current systems, possible only by magnetic field models, model dependent)

- **Low energy part of RC (Yamauchi):**

Neglected, but useful for interpreting electromagnetic fields

- **RC/PS populations (Jahn):**

MLT relationship, energy separation

- **Plasmasheet access to radiation belts (Elkington):**

Access only for special configuration and conditions

What Does This Mean?

- From data, substorms don't really influence the MPA energy range
- From modeling, substorms are usually not a large contributor for building the ring current
- Questions for us to ponder:
 - What do you think about which is more important: convective or inductive electric fields?
 - Can we get an intense ring current without one or the other of these E-fields?
 - Are substorms necessary to produce the right near-Earth plasma sheet?

As a group, we think...

- Substorms modify an existing ring current's properties
 - Inward shift in radial distance
 - Pitch angle change?
 - Injection on top of existing RC ions
 - Is this substantial?
- Substorms bring in plasma to near geosynchronous orbit
 - Flow breaking merges into background flow around this radial distance