**Electron energy spectra during the different phases of magnetotail reconnection**

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**OVERVIEW**

**A. Pre-substorm**

**BASE MODELS**

- Kappa
- Flattop

**ENERGY SPECTRA**

- **A. Pre-substorm**
  - Energy buildup?
  - Hones 1977

- **B. Plasma sheet reconnection**
  - Slow...
  - Hones 1977

- **C. Lobe plasma reconnection**
  - Explosive !!!
  - Hones 1977

**NOTE:** $\kappa$ is equivalent to the power-law index $\delta$ as measured in differential flux.

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**CONCLUSION**

1. Electron power-law ($\delta \sim 3-4$) exists throughout the event even in quiet phase (but it was soft in another event …… preconditioning?)
2. Both ion/electron spectra become slightly softer in the enhanced temperature phase
3. The non-thermal fraction depends on the definition & model and are thus subjective.
4. Based on our definition, $R_{\text{den}} \sim 22\%$ and $R_{\text{egy}} \sim 55\%$ were the typical values in the active plasma sheet.

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Please come see this poster again during the core time, **Day 3, 13:00 — 13:40 EDT** for more detailed explanation, further analysis, and movies (which are cool!)