THEMIS Overview

TIME HISTORY OF EVENTS AND MACROSCALE INTERACTIONS DURING SUBSTORMS
RESOLVING THE MYSTERY OF WHERE, WHEN AND HOW AURORAL ERUPTIONS START

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Baltimore, MD
Mission elements

- Reconnection
- Aurora
- Current disruption
- Reconnection
### Probe deployment / instrument complement

- **EFIs**
- **EFIa**
- **SCM**
- **SST**
- **FGM**

#### Probe deployment / instrument complement

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<thead>
<tr>
<th>Instrument</th>
<th>Description</th>
<th>Measurements</th>
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<td>ESA</td>
<td>Electro-Static Analyzer</td>
<td>Ions and Electrons</td>
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<td>SST</td>
<td>Solid-State Telescope</td>
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<td>FGM</td>
<td>Flux-Gate Magnetometer</td>
<td>Magnetic field</td>
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<td>SCM</td>
<td>Search-Coil Magnetometer</td>
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<td>EFI</td>
<td>Electric Field Instrument</td>
<td>Electric Field</td>
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THEMIS will answer:

“How substorms operate”

– The holy grail of space physics
– A pre-requisite to understanding space weather
– Important for Heliophysics and Astrophysics