

# THEMIS and ARTEMIS Science Data Analysis Software Monthly Accomplishments

## December 2012

### THEMIS and ARTEMIS Science Data Analysis Software (TDAS) - Post v7.0.1

1. The following enhancements were made to the THEMIS/ARTEMIS data analysis software:

- Eclipse spin model corrections were implemented for ground-generated moments.
- A crash in thm\_load\_sst (occurring when 6-angle data is present and 1-angle data is not) was fixed.
- A more intuitive treatment of "Apply to All Pages" functionality was implemented for several GUI panels.
- thm\_load\_sst.pro and thm\_load\_mom.pro were enhanced to permit loading of ESA and SST configuration variables from L1 CDFs.
- Some TDAS code, copied and slightly modified to support IUGONET development, was merged back into the TDAS bleeding edge to ease installation and management of the IUGONET plugin code.
- A console error that occurred when selecting instrument type "None" in the GUI "Load THEMIS Data" panel was fixed.

### THEMIS/ARTEMIS Web Site

1. Updated FGM processing history to reflect reprocessing due to updated calibration parameters.
2. "Instruments" pages updated to include links to detailed configuration history for ESA and SST data types.
3. A link to the GEOPACK home site at APL was added to the TDAS download page.

### THEMIS and ARTEMIS Data Products

1. Reprocessed FGM L2 CDFs with updated calibration parameters.
2. A coordinate transform problem was noted in the web site summary plots of the onboard moments, and fixed by correcting the SOC code and reprocessing the summary plots.
3. SST summary plots were reprocessed to repair some gaps due to the bug discovered in thm\_load\_sst.
4. All Sky Imager (ASI) products are available as follows:
  - a. Thumbnail cdf files and overview plots are available through 2012/12/31. Thumbnail movies are complete through 2012/12/31.
  - b. Full resolution raw data is available and complete for 2007 through 2011. 2012 complete through 2012/04/01. Full resolution CDFs complete through 2012/04/01, keograms are available and complete through 2012/12/31.
  - c. Web site - Mosaics are up to date and available through 2012/12/31.

### Conferences and Training Sessions

1. Several TDAS-related presentations were given at the Radiation Belts and Wave Monitoring session at the mini-GEM conference which preceded the Fall 2012 AGU meeting in San Francisco.
  - Representatives of the TDAS development team presented overviews of current command-line and GUI capabilities.
  - A question-and-answer session was conducted for prospective plugin developers interested in using the "SPEDAS" framework to support loading and analyzing data from multiple missions.
  - Representatives of the Van Allen, ERG, and IUGONET missions gave presentations highlighting their current and proposed usage of TDAS and SPEDAS to support their respective missions.