

THEMIS and ARTEMIS Science Data Analysis Software Monthly Accomplishments

July 2012

THEMIS and ARTEMIS Science Data Analysis Software (TDAS) - Post v7.0

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

- Updated ASI mosaic program with color_annotation keyword to allow users to change label colors.
- Updated thm_part_moments2 with new limit for the size of particle spectra in PHI (angle relative to probe-sun direction in spin plane), to allow for correct spectra in burst mode.
- Colors may now be set directly on tplot pseudo variables (instead of needing to be set on its constituents).
- Added extra support for downloading files from behind a proxy server.
- thm_load_state now performs coordinate transforms for spinaxis attitude, if a coordinate system other than the default GEI is requested.
- Row/column controls were removed from the panel options window and are now controlled solely from the plot/layout window.
- The true_dsl keyword, formerly used to fully enable eclipse spin model corrections in thm_load_fit and thm_load_mom, is no longer required. Examples showing the use of the eclipse spin model corrections are now included in the crib sheets thm_crib_fgm, thm_crib_fit, and thm_crib_mom
- THEMIS SST calibration files enabling intercalibration of anodes for all spacecraft (allowing more trustworthy pitch angle distributions) have been upgraded. Use in the "bleeding edge" code by calling thm_load_sst2, and when computing moments or spectra, use the keyword: /sst_cal. For more information, see: thm_crib_sst_calibration.pro .

THEMIS and ARTEMIS Data Products

1. L1 STATE CDFs have been reprocessed to include eclipse spin model corrections, and these corrections are now a standard part of the STATE processing. Previously, these corrections were only available for selected dates in a QA area.
2. Reprocessed L2 FGM data for 2011-08-01 and later with new calibration data for all probes.
3. All Sky Imager (ASI) products are available as follows:
 - a. Thumbnail cdf files and overview plots are available through 6/30/2012. Thumbnail movies are available through 6/30/2011.
 - b. Full resolution raw data is available and complete for 2007 through 12/2011. 2012 complete through 01/2012. Full resolution cdf's and keograms are available and complete for 2007 through 12/2011.
 - c. Web site - Mosaics are up to date and available through 12/2011.

Exelis (IDL) TDAS compatibility presentation

1. On July 26, a presentation was given by the TDAS team to representatives from Exelis, the current vendor of IDL. Several areas of incompatibility between TDAS and IDL version 8.2 were identified and discussed. Exelis is working to address these issues and recommend workarounds, so that future IDL releases will be more viable platforms for running TDAS.