

THEMIS Tips of the Month - August - September 2010

Reminder: A link to the processing history of each data type can be found on the data type's Data Description web page. Use the following link to select a data type: http://themis.ssl.berkeley.edu/esa_desc.shtml

THEMIS Data Reprocessing - L1 Data

ESA, SST, MOM:

1. Solar wind mode flags and timestamps were corrected for multiple entries with identical timestamps.
2. Added full 16-bit ESA and SST mode configuration words.
3. New calibration values have been implemented for the SST attenuator correction.
4. thm_load_mom now generates new tplot variables containing solar wind mode data for P1(THB) and P2(THC).

FFT (FFF, FFP, FFW) and FBK) and FBK

1. The data was reprocessed due to sample times being off by one sample period.

V03 STATE

1. Reprocessed 2010 data for inner probes A, D, and E with latest spin attitude corrections.

THEMIS Data Reprocessing - L2 Data

FGM

1. The L2 files, post 29-Mar-2010 have been reprocessed using updated calibration data.

ESA

1. The data was reprocessed to include calibrated data for ESA in the solar wind mode.

SST

1. The data was reprocessed to include corrected solar wind mode flag variables.
2. New calibration values have been implemented for the SST attenuator correction.
3. New calibration software has been implemented for SST. Software is available to scientists for testing. The new software allows calibration parameters to be set using text-file. Example showing usage is available in themis/spacecraft/particles/SST/SST_cal_workdir/thm_sst_calibration_test.pro.

MOM

1. The data was reprocessed to include corrected solar wind mode flag variables. This corrected a problem where flags with (approximately) duplicate time stamps and different values were included for electron burst mode data.
2. New calibrations applied to on-board moments have been as follows;
 - a. new coefficients improve agreement between ESA ground and ESA moments
 - b. coefficients added which are applied to ESA on-board moments only when spacecraft is in solar wind mode.
 - c. units for heat flux were changed from eV/cm³*km/sec to eV/cm²/sec

FFT and FBK

1. The data was reprocessed due to sample times being off by one sample period.

THEMIS Data Reprocessing - Overview (Summary) Plots (Reprocessing in progress)

1. Plots updated to reflect changes in data.
2. FGM & Memory plots now show blank panels when some spacecraft data are missing.