Software Task Priorities (In Play / In the Queue) - 9/24/07

Ken
1. SCM Reconciliation - Merge Chris C. and Oliver's latest version of thm_cal_scm with the trunk version. This will accomplish: clean up the power ripples, and the 8/32Hz noise for SCM First step sort out duration of the work.
2. Tweaks for _dot0 and _0 for subspin resolution (for John - tbd)
2. implementation of the removal of the spin-independent and -dependent offsets (for John)
3. Themis SCM CAL File Processing - produce table of contents and assign sections with Patrick R.
4. Themis System Administrators Guide
5. Themis Developers Guide

Jim L.
1. Correct Spin period, Spin Plane, sun pulse data. Doc update. BugzID=29 (for Vassilis) Hannes to review. If okay will be reprocessed by 9/28.
1. Spin Model L1 CDF. BugzID=29. Will be reprocessed by 9/28.
1. IDL Load routines for Spin Model L1 cdf's
2. ESA Sweep Modes put into Moments L1 CDF. BugzID=42. (For Davin) Will be reprocessed by 9/28.
2. Spin model does not capture slow drifts in spin rate. BugzID=46. If Hannes approves will be reprocessed by 9/28.
2. Compress and Decompress routines for MOMs. BugzID=37
2. Compress and Decompress routines for Fields. BugzID=37
2. Modify lzp_wrapper and process_lzp_dir scripts. BugzID=49.
2. Clean-up current VC->L0 processing scripts temporary files. BugzID=50.
2. L0 to L1 processing: look ahead to the next packet before processing the current packet. BugzID=67
3. When FGM range changes in the middle of a packet. Post Proc maybe a solution to eliminate the spike. BugzID=44.
4. Unexpected transfer frames time matched packet time yet in the past. BugzID=38.
5. L1 File definitions Document. BugzID=xx.

Tim
1. Five probe overview for FGM, ESA and SST (Tohban scripts) on the web. BugzID=70

Jim M.
1. Interface with QSAS with latest L2 cdf's.
2. MOM L2 CDF put Coord Systems into metadata
2. FIT/MOM (Onboard) in separate L2 cdf's GMOM's put into ESA files. (for Vassilis)
2. Default for Load FIT and MOM to be L1 (for Davin)
2. High-pass filter function.(for Vassilis)
2. GMAG cdf's -Resilution dropped to 1 sec from 1/2 sec.
3. Sort out with Tim Interface Issues with production
3. tsmooth2 needs to accept a time keyword (say, seconds) rather than # of points. (for Vassilis, Davin)
3. Review Patches for CDF's to increase speed
4. GUI Mods
      a. thm_ui_config bug found by Davin
      b. No dialogue box appears for save ascii, no file location in msg box
      c. See email with history file ...231920 abort.
      d. Upper flatfile button (for Vassilis, work with Kate / UCLA Splash)

5. GUI Mods
    a. current plot window - tell you which one (for UCLA)
    b. Save Ascii - fix precision, add header (with Pat for UCLA)
    c Label S/C Position button (GSE or GSN - default) (for UCLA)
    d. De-Gap widget add units
    e. DP - Delete or Overview Plot or Clear History - warning message
    f. Long Variable Names truncated in IDL-D
    g. Lower flatfile button (for Vassilis / Chris Russell)

Pat
1. Tsyganenko model in IDL.
   a. Write IDL wrapper routines to integrate IDL-Geopack into Themis Science Software BugzID=57.
      T96, T01, T04.
2. Five probe overview for FGM, ESA and SST (Tohban scripts) on the web. BugzID=70 .
   Vassilis to review FGM plots. Work can begin on ESA and SST.
   ESA final completion awaing fix from Davin. ESA plots can be generated and sent to Vasssilis.
2. Mirror-image of the summary plots data to say "Key". BugzID=89
2. Code to add magnitude of a vector into a vector structure.
3. gmag overview plots require reprocessing. BugzID=86
3. boundary normal coordinates. On Hold. BugzID=59.
4. Tplot auto scaling. BugzID=41.
4. invalid inputs to the version keyword

Bryan
1. Using thm_load_efi as a guide incorporate thm_load_xxx functionality into thm_load_state
1. Modify thm_load_state to load highest version file, no suffix BugzId=51.
1. thm_load_state - phase I
   a. hardcode (units = "km/s" or "km", or "deg")
   b. finish "no_update" loading option (consult with Davin)
   c. Finishing the coordinate transformation of the thm_load_state data at input, to include transformation
      of spinaxis attitude, need to determine keyword switch, implement the rotation of the spinaxis
      elevation/azimuth from gei to arbitrary coordinates (consult with Pat, Vassilis and Ken)
2. thm_load_state - phase II (consult with Ken)
   a. For STATE CDF files, the following variable attributes should be defined, consistent with they way they
      are defined in the L2 FGM file: units, coordinate_system (consult with Jim L.)
   b. Once defined in the CDF, thm_load_state should take the values from the dlimits.cdf.vatt to set the
      metadata for the tplot variables: dlimits.data_att.units, dlimits.data_att.coord_sys
   c. For thm_load_state, the suffix gets added to support data, but support data is not transformed: if you call
      thm_load_state, coord='gse', suffix='_gse', /get_support_data only the pos and vel get transformed, but
      all get the _gse suffix.
   d. in thm_load_state, the code to delete support data that was loaded for coordinate transformation should
      be just del_data, '*_state_temp'
3. upgrade thm_load to work with probe assignments
4. make a b/w colormap for a single tplot panel.
5. move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2
5. Shadow Indicator (for Vassilis - using functionality in ...load_state2 and tplot roi)
6. Multiple enhancements concerning keywords, valid_names and thm_load routines

David
1. button for postscripts (for Stephen Mende)
2. Add new coord transf options GSM2SM and SM2GSM into GUI

Davin
1. Create Angular spectrograms
2. Z-Buffer plotting bug. BugzID=85.

Jim McFadden
1. Function get_tha_peir issue (for Kate - UCLA)
2. Various clean-up issues in thm_load_esa_pkt. BugzID=88 (Pat reported)

UCLA
1. Clean-up the power ripples from the FGM data. (Krishan)

Software Tasks (UnPrioritized / To Be Discussed (TBD))
1. TBD - Software Repository Open to the Public
2. TBD - Mini Language to operate on tplot variables
3. **TBD - Fix for Ferdinand's issue as an incremental**
4. PRI- Provide Higher Cadence State Files (Jim Lewis)
5. PRI - SVD-FIT instead of POLY-FIT - from Vlademir
6. TBD - makepng and makegif