Software Task Priorities (In Play / In the Queue) - 11/12/07

Jim L.
1. Compress and Decompress routines for MOMs. BugzID=81
1. Compress and Decompress routines for Fields. BugzID=81
1. Help out with Compression Flatsat Testing
2a. Setup Themis Mac with IDL and TDAS to prep for 12/9 presentation.
2b. Interface with Pat to do IDL Geopack Testing on the Mac
2. L1 File definitions Document. BugzID=xx.
3. Modify lzp_wrapper and process_lzp_dir scripts. BugzID=49.
3. Clean-up current VC->L0 processing scripts temporary files. BugzID=50.
3. L0 to L1 processing: look ahead to the next packet before processing the current packet. BugzID=67
4. When FGM range changes in the middle of a packet. Post Proc maybe a solution to eliminate the spike. BugzID=44.
5. Unexpected transfer frames time matched packet time yet in the past. BugzID=38.
6. Provide Higher Cadence State Files
   Spinper and spin phase - double precision. BugzID=91
6. Non Monotonic timestamps. BugzID=72

Tim
1. Reprocess overview plots before 10/16.
1. Update for QSAS blurb on the Themis Related web sites web page.
1. Investigate retrieval of additional datasets from the Canadian (CARISMA) and
   Alaskan (GI) ground mag networks. Awaiting response. Vassilis will give David phone #.
2. Five probe overview for ESA and SST (Tohban scripts) on the web. BugzID=70
   Awaiting Jim M. to complete his part.
2. Mirror-image of the summary plots data to say "Key". BugzID=89
   Add "Key" box to the right of the "Display" Box.
2. Add link from Data drop down menu to Data Variable Description document.
   Waiting for David to provide document and link.

Jim M.
1. L2 ESA - SPDF and QSAS
        a. VALIDMAX
        b. problem is that there are 4 variables, in the two files that don't have the same dimension sizes:
           tha_peib_en_eflux: in tha_l2_esa_20070313_v01.cdf dim=1:[31], but in
           tha_l2_esa_20070314_v01.cdf dim=1:[32] tha_peib_en_eflux_yaxis: same
           as above tha_peeb_en_eflux: same as above, tha_peeb_en_eflux_yaxis: same as above
        c. thm_load_esa - Jiang's issue
        d. t_parallel and t_perp's mixed up in the ESA L2 files. (Vassilis and Jim McFadden)
1. Overview Plot changes
        a. use min value if zeros or lower than min value
        b. log for scale on FBK
        c. ylimits - float of SST/ESA energy spectra plots
        d. generic solution (keyword to optimize) ???
1. FIT/MOM (Onboard) in separate L2 cdf's
1. MOM L2 CDF put Coord Systems into metadata
1.GMAG Stack Plots - In progress few more Spikes, limits changed, reprocess.
1. ESA and SST Tohban plot prep for Tim

Jim M. (Continued)

2. Additional Ground Mag data from Alaska and Canada Network - processed into slightly different files
2. SVD-FIT instead of POLY-FIT - from Vladimir
2. Default for Load FIT and MOM to be L1 (for Davin)
2. High-pass filter function.(for Vassilis)
2. gmag overview plots require reprocessing. gmagstackplot mod. Despike. BugzID=86
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. Transfer files to new computer
1. IDL Geopack Testing. T96, T01 and T04. BugzID=87
   Retesting wrappers for v6.6 from Haje.
1. bug:plotting colors/options for stored data coming from multiple tplot vars
1. Ground Trac and tplotxy routines and to finalize crib sheet
   cribsheet plots footprints and equitotial trac for 3/23 on probe 'C'.
2. VMO Deliverables: data product description files
    Step 1 - fgm L2 cdf for one probe, Step 2 - fgm L2 cdf for all probes
2. "th?_fgs_sigma" and "th?_efs_sigma" to the FIT CDFs (L1) and this should make it to the
    L2 CDFs as well,
2. Mini language to operate on tplot variables - first provide concept writup
3. boundary normal coordinates. On Hold. BugzID=59.
4. Christine's code to rotate the XY coord's along Earth direction was very effective. Also it was used by
   others. We need to streamline it, and its very similar to the others you've already written.
4. Tplot auto scaling. BugzID=41.
4. invalid inputs to the version keyword
4. Clean-up of makepng and makegif

Bryan

1a. Create energy spectra using thm_part_moments
1b. Create angular spectra using thm_part_moments
1c. Create plotting routine for angular spectrograms
    --target fo 1a - 1c is 11/16
2. Modify thm_load_state to load highest version file, no suffix BugzId=51.
3. 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)

Bryan (Continued)
4. 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'
5. upgrade thm_load to work with probe assignments
5. make a b/w colormap for a single tplot panel.
6. move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2
6. Shadow Indicator (for Vassilis - using functionality in ...load_state2 and tplot roi)
7. Multiple enhancements concerning keywords, valid_names and thm_load routines

Ken
1. Themis SCM CAL File Processing - produce table of contents and assign sections with Patrick R.
2. Themis System Administrators Guide
3. Themis Developers Guide

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

Harald
1. Validate Tsygenko work from Pat

Vladimir
1. Zero order step to create pre-processed solar wind data
2. Shue MP routine

Thomas Moreau
1. thm_load_esa from L0 to L1

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

Software Tasks To Be Discussed (TBD) / To Be Assigned (TBA)
1. TBA - Tweaks for _dot0 and _0 for subspin resolution (for John - tbd)
2. TBA - Implementation of the removal of the spin-independent and -dependent offsets (for John)
3. TBD - print, dprint, msg continue, verbose options for a standard
4. TBD - Mini Language to operate on tplot variables
5. TBD - Aministrator's Guide complete by mid December
6. Hold - Themis E-Field Data (Forrest, John)

Monthly List of Updates
1.
2.
3.
4.