

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
To be Assigned or Discussed								
4714	!themis.verbose setting not propagated to tplot_options,'verbose' setting	7/31/2012	Jim L			Davin recently (Feb 2012) changed some dprint levels in store_data.pro. Some expected diagnostic output is missing, even though !themis.verbose is set high enough. However, the behavior is a little unexpected: the diagnostics appear within thm_load_state, for example, but not when calling store_data from the command line. Perhaps !themis.verbose needs to be pushed down to tplot_options,'verbose' in thm_init or thm_config.		
4717	A limitation for tplot came up for the EMIC plots. If you want to use the var_label feature(for example, to plot spacecraft position below spacecraft data) you can only put the var labels at the very bottom of the plot. In the case of EMIC, what we actually want to do is a layout that looks like this (from top to bottom) Plot1PrbA Plot2PrbA VarLabelPrbA Plot1PrbB Plot2PrbB VarLabelPrbB Plot1PrbC Plot2PrbC VarLabelPrbCetc...	8/2/2012	Pat			You can't actually do this in tplot right now. To work around this limitation for the EMIC plots, I'm going to do some tricks making separate plots in the z-buffer and concatenating them then reposting them to the z-buffer. This will work for the overviews, but it is an ugly kluge. We should consider a task that adds this feature to tplot.(The task would be to add the feature to tplot and to add examples to the tplot cribs showing how to use the features)		
4718	ESA energy table updates – L0->L1 processing mods (tmttools)	8/2/2012	Jim L		Jim L	Modified tables will need a new ESA config word – tmttools L0->L1 code needs to be updated to recognize it as a valid ESA mode.		
4719	ESA energy table updates – TDAS mods (ESA packet processing, calibration, summary plots, etc)	8/2/2012	Jim L			Support new ESA config word in TDAS code		
4720	Add USGS GMAG sites (BOU,CMO, DED, FRD, FRN, GUA, HON, NEW, SJG, SHU, SIT, BSL, TUC)	8/3/2012	Cindy		Cindy	In progress – Duff Stewart to provide data back to 2007		
4721	Add AUTUMN GMAG sites (EHB, VLDR)	8/3/2012	Cindy		Cindy	In progress – working with Ian Schofield and Martin Connors to get data back to 2007		
4722								
4723								
4724								
4725								
v7.0 QA Tasks for Review with Vassilis								
General								
Hannes								
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	Exclude List up to date as of 6/25/2012		
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes	7/02/2012: THA spin axis offset done 7/6/2012, thd and the in progress.		
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes	Updated for inner probes, 2012-07-18		
4472	Inter-spacecraft FGM calibration for ARTEMIS.	1/4/2012	Vassilis	1	Hannes	6/4/12 from Hannes: Artemis inter spacecraft differences		

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2074c	quality flag for FGM data. Dependencies on Ben's tasks 3093 and JWL's tasks 4142 and 2266.		Vassilis	2	Hannes	quality flags for FGM data: Hannes talked to Ferdinand and suggests some flags in the state CDF: times when eclipse spin model adjustments were performed; times when spin fit & FGL data used to refine the eclipse spin model; times when V03 attitude corrections are available; times when spin fit timing had problems. Some of these flags already present in state CDF spin model variables. JWL will document in L1 file definition document. Final item not so easy, since we have trouble even detecting the timing problem in spin fits. Keep task open, Vassilis says we can come back to it when we have clarity on the spin fit timing.		
Aaron								
4468	Ongoing - Review all commits by Davin, Peter, etc for impact to TDAS.	3/27/2012	David	0	Aaron	Provide weekly report and spreadsheet		
4704	I'm getting a collision in the y-title and the y-labels using default settings. It may indicate some sort of problem.	7/17/2012	Pat	1	Aaron	Attached is an image of the problem, only seems to be occurring on the spectral plot. (see how 31 kev is sitting on top of thc_psif_en_efflux) (also, why the default label is 31 kev is another issue, but less important, imo) I generated these plots by running the attached code, then opening the gui and using the manage data->import option to import thc_psif_en_efflux, and thc_psif_density. Clicked through the confirm import menus, then plotted using layout options on default settings. 8/3/2012: Still in progress, not sure yet what's causing the text to be positioned that way.		
4708	2-D slices enhancements	7/23/2012	Aaron	1	Aaron	1. Modify slices plotting procedure to take single structure that will include data and axis arrays; 2. Fix/re-apply feature to draw instrument's energy limits on slices plots		
4463	file_http_copy support for proxy servers	12/12/2011	IUGONET	1	Aaron	Verified correct headers when going through local proxy. Email sent to IUGONET team to test under their configuration, waiting to hear back from them.	1-3 hrs	
4646	bug reports getspec GUI suite							
4646a	When I try to plot a spectral quantity as a line plot, it uses the y-axis limit as the default, it should actually use the z-axis limit as the default. (Because a line plot for a spectral quantity actually ends up being an X v. Z plot not an X v. Y plot) This is a side-effect of our more thorough implementation of range defaults. Not a huge issue and easy to fix.	5/31/2012	Pat	1	Aaron	7/27/2012: Turned out to be a little more tricky than we thought, fix being tested.		
4685	Widget tree expansion, IDL 8.2	6/26/2012	Pat	2	Aaron	IDL fixed a bug which we had worked around, need a version check to enable/disable the workaround so it will work on all IDL versions.		
Cindy								
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Cindy	Next October 2012		
4706	Missing data from McGrath and Kiana magnetometer sites	7/18/2012	Cindy	0	Cindy	Sites are reported as working, but no recent files at the other end, so nothing for wget to pick up. Contacted Harald Frey and Ian Schofield 7/18/2012. Diagnosis in progress. 8/3/2012: May have to wait until school is back in session before we can get a clear status, back burner until then?		

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4481	New data product, AE index from THEMIS+std sites	1/9/2012	Vassilis	1	Cindy	awaiting Russian data 7/2/2012: Still need data from 2007-2010. 7/27/2012: Getting current data again, still waiting for older data.		
4699	I've had questions from some scientists about the status of some of the gbo sites. In particular Fort Yates and Beetles. I know that Fort Yates is done for (drowned in a flood or some other natural disaster). It might be helpful to add a color scheme that is not red but maybe grey for those sites we know will not be up again. Maybe even a note saying site is down for good.	7/10/2012	Cindy	1+	Cindy	Database table for "defunct" sites, with brief explanation why, and check this in the PHP code for the status pages? Or (static) web page linked somewhere with status of each site? Tim Quinn had a page based on Google Maps, bring up to date (1 map per year showing GMAG sites). Also, use a different color for defunct sites on the PHP status pages (instead of "red" for stale data). 8/3/2012: Status inventory in progress, will make GMAG map page similar to ASI map page.		
4409I	Leirvorgur (LRV) (Iceland)	10/19/2011	Vassilis	2+	Cindy	7/13/2012: Zip file received, unpacking and verification of data in progress. 8/3/2012: ASCII files unpacked, but lrv_ascii2all script seems to be silently failing, diagnosis in progress.		
Jim L								
4612	GOES 2008 Data	4/20/2012	Andrei Runov	0	Jim L	7/26/2012: Some telemetry was lost in the process of an internal reorganization, Howard is looking into whether any additional magnetometer data can be recovered.		
4715	Remove /true_dsl keyword from thm_load_fit, thm_load_mom, etc	7/27/2012	Jim L	1	Jim L	same meaning as use_eclipse_corrections=2		
4716	Add examples of eclipse spin model corrections to crib sheets (fgm, efi, scm, fit, mom)	7/27/2012	Vassilis	1	Jim L	After 4715.		
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	1	Jim L	Once prod reprocessing complete send announcement.		
4709	Manual eclipse processing resets "last processed" date for automated processing	7/24/2012	Jim L	0	Jim L	If the automated processing is up to date, and I manually reprocess a time range early in the mission, the "last processed" date will get reset to the earlier date, which could trigger an unintended reprocessing of the full mission. "last processed" date should only be updated if it moves forward in time.		
4710	Automated eclipse processing not running correctly out of crontab	7/24/2012	Jim L	0	Jim L	Seems to die immediately without doing anything, works OK from command line. After 4709 is fixed.		
4656	THEMIS Orbits - Discuss with Dan Cosgrove on July 9th. From time to time, the first orbit determination after a maneuver is very "raw" due to the shortness of the arc, causing large discontinuities in definitive position ephemeris when the arc is propagated back to the maneuver burnout time.	6/4/2012	Vassilis	n/a	Jim L	Dan C. and Jeff M. suggest that after each maneuver or series of maneuvers, the MOC can curate the orbit determination data so that the back propagation is done from a higher quality orbit solution (e.g. 7 days rather than a few hours). There will still be discontinuities but they should be much smaller. MOC will provide improved definitive ephemeris files to JWLL (est. late August 2012). We will reprocess a few days of L1 STATE for each incident. We will also provide Hannes a list of reprocessed initial simple way, final fix is to fix esa and sst 3D data structures. Probably a good idea to make a THEMIS-specific moment calculation routine, to avoid extensive changes to WIND code currently being used. Jim McFadden (as of 3/26/12) said he would review what Jim L sends him. Waiting on Ben to finish 3093 so I can start testing.		
4034a2	thm_parts_moments update (spin moments mods)	11/22/2010	Vassilis	0	Jim L			

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4509	Some array accesses still use () instead of [].	2/6/2012	A. Breneman	1	Jim L	For example the ESA packet loading routines, thm_load_peif, thm_load_peek. Work to be done when 4034a2 work continues		
Jim M								
4152b	change the ESA tables such that the minimum magnetospheric electron energy becomes lower (about 3eV, or lower). McFadden can specify the lower energy	10/20/2011	Vassilis	0	Jim M	only ARTEMIS probes - Need to talk to Jim McFadden. Also need MOC Support. 7/20/2012: Table generation script finished and checked in. Ready to test table updates on FLATSAT (in between maneuver sims). After that, modify mode change scripts & test on FLATSAT, then proceed to testing on ARTEMIS probes. 7/27/2012: Final preparations for FLATSAT testing in progress (ESA table addresses to dump/modify, modify mode change scripts with new CDI commands. 8/3/2012: Waiting for FLATSAT EEPROM dump from ops team		
4688	Ensure that remote_data_dir URLs end in trailing slash	6/27/2012		1	Jim M	Davin objected to mods to file_retrieve, so mods need to happen in thm_load_xxx and other routines that call file_retrieve.		
4639	Also, there are a bunch of other calibration files that are used FGM and other instruments. The installation of these files is not detailed in the admin guide yet. I created a new section, with only one entry for this particular cal file type. If we want to be thorough, we should probably do the others.	5/30/2012	Pat	1	Jim M	7/20/2012: Cal file installation scripts being updated, will document in admin guide when ready. 8/3/2012: spin_cal files checked into SVN, writing up blurb for the admin guide		
Pat								
	Updated FGM calibrations for solar array currents, ADC nonlinearity available?	5/30/2012	Vassilis	0	Pat	Last Recieved - May 2012. May need to remind FGM team if we go a long time without updates.		
4712	Add a keyword to the SST code which would extrapolate SST data down to the ESA	7/24/2012	Vassilis	0	Pat	Some diode degradation on the SST instrument is increasing the gap between the SST and the ESA. The task is to add a keyword to the SST code which would extrapolate SST data down to the ESA. It would use ESA intercalibration factors that are going to be generated by Drew(or a student), but it would not actually interpolate to the ESA data. If the keyword is set, a linear regression(log energy v log counts) of sst data would be performed for each look direction of the SST. Additional points would be generated using the regression to extend the SST down to the ESA; maintaining the dE/E of the SST instrument. Due late August 2012		
4713	Since the diode degradation will be modeled as shifting the minimum energy of the SST up, we'll need to interpolate the SST efficiency parameters to the new energy bins.	7/24/2012	Vassilis	0	Pat	After 4712. This may not actually be done by someone on the software team, but I thought I'd report it anyway, so that it doesn't get lost in the shuffle once the other calibrations are completed.		
4707	Unintended make_asi_orbits reprocessing triggered by reprocessed state CDFs	7/23/2012	Pat	0	Pat	Process last two week's worth, otherwise ignore updates to state CDFs.		

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4703	New FGM overview plots (EMIC spectrograms)	7/12/2012	Vassilis			A copy of the IDL code, along with the IDL save sets we used as data and a full day's set of plots from January 1, 2012, can be found at ftp://yspace.augsburg.edu/themis/. You will see that the IDL batch file is set up to produce one daily spectrogram and four 6-hour spectrograms for each axis, in two frequency ranges (0-1 and 0-2 Hz). It didn't take Jennifer very long to produce all of these plots for the past 1 - 1/2 years of Themis data. Having so many different plots may be overkill -- one can often identify events using only the 0-2 Hz, 24-hour plot showing only X axis (transverse to B) data... but you can decide how many of these might be optimal for you to produce. If you or your colleagues have any questions, please get back to Jennifer (posch@augsburg.edu) or me.		
4703a	Integrate Augsburg code with TDAS (Ferdinand can help), generate EMIC spectrograms from TDAS GUI.	7/23/2012	Vassilis	1	Pat	Also from FGE data? Plots should have perigee annotations if possible.		
4705	The changes that I made to allow more flexible tick aesthetic tick placement don't seem to be working so well on the z-axis.(see image from previous email,steps of 0.9 orders of magnitude don't make sense)	7/12/2012	Pat	1	Pat	If this were the y-axis, you could just change the recommended number of ticks to a number of ticks where the aesthetic selection algorithm selects an even order of magnitude. But that option is unavailable on the z-axis. Allow the user to input a recommended number of ticks even when the "aesthetic" option is selected.		
4697	Create a set of Benchmark Tests against IDL future versions (now for v8.2 beta). Run these tests and produce a report. In addition present this report to Exelis in a web conference with a demo of TDAS. Benchmark Tests should include tests for PC, Mac (leopard and lion) and Linux O/S.	3/21/2012	David	1	Pat	Presented to Exelis 7/25/2012. Waiting to hear from Exelis about which email address to use to submit test instructions so they can attempt to reproduce the issues we found.		