

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								
4796	Crash in GUI load panels for GOES, WIND, but THEMIS data OK. Issue with thm_ui_call_sequence interface?	11/15/2012	Jim L			Last IDL Error: % THM_UI_CALL_SEQUENCE::ADDLOADWIND: Incorrect number of arguments. % Execution halted at: THM_UI_LOAD_WIND_DATA_EVENT 172 /home/jwl/tdas_trunk/themis/thm_ui_new/panels/thm_ui_load_data_file/thm_ui_load_wind_data.pro THEMIS>		
4797	plotxyz error	11/16/2012	Pat			I just noticed a bug in plotxyz, it is not skipping the reserved colors at the beginning of the themis color table. Since it reuses the specplot draw_color_scale routine, I'm guessing a change in that routine had an unanticipated effect on plotxyz.		
4798	Add links to FBK and FFT configuration history reports to THEMIS web site	11/16/2012			Emmanuel			
4799	Possible issue with onboard moments, or transform to GSM coords					Vz and Vx magnitudes close when in solar wind, sinusoidal behavior		
4800								
	General							
	Tips of the Month		David		Jim L	Next Candidates: Lynn Wilson Routines; Eclipse auto processing; FGM Reprocessing, CDF library 3.4.1 released (fixes memory issue for Linux users), Simplified eclipse spin model corrections, new SST calibrations, specplot datagap		
4792	2013 MAP for Senior Review	11/1/2012			Jim L			
	Hannes							
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	Exclude List up to date as of 9/20/2012		
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes	10/03/2012: Cal files updates, all probes from August 2012 on.		
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes	10-22-2012 Updated for 2012-04-01 – 2012-06-30		
4472	Inter-spacecraft FGM calibration for ARTEMIS.	1/4/2012	Vassilis	1	Hannes	6/4/12 from Hannes: Artemis inter spacecraft differences show good results with current calibration		
	Aaron							
4468	Modify ESA packet loading code to use standard spinmodel routines rather than deprecated ASCII files.		Jim L	1	Aaron	After TDAS 7.0.	1 day	
4468a	Routine to dump common block data to tplot variables (for regression testing)			1	Aaron			
4468b	Replace ESA time tagging code with std spinmodel routines			1	Aaron	Reduced mode first (always 1 spin/sample), then other modes, using tmtools L0->L1 processing as reference implementation. Testing full and reduced modes, timestamp differences very minor and expected (on the order of 100 usec or less).		

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4135a	Write some TDAS routines that take an apid and a configuration word, and return a structure with all the relevant properties of that configuration. This is basically reimplementing some logic that's already in the L0->L1 processing code (written in C). If anyone ever needs other attributes of the instrument configuration (for example: the angle maps corresponding to each configuration), we would update these routines to return the additional information.	9/10/2010	Jim L	1	Aaron	Code written, testing in progress		
4468c	Verify ESA data correctly time-tagged			1	Aaron			
4468d	Add spinmodel loading code to thm_load_sst			1	Aaron	10/26/2012 In progress		
4468e	Add eclipse delta-phi correction to ESA and SST common blocks			1	Aaron	10/26/2012: ESA done, SST in progress		
4034a2	thm_parts_moments update (spin moments mods)	11/22/2010	Vassilis	1	Aaron	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. After 4468.		
4509	Some array accesses still use () instead of [].	2/6/2012	A. Breneman	1	Aaron	ESA packet loading code fixed, probably some other occurrences to be updated.		
4795	thm_part_dist_array memory allocation optimization	11/13/2012	Pat	1	Aaron	Scan common blocks and preallocate all needed memory rather than doing incremental allocation/copies.		
4777	thm_part_dist_array modification	10/2/2012	Aaron	1	Aaron	The task would be to vectorize thm_part_dist_array by having it directly access the common blocks where particle data are stored instead of looping over thm_part_dist. This would mean writing some vectorized sub-fuctions that recreate the operations done in datatype-specific routines called by thm_part_dist. Also, for this to work and be most effective all background/contamination removal and other similar routines would need to work on arrays of data structures. After 4795.		
4719	ESA energy table updates – TDAS mods (ESA packet processing, calibration, summary plots, etc)	8/2/2012	Jim L	1	Aaron	Support new ESA config word in TDAS code. After 4718 (Jim L).		
Cindy								
4789	Process Kiana GMAG back data	10/19/2012	Cindy		Cindy	Data now flowing, Back data mirrored, not yet fully processed		
4787	gbo_asi_rt_mirror.ksh reports unzip errors, but downloaded file was OK	10/19/2012	Cindy		Cindy	Still happening...		
4760	Add MacMac magnetometer network (12 sites) to our data set.	9/17/2012	Vassilis		Cindy	Meeting w/ Peter Chi on Tuesday 11/20/2012		
4761	Add STEP polar magnetometer network (6 sites) to our data set.	9/17/2012	Vassilis		Cindy			
4783	OMNI load routine for GUI	10/15/2012	Vassilis	1	Cindy	Test case for new GUI load tab API		
4695	GUI API for other missions to add GUI tabs, load routines, etc	7/6/2012	Jim L	1	Cindy	Proposed GUI load tab registration routine has required arguments for status bar, history window, and other GUI objects. That makes them part of the API; expand writeup to include documentation for most useful methods (excluding "internal-use-only" methods) on each of these objects. 10/12/2012: In progress, writing dummy load routine to demo data tree manipulation from GUI load panel.		
3086b	MACCS download server moving to new hostname, download scripts will need an update	9/11/2012	Cindy	2	Cindy	Mirroring script activated, processing script needs some changes. Cadence changed from 1 sec to ½ sec.		
Jim L								
4764	Steps/Sawtooth pattern in FGS data near perigee	9/24/2012	Vassilis	1	Jim L	Sudden changes at packet boundaries, probably a spin fit timing issue.		

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4709	Manual eclipse processing resets "last processed" date for automated processing; some processing logs not preserved	7/24/2012	Jim L	1	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.		
4716	Add examples of eclipse spin model corrections to crib sheets (fgm, efi, scm, fit, mom)	7/27/2012	Vassilis	1	Jim L	fgm, fit, mom, updated; efi, scm, new eclipse crib in progress.		
4718	ESA energy table updates – L0->L1 processing mods (tmttools)	8/2/2012	Jim L	0	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. Waiting for Jim McFadden to help us update the mode spreadsheet with new config words and table configuration. 9/28/2012: New modes & config words may already be present in latest ETC spreadsheet.		
4142	issue with FGS processing - timestamps	9/30/2010	Vassilis	1	Jim L	not trivial		
2266	Timing of Spin Fit data	10/16/2009	Jim McFadden	1	Jim L	see 4142		
	Jim M							
4784	Add RBSP orbit data to THEMIS plots	10/16/2012	Vassilis		Jim M	10/26/2012: John B will provide link for RBSP orbit data. I received a request to plot RBSP data on the THEMIS plots. Maybe as a fourth click to show both inner probes and RB?		
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. 8/10/2012: FLATSAT energy weights don't match Jim McFadden's spreadsheet, need to discuss with him, possibly 8/10/2012. 9/10/2012: Energy weight table discrepancy resolved, flatsat and probe EEPROM tables are fine. 9/28/2012: New modes & config words may already be present in latest ETC spreadsheet		
2224	thm_load_mom: for quantities like velocity, the coordinate system isn't stored in the meta data, and none of the units are stored in the place we normally try to store them (from Pat - Vassilis concurs) Will take a look.		Vassilis	2	Jim M			
	Nick							
4286	Create and maintain a list of FBK and FFT (and possibly other?) configuration parameters versus time, to be used by other researchers to located time intervals containing data that was acquired in a particular configuration. Examples (totally made up): THEMIS A Filter Bank Source Selections: 2007-02-23 - 2008-01-01 e12dc, scm3; 2008-01-01 - 2008-05-01 scm2, e34ac; THEMIS A FFT configuration: 2007-02-23 - 2008-01-01 16 frequency bins, e12dc, e56dc, scm1, scm3; 2008-01-01 - 2008-05-01 32 frequency bins, e12dc, e56dc, scm1, scm3	7/15/2011	SPDF - Jim L	1	Nick	10/26/2012: FBK in progress (bash script and C program), FFT next.		
960	Add a change all pages option in the Page Options panel		Aaron	1	Nick	Still needed (see 810).	2 days	
1063	Axis Options: #1 When I turn off show-line and turn on mirror, the mirror doesn't show. This is not important, because it is not incorrect that it doesn't show, but we could maybe gray out the mirror check box + others when the show flag is not checked.		Pat	1	Nick	Still an issue.	1 day	
1133	When I am removing panels in the layout panel, it always resets the selection to the bottom panel in the list after I remove a panel. This can be annoying if there are several panels because I have to keep scrolling up and clicking.		Pat	1	Nick	Still an issue.	1/2 day	

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1139	We should turn on the hourglass and/or include a progress indicator when we generate angular spectra.		Pat	EL		Still an issue.	get spec overhaul - 2 hr	
1177	The above Axis Annotation tab buttons should probably get changed from "first/last" to "range min/max". They used to apply to tick positions, but now are really just the plot box (range) min/max.		Michael	EL		Still open.	for discussion, 2 hrs	
1298	One item that I think we forgot about when discussing the spinner issues is that it returns strings in it's event structures but doubles when using get_value from widget_control. We should make it more consistent by returning doubles in the event structu		Aaron	BL		Still an issue.		
	Pat							
4780	Additional SST energy extrapolation tasks	10/11/2012	Drew/Vassilis	0	Pat			
4780a	Implement keyword to add energies to the existing set of energies instead of requiring the full array of energies to be specified.	10/11/2012	Drew/Vassilis	0	Pat	In progress – one-size-fits-all approach didn't work well, doing esa and sst separately.		
4780b	Either implement logic to automatically remove the ESA retrace bin or add a keyword to allow end-users to remove bins.	10/11/2012	Drew/Vassilis	0	Pat	In progress.		
4780c	Make a log-log fit the default.	10/11/2012	Drew/Vassilis	0	Pat			
4780d	Add option to perform least squares fit on specific bins.	10/11/2012	Drew/Vassilis	0	Pat			
4780e	In the crib, the extrapolation should be done on counts/sec instead of en efflux.	10/11/2012	Drew/Vassilis	0	Pat			
4780f	Add a "see also" section to the cribs.	10/11/2012	Drew/Vassilis	0	Pat			
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	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.		
4773	Redo SST calibrations with new scheme: match intervals during quiet periods early in the mission, to establish relative efficiencies, then later in the mission to estimate degradation.	10/1/2012	Vassilis	0	Drew			
4771	Writeup for new SST calibration	9/28/2012		0	Pat/Drew	For senior review. After 4773.		
4788	scmode data, possible issue with date boundaries?	10/19/2012	Justin Lee	1	Pat	Might need to take a look at scmode L1 CDF production.		
4785	Unicode font support?	10/17/2012	Nick	1	Pat	Probably not feasible due to IDL limitations.		
4782	Statistical error (based on counts) for SST data	10/15/2012	Christine G	1	Pat	Already exists for ESA, add equivalent feature for SST. In progress.		
4737	calc enhancements	9/3/2012	Vassilis	1	Pat	For newly created variables, ytitle should default to the variable name; scale should reset to automatic and forced to be linear. Or, maybe better if it takes the lin/log options from a variable on the right hand side, if that's feasible.		
4627b	SST: Andrei did some work that makes it look like we may need to look at the inter-anode calibrations for probes B & C.(This may be more Drew than me)	5/17/2012	Vassilis	1	Pat	Complete 4627a - d by August 1		
4627c	SST: We need to generate a combined spectrum product that includes the FTO(low) channel. This would be adding the FTO(low) channel to the F+FT combined spectrum that we've already created.	5/17/2012	Vassilis	1	Pat			
4267d	Write code to remove proton and electron contamination from the electron and proton distributions using data and efficiencies from the F & O channels.	6/27/2011	Pat	1	Pat	Working on noise removal, etc.		

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4627e	SST: After #a-d are done, we need to reprocess SST L2 with sun contamination removed and new calibrations applied.	5/17/2012	Vassilis	1	Pat	need 4267c to be completed		
4603	make new SST Cal standard	3/22/2012	Vassilis	1	Pat	Revisit in July ** on hold **		