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							
4771	Writeup for new SST calibration	9/28/2012				For senior review? Who should do this, Davin or Pat?		
4772	tplot window management bug	9/28/2012	Stefan			If I call: thm_load_state,probe='a' tplot,'tha_state_pos' ;goes to window 0(correct) window,1 ;creates new window tplot,'tha_state_pos' ;ERROR: goes to window 0, should go to window 1 I suspect that some edit to tplot is messing up the tplot default.		
4773								
4774								
4775								
4776								
	Hannes							
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	Exclude List up to date as of 8/20/2012		
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes	**9/03/2012: Cal files updates, THA from 2012-06-24, THD from 2012-06-06, THE from 2012-07-05**		
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes	**Updated for inner probes, 2012-07-18**		
4656	THEMIS Orbits - Discuss with Dan Cosgrove on **July 9th. From time to time, the first orbit determination after a manuever 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 manuever burnout time.**	6/4/2012	Vassilis	n/a	Hannes	**We will also provide Hannes a list of reprocessed ephemeris time intervals, so he can check for any changes in the fine attitude determination (since direction of B field might change when the probe positions are updated). Reprocessed time intervals handed off to Hannes 9/27/2012.**		
4472	Inter-spacecraft FGM calibration for ARTEMIS.	1/4/2012	Vassilis	1	Hannes	**6/4/12 from Hannes: Artemis inter spacecraft differences**		
	Aaron							
4762	SST vs ESA timing discrepancy in thm_part_getspec	9/24/2012	Mitsuo Oka	0	Aaron, Jim McT, Jim L	Sample times differ by ½ spin between ESA and SST. Do integration intervals differ due to look angles? (probably not, will confirm with Jim McF and Davin). ½ spin correction being applied in L1->L2 (maybe needed for L0 ESA but not L1 SST?) Aaron to check getspec and related code to identify any ½ spin corrections.		
4766	Possible slices bugs	9/24/2012	Lynn Wilson	1	Aaron	Some rotations not working? Some plots differ from his own routines? Case sensitivity bug? Aaron to follow up with Lynn Wilson		
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. 9/24/2012 Reduced mode almost ready to start testing, will compare to original code & L0->L1 code. May need to take Unix vs. THEMIS (epoch 2001) time offset into account when using std spinmodel. Jim L to send diagnostic L0->L1 output for THB, 2/26/2009 reduced electrons.		

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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			
4468c	Verify ESA data correctly time-tagged			1	Aaron			
4468d	Add spinmodel loading code to thm_load_sst			1	Aaron			
4468e	Add eclipse delta-phi correction to ESA and SST common blocks			1	Aaron			
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	**For example the ESA packet loading routines, thm_load_peif, thm_load_peeb. Work to be done when 4034a2 work continues**		
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. Aaron to ping again 9/28/2012**	1-3 hrs	
	Cindy							
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Cindy	Next October 2012		
4553	Major/minor tick length also Major/minor grid thickness/frame thickness: If you set it to 0.5 it will truncate to 0. Next time you click apply it tells you it is invalid.					For major/minor tick length I don't know if 0.5 is a valid length, for the grid and frame thickness I'm pretty sure the IDL object that the thickness is being passed to only allows values between 1 and 10. Formerly QA281.		
4554	annotation font size: if you enter 0.5 it pops up a warning saying the value should be greater than zero - we should change to greater than or equal to 1. On a similar note the label font size lets you enter zero without a warning even though 1 is the lowest valid value.					Formerly QA282.		
4763	bug in scpot2dens.pro	9/24/2012	Lynn Wilson	1	Cindy	Routine: thm_scpot2dens.pro Line : 64 Error : % Type conversion error: Unable to convert given STRING to Long. % Detected at: THM_SCPOT2DENS 65 /Users/lbwilson/Desktop/Old_or_External_IDL/TDAS/tdas_7_00/idl/themis/common/thm_scpot2dens.pro [...] In any case, I assume the fix is just to do the following: if (is_num(probe_in) eq 0) then probe = thm_probe_num(probe_in) else probe = thm_probe_num(thm_probe_num(probe_in)) Then one would need to convert PROBE back to a string prior the case statement on Line 87.		

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4767	cron job for GMAG site availability by date produces unwieldy results; hard to use and job takes a long time to run.	9/24/2012	Cindy		Cindy	When web site updated with color-coded site availability maps, the file list will no longer be needed and the cron job can be eliminated.		
4706	Missing data from McGrath and Kiana magnetometer sites	7/18/2012	Cindy	1	Cindy	Sites are reported as working, but no recent files at the other end, so nothing for wget to pick up. 9/24/2012: Issues still not resolved; telecon with EPO folks after Oct 1 to figure out how to proceed		
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.		
4738	More concise error reporting for GMAG download/processing	9/5/2012	Cindy	1	Cindy	Current scripts generate large volumes of notifications for missing data. Is there a way to maintain a per-site or per-network "green, yellow, red" status, then report status changes only rather than reporting each missing file? 9/24/2012: Eliminated warnings for rsync error code 0 (success), removing defunct EPO sites should help, too.		
4750	Temp files for GMAG processing in data product area, causing problems for mirror site rsync jobs	9/10/2012	Jim L	1	Cindy	Should use /mydisks/home/thmsoc (directly attached storage on each processing server) rather than /disks/themisdata for temp files and working directories. Cindy: Safe to change setting in soc_it_to_me.config? Do different scripts use the temp dir to communicate? Probably not...go for it, but monitor data products next few days to see if anything breaks.		
4721b	Add NRCAN GMAG sites (EHB, actually chain of 5 GMAGs)	8/3/2012	Cindy	1	Cindy	In progress – working with Ian Schofield and Martin Connors to get data back to 2007. 8/24/2012: Vassilis is working with them to see if the data can be made available en masse rather than requesting individual plots.		
4760	Add McMac magnetometer network (12 sites) to our data set.	9/17/2012	Vassilis		Cindy			
4761	Add STEP polar magnetometer network (6 sites) to our data set.	9/17/2012	Vassilis		Cindy			
4695	GUI API for other missions to add GUI tabs, load routines, etc	7/6/2012	Jim L	2	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.		
3086b	MACCS download server moving to new hostname, download scripts will need an update	9/11/2012	Cindy	2	Cindy	New server should be up and running week of Sept 26 2012		
4758	MACCS download script: ever since site name changed, extra components added to directory paths (also an issue with LRV)				Cnidy	Maybe related to wget options? In progress. After 3086b.		
778b	Need capability to read in ASCII. IDL has a built in widget to specify ASCII formats.	11/21/2011	Oldie	2	Cindy	Write up "howto" document for using IDL built-in ASCII file reading capability.		
	Jim L							
4762	SST vs ESA timing discrepancy in thm_part_getspec	9/24/2012	Mitsuo Oka	0	Aaron, Jim McT, Jim L	Sample times differ by ½ spin between ESA and SST. Do integration intervals differ due to look angles? (probably not, will confirm with Jim McF and Davin). ½ spin correction being applied in L1->L2 (maybe needed for L0 ESA but not L1 SST?) Jim L to check ETC spec and verify that sample integration time is always sunpulse-to-sunpulse for both ESA and SST		
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.		

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4656	THEMIS Orbits - Discuss with Dan Cosgrove on **July 9th. From time to time, the first orbit determination after a manuever 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 manuever 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 JWL (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 ephemeris time intervals, so he can check for any changes in the fine attitude determination (since direction of B field might change when the probe positions are updated). The curation process will be folded into the definitive ephemeris processing so that no manual intervention will be needed on the SOC side going forward.**		
4718	ESA energy table updates – L0->L1 processing mods (tmtools)	8/2/2012	Jim L	0	Jim L	Modified tables will need a new ESA config word – tmtools 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. 2/28/2012: New modes & config words may already be present in latest ETC spreadsheet.		
	Jim M							
4770	Install updated FGM cal files and reprocess L1->L2	9/27/2012	Hannes		Jim McT			
4762	SST vs ESA timing discrepancy in thm_part_getspec	9/24/2012	Mitsuo Oka	0	Aaron, Jim McT, Jim L	Sample times differ by ½ spin between ESA and SST. Do integration intervals differ due to look angles? (probably not, will confirm with Jim McF and Davin). ½ spin correction being applied in L1->L2 (maybe needed for L0 ESA but not L1 SST?) Jim McT to check L1->L2, ESA L0->L2 processing code to find any ½ spin corrections		
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.**		
4731	thm_make_ae: add FCC station (when not on exclude list)	8/20/2012	Vassilis	1	Jim M	Data now available, need to modify thm_make_ae script. Add FCC, CMO, NAQ, and LRV. Later, other Russian stations. Reprocess and add 4 new stations to stackplots.		
	Nick							
810	Replace the Set All Panel checkbox, with an 'Apply All' button at the bottom of the window. More intuitive. Need to check all panels for consistency		Oldie	1	Nick	Old bug report, still an issue?		4 hrs
933	Web forms allow users to go to the next text input box with a tab. Can we do that on our widgets? E.g., the GUI_TPLOT Verify Data would work well that way.		Michael	1	Nick	Old bug report, still an issue?		
943	Getspec window is slightly larger than my 1024x768 screen. Minor issue, probably a Phase 2 task. The vertical size of the Loaded Data pane in the Data Processing window is not consistent across platforms. On my linux box, it's only about half the height		Bryan	1	Nick	Old bug report, still an issue?		1 day

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959	When removing a middle panel with locked axes on and you have more than 2 panels, the space the removed panel occupied is drawn blank, rather than moving the panels below it up.		Cindy	1	Nick	Old bug report, still an issue?	2 days	
960	Add a change all pages option in the Page Options panel		Aaron	1	Nick	Old bug report, still an issue?	2 days	
998	Nudge Traces: If a trace is nudged enough then the title will exceed the size of the combobox. When this happens a scroll bar is automatically added to the bottom of the combobox making it difficult to see the traces if the list is small (e.g. 3 or less		Aaron	1	Nick	Old bug report, still an issue?	1 day	
1057	Add version # to GUI (Help -> About…)		Bryan	1	Nick	Old bug report, still an issue?	2 hrs	
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	Old bug report, 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	Old bug report, still an issue?	1/2 day	
	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.		
4712c	Routine to edit particle calibration parameters on the fly	8/31/2012	Vassilis	0	Pat	Adopted slightly different approach, easier to just assign to parts of data structure, with supporting deep copy routine.		
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. 4733 a prerequisite.		
4724	Issues with implementation of specplot datagap keyword	8/9/2012	Pat	0	Pat	The way that the keyword is implemented is that it breaks the main spectrogram into smaller spectrograms, using any time gaps bigger than the parameter provided in the datagap keyword as the condition for splitting spectrograms. It then loops over each spectrogram and draws it separately. The problem is that the code it is looping over is basically a copied and pasted version of the single spectrogram version. Some of the parameters that are determined inside each iteration of the loop are then used outside the loop. What this means is that the parameters that get used after the loop are basically set arbitrarily depending on the loop order and on how each parameter is set. May be similar problems, but haven't examined further.		
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.		
4519	getspec (CL) rewrite for maintainability	2/21/2012	Pat, Aaron, Jim M	1	Pat/Vassilis	Code has become prone to bugs, very difficult to understand and maintain, would benefit greatly from rewriting from scratch with "lessons learned" up to this point. Level of effort? Pat and Vassilis to go over code, improve documentation, and identify areas that could be improved.		