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							
4839	SST psir bug, energy bins off by factor of 4 during slow survey	1/15/2013	Shanshan			PSIF and PSIR agree during fast survey		
4840	bug in thm_crib_tplot_annotation	1/15/2013	Pat			The example with filled symbols doesn't work, just get an empty plot.		
4841	Problem loading WIND data from SPDF	1/14/2013	Peter Schroeder			URLs are structured differently now		
4842	GUI API – Plugin access to GUI configuration settings dialog (remote, local data dirs, etc)	1/18/2013				Another item for the master plugin config file (add a new mission to the dropdown in the configuration settings dialog)		
4843								
4844								
4845								
	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	**12/06/2012: Cal files updates, all probes from mid-August 2012 on.**		
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes	**1/18/2012 Updated for 2012-07-01 – 2012-11-30**		
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	Ongoing - Review all commits by Davin, Peter, etc for impact to TDAS.	3/27/2012	David	0	Aaron	Provide weekly report and spreadsheet		
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. May be rather complicated...assess level of effort, then prioritize.		
1301	The draw object takes a long time to render spectrograms when they are very zoomed in. It should be possible to put a special case in that would make this work more quickly.		Pat	4				
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).		
4298	the slices code should probably have a keyword to use the new SST calibrations.	7/27/2011	Pat	2	Aaron	On hold till the SST calibrations have found wider use.		
	Cindy							
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Cindy	Next March 2013		
4781	GMAG station status: troubleshoot stations with no data reported				Cindy			
	Ping Sasha for status of back AE station data					Next March 2013		
4760	Add McMac magnetometer network (12 sites) to our data set.	9/17/2012	Vassilis		Cindy	ucla_rmd2all script modified, master CDFs created..database tables will need to be created with updates to the GMAG status pages.		

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2062	Alberta - At the moment the data files are from Dawson (daws), Churchill (fchu), Island Lake (isll) and Fort McMurray (mcmu). I will add Rabbit Lake and Taloyoak at some time but we have some issues with mag pointing at those 2 sites. If you recall, the agreement between Ian and Vassilis was that this data wouldn't be copied to become part of a mirrored archive like the existing data we provide. Instead, each file would be obtained from this site each time it is requested (using curl or some such). This means we can use our own logs to monitor data usage. Themis Software to be able to retrieve from Alberta		Vassilis	2	Cindy	**Waiting for CARISMA - our side coding done - run a test when data available**		
1125	Sometimes when the Annotate Last option is turned off (as it is by default) it will keep ticks relatively far away from the end of the axis from being annotated. If there are three or less ticks on an axis this may cause a large portion of it to be annotationless making it difficult to read.		Aaron	EL			4 hrs (? Done)	
4552	Right now, if the GUI automatically selects fewer ticks than the user requested it overwrites the value that the user requested. I'd recommend that we don't change the requested value even if the displayed number of ticks is less than the requested number.	3/15/2012	Pat			(See also #4508) Rewriting the ticks on each step can create a lot of odd problems with "tick mark creep". For example, if you request 5 ticks, the algorithm might only be able to fit 4 ticks nicely, and then it replaces the 5 in the panel with a 4. But if you request 4 ticks it might draw 3(because of rounding, it might just barely fail the test for 4), and then it writes 3 in the panel. Thus you get a situation where each time you hit apply you get fewer ticks than the last time. This problem exhibits in lots of other ways. So I think just not flush the draw object value back to the interface would be the safest fix. Lydia: we'll need to make it clear to the user somehow that the number of ticks in the box may not be the same as the number of the plot (I'm sure they could read it in the users' guide, but people might forget).		
1419	It is essentially impossible to get more aesthetic ticks on a log axis when ticks are spaced 1 order of magnitude apart. There is a fix that could fit more aesthetic ticks in		Pat	EL				
1420	We should add an option that allows the user to determine if minor ticks should be log-spaced or not. On plots with very large ranges, logarithmically spaced minor ticks are not helpful.		Pat	EL				
4761	Add STEP polar magnetometer network (6 sites) to our data set.	9/17/2012	Vassilis		Cindy	12/12/2012 Ian Schofield is gathering Dr. Hayashi's data for us, will get back to us after Jan 1.		
4706	Missing data from McGrath magnetometer site	7/18/2012	Cindy	2	Cindy	. McGrath: Firewall issue at their end (no incoming ports open so we can't get in), Stu Harris is working with admins on their end, but might take a while to resolve.		
	Eric							

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4837	GUI crash setting page size to 45x11 (Reliably reproducible on Win XP, IDL 7.0.6)	1/14/2013	Aaron		Eric	I managed to crash the gui by expanding my page size to 45x11 with with 10 line plots drawn. The initial error (output below) is followed by many more which make it difficult to restart the gui (it took the IDL terminate command and maybe a dozen error messages before it closed). Once close the gui can be re-opened and retained the previous settings. Last IDL Error: % IDLGRSRCDEST::DRAW: Unable to acquire device context. % Execution halted at: THM_UI_DRAW_OBJECT::CREATEINSTANCE 35 C:\THEMIS\THEMIS SVN\idl\themis\thm_ui_new\display\draw_object\thm_ui_draw_object__createinstance.pro % THM_UI_DRAW_OBJECT::UPDATE 172 C:\THEMIS\THEMIS SVN\idl\themis\thm_ui_new\display\draw_object\thm_ui_draw_object__update.pro		
4523	GUI Load Data: Console errors when selecting "None" from instrument type dropdown	2/17/2012	Jim L		Eric	Not trivial to remove the "None" selection from the instrument type combobox. "None" was basically a placeholder for the "load ASI" feature that might not be implemented for a long time, if ever. Consequently, the code for changing between instrument types is looking for hard-coded array indices into the combobox list and treating them as special cases. Dropdown error msg fixed, but code still badly needs a rewrite.		
4827	IUGONET plugin forked some TDAS routines, some updates probably now moved into TDAS, any remaining incompatibilities? SVN URL: svn+ssh://thmsvn@ambrosia.ssl.berkeley.edu/repos/thmsoc/trunk/idl/iugonet	12/20/2012	Pat		Eric	file_http_copy and file_retrieve changes already in trunk, changes to thm_ui_calendar now ported to trunk. Now year dropdown has a very long list of years back to 1880. Maybe start year should be a parameter when the widget is created, so people who only work on THEMIS data won't have to deal with scrolling past dates in the 1800's?		
803	Would be nice to have a way to move different panels from one page to another	11/22/2011	Oldie	3	Pat	sort how level of effort to accomplish. On hold, after QA		
1061	Add capability to control Legend text, font, format, size, color			3		Vassillis reviewed on 7/20/09	4 days	
1241	This is just a minor nuisance. If you delete button is hit with no entries in the GUI Data pane, the Delete GUI data confirmation dialog still pops up. Perhaps the delete and examine icons should be desensitized when there's no data loaded in the GUI.		Bryan	EL		Can't reproduce	1 day	
1501	Overview Plots: Applying any y-axis settings to the roi panel turns the data black making it somewhat hard to read.		Aaron	EL		Can't reproduce	4 hrs	
1266	Our numerical entry fields only accept exponential notation entries of the form (1.23e-3) but not the more traditional format(1.23*10^-3). We may want to leverage the code base from the mini language so that we can interpret these entries as numbers.		Pat	EL		Still happening?	3 days	
	Jim L							
4638	I think that section 3.1.2 of the admin guide is wrong. That is the old system, but I'm pretty sure that Bryce replaced this with something new. Jim L or Bryce would know.	5/30/2012	Pat	1	Ben		2-4 hrs	
4834	Add additional links to instrument configuration history pages	1/10/2013	Bob McGuire		Jim L	1) From ESA, SST, other instrument pages 2) L1/L2 master CDFs 3) Possibly from one of the "Data" dropdown menu items? Hold until Nick's task 4804 is done. Ask Bob McG to look at website and suggest other useful changes.		
4831	Admin guide updates: eclipse spin corrections, chk_bfds_archive	1/3/2013			Jim L			
4815	Developer guide updates for GUI API, placeholders for rest of SPEDAS to plugin interface	12/7/2012	Vassilis					

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
4816	Eclipse spin model processing: some eclipses not being processed with current code, but Ferdinand's code is giving results?	12/7/2012	Ferdinand		Jim L	Ferdinand has updated eclipse model parameters for inner probes		
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 (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. 9/28/2012: New modes & config words may already be present in latest ETC spreadsheet.		
	Jim M							
4836	Add IUGONET plugin code to scripts to built bleeding edge and official releases.				Jim M	Uncomment IUGONET line in config file when IUGONET starts showing up in bleeding edge.		
4799	Possible issue with onboard moments, or transform to GSM coords			1	Jim M	Problem fixed, reprocessing in progress.		
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. 1/18/2013: Ready for FLATSAT testing		
	Nick							
	Update FBK, FFT, ESA, SST configuration history HTML pages				Nick	Update monthly for now.		
4828	thm_load_fit produces NaN-filled FGS and probably EFS samples	12/20/2012	Jim L		Nick	Most likely at packet boundaries (L0->L1 processing), possibly related to spikes seen in calibrated FGS? Causes NaN-filled matrices in tvector_rotate.		
4804	ESA, SST configuration history	11/20/2012	Jim L		Nick	HTML reports now available. Next step: put time intervals in a database so we can produce different views (ascii tables, timeline, interactive views) with php scripts that pull from the same database. Ready for demo sometime week of 1/21/2013		
4819	Generic "terms of use/rules of the road" popup for SPEDAS	12/11/2012	Mini-GEM		Nick	Caller provides some sort of mission identifier & custom message; after displaying message, give user a chance to accept/decline; if accepted, remember for rest of IDL session (common block?) and don't prompt again (for that mission ID). Should work in CL or GUI environment.		
4541	tvector_rotate: some rotation matrices produced by rot_testscript are all NaNs.	3/13/2012	Jim L			2 matrices out of 27895 (indices 18783 and 23042) are all NaNs, rest OK. Possibly missing FGM data points at those sample times? No action required for QA. Formerly QA268. See task 4828, some NaN-filled samples produced by thm_load_fit.		

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4542	If you create an x-versus-y plot, instead of a time series plot in the gui, then make the x-axis logarithmic, it will autoscale to the entire range of the data, instead of just the visible data set. I'm not entirely sure if this problem is specific to log x-axis or just to any x/y plot	3/14/2012	Pat			Exact instructions for replication: load tha_state_pos in gui, default day Open Layout Select "show data components" select tha_state_pos_x for x_var select tha_state_pos_y for y_var select line-> and hit "ok" Open x-axis options select "log10" and hit "ok" zoom in on data. The x-axis will adjust, but the y-axis will not(even through the range of the displayed data is being reduced by the zoom operation)		
1178	I accidentally tried to plot wavelets as lines and got a memory error. I do not know if there is any way of intercepting this, but it would be nice if there were. Traceback Report from THM_UI_LAYOUT_OPTIONS_EVENT: Unable to allocate memory: to make array		Michael	EL		need to talk with michael		
1125	Var options - would be nice to have Panel droplist return to the Panel that was last modified. Right now it always opens with Panel 1.		Cindy	EL		Not sure where to store last modified panel information. Discuss w	1/2 day	
1576	I was thinking it would be nice if we enabled resize on the overview plot key window. That way on larger monitors, users could extend the window so that they can see the whole key at once.		Pat	4		Discuss with team.		
	Pat							
	Updated FGM calibrations for solar array currents vs. spin phase?	5/30/2012	Vassilis	0	Pat	Last Recieved - May 2012. May need to remind FGM team if we go a long time without updates. David Fischer will probably have updates after Jan 1.		
4829	New keywords for thm_part_moments, 1-count subtraction			1	Pat	Pat has some code to routinely subtract 1count/s from the moments. I am including the snippet below. I suggest that we do this routinely in thm_part_moments, using the following new keywords with defaults: zerolevel=1 for subtraction and mincounts=5.e-3.		
4832	Allow keywords in calc function calls	1/7/2013	Vassilis	1	Pat	e.g. calc,'a=total(b,/nan)'		
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.		
4723	tplot feature request: formatting callbacks	8/7/2012	Pat	1	Pat	There doesn't appear to be a way to explicitly format a var_label in tplot using a callback function, the same way that I can format an annotation using a callback in normal IDL-plot. This is a pretty big limitation on the var_labels. Right now it only		
4711	GUI cotrans error checking	7/24/2012	Pat	1	Pat	When looking at the replay/overwrite logic in the GUI, I noticed a small issue. If you try to cotrans a variable that is not a 3-vector, it still asks you if you want to load the support data that is necessary for the transformation. I'm wondering if it might be better for it to check whether the variable can be transformed at all, before it tries to load the support data needed to run the transformation.		

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4550	Major ticks by number/major ticks by interval: It might be nice to have major ticks by interval default to something logical rather than 1 n^1. If you change 'Major ticks every' then 'Major ticks by number' is updated to something that closely matches that interval, but the reverse isn't true. I'm not sure if we necessarily need 'Major ticks every' to update when 'Major ticks by number' is changed, but it might be good to have it default at the beginning to something that sort of matched.	3/15/2012	Lydia	2	Pat			
4537	Deletion of data not reflected in saved/reloaded THEMIS document. Formerly QA206. Also remember to overwrite prompt setting (yes to all, etc)	3/2/2012	Lydia		Pat	I loaded data for probes b and c and then went to plot the data and realised I should have loaded a and b for the tests. I returned to the load data panel and loaded the probe a data before deleting the probe c data. After saving as a themis document and reopening, the c data was loaded but not deleted. The data that was loaded and deleted using delete all data following the testscript does not appear when you reopen the document (as you'd expect).		
4545	Axis options: Major ticks by interval/Annotate every: For a non-time axis, switching between log/linear doesn't update the major tick every field as might be logical. ie. if you set to every 10000 n^1 on linear then switch to log it still tries 10000 10^n. Usually this means it fails to place any ticks/annotations if you switch between log/linear with either major ticks by interval or annotate every set.	3/14/2012	Lydia	1	Pat	Formerly QA271. If you have major tick every set and a mix of log and linear axes on the page and then use set all panels, you're bound to end up with no ticks on the panel with different scaling.		