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							
4200	Yuri has generated a 3 parameters for the THEMIS spacecraft L,L*,Mlat. These parameters are very useful scientifically. The task would be to archive these parameters in CDF and add a load routine in TDAS to read them. Currently, the data will be made available to us by Yuri via tab separated ascii files.	1/19/2011	Yuri Shprits	2	Ben	**part of the state cdf - do we want to do? Still a priority '2' after 1 1/2 years?**		
4632	Just had a question about pseudo-variables, Stefan was wondering about setting colors for pseudo variables. This is a features that we have not yet implemented. (You can set colors on pseudo variable components, but not at the top level).	5/21/2012	Pat	?	Aaron	4-8 hours with testing to add the custom colors feature for pseudo variables. Once in place it may be easier to add other similar features as well	4-8 hrs	
4636	If you open X Axis Options and uncheck 'show date' then click apply, then recheck 'show date' the Line 1 and Line 2 fields remain desensitized even though 'Show date' is checked. Clicking Apply again will fix the issue, but the fields should be sensitized as soon a 'show date' is checked.	5/30/2012	Lydia	?	?			
4637	Yesterday, we did a data dump on the flatsat, which contained a couple hundred packets of engineering data. We then "restored" the segment and dumped it again. Then we let data accumulate over night. This morning, we dumped the segment again, and while dumping sent the restore command. This test is essentially to see if the same data we dumped yesterday are available in the second dump and what effect if any sending the restore command during the dump might have had. Mark asked me to forward the two files to you. In the first, the first data dump after the first "restore". In the second, the second data dump with a "restore" while the dump was in progress. /home/jmcd/test_data/SSL.FLATSAT.TLM_VC3.2012_145_173946 .0 home/jmcd/test_data/SSL.FLATSAT.TLM_VC3.2012_146_182430. 0 (or do you need the other VC files, too?)	5/30/2012	John McDonald / Jim Lewis	?	?	Jim L: This will require some non-standard processing. The default VC->L0 processing detects and prunes duplicated packets, so it's not trivial to do the comparison you're looking for. I'd say 4 hours effort. This is a test of a different data dumping strategy, which will improve our ability to get data down in the event of missed passes, late acquisitions, and so forth. Probably a fairly high priority.		
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	?	?			
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	?	?			
4640	On Linux/Mac the grid check boxes in the axis options are very small and don't really look like buttons.	5/30/2012	Lydia	?	?	Actually, I'll revise that. It is to do with the button being created with an empty value (ie no label). It will need to be checked on windows as well, but I think simply changing it from value='' to value=' ' will work.		
4641	thm_ui_part_getspec_options.txt:							
4641a	I think perhaps the testscript needs to be revised as it seems a bit out of date in places, and also a little confusing sometimes.	5/30/2012	Lydia	?	?			
4641b	For the Angular Limits the invalid min/max behaviour is a bit counter intuitive: it truncates the value rather than setting to the last valid value. eg. 450 becomes 45.	5/30/2012	Lydia	?	?			

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4641c	The processing can often take some time but an hourglass doesn't appear so it is not immediately obvious that it is busy processing stuff.	5/30/2012	Lydia	?	?			
4643	I got the same failure on the SPDF testscript that we got last time. (The L1/L2 doesn't match) I thought we had fixed it.(maybe we haven't?) My guess is that this is actually because of the new calibration coefficients for FGM and the fact that we haven't reprocessed L2 data to match yet.	5/31/2012	Pat	?	?			
4645	minor issues during IDL8.2 Testing							
4645a	In the slices panel the smoothing width spinner tooltip says to enter an odd integer, but even integers are accepted. Also, if you use the spinner arrow keys the numbers increment by 2, but probably not the way they were intended to (they go 3,4,6,8,10 etc).	5/31/2012	Lydia	?	Aaron		1/2 hr	
4645b	If you set the annotation size to something small or very large the error message says: An unknown error occurred and the current operation had to be canceled. The slices panel stays open and working, but it might be good to handle these errors better or restric the allowed annotation size.	5/31/2012	Lydia	?	Aaron	**might be 8.2 related - will research by 6/4 S/W meeting**		
4645c	In the Slices test 8 d) it says the plot should stay the same when autorange z is checked/unchecked. This didn't happen.	5/31/2012	Lydia	?	Aaron	**might be 8.2 related - will research by 6/4 S/W meeting**		
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	?	?		1-2 hrs	
4646b	It is a little weird that the getspec panel resets your settings to the last valid and then runs with last valid when you enter an invalid character or an out of range value, but if you set min greater than max, it refuses to run and requests that user correct the entry. I feel like it should correct user entry errors consistently.	5/31/2012	Pat	?	?	**discuss at S/W meeting**	1-4 hrs depending	
4646c	11.b.i indicates that -20.5 is an invalid entry and should be reset. It actually isn't. It looks like this section was written for testing a valid range between [0,360] when the actual valid range is [-180,180]	5/31/2012	Pat	?	?		1 hr	
4647	I am reviewing a paper for GRL that uses THEMIS data incorrectly. Basically, the authors are trying to publish solar array switch spikes as evidence for DLs. I am sorry that I cannot give you more details. will notify the editors of this problem. However, it is entirely possible that such a paper could have been published and I want you to be aware of this problem. Perhaps a warning should be posted on the web site: (1) Axial boom data are not necessarily valid, particularly in the subsolar region. (2) THEMIS EFI data have unwanted "spikes" which come at four times per spin. These spikes are removed in released THEMIS data analysis programs, but the removal process can leave a residue.	6/1/2012	Bob Ergun - Colorado U	?	?			

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4650	It appears that not all labels are "anchored" in the same manner. In the attached plots all the stacked labels are drawn inward from a specified point while the non-stacked labels are drawn outward (anchored on the bottom instead of the top). This may be relevant if we want to compensate for the font size difference.	6/1/2012	Aaron	?	?			
4651								
4652								
4653								
4654								
4655								
4656								
	v7.0 QA Tasks for Review with Vassilis							
4525	GUI feature pruning: many settings (text fonts, label positioning etc) perhaps better performed using external tools (Illustrator, GIMP, etc.) rather than supported directly in TDAS	2/28/2012	Pat			Maintaining the multitude of settings in the GUI ends up taking a lot of development and testing time, so, in theory, we could be more efficient. The types of things we would want to refocus on improving would be the variety of data types available, the quality of data processing routines, and some aspects of the annotation and data viewing. Of course, this wouldn't have to be done all at once, it would be more just a decision to change our development direction a little bit.		
4526	Set lazy labels in TDAS load routines?	2/28/2012	Lydia			thm_cotrans sets lazy labels on tplot variables it generates, but load routines do not. Should we also do this in the load routines, for consistency?		
4528	X-axis options with locked panels	2/29/2012	Lydia			set all panels' set by default on opening panel, if axes locked. Somewhat confusing, behavior not the same for all tabs.		
4537	Deletion of data not reflected in saved/reloaded THEMIS document. Formerly QA206.	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).		
	General							
4607	?linux - bug in memory management with cdf libraries (after loading one cdf)	4/1/2012	Pat		Tami - SPDF	**Tami will check on.**		
4464	All plug-ins for v7.10 - add a section to User's Guide for Plug-ins	3/22/2012	David	1	David	Discuss at the appropriate time what the content would be. Also add a link for VM on the Software Web Page or Developers web page?		
	Hannes							
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	Exclude List updated 7/11/11. **David 5/4/12: Has this been updated since?**		
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes	updated 4/3/12		

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes	**What is the status?**		
4472	Inter-spacecraft FGM calibration for ARTEMIS. **David 5/4/12: is this ready to be worked?**	1/4/2012	Vassilis	1	Hannes			
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.**		
4058	This is getting a bit out of hand I think. How about a configuration file? The software just reads keywords from a configuration file. With such a configuration file it is possible to set keywords automatically (for the scientists) but additionally it would give us the possibility to keep track of what the software does automatically. When I do calibrations I can then save the configuration file together with the results and not worry about the things that the software might have done automatically.	5/10/2010	Hannes	3	Hannes	Hannes sent out new version for review.		
	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		
4493	2D slices, 1.5D Pitch Angle Distributions - command line in progress; GUI?	1/23/2012	Vassilis	1	Aaron	**Andrei and Xuzhi to test further**		
4494	2D slices, 2D Pitch Angle Distributions - command line in progress; GUI?	1/23/2012	Vassilis	1	Aaron	**Andrei and Xuzhi to test further**		
4536	GUI Slices:Step 8 g) Annotation precision only changes z axis labels (not x, y) . Is that as intended?	3/1/2012	Lydia	1	Aaron	**Aaron completed analysis - it can be done.**	2-4 hrs	
4503	thm_load_fgm does not throw error for invalid probe, only prints a message…should this be a more severe error?	2/3/2012	Ben	1	Aaron	Will remove thrown-error from thm_check_valid_name.pro (restore it to its previous version), and instead of throwing an error, the load routine will be modified to keep track of the requested inputs and processed inputs, and provide a summary/error report at the end of the load routine.	1-3 hrs	
4646d	The getspec panel doesn't error check when I set a minimum energy greater than the maximum energy. From the GUI messages it appears to pass invalid energy range to the command line routine.	5/31/2012	Pat	1	Aaron		5-10 minutes	
4463	file_http_copy support for proxy servers	12/12/2011	IUGONET	2	Aaron	**item 3.3 from presentation - in progress**		
4464	mods for file_retrieve, determine remote & local parts from URL returned by query from metadata DB	12/12/2011	IUGONET	2	Aaron	**item 3.4.2 from presentation - in progress**		

6/1/2012 4:33 PM

20120601 - Themis Software Task Priority List.xls

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
4543	Axis options: With "bound autoscaling" or "floating center w/ span", allow units other than seconds for a time axis.	3/14/2012	Pat	2	Aaron	Floating center/span not very useful; probably exists only because SPLASH had it. Perhaps it could be removed?		
4505	Add a TDAS routine to do 1-d cuts - **when ready to work send Aaron Bennenman an email for clarity of task and then review at the S/W meeting again with Vassilis.**	2/6/2012	Aaron Breneman	2		You could obtain a 1D cut of a slice by aligning the custom orientation vector (slice_orient keyword) such that the desired cut is along the x or y axis. The data could then be pulled directly from the array returned by thm_part_slice2d via the 'part_slice' keyword. This returns an R x R array containing the interpolated slice data (R=resolution). The x & y axis values for the array are returned in the 'xgrid' and 'ygrid' keywords.		
4298	the slices code should probably have a keyword to use the new SST calibrations.	7/27/2011	Pat	2	Lydia	On hold till the SST calibrations have found wider use.		
	Ben							
4616	Chile having download issues	4/26/2012	Marina Stepanova	0	Ben	**Email sent 5/21/12 - awaiting response from Chile**		
4612	GOES 2008 Data	4/20/2012	Andrei Runov	0	Jim L / Ben	**Jim to sent email to Howard - on hold until data arrives. Email sent on xx/xx/12.**		
4027b	Reprocessing GOES Data	4/5/2010	Tami - SPDF	3	Ben	Reprocessing on hold until Howard Singer delivers another batch of binary GOES data files. In conjunction with task 4612.		
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	1	Ben			
3093d	Reprocessing	2/22/2010	Jim L	1	Ben	**looking for good test cases - may need an additional processing for additional data**		
3093e	Update Admin Guide	2/22/2010	Jim L	1	Ben	**in progress**		
3093f	production cron job	2/22/2010	Jim L	1	Ben			
3093g	reprocess entire mission - notify Jim M and Tami before doing	2/22/2010	Jim L	1	Ben			
4633	Reviewed Admin Guide - Ephemerus Manuel Processing after outage's of any sort	5/21/2012	Jim L	1	Ben			
4458	Horae (rsync server for mirror sites) is dying and needs to be migrated to a VM Astrea2.	12/8/2011	Jon L	1	Ben	**** In Progress **** Testing with UCLA; Once UCLA has completed the catch up rsync to test the UCLA data with the GUI doing loads, creating plots.		Y
4458a	migrate Japan mirror site	12/8/2011	Jon L	1	Ben			
4458b	migrate France mirror site	12/8/2011	Jon L	1	Ben			
4458c	migrate Chile mirror site	12/8/2011	Jon L	1	Ben			
4613	Prevent Email Storms when data servers go down	4/25/2012	Jim L	1				
4613b	Write and test a few simple shell scripts to manipulate the log database (probably one to log errors to the DB, one to query for errors and make a single email notification):	4/25/2012	Jim L	1	Ben	**in progress**	2-4 hrs	
4613c	Modify existing processing scripts to log to the database rather than send their own emails	4/25/2012	Jim L	1	Ben	15 minutes per script, times 10-20 scripts	3-5 hrs	
4635	It looks to me like the administrator's guide is out of date. For the table that lists which machine each script runs on, it lists the pre-VM machine name, not the post-VM machine name. For example, for overplot.ksh, is lists	5/29/2012	Pat	1+	Ben			

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4625	For THEMIS code, we generally don't use thm_ prefixes on everything, only for those routine names that would otherwise be too generic (e.g. thm_load_fgm versus load_fgm, or thm_cotrans versus cotrans). I think the best way to handle this is to call out the issue in the developers guide -- that it's the programmer's responsibility to ensure they're not duplicating routine names that already exist in the repository, avoid overly-generic names that might conflict with completely unrelated packages, and use mission-specific prefixes where it makes sense to do so.	5/14/2012	Jim L	1+	Ben			
2046	Create a more efficient & productive prototype QA Instrument Command Line Script - first template (s) functional blocks then scripts for FGM, ASK, SCM, FIT, MOM, ASI, EFI, FFT, FBK, Gmag, State, SST, ESA		Jim L	2	Ben	**Save v7.0 templates and saved files.**		
4455	Developer's Guide - Plug in Section - How to do, QA, Suites, Scripts, watch out fors (like erg)	3/21/2012	Jim L	2	Ben	in progress		
4532	Developer's guide update re: "touched" properties, standard way of tracking which settings were changed at user's request.	2/27/2012	Pat	2	Ben	with 4455		
4214	THEMIS Pipeline proof of concept regression tests					On hold, after QA.		
4214e	GMAG	3/23/2011	Jim L	2	Ben			
4214f	AE Index	3/23/2011	Jim L	2	Ben			
4214g	ASI	3/23/2011	Jim L	2	Ben			
4214h	mosaics	3/23/2011	Jim L	2	Ben			
4214i	summary plots	3/23/2011	Jim L	2	Ben			
Cindy								
4479	themis dependencies in ssl_general	1/9/2012	Davin	1	Cindy	**I have made all the modifications to the source code that will remain in ssl_general (that is, removed thm_ routines and replaced them with generic code). These routines have been released to the repository. What remains are only a handful of routines that need to be copied from ssl_general to themis. It is a trivial thing to do, however, I do not have command line svn to ensure the proper copying of the code within the repository. I do have Windows TortoiseSVN however, it doesn't seem to work quite the same, so I don't trust it to preserve the history.**		
2027e	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)	7/1/2010	Vassilis	2	Cindy			
Jim L								
3093	Data verification of QA sample data for eclipse spin model corrections							
3093d	Validate Reprocessing	2/22/2010	Jim L	0	Jim L	**Reprocess L1 State Data into QA (two months of probe 'D') - bells and whistles will be added (fgs data?)**		

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4034a2	thm_parts_moments update (spin moments mods)	11/22/2010	Vassilis	0	Jim L	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.**		
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_peeb. Work to be done when 4034a2 work continues**		
4326b	Then for Particles and Spin Fits	8/18/2011	Vassilis	0	Jim L	in progress - dependent on 4034a2.		
4326c	reprocessing for the moments and spin fits	8/18/2011	Vassilis	0	Jim L	**on hold 3093 is done (task 3093 assigned to Ben)**	3-4 weeks depending on pri zero tasks	
4451	operating the particle instruments in "accumulate" rather than "snapshot" mode. So we'd be getting into some unexplored territory. The time tagging code in the L0->L1 particle distribution processing would need some slight modifications to support "accumulate" mode. The ESA load routines use the L0 packets directly, and probably also assume "snapshot" mode, so that's another potential set of required modifications. I wouldn't be surprised if the ESA and SST calibration code also assumes snapshot mode. It would need to be tested with real data (since we have no way to generate a realistic particle data stream on FLATSAT).	12/1/2011	Vassilis	1	Jim L	**5/21/12 as per Vassilis - give it a shot; Awaiting flatsat availability - after SST table updates**		
4451a	accumulate mode	12/1/2011	Vassilis	1	Jim L	flatsat testing l0-l1 mods;		
4451b	tdas mods - if accumulate mode approved discuss at S/W meeting	12/1/2011	Vassilis	1	Jim L	double chech slices and getspec as per Aaron		
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		
4476	Discuss thmsoc_dp_current deployment process, avoid unintended updates from trunk	1/5/2012	Jim L,David	1	Jim L	After QA, review CDF "software version" requirement with SPDF.	1 day	
4465	Diagnose, repair? Spikes in FGS data.	12/14/2011	Vassilis	1	Jim L	No code changes required. Document on web site (anomalies/watch out fors) as something to be aware of		
4468	Modify ESA packet loading code to use standard spinmodel routines rather than deprecated ASCII files.		Jim L	1	Jim L	After TDAS 7.0.		
4430	crib for eclipse despinning code for spin fits and moments	11/9/2011	Jim L	1	Jim L	**on hold- demo exists;dependent on 3093**		
2074c	quality flag for FGM data - Jim L perform analysis, define task - someone else to do development		Vassilis	1	Jim L	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.**	1-3 days	
4034a3	awaiting feedback and performing analysis	11/22/2010	Vassilis	1	Jim L	Tips of the Month at some point?		

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4236	Ferdinand P. suggests that we make available a diagnostic quantity produced by the eclipse spin modeling procedure. Add "phase" diagnostic quantity (from eclipse spin modeling process) to L1 STATE CDF, to give end users a sense of the expected angular error in the eclipse spin model.	5/23/2011	Ferdinand	1	Jim L			
2047	Separate E and B timestamps for spin fits: a) make a revised V02 master CDF with E and B separated b) change thm_load_fit to support V01 and V02 of the L1 CDFs c) change the L0->L1 processing code d) change the L1->L2 processing code e) test the changes, then reprocess to create the V02 CDFs (keeping the V01 files around for a while to ease the transition)	before the millenium started and when bugzilla's roam the free world	Vassilis	1	Jim L	**Hard for SPDF to deal with, with their plotting tools - review priority with Vassilis; Check again with John Bonnel regarding timing differences between fgm and efi spin fits**		
4070	"Add support to thm_cotrans, ssl2gse, and ssl2dsl for /pseudo_dsl keyword. If keyword is present, look for and apply eclipse delta_phi corrections as appropriate."	6/1/2010	Jim L	1	Jim L	thm_load_fit and thm_load_mom, add keyword. In progress - **Will review code Davin checked-in concerning tensor quantities in thm_load_mom.**		
4030	cross-check SST psir6 and psif data types for excess counts in psir6	4/8/2010	Jim McFadden	1	Jim L	**Jim L talked to Davin and sounds like we can shut the data off. Jim L will send email on the time saved by shutting this off.**	4-5 days	
4030b	Correct Existing Data	5/17/2010	Jim McFadden	1	Jim L	4030a prerequsite		
4030c	If scripts change - make changes to processing scripts	5/17/2010	Jim Lewis	1	Jim L	4030a prerequsite		
QA110	as you know we have a few folks here in our SPDF group who are using the THEMIS-B and C data for a lunar project. They have found and I've confirmed through CDAWeb, that the time stamps and associated data measurements for October, 9, 2010 THEMIS-E ESA, after time 15:58:40.695 are of a different resolution and the data values are either 0.0 or -NaN.	2/7/2011	Tami	1	Jim L	Web Site - instruments will have a web page with "Sources of Data Anamolies". The first one being the ESA issue		
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	2+	Jim L	**phase 1 - list for next Tips of the month, phase 2 - cdf or web page: To be done before the Map in early 2013**		
4301	"bad" themis thg l2 files - instrument files; L0->L1 processing produces incomplete/empty CDFs	8/1/2011	Tami	2	Jim L	**one fixed - one priority 2**		
2248	once in a while (maybe 10-20 occurrences per probe during the entire mission), the FGM range doesn't change on all three axes at once:	9/10/2009	Jim L	2	Jim L			
Jim M								
4642	Something seems wrong with the mosaic processing since yesterday. We're still getting lots of error emails. I looked in the process_logs/mosaics directory, and most of the IDLRUN_* files are empty (exist but zero length).	5/31/2012	Jim L	0	Jim M	**Mosaics running again -- update admin guide with a section**		

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4648	full mission reprocessing of fgm data for David Fisher new calibration data	6/1/2012	Pat	0	Jim M	**Start 6/4**		
4365	reverse-engineer the process of updating the onboard tables that define the ESA and SST angle/energy modes.**Jim M: he process of creating the RAW commands will result in an IDL routine which has the same functionality as the "lost" code that Davin wrote in 2008. This will make future changes easier.**	9/8/2011	Vassilis	0	Jim M			
4365g	**If all goes well**: Ops team: Run the EEPROM update script on one of the probes. Verify that the EEPROM update has effected the desired changes.	4/11/2012	Vassilis	0	Jim M, Jim L, Ops Team, Science Team	**flatsat test completed and uploading to Probe A 6/1; review SST data see if sun containmination is out of the data**		
4365h	**If something goes wrong on FLATSAT:** Diagnose what went wrong, restore EEPROM to what it was before the test, retry with corrected table update procedure.	4/11/2012	Vassilis	0	Jim M, Jim L, Ops Team			
4152	verify the location of the sun-contaminated bins for each spacecraft and any change in location over time(they should change very slowly if at all). They would then re-activate the sun contamination masking. It was previously disabled because the masking was originally in the from place. Davin said that he wants to create the new configuration files that would be uploaded to the spacecraft.	10/8/2010	Vassilis and Davin	0	Jim M	**Persons that can provide information are: Davin, Deron Pease/McDonald, Michael Luldam and Robert Abiad. Awaiting task 4365 (same process)**		
4152a	change the SST tables to mask view directions that are affected by the sun. We need to do this for the reduced distributions only. If it can be done for the moments too it would be great. WE need to find the masking tables that were input before in 2007 and rescinded sometime in 2008 - but the actual bins that require masking are different than before.	10/20/2011	Vassilis	0	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	**ask Vassilis which probes**		
4152c	change the ESA tables such that electrons and ions can be changed separately into magnetospheric and solar wind modes.	10/20/2011	Vassilis	0	Jim M			
4003	Document: ESA File and Calibation Processing	3/5/2010	David	1	Jim M	**next Up**		
2283b	There is another aspect to this problem. Dead-time corrections are severe for ion ESA SW data and there are no dead-time corrections for onboard moments. Some algorithm will have to be developed that does this correction after the fact. Davin developed an algorithm like this for Wind 3DP. That algorithm may not work directly due to differences in energy sweeps, but something like it could be developed for THEMIS. Davin and I can provide some advice and direction. Similarly electron onboard moments in the SW may also need some corrections -- this should also be worked out at the same time. ****Send old code to Pat ****	11/2/2009	Jim Mcfadden	1	Jim M	Jim McFadden showed me what he had in mind for improving the corrections for ground-processed moments. This involves calculating the dead-time correction based on a higher resolution energy grid, with 4 different points per output energy channel. In progress: Jim M 8/26/11: Thanks for looking at this. It also seems the the pressure tensor has some interesting spikes due to the dead-time correction, while the scalar quantities ssme to be more stable **9/23/11: Will ping Jim Mcfadden. May need additional code to convert from fluxes back to raw counts. When code written, will discuss with J McF.**		
4312	Quality flags for efi are wrong including electric field offsets in computation. **On hold until Michael Hartinger sorts out.**	8/8/2011	Vassilis	1	Jim M	**discuss with Vassilis**		
4233	Angular Correction for particle data - use Jim McFadden's code if available	1/9/2011	Vassilis	2	Jim M			

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4241	Dieter and I have tested the variables, there are two that don't seem to have data for the mission, and their catdesc's seem to indicate that they won't... so can we "turn these off", or is there a plan to use them in the future? EFS_Q_MAG (Data Quality Parameter: set to NaN for EFS, as there is no good measure of data quality.) **EFS_Q_PHA (Data Quality Parameter: Set to NaN, as there is no good way to measure data quality for EFS data.)**	6/6/2011	Tami Kovalick	2	Jim M	They are empty at the moment, by design -- we may have a use for them in the future. Nothing needs to be done with SPDF. Look into EFS_Q_PHA and **check with John Bonnell about the future. If we add these variables notify SPDF.**		
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			
2035	Split L1 ESA (using Thomas's routine) in master ESA data cdf		Vassilis	2	Jim M	On Hold - awaiting Jim McFadden release: Then send David Sub Task List; Calibration variables removed from L1 data master CDF. (Side note: found and reported a bug in SKTEditor, which the Goddard team has agreed to fix...) Waiting for feedback from Jim McFadden about how calibration data should be handled (TH-A ASCII calibration file (used for all probes) doesn't match anything I removed from the data CDF).		
4208a	Enhanced MOM Instrument Web Pages	3/5/2010	David	2	Jim M	Talked to David first.		
	Lydia							
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Lydia	Next October 2012		
4629	CARISMA gmag data We haven't received any data since May 9th. A few day delay is not unusual, but this does seem long. The download script is showing an rsync error 12. I've emailed the CARISMA team and they say the data is there and they know of no problems at their end (though they are looking into it for me).	5/18/2012	Lydia	0	Lydia	**in progress -5/21/12 - major disk failure at their end; database back on line 6/1/12 Lydia sent email as we are not getting anything**		
4481	New data product, AE index from THEMIS+std sites	1/9/2012	Vassilis	1	Lydia	**awaiting Russian data**		
4644	it would be a good idea to have a paragraph somewhere that summarizes some of the database information eg. mentions that we use databases on astraea2 and juneau, scripts write to the databases, some of the webpages read from the databases etc. This could include a note that we should always check to ensure the databases are up and running after any outages/crashs.	5/31/2012	Lydia	1	Lydia			

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4649	I see that the IDL 8.2 development environment now checks to see if there are multiply-defined routines on your IDL path. Below is a list of the duplicate definitions it finds in tdas_7_00. Many of them have more than one definition within TDAS, but some of the conflicts are with IDL 8.2 builtin routines.	6/1/2012	Jim L	1	Lydia	Most of these conflicts should be easily resolved: For conflicts between TDAS routines and IDL 8+ new features: Rename the TDAS routine and .pro file with a thm_ prefix, then find all references to the old name and update them by adding the prefix. For multiply defined routines within TDAS: Most of these are probably helper routines that didn't have their own .pro file; someone probably cloned the .pro file and left the helper function definition in place. For these cases, first check that the definitions are truly identical; if so, pull them out into their own .pro file and remove them from the two conflicting .pro files. If any of the "duplicate" routines have diverged since the fork, we would have to either merge both copies into a common routine that works for all call locations, or rename one of them and make sure the appropriate version is called everywhere. There may be references outside the originally conflicting .pro files, so that would have to be checked.		
3086	add MACCS gmag data from 2007 to our data archive. We already have MACCS data for some years and a process that automatically downloads it/converts to CDF. So the task would involve finding missing files from 2007 and feeding them into our pre-existing processing framework. It should be pretty straightforward, but probably non-trivial because of learning curve/unexpected details.	2/19/2010	James Weygand	2	Lydia	**They are moving all the data to another server - on hold. Once they have completed the move we can get 2007 data and we will update scripts to handle the new data location. In progress as of 5/15/12 at their end.**		
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	Lydia	**awaiting 4629 to complete**		
4409	AE Stations: I am interested in including the "standard AE ground stations" i.e. the ones that go into the computation of the AE index - there are 12 - into the THEMIS pipeline. This is because we can then include them into the computation of our own pseudoAE. They include: FCC: Fort Churchill, LRV: Leirvorgur, a couple in Russia and one in Scandinavia etc. They should be available somehow. The ones in Russia have been made available through APL, and THEMIS has contributed to their refurbishment. I think we have established communication with APL's Kazue Takahashi and he said a couple of years ago that routine delivery of the Russian stations was impending. So by now they should be ready…I think he should be a good source of information about the other stations as well, if you cannot find them on the web by searching or at WDC Kyoto.	10/19/2011	Vassilis	2+	Lydia			
4409b	Dixon (DIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	**5/31/12 - eta for data week of 6/4-6/8**		
4409c	Cape Chelyuskin (CCS) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	see 4409b		

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4409d	Tixie Bay (TIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	see 4409b		
4409e	Cape Wellen (CWE) - closed, replaced with Pebek (?) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	see 4409b		
4409l	Leirvorgur (LRV) (Iceland)	10/19/2011	Vassilis	2+	Lydia	**code to download and process is done and Iceland can make the data available. 5/10/12: Awaiting past data in zip file will be awhile.**		
778b	Need capability to read in ASCII, CDF?, . IDL has a built in widget to specify ASCII formats.	11/21/2011	Oldie	2	Lydia	Also assigned to Pat. See Vassilis's files for Ascii and cdf's only analysis		
	Pat							
	Updated FGM calibrations for solar array currents, ADC nonlinearity available?	5/30/2012	Vassilis	0	Pat	Last Recieved - May 2012		
4458	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	**(50% Time) - awaiting beta v8.2 from Exelis**		
4504	Updated FGM calibrations for solar array currents, ADC nonlinearity available?	2/3/2012	Pat	1	Pat	update admin guide after testing; Pat 5/30/12:Files are installed. **We might want to do an L1->L2 FGM reprocess. Also, I'm not sure if we want to have someone take a look at the data.** I don't really have the expertise to tell if the calibrations improved things ro not.		
4470	Pre-deployment summary plot QA script	1/4/2012	Jim L	1	Pat	Check that summary plots are produced, and that they're roughly correct, before pushing updates into production.**In progress**		
4508	GUI xy axis: improve aesthetic ticks	2/9/2012	Pat	1	Pat	Formerly QA112, QA276. I'm not really happy with the way that the aesthetic ticks option performs if you request more ticks than the number of orders of magnitude visible on a log axis. For example, on a plot of 1-1000, it will correctly select major ticks at 10 & 100, but you can't make it put more than 2 major ticks on the axis with that range. It seems like it would make sense for it to be able to put major ticks at 10 ^ 1.5 and 10 ^ 2.5. Or if the ticks are not in scientific notation, maybe put the ticks at the nearest round number to 30(10^1.47) and 300(10^2.47).	1-2 days	
4516	Can't save ISTP or WIND config params from GUI	2/14/2012	Ben	1	Pat	Changes persist in current session, need to write to config file & read same config file before loading ISTP or WIND data. Formerly QA130.	1/2 - 1 day	
4460	Add New Routines from Lynn Wilson	3/22/2012	Vassilis	1	Pat			
4460-1	Include: safe, minimal effort, obvious benefit. (21)		Vassilis	1	Pat		3-4 days	
4460-2	Documentation only: LW3 has documented a routine that didn't have documentation previously, but incorporating routine body is no worthwhile.(possible bugs or too much effort) (12)		Vassilis	1	Pat		1 day	

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4460-3	Don't include: Too difficult to be sure it won't cause problems, or LW3 version is worse. (24)		Vassilis		Pat	will not do		
4460-4	Not sure: Need a scientist's opinion on the benefits of the routine. (26)		Vassilis	?	Pat	Vassilis will talk to Lynn Wilson and ask the benefits of these routines		
4460-5	Not sure: Need more programmer time to make confident recommendation. (14)		Vassilis	?	Pat	Vassilis will talk to Lynn Wilson and ask the benefits of these routines		
4460-6	Helper, only include if required by an included routine. (9)		Vassilis	1	Pat			
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			
4267c	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.		
4627d	SST: After #a-c 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		
4002	Document: SST File and Calibation Processing	3/5/2010	David	1	Pat	to be completed 9/30/12		
4603	make new SST Cal standard	3/22/2012	Vassilis	1	Pat	Revisit in July ** on hold **		
4520	The bug that Drew had reported yesterday turned out to be not a bug, but because the bins that the sun decontamination code selected differed depending on the date selected and this wasn't clearly reported to the end-user. I put an informational message in to clarify what is happening, but after talking with Drew there are two other solutions that don't fit within the scope of QA, but would be good to consider later. There features are: #1 Add a keyword that returns the the bins that were flagged by automatic sunlight decontamination to the end user. #2 Provide an option to window the automatic sunlight decontamination code so that one test is not applied to the entire time period.	2/22/2012	Pat	2	Pat			
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat			
4208b	Enhanced SST Instrument Web Pages	3/5/2010	David	2	Pat	See current ESA Instrument Web Pages - Make recommendations to Vassilis to improve.		
	IDL and Mac OS "Lion" compatibility issues							
QA008	Lion -- IDL 7 crashes when trying to add directory to the IDL path in IDLDE	1/19/2012	Lydia		Pat	Can work around by setting IDL_PATH externally		
QA010	Lion: IDL 6.4 (PowerPC application) not supported	1/20/2012	Lydia		Pat	But there's a non-PowerPC version that works.		

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4388	I was having some trouble getting the mouse click feature to work with the various tplot functions in TDAS after upgrading to a new system running the Lion OS. After poking around a bit it looks like there are a couple X11 settings that need to be changed to allow clicking of tplot windows (such as when using the tlimit command). In X11 preferences I enabled the following: Input: Emulate three button mouse Windows: Click-through Inactive Windows After enabling those I was able to click on tplot windows again. Just passing along the info in case there are others who may experience this issue.	9/30/2011	Justin Lee - UCLA	1		**Pat:** This looks different than the instructions that we have in the quick reference guide. I think that we may need a new set of instructions for newer macs. Lydia: Justin's workaround seems OK. Add to quick reference guide and users guide.		
QA175	GUI Export to image: EPS plots sometimes look a little different than on-screen or bitmap output for plots with rapid changes	2/29/2012	Lydia		Pat	Small wiggles in bitmap plot exaggerated in EPS output, all OS-es. Report to IDL support, may need to send TDAS zip file and instructions to reproduce.		
QA228	I've been having some problems running the gui on linux. I think it is most likely an issue with my machine or java/eclipse versions, but I thought I'd report it in case other people had seen similar issues. If I am testing things in the gui and then type something in the IDL commandline (eg print, 'test'), IDL takes a long time to respond (sometimes minutes). This is happening when the main gui window is open, but there are no panels open and no processing in progress. When I was first checking things on the mac with lion I noticed similar problems. This is a new problem on linux, which is why I think it may be related to updates to my machine.	3/7/2012	Lydia		Pat	Only occurs under idlde, possibly a java or eclipse version issue.		
QA241	Slices: Step 3j) (possible bug) 2-d interpolation fails.	3/12/2012	Lydia		Pat	THM_PART_SLICE2D(766): 2D Interpolation failed due to an error in an underlying IDL math routine. Aaron to expand warning message. Root cause is an IDL internal issue, main task list & report to IDL tech support.		
4511	IDL "out of memory" errors when running TDAS under IDLDE	2/14/2012	Ben		Pat	Java virtual machine memory limit? Identify platforms/IDL versions where this occurs, send bug report to IDL developers. Add note to users's guide if deemed necessary.		