

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 as '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 restrict 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. I 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	?	?			
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).		
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		
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			
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		

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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		
Ben								
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	1	Ben	looking for good test cases - may need an additional processing for additional data		
3093d	Reprocessing	2/22/2010	Jim L	1	Ben			
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 - Ephemeris 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
4613	Prevent Email Storms when data servers go down	4/25/2012	Jim L	1	Ben	in progress	2-4 hrs	
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				
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	
Cindy								
4479	RBSP and Gem Conference Prep	6/1/2012	David	0	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.		
	themis dependencies in ssl_general	1/9/2012	Davin	1	Cindy			
Jim L								

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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 (figs data?)		
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.		
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 I0-I1 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		
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		
4648	full mission reprocessing of fgm data for David Fisher new calibration data	6/1/2012	Pat	0	Jim M	Start 6/4		
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		
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)		
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			

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4003	Document: ESA File and Calibration Processing	3/5/2010	David	1	Jim M	next Up		
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/crashes.	5/31/2012	Lydia	1	Lydia			
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.		
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			

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4409b	Dixon (DIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	5/31/12 - eta for data week of 6/4-6/8		
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)		
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		