

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								
4348	It was suggested that we allocate multiple processors to speed up overview plots. But this would only speed things up if we modified our overview processing scripts so that they're executed in parallel. My thinking is that it would be a much smaller modification to just adjust the multi-threading settings on IDL, rather than making the changes to run each overview probe in parallel.	8/24/2011	Pat	?	?	Run an Experiment after VM Migration is completed.		
4449	Overview plots - web behaviour	12/30/2011	Pat	0	Emmanuel?	Modify web server config to send cache control headers, so clients can detect stale files that need to be reloaded.		
4454	Plot templates (autoplot version, different from TDAS templates)	12/5/2011	John Bonnell	?	?			
4462	GUI and Illustrator	2/28/2012	Pat / Aaron	?	?	For discussion with Vassilis (Pat's email)		
4463	SST new Cal in GUI and make new SST Cal standard	3/22/2012	Vassilis	?	?	For discussion with Vassilis		
4465								
4466								
v7.0 QA Tasks for Review with Vassilis								
4501	Documentation links from THEMIS web site should be http: instead of ftp: links.	2/2/2012	Jim L			Mac Safari users had trouble downloading users guide, etc. during a TDAS training session. FTP links not firewall-friendly.		
4502	FTP site access	2/2/2012	David		David, IT	Any way to make THEMIS FTP site more accessible to Mac/Safari users?		
4500	Velocity cotrans between non-inertial systems	2/2/2012	John Bonnell			John Bonnell had some questions about how TDAS transforms velocity between inertial and non-inertial systems as well as some ideas about how to make these features more useful to scientists.		
4495	Cotrans routines not checking st_type to warn about cotransing velocities	1/21/2012	Jim L					
4497	Need axis titles for the GUI. This is a pretty big limitation insofar as almost all plots end up combining component labels with axis titles. (Often labels on one side and axis titles on the other.)	1/27/2012	Pat			Post-TDAS 7.	1 week?	
4498	sst contamination removal: excessive console output if no bins selected	1/30/2012	Jim L			Noticed in CL contamination test. May be hard to move that warning out of the loop.. Post-TDAS 7, if at all.		
4499	Greenland GMAG stations -- move data to standard location thg/l2/mag ?	1/31/2012	Tami			Post TDAS 7.		
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			Probably the case for all themis load routines. Not covered in any CL test scripts as far as I can tell.		
General								
4068	Lynn Wilson (RBSP) possible enhancements	6/1/2010	Lynn Wilson	1	David			
4043	Paper on interdependencies of FGM and STATE Reprocessing	4/19/2010	Pat	1	Jim L			
4453	Look into RBSP autoplot tool	12/5/2011	Mini-GEM		David	David to contact autoplot team		

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4464	All plug-ins fro v7.1 - 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		
Hannes								
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	Exclude List updated 7/11/11		
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes	new Artemis offsets sent to Karl-Heinz on 11/21/11; reprocessing after AGU for the STATE		
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes			
4472	Inter-spacecraft FGM calibration for ARTEMIS	1/4/2012	Vassilis	1	Hannes			
2074c	quality flag for FGM data		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								
4421d	User's Guide			1	Aaron	add reference to thm_soc_135_time_conventions document (QA prep)		
4485	Change message,/info and message,/continue calls to dprint	1/10/2012	David	1	Aaron			
2063	Problem with edit3dbins is being caused by IDL's mouse system variable not being updated correctly on Macs. The ctime procedure, used to interactively select a time from a tplot window, relies on this variable to determine when a selection has been made in the tplot window. If the variable is never updated then ctime gets caught in an infinite loop. It's unclear whether this is specific to a particular OS version, but the routine should probably be modified at some point to maximize compatibility with Macs. In the meantime the alternate method of calling gettime that I copied you on yesterday should provide a temporary way around this bug.		Aaron	1	Aaron	verify note in quick reference and users guide and then task will be closed - in progress. Check OS Lion when available at UCLA. Ping UCLA IT people next week; OS Lion is a prerequisite for starting TDAS 7.0 QA.		

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4493	2D slices, 1.5D Pitch Angle Distributions	1/23/2012	Vassilis	1	Aaron	We need collapsed BV plots. I.e., we often do not care about gyrovelocity direction but only pitch angle direction. The electrons especially (but sometime ions too) are gyrotropic. Then we can increase the counting statistics if all the look directions with the same pitch angle (but different phases) are averaged into a single point. After QA.		
4494	2D slices, 2D Pitch Angle Distributions	1/23/2012	Vassilis	1	Aaron	We sometimes need cuts in a very special direction: B-M, 2D cut, where the P direction is normal to a specific, user-specified N direction. The N direction needs to be specified by the user as (1,0,0) or (0,0,1) etc. Then the cut would be made such that M is along the NxB direction, such that M,N,B form an orthogonal system. After QA.		
4441	bugs in tplots handling of labels	11/23/2011	Aaron	1	Aaron			
4441a	It looks like the LABFLAG option, which controls where y-axis labels are placed in tplot, is not applied correctly for compound variables. Specifically, the option to draw evenly spaced labels doesn't account for the labels from all the component tplot variables and end up drawing them on top of each other.	11/23/2011	Aaron	1	Aaron			
4521	GUI getspec: issues when setting phi limits and starting phi at same time	2/8/2012	Aaron	1	Aaron	I produced two phi plots with the phi limits set to 45 - 180; the second plot also had the start angle set to 90 degrees. That plot begins at 90 degrees and appears as it should until just past 160 degrees at which point the remainder appears to be 'smeared' and ends at a maximum of ~440. Because of this it is also hard to tell if it looped back to the data between 45-90 correctly.		
4530	When I despike thd_peim_flux on 2-10-12 I am left with data points that I expect should have been removed. All the spikes were surrounded by NaNs, but the those that consisted of more than one data point were removed while those that were only a single point were not. The values of the single-point spikes were comparable to those of the others.	3/1/2012	Aaron	1	Aaron	e.g. 3 and 4 were removed but 1 and 2 were not 1: 271376.90 NaN -2.4147143e+009 NaN NaN 2: NaN NaN 1.8829594e+009 NaN NaN 3: NaN NaN -2.5399129e+009 2.4763575e+009 NaN 4: NaN -2.5399129e+009 2.4763575e+009 NaN NaN		
4544	If I have a list of panels, with the page locked to the top panel. If I remove the top panel it will lock to the panel at the bottom of the list instead of the next panel in the list. It makes more sense that it goes through the list in order when trying to lock, rather than jumping around.	3/14/2012	Pat	1	Aaron			
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	Formerly QA190		

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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?		
4529	Remove items from GUI menus -- desensitized, cannot or probably will not implement these features.			2	Aaron	print preview, print multiple files, undo/redo, track additional variables		
519	We should extend our data model to support 3-dimensional distributions and 3-dimensional image data. This will entail modifications to load widgets, the loaded data object, the tree widget, the data processing widgets, and the addition of a means to draw	10/17/2011	Vassilis	3	Aaron			
267	The Layout panel doesn't allow shift selection in the panel portion of the widget.		Vassilis	3	Aaron	discuss at software meeting	1 hr	
4340	Anything you can do to accelerate the geometric method?	8/22/2011	Vassilis	3	Aaron	on hold		
4314d	combination of ESA and SST data could only be done in the Geometric mode. Would be great if it could be done in other modes as well.	8/11/2011	Xuzhi	4	Aaron	On Hold		
2013w	Integrate our own slicer3.pro gui with regular 2-D slice plots.		Vassilis	4	Aaron	on hold	2 days	Y
Ben								
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	1	Ben	then reprocess. In progress		
4466	Documentation for mirror site admins	12/14/2011	David	2	Ben	Sample scripts, suggested config for ssh, rsync, firewalls. Add to THEMIS-ARTEMIS admin guide? Japan and France contacted, awaiting reply.		
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 for (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		
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 On hold, after QA.		
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			

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4135	Now that the L1 ESA/SST/MOM reprocessing is underway, these CDFs will soon contain the full ESA and SST configuration words, in addition to the solar wind flags, sweep modes, and so forth. With the full configuration data available, if someone wants to use a property of these instrument configurations that's not already present as a L1 variable, we don't need to reprocess L1 to add it -- we just write a little more code for TDAS, to extract the new attribute from the configuration data that's already present.	9/10/2010	Jim L	3	Ben	On hold, after QA.	2-4 hrs	
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	3	Ben	On hold, after QA.		
4135b	In the load and/or calibration routines for ESA, SST, MOM: rather than using the ESA solar wind flags and sweep mode from the L1 CDFs, use the ESA full configuration instead (which is present in all three L1 types, for convenience), and use the routines from 4135a to extract the solar wind flags, sweep mode, and any other useful attributes. I think SST does not have any configuration flags similar to the ESA quantities (there's the attenuator status, but that's separate from the instrument configuration word), but it needs them in the future, they should be handled the same way as ESA (extract from SST configuration word instead of adding L1 variables). I can do this, but if the routines from part (a) are well-documented, any of us could probably do this part.	9/10/2010	Jim L	3	Ben	On hold, after QA.		
2078	bau_sunpulse_met assumes x86 endiannes (BugzID=13)		Vassilis	3	Ben	On hold, after QA.		
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.		
Cindy								
4489	TDAS cotrans to magnetic coordinates?	1/12/2012	Cindy	2	Cindy	After TDAS 7.0		
Jim L								
4458	Horae (rsync server for mirror sites) is dying and needs to be migrated to a VM ASAP.	12/8/2011	Jon L	0	Jim L	Use new UCLA mirror site as test case for new server, or maybe Chile since UCLA will take a while to set up.		
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. On hold, after QA	3-4 weeks depending on pri zero tasks	
4326b	Then for Particles and Spin Fits	8/18/2011	Vassilis	0	Jim L	in progress - dependent on 4034a2. On hold, after QA.		

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4326c	reprocessed	8/18/2011	Vassilis	0	Jim L	on hold 3093 is done (task 3093 assigned to Ben)		
4142	issue with FGS processing - timestamps	9/30/2010	Vassilis	0	Jim L	not trivial	3-5 days	Y
2266	Timing of Spin Fit data	10/16/2009	Jim McFadden	0	Jim L	see 4142		
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			
4451a	accumulate mode	12/1/2011	Vassilis	0	Jim L	flatsat testing I0-I1 mods; on hold	1 day	
4451b	tdas mods - if accumulate mode approved discuss at S/W meeting	12/1/2011	Vassilis	?	?			
4421b	L1 File Definitions			1	Jim L	add reference to thm_soc_135_time_conventions document (QA prep)		
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.		
4479	themis dependencies in ssl_general	1/9/2012	Davin	1	Jim L	dsl2gse, dsl2ssl, thm_load_goesmag, etc. After TDAS 7,		
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 for) as something to be aware of when using FGS data. CC Uli Auster with draft wording.		
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.	1-3 days	
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. JWLL will document in L1 file definition document.		
4034a3	awaiting feedback and performing analysis	11/22/2010	Vassilis	1	Jim L	Tips of the Month at some point?		
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			

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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	4-5 days	
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.		
4030b	Correct Existing Data	5/17/2010	Jim McFadden	1	Jim L	4030a prerequisite		
4030c	If scripts change - make changes to processing scripts	5/17/2010	Jim Lewis	1	Jim L	4030a prerequisite		
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.		
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-B 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		2 hrs	

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4022	Update L1 master cdfs to support SPDF hosting	3/25/2010	David	3+	Jim L	I think 4022 is a an end-of-mission task: basically clean up all the L1 CDFs, so they are fully ISTP compliant and as compatible as possible with SPDF's tools. But "ISTP compliant" is a moving target -- they keep adding new checks to the SKTEditor software -- so I think we made a task to do one final cleanup and reprocessing at the end of the mission, as opposed to reprocessing every time they introduce a new SKTEditor check that renders our L1 files non-ISTP-compliant. So 4022 = final end-of-mission adjustments to master CDFs, 4023=final reprocessing. Both should remain open, with no immediate action required as far as I know		
4040	Spinfits - separate E&B timestamps?	4/15/2010	Jim L	3	Jim L	SPDF has issue creating plots on the L1 data with their software		
4046	either thm_load_fit or the GUI code that calls thm_load_fit should split the data into separate tplot variables for E and B, before importing them into the GUI data model. I think thm_load_fft already does something like this. See task 4040	4/23/2010	Pat	3	Jim L	Jim M 4/23: thm_load_fit also splits into efit and bfit variables, so unless you need to look at raw bytes, the 'fit' datatype is not needed. Pat: Agreed. Short term, excluding the data type from the GUI seems like an easy solution.		
2082a	Spin modeling during shadows BugZid=43		Vassilis	3	Hannes	Jim L to write routine. Hannes send info.		
2038	STATE Web Page (s)		Vassilis	3	Jim L	review web pages		
2039	bad timing sun pulse times (early January 2009)		Vassilis	3	Jim L	Clarification needed		
2040	L1 Data Processing History Info: SCM, EFI, STATE		Vassilis	3	Jim L	Ben???		
2043	Refactor repeated CDF library code in CDF processing tools BugZid=50		Vassilis	3	Jim L			
2077	Non Monotonic timestamps. BugzID=72		Vassilis	3	Jim L			
2047	task 2047 in my name: "Seperate E and B timestamps for spin fits", which is also a change to the L1 FIT master CDF and associated TDAS code. But unlike the spacecraft potential enhancement (which only adds new CDF variables, and is more-or-less backward compatible), 2047 would require us to bump the L1 FIT CDF version number to V02, and produce both V01 and V02 for a while, so users of TDAS 5.20 and earlier will still be able to load L1 FIT data. So I'm not sure whether the spacecraft potential task should include 2047, or not.	3/2/2010	Jim L	4+	Jim L			
4075	describe the FBK data type, time tag specified to correspond to the beginning of the time interval of the data that went into the FBK data, the middle, or the end, or is that unspecified, and what's happening here is that the time tagging is being changed in year 3+ of the mission - in the L1 file definition document, at least, does not define the time-tagging conventions to this level of detail.	6/11/2010	John Bonnell	4	Jim L			
4023	Before EOM reprocess L1 cdf's due to master cdf changes for SPDF	3/25/2010	David	4	Jim L			
2080	Phantom packets" cause non-monotonic distribution times. BugzID=25, low priority.		Vassilis	4	Jim L			

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2081	Evaluate CDF compression algorithms BugZid=81		Vassilis	4	Jim L			
2083	Add "last processed" time to L1 (and L2?) CDFs BugZid=115		Vassilis	4	Jim L			
4097	cdf's with MD5 checksum	7/19/2010	Jim L	4	Jim L	Jim L to send email with subtasks and estimates		
Jim M								
4456	GET_MOMENT3D is bombing when it calls STORE_DATA.	3/7/2012	Peter	0	Jim M	Jim L: I tried to reproduce the error, but load_3dp_data does not exist in TDAS. Maybe you're familiar enough with some of the other missions under ssl_general to troubleshoot this...if not, maybe you can tell us at least who's responsible for that code, so we can let them handle it.		
4457	I am not able to load Wind PM files. The code is so convoluted, I can't figure out where things are going awry, but the path it ultimately tries is invalid.	3/7/2012	Peter	0	Jim M			
4492	get_tsy_params, time offset if trange not set	1/19/2012	Marilia Samara	0	Jim M	Need more info from Marilia, unable to reproduce. In working with get_tsy_params it seems that it is important to set the trange parameter. I usually work with a one hour interval. When I use it like so:		
4365	reverse-engineer the process of updating the onboard tables that define the ESA and SST angle/energy modes.	9/8/2011	Vassilis	0	Jim M	steps: Create the Table Image, Create the CDI Commands, Create the IDPU Commands, Create the raw packets that go to the MOC for uplink Have code for reading maps into memory, working on outputting IDPU commands sst angular maps and esa energy maps part done week of 3/26-3/30. Then flatsat testing.		
4365a	Sanity check of current configuration: Jim and Davin will provide a range of ETC memory addresses to be validated. Ops team will request a memory dump of those locations, probably on one of the inner probes, via apid 407 memory dump packets. JWL (or maybe Ben S) will write a tool to stitch the memory dump packets back together into a memory image, which Jim and Davin can inspect to make sure we are working with the correct memory range. Hopefully this will be a targetted test -- a small range of addresses, rather than a complete memory dump (which would take extra care and error checking to interpret). If it's a small enough dump, we can possibly avoid having to write a tool and just look at the raw hex from a few 407 packets.	9/8/2011	Vassilis	0	Jim M	On hold		
4365b	ETC table upload utility: Davin may have something in his backups. If not, JWL will resurrect a "cmd2raw" utility we used during I&T to convert ASCII files of IDPU commands to a properly checksummed RAW command file, which the ops team can then upload to the probes. Jim McFadden and/or Davin will have to provide the list of IDPU commands.	9/8/2011	Vassilis	0	Jim M	On hold		

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4365c	(Maybe) ETC table image->IDPU command converter: If Jim McF or Davin can't come up with a list of IDPU commands, we may need an additional utility to take the desired ETC memory image, and convert that to a file of IDPU commands that will produce the desired memory image when executed on board.	9/8/2011	Vassilis	0	Jim M			
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. See 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			
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			
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			
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.		

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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)		Vassilis	2	Jim M	not allow velocity to go bad		
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.		
4412	Out of memory problem loading HSK data for long timespan	10/28/2001	John Bonnell	3	Jim M	sent John diagnostic code to run; from Jim to John 11-2-11: So far, The program never seems to use more than 400Mbytes of memory, at least as far as I can tell? Can you run the attached version and send the IDL output to me, in a journal file? It just has a couple of statements included, help, /memory, which checks how much memory is being used, and has been used, and get_max_memblock2, which is a program that we wrote to check to see how big an array you can create.		
4003	Document: ESA File and Calibration Processing	3/5/2010	David	3	Jim M			
2091	Once Jim McFadden completes his mods for n_3d_new_3 reprocess L2 cdf's - entire mission		Vassilis	3	Jim M			
2055	ESA L2 from L1 (not packets) - create L2 and test thoroughly, then reprocess ESA		Vassilis	3	Jim M	On Hold; awaiting Jim L to split L1 into master cdf		
2093	AE Indexes Issue Jan 8-12, keyograms Jan 12-13, Stripes-Vassilis: minor nuisance		Vassilis	4	Jim M			
2095	Mosaic Processing - permanent script needed		Vassilis	4	Jim M			
2100d	DC offset between 4sdo and 2sdo in boom plane		John Bonnell	4	Jim M	Which is better? Assigned to J. B. (low priority).		
2100h	Try to track down frequency scaling problem in DPWRSPC (dlimit setting? Compare to old plots?).		John Bonnell	4	Jim M	On Hold - low priority		
2100p	Modify THM_CAL_FIT to treat efs datatype - Install E12/E34 conditional based on th_fit_code TPLLOT variable. If E12 switched to E34 software needs to be revised to handle		John Bonnell	4	Jim M			
Lydia								
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Lydia	Next October 2012		

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4460	modify scripts using rsync to call /usr/bin/rsync rather than /usr/local/bin/rsync Clarina says she has restored /usr/local/bin/rsync so the scripts should run correctly at the moment, but making the modification will mean there are less likely to be problems in the future. The modification will be very quick - probably only 15 minutes to update the scripts and then a few minutes over the next days to ensure they are running correctly. I can make the changes as soon as we are back to allowing SVN commits.	3/21/2012	Lydia	0	Lydia			
4421a	Developers Guide			1	Lydia	add reference to thm_soc_135_time_conventions document (QA prep)		
4421c	L2 File Definitions			1	Lydia	add reference to thm_soc_135_time_conventions document (QA prep)		
4481	New data product, AE index from THEMIS+std sites	1/9/2012	Vassilis	1	Lydia	talk to Vassilis		
4274	Bob Clauer mentioned that he was interested in importing his Antarctic gmags into TDAS.	6/30/2011	Bob Clauer	2	Lydia	From Bob 11-7-11; Both stations that were being tested at South Pole are still operating properly. We will be departing immediately after AGU for our Antarctic field season and plan to redeploy those two stations onto the East Antarctic plateau along the 40 degree magnetic meridian chain (conjugate to the west coast of Greenland). When the stations are deployed and we have exact locations, I will let you know and we can begin the process of including the data into the THEMIS data base. Data from some Antarctic sites has been made available to us in CDF form. Download script written and awaiting SVN open and then add sites to valid sites in TDAS.		
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. Augsburg responded on 11/10	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. Ping what's cooking.		
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	Heard back from David Milling, who gave us a sample URL we can use to download CDFs with wget. Location will probably change when new server is ready.		

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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	Lydia: Do we want to be mirroring the data for the sites and generating CDFs as we do for the other external magnetometer sites? If so, we would need to determine where the data could be retrieved from, obtain permission to mirror it, and write download and conversion to CDF scripts. This would be a separate task for each of the data suppliers (unless there is some existing site that has the data from multiple sources). The 12 stations that are used for the calculation of the AE indices seem to be (according to Kyoto WDC): listed in tasks 4409a-4409m.		
4409b	Dixon (DIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	Masahito Nose replied that we should contact AARI directly. Contacted Oleg Troshichev at AARI on Jan 20th. Have not heard anything back from Oleg Troshichev.		
4409c	Cape Chelyuskin (CCS) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	see 4409b		
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		
4409h and i						Yellowknife and Fort Churchill Initially data before 2011 was not made available for these sites. I requested access to earlier data as FCC was the site Vassilis particularly wanted for the new AE indices. The back data was made available temporarily. This data has now been downloaded and processed, so we have YKC data back to 2008-10-24 and FCC data back to 2009-10-18		
4409l	Leirvorgur (LRV) (Iceland)	10/19/2011	Vassilis	2+	Lydia	They have replied that we can make the data available, but should contact Masahito Nose at Kyoto WDC for access to data. Vassilis would prefer definitive data if delay is not too long. I have emailed Leirvogur asking about data delay (20th Jan). Waiting to hear back before asking Masahito Nose about data access. 3/23/12 from Lydia: Need to check with Vassilis whether he wants definitive or preliminary data. One minute resolution definitive data is updated at the beginning of each month, one second preliminary data is updated hourly. After decision on definitive/preliminary next step is to contact Masahito Nose to request access to the data.		
4409m	SNKQ	10/19/2011	Vassilis	2+	Lydia	SNKQ is confirmed to be the same site as SNK. We already get this data. There seems to be an issue with data availability at the moment, but this is a problem at their end. Nothing needs to be done. We gat data from Alberta.		
4409p	Update Online accesible charts	10/19/2011	Vassilis	2+	Lydia			

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778b	Need capability to read in ASCII, CDF?, . IDL has a built in widget to specify ASCII formats.	11/21/2011	Oldie	2	Lydia	On hold. Also assigned to Pat. See Vassilis's files for Ascii and cdf's only analysis		
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.		
4313	While on the telecon with Alberta, I was looking at the IDL documentation for their built in http download object. It actually makes it look like the http authentication, with username and password would not be too difficult. Since this keeps coming up, we might want to consider dedicating a few hours of programming time to see how hard it actually is to do authenticated downloads. If it turns out not to be too hard, it would probably give us the capability to extend our system to a lot more types of data.	8/11/2011	Pat	2	Lydia	when the need arises - on hold		
4432	ASI FAQ - ask Harald if adding User Questions and his answers	11/10/2011	David	3	Lydia			
4431	GMAG Web Page Enhancements - FAQ's, etc	11/10/2011	David	3	Lydia			
4042	Script to run every two weeks to runs IDL TDAS and checks if a file can be loaded from THEMIS SPDF file (s)	4/19/2010	Pat	3	Lydia	see Pat		
4210	Modeling SST fluxes	3/12/2011	Vassilis	3	Lydia	on hold		
2030	upgrade thm_load to work with probe assignments		Vassilis	3	Lydia			
2031	move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2		Vassilis	3	Lydia			
2032	Multiple enhancements concerning keywords, valid_names and thm_load routines		Vassilis	3	Lydia			
492	Work with Harald to be able to load a reasonable amount of ASI data and add tools into Analysis and DP to process this data.	10/17/2011	Vassilis	3	Lydia			
519	We should extend our data model to support 3-dimensional distributions and 3-dimensional image data. This will entail modifications to load widgets, the loaded data object, the tree widget, the data processing widgets, and the addition of a means to draw	10/17/2011	Vassilis	3	Aaron			
Pat								
4471	Support TT2000 CDF time format in cdf2tplot	1/4/2012	RBSP	1	Pat	should complete by May 2012		
4477	Reprocess SLP data for 2012 leap second	1/9/2012	Jim L	1	Pat	Pre-2012 files also need reprocessing for update to ICY/SPICE kernel. After QA, due end of June 2012	1-2 hrs	
4460	Add New Routines from Lynn Wilson	3/22/2012	Vassilis	1	Pat	also lasp code?		
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			
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. After QA.		
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. Hold until after QA, if necessary.		
4287	Switching SST Load routines to thm_sst_load2 for SST calibrated data	7/15/2011	Pat	1	Pat	on hold		

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4464	mods for file_retrieve, determine remote & local parts from URL returned by query from metadata DB	12/12/2011	IUGONET	2	Pat	item 3.4.2 from presentation (Hold until after QA)		
4463	file_http_copy support for proxy servers	12/12/2011	IUGONET	2	Pat	item 3.3 from presentation (Hold until after QA)		
778a	Need capability to read in ASCII, CDF?, . IDL has a built in widget to specify ASCII formats.	11/21/2011	Oldie	2	Pat	See Vassilis's files for Ascii and cdf's only analysis. Also assigned to Lydia. On hold.		
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat	On hold, after QA		
4002	Document: SST File and Calibration Processing	3/5/2010	David	2	Pat	David to ask Davin for ppt document corresponding to pdf on ftp site concerning SST		
4208b	Enhanced SST Instrument Web Pages	3/5/2010	David	2	Pat	Talked to David first.		
803	Would be nice to have a way to move different panels from one window to another	11/22/2011	Oldie	3	Pat	sort how level of effort to accomplish. On hold, after QA		
3063	40. CL tplot options -- setposition test plots all look the same	1/15/2010	Pat	4	Pat	Long-standing tplot bug, may not ever be fixed		
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.		
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		
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	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.		