Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E	Crib	QA Suite or Script	UG	Qref	Adm Guide
	To be Assigned or Discussed												
4421	After Comments received on Jim L's Leap Second Document the following documents to be updated based on final Leap Second Document:					May only need a mention an link to the document.							
4421a	Developers Guide				Lydia								
4421b	L1 File Definitions				Jim L								
4421c	L2 File Definitions				Lydia								
4421d	User's Guide				Aaron								
4421e	Quick Reference Guide				Pat								
4425	Removing Duplicate procedures	11/3/11	Pat		Pat - Aaron	Reviewd Aaron's notes and list next S/W meeting 11/21							
4435	The wavelet options widget uses the time range set in tplot as the default. It should look at the active data or time range stored in the gui instead.	11/16/11	Aaron	?	?								
4436	The dproc method of the loaded data object has a line to copy the tplot variable being operated on before the wavelet is produced. However, the new variable name is always identical to the original name. If unintentional then it should be fixed, otherwise we can remove the line altogether.	11/16/11	Aaron	?	?								
4438													
4439													
4440													
4441													
4442													
4443													
4444													
	Oldies for Discussion - Du Jour												
760	It is somewhat confusing to the user about the zoom in and zoom out of the page. Another way to make this clearer, might be to draw a border around the draw area, so that the user is more aware of the difference between the two. We'll also have another wa						2 hrs						
764	Add widget to allow user to set space between labels in axis options label tab						1 day						
778	Need capability to read in ASCII, CDF?, SPLASH files. IDL has a built in widget to specify ASCII formats.					write 3-D distributions then extend to GUI	3 weeks						
799	Add '*' shortcut for navigating the tree widget						tbd						
802	Would be nice to have a THEMIS color palette quickly available, maybe a dropdown menu with the 5 themis colors, or a check box to say use 5 default colors?												
803	Would be nice to have a way to move different panels from one window to another												
805	Implement Undo/Redo												
	General												
4068	Lynn Wilson (RBSP) possible enhancements	6/1/10	Lynn Wilson	1	David	David to send email							
4043	Paper on interdependentcies of FGM and STATE Reprocessing	4/19/10	Pat	1	Jim L	David - Put Paper into themis doc format							
447	Save THEMIS document: Attempting to save to a read only file in Windows outputs the correct error message, but IDL crashes immediately afterwards.	2/24/11	Team	1	David - Pat	IDL Error report to ITT - Bjorn at ITT 6/22: what I see it has been fixed in IDL 8.1 which is available for download from our website. Let us know how things work out after you install IDL 8.1 and test this out.							
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.	8/24/11	Pat	?	David	Run an Experiment after VM Migration is completed.							

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	Harald reports that Calgary changed their data server in early September, and downloads started failing after that. Lydia made changes to the GMAG download scripts, which seem to be working. Changes in progress for ASI download scripts, should take about a week to finish downloading ASI files and check for anything missing.	10/31/11	Jim L		Harald								
	QA v7.0 Issues to be tested												
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.	9/30/11	Justin Lee - UCLA	?	?	**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. **Jim L**: Maybe we should upgrade my Macbook from OS X release "Leopard" to "Lion". (There's an intermediate "Snow Leopard" release between those two...maybe also worth testing?) It might even be possible to install all three OS versions, so we can boot into whichever one we need for testing or troubleshooting.							
4389	One is that makepng doesn't appear to work for OSX Lion. Two is that tlimit doesn't work right in OSX Lion. He said that he wasn't having any of these problems in Snow Leopard, and he's going to roll back to the previous OS. But we should probably still try to resolve these issues for future users.	9/30/11	Justin Lee - UCLA	?	?								
	Hannes												
4153	maintenance of gmag stations "Exclude List"	10/11/10	David	0	Hannes	Exclude List updated 7/11/11							
4018a	New Calibration FGM parameters and spin axis offsets	5/10/10	Hannes	1	Hannes								
4080	Attitude Determination next few months	6/21/10	Hannes	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.	5/10/10	Hannes	3	Hannes	Hannes sent out new version for review.							
	Aaron												
4429	add support for new pos/vel and spin model variables to thm_load_state, both for command-line and GUI	11/8/11	Jim L	1	Aaron								
4429a	Check for the presence of slp data for coordinate transforms and warn or prompt the user if it is not present.	11/8/11	Jim L	1	Aaron		6 hrs						
4429b	Check the time range when verifying presence of support data and prompt the user if it is insufficient.	11/8/11	Jim L	1	Aaron		4 hrs						
4429c	Ensure that added features are replay correctly for Themis save files.	11/8/11	Jim L	1	Aaron		4 hrs						

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692	"support additional time formats for Save Data As ASCII"?	11/7/11	Oldie	1	Aaron	**separate list of formats for save data instead of use axis annotation list**							
4275	There was a suggestion that we use dprint more consistently in our debugging output so that it is possible to disable all of the text that the GUI and other TDAS software prints to the command line.	6/30/11	Pat	2	Aaron	**on hold until mid January 2012**							
2135	I didn't realize the cotrans messed up the velocities for earth centered coordinates. Maybe what we really need to do is modify cotrans so that it correctly transforms velocities. Users can incorrectly transform velocities just as easily using thm_cotrans on the command line, as they can using the coord keyword.		Pat/Jim L	3	Aaron	checking that the code to recognize velocity and acceleration components when performing non-inertial transformations works correctly for moon-based coordinates.							
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	3	Aaron	verify note in quick reference and users guide and then task will be closed							
2106	Add the ability to right-click on a variable in the widget-tree and display a popup with basic information about the quantity such as dimensions, range, or other meta data as well as the ability to rename variable		Pat	3	Aaron	originally part of task 64, however, after further evaluation, it was determined this best belonged with the widget tree rather than the analysis window							
2220	I found a small bug in the z-axis panel in the gui. If I change the z-axis annotation size of a layout with 2-panels each with one spectrogram, when I apply this change, it gets applied to both panels, even if set-all is off.	8/27/09	Pat	3	Aaron								
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	10/17/11	Vassilis	3	Aaron								
267	The Layout panel doesn't allow shift selection in the panel portion of the widget.		Vassilis	3	Aaron		1 hr						
745	Windows: using arrow keys in spinners (spin it with up/down arrows)		Oldie	3	Aaron	Confirm it is done already or not							
4340	Anything you can do to accelerate the geometric method?	8/22/11	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.	8/11/11	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	Y	Y	Y		
	Ben												
4403	clean up SST data from 4385 (Jim L)	10/17/11	Jim L	1	Ben								
4403a	implement a tool to clean up particle distribution CDFs as described below	10/17/11	Jim L	1	Ben	**in progress - tool back into development phase**							
4403b	integration with process_lzp_dir (L0->L1) pipeline	10/17/11	Jim L	1	Ben	awaiting 4403a							
4403c	reprocess entire mission to clean up L1 ESA and SST product	10/17/11	Jim L	1	Ben	wait until after AGU (12/11)							
4437	Move Ephemeris Processing to TMTOOLS.	11/17/11	Jim L	1	Ben								
2149g	write a routine to check time tag monotonicity and repair tplot variable if necessary ("replace with NaN" and "delete") - **Specifically checkout the esa pkt issue from Shanshan. Check other programs for similar code.**		Jim L	2	Ben	Create a routine to clean up tplot variables. Use in the load routines were susecptible. Recommend that we just remove what is needed to make the time tags monotonic, and issue a warning indicating that the user should consult the THEMIS software team about that data. **(repair monotonicity of time tags) has been discussed with Jim and the work will start asap, followed by the repair routine's integration with TDAS (Task 2149h).**							
2149h	integrate time tag fixer-upper with TDAS analysis routines		Jim L	2	Ben								

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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	**In progress. TDAS v6 has been tested. Several templates created, selecting the appropriate command line routines to test.**							
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.	1/19/11	Yuri Shprits	2	Ben	part of the state cdf							
4214	THEMIS Pipeline proof of concept regression tests												
4214e	GMAG	3/23/11	Jim L	2	Ben								
4214f	AE Index	3/23/11	Jim L	2	Ben								
4214g	ASI	3/23/11	Jim L	2	Ben								
4214h	mosaics	3/23/11	Jim L	2	Ben								
4214i	summary plots	3/23/11	Jim L	2	Ben								
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.	9/10/10	Jim L	3	Ben		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.	9/10/10	Jim L	3	Ben								
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.	9/10/10	Jim L	3	Ben								
2078	bau_sunpulse_met assumes x86 endiannes (BugzID=13)		Vassilis	3	Ben								
4027b	Reprocessing GOES Data	4/5/10	Tami - SPDF	3	Ben	Reprocessing on hold until Howard Singer delivers another batch of binary GOES data files.							
	Cindy												
4426	While working with Sabine on the lunar coordinate transforms I modified the gse2sse and sse2sel routines so that they can handle array data. Previously these routines only handled tplot variables. The routines that needed to be modified include: gse2sse, sse_matrix_make, sse2sel, sel_matrix_make, tinterpol_mxn (fixed small bug, array data was not being returned) tvector_rotate	11/7/11	Cindy	1	Cindy	Commit mods and revised QA scripts to test these changes (use of arrays)							
	Jim L												
4385	strange patterns in SST data	9/26/11	Xuzhi	0	Jim L	**Now seeing similar issue in ESA data - just monitor.**							

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4369	THEMIS Leap Second Discussion	9/15/11	Vassilis - Jim L	0	Jim L	draft document published. **Awaiting feedback from Harald and Bryce.**							
4326a	The ARTEMIS science team is keen to have a look at the most recent lunar data, with the eclipse spin model corrections turned on. That processing isn't fully automated yet, so it'll take me a couple of hours to set up and run Ferdinand's eclipse processing code. I told Vassilis I'd try to have at least the THB and THC products up to date by next Wednesday's telecon.	8/18/11	Vassilis	0	Jim L								
4326b	Then for Particles and Spin Fits	8/18/11	Vassilis	0	Jim L	**in progress - verify tensor quantities are manipulated properly**							
4034a2	thm_parts_moments update (spin moments mods)	11/22/10	Vassilis	1	Jim L	initial simple way, final fix is to fix esa and sst 3D data structures							
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/10	Jim L	1	Jim L	then reprocess							
4430	crib for eclipse despinning code for spin fits and moments	11/9/11	Jim L	1	Jim L	**on hold- demo exists;dependent on 3093**							
2074c	quality flag for FGM data		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.**							
4326c	reprocessed					**on hold 3093 is done**							
4034a3	awaiting feedback and performing analysis	11/22/10	Vassilis	1	Jim L	Tips of the Month at some point?							
4268e	astrea - come up with a test , verification and migration plan	7/18/11	David	1	Jim L	Lydia will do gmag							
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.	5/23/11	Ferdinand	1	Jim L								
4142	issue with FGS processing - timestamps	9/30/10	Vassilis	1	Jim L	not trivial	3-5 days	Y					
2266	Timing of Spin Fit data	10/16/09	Jim McFadden	1	Jim L	see 4142							
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	4/8/10	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.**							
4030a	Review Onboard Scripts for possible error.	5/17/10	Jim Lewis	1	Jim McFadden, Davin, Robert Abiad	**can duplicate on flatsat. Jim Mcfadden and Davin to review Jim L's email.**							
4030b	Correct Existing Data	5/17/10	Jim McFadden	1	Jim L	4030a prerequsite							
4030c	If scripts change - make changes to processing scripts	5/17/10	Jim Lewis	1	Jim L	4030a prerequsite							
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."	6/1/10	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.**							

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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.	2/7/11	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	7/15/11	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	8/1/11	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:	9/10/09	Jim L	2	Jim L		2 hrs						
4022	Update L1 master cdfs to support SPDF hosting	3/25/10	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?	4/15/10	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**	4/23/10	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.	3/2/10	Jim L	4+	Jim L								

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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.	6/11/10	John Bonnell	4	Jim L								
4023	Before EOM reprocess L1 cdf's due to master cdf changes for SPDF	3/25/10	David	4	Jim L								
2080	Phantom packets" cause non-monotonic distribution times. BugzID=25, low priority.		Vassilis	4	Jim L								
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	7/19/10	Jim L	4	Jim L	Jim L to send email with subtasks and estimates							
	Jim M												
4419	Reprocess overview plots with automated sun contamination removal?	10/26/11	Pat	0	Jim M	**Awaiting fix from Pat for TH-C before resumming the reprocessing.**							
4412	Out of memory problem loading HSK data for long timespan	10/28/01	John Bonnell	0	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.**							
4334d	Danaid Migration - testing and Migration	8/22/11	David	0	Jim M	**in progress**							
4365	reverse-engineer the process of updating the onboard tables that define the ESA and SST angle/energy modes.	9/8/11	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.**							
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.	9/8/11	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.	9/8/11	Vassilis	0	Jim M	On hold							
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.	9/8/11	Vassilis	0	Jim M								

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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.	10/8/10	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.	10/20/11	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	10/20/11	Vassilis	0	Jim M								
4152c	change the ESA tables such that electrons and ions can be changed separately into magnetospheric and solar wind modes.	10/20/11	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 ****	11/2/09	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**							
4394	We have a situation where, from time to time, code is getting pushed out to the automated processing directories prematurely. For example, the automated ephemeris to V00 state state CDF processing is not yet supposed to include the lunar SSE and SEL coordinates, but since I'm currently doing QA on them, the code is checked in to the repository trunk. Twice last month -- once in the beginning of September, and again about a week ago, the code directories used in the automated processing (/disks/socware/thmsoc_dp_current) were updated -- from the trunk -- and this caused the ephemeris processing to fail since the production state CDFs don't have the SSE and SEL variables yet. Suggestion: instead of periodically synchronizing /disks/socware/thmsoc_dp_current from the SVN trunk, we maintain a release branch for the automated processing code, just like we do for TDAS and tmtools. Code would only be promoted to the release branch after it's been thoroughly QA-ed, rather than just doing an SVN export from the trunk whenever something needs an update. This should reduce the risk of unapproved code coming along for the ride when an unrelated enhancement or bug fix gets pushed out to production.	10/4/11	Jim L	1	Jim M	Update tool modified to avoid clobbering the one file where the trunk version is unsuitable -- will revert modification once JWL updates production master CDFs so they will work with the trunk version of state_addcoords.pro							
4394b	Jim M. will probably be the one to make the necessary changes to the repository layout and deployment scripts, if my suggestion is approved.	10/4/11	Jim L	1	Jim M								
4312	Quality flags for efi are wrong including electric field offsets in computation. **On hold until Michael Hartinger sorts out.**	8/8/11	Vassilis	1	Jim M	**discuss with Vassilis**							
4233	Angular Correction for particle data - use Jim McFadden's code if available	1/9/11	Vassilis	2	Jim M								
4302	"bad" themis thg l2 files - mag files	8/1/11	Tami	2	Jim M	**multiple versions of idl_make_cdf Jim M to look at**							

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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.)**	6/6/11	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.**							
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	3/5/10	David	2	Jim M	Talked to David first.							
4003	Document: ESA File and Calibation Processing	3/5/10	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 TPLOT 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.	9/6/11	David	0	Lydia	Next March 2012							
4256b	Astrea Test and Migration to VM	8/30/11	David	1	Lydia								
4405	tidy up the cribs that load ACE data so that they use dates where the data is available	10/18/11	Lydia	1	Lydia	**in progress - one more crib to do, waiting for Davin to check in missing STEREO calibration routine.**							
4274	Bob Clauer mentioned that he was interested in importing his Antarctic gmags into TDAS.	6/30/11	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.							

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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**	2/19/10	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.**							
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	**no response expected until after mid november**							
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.	10/19/11	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.							
4409a	Abisko (ABK) (Sweden)	10/19/11	Vassilis	2+	Lydia	**Permission granted to access data through INTERMAGNET. Awaiting a response from Gerhard Schwarz as to the PI, Affiliation, Acknowledgement, Rules of Use information to include in CDF and on data policy website. (Email sent 14th Nov) In process of writing script to download data. In process of writing script to process data to CDF.**							
4409b	Dixon (DIK) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia	**Still waiting for a reply as to whether Kyoto or APL can make this data available. sent email 10/24/11.**							
4409c	Cape Chelyuskin (CCS) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia	see 4409b							
4409d	Tixie Bay (TIK) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia	see 4409b							
4409e	Cape Wellen (CWE) - closed, replaced with Pebek (?) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia	see 4409b							
4409f	Barrow (BRW) (USGS, US)	10/19/11	Vassilis	2+	Lydia	**Permission to access data granted. Awaiting a response to the followup email/questions sent 14th Nov.**							
4409g	College (CMO) (USGS, US)	10/19/11	Vassilis	2+	Lydia	I have confirmation from U Alaska/GIMA that CMO is the same site as CIGO. We have this data already. Nothing needs to be done.							
4409h	Yellowknife (YKC) (CANMOS/Geological Survey of Canada)	10/19/11	Vassilis	2+	Lydia	**Permission granted to access data through INTERMAGNET. Awaiting a response regarding PI, Affiliation, Acknowledgement etc. Email sent 16th Nov. FCC, YKC can be downloaded and processed with the same scripts as ABK. These scripts are in progress.**							
4409i	Fort Churchill (FCC) (CANMOS/Geological Survey of Canada)	10/19/11	Vassilis	2+	Lydia	ss 4409h							
4409j	Poste de la Baleine (PGQ) - closed, replaced with Sanikiluaq (CANMOS/Geological Survey of Canada)	10/19/11	Vassilis	2+	Lydia								
4409k	Narsarsuaq (NAQ) (DTU, Denmark)	10/19/11	Vassilis	2+	Lydia	**Want to change cdf_save_vars to correctly write epoch attributes as CDF_EPOCH before starting the process to produce Greenland CDFs.**							

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4409l	Leirvorgur (LRV) (Iceland)	10/19/11	Vassilis	2+	Lydia	**sec resolution data for the current month and min for previous months is available at ftp://ftp.raunvis.hi.is/pub/lrv/. Point of contact: Þorsteinn Sæmundsson halo@raunvis.hi.is. Sent email requesting permission to access data on Nov 9th. No response as yet.**							
4409m	SNKQ	10/19/11	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.							
4409n	Greenland Scripts	10/19/11	Vassilis	2+	Lydia	**see 4409k**							
4409o	Update Admin Guide	10/19/11	Vassilis	2+	Lydia								
4409p	Upodate Online accesible charts	10/19/11	Vassilis	2+	Lydia								
4298	the slices code should probably have a keyword to use the new SST calibrations.	7/27/11	Pat	2	Lydia	On hold till the SST calibrations have found wider use.			Y		Y		
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.	8/11/11	Pat	2	Lydia	**when the need arises - on hold**							
4396	Testing v6.0 and bleeding edge with Mac Lion OS - see Justin's Issues	10/4/11	David	3	Lydia								
4432	ASI FAQ - ask Harald if adding User Questions and his answers	11/10/11	David	3	Lydia								
4431	GMAG Web Page Enhancements - FAQ's, etc	11/10/11	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)	4/19/10	Pat	3	Lydia	see Pat							
4210	Modeling SST fluxes	3/12/11	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.	10/17/11	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	10/17/11	Vassilis	3	Aaron								
	Pat												
4420	reprocessed slp data in a different way	11/1/11	Sabine	0	Pat								
4138f	Run simulation for range of initial positions around the full sphere.	9/17/10	Davin	1	Pat	**Reeceived Data from Rob Lillis - check the mods to see if they work and if so start simulations**							
4267c	Write code to remove proton and electron contamination from the electron and proton distributions using data and efficiencies from the F & O channels.	6/27/11	Pat	1	Pat	**in progress - working well and will show Vassilis next week**							
4355	IDL-VM checkout	8/30/11	Yoshimasa - Iugonet	1	Pat	**another error - bug analysis; review list of duplicate name modules at next S/W meeting**							
4287	Switching SST Load routines to thm_sst_load2 for SST calibrated data	7/15/11	Pat	1	Pat	**on hold**							
447	Save THEMIS document: Attempting to save to a read only file in Windows outputs the correct error message, but IDL crashes immediately afterwards.	2/24/11	Team	2	David - Pat	IDL Error report to ITT - Bjorn at ITT 6/22: what I see it has been fixed in IDL 8.1 which is available for download from our website. Let us know how things work out after you install IDL 8.1 and test this out.							

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4433	Is there was a way to specify tick marks on the z axis in tplot and whether the ticks themselves could be drawn. It looks like the procedure responsible for drawing the z axis does not include these options, although they are basic IDL plotting options. We would simply need to add the respective keywords to the procedure's call and they could be passed through to the plotting routine with the usual options.	11/14/11	Drew - UCLA	2	Pat	**Vassilis** was under the impression that they are automatically accepted like all standard keywords. Is that true from your experience? **Jim M**: I don't think that you can pass standard keywords through tplot to the plot routine; instead you use the options routine to set up the options for a given tplot variable, and then tplot should pick that up. something like options, 'thb_xxx_xxx', 'zticklen', 5. **Aaron**: Currently tplot only picks up the 'zticks' option, which controls how many ticks are automatically used by IDL. Users can add other plotting options such as zticklen but there's no code to pull them from the options structure so they end up boing ignored. **Pat:** draw_color_scale.pro is the routine that draws the z-axis for a tplot spectrogram, but it doesn't look like draw_color_scale supports the normal set of options. The settings it does support are: zrange zlog ztitle zticks zposition zoffset no_color_scale. All of these would need to be set using the options keyword. I imagine that zticks, zposition, & zoffset could be used to configure z tick settings. Another possibility would be to use no_color_scale to turn off the z-axis then you could draw it yourself by calling draw_color_scale manually.							
716	When I swapped between traces on the line window there was a noticeable screen flicker and the line window was moved back to the center of the viewing area.(even though I had positioned the window off center. The flicker can be eliminated by turning upda	11/7/11	Oldie	2	Pat								
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat								
4002	Document: SST File and Calibation Processing	3/5/10	David	2	Pat	**David to ask Davin for ppt document corresponding to pdf on ftp site concerning SST**							
4208b	Enhanced SST Instrument Web Pages	3/5/10	David	2	Pat	Talked to David first.							
3065	68. GUI z-axis options -- when Fixed Min/Max selected, value in spinners does not reflect current range as it does for X and Y axes. Displayed range when spinners desensitized is inaccurate.	2/10/10	Aaron	3	Pat	check draw object							
4434	bug in the sst load code that is called from thm_part_moments which should occur when loading reduced distribution data. There is a keyword called badbins2mask which allows you to disable particular angles, when creating moments. If this keyword is called when using reduced distribution data it will fail because it assumes that the reduced distribution data is in 6-angle mode, when reduced data actually switches between 1-angle and 6-angle modes.	11/16/11	Pat	3	Pat		1 hr						
3063	40. CL tplot options -- setposition test plots all look the same	1/15/10	Pat	4	Pat	Long-standing tplot bug, may not ever be fixed							