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												
4384	Horae possibe VM Migration - Review after all other servers migrated	9/26/11	David	1	?								
	We should probably discuss whether the alternate versions of these routines should be built into our release versions of TDAS. While unlikely, these errors could also occur for non-VM users.					Discuss at S/W Meeting 10/24							
	THMSOC - anything left to discuss					Discuss at S/W Meeting 10/24							
	Data Reprocessing befoe AGU - cut off date					Discuss at S/W Meeting 10/24							
4412													
4413													
4414													
4415													
4416													
	Oldies for Discussion - Du Jour												
	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.							
	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	**8/22/11 Hannes: start new Artemis offsets this week (currently covered through mid June). Themis covered through Mid August and will not be updated until the end of the year 2011. 8/29/1: Sent to Brandswaug**							
4080	Attitude Determination next few months	6/21/10	Hannes	1	Hannes	After 4018a for Artemis is complete will work on spin phase and axis offsets							
2074c	quality flag for FGM data		Vassilis	2	Hannes	talk to Ferdinand							
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.							

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	Aaron												
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	**Email list of order for global changes to team. When you come up with subgroups to do the global change email, come up with a list of QA scripts and/or suites that could be used to test the changes. I would suggest the first subgroup be a small one so we can check if there are any issues that pop up. Mid January 2012**							
2121	When thm_load_fit is called requesting a single data type it will also return some auxiliary data types. For example: thm_load_fit,probe='b',datatype='fgs' returns: 1 thb_fit_code 2 thb_fit_npts 3 thb_fgs. load bug or test script bug) b. The relpathnames all keyword is broken.			2	Aaron								
4393	Tplot cribs move to ssl_general	10/4/11	Pat	2	Aaron	**in progress**							
24	Misc changes												
24a	Page Options (for printing)	11/17/11	Team	2	Aaron								
24b	ungray widget to allow user to modify canvas settings	11/17/11	Team	2	Aaron								
24c	add window size to page settings template	11/17/11	Team	2	Aaron								
24d	need algorithm to print a large canvas	11/17/11	Team	2	Aaron								
2029a	Provided is the most common plot used by scientists that look at magnetic field data. Four panels Bx By Bz Bt and the position X Y Z as variables. Often the radial distance R is another variable. It would be great if someone enters e.g. tplot,'tha_fgs_gsm' such a useful default plot would appear. I am currently not able to produce such a plot using tplot. Another useful plot would be instead of one trace per panel, 5 traces per panel. One for each spacecraft and 5 sets of positions as variables at the bottom. For example: tplot,'th?_fgs_gsm' could produce such a plot. Also some standard plots that combine ground and spacecraft data could be useful. Notes from Vassilis: define keyword /positions default 'none', allow GSM X Y Z, R Lat Long,.....		Hannes	3	Aaron	**discuss at s/w meeting on 10/31**						
2029b	The level 2 CDF files at http://themis.ssl.berkeley.edu/data_download.shtml should contain position in various coordinate systems as well. Preferably in the same resolution as the data. Otherwise Scientists need to get the position from another source. Notes from Vassilis: option to introduce the data in RE with keyword (one RE =6,478 kilometers ???). Like thm_load_fgm /pos_units= 'RE'. Also thm_load_state keyword out_coord = 'GSM', 'GSE',...etc.		Hannes	3	Aaron	**discuss at s/w meeting on 10/31**						
2029c	If one loads fgm data from probe 'a' and let's say there are no data for the chosen interval. The variables tha_fgl and tha_fgl_gsm etc. should all be empty. It could be those variables still contain data from the previously loaded interval.		Hannes	3	Aaron	**discuss at s/w meeting on 10/31**						
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								
2124	I loaded a plot which had the line color as white. Because the legend plots in the same color as the line, the legend text did not show up. We should probably just put in a check for this case. If the line is white and the background is white then draw the text in black		Pat	3	Aaron								

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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 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								
4340	Anything you can do to accelerate the geometric method?	8/22/11	Vassilis	3	Aaron	**on hold**							
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								
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		
267	The Layout panel doesn't allow shift selection in the panel portion of the widget.		Vassilis	4	Aaron		1 hr						
	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	10/17/11	Jim L	1	Ben								
4403b	integration with process_lzp_dir (L0->L1) pipeline	10/17/11	Jim L	1	Ben								
4403c	reprocess entire mission to clean up L1 ESA and SST product	10/17/11	Jim L	1	Ben								
2046	Create a more efficient & productive prototype QA Instrument Command Line Script - first template (s) functional blocks then scripts for FGM, ASK, SCM, FIT, MOM, ASI, EFI, FFT, FBK, Gmag, State, SST, ESA		Jim L	1	Ben	**In progress. TDAS v6 has been tested. Several templates created, selecting the appropriate command line routines to test.**							
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 integrationwith TDAS (Task 2149h).**							
2149h	integrate time tag fixer-upper with TDAS load routines - thm_load_xxx and few others		Jim L	2	Ben	needs a prerequisite written - see 2149g							
4379	Add Mirror Sites info to Admin Guide	9/23/11	Jim L	2	Ben	See David for Info							
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								

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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.	9/10/10	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												
	Jim L												
4385	strange patterns in SST data	9/26/11	Xuzhi	0	Jim L	**The updated script set was just uploaded to TH-C, TH-B to follow when the pass schedule permits. Monitoring to continue until both ARTEMIS probes are updated, and compression is once again being performed during fast survey. So maybe 2 more weeks at 1 hr/week.**							
4369	THEMIS Leap Second Discussion	9/15/11	Vassilis - Jim L	0	Jim L	**Jim L to write up doc and get SL:P write-up from Pat. Issues Probe Files, Spin Model, ESA Pkt, SPDF, VMO. Looking like early next week to complete the leap second document. eta 10/30**							
4310	state files: including P1, P2 SSE and SEL coordinates	8/8/11	Vassilis	0	Jim L								
4310g	take Jasper's code and incorporate into thm_cotrans	8/8/11	Vassilis	0	Jim L								
4310b	Change the V00 and V02 ascii ephemeris to state CDF processing to include the new SSE and SEL ephemeris variables	8/8/11	Vassilis	0	Jim L								
4310c	Change thm_load_state to allow loading the new variables	8/8/11	Vassilis	0	Jim L								
4310d	Test that revised CDFs have correct data	8/8/11	Vassilis	0	Jim L	**Jim will ping Sabine Frey**							
4310e	Deploy code changes and new master CDFs for use in the automated processing	8/8/11	Vassilis	0	Jim L	on hold until confirmation 4310d							
4310f	Reprocess state CDFs for entire mission	8/8/11	Vassilis	0	Jim L								

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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	**Vassilis is okay awaiting Sabine's okay**							
4326c	add new variables to STATW cdf and reprocessed					**on hold 4326b is done**							
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/10	Jim L	1	Jim L	brought up from 3+ priority							
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							
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.**							
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**							

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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								
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												
4401	hsk and config file - permanet change	10/17/11	Team	0	Jim M								

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4411	I've been using the tplot variable "th*_hsk_issr_mode_raw' to automatically identify fast survey intervals. It's been working well for most intervals in 2008 and 2009, but recently I've been looking at intervals in 2010 and later and have been having problems. In particular, there are some fast survey intervals that are identified as slow survey using this variable. For example, if you run the code below, you'll see that during an interval on 01-Nov-2010 around 1100, slow survey data is indicated along with wave burst data every 5 data points, yet the summary plot shows that it should all be fast survey (attached) -- it also doesn't look like any wave burst intervals are occurring.	10/21/11	Michael Hartinger · UCLA	0	Jim M	What's happening is that the degap program has gotten a small value of dt equal to 12 seconds, and many of the data points are spaced a minute apart. Many of the data points are also 2 and 4 seconds apart. There are also a bunch of intervals spaced 12, 16, 24, and 48 seconds apart. By default the value for dt used in tdegap is the median value of the set of time intervals. It's not designed to deal with multiple time resolutions; how it it supposed to decide what the data should look like? You could use the min value of the time resolution, but then you end up degapping when you shouldn't, for the points with long time resolution. You can use the max value of time resolution, but you would never degap anywhere then. The median usually works, because you usually don't get THEMIS data with that many different time resolutions in the same dataset. The user needs to use the dt keyword in tdegap, and input something slightly larger than what he expects the maximum time resolution to be. In the overview plots we use dt = 600.0 in the degap calls, I'd suggest that Michael use two minutes here. **Awaiting confirmation from Michael that this fixes his issue.**							
4334c	Ambrosia Migration - testing and Migration	8/22/11	David	0	Jim M	**ve migrated and checked out the repository, I'll be testing commits andupdates today. Next week I'll fill the socware directories and check the release and bleeding edge scripts, we should be good to go a week from Monday.**							
4334d	Danaid Migration - testing and Migration	8/22/11	David	0	Jim M								
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 **** in progress ** Still writing code that reads the angle/energy maps into memory.**							
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	On hold							
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.**							

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E	Crib	QA Suite or Script	UG	Qref	Adm Guide
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								
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**							
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.**							

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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	3/5/10	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							
4410	Marilia Help Request	10/19/11	Marilia - UCLA	0	Lydia								
4256b	Astrea Test and Migration to VM	8/30/11	David	1	Lydia								
4375	Calgary GMAG Issue	9/20/11	Lydia	1	Lydia - Harald	**new script needed. gmags up and running. ASI will be up and running by Monday. Will check next week to see if any data products are missing.**							
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.**							
4357	Laura is looking into the processing of EPO Spectra jpgs. As this has been a problem for more than a year it is probably not a high priority.	9/1/10	Laura Petacolas	n/a	Lydia - maybe	**Scripts to fill in missing information in database and also to reprocess missing files are currently running.** Will be another week before that is finished. Still waiting to hear back regarding the spectral jpg files.							
4274	Bob Clauer mentioned that he was interested in importing his Antarctic gmags into TDAS.	6/30/11	Bob Clauer	2	Lydia	Bob email us and said he would provide necessary data.							
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 investigating - ping sent on 9/23**	2/19/10	James Weygand	2	Lydia	**Email requesting other 2007 sites to be put on ftp site. From Erik at Augsburg: We are indeed moving information from an older computer to a newer one, with both currently in service and with the general designator space.augsburg.edu now pointing at the newer computer leaving the old 'space' computer as yspace, as you noticed. We are indeed moving information from an older computer to a newer one, with both currently in service and with the general designator space.augsburg.edu now pointing at the newer computer leaving the old 'space' computer as yspace, as you noticed.**							

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2175	L2 File Definitions Document	3/1/11	David	2	Lydia	**next week commit changes**							
2062	Alberta - At the moment the data files are from Dawson (daws), Churchill (fchu), Island Lake (isll) and Fort McMurray (mcmu). I will add Rabbit Lake and Taloyoak at some time but we have some issues with mag pointing at those 2 sites. If you recall, the agreement between Ian and Vassilis was that this data wouldn't be copied to become part of a mirrored archive like the existing data we provide. Instead, each file would be obtained from this site each time it is requested (using curl or some such). This means we can use our own logs to monitor data usage. Themis Software to be able to retrieve from Alberta		Vassilis	2	Lydia	**awaiting reply to sent email**							
4406	It may be that the admin guide needs to be expanded to have, for example, an introductory section on gmags before the details of the gmag scripts. This could just be a paragraph or so that explains that the magnetometer data is retrieved from a number of different external servers in various formats by some automated scripts and processed to CDF form by some others. It should mention what information is stored in databases, and how that information is used. It would also point people to the excel list of magnetometer sites.	10/18/11	Lydia	2	Lydia								
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.							
	Vassilis					While in principle there is no need to have the same station twice it would be fine to do so using a 3letter code in order to ensure we have the exact same data as goes into the Kyoto AE. Someone wrote a "commentary" in JGR on one of our earlier papers, saying that we misinterpreted the phenomenon because the THEMIS AE while it was supposed to catch more localized activations ironically missed an event that showed up on the Kyoto AE because we did not have one station: FCC. So we need to have all AE stations, a lesson learned from that experience.							
	Lydia					To ensure that we have exactly the same data it may be that the first step is to contact Kyoto (or perhaps Kazue Takahashi at APL as mentioned) and ask them exactly where they retrieve the data from. Although some data can be found online (eg. data from the USGS) it may be that it is a different resolution to that used to generate the Kyoto AE, or only available for restricted times. e.g. we retrieve Sanikiliuaq data from Alberta, but I am not certain whether this is exactly the same data as is available from Geological Survey of Canada online, or what version is used to generate the Kyoto AE.							
	Vassilis					I'd try to go for the highest resolution possible (although this is not as crucial as getting all stations). For example if there is a common database to obtain all the stations lets do that in whatever the cadence and maybe this is good enough. Kazue had mentioned 2 yrs ago that they were preparing an automated site. (Takahashi, Kazue <Kazue.Takahashi@jhuapl.edu>)							

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	Pat					Correct me if I'm off-base, but I'd suggest that you might not want to set your standards for data quality too high at first. Just getting some data from the required sites would be a big improvement over what we've got now, even if it isn't their best data or even if we get data for the same gmag but from someone different than Kyoto does. Even a first draft AE will be challenging because we're probably talking about a number of different data providers, each with their own formats and distribution rules. Once we've got an initial version of a "true" ae, we can work on finding better quality options.							
4409a	Abisko (ABK) (Sweden)	10/19/11	Vassilis	2+	Lydia								
4409b	Dixon (DIK) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia								
4409c	Cape Chelyuskin (CCS) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia								
4409d	Tixie Bay (TIK) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia								
4409e	Cape Wellen (CWE) - closed, replaced with Pebek (?) (AARI, Russia)	10/19/11	Vassilis	2+	Lydia								
4409f	Barrow (BRW) (USGS, US)	10/19/11	Vassilis	2+	Lydia								
4409g	College (CMO) (USGS, US)	10/19/11	Vassilis	2+	Lydia	This may be the same as the CIGO site we retrieve from Alaska (GIMA network) - or at least located at the same place.							
4409h	Yellowknife (YKC) (CANMOS/Geological Survey of Canada)	10/19/11	Vassilis	2+	Lydia								
4409i	Fort Churchill (FCC) (CANMOS/Geological Survey of Canada)	10/19/11	Vassilis	2+	Lydia	Fort Churchill may be one of the sites that is intended to be included with the new sites available from Alberta (it was mentioned at one point, but I can't confirm this). However, the present intention was that the data be retrieved on the fly in CDF format from Alberta, rather than mirrored to our data directory.							
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	We already retrieve this data as part of the 'Greenland' network. Currently the data is downloaded manually, so we would probably need to automate the Greenland download and processing scripts. Unless there is some reason why they are only run manually.							
4409l	Leirvorgur (LRV) (Iceland)	10/19/11	Vassilis	2+	Lydia								
4409m	SNKQ	10/19/11	Vassilis	2+	Lydia	We already retrieve data from Sanikiluaq from Alberta, though we don't have any data since May for this site. Assuming we are talking about the same magnetometer at Sanikiluaq nothing needs to be done for this site (except perhaps checking why we have no recent data).							
4409n	Greenland Scripts	10/19/11	Vassilis	2+	Lydia	Unless there was a reason why the Greenland download scripts weren't automated to begin with, I think this would be a useful task. It wouldn't be very much work to set up the existing scripts to run on the cron and would mean that someone (me probably) doesn't need to remember to run the download scripts every six months or so.							
4409o		10/19/11	Vassilis	2+	Lydia								
4409p		10/19/11	Vassilis	2+	Lydia								
4409q	Update Admin Guide	10/19/11	Vassilis	2+	Lydia								
4409r	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**							

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2088	Themis Developers Guidelines		David	3	Lydia	**Lydia completed Draft - out for review: Jim M, Jim L, Aaron**							
4396	Testing v6.0 and bleeding edge with Mac Lion OS - see Justin's Issues	10/4/11	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												
4138f	Run simulation for range of initial positions around the full sphere.	9/17/10	Davin	1	Pat	**Rob Lillis sanitizing files.; eta couple of weeks from Rob**							
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	**Installed geometric factors from true. Decontamination with new GFs improved data some, but there are still problems. Drew is checking for a possible error in his GF calculation, code. I'm writing code to include background noise removal as a function of the activity on the FTO channel and double checking the for sources of error in the decontamination matrix. Progress continues,**							
4355	IDL-VM checkout	8/30/11	Yoshimasa - Iugonet	1	Pat	**GUI modifications to be made so that we can track down the errors. I'm aiming to have the mods completed sometime next week.**							
4399	modifying the overview plot script to include the automatic sun contamination removal for SST. I've been hearing from people that its been working better now that Lydia has tuned the thresholds for contamination removal. A lot of the time, the SST spectrograms are extremely contaminated in the overview plots.	10/13/11	Pat	1	Pat	**mod made; overview updated over the weekend for the next couple of days; If Vassilis says okay then reprocess**							
4287	Switching SST Load routines to thm_sst_load2 for SST calibrated data	7/15/11	Pat	1	Pat	on hold							
63	Up/Down Arrows to scroll draw area		David	2	Pat								
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.							
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat								
4002	Document: SST File and Calibation Processing	3/5/10	David	2	Pat								
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							
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							