

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								
4448	In particular, he was getting two problems: #1 If he tried to run plotxy to create a postscript without having > already created a normal plot, it would throw an IDL error. #2 If he tried to run plotxy to create a postscript after having created a normal plot it would throw a different error > #3 If he used the replay functionality with plotxy(call plotxy with zero > arguments), it worked. He is using IDL 6.3 with TDAS 6.0 on windows. I can't replicate these issues on my computer, even when I run a copy of his code. My hunch is that this is a windows compatibility issue. Since #3 works, he has a temporary workaround, but we should still probably track the problem down and fix it.	12/30/2011	Stefan - UCLA and Pat	0	?	Stefan to upgrade IDL version from 6.3 and try again.							
4475	Review Davin's recent commits	1/5/2012	David		All	SVN revs 9483 through 9487							
4476	Discuss thmsoc_dp_current deployment process, avoid unintended updates from trunk	1/5/2012	Jim L,David		All								
4477													
4478													
4479													
Oldies for Discussion - Du Jour													
General													
4068	Lynn Wilson (RBSP) possible enhancements	6/1/2010	Lynn Wilson	1	David	David to send email							
4043	Paper on interdependencies of FGM and STATE Reprocessing	4/19/2010	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.	2/24/2011	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.	8/24/2011	Pat	?	David	Run an Experiment after VM Migration is completed.							
4449	Overview plots - web behaviour	12/30/2011	Pat	0	Emmanuel	Modify web server config to send cache control headers, so clients can detect stale files that need to be reloaded.							
4453	Look into RBSP autoplot tool	12/5/2011	Mini-GEM		David	David to contact autoplot team							
4474	Ping Davin to resolve problems with st_mag_load	1/4/2012	David		David	Currently commented out of crib sheet							
4454	Plot templates (autoplot version, different from TDAS templates)	12/5/2011	John Bonnell		David	On hold until TDAS 7 QA is finished.							
QA v7.0 Issues to be tested													

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4388	I was having some trouble getting the mouse click feature to work with the various tplot functions in TDAS after upgrading to a new system running the Lion OS. After poking around a bit it looks like there are a couple X11 settings that need to be changed to allow clicking of tplot windows (such as when using the tlimit command). In X11 preferences I enabled the following: Input: Emulate three button mouse Windows: Click-through Inactive Windows After enabling those I was able to click on tplot windows again. Just passing along the info in case there are others who may experience this issue.	9/30/2011	Justin Lee - UCLA	1		Pat: This looks different than the instructions that we have in the quick reference guide. I think that we may need a new set of instructions for newer macs. 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.	9/30/2011	Justin Lee - UCLA	1									
2063	Problem with edit3dbins is being caused by IDL's mouse system variable not being updated correctly on Macs. The ctime procedure, used to interactively select a time from a tplot window, relies on this variable to determine when a selection has been made in the tplot window. If the variable is never updated then ctime gets caught in an infinite loop. It's unclear whether this is specific to a particular OS version, but the routine should probably be modified at some point to maximize compatibility with Macs. In the meantime the alternate method of calling gettime that I copied you on yesterday should provide a temporary way around this bug.		Aaron	1		Also on Lion							
4459	QA for TDAS 7 under IDL VM	12/12/2011											
	Hannes												
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	Exclude List updated 7/11/11							
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes	new Arthemis offsets sent to Karl-Heinz on 11/21/11; reprocessing after AGU for the STATE							
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes								
4472	Inter-spacecraft FGM calibration for ARTEMIS	1/4/2012	Vassilis	1	Hannes								
2074c	quality flag for FGM data		Vassilis	2	Hannes	quality flags for FGM data: Hannes talked to Ferdinand and suggests some flags in the state CDF: times when eclipse spin model adjustments were performed; times when spin fit & FGL data used to refine the eclipse spin model; times when V03 attitude corrections are available; times when spin fit timing had problems. Some of these flags already present in state CDF spin model variables. JWVL will document in L1 file definition document. Final item not so easy, since we have trouble even detecting the timing problem in spin fits. Keep task open, Vassilis says we can come back to it when we have clarity on the spin fit timing.							
4058	This is getting a bit out of hand I think. How about a configuration file? The software just reads keywords from a configuration file. With such a configuration file it is possible to set keywords automatically (for the scientists) but additionally it would give us the possibility to keep track of what the software does automatically. When I do calibrations I can then save the configuration file together with the results and not worry about the things that the software might have done automatically.	5/10/2010	Hannes	3	Hannes	Hannes sent out new version for review.							
	Aaron												

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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.	6/30/2011	Pat	1	Aaron	First batch updated themis directory; ssl_general is next, will need to be thoroughly checked since other projects are using it.							
4441	bugs in tplots handling of labels	11/23/2011	Aaron	1	Aaron	reopened 1/4/2012 -- can wait till after QA							
4441a	It looks like the LABFLAG option, which controls where y-axis labels are placed in tplot, is not applied correctly for compound variables. Specifically, the option to draw evenly spaced labels doesn't account for the labels from all the component tplot variables and end up drawing them on top of each other.	11/23/2011	Aaron	1	Aaron	reopened 1/4/2012 -- can wait till after QA							
4441b	The option to specify the label position on a line plot only works if the LABFLAG keyword was never set. There should be a specific value it can be set to to allow the user to specify the label positions.	11/23/2011	Aaron	1	Aaron	reopened 1/4/2012 -- can wait till after QA							
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. Thought this was already checked; Aaron to check again and verify if this can 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.	8/27/2009	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	10/17/2011	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	Not working under windows. How did this get past TDAS 6 QA?							
4340	Anything you can do to accelerate the geometric method?	8/22/2011	Vassilis	3	Aaron	on hold							
4314d	combination of ESA and SST data could only be done in the Geometric mode. Would be great if it could be done in other modes as well.	8/11/2011	Xuzhi	4	Aaron	On Hold							
2013w	Integrate our own slicer3.pro gui with regular 2-D slice plots.		Vassilis	4	Aaron	on hold	2 days	Y	Y	Y	Y		
Ben													
4403	clean up SST data from 4385 (Jim L)	10/17/2011	Jim L	1	Ben								
4403a	implement a tool to clean up particle distribution CDFs as described below	10/17/2011	Jim L	1	Ben								
4403b	integration with process_lzp_dir (L0->L1) pipeline	10/17/2011	Jim L	1	Ben	qa testing coming							

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4403c	reprocess entire mission to clean up L1 ESA and SST product	10/17/2011	Jim L	1	Ben	reprocess 1 month subset into QA, through L2 and summary plots, build & test tmttools 7.1 release for this in progress - processing script done, working on wrapper script, logging, error reporting							
4437	Move Ephemeris Processing to TMTTOOLS.	11/17/2011	Jim L	1	Ben								
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	1	Ben	then reprocess. JWL to provide detailed task description. Probably not before QA.							
4466	Documentation for mirror site admins	12/14/2011	David	2	Ben	Sample scripts, suggested config for ssh, rsync,firewalls. Add to THEMIS-ARTEMIS admin guide?							Yes
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.	1/19/2011	Yuri Shprits	2	Ben	part of the state cdf							
4214	THEMIS Pipeline proof of concept regression tests												
4214e	GMAG	3/23/2011	Jim L	2	Ben								
4214f	AE Index	3/23/2011	Jim L	2	Ben								
4214g	ASI	3/23/2011	Jim L	2	Ben								
4214h	mosaics	3/23/2011	Jim L	2	Ben								
4214i	summary plots	3/23/2011	Jim L	2	Ben								
4135	Now that the L1 ESA/SST/MOM reprocessing is underway, these CDFs will soon contain the full ESA and SST configuration words, in addition to the solar wind flags, sweep modes, and so forth. With the full configuration data available, if someone wants to use a property of these instrument configurations that's not already present as a L1 variable, we don't need to reprocess L1 to add it -- we just write a little more code for TDAS, to extract the new attribute from the configuration data that's already present.	9/10/2010	Jim L	3	Ben		2-4 hrs						
4135a	Write some TDAS routines that take an apid and a configuration word, and return a structure with all the relevant properties of that configuration. This is basically reimplementing some logic that's already in the L0->L1 processing code (written in C). If anyone ever needs other attributes of the instrument configuration (for example: the angle maps corresponding to each configuration), we would update these routines to return the additional information.	9/10/2010	Jim L	3	Ben								
4135b	In the load and/or calibration routines for ESA, SST, MOM: rather than using the ESA solar wind flags and sweep mode from the L1 CDFs, use the ESA full configuration instead (which is present in all three L1 types, for convenience), and use the routines from 4135a to extract the solar wind flags, sweep mode, and any other useful attributes. I think SST does not have any configuration flags similar to the ESA quantities (there's the attenuator status, but that's separate from the instrument configuration word), but it needs them in the future, they should be handled the same way as ESA (extract from SST configuration word instead of adding L1 variables). I can do this, but if the routines from part (a) are well-documented, any of us could probably do this part.	9/10/2010	Jim L	3	Ben								
2078	bau_sunpulse_met assumes x86 endiannes (BugzID=13)		Vassilis	3	Ben								
4027b	Reprocessing GOES Data	4/5/2010	Tami - SPDF	3	Ben	Reprocessing on hold until Howard Singer delivers another batch of binary GOES data files.							
Cindy													
Jim L													

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4465	Diagnose, repair? Spikes in FGS data.	12/14/2011	Vassilis	0	Jim L	No code changes required. Document on web site (anomalies/watch out for) as something to be aware of when using FGS data. CC Uli Auster with draft wording.							
4458	Horae (rsync server for mirror sites) is dying and needs to be migrated to a VM ASAP.	12/8/2011	Jon L	0	Jim L	Use new UCLA mirror site as test case for new server, or maybe Chile since UCLA will take a while to set up.							
4369	THEMIS Leap Second Discussion	9/15/2011	Vassilis - Jim L	0	Jim L	Received feedback from Harald and others, will incorporate into next draft and distribute.							
4468	Modify ESA packet loading code to use standard spinmodel routines rather than deprecated ASCII files.		Jim L	0	Jim L	To be completed before starting QA.							
4451	operating the particle instruments in "accumulate" rather than "snapshot" mode. So we'd be getting into some unexplored territory. The time tagging code in the L0->L1 particle distribution processing would need some slight modifications to support "accumulate" mode. The ESA load routines use the L0 packets directly, and probably also assume "snapshot" mode, so that's another potential set of required modifications. I wouldn't be surprised if the ESA and SST calibration code also assumes snapshot mode. It would need to be tested with real data (since we have no way to generate a realistic particle data stream on FLATSAT).	12/1/2011	Vassilis	?	?	Hold until after QA.							
4451a	accumulate mode	12/1/2011	Vassilis	0	Jim L	flatsat testing I0-I1 mods; on hold	1 day						
4451b	tdas mods - if accumulate mode approved discuss at S/W meeting	12/1/2011	Vassilis	?	?								
4034a2	thm_parts_moments update (spin moments mods)	11/22/2010	Vassilis	1	Jim L	initial simple way, final fix is to fix esa and sst 3D data structures. Probably a good idea to make a THEMIS-specific moment calculation routine, to avoid extensive changes to WIND code currently being used. On hold, after QA	depending on pri zero tasks						
4326b	Then for Particles and Spin Fits	8/18/2011	Vassilis	0	Jim L	in progress - dependent on 4034a2. On hold, after QA.							
4430	crib for eclipse despinning code for spin fits and moments	11/9/2011	Jim L	1	Jim L	on hold- demo exists;dependent on 3093							
2074c	quality flag for FGM data		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	11/22/2010	Vassilis	1	Jim L	Tips of the Month at some point?							
4268e	astrea - come up with a test , verification and migration plan	7/18/2011	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.	5/23/2011	Ferdinand	1	Jim L								
4142	issue with FGS processing - timestamps	9/30/2010	Vassilis	1	Jim L	not trivial	3-5 days	Y					
2266	Timing of Spin Fit data	10/16/2009	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	4/8/2010	Jim McFadden	1	Jim L	Jim L talked to Davin and sounds like we can shut the data off. Jim L will send email on the time saved by shutting this off.							

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4030a	Review Onboard Scripts for possible error.	5/17/2010	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	5/17/2010	Jim McFadden	1	Jim L	4030a prerequisite							
4030c	If scripts change - make changes to processing scripts	5/17/2010	Jim Lewis	1	Jim L	4030a prerequisite							
4070	"Add support to thm_cotrans, ssl2gse, and ssl2dsl for /pseudo_dsl keyword. If keyword is present, look for and apply eclipse delta_phi corrections as appropriate."	6/1/2010	Jim L	1	Jim L	thm_load_fit and thm_load_mom, add keyword. In progress - Will review code Davin checked-in concerning tensor quantities in thm_load_mom.							
QA110	as you know we have a few folks here in our SPDF group who are using the THEMIS-B and C data for a lunar project. They have found and I've confirmed through CDAWeb, that the time stamps and associated data measurements for October, 9, 2010 THEMIS-B ESA, after time 15:58:40.695 are of a different resolution and the data values are either 0.0 or -NaN.	2/7/2011	Tami	1	Jim L	Web Site - instruments will have a web page with "Sources of Data Anamolies". The first one being the ESA issue							
4286	Create and maintain a list of FBK and FFT (and possibly other?) configuration parameters versus time, to be used by other researchers to located time intervals containing data that was acquired in a particular configuration. Examples (totally made up): THEMIS A Filter Bank Source Selections: 2007-02-23 - 2008-01-01 e12dc, scm3; 2008-01-01 - 2008-05-01 scm2, e34ac; THEMIS A FFT configuration: 2007-02-23 - 2008-01-01 16 frequency bins, e12dc, e56dc, scm1, scm3; 2008-01-01 - 2008-05-01 32 frequency bins, e12dc, e56dc, scm1, scm3	7/15/2011	SPDF - Jim L	2+	Jim L	phase 1 - list for next Tips of the month, phase 2 - cdf or web page: To be done before the Map in early 2013							
4301	"bad" themis thg l2 files - instrument files; L0->L1 processing produces incomplete/empty CDFs	8/1/2011	Tami	2	Jim L	one fixed - one priority 2							
2248	once in a while (maybe 10-20 occurrences per probe during the entire mission), the FGM range doesn't change on all three axes at once:	9/10/2009	Jim L	2	Jim L		2 hrs						
4022	Update L1 master cdfs to support SPDF hosting	3/25/2010	David	3+	Jim L	I think 4022 is a an end-of-mission task: basically clean up all the L1 CDFs, so they are fully ISTP compliant and as compatible as possible with SPDF's tools. But "ISTP compliant" is a moving target -- they keep adding new checks to the SKTEditor software -- so I think we made a task to do one final cleanup and reprocessing at the end of the mission, as opposed to reprocessing every time they introduce a new SKTEditor check that renders our L1 files non-ISTP-compliant. So 4022 = final end-of-mission adjustments to master CDFs, 4023=final reprocessing. Both should remain open, with no							
4040	Spinfits - separate E&B timestamps?	4/15/2010	Jim L	3	Jim L	SPDF has issue creating plots on the L1 data with their software							
4046	either thm_load_fit or the GUI code that calls thm_load_fit should split the data into separate tplot variables for E and B, before importing them into the GUI data model. I think thm_load_fit already does something like this. See task 4040	4/23/2010	Pat	3	Jim L	Jim M 4/23: thm_load_fit also splits into efit and bfit variables, so unless you need to look at raw bytes, the 'fit' datatype is not needed. Pat: Agreed. Short term, excluding the data type from the GUI seems like an easy solution.							
2082a	Spin modeling during shadows BugZid=43		Vassilis	3	Hannes	Jim L to write routine. Hannes send info.							
2038	STATE Web Page (s)		Vassilis	3	Jim L	review web pages							
2039	bad timing sun pulse times (early January 2009)		Vassilis	3	Jim L	Clarification needed							
2040	L1 Data Processing History Info: SCM, EFI, STATE		Vassilis	3	Jim L	Ben???							
2043	Refactor repeated CDF library code in CDF processing tools BugZid=50		Vassilis	3	Jim L								
2077	Non Monotonic timestamps. BugzID=72		Vassilis	3	Jim L								

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2047	task 2047 in my name: "Seperate E and B timestamps for spin fits", which is also a change to the L1 FIT master CDF and associated TDAS code. But unlike the spacecraft potential enhancement (which only adds new CDF variables, and is more-or-less backward compatible), 2047 would require us to bump the L1 FIT CDF version number to V02, and produce both V01 and V02 for a while, so users of TDAS 5.20 and earlier will still be able to load L1 FIT data. So I'm not sure whether the spacecraft potential task should include 2047, or not.	3/2/2010	Jim L	4+	Jim L								
4075	describe the FBK data type, time tag specified to correspond to the beginning of the time interval of the data that went into the FBK data, the middle, or the end, or is that unspecified, and what's happening here is that the time tagging is being changed in year 3+ of the mission - in the L1 file definition document, at least, does not define the time-tagging conventions to this level of detail.	6/11/2010	John Bonnell	4	Jim L								
4023	Before EOM reprocess L1 cdf's due to master cdf changes for SPDF	3/25/2010	David	4	Jim L								
2080	Phantom packets" cause non-monotonic distribution times. BugZid=25, low priority.		Vassilis	4	Jim L								
2081	Evaluate CDF compression algorithms BugZid=81		Vassilis	4	Jim L								
2083	Add "last processed" time to L1 (and L2?) CDFs BugZid=115		Vassilis	4	Jim L								
4097	cdf's with MD5 checksum	7/19/2010	Jim L	4	Jim L	Jim L to send email with subtasks and estimates							
Jim M													
4473	Missing eESA plots (ESA moment overview plots)	1/4/2012	Vassilis	0	Jim M	No way to calculate velocities from omnidirectional modes in reduced particle data. Fast survey an option?							
4365	reverse-engineer the process of updating the onboard tables that define the ESA and SST angle/energy modes.	9/8/2011	Vassilis	0	Jim M	steps: Create the Table Image, Create the CDI Commands, Create the IDPU Commands, Create the raw packets that go to the MOC for uplink Have code for reading maps into memory, working on outputting IDPU commands. Pat to send list of sun contaminated bins to Jim M. In parallel, will try to recover Davin's code from malfunctioning hard drive.							
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. JWJL (or maybe Ben S) will write a tool to stitch the memory dump packets back together into a memory image, which Jim and Davin can inspect to make sure we are working with the correct memory range. Hopefully this will be a targetted test -- a small range of addresses, rather than a complete memory dump (which would take extra care and error checking to interpret). If it's a small enough dump, we can possibly avoid having to write a tool and just look at the raw hex from a few 407 packets.	9/8/2011	Vassilis	0	Jim M	On hold							
4365b	ETC table upload utility: Davin may have something in his backups. If not, JWJL will resurrect a "cmd2raw" utility we used during I&T to convert ASCII files of IDPU commands to a properly checksummed RAW command file, which the ops team can then upload to the probes. Jim McFadden and/or Davin will have to provide the list of IDPU commands.	9/8/2011	Vassilis	0	Jim M	On hold							
4365c	(Maybe) ETC table image->IDPU command converter: If Jim McF or Davin can't come up with a list of IDPU commands, we may need an additional utility to take the desired ETC memory image, and convert that to a file of IDPU commands that will produce the desired memory image when executed on board.	9/8/2011	Vassilis	0	Jim M								

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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.	10/8/2010	Vassilis and Davin	0	Jim M	Persons that can provide information are: Davin, Deron Pease/McDonald, Michael Luldam and Robert Abiad. See task 4365 (same process)							
4152a	change the SST tables to mask view directions that are affected by the sun. We need to do this for the reduced distributions only. If it can be done for the moments too it would be great. WE need to find the masking tables that were input before in 2007 and rescinded sometime in 2008 - but the actual bins that require masking are different than before.	10/20/2011	Vassilis	0	Jim M								
4152b	change the ESA tables such that the minimum magnetospheric electron energy becomes lower (about 3eV, or lower). McFadden can specify the lower energy	10/20/2011	Vassilis	0	Jim M								
4152c	change the ESA tables such that electrons and ions can be changed separately into magnetospheric and solar wind modes.	10/20/2011	Vassilis	0	Jim M								
2283b	There is another aspect to this problem. Dead-time corrections are severe for ion ESA SW data and there are no dead-time corrections for onboard moments. Some algorithm will have to be developed that does this correction after the fact. Davin developed an algorithm like this for Wind 3DP. That algorithm may not work directly due to differences in energy sweeps, but something like it could be developed for THEMIS. Davin and I can provide some advice and direction. Similarly electron onboard moments in the SW may also need some corrections -- this should also be worked out at the same time. **Send old code to Pat **	11/2/2009	Jim Mcfadden	1	Jim M	Jim McFadden showed me what he had in mind for improving the corrections for ground-processed moments. This involves calculating the dead-time correction based on a higher resolution energy grid, with 4 different points per output energy channel. In progress: Jim M 8/26/11: Thanks for looking at this. It also seems the the pressure tensor has some interesting spikes due to the dead-time correction, while the scalar quantities ssme to be more stable. 9/23/11: Will ping Jim Mcfadden. May need additional code to convert from fluxes back to raw counts. When code written, will discuss with J McF.							
4312	Quality flags for efi are wrong including electric field offsets in computation. On hold until Michael Hartinger sorts out.	8/8/2011	Vassilis	1	Jim M	discuss with Vassilis							
4233	Angular Correction for particle data - use Jim McFadden's code if available	1/9/2011	Vassilis	2	Jim M								
4241	Dieter and I have tested the variables, there are two that don't seem to have data for the mission, and their catdesc's seem to indicate that they won't... so can we "turn these off", or is there a plan to use them in the future? EFS_Q_MAG (Data Quality Parameter: set to NaN for EFS, as there is no good measure of data quality.) EFs_Q_PHA (Data Quality Parameter: Set to NaN, as there is no good way to measure data quality for EFS data.)	6/6/2011	Tami Kovalick	2	Jim M	They are empty at the moment, by design -- we may have a use for them in the future. Nothing needs to be done with SPDF. Look into EFS_Q_PHA and check with John Bonnell about the future.							
2027e	Finishing the coordinate transformation of the thm_load_state data at input, to include transformation of spinaxis attitude, need to determine keyword switch, implement the rotation of the spinaxis elevation/azimuth from gei to arbitrary coordinates (consult with Pat, Vassilis)		Vassilis	2	Jim M	not allow velocity to go bad							
2224	thm_load_mom: for quantities like velocity, the coordinate system isn't stored in the meta data, and none of the units are stored in the place we normally try to store them (from Pat - Vassilis concurs) Will take a look.		Vassilis	2	Jim M								
2035	Split L1 ESA (using Thomas's routine) in master ESA data cdf		Vassilis	2	Jim M	On Hold - awaiting Jim McFadden release: Then send David Sub Task List; Calibration variables removed from L1 data master CDF. (Side note: found and reported a bug in SKTEditor, which the Goddard team has agreed to fix...) Waiting for feedback from Jim McFadden about how calibration data should be handled (TH-A ASCII calibration file (used for all probes) doesn't match anything I removed from the data CDF).							
4208a	Enhanced MOM Instrument Web Pages	3/5/2010	David	2	Jim M	Talked to David first.							

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4412	Out of memory problem loading HSK data for long timespan	10/28/2001	John Bonnell	3	Jim M	sent John diagnostic code to run; from Jim to John 11-2-11: So far, The program never seems to use more than 400Mbytes of memory, at least as far as I can tell? Can you run the attached version and send the IDL output to me, in a journal file? It just has a couple of statements included, help, /memory, which checks how much memory is being used, and has been used, and get_max_memblock2, which is a program that we wrote to check to see how big an array you can create.							
4003	Document: ESA File and Calibration Processing	3/5/2010	David	3	Jim M								
2091	Once Jim McFadden completes his mods for n_3d_new_3 reprocess L2 cdf's - entire mission		Vassilis	3	Jim M								
2055	ESA L2 from L1 (not packets) - create L2 and test thoroughly, then reprocess ESA		Vassilis	3	Jim M	On Hold; awaiting Jim L to split L1 into master cdf							
2093	AE Indexes Issue Jan 8-12, keyograms Jan 12-13, Stripes-Vassilis: minor nuisance		Vassilis	4	Jim M								
2095	Mosaic Processing - permanent script needed		Vassilis	4	Jim M								
2100d	DC offset between 4sdo and 2sdo in boom plane		John Bonnell	4	Jim M	Which is better? Assigned to J. B. (low priority).							
2100h	Try to track down frequency scaling problem in DPWRSPC (dlimit setting? Compare to old plots?).		John Bonnell	4	Jim M	On Hold - low priority							
2100p	Modify THM_CAL_FIT to treat efs datatype - Install E12/E34 conditional based on th?_fit_code TPOLOT variable. If E12 switched to E34 software needs to be revised to handle		John Bonnell	4	Jim M								
Lydia													
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Lydia	Next March 2012							
4438	I was looking creating new maps of the gmag locations for the website and found that ATHA and REDR mapped to the same location. REDR (from Athabasca University/AUTUMN) has incorrect latitude and longitude recorded in it's CDF and in the excel spreadsheet of gmag locations.	11/21/2011	Lydia	1	Lydia								
4438c	The spreadsheet needs to be updated, and so does the txt file GMAG-station-code-19700101.txt. (I'll do this when I add the new stations)	11/21/2011	Lydia	1	Lydia	New spreadsheet not up on web yet -- ping Emmanuel							
4274	Bob Clauer mentioned that he was interested in importing his Antarctic gmag into TDAS.	6/30/2011	Bob Clauer	2	Lydia	From Bob 11-7-11; Both stations that were being tested at South Pole are still operating properly. We will be departing immediately after AGU for our Antarctic field season and plan to redeploy those two stations onto the East Antarctic plateau along the 40 degree magnetic meridian chain (conjugate to the west coast of Greenland). When the stations are deployed and we have exact locations, I will let you know and we can begin the process of including the data into the THEMIS data base.							
3086	add MACCS gmag data from 2007 to our data archive. We already have MACCS data for some years and a process that automatically downloads it/converts to CDF. So the task would involve finding missing files from 2007 and feeding them into our pre-existing processing framework. It should be pretty straightforward, but probably non-trivial because of learning curve/unexpected details. Augsburg responded on 11/10	2/19/2010	James Weygand	2	Lydia	They are moving all the data to another server - on hold. Once they have completed the move we can get 2007 data and we will update scripts to handle the new data location.							
2062	Alberta - At the moment the data files are from Dawson (daws), Churchill (fchu), Island Lake (isl) and Fort McMurray (mcmu). I will add Rabbit Lake and Taloyoak at some time but we have some issues with mag pointing at those 2 sites. If you recall, the agreement between Ian and Vassilis was that this data wouldn't be copied to become part of a mirrored archive like the existing data we provide. Instead, each file would be obtained from this site each time it is requested (using curl or some such). This means we can use our own logs to monitor data usage. Themis Software to be able to retrieve from Alberta		Vassilis	2	Lydia	Heard back from David Milling, who gave us a sample URL we can use to download CDFs with wget. Location will probably change when new server is ready.							

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4409	AE Stations: I am interested in including the "standard AE ground stations" i.e. the ones that go into the computation of the AE index - there are 12 - into the THEMIS pipeline. This is because we can then include them into the computation of our own pseudoAE. They include: FCC: Fort Churchill, LRV: Leirvorgur, a couple in Russia and one in Scandinavia etc. They should be available somehow. The ones in Russia have been made available through APL, and THEMIS has contributed to their refurbishment. I think we have established communication with APL's Kazue Takahashi and he said a couple of years ago that routine delivery of the Russian stations was impending. So by now they should be ready...I think he should be a good source of information about the other stations as well, if you cannot find them on the web by searching or at WDC Kyoto.	10/19/2011	Vassilis	2+	Lydia	Lydia: Do we want to be mirroring the data for the sites and generating CDFs as we do for the other external magnetometer sites? If so, we would need to determine where the data could be retrieved from, obtain permission to mirror it, and write download and conversion to CDF scripts. This would be a separate task for each of the data suppliers (unless there is some existing site that has the data from multiple sources). The 12 stations that are used for the calculation of the AE indices seem to be (according to Kyoto WDC): listed in tasks 4409a-4409m.							
4409a	Abisko (ABK) (Sweden)	10/19/2011	Vassilis	2+	Lydia	The scripts to download and process the data have been written but are not yet running on the cron. Back data downloaded, waiting for astraea migration to enable cron jobs.							
4409b	Dixon (DIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	Still waiting for a reply as to whether Kyoto or APL can make this data available. sent email 11/18/11.							
4409c	Cape Chelyuskin (CCS) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	see 4409b							
4409d	Tixie Bay (TIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	see 4409b							
4409e	Cape Wellen (CWE) - closed, replaced with Pebek (?) (AARI, Russia)	10/19/2011	Vassilis	2+	Lydia	see 4409b							
4409f	Barrow (BRW) (USGS, US)	10/19/2011	Vassilis	2+	Lydia	Draft scripts to download and process the data have been written, but are not tested or running on the cron yet. Data back to 2007 (provided in a different format) has been downloaded. Scripts have been written to process this data. Back data downloaded, waiting for astraea migration to enable cron jobs.							
4409h	Yellowknife (YKC) (CANMOS/Geological Survey of Canada)	10/19/2011	Vassilis	2+	Lydia	The scripts to download and process the data have been written but are not yet running on the cron. Waiting on response from NRCan as to who to list as PI etc (reply on Nov 29 said they would get back to me soon). Have downloaded some back data for 2011 and 2010, but I think they are still setting up the ftp site I have access to and some data has not yet been added.							
4409i	Fort Churchill (FCC) (CANMOS/Geological Survey of Canada)	10/19/2011	Vassilis	2+	Lydia	ss 4409h							
4409k	Narsarsuaq (NAQ) (DTU, Denmark)	10/19/2011	Vassilis	2+	Lydia	Greenland download and processing scripts are now running on the cron. I am currently downloading back data to 2007 where available in the better coordinate system.							
4409l	Leirvorgur (LRV) (Iceland)	10/19/2011	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	10/19/2011	Vassilis	2+	Lydia	SNKQ is confirmed to be the same site as SNK. We already get this data. There seems to be an issue with data availability at the moment, but this is a problem at their end. Nothing needs to be done. We gat data from Alberta.							
4409n	Greenland Scripts	10/19/2011	Vassilis	2+	Lydia	see 4409k							
4409p	Udodate Online accesible charts	10/19/2011	Vassilis	2+	Lydia								
778b	Need capability to read in ASCII, CDF?, . IDL has a built in widget to specify ASCII formats.	11/21/2011	Oldie	2	Lydia	See Vassilis's files for Ascii and cdf's only analysis							
4298	the slices code should probably have a keyword to use the new SST calibrations.	7/27/2011	Pat	2	Lydia	On hold till the SST calibrations have found wider use.			Y		Y		

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4313	While on the telecon with Alberta, I was looking at the IDL documentation for their built in http download object. It actually makes it look like the http authentication, with username and password would not be too difficult. Since this keeps coming up, we might want to consider dedicating a few hours of programming time to see how hard it actually is to do authenticated downloads. If it turns out not to be too hard, it would probably give us the capability to extend our system to a lot more types of data.	8/11/2011	Pat	2	Lydia	when the need arises - on hold							
4396	Testing v6.0 and bleeding edge with Mac Lion OS - see Justin's Issues	10/4/2011	David	3	Lydia								
4432	ASI FAQ - ask Harald if adding User Questions and his answers	11/10/2011	David	3	Lydia								
4431	GMAG Web Page Enhancements - FAQ's, etc	11/10/2011	David	3	Lydia								
4042	Script to run every two weeks to runs IDL TDAS and checks if a file can be loaded from THEMIS SPDF file (s)	4/19/2010	Pat	3	Lydia	see Pat							
4210	Modeling SST fluxes	3/12/2011	Vassilis	3	Lydia	on hold							
2030	upgrade thm_load to work with probe assignments		Vassilis	3	Lydia								
2031	move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2		Vassilis	3	Lydia								
2032	Multiple enhancements concerning keywords, valid_names and thm_load routines		Vassilis	3	Lydia								
492	Work with Harald to be able to load a reasonable amount of ASI data and add tools into Analysis and DP to process this data.	10/17/2011	Vassilis	3	Lydia								
519	We should extend our data model to support 3-dimensional distributions and 3-dimensional image data. This will entail modifications to load widgets, the loaded data object, the tree widget, the data processing widgets, and the addition of a means to draw	10/17/2011	Vassilis	3	Aaron								
Pat													
4439	Astrea Testing and Migration	11/22/2011	David	0	Pat	awaiting sysadm mysql move, sched Tues Jan 10							
4470	Pre-deployment summary plot QA script	1/4/2012	Jim L	1	Pat	Check that summary plots are produced, and that they're roughly correct, before pushing updates into production.							
4439c	Wait for quiet period to cut over to new astrea without data gap		David	0	Pat	Wait until after holidays to cut over to new server							
4267c	Write code to remove proton and electron contamination from the electron and proton distributions using data and efficiencies from the F & O channels.	6/27/2011	Pat	1	Pat	in progress - working well and will show Vassilis next week. Hold until after QA, if necessary.							
4471	Support TT2000 CDF time format in cdf2tplot	1/4/2012	RBSP	1	Pat	Hold until after QA; should complete by May 2012							
4287	Switching SST Load routines to thm_sst_load2 for SST calibrated data	7/15/2011	Pat	1	Pat	on hold							
4464	mods for file_retrieve, determine remote & local parts from URL returned by query from metadata DB	12/12/2011	IUGONET	2	Pat	item 3.4.2 from presentation (Hold until after QA)							
4463	file_http_copy support for proxy servers	12/12/2011	IUGONET	2	Pat	item 3.3 from presentation (Hold until after QA)							
447	Save THEMIS document: Attempting to save to a read only file in Windows outputs the correct error message, but IDL crashes immediately afterwards.	2/24/2011	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. Part of QA prep.							
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	11/7/2011	Oldie	2	Pat								
778a	Need capability to read in ASCII, CDF?, . IDL has a built in widget to specify ASCII formats.	11/21/2011	Oldie	2	Pat	See Vassilis's files for Ascii and cdf's only analysis							
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat								
4002	Document: SST File and Calibration Processing	3/5/2010	David	2	Pat	David to ask Davin for ppt document corresponding to pdf on ftp site concerning SST							
4208b	Enhanced SST Instrument Web Pages	3/5/2010	David	2	Pat	Talked to David first.							
803	Would be nice to have a way to move different panels from one window to another	11/22/2011	Oldie	3	Pat	sort how level of effort to accomplish							

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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.	2/10/2010	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 baddbins2mask 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	11/16/2011	Pat	3	Pat		1 hr						
3063	40. CL tplot options -- setposition test plots all look the same	1/15/2010	Pat	4	Pat	Long-standing tplot bug, may not ever be fixed							