Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E	Crib	QA Suite or Script	UG	Qref	Adm Guide	Dev Guide
	To be Assigned or Discussed													
4353	ARTEMIS Full Data: Looking at THB data for Aug 26 and 27, I'm not seeing any 32x88 PEEF data (apid 457). All I'm seeing is 15x88, for the following time intervals: Aug 26: 05:44:27 to 09:03:06 Aug 27: 11:54:13 to 15:13:08 It's not a processing issue; this is the only configuration I'm seeing in the apid 457 packets for these dates. If you were expecting something else, that would be an issue for the ops team.	8/29/2011	Vassilis	?	Jim L - > Ops Team	Vassilis to report to Ops Team								
4358														
4359														
4360														
4361														
	General													
4043	Paper on interdependentcies 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.								
4013	Plot Description Doc Button	3/22/2010	David	3	Emmaunel	**in progress**								
4337	DP Processing web page change	8/22/2011	David	1	Emmaunel	**David to get website updated, notify Tohbans**								
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.								
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.	9/1/2010	David	n/a	Laura Petacolas									
	Harald													
	L1's and mosaics are up-to-date and available through June 2011				Harald									
	Thumbnail Data:				Harald	Updates ready 7-10th of the next month								
	- cdf files done until June 2011													
	- overview plots done until June 2011													
	- movies done until June 2010													
	Full-resolution raw data:				Harald									
	- complete for 2007, 2008, 2009													
	- Up to date and complete until September 2010													
	Full resolution data:				Harald									
	- data cdf done for all 2007 and 2008 and up todate and complete through September 2010													
	- keogram cdf done for 2007-2008, 2008-2009 and up to date and complete through September 2010													
	Web site mosaics and movies:													
	- Mosaics and movies reprocessed for 2007, 2008, 2009 and 2010 seasons													
	- Mosaics and movies up to date until June 2010													

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	Web site overview plots with full resolution data:													
	- overview plots done for 2007-2009 and until September 2010													
	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	**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	6/21/2010	Hannes	1	Hannes	After 4018a for Artemis is complete will work on spin phase and axis offsets								
4034b	Ferdinand sent was an attempt on his part to automate the shadow processing. He wanted feedback whether the products produced are adequate and if the code is amenable to automation. We can pick it up with him once you have gone through it.	4/14/2010	Vassilis	1	Hannes	**Waiting for feedback from Ferdinand about state of inner probe eclipse models, long & short eclipse models**								
2082a	Spin modeling during shadows BugZid=43		Vassilis	2	Hannes	Jim L to write routine. Hannes send info.								
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.								
2074c	quality flag for FGM data		Vassilis	3	Hannes	on hold								
	Aaron													
QA038c	6.f) When the 5 panels have been made of the data, the type of data in each panel is labeled but the spacecraft is not included in the label. You only know which spacecraft is represented if you hover your mouse over the panel. I think the panel should have the sc label, especially for printing purposes.	1/21/2011	Christine	1	Aaron	**come up with how to fix options with level of effort - one or two load to edit**	2 hrs							
QA038d	REALLY don't like how when you select the dependent variable, the window slides over to center it. I want it to stay wehre it was unless I slide the window myself. Otherwise I'm constantly sliding it back to the left in order to see which variable I want to select.	1/21/2011	Christine	1	Aaron	fix only for windows - if it can be fixed	4 hrs							
4332	Slices Mods Keyword forces a load, SST warning to interpolate	8/22/2011	Vassilis	1	Aaron									
4327	Andre came by again after re-working his plots and said that they looked good and reflected what was expected. There does seem to be a plotting option (from the old software) to plot the exact energy limits that was temporarily disabled and part of it never re-instated. It would be a 2-3 hour task to implement it. He also mentioned that he will continue tinkering with the software and will let me know what he finds.	8/18/2021	Andrea	1	Aaron		2-3 hrs							

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4330	Andre stopped by again yesterday to mention that everything looked good. He did make a suggestion, which I agree with, to change the keyword that controls slice type ("TYPE") since the same keyword is already used in the load routine and it could get confusing.	8/19/2011	Andrea	1	Aaron		1/2 hr							
4335	Slices issues from Shanshan	8/22/2011	Shanshan	1	Aaron									
4339	Its plot comes up and erases the tplot time series plots. Could you make sure it opens a separate window?	8/22/2011	Vassilis	1	Aaron									
4340	Anything you can do to accelerate the geometric method?	8/22/2011	Vassilis	1	Aaron									
4341	It tried to avoid smoothing but it seems to have smoothed when it shouldn't.	8/22/2011	Vassilis	1	Aaron									
4342	The autorange did not autorange when limited the energy in 2Dinterpol but worked for Geometric.	8/22/2011	Vassilis	1	Aaron									
4305	General Slices feedback from UCLA (Stefan, Andrei, Shanshan and Xuzhi) and UCB (Jim McFadden)	8/1/2011	Vassilis	1	Aaron	**update the crib as well**								
4012	When Cindy & I tried to load tha_eff on 2007-03-23, it didn't load and said some calibration quantity couldn't be found. When I tried to load the same thing, I didn't have a problem. So the trick would be to find out what changed from my computer to Cindy's computer and to figure out how often our user's computers are going to have the same problem that Cindy's computer had.	3/22/2010	Pat	2	Aaron	**Jim M: I have no trouble with EFF data either for linux or windows.**	4-6 hrs							
3014	We don't have support for filled symbols. This means symbols are only outlines.	12/11/2009	Pat	2	Aaron									
3031	GUI Overview plots sometimes have diamond shaped artifacts in the sample rate bar. Should fix.	1/5/2010	Vassilis	2	Aaron	This is a side-effect of the a way that symbols are used as a hack to generate the sample rate bar. Fix after 3014 is fixed.	1/2 day							
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**								
2084	. transforming one data point from SM coordinates to GSM coordinates. ct=time_double('2008-02-16/04:50:00') dipole=[[0],[0],[1]] v=[1,2,3] store_data,'dipole_sm',data={x:ct,y:dipole,v:v} cotrans,'dipole_sm','dipole_gsm',/SM2GSM cotrans,'dipole_gsm','dipole_gse',/GSM2GSE get_data,'dipole_gse',data=dipole_gse xdipgse=dipole_gse.y[0] ydipgse=dipole_gse.y[1] zdipgse=dipole_gse.y[2] tilt=atan(xdipgse,zdipgse) When I check the data for 'dipole_gsm', the values are 0,0,0. I'm not sure what they SHOULD be, but I know that their magnitude should equal 1. sqrt(x^2+y^2+z^2)=1		Christine	4	Aaron									
1579	When importing a variable with a valid 'V' component in its data struct, but no spec flag set in its meta data, the loaded data object fails to load the y-axis. This should be fixed, as it ends up incorrectly loading certain spectral quantities.		Pat	4	Aaron									
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.			4	Aaron									
2029	From Hannes		Hannes	4	Aaron									

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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	4	Aaron									
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	4	Aaron									
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	4	Aaron									
2030	upgrade thm_load to work with probe assignments		Vassilis	4	Aaron									
2031	move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2		Vassilis	4	Aaron									
2032	Multiple enhancements concerning keywords, valid_names and thm_load routines		Vassilis	4	Aaron									
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													
4334	Python Migration - testing and Migration	8/22/2011	David	0	Ben	**in progress**								
4309	Python migration - series of tools and scripts	8/5/2011	Jim L	1	Ben	**awaiting VM python2 to be ready**								
4214	THEMIS Pipeline proof of concept regression tests				Ben									
4214a	VC->L0	3/23/2011	Jim L	1	Ben	**awaiting VM python2 to be ready**								
4214b	L0->L1	3/23/2011	Jim L	1	Ben	**awaiting VM python2 to be ready**								
4214c	L1>L2	3/23/2011	Jim L	2	Ben									
4214d	empermeris->state v00	3/23/2011	Jim L	1	Ben									
4001	Document: Administrators Guide	3/1/2011	David	1	Ben									
4001a	Review Tim Quinn's scripts and update admin guide for input and output locations. (VC->L0->L1)	8/26/2011	Jim L	1	Ben	**in progress**								
4001b	update admin guide for input and output locations L1->L2					**in progress**								
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		Vassilis	1	Ben	In progress. Several templates created, selecting the appropriate command line routines to test.								

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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									
2149g	write a routine to check time tag monotonicity and repair tplot variable if necessary (with options for "replace with NaN" and "delete")		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.								
2149h	integrate time tag fixer-upper with TDAS load routines		Jim L	2	Ben	needs a prerequisite written - see 2149g								
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									

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4027b	Reprocessing GOES Data	4/5/2010	Tami - SPDF	1	Ben	Reprocessing on hold until Howard Singer delivers another batch of binary GOES data files.								
	Cindy													
4318	Load Data. I received an "Invalid Start and/or stop time" message when the time format was correct. Clicking in the start time text field fixed it. This happened several times, but I can't reproduce it consistently.	8/15/2011	Lydia	1	Cindy	cannot recreate								
4319	History Window. I think this has been reported previously - When you open the history window it appears on top of the main GUI window, but then immediately moves behind it. If you have the history window open on top of the main gui window then as soon as the mouse enters the draw area of the main GUI window the history window is sent behind it again. To save or close the history window you need to minimise or move the main gui window out of the way.	8/15/2011	Lydia	1	Cindy									
4325	Page Options: Landscape. If you change a page from portrait to landscape, and then close that page then the remaining page/new page will display as landscape even though the Page Options shows portrait selected.	8/17/2011	Lydia	1	Cindy									
	Jim L													
4334	Python Migration - testing and Migration	8/22/2011	David	0	Jim L	**in progress**								
4310	state files: including P1, P2 SSE and SEL coordinates	8/8/2011	Vassilis	0	Jim L									
4310g	take Jasper's code and incorporate into thm_cotrans	8/8/2011	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	8/8/2011	Vassilis	0	Jim L									
4310c	Change thm_load_state to allow loading the new variables	8/8/2011	Vassilis	0	Jim L									
4310d	Test that revised CDFs have correct data	8/8/2011	Vassilis	0	Jim L	See Sabine for verification of code - email sent to ARTEMIS team on 9/1/11								
4310e	Deploy code changes and new master CDFs for use in the automated processing	8/8/2011	Vassilis	0	Jim L	on hold until confirmation 4310d								
4310f	Reprocess state CDFs for entire mission	8/8/2011	Vassilis	0	Jim L									
4326	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.	8/18/2011	Vassilis	0	Jim L	**in progress - Ferdinands code not working on all eclipses; Spin model for Artemis probes expended fuel. Awaiting info from FGM Team**								

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4331	I noticed a couple of warnings overnight from the automated definitive ephemeris processing. It looks like a couple of files from 2008 got updated: THEMIS_B_EPHDEF60_08135_000100_08141_210000 THEMIS_B_EPHDEF60_08141_210100_08148_140000 THEMIS_B_EPHDEF60_11203_020100_11229_110000 was also picked up (as expected), and processed normally as far as I can tell. I haven't tracked down the exact problem with the 2008 files that were also processed last night. It's possible that my script just isn't working properly or the case when an ephemeris file is updated, but the preceding and following files are not. But it appears, from the processing logs, that the data in those two files may have differed from what was there previously. Otherwise, it should have detected that the updated products were identical to the published products, and skipped the update. Any idea why these files might have been updated, and what (if anything) was different about the updated version?	8/19/2011	Jim L	1	Jim L	**Dan Cosgrove will update ascii files and then you will do a manuel reprocessing as needed**								
4034a2	thm_parts_moments update	11/22/2010	Vassilis	1	Jim L	initial simple way, final fix is to fix esa and sst 3D data structures								
4034a3	awaiting feedback and performing analysis	11/22/2010	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.**								
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 prerequsite								
4030c	If scripts change - make changes to processing scripts	5/17/2010	Jim Lewis	1	Jim L	4030a prerequsite								

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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**								
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	2+	Jim L	to take a look at a possible standard and then review with all								
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 immediate action required as far as I know.								

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3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	3+	Jim L									
4040	Spinfits - separate E&B timestamps?	4/15/2010	Jim L	3	Jim L	SPDF has issue creating plots on the L1 data with their software								
4046	either thm_load_fit or the GUI code that calls thm_load_fit should split the data into separate tplot variables for E and B, before importing them into the GUI data model. I think thm_load_fft already does something like this. **See task 4040**	4/23/2010	Pat	3	Jim L	Jim M 4/23: thm_load_fit also splits into efit and bfit variables, so unless you need to look at raw bytes, the 'fit' datatype is not needed. Pat: Agreed. Short term, excluding the data type from the GUI seems like an easy solution.								
2082a	Spin modeling during shadows BugzId=43		Vassilis	3	Hannes	Jim L to write routine. Hannes send info.								
2038	STATE Web Page (s)		Vassilis	3	Jim L	review web pages								
2039	bad timing sun pulse times (early January 2009)		Vassilis	3	Jim L	Clarification needed								
2040	L1 Data Processing History Info: SCM, EFI, STATE		Vassilis	3	Jim L	Lydia???								
2043	Refactor repeated CDF library code in CDF processing tools BugZid=50		Vassilis	3	Jim L									
2077	Non Monotonic timestamps. BugzID=72		Vassilis	3	Jim L									
2047	task 2047 in my name: "Seperate E and B timestamps for spin fits", which is also a change to the L1 FIT master CDF and associated TDAS code. But unlike the spacecraft potential enhancement (which only adds new CDF variables, and is more-or-less backward compatible), 2047 would require us to bump the L1 FIT CDF version number to V02, and produce both V01 and V02 for a while, so users of TDAS 5.20 and earlier will still be able to load L1 FIT data. So I'm not sure whether the spacecraft potential task should include 2047, or not.	3/2/2010	Jim L	4+	Jim L									
4075	describe the FBK data type, time tag specified to correspond to the beginning of the time interval of the data that went into the FBK data, the middle, or the end, or is that unspecified, and what's happening here is that the time tagging is being changed in year 3+ of the mission - in the L1 file definition document, at least, does not define the time-tagging conventions to this level of detail.	6/11/2010	John Bonnell	4	Jim L									
4023	Before EOM reprocess L1 cdf's due to master cdf changes for SPDF	3/25/2010	David	4	Jim L									
2080	Phantom packets" cause non-monotonic distribution times. BugzID=25, low priority.		Vassilis	4	Jim L									
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								
4201	Kyoto final data - may have different URL naming scheme	2/2/2011	Jim L	4	Jim L	they are only up to 2003 in final								
	Jim M													

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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. I'll check this out. eta 9/6 then Jim Mc Fadden approval**								
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	**On Hold**								
4233	Angular Correction for particle data - use Jim McFadden's code if available	1/9/2011	Vassilis	2	Jim M									
4218	thm_part_moments angular restriction	4/4/2011	Vassilis	2	Jim M									
4302	"bad" themis thg l2 files - mag files	8/1/2011	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.)**	6/6/2011	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									

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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.								
4003	Document: ESA File and Calibation 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									
2094	Overview plot change: mode bar seems thick		Vassilis	4	Jim M	nothing we can do easily								
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													
4302	"bad" themis thg l2 files - mag files	8/1/2011	Tami	0	Lydia	**multiple versions of idl_make_cdf (priority 3) Jim M to look at**								
4346	I got a question from a grad student(Shan shan) that made me think of a missing feature. The routine tinterpol_mxn should have a 'repeat/nearest neighbor' option when interpolating. That is, instead of picking a value between the two adjacent points when interpolating, it should repeat the value of the nearest point. This came up when Shan Shan was trying to interpolate a bit-packed variable(the ROI data), if you use normal interpolation on this type of variable, the result will be garbage. It looks like this routine gets a lot of usage so I think it would be a fairly visible improvement.	8/23/2011	Pat	1	Lydia	**in progress**								
4349	I was loading some FFT data in the GUI and just wanted to check that the behaviour was correct. If I attempt to load fff_32_adc it brings up a message: THM_UI_LOADED_DATA::ADDDATA--> Problem loading: tha_fff_32. GUI data model does not currently support data with dimensions greater than 2. (and also messages for tha_ffp_32 and tha_ffw_32) But it does show fff/p/w_adc, src, hed as having loaded. I don't actually know what any of these quantities are so I'm not sure if this is what it should be doing. (This doesn't seem to happen in v.6)	8/26/2011	Lydia	1	Lydia	**tplot and gui**								

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4356a	Astraea GMAG script migration plan I noticed that some of the scripts that are running are not on the SVN. I'd like to move the scripts over to SVN and make sure everything is running correctly before the migration. Existing problems, such as with the EPO processing warnings, will just make the migration more difficult to test.	8/30/2011	Lydia	1	Lydia	**in progress**								
4256b	Astrea Test and Migration to VM	8/30/2011	David	1	Lydia									
4343	Bay Mills was installed backwards, where sensor north is facing south. Apart from sending someone to rotate the sensor 180 degrees, there is nothing that we can fix. What we can do is add a matrix transformation and reprocess the data. ***** Awaiting Katheryn *****	8/22/2011	Shanshan	1	Lydia	I just talked to Kathryn and she indicated that she would prefer that the rotation be done in their flat files. When they're done reprocessing they'll let us know and we'll have to redownload & reprocess the BMLS data. The one caveat is that they've never really exercised this rotation matrix in their calibration procedures, so there is the possibility that it will have bugs. We might want to start by downloading a small amount of the data and then having Shanshan verify that their modification fixed the problem before we do the reprocess.								
4274	Bob Clauer mentioned that he was interested in importing his Antarctic gmags into TDAS.	6/30/2011	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.	2/19/2010	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.**								
2175	L2 File Definitions Document	3/1/2011	David	2	Lydia	**25% time - in progress**								
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	**ping David Milling**								

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4006	add the following ancillary ground-based observations: MAGDAS Network, Auroral Electrojets (AE) and Ground Radars (SuperDarn, AMISR and Sondrestorm)	3/8/2010	David	2	Lydia	**discuss at software meeting of 9/6**								
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			
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**								
2088	Themis Developers Guide		David	3	Lydia	25% time after 2175 completed								
2036	GOES 10-12 Test data: h. update labels (Howard's request - minor tweak)		Vassilis	3	Lydia	see Jim L								
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								
2090	that streamlines the generation of gmag stackplots and a crib to show how to do this. (< than a day)		Vassilis	3	Lydia	see Jim M								
4210	Modeling SST fluxes	3/12/2011	Vassilis	3	Lydia	on hold								
3007	EPO-GMAG msgs: modify the script and only issue this message if > 2 days	12/8/2009	David	4	Lydia	see Pat								
	Pat													
4138f	Run simulation for range of initial positions around the full sphere.	9/17/2010	Davin	1	Pat	**Software to be purchased and build the geometry by hand. (working with Rob Lewis) in progress; anothet two weeks**								
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**	1	Pat	**Pat has enough info to generate tables to send to the S/C, Davin to ask Peter Harvey for more info. Davin will talk to Peter next week. 7/26/11 David reminded Davin;8/22/11 Vassilis says another week**								
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 - updating code to new method**								
4355	IDL-VM checkout	8/30/2011	Yoshimasa - lugonet	1	Pat									
4306	Overview web page navigation	8/1/2011	Vassilis	1	Pat	**Emmanuel not able to do**								
4068	Lynn Wilson possible enhancements	6/1/2010	Lynn Wilson	1	Pat	Review Lynn's software and generate list of features								
4287	Switching SST Load routines to thm_sst_load2 for SST calibrated data	7/15/2011	Pat	1	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.	2/24/2011	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.								

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2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat									
4002	Document: SST File and Calibation Processing	3/5/2010	David	2	Pat									
4208b	Enhanced SST Instrument Web Pages	3/5/2010	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.	2/10/2010	Aaron	4	Pat	check draw object								
2279	How's it going with the stats? I noticed the query takes some time because it's looking at the whole table. It could be refined for specific time periods. The delay in return could be what's causing Dave to have access problems - or the SSL firewall?	10/23/2009	Tim	4	Pat	see 2277								
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	4	Pat									
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	4	Pat									
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	4	Pat	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	4	Pat	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	4	Pat									
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								

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4029	One of Michael Hartinger (a grad student in atmos) is having trouble with thm_part_getspec when the SST is in fast survey mode. The routine can take a very long time to run because of the higher resolution. I think we should put a feature request on the list to automatically downsample the particle data in time. Normally, I would suggest that uses downsample using one of our interpolation routines, but because the particle data is stored in a special common block, there is no easy way for end users to perform this operation.	4/6/2010	Michael Hartinger / Pat	4	Pat	Michael supplied code for thm_part_moments	4-8 hrs							