Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate (hrs)
	To be Assigned or Discussed						
4005	The TDAS Software will be enhanced to incorporate data from the STEREO mission.	3/8/2010	David		Pat		
4006	add the following ancillary ground-based observations: MAGDAS Network, Auroral Electrojets (AE) and Ground Radars (SuperDarn, AMISR and Sondrestorm)	3/8/2010	David		Pat		
4007							
4008							
4009							
4010							
4011							
4012							
4013							
4014							
4015							
	General						
2186	I noticed that the Data->Collaboration Tools->(subcategories...) fall behind the ARTEMIS graphic.	7/28/2009	Michael	2	Amanda	Run Compatiability View in Internet Explorer	
	Complete Charts in UCLA and UCB rollups	2/1/2010	David	1	David		
4000	Document: Developers Guide	3/5/2010	David	2	Team		
4001	Document: Administrators Guide	3/5/2010	David	2	Team		
	Incorporate electron calibration into data	10/25/2009	Vassilis		Davin		
	Enhanced SST and MOM Instrument Web Pages		David		Davin		
2103	EAC offsets	8/1/2009	John Bonnell	2	John B	John has taken AC coupled data -> he will get me the offsets and the switch-over times.	
2216	Fix the sign reversal of e34.	8/13/2009	Michael	tbd	John B		
2225	L2 EFI cdf (quality flags)	8/31/2004	Vassilis	1	John B	Jim M to create master cdf with few new variables. John to look at data and describe the criteria for the quality flags.	
	Harald						
3094	Sort out Disk Space and Harware needed for 2010	2/22/2010	David	1	Harald Jon Loran		
	ASI software - running fine as of 11 January 2010, L1's and mosaics are up-to-date.				Harald		
	Thumbnail Data:				Harald	Updates ready 7-10th of the next month	
	- cdf files done until January 31, 2010						
	- overview plots done until January 31, 2010						
	- movies done until January 31, 2010						
	Full-resolution raw data:				Harald		
	- complete for 2007 and 2008						
	- reasonably complete until mid April-2009						
	Full resolution data:				Harald		
	- data cdf done for all 2007 and 2008 and until 03/31/09						
	- keogram cdf done for 2007 and 2008 and until 02/28/09						
	Web site mosaics and movies:						
	- Mosaics and movies reprocessed for 2007/2008 season						
	- Mosaics and movies reprocessed for 2008/2009 season						
	Web site overview plots with full resolution data:						
	- overview plots done for 2007 and 2008 and until 02/28/09						
2069d	UCLA – mirror site set-up		Vassilis	1	Harald	UCB has sent 4 bricks to UCLA. After brick transfer UCLA will need to supply SSH key - RSYNC Key.	
	Hannes						
2273	Attitude Determination changed based on spin tone removals?	10/19/2009	Hannes	0	Hannes	Hannes will process See 3023	
2074c	quality flag for FGM data		Vassilis	2	Hannes	on hold	
2082a	Spin modeling during shadows BugZid=43		Vassilis	2	Hannes	Jim L to write routine. Hannes send info.	
	Aaron						
2033	VMO file generation (EFI and SCM)		David	1	Aaron		
2033a	One variable change to ASI files and possibly the whole repository		David	1	Aaron	changes sent to Jan	
2033b	SCM L2 numerical files		David	1	Aaron	in progress	
2033c	EFI L2 numerical files		David	1	Aaron	in progress	
2033d	V03 L2 STATE - revision needed?		David	1	Aaron	send Jan an email	
3066	104. GUI part_getspec -- crash in thm_part_moments2 with non-default arguments	2/10/2010	Aaron	1	Aaron		
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	1	Aaron		
3077	134. GUI, CL -- bfit data, inconsistent results cotransing to GSM. Aaron: The fit load and cal routines don't call thm_cotrans for the quantities in question. All that's left is to make sure the routine handles non-3-vectors correctly.	2/12/2010	Aaron	1	Aaron	Data type not a 3-vector. Change thm_load_fit to skip cotrans for bfit/efit, figure out why thm_cotrans allows it	2-3 hrs
2013	2-D, 3-D slices enhancements					Talk to Andrea, Christine, Shanshan	
2013m	User's Guide write-up and then review with Xuzhi		David	1	Aaron	First create outline,	

2013h	Main: Temporal slider Bar - in progress Export to .png file Allow for use outside GUI	11/13/2009	Vassilis	1	Aaron	in progress	
2013j	Plotting: Contour lines Display min/max Title information (same as old slices code) Specify x,y,z ranges Axes titles Axes ticks Plot ESA boundary		Vassilis	1	Aaron	on hold until 2013h completed	
2013k	Create our own version of slicer3.pro that can take user input to setup colors, orientation, etc. when it's called.		Vassilis	1	Aaron	will be completed when 2013h completed	
2013l	Integrate our own slicer3.pro gui with regular 2-D slice plots.		Vassilis	1	Aaron	will be completed when 2013h completed	
3042	33. QA: GUI panel options -- only updates panel titles on startup.	1/15/2010	Aaron	1	Aaron		
3046	Fix labels/change coords for on-board moment velocity plots. Data is DSL, label says GSM	1/25/2010	Vassilis / Miyashita	1	Aaron		
3051	EFW spike removal	2/1/2010	Vassilis	1	Aaron		
3014	We don't have support for filled symbols. This means symbols are	12/11/2009	Pat	2	Aaron		1 day
3016	There is no way to control the variable font size from the variable panel. There was a barrier to adding features to the variable panel when this came up before, in terms of a design that was too complex to modify reliably. When I fixed some previous bugs in this panel I simplified the code considerably. I now think that adding this feature is feasible.	12/11/2009	Pat	2	Aaron		1/2 day
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.	
3001	I'm getting a crash in the calculate window after I delete the text in the program area and then click on a data quantity from the tree. The error message is below.	12/7/2009	Aaron	2	Aaron	found during EFI testing	
3079	110. GUI -- spinner widget, inconsistencies between actual and displayed value for very small numbers	2/12/2010	Pat	2	Aaron	Support exponential notation for very small values	
3079a	Spinner Part	2/12/2010	Pat	2	Aaron		4-5 hrs
3079b	FormatAnnotation Part	2/12/2010	Pat	2	Aaron	The format routine is incorrectly deciding the # of significant digits in a number when using decimal format. I think this may have been done originally for simplicity but it should be fixed	6-10 hrs
3083	137. GUI spinner controls -- when inputing value >= 2^16/2 in grid thickness spinner, causes error message and value reset to -32768. Pat: Problem is not the spinner. Object definitions using short ints when long ints should have been used.	2/16/2010	Pat	2	Aaron	Probably short data type used where long required, affects many of the spinner controls	1-2 hrs
3084	139. GUI variable options -- more status bar/history window updates needed.	2/16/2010	Aaron	2	Aaron	the only message that ever printed was "1: Cannot Set Value variable, no variables"	1 hr
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	Aaron	not allow velocity to go bad	
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	3	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.			3	Aaron		
2028	Variable units – generic solution - thm_load_spin, _state, _hsk, _sst, _esa, _bau, _fgm, _fbk, _fft, _fit, _scm, _efi, _trg, _asi, _gmag, _ask, _mom, _esa_pkt		Vassilis	3	Aaron		
2029	From Hannes		Hannes	3	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		

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		
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		
2030	upgrade thm_load to work with probe assignments		Vassilis	3	Aaron		
2031	move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2		Vassilis	3	Aaron		
2032	Multiple enhancements concerning keywords, valid_names and thm_load routines		Vassilis	3	Aaron		
	Cindy						
	Jim L						
4007	Determine for Sun Pulses an appropriate decimation factor for outer probes and send email. Currently the factor is 60 and is unacceptabele.	3/9/2010	Jim L and Vassilis	1	Jim L	Agenda item for Ops meeting Discussion	
3037	Support new apid 44F (survey FFT) in tmtools L0 packet processing code.			1	Jim L	Awaiting FSW Patch from PRH, tmtools coding is done	
3038	Update sample timing code to be compatible with apid 44F decimated FFTs.			1	Jim L	Awaiting FSW Patch from PRH, tmtools coding is done	
3089	The old spin period data (which is close to what was assumed on board by the IDPU) needs to be corrected to reflect that precisely also during the eclipse. This is now interpolated during shadow to avoid spinphase jumps at the ends, but should be corrected to reflect what the IDPU was thinking based on housekeeping (spinper differs by ~msecs but this adds up quickly). This can be added into the same spinper file if it does not increase file size much. (Else represent the differences).	2/22/2010	Vassilis	1	Jim L	in progress - eta 3/5	1 week
3090	Then one needs to correct the particle distributions to be introduced in the same orientation. I.e., should use the corrected spinphase upon being introduced (on the fly). This means the particle loading software needs to read the above difference between corrected and uncorrected spinphase, and apply a rotation to the distribution functions upon reading. This should be done with a keyword first, and routinely when we get into orbit (by which time the shadow spinphase determinations will hopefully be automated). I think McFadden is the one to do this but he can also assign it.	2/22/2010	Vassilis	1	Jim McFadden	3089 is prerequisite	
3092	Task list and discussion item for Monday: correction of particle data when using modeled eclipse sun pulse data. The onboard particle data is acquired assuming a constant spin period through the eclipse. Other data gets processed using a different spin model, incorporating the modeled sun pulses during the eclipse, rather than the onboard spin period. So they are really in different coordinate systems -- the one using the modeled sun pulses is close to "true" DSL, while the one using the onboard spin period ("pseudo-DSL") slowly rotates with respect to true DSL when the probe is in eclipse. We need to have a way to convert back and forth between them. Maybe the state CDF needs to contain two sets of spin model parameters, one with eclipse corrections and one without, so TDAS has access to one or the other on the fly. This could be done with a /no_eclipse_corrections keyword in the spinmodel routines, which would give something close to the onboard spin model. Or, perhaps we need something completely different based on the spin period reported in the apid 404 housekeeping telemetry.	2/22/2010	Vassilis	1	Jim L	See 3089	n/a
3099	there is a plan to change the format of the apid 410 spin fit packets (data type FIT). Since we're going to be heavily decimating the apid 453 (MOM) packets, which contain the spacecraft potential with each sample, the science team would like to get that information via a different apid. So there's a proposal to put the spacecraft potential in the spin fit packets instead (replacing the EFI-Z component of the E spin fits), so we'll still get it once per spin. This will require changes to both the L0->L1 server-side processing, and the client-side TDAS code.						
3099a	Define the new apid 410 format in a backward-compatible fashion -- how will we know whether the 410 packet contains EFI-Z or spacecraft potential?	3/2/2010	Jim L	1	Jim L and PRH		
3099b	Revise the L1 FIT master CDF to add a new variable for spacecraft potential, possibly with its own time variable (since the spacecraft potential time tags might need to differ from the E and B spin fit times). We may also want a flag of some sort to tell whether EFI-Z is present or not.	3/2/2010	Jim L	1	Jim L	not needed	
3099c	Revise L0->L1 processing code to determine whether the 410 packets contain spacecraft potential, or EFI-Z, and put the correct information into the new L1 FIT CDF.	3/2/2010	Jim L	1	Jim L	awaiting FSW patch from PRH to create test data for 3099-d	

3099g	Reprocess L1 FIT for the whole mission using the revised master CDF and L0->L1 processing code	3/2/2010	Jim L	1	Jim L	not needed	
3070	VC->L0 processing issue for outer probes	2/10/2010	Jim L	1	Jim L		
3040	Update load & cal routines to handle survey FFTs			1	Jim L		
3041	Update overview plots to handle survey FFTs?			1	Jim L		
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 and Michael	1	Jim L	assign when 2149e started. Michael: Since it is difficult or impossible (in post-processing) to identify all of the bad time tags (or even some of them -- e.g., the fast->slow case), I 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.	
2266	Timing of Spin Fit data	10/16/2009	Jim McFadden	1	Jim L		
2149h	integrate time tag fixer-upper with TDAS load routines		Jim L	1	Jim L		
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	1	Jim L	see 2149g and h	
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	2+	Jim L		3-4 days
3097	Enhance L0->L1 processing script to update V03 state, if present, along with V01 and V02 state.	2/23/2010	Jim L	2+	Jim L		2 days
2082a	Spin modeling during shadows BugZid=43		Vassilis	2	Hannes	Jim L to write routine. Hannes send info.	
2035	Split L1 ESA (using Thomas's routine) in master ESA data cdf		Vassilis	2	Jim L	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).	
2036	GOES 10-12 Test data: h. update labels (Howard's request - minor tweak)		Vassilis	2	Jim L	determine if to be reassigned	
2038	STATE Web Page (s)		Vassilis	2	Jim L	review web pages	
2039	bad timing sun pulse times (early January 2009)		Vassilis	2	Jim L	Clarification needed	
2040	L1 Data Processing History Info: SCM, EFI, STATE		Vassilis	2	Jim L		
2043	Refactor repeated CDF library code in CDF processing tools BugZid=50		Vassilis	2	Jim L		
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	2	Jim L	In progress. Several templates created, selecting the appropriate command line routines to test.	
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) BugzID=45		Vassilis	2	Jim L		
2047a	FGS sample times and values, showing repeated timestamps. BugzID=113 (BugzID=67 must be done first)		Vassilis	2	Jim L		
2047b	Repeated timestamps and gaps in spin fit data BugZid=113 (#67 may fix this one as well).		Vassilis	2	Jim L		
2077	Non Monotonic timestamps. BugzID=72		Vassilis	2	Jim L		
2078	bau_sunpulse_met assumes x86 endiannes (BugzID=13)		Vassilis	2	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	3+	Jim L		
2080	Phantom packets" cause non-monotonic distribution times. BugzID=25, low priority.		Vassilis	3	Jim L		
2081	Evaluate CDF compression algorithms BugZid=81		Vassilis	3	Jim L		
2083	Add "last processed" time to L1 (and L2?) CDFs BugZid=115		Vassilis	3	Jim L		

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	3	Jim L		
	Jim M						
3010	March 1-15 mosaics should get reprocessed	12/9/2009	Harald	0	Jim M		
3098	"thm_load_mom should load ESA sweep mode variables from L1 MOM CDF"	2/23/2010	Jim L	0	Jim M		
3073	I have been contacted by somebody trying to download THEMIS all-sky data. To see the problem go to the "Data retrieval", and "Data files - By group". Select "Ground", "Fort Yukon", "All sky imager", and "Level 1 CDF High Res". Then select for instance 10/29/2008 to 10/30/2008 and press "Download Data". It will show "*Sorry, no files were found for the criteria entered", *though the files clearly exist.	2/12/2010	Harald for User	0	Jim M	To see the problem go to the "Data retrieval", and "Data files - By group". Select "Ground", "Fort Yukon", "All sky imager", and "Level 1 CDF High Res". Then select for instance 10/29/2008 to 10/30/2008 and press "Download Data". It will show "*Sorry, no files were found for the criteria entered", *though the files clearly exist. What's the problem?	
2056	SCM L2 cdf		Vassilis	1	Jim M	Awaiting processing (awaiting EFI L2 completion)	
2228	one outstanding issue with THM_LOAD/THM_CAL_EFI is that for some reason when I ask for the calibrated data in SPG (which should just be adjustment of gains and offsets, and conversion from ADC units to physical units, the code is trying to do some despin operations. Since this has direct impact on my ability to evaluate the EFI data quality,	9/3/2009	John Bonnell	1	Jim M		
2225	L2 EFI cdf (quality flags)	8/31/2004	Vassilis	1	Jim M	eta 3/15	
4004	Sort out if TDAS software can run off SPDF cdf's	3/5/2010	David	1	Jim M		
3099	there is a plan to change the format of the apid 410 spin fit packets (data type FIT). Since we're going to be heavily decimating the apid 453 (MOM) packets, which contain the spacecraft potential with each sample, the science team would like to get that information via a different apid. So there's a proposal to put the spacecraft potential in the spin fit packets instead (replacing the EFI-Z component of the E spin fits), so we'll still get it once per spin. This will require changes to both the L0->L1 server-side processing, and the client-side TDAS code.						
3099d	Revise thm_load_fit (command line and GUI) to load the additional L1 variables.	3/2/2010	Jim L	1	Jim M	pre-requisite 3099c test data (Jim L) and awaiting FSW patch from PRH to create test data for 3099-d	
3099e	Revise thm_cal_fit, and thm_cal_efi to do the right thing when EFI-Z is not present.	3/2/2010	Jim L	1	Jim M	pre-requisite 3099c test data (Jim L) and awaiting FSW patch from PRH to create test data for 3099-d	
3099f	Revise the calibration code for the particle data types (ESA, perhaps also SST or MOM?) to look for spacecraft potential in L1 FIT, if the moments are decimated	3/2/2010	Jim L	1	Jim M	pre-requisite 3099c test data (Jim L) and awaiting FSW patch from PRH to create test data for 3099-d	
3015	The data processing panel doesn't allow split components. This is fine for some operations, even required, but for some operations this doesn't make sense. For example, clipping. There is a good chance that some people will want to clip each component at separate values.	12/11/2009	Pat	tbd	Jim M	Jim M to assess	1 week
3078	119. CL EFI load & cotrans -- result of cotrans from spg to dsl	2/12/2010	Jim M	1	Jim M	Disable in gui SPG->any cotrans of EFI data	1 hr
3085	138. GUI SCM cotrans -- inconsistent results depending on starting/ending coordinate systems. Pass warning through to GUI	2/18/2010	Jim M	1	Jim M	Also should check if same problem exists with command line? Will take time to look at code to get an estimate	tbd
3064	47. CL specplot -- missing peib data for tests 25 and 26	1/15/2010	Jim M	1	Jim M	Data exists, but isn't plotted for some reason.	
3057	I found an issue in the program trange_clip.pro located in the directory: ~/themis/spacecraft/fields/LASP/ There appears to be no error handling to deal with the possible issue of the variable "i1" being greater than "i2". Thus, if the program chooses two times where there is only one data point nearby, it will assign the same index to both variables, which results in the program crashing. One could add this to line 41 or make a simple logical test to avoid the issue.	2/5/2010	Lynn Wilson	1	Jim M		
2227	L2 SST cdf revisions	8/31/2004	Vassilis	2+	Jim M	awaiting SST calibrations	
3021	Data Processing History Web Pages - SST, SCM, FGM, FBK, FIT, EFI	12/15/2009	David	2+	Jim M	Also activate links from Data Desc Web page	
2288	had expected that this cotrans would occur at the very end, after all the calibration code. But the calibration itself seems to be affected,	11/12/2009	Jim	2	Jim M	see 2256	
2057	SCM CAL File Processing Doc		Vassilis	2	Jim M	text completed. Put into std document format and send to Olivier for review	

2283	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.	11/2/2009	Jim Mcfadden	2	Jim M		
2058	found 3 errors in the new th*_l2_esa masters - the good news is, with them fixed in our masters, all plotting issues w/ the ESA files (in CDAWeb) seem to have been resolved.		Vassilis	2	Jim M		
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Jim M		
2175	L2 File Definitions Document		David	2	Jim M		
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	Jim M		
2087	Administrator's Guide		Vassilis	2	Jim M		
2088	Themis Developers Guide		Vassilis	2	Jim M		
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		
2090	that streamlines the generation of gmag stackplots and a crib to show how to do this. (< than a day)		Vassilis	2	Jim M		
2091	Once Jim McFadden completes his mods for n_3d_new_3 reprocess L2 cdf's - entire mission		Vassilis	2	Jim M		
2092	thm_load_mom changes - reconcile mods with Davin at an appropriate time.		Vassilis	2	Jim M		
2055	ESA L2 from L1 (not packets) - create L2 and test thoroughly, then reprocess ESA		Vassilis	2	Jim M	On Hold; awaiting Jim L to split L1 into master cdf	
4002	Document: SST File and Calibation Processing	3/5/2010	David	2	Jim M		
4003	Document: ESA File and Calibation Processing	3/5/2010	David	2	Jim M		
2093	AE Indexes Issue Jan 8-12, keyograms Jan 12-13, Stripes- Vassilis: minor nuisance		Vassilis	3	Jim M		
2094	Overview plot change: mode bar seems thick		Vassilis	3	Jim M	nothing we can do easily	
2095	Mosaic Processing - permanent script needed		Vassilis	3	Jim M		
2100	EFI calibration		John Bonnell	3	Jim M		
2100d	DC offset between 4sdo and 2sdo in boom plane		John Bonnell	3	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	3	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	3	Jim M		
	Pat						
2069	Support Mirror Sites		Vassilis	0	Pat		
2069a	Japan (ISAS)		Vassilis	0	Pat		
2069b	Austria		Vassilis	0	Pat		
2069c	France		Vassilis	0	Pat	(Rumi - not always up to date for gmags)	
2070	Support gmag data remote sites.		Vassilis	0	Pat	The -12 days ones are ones that Kathryn indicated are on the fritz: BMLS,UKIA,HOTS,PINE.	
2070a	Augsburg (MACC's)		Vassilis	0	Pat		
2070b	Alberta		Vassilis	0	Pat		
2070c	Greenland		Vassilis	0	Pat		
3033	GBO rsync from U Calagary is failing. Contacting Emma Spanswick to determine source of problem.	1/5/2010	Pat/Jim M	0	Pat	gap in the data - Calgary was notified	
3034	Rsync to GIMA server is failing. Ualaska Server was replaced and renamed.	12/7/2009	Jim M	0	Pat	Working out problems with SSH public-key authetication...maybe try http	
2265	When new FGM Cal files come from David Fisher reprocess last 6 months.	10/16/2009	Pat	0	Pat	ongoing	
2239b	Load Panel Bug: Loading state data for any probe and requesting level 1 data type '*', it doesn't load all the support types(spinras etc...). This also doesn't work if I shift-select all the quantities in the type list.	11/13/2009	Cindy	1	Pat		
2239c	Load Panel Bug: When trying to load gmag data from the gui station=kian, I got the following crash: % Attempt to subscript NEW_TVARS with NEW_VARS_IND is out of range. % Execution halted at: THM_UI_NEW_LOAD_DATA2OBJ 543	11/13/2009	Cindy	1	Pat		
3067	117. Degap popup queries for every quantity	2/11/2010	Pat	1	Pat	annoyance	
3068a	Labeling Coordinates	2/11/2010	Pat	1	Pat		
3069	122. GUI marker subset -- should be able to subset all plots on a page, perhaps do automatically if axes are locked	2/11/2010	Pat		Pat	new feature	

3071	If you remove a panel in a page with more than one panel, it will move your selection to another panel and desensitizes the "edit" button. It shouldn't desensitize the "edit" button because it has moved the cursor to another valid selection.	2/11/2010	Pat	1	Pat		
3072	Related to 3071 if you remove all the traces in a panel, it moves you selection to that panel and desensitizes the "edit" button. The edit button is valid for the panel it moves your selection to.	2/11/2010	Pat	1	Pat	with 3071	
3074	129. GUI interpolate -- when downsampling data, queries for each	2/12/2010	Pat	1	Pat	Annoyance, should use yes-to-all/no-to-all widget	
3076	133. GUI -- trace labels not updated when variable name changed	2/12/2010	Aaron	1	Pat	Routines are available on window,panel etc... to update variable names when changed(eg thm_ui_window::updatedatareference), should be extensible to support updating label names as well.	
3081	In t96.pro it checks for the model input parameters (pdyn, dst, by, bz) using the KEYWORD_SET() function. This prevents the user from calling the T96 model with by or bz explicitly set to 0.0 change this part to if n_elements(by) eq 0 then …	2/16/2010	Dr Lasse Clausen	1	Pat	t96 complete - in progress	
3025	SST Code development	12/18/2009	Davin	1	Pat	Vassilis to call Davin	
3055	Debug source code from Davin to determine source of crash	12/18/2009	Davin	1	Pat	waiting for receipt of code from Davin. He said that it crashes on 1/10 days but doesn't yet know why.	
3056	Add modification to SST moment - calculations(thm_part_moments/thm_part_moments2) that would allow application of scalar corrections to moments when the spacecraft is in solar wind. Corrections will be provided by Davin, task involves providing framework to apply corrections at the correct times.	12/18/2009	Davin	1	Pat	I sent an email asking for clarifications to Davin, specifically which method out of several should I use to determine whether spacecraft is in solar wind. I've also talked to Jim Lewis about different methods. Jim suggested that it may be worthwhile to add solar wind flags from the data source selected to the SST L1 cdf so that we do not create dependency between SST data calibrations and other data types.(For example, if we don't add flags to SST cdf we might end up needing to load ESA data every time we want to calibrate SST data)	
3048b	spinmodel_interp_t loops over each time segment individually. If we vectorize this operation, we could get serious speed increases. Would generate speedups EFI and for other calibration routines.	1/25/2010	Pat	1	Pat		
3095	I think that when multiple copies of the same images are being created they are not clobbering, but instead are being inserted side-by-side, so when you use the web page to view the images, you'll get multiple copies side-by-side. I think I need to modify the database tables to use unique indexes based on file name, and logic in the insert routine to overwrite when a collision is detected. This should guarantee unique plots for each time.	2/22/2010	Pat	1	Pat		
3029	This happened on a fresh session after loading all L1 EFI variables for 2009-02-09 probe C and attempting to plot the fast survey data (I had similar problems last month plotting EFI wave burst data). The plots still appeared in the draw window after Layout Options crashed, but panel tracking was off, the gui ran very slow, and even after removing some deleting variable to free memory I had to reset IDL to get everything working. Traceback Report from THM_UI_LAYOUT_OPTIONS_EVENT:	1/4/2010	Aaron	1	Pat	Discuss possible solutions. Provide better information to use on data size so that user can avoid problem themselves. E.g., right click on a variable and have the GUI tell you how much memory.	
2280	Retrieval of ASCII Data - Including 2009.	10/29/2009	Laura	1	Pat	Reprocessing is in progress. After reprocessing is	
2136	When we implemented tplot_gui, we gave it support for the most important tplot options, but not many of the more obscure ones. It might be worthwhile to create a task for someone to go through exhaustively and implement as many tplot options as is feasible. That way people can more easily use the gui like an interactive version of tplot. Right now I feel like the more obscure options end up leading to gui plots that still look reasonably different from tplot plots.		Pat	1	Pat	in progress	
3043	36. GUI interpolate -- error with multiple quantities selected and one is out of range -- bad item not skipped, following items not processed.	1/15/2010	Pat	1	Pat	#2 Loaded data for data 2007-03-24. Types: efi_vaw, tha_fgl_dsl,tha_fgh_dsl. Make all data active. In the order above(I believe exact order is important). Open interpolate panel, select "cadence" radio button, leave at default, select limit time, leave at default for quantity vaw(2007-03-24/22:47:06,2007-03-24:22:47:22). Select "Okay", it processes first quantity, then second quantity is out of range, produces error but does not process 3rd quantity(fgh). It should skip over #2.	
3044	38. QA: GUI interpolate -- Interpolating state data to match efi_vaw, "data out of range" error if no state samples fall within the efi_vaw time range.	1/15/2010	Pat	1	Pat	#4 Date 2007-03-24, data efi_vaw, tha_state_pos. Make state active. Select "interpolate", select "match" match to quantity "efi_vaw", select "extrapolate" Select limit time range, select range for efi_vaw (2007-03-24/22:47:06,2007-03-24:22:47:22): Says no data in range. What is happening here is that there are state points on either side of the vaw interval, but no points inside the interval. Perhaps one possibility where time is limited & matching is being done, maybe it should limit based upon the range of the match quantity and not the range of the target?	

3048a	Profiled EFI calibration can speed up by reducing the number of calls to spinmodel_interp_t. Right now >95% of time is spent in spinmodel. It calls spinmodel_interp_t 2x for each 3d data type, could probably use a single call for multiple data types with the same cadence.	1/25/2010	Pat	1	Pat		
3052	The last time we have GBO data is 1/12/10	2/2/2010	K. Rowe	1	Pat		
3058	The size of the windows created by the widgets in IDL for the SCM instrument are too big (at least they were on mine). It was easily remedied by changing the size of the boxes allocated in the probe/Level-1/Level-2 lists in the program thm_ui_scmcal.pro. I simply altered the value passed to the YSIZ keyword in the WIDGET_LIST function call (lines 610 - 628, I think).	2/5/2010	Lynn Wilson	1	Pat		
3068	120. GUI GMAG -- cotrans error, says coordinate system is undefined	2/11/2010	Pat				
3068b	Implementing HDZ->GEO coordinates	2/11/2010	Pat	2+	Pat		6-20 hrs
3053	102. Tplot_gui -- overwrite warning when importing data, even if variable gets renamed.	2/3/2010	Pat	2	Pat		
2115	tplot does not fail gracefully after illegal margin set. In this case: tplot_options,'xmargin',[100,100], tplot does not fail gracefully after illegal margin set. In this case: tplot_options,'xmargin',[-1,-1] -tplot does not fail gracefully after illegal margin set. In this case: tplot_options,'ymargin',[100,100]			2	Pat		16
2267	if you want to load a template, you need to pass the template path in via a keyword, or select an option to open it from the THEMIS->File Menu. I think we should consider adding the template path to the configuration file that we save, so that it can be loaded automatically.	10/19/2009	Pat	2	Pat		40
2176	I ran into a small annoyance today when loading a themis document. I had originally loaded ESA and SST data for one time period, then overwrote that data by loading the same quantities but for a different time period. I did this several times and then saved the document for later. When re-opening the document I got a series of prompts asking whether I would like to re-write each quantity. It would speed up and streamline the process in this case if data that was later overwritten is not loaded when you open the document.	7/20/2009	Aaron	2	Pat	I spoke to Pat about this yesterday and we both agreed that while we cannot be sure which quantities should be re-loaded and which shouldn't (some may have been used temporarily for calculations). However, we can store the users's original choice to overwrite the data or not. So while we may not be able to save on loading time we can still keep the user from having to click multiple messages and from having to remember what they chose originally. The latter is particularly important since they may receive errors or get corrupted data if they do not choose the correct option	
2201	One feature that was never implemented for the mini-language is globbing.(The ability to use '*' and '?' to reference multiple tplot variables at once.) This is a feature that is standard with many of our other tplot data processing routines. I think it would be very useful to include in the mini-language.	8/5/2009	Pat	2	Pat		
2187	I noticed a bug in the x-axis options panel. It probably also applies to the y-axis options. If the set-all button is selected on the grid tab, then changing panels doesn't update the settings on the grid tab to the settings currently displayed for that panel.	7/29/2009	Pat	2	Pat	set to most recent user action for all routines	
2041	thm_load_state out_coord velocity calculations wrong		Vassilis	2	Pat		
2285	Christine brought to my attention a bug that occurs if you use the TDAS tsyganenko routines in a way that is not really something that I expected, but seems to be a legitimate use of the routines. If passing in a set of input parameters that are stored in tplot variables but are not in time-series, the routine produces incorrect results.	11/4/2009	Christine	2	Pat		
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	Pat		8 hrs
3091	Add a configuration setting "force_download", which if enabled, will download data even if the remote file is older than the local file. This comes up if you're switching back and forth between using QA data and production data; once you've downloaded QA data, it's hard to download (usually older) production data without manually removing any QA files. This should apply to all data sources -- THEMIS, GOES, WIND, etc.	2/22/2010	Vassilis	2	Pat		4 hrs
3007	EPO-GMAG msgs: modify the script and only issue this message if > 2 days	12/8/2009	David	3	Pat		
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	3	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	3	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	3	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	3	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	3	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	4-8 hrs
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	Pat		4 hrs
3063	40. CL tplot options -- setposition test plots all look the same	1/15/2010	Pat	3	Pat	Long-standing tplot bug, may not ever be fixed	
	Misc						16-24 hours
447	Save THEMIS document: Attempting to save to a read only file in Windows outputs the correct error message, but IDL crashes immediately afterwards.			1		IDL Error report to ITT	
							4 hrs