Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate (hrs)
	To be Assigned or Discussed						
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	tbd	tbd	Discuss	
2249							
2250							
	General						
2033	VMO file generation		David	1	Aaron		
2033a	One variable change to ASI files and possibly the whole repository		David	1	Aaron	changes sent to Jan	
2033b	SCM and EFI L2 variables		David	1	Aaron		
2033c	L2 STATE (?)		David	1	Aaron		
	FFK and FFT web pages - move to official site	7/15/2009	David	1	Amanda	make mods on beta and new thumbnails	
2244	ESA Web page addition (#26)	9/10/2009	Jim McFadden	1	Amanda		
2186	I noticed that the Data->Collaboration Tools->(subcategories...) fall behind the ARTEMIS graphic.	7/28/2009	Michael	2	Amanda		
	Revise the Data Products Web page and send to Amanda		David		David		
	Enhanced SST and MOM Instrument Web Pages		David		Davin		
2104	L2 CDF, quality flags	7/1/2009	John Bonnell	2	John B	J. B. to talk to Vassilis about expectations for users by 9/30/09.	
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		
	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,	9/8/2009	Jim M		John B	Review Jim's fix	
	Greenland data total magnetic field is only about 250 nT even if no baseline subtracted (from Harald).		Vassilis		J Weygand	Waiting for student to have time.	
2163	Send to Jim McFadden the format of the beginnings of the Operations Log for on board changes that will effect the instrument data	7/6/2009	Jim McFadden		Deron and John McDonald		
	Harald						
	ASI software - running fine as of September 8, 09:45am				Harald		
	Thumbnail Data (updates will come around October 10):				Harald		
	- cdf files done until August 31, 2009						
	- overview plots done until August 31, 2009						
	- movies done until July 31, 2009						
	Full-resolution raw data:				Harald		
	- complete for 2007 and 2008						
	- reasonably complete until February-2009, waiting for transfer disks from Calgary						
	Full resolution data:				Harald		
	- data cdf done for all 2007 and 2008 and for everything available for 2009						
	- keogram cdf done for 2007 and 2008 and for everything available for 2009						
	Web site overview plots with full resolution data:				Harald		
	- overview plots done for 2007 and 2008 and for everything available for 2009						
	- overview plots done for 2007 and 2008 and for everything available for						
2069d	UCLA – mirror site set-up		Vassilis	1	Harald	UCB has 4 bricks to be filled again. After brick transfer UCLA will need to supply SSH key - RSYNC Key.	
	L2 ASI cdf's				Harald		
	When L2 ASI available Quality Flags and History Status?				Harald		
	Tim						
2069	Support Mirror Sites		Vassilis	1	Tim		
2069a	Japan (ISAS)		Vassilis	1	Tim		
2069b	Austria		Vassilis	1	Tim		
2069c	France		Vassilis	1	Tim	(Rumi - not always up to date for gmags)	
2070	Support gmag data remote sites		Vassilis	1	Tim		
2070a	Augsburg (MACC's)		Vassilis	1	Tim		
2070b	Alberta		Vassilis	1	Tim		
2070c	Greenland		Vassilis	1	Tim		
	Hannes						
2241	Determine 2009 V03 STATE spin phase and spin axis corrections	9/4/2009	Jim L and Hannes	1	Hannes		
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.	
	Vladimir						
2114	Load routines to all support keywords suffix and relpathnames_all.			2	Vladimir	See Bryan if there are questions	8 hrs
2120	NO_DOWNLOAD keyword missing from thm_load_fbk.			2	Vladimir	See Bryan if there are questions	4 hrs
2085	Summary Plot mods		Vassilis	2	Vladimir	See Jim M if there are questions	
2085a	Fix duplicate velocity units by removing 'km/s' from ytitle and maintaining 'km/s' in ysubtitle		Vassilis	2	Vladimir	See Jim M if there are questions	
2085b	Either make velocity labels into ('X','Y','Z') or make velocity labels into 'VX','VY','VZ'. So that the components are easier to distinguish.		Vassilis	2	Vladimir	See Jim M if there are questions	
2085c	Modify ytitles on esa eflux and sst eflux so that they do not collide. (Insert '!C's or change setting to make tplot do this automatically).		Vassilis	2	Vladimir	See Jim M if there are questions	
2085d	Set the scales on the zoomed out(24 hr) plots so that they are not autoscaled. Information on appropriate yranges should come from Vassilis.		Vassilis	2	Vladimir	See Jim M if there are questions	
2085e	Change labels on temperature lines so that they are done in different colors (and possibly different linestyles).		Vassilis	2	Vladimir	See Jim M if there are questions	
2085f	If necessary, Update the plot key so that it reflects any of the changes above. It'd probably be best to give this task to me, since I've done the past modifications of the plot key.		Vassilis	2	Vladimir	See Jim M if there are questions	
2200	FIT web pages info		David	2	Vladimir	See David for Template	
	Bryan						
2230	Find out cause of apparent periodicity about phi in Xiaojia's energy spectrum plots.	9/4/2009	Shasha	0	Bryan		
	Fix cribs from Jiang	8/12/2009	Jiang	1	Bryan		
2013	Think about making 2D slices through distribution. See medical imaging code in IDL demo."		Vassilis	2	Bryan		
2013e	Modularize plotting related code		Vassilis	2	Bryan		
2013f	Rewrite crib		Vassilis	2	Bryan	eta 9/18 in progress	
2013g	Integrate into gui		Vassilis	2	Bryan	on hold	
2013h	2D with med imaging code		Vassilis	2	Bryan	eta 9/18	
2013i	3D slices		Vassilis	2	Bryan	eta 9/18	
2027	thm_load_state			2	Bryan		
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 and Ken)		Vassilis	2	Bryan	on hold until V03 State completed - not allow velocity to go bad	
2126	State Vector -> remove coord keyword	7/20/2009	Pat/Jim L	2	Bryan	eta 9/18	
1578	When calling: timespan,'2008-01-29/00:00:00',1,/day thm_load_state,probe='d',coord='dsl',/get_support_data It is printing the following error: % THM_COTRANS: input tplot variable is not a 3-vector. This may not be a big deal, or it may be indicative of the coord argument failing.		Pat	2	Bryan	eta 9/18	
2020b	If requesting 1 hour of data using timespan, then load data using one of our load data routines.: EFI and SCM		Vassilis	2+	Bryan	possible eta 9/18	
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	Bryan		
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	Bryan		
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	Bryan		
2029	From Hannes		Hannes	3	Bryan		
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	Bryan		

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	Bryan		
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	Bryan		
2030	upgrade thm_load to work with probe assignments		Vassilis	3	Bryan		
2031	move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2		Vassilis	3	Bryan		
2032	Multiple enhancements concerning keywords, valid_names and thm_load routines		Vassilis	3	Bryan		
	Cindy						
2239	It looks like we may need to make some small modifications to the Load Themis Data panel to make it work correctly with the changes in thm_load_state. Bug #1 I just got the new version and noticed that if I load probe state/pos with gei coords selected, it correctly load tha_state_pos(in GEI), but now also loads tha_state_pos_gse and tha_state_pos_gsm. This is almost certainly because these new coordinate systems were just added to the state file. It should have only loaded the coordinate system requested. Also, if you request another coordinate system using the interface, it will transform all three into that coordinate system. So if I select coord='dsl', I will get tha_state_pos,tha_state_pos_gse,tha_state_pos_gsm, but despite their names, they will all actually be in DSL coordinates. Bug #2 We need to modify the panel so that it does not transform velocities incorrectly. Right now, if I load probe a/state/vel in spg coords, it will perform an incorrect transformation of the velocity into SPG. (incorrect as per our discussion on the limitations of the cotrans routine with respect to velocities) I don't think it should do this.	9/10/2009	Pat	1	Cindy	in progress	4-8 hrs
2013g	Integrate into gui		Vassilis	2	Cindy	Put together task list	
	turnover Artemis machine from Bryan						
	Jim L						
2237	Turnover from Tim	9/8/2009		0	Jim L	in progress, check if there is email notifications	
2213	Anyway, I have found a burble (not monotonic) in the eff data type time series in this cdf file: thc_l1_eff_20070720_v01.cdf	8/11/2009	Michael	0	Jim L	In progress. Review remaining issues at S/W meeting with Vassilis	
2240	I have a couple of other minor changes to make to the GOES master CDF, in addition to the b_gsm coordinate system fix, and a few tweaks to the processing scripts	8/15/2009	Jonathan Rae	1	Jim L		
2238	FGE-FGH comparison	9/8/2009		1	Jim L		
2246	thm_cotrans now tries to access spinmodel data even when it's not necessary, and if no spinmodel data is loaded an unnecessary error message is produced.	9/10/2009	Jim L	1	Jim L		1 hr
2247	Another undesirable change between tdas_5_11 and the trunk has to do with the 'probe' keyword argument to thm_cotrans. In tdas_5_11, either the single letter 'a b c d e' or the longer 'tha thb thc thd the' names were accepted. In the trunk version, the longer 'thx' values are no longer accepted.	9/10/2009	Jim L	1	Jim L		1 hr
2130	FGM offset study/debug for European Folks		Vassilis	1	Jim L	Offset Data - more analysis in progress (see J Bonnell)	
2034	V03-L2 cdf STATE		Vassilis	1	Jim L		
2034d	I need to add support to thm_load_state (and any load/cal routines that call thm_load_state, e.g. thm_cal_fgm) for specifying which version V00, V01, V02, V03 should be used for cotrans and calibration		Vassilis	1	Jim L		
2034f	revised QA script for STATE (path finder for other scripts to be revised later)		Vassilis	1	Jim L	Jim will do for STATE and then Pat will do 2034g	
2034g	Make GSE and GSM position and velocity's slectable in the GUI		Vassilis	1	Jim L		1-2 hrs
Note	At this point, we should be able to install the new master CDF, and move the reprocessed state CDFs from QA into production (with a heads-up to Tami that a new batch is on the way). The reprocessed CDFs will still be compatible with TDAS 5_11 -- we're only adding new variables, not taking anything away.					wait until Hannes reviews	
Note	Once the reprocessed CDFs are in place, we'll want to make the following changes in TDAS:						

2149	They were also asking when we'll be getting rid of the spikes in the L1 FGM data (Bugzilla #44 and #67). I told them that this is already in the queue, and I should be getting to it very soon. Maybe now is the time?		FGM Team	1	Jim L	all 2149 tasks in progress	
2149a	Packet lookahead in L0->L1 processing (Bugz #67)		FGM Team	0	Jim L		
2149b	Apply despike algorithm to current packet if next packet has different range (Bugz #44)		FGM Team	1	Jim L		
2149c	When a and b are coded and tested, build new tmtools release and start using it for automated processing.		FGM Team	1	Jim L	tmtools 6_00 release built & tested with 2149a and 2149b, 2213 not yet included.	
2149d	Reprocess all L1 FGM data (which should trigger L2 FGM reprocessing as well) will run for several days, should probably wait until "new justice" is operating reliably)		FGM Team	1	Jim L	Waiting for Vassilis to approve use of tmtools 6_00 "as is" for automated processing, and reprocessing L1 STATE (V03 and additional variables), FIT and FGM (range changes).	
2149e	Detect and repair time tags in L0->L1 processing when sample rate changes mid-packet (depends on 2149a)		Jim L and Michael	1	Jim L	see 2213	
2149f	Reprocess L0->L1 for data types susceptible to time tagging problems due to sample rate changes		Jim L and Michael	1	Jim L	see 2213	
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.	
2149h	integrate time tag fixer-upper with TDAS load routines		Jim L and Michael	1	Jim L	assign when 2149e started	
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).	
1563	We were just griping about how long the Overview plots take to load, and I was thinking, what if the Overview Plot window, had a list of check boxes that would enable the user to turn off certain plots? That way if they don't care about the AE index plot, they could turn it off and speed up the load of the rest of overview plots. Here's some more food for thought: didn't we recently discuss the possibility of making an AE index CDF, and let the users download that instead of downloading all the data necessary to recalculate it client-side? Another candidate for that sort of treatment might be the time intervals for slow survey, fast survey, particle burst, and wave burst -- that's another calculation that requires a large volume of data to be downloaded to produce a tiny product, but only a trivial amount of extra work if it's done on the server side.		Bryan/JimL	2	Jim L	Separate L1	
2148	ADC non-linearity correction: This was proposed as a correction to (i.e. reprocessing) the L1 FGM CDFs, but I think it really belongs in thm_cal_fgm as the very first step. There are jumps in the X, Y, and Z components of the FGM data when the field increases or decreases past some thresholds. Dragos Constantinescu has sent some IDL code to implement the correction, but today I'm told that this code doesn't work that well, and Dragos will be rewriting it to reflect that the size of the jump depends strongly on the rate of change as well as the threshold value.		FGM Team	2	Jim L and/or Hannes		
2148a	3a) Incorporate Dragos' code in thm_cal_fgm (hold off on implementing until Dragos delivers improved algorithm; estimate 2 days from receipt of revised code?)		FGM Team	2	Jim L and/or Hannes		16
2148b	Reprocess L2 FGM products with enhanced code (Jim McT, combine with 2147c?)		FGM Team	2	Jim M or Tim	It might make sense to delay 2147c and 2148b L2 reprocessing until the 2149d L1 reprocessing is performed.	
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		
2042	FGM range changes in the mid packet. Post Proc maybe a solution to eliminate the spike. BugzID=44. Bfield mid-packet jumps.		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		
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		
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						
2236	Turnover from Tim	9/8/2009		0	Jim M	eta 9/18	
2242	L2 reprocessing FGM, FIT	9/10/2009	Jim L	0	Tim and Jim M		
2199	AE Index - quality control check plots for traces without gaps	8/3/2009	Vassilis	1	Jim M	Train Tohbans to edit file.	
2048	Process full resolution for March 1-15 2008, Jan 15 2009 and onward.		Vassilis	1	Jim M	March 1-15 complete. Start Jan 15, 2009. - at Jan 26,2009 and processing.	
2056	SCM L2 cdf		Vassilis	1	Jim M	test files have to be sent to SPDF	
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	fix awaiting JB review	
2225	L2 EFI cdf	8/31/2004	Vassilis	1	Jim M	in progress	
2234	ESA velocity (thb - 8/11/09) less than 10 to the -10 change to nan's	9/8/2009	Vladimir	1	Jim M		
2232	MOM - quality flags converted to binary, saturation flag, solar wind flag and maneuver flag, data desc and processing history web page updates. Change pointer to Processing History in master cdf.	9/8/2009	Vladimir	1	Jim M		
2233	ESA - quality flags converted to binary, maneuver flag, data desc and processing history web page updates. Change pointer to Processing History in master cdf.	9/8/2009	Vladimir	1	Jim M		
2245	ESA and MOM Reprocessing when 2232-2234 are done	9/10/2009	Vladimir	1	Jim M		
2227	L2 SST cdf revisions	8/31/2004	Vassilis	1	Jim M		
2170	Port LASP axial calibration to eff datatype	7/13/2009	John Bonnell	1	Jim M	was this completed?	
2101	THM_SPINFIT simulates the on-board spin fits		John Bonnell	2	Michael		
2102	FBK frequencies		John Bonnell	2	Michael		
2102c	Make sure that bin center assignment from L2 works with any changes that Jim M. makes		John Bonnell	2	Michael		
2057	SCM CAL File Processing Doc		Vassilis	2	Jim M	text completed. Put into std document format and send to Olivier for review	
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 - awaiting L1 document to be completed to use as template.		David	2	Jim M		
2061	Data Description Paragraphs		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	
2099	npot computation		Jim McFadden	3	Jim M		
2099a	Formula		Jim McFadden	3	Jim M	McFadden has found bugs in the pipeline. I am on hold until he works those out (he is working with Bonnell and Mozer).	
2099c	McFadden requires more information on the bias changes from John as of 6/5		Jim McFadden	3	Jim M	Check with Jim McFadden	
2099d	Integrate Nishamura's Npot routine as an option into THM_SCPOT2DENS		Vassilis	3	Jim M	I guess this has become 2099e. McFadden basically took the ball, so THM_SCPOT2DENS is	
2099e	Integrating Npot code.	7/24/2009	Toshi	3	Jim M	This is Nishimura's stand-alone routine. I envision it being called by THM_SCPOT2DENS (as an option) which would be called by THM_FITGMOM_OVERVIEWS. In discussion between Angelopoulos, McFadden, and Nishamura.	
2099f	Writing a crib to demonstrate how to use the code to remove penetrating electrons from ESA e- and ion data	7/24/2009	Toshi	3	Jim M	tbd	
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						
2235	Turnover from Tim	9/8/2009		0	Pat	need to be put on email notifications	
955	Add ability allow user to set personal preferences once, so they don't have to do it each time they bring the GUI up. Create user profile so that plots/fonts/colors/sizes/titles/etc... will always be set to user's choice.	8/1/2009	Bob Strangeway and other(s)	1	Pat	in progress, additional items to be discussed at S/W meeting	
2034g	revised QA script for STATE (path finder for other scripts to be revised later)		Vassilis	1	Pat	On hold until Jim L finishes 2034f	16 hrs
2213	I get a log of errors like this from THM_SPINFIT (after running the crib and plotting the data): TPLOT(398): 32 tha_efp_spinfit_npoints MPLOT: Incorrect number of labels. This is, of course, non-fatal, but should be cleaned up.	8/20/2009	John Bonnell	2	Pat	John has approved	
2243	The routine PEN to GSM (or probably better PEN to GEO) requires bird position (r, geolon, geolat is best for these geosynchronous birds) and time as input; then it can be used generically for any GOES satellite. It can be tested against existing birds. The task can therefore be very simple: from geolat/long you determine PEN directions for the new coordinate system, then create a time dependent rotation matrix at some low resolution (perhaps 10 min) and rotate the supplied vector by interpolating. To make it faster, since the spacecraft position does not change in GEO cords very fast, you can put in a keyword of /fixed_geo_sat_pos which will result in a matrix fixed in time. This can then also be run for other satellites (e.g., LANL) if we know position.	9/10/2009	Vassilis	2	Pat	in progress - implement Paul's method and compare	

2183	L0->L1 Processing determine start and stop times of particle burst modes and put into an L1 cdf.	7/27/2009	Vassilis	2	Pat		
2218	Can you change the way the plot menu switches plots? If I start with TH-A and zoom in to a 2 hr plot, then switch to TH-B, the web page automatically zooms out to the whole day. Can we change it so it stays on a 2 hr scale? I thought it used to do this. It would also be useful if when one changed s/c, it automatically updated the plots without having to further click on the display button. This way you could set all the other buttons ,mo,date,time), and then just change the s/c.	9/21/2009	Jim McFadden	2	Pat	Post 10/1/09	
2147	FGM spin harmonics correction (remove interference from solar array currents). David Fisher has produced several tables (each table valid for a few months; correction varies with sun angle) of FGM correction vs. spin phase		FGM Team	2	Pat		
2147a	Decide on how to represent tables for use in thm_cal_fgm (keep as ASCII? convert to CDF?), get full set of corrections, convert to the desired format, install somewhere under /disks/themisdata (probably alongside FGM cal files?)		FGM Team	2	Pat		
2147b	Add a step to thm_cal_fgm to load the appropriate correction tables for the probe & time interval being processed, use spin phase at each sample and interpolate within table to find correction at that point, apply correction. There should be a way to disable this		FGM Team	2	Pat		16
2147c	Reprocess L2 FGM products with enhanced code		FGM Team	2	Pat	It might make sense to delay 2147c and 2148b L2 reprocessing until the 2149d L1 reprocessing is performed.	40
2086	Orbit Plot on Summary Plot web page - on the right side, 3 plots vertically, each overview plot there would be orbit panels (coordinate with Harald).		Vassilis	2	Pat		
2089	Thm_fgm_overviews currently loads the data out of the fit file. It should probably load the data out of the fgm file. Only needs to load from one data source. Jim M thinks the thm_load_fit can be deleted		Vassilis	2	Pat		
2076	SM coord transformation in thm_cotrans does not work: fixing that would be too drastic a change for a patch release, because it might break a lot of existing code. The issue is: if the in_coord parameter is not explicitly specified, and the dlimits structure also does not		Vassilis	2	Pat	Issue Warning and not to let it fail. Clarification Needed	
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	2	Pat	use tplot crib sheets to identify tplot options - get list together	
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		
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	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 user's original choice to overwrite the data or not	
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		4-8 hrs
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	4 hrs
2041	thm_load_state out_coord velocity calculations wrong		Vassilis	2	Pat		

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		16-24 hour
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	4 hrs
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	
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		
	Misc						
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	