Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate (hrs)
	To be Assigned or Discussed						
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.		Bob Strangeway and other(s)	tbd	tbd		24-32 hrs
1512	Cancel Load process		Bob Strangeway and other(s)	tbd	tbd	This is not only a tricky one but it involves all the thm_load command line routines. We briefly looked at this before and were not certain how we would go about it. However, just about everyone I've trained or talked with has requested this.	1+ weeks
1061	Add capability for user to control legend options (size,color,font)		Bob Strangeway and other(s)	tbd	tbd		24-32 hrs
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	tbd	tbd		4 hrs
2202	Reduce GUI Load time for data sets with large numbers components	8/6/2009	Programming Team	tbd	tbd	Build widget tree so only widgets (components) that are displayed are added to the tree. Subcomponent widgets will be dynamically added when user requests their display (clicking on '+' sign). This will reduce the time needed for loading data sets with large numbers of components. A time hit will be paid later down the line, if and when the user chooses to display components. Note: This approach will definitely reduce the time required to load, however, the hit later down the line may not be acceptable. We just need to try it and see.	24 hrs
2203	Improve interface on Plot/Layout Window for spectral vs. linear data	8/6/2009	Programming Team	tbd	tbd	Modify the Plot/Layout panel so that the user doesn't have to remember to switch back and forth from line to spectral mode. This could be done with a simple 'make line' and 'make spectral' button or check box.	4-8 hrs
2204	Reduce the number of keystrokes needed to navigate the tree.	8/6/2009	Programming Team	tbd	tbd	Allow expansion of widget tree from keyboard using accelerator keys. Need to check into operating systems for pre-existing keys. An alternative to this would be to automatically open the tree to at least the probe and/or instrument level, possibly even open down to the data/component level for those data sets with only a few components. This is not critical, but very nice for user and would reduce the number of key strokes.	16-24 hrs
2207	I just got a suggestion from a scientist. He said he was used to level 2 data types have gaps filled or marked, and was surprised that we don't do this. That said, I'm not sure that filling gaps is necessarily a good idea. I think we leave the gaps as they are for good reason, but we might consider posting better warnings to indicate that (1) our data may have time gaps. (2) that an individual data quantity may change cadence mid-time-series.	8/6/2009	Paul L	tbd	tbd		
2008							
2009							
2010							
2011							
	General						
	Work on acquiring FIT web info		David		David	From Toshi	
	Enhanced SST and MOM Instrument Web Pages		David		Davin		
	New Server Installation		Vassilis		Jon L	in progress	
	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.	
	Move EFI Web Pages from beta to official web site		David		Amanda	After John has verified changes	
2160	ESA Processing Web Page revision	7/1/2009	David		Amanda		
2186	I noticed that the Data->Collaboration Tools->(subcategories...) fall behind the ARTEMIS graphic.	7/28/2009	Michael		Amanda		
	Calibration - send sample to Vassilis and David Sibeck		Vassilis		Vladimir		
	Link to Plots		Vassilis		Vladimir		

	Data contain engineering, deployment, maneuver, and science data are in the same stream. From the data description, only maneuver flag state_man is provided. Do you provide information about the time intervals when the data are on, say, engineering level? This data, though valuable in many respects, may be confusing if interpreted as science data. To provide such information, it is possible, for example, to add some bits to existing state_man flag. (from Vladimir) Quality flags (for each instrument to be added to L2 State cdf).		Vassilis		Vladimir		
	Clean-up the power ripples from the FGM data.		Krishan			awaiting programmer	
	Revise the Data Products Web page and send to Amanda		David		David		
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		
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		
	Harald						
	Keograms being updated.					Current status ASK through October 5 2008. Restart Process	
	The THEMIS movies are now up to date and finished through the end of April. There will be a ~4 days delay because we wait with the mosaic generation until that all the station data have been transmitted						
	Mosaic reprocessing post-February 2008 (Full Resolution).					Process full resolution for March 1-15 2008, Jan 15 2009 and onward. (Jim M)	
	Overview plots for web site done though 6/30/2009.						
	CDF file up to date through 6/30/2009. During the tail season I kept these up to date every 10 days. Now I planned to keep up with this task only once a month somewhere around the 10th of the following month.						
	Summary Plots through March 2008.					replacement with full resolution data in the future	
	L2 ASI cdf's						
	When L2 ASI available Quality Flags and History Status?						
	Tim						
2184	Test V03 State Automation	7/27/2009	Jim L	1	Tim	with Jim L 8/3-8/7	
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)	
2069d	UCLA – mirror site set-up		Vassilis	1	Tim	UCB sent 08T UCLA loaded 06T. Four bricks sent to UCLA - UCLA must reconfigure server first . UCLA will need to supply SSH key - RSYNC Key	
2070	Support gmag data remote sites		Vassilis	1	Tim		
2070a	Augsburg (MACC's)		Vassilis	1	Tim		
2070b	Alberta		Vassilis	1	Tim	gmag attributes - reprocess with fix - On Hold for IT	
2070c	Greenland		Vassilis	1	Tim		
2071	Processing full resolution ASI data disks (Apr-Nov 2008).		Vassilis	1	Tim	in process	
2072	Reprocess of ESA L2 data from these dates and all days after until 5/31. This is needed to fill in a missing energy bin in 88x15 full electron mode.		Jim M	1	Tim	MOM reprocessing done, Esa on hold for Jim M	
2063b	Make A-E Index an L1 cdf.		Pat	2	Tim	on hold for reprocessing	
2137	The CDF attributes for some of our GMAGs list the wrong location for the calibration files in the attribute: dl.cdf.gatt.logical_source_description It lists the cal files at: CAL files at http://www-ssc.igpp.ucla.edu/themis_data/calib_files/ But the calibration files for: ATHA, FSIM, FSMI, GILL, PINA, RANK, SNKQ will be found somewhere on this site: http://portal.cssdp.ca:8080/ssdp/jsp/logon.jsp		Pat	2	Tim	in progress	
	Hannes						
2073	New FGM offsets for tail season		Vassilis	1	Hannes	in progress eta 8/7	
2074	V03 STATE		Vassilis	1	Hannes		
2074c	quality flag for FGM data		Vassilis	2	Hannes	talk to Uli	
2075	Spin Axis offsets – Improve the new spin axis offsets calibration routine – In progress. A new technique has been developed for inside magnetosphere with high accuracy. Once complete a paper to be published. Sent data to Karl Heinz, included in the distribution		Vassilis	1	Hannes		
2082	Spin modeling during shadows BugZid=43		Vassilis	3	Hannes		
	Bryan						

2020	If requesting 1 hour of data using timespan, then load data using one of our load data routines.		Vassilis	1	Bryan		
2020a	If requesting 1 hour of data using timespan, then load data using one of our load data routines: All except EFI and SCM		Vassilis	1	Bryan	eta 8/7	
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		
2178	thm_load_goes_mag - put attributes where other TDAS software expects them	7/22/2009	Jonathan Rae, Jim L	1	Bryan	eta 8/7	3-4 hrs
2200	GUI is veeeeery slooooooow loading ASK data	8/4/2009	Harald	1	Bryan		
2122	THM_LOAD_MOM doesn't recognize the datatype keyword for L1 data. (It does for L2).			1	Bryan		
2013	Think about making 2D slices through distribution. See medical imaging code in IDL demo."		Vassilis	2	Bryan		
2013d	Add new slice features (plane orientation, time window, etc.) to slice code		Vassilis	2	Bryan	eta 8/10	
2013e	Modularize plotting related code		Vassilis	2	Bryan		
2013f	Rewrite crib		Vassilis	2	Bryan		
2013g	Integrate into gui		Vassilis	2	Bryan		
2013h	2D with med imaging code		Vassilis	2	Bryan		
2013i	3D slices		Vassilis	2	Bryan		
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	
2041	thm_load_state out_coord velocity calculations wrong		Vassilis	2	Bryan		
2126	State Vector -> remove coord keyword	7/20/2009	Pat/Jim L	2	Bryan	give them suffix's - review with Cindy	
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	on hold - may be solved by 2126	
2114	Load routines to all support keywords suffix and relpathnames_all.			2	Bryan		8 hrs
2120	NO_DOWNLOAD keyword missing from thm_load_fbk.			2	Bryan		4 hrs
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		
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	Bryan	Discuss at Software Meeting - also related to 2141 and 2135	
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						
2195	When I print a plot with the landscape mode turned on, the plot is clipped in half. There may be cross-platform issues using the landscape flag in the IDLgrPrint object to generate landscape plots. We should probably test on various platforms to see. If this is just an isolated issue, it may not be worth worrying about, as printer support in IDL is intermittent anyway, but if this is more widespread, we may need to deal with this by performing the landscape transformation on the output scene by rotating/translating the scene prior to output. Also, if we decide that printer support is not a	8/3/2009	Pat	1	Cindy	Sort out	
2196	Bob Strangeway GUI Review	8/3/2009	David	1	Cindy		
2197	Rename thm_gui_new to thm_gui	8/3/2009	David	2	Cindy		
2189	I found a graphical bug in gui. If you are plotting a constant value and autoscaling is on, it can create a plot that looks non-constant due to internal numerical error. I've attached an example plots(issue in first panel). The first one is using autoscaling, the second is using a fixed range .002 units wide.	7/29/2009	Pat	2	Cindy	QA other plot functions after Pat is done	2-3 hrs
2205	section in the user's guide on optimizing workflow and retrieving default values. Additional comments in tplot_gui, calculate, and save document sections	8/6/2009	Cindy	2	Cindy		1 hr
2206	add Pat's scripts into training scenario	8/6/2009	Cindy	2	Cindy		1 hr
	Jim L						
2181	APID Compression on Probe A did not work - monitor telemetry	7/24/2009	Ops	1	Jim L	only probe 'b' left to verify	
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		
2034c	writing some code to fill in the position and velocity variables for GSE and GSM coordinates.		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	Thm_load_state done. Analysis to determine which other routines need fixing will be done These are routines that call thm_load_state internally. Will review with programmers.	
2034e	I need to enhance the spinmodel routines to use Hannes' spin phase correction, if present With these code changes in place, we can hopefully make some kind of comparison between FGM data calibrated/cotrans-ed with V02 vs. V03 state to verify that the V03 attitude and spin phase corrections are working properly.		Vassilis	1	Jim L		
2034f	revised QA script for STATE (path finder for other scripts to be revised later)		Vassilis	1	Jim L	Still in progress. V03 missing variables are fixed. QA scripts for thm_load_state in progress, but probably won't be ready for 5.1 release. Waiting for Hannes to complete his testing. Next in queue.	
2034g	Edit the master state CDF to add variables for the spin axis RA and Dec corrections	8/4/2009	Vassilis Jim L	1	Jim L		
2034h	Tweak the V02->V03 server-side processing code to store the original RA/DEC values, and the RA and Dec corrections, instead of applying the corrections and storing only the updated values	8/4/2009	Vassilis Jim L	1	Jim L	in progress	1 hr
2034i	Manually reprocess the V00, V01, V02, and V03 state CDFs for the whole mission into QA again, using the new master CDF.	8/4/2009	Vassilis Jim L	1	Jim L	waiting for Tim	2-3 hrs
2034j	Spot check a few of the reprocessed V00, V01, V02, V03 state CDFs to verify that they're consistent with what's currently in production	8/4/2009	Vassilis Jim L	1	Jim L	2034i is prerequisite	1 hr
2034k	Complete task 2184 (Tim and I validate the automated processing)	8/4/2009	Vassilis Jim L	1	Jim L		1 hr
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.						
Note	Once the reprocessed CDFs are in place, we'll want to make the following changes in TDAS:						
2034l	Add the new spin axis correction support variables to thm_load_state	8/4/2009	Vassilis Jim L	1	Jim L		.5 hr

2034m	For the spin phase corrections, the default in the spinmodel routines should be to *not* apply them unless requested by keyword. Right now, the default is to use them, and specify a keyword to turn off the corrections, so this ought to be reversed	8/4/2009	Vassilis Jim L	1	Jim L		1 hr
2034n	Add appropriate keyword argument(s) to any low-level cotrans routines that use the spin axis RA/DEC (probably only affects the DSL<->GEI transform), and make sure thm_cotrans can accept the new arguments and pass them to the lower level routine. Implement the necessary corrections inside the low-level cotrans routine when the "use correction" keyword is specified.	8/4/2009	Vassilis Jim L	1	Jim L		1+ days
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		
2149a	Packet lookahead in L0->L1 processing (Bugz #67)		FGM Team	1	Jim L		16
2149b	Apply despike algorithm to current packet if next packet has different range (Bugz #44)		FGM Team	1	Jim L		16
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		8
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	Set-up only, then goes to Tim or Jim M	1
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).	
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 specify the coordinate system, do we want to try to figure it out from the "in_suffix" argument (current behavior, doesn't work for SM coords), or just fail with a message that a coordinate system must be specified with either the in_coord argument or dlimit structure (probably a better solution, but might break existing code).		Vassilis	2	Jim L	Issue Warning and not to let it fail. Clarification Needed	
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	
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	Jim L and/or Hannes		
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	Jim L and/or Hannes		16
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 correction (e.g. /NO_HARMONIC_CORRECTION keyword or similar, since David F. will need to periodically create new tables from the uncorrected data as data continues to accumulate).		FGM Team	2	Jim L and/or Hannes		40
2147c	Reprocess L2 FGM products with enhanced code		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.	

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		
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						
2198	I'm trying to use the TWAVPOL routine to do a polarization analysis. However, I don't believe I am getting the results I should. Specifically, I am analyzing a wave that has a spectral component around 6 mHz. However, my \ower spectrum plots of the data show a component between 20 and 30 mHz.	8/3/2009	Nathaniel Frissell	1	Jim M		
2199	AE Index - quality control check plots for traces without gaps	8/3/2009	Vassilis	1	Jim M	in progress	
2192	was testing some data using future dates and found something odd. It appears that the routine thm_ui_timefix, fails for dates in the year 2011 and later. Clearly this won't be an issue for a couple of years, but we should probably put this on the list so we don't forget to fix it before it does become an issue. thm_ui_timefix is a routine used by the time widget, which is in turn used by a large number of panels in the gui.	7/31/2009	Pat	1	Jim M		
2048	Process full resolution for March 1-15 2008, Jan 15 2009 and onward.		Vassilis	1	Jim M	on March 11, 2008. Process restarted	
2049	MOM Quality Flags and MOM Processing History		Vassilis	1	Jim M		
2050	Incorrect adjustment on S/C potential. Effects L2 cdfs. Fix in thm_load_mom		Vassilis	1	Jim M	Code complete - reprocessing needed	

2951	New ESA Quality flag for Jim McFadden		Jim McFadden	1	Jim M	In testing with SPDF. Then reprocess.	
2052	Add quality flag verbiage to ESA and MOM Data Description web page.		David	1	Jim M		
2053	Revise ESA and MOM Processing History Web Page		David	1	Jim M	Awaiting new reprocessing completion	
2054	Issue with ESA data and Overview Plots. Pgm Change and reprocessing from Feb 2009-current ?			1	Jim M	Ready to go. Waiting for reprocessing to complete.	
				ETC-sst-esa table load TH-A 2009-02-02 22:30:14.			
				ETC-sst-esa table load TH-D 2009-02-13 20:36			
				ETC-sst-esa table load TH-E 2009-02-13 22:27			
				ETC-sst-esa table load TH-B 2009-02-17 23:50:38			
				ETC-sst-esa table load TH-C 2009-02-18 00:52:20			
2125	I received an error in the smoothing function with the no_time_interp keyword set (through the gui). I was using mag data from drby on 2009-6-9 at 500 sec resolution. Traceback Report from THM_UI_LOADED_DATA::DPROC: $MAIN$ THM_UI_DPROC_PANEL_EVENT<C:\GUI\THEMIS_GUI\themis\thm_ui_new\panels\thm_ui_dproc_panel.pro(123)> THM_UI_NEW_DPROC<C:\GUI\THEMIS_GUI\themis\thm_ui_new\utilities\thm_ui_new_dproc.pro(179)> CALL_DPROC <C:\GUI\THEMIS_GUI\themis\thm_ui_new\utilities\thm_ui_new_dproc.pro(57)> THM_UI_LOADED_DATA::DPROC <C:\GUI\THEMIS_GUI\themis\thm_ui_new\objects\thm_ui_loaded_data__dproc.pro(104)> ERROR_MESSAGE <C:\GUI\THEMIS_GUI\themis\thm_ui_new\utilities\error_message.pro(256)> Last IDL Error: Unable to concatenate variables because the dimensions do not agree: ARRAY. % Execution halted at: SMOOTH_IN_TIME 153 C:\GUI\THEMIS_GUI\ssl_general\misc\smooth_in_time.pro		Aaron	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	
2056	SCM L2 cdf		Vassilis	2	Jim M	in progress	
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		
2059	L2 Data Processing History Info Completed: ESA, MOM Still to be Done: SST, FGM, FBK, FFT, FIT		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		
2085	Summary Plot mods		Vassilis	2	Jim M		
2085a	Fix duplicate velocity units by removing 'km/s' from ytitle and maintaining 'km/s' in ysubtitle		Vassilis	2	Jim M		
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	Jim M		
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	Jim M		
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	Jim M		
2085e	Change labels on temperature lines so that they are done in different colors (and possibly different linestyles).		Vassilis	2	Jim M		
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	Jim M		
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	Jim M		
2087	Administrator's Guide		Vassilis	2	Jim M		
2088	Themis Developers Guide		Vassilis	2	Jim M		
	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		

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	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		
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		
	Michael						
2169	LASP code appears to label SPG coords w/ DSL. Investigate and fix.	7/13/2009	John Bonnell	1	Michael	awaiting reply from JB whether to fix or nott (interaction btw 2 cribs	
2170	Port LASP axial calibration to eff datatype -> can we?	7/13/2009	John Bonnell	1	Michael	awaiting reply from JB as to next step	
2100	EFI calibration		John Bonnell	1	Michael		
2100d	DC offset between 4sdo and 2sdo in boom plane		John Bonnell	3	Michael	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	Michael	On Hold	
2100k	"Case-by-case" calibration parameters ("short-term" high accuracy corrections). LASP does this, but needs integration.		John Bonnell	2	Michael	On Hold	
2100n1	better define the behavior of THM_LOAD_EFI if multiple coord are specified.		John Bonnell	1	Michael		
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	Michael		
2101	THM_SPINFIT simulates the on-board spin fits		John Bonnell	2	Michael		
2101a	Check input coord and boom selection (offset is boom dependent) and reflect in TPLOT var name and metadata. Check offsets against C. Cully's example.	Revised 7/13/2009	John Bonnell	2	Michael	in progress	4 hrs
2101d	SPINFIT that induces a crash at a particular time (unfortunately on a day of interest). At the moment, I suspect that the data is unusual somehow, but probably not bad	8/5/2009	Michael	2	Michael		2 hrs
2099	npot computation		Jim McFadden	1	Michael		
2099e	Integrating Npot code.	7/24/2009	Toshi	2	Michael		
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	2	Michael		
2099a	Formula		Jim McFadden	3	Michael	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	Michael	J.B. to send Jim McFadden info	
2099d	Integrate Nishamura's Npot routine as an option into THM_SCPOT2DENS		Vassilis	3	Michael	add to thm_fitgmom_overviews - first ask Jim McFadden if okay, then reprocess at next opportunity	
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		
2102d	John wants to calibrate by signal source – thm_cal_fbk		John Bonnell	2	Michael		
2103	EAC offsets		John Bonnell	2	Michael	John has taken AC coupled data -> he will get me the offsets and the switch-over times.	
2104	L2 CDF		John Bonnell	2	Michael	J. B. to talk to Vassilis about expectations for users. Michael to find out what the programming task is.	
2105	EFI Calibration Document		David	2	Michael		
	Pat						
2193	Convention notes for Developers	7/31/2009	Pat	1	Pat		
2113	Many of the data processing routines that are tested here do not inherit the plotting options from the tplot variable that they take as input. For data processing routines that I've written Vassilis has had me modify them so that they inherit these options. It shouldn't be very hard to do this, but whether we do it or not depends on whether we think these data processing routines are useful only for the gui or for the command line user as well. (		Pat	1	Pat	Aaron did not check themis/common so that is a task that still needs to be done.	8 hrs
2119	There's a possible bug thm_gen_overplot when an illegal device is set with the DEVICE keyword. The code doesn't check to make sure if the graphics device is valid. It passes the test script because thm_gen_overplot has its own catch error statement embedded in the code. The catch statement does report, "Graphics device not available: a", but only after data have been loaded and tplot vars have been created. If a long time range is requested this could be a significant waste of time to the user.			1	Pat		2 hrs

2118	With a pre-mission and future dates, thm_gen_overplot does not exit gracefully. The user sees a lot of "Remote file not found messages", but is not offered any indication that the date requested is before the mission began. It would also be useful to have a check for when DATE plus DUR is greater than the current date, and then ignore the requested days beyond the current.			1	Pat	same time as 2119	
2189	I found a graphical bug in gui. If you are plotting a constant value and autoscaling is on, it can create a plot that looks non-constant due to internal numerical error. I've attached an example plots(issue in first panel). The first one is using autoscaling, the second is using a fixed range .002 units wide.	7/29/2009	Pat	1	Pat	(Cindy will QA other plot functions)	2-3 hrs
2190	If I had a plot that I had made range settings to and I added another quantity to the plot, the range settings would be reverted to the defaults. This is actually a sub-case of a larger problem that we've seen over and over again, specifically, we don't have any idea when a user has modified a setting(versus when the internal code modifies a setting). This is important to know for deciding when to automatically change defaults, and also for things like knowing which settings to copy when the "Set All" flag is checked.	7/30/2009	Pat	1	Pat		3 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	1	Pat	Discuss at S/W Meeting 8/10	1 hr
2188	The current GUI allows fixed ranges on the interval (0,inf) for logarithmic z-axes. Meaning 0-is considered an illegal entry. For spectral plots like ESA and SST that is a problem. They include 0-values even though they are technically illegal values for a logarithmically scaled axis. A while back we added a special case so that those values can be displayed, but we don't have a special case to allow users to enter that value as a range. It appears pretty clearly in the gui overview plots now that they have fixed z-ranges.(plot attached) On the ESA & SST plots at the bottom, most of those purple regions would be black if we allowed the scale to be on the interval [0,inf)	7/29/2009	Pat	1	Pat		4-8 hrs
2037	J. Kissinger's cotrans routine (from GSE to SSE coordinates)		Vassilis	2	Pat	SPICE/ICY lib installed. integration of this data into a separate L2 cdf. - in progress Create a crib as well.	
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	in progress	
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 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	4-8 hrs

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		4 hrs
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	
	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	