Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate (hrs)
	To be Assigned or Discussed						
4118	Vassilis to talk to Jim McFadden concerning background removal code.	8/23/10	Vassilis	?	Vassilis		
4107	thm_part_getspec will average energy over the energy range requested. It looks like Perez only used representative energies, rather than an average of the whole range.	8/6/10	Pat	?	Vassilis	potential bug.#3, it seems to me that thm_part_getspec should actually use a weighted average rather than average over it because the energy bins are not evenly spaced and thus each bin has a different size in energy. In my testing this only accounted for a small amount of error, the three issues above made the vast majority of difference. Still it should be easy to fix and should make the angular spectra results slightly more accurate. **8/23/10 Vassilis wants to talk to Jim McFadden and Davin**	
4161	Put new FFF plots online	11/5/10	Vassilis	1	Jim M	Coordinate with Pat	
4162							
4163							
4164							
4165							
4166							
4167							
4168							
4169							
	General						
2186	I noticed that the Data->Collaboration Tools->(subcategories...) fall behind the ARTEMIS graphic.	7/28/09	Michael	3	Amanda	Run Compatiability View in Internet Explorer	
4043	Paper on interdependentcies of FGM and STATE Reprocessing	4/19/10	Pat	1	Jim L	David - Put Paper into themis doc format - tips du jour?	
4000	Document: Developers Guide	3/5/10	David	3	Team		
4001	Document: Administrators Guide	3/5/10	David	3	Team		
	Incorporate electron calibration into data	10/25/09	Vassilis		Davin		
	Enhanced SST and MOM Instrument Web Pages		David		Davin		
4078	help request Martin - SST	6/18/10	Martin Birch	0	Davin		
	Harald						
	ASI software - running fine as of 25 May 2010, L1's and mosaics are up-to-date.				Harald	**High resolution datd for last tail season by end of December**	
	Thumbnail Data:				Harald	Updates ready 7-10th of the next month	
	- cdf files done until April 30, 2010						
	- overview plots done until April 30, 2010						
	- movies done until April 30, 2010						
	Full-resolution raw data:				Harald		
	- complete for 2007, 2008, 2009						
	- reasonably complete until mid February 2010						
	Full resolution data:				Harald		
	- data cdf done for all 2007 and 2008 and mid Nov-2009						
	- keogram cdf done for 2007 and 2008 and until mid Nov-2009						
	Web site mosaics and movies:						
	- Mosaics and movies reprocessed for 2007/2008 and 2008/2009 seasons						
	- Mosaics and movies up to date until April 30, 2010						
	Web site overview plots with full resolution data:						
	- overview plots done for 2007 and 2008 and until mid-November 2009						
	- overview plots with thumbnails done until April 30, 2010						
2069d	UCLA – mirror site set-up		Vassilis	1	Harald	UCB has 2-1TB and 2-2TB bricks.	
	Hannes						
4153	maintenance of gmag stations "Exclude List"	10/11/10	David	0	Hannes		
4080	Attitude Determination next few months	6/21/10	Hannes	1	Hannes	will send out new attitude correctionsfor tha, thd and the. 8/30/2010: Thb and thc while in lunar orbit based upon sun angles. Work with UCB Ops folks (Dan Cosgrove). 10/11/10 Waiting for 4-18a and then new calibration data	
4034b	Ferdinand sent was an attempt on his part to automate the shadow processing. He wanted feedback whether the products produced are adequate and if the code is amenable to automation. We can pick it up with him once you have gone through it.	4/14/10	Vassilis	1	Hannes	**Report sent out on 9/13/10. Jim L to review**	
4018a	New Calibration FGM parameters and spin axis offsets	5/10/10	Hannes	1	Hannes	offsets to be sent to instr scientists by 11/15.	
4154	GSE-GSM	10/11/10	Vassilis	1	Hannes		
4058	This is getting a bit out of hand I think. How about a configuration file? The software just reads keywords from a configuration file. With such a configuration file it is possible to set keywords automatically (for the scientists) but additionally it would give us the possibility to keep track of what the software does automatically. When I do calibrations I can then save the configuration file together with the results and not worry about the things that the software might have done automatically.	5/10/10	Hannes	3	Hannes	**Hannes sent out new version for review.**	
2074c	quality flag for FGM data		Vassilis	3	Hannes	on hold	
2082a	Spin modeling during shadows BugZid=43		Vassilis	3	Hannes	Jim L to write routine. Hannes send info.	
	Aaron						
2013	2-D Slices		Vassilis	1	Aaron		
4148	Slices re-gridding: Add nearest neighbor interpolation across energy, based off bin size, & implement in gui	10/8/10	Vassilis	0	Aaron	**plots due 11/8; Meet with Vassilis and Xushi each day until task is completed.**	
4149	Allow exporting of slices plots to .eps format. There should already be some code in place to do this; if not we may want to re-prioritize it.	10/8/10	Vassilis	0	Aaron		
4150	Allow slices based off coordinates other than DSL.	10/8/10	Vassilis	1	Aaron		
2013x	User's Guide write-up and then review with Xuzhi		David	1	Aaron	**changes in progress**	
2013am	Crib		David	1	Aaron	**changes in progress**	

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.	12/11/09	Pat	1	Aaron	**analysis completed**	1 day
3079	110. GUI -- spinner widget, inconsistencies between actual and displayed value for very small numbers	2/12/10	Pat	2	Aaron	Support exponential notation for very small values	
3079a	Spinner Part	2/12/10	Pat	2	Aaron		
3079b	FormatAnnotation Part	2/12/10	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	4-5 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.	2/16/10	Pat	2	Aaron	Probably short data type used where long required, affects many of the spinner controls	6-10 hrs
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	1 hr
2013af	Mark one count level (dashed line)		Vassilis	2	Aaron	**Vassilis wants to talk to Jim Mcfadden about this. Jim McFadden to review email.**	
2013s	combine SST and ESA slices into a single plot?		Vassilis	2	Aaron		2 days
2013t	Allow for loading of user-specified distributions in gui. 8/23/10 Per Vassilis: For 2013t instead of allowing user specified distributions in the gui I will be adding an option to compare slices with specified functions		Vassilis	2	Aaron		4-6 hrs
2013w	Integrate our own slicer3.pro gui with regular 2-D slice plots.		Vassilis	2	Aaron		2 days
3014	We don't have support for filled symbols. This means symbols are only outlines.	12/11/09	Pat	3	Aaron		
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.	12/11/09	Pat	3	Aaron		1 day
3031	GUI Overview plots sometimes have diamond shaped artifacts in the sample rate bar. Should fix.	1/5/10	Vassilis	3	Aaron	This is a side-effect of the a way that symbols are used as a hack to generate the sample rate bar. Fix after 3014 is fixed.	1/2 day
1579	When importing a variable with a valid 'V' component in its data struct, but no spec flag set in its meta data, the loaded data object fails to load the y-axis. This should be fixed, as it ends up incorrectly loading certain spectral quantities.		Pat	4	Aaron		
2121	When thm_load_fit is called requesting a single data type it will also return some auxiliary data types. For example: thm_load_fit,probe='b',datatype='fgs' returns: 1 thb_fit_code 2 thb_fit_npts 3 thb_fgs. load bug or test script bug) b. The relpathnames all keyword is broken.			4	Aaron		
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	4	Aaron		
2029	From Hannes		Hannes	4	Aaron		
2029a	Provided is the most common plot used by scientists that look at magnetic		Hannes	4	Aaron		
2029b	The level 2 CDF files at http://themis.ssl.berkeley.edu/data_download.shtml should contain position in various coordinate systems as well. Preferably in the same resolution as the data. Otherwise Scientists need to get the position from another source. Notes from Vassilis: option to introduce the data in RE with keyword (one RE =6,478 kilometers ???). Like thm_load_fgm /pos_units= 'RE'. Also thm_load_state keyword out_coord = 'GSM', 'GSE',...etc.		Hannes	4	Aaron		
2029c	If one loads fgm data from probe 'a' and let's say there are no data for the chosen interval. The variables tha_fgl and tha_fgl_gsm etc. should all be empty. It could be those variables still contain data from the previously loaded interval.		Hannes	4	Aaron		
2030	upgrade thm_load to work with probe assignments		Vassilis	4	Aaron		
2031	move functionality of thm_load_state2 into thm_load_state and delete thm_load_state2		Vassilis	4	Aaron		
2032	Multiple enhancements concerning keywords, valid_names and thm_load routines		Vassilis	4	Aaron		
Cindy							
Jim L							
4142	issue with FGS processing	9/30/10	Vassilis	0	Jim L	analysis first fixing if needed priority 1 after	

4117	I am a postdoc from UCLA working on the THEMIS data. The recently added FFF data is very helpful in our study with higher frequency resolution and longer time availability. I looked at FFF data and compared with FFP data during particle burst and attached a couple of examples as follows. In the attached figures, top three panels are electric field (1. FFP, 2. FFF, 3. closest FFP data at FFF recording times), and bottom three panels are magnetic field (4. FFP, 5. FFF, 6. closest FFP data at FFF recording times). As we can see from the figures, FFF data generally agrees well with FFP data, but sometimes is associated with a short time shift (e.g., ~10-05-12/12:51:54 UT). **When closed a warning needs to be sent to users.**	8/16/10	Wen Li	0	Jim L	I've had a chance to take a closer look at the FFF (apid 44f) vs. FFP (apid 44d) timing discrepancy you pointed out. I have a tool that tries to match the FFF samples bin-by-bin with the FFP samples, to locate the data points that are common to the two data sets, report the matching indices, and show any time differences found for the matching samples. Please refer to the attached output file fff_ffp_comparison.txt. It seems that the IDPU is occasionally skipping over some of the FFP samples, and not copying them into the FFF data stream. 8/30/2010 Jim L to send out an email (high priority) to get a etu/flatsat case setup. Awaiting "function generator" and Peter's return from vacation. 9/13/10 see Peter Berg for a piece of equipment. 9/20/10 Jim L to run on etu the old code and see if the problem can be duplicated. flatsat will not be available for 1-2 more weeks. **9/30/2010 going to test on Flatsat the week of 10/4-10/8. Prep for test and contact tom Clemons for support to hook up function generator. Next step: patch to probe**	
4140	decompression algorithm - implementation and testing; FYI, I'm done (pending ETU testing) implementing the new lossy moment compression algorithm requested by Vassilis. It passes its self-consistency check (that the decompression algorithm exactly reverses the compression algorithm). We still have to test it against Peter's implementation on the ETU, to make sure the ground decompression is compatible with the FSW compression. He's probably not quite finished with the FSW side of it yet, so as soon as he's ready we'll give it a try on the ETU.	9/15/10	Vassilis	0	Jim L	flight software patch to remove the SST data from the moments packets for the ARTEMIS probes. Peter is going to implement the FSW side as a new compression algorithm, so I need to add support for it in the VC->L0 processing. **Jim's code done awaiting for Peter's FSW patch and then will be run on the etu; 10/8 next step to test on flatsat**	8 hrs
4158	I'm looking at the L1 CDF data from the THB on-board spin fits, and am seeing stuff that I'm not familiar with in the FIT_CODE. It is the case that it looks like the configuration change that was commanded on 23 Oct 2010 has taken effect, and that the E-field fit code has changed from 0xE5 to 0xE7 as was expected. However, it appears that some fraction of the fits have their code set to 0x00, and have their number of points set to zero as well. It does not appear that this behavior had anything to do with the reconfiguration, as one can see the zero-code/zero-point fits both before and after the reconfiguration at ~0623 UT on 23 Oct 2010 (see attached plot). SO, I'm wondering if this is expected behavior from the on-board spin fit and ground processing, or if it's anomalous. I'll take a look at more data from THB and data from the other SC to see if it's a generic feature of the FIT data products as well and let folks know what I find.	11/2/10	John Bonnell	0	Jim L		
4159	we've performed a number of data replays from DSN to fill gaps in our science coverage for THEMIS B, recovering small amounts of previously missing science data in a period between 1 August 2010 and now. The archive files have been processed through the system and are now under: /disks/themisdata/thb/vc_archive/2010/. which indicates to me that some level of science data processing has been performed. Some of the filled gaps were a month ago or more, and I'm not sure if special action has to be taken (by Jim Lewis or others) to force the gap-filling data to be included into downstream data products. If so, the simplest thing to do would be to reprocess THEMIS B data between 1 August 2010 and now. If that is too onerous, below is a targeted list of the gaps that have been filled (columns 1 and 2 are the specific areas that would require reprocessing).	11/2/10	Bryce	0	Jim L		
4034a	Ferdinand sent was an attempt on his part to automate the shadow processing. He wanted feedback whether the products produced are adequate and if the code is amenable to automation. We can pick it up with him once you have gone through it.	4/14/10	Vassilis	1	Jim L	**Jim L to review Hannes's report.**	
4030	cross-check SST psir6 and psif data types for excess counts in psir6	4/8/10	Jim McFadden	1	Jim L	**Talk to Davin as well.**	
4030a	Review Onboard Scripts for possible error.	5/17/10	Jim Lewis	1	Jim McFadden, Davin, Robert Abiad	**can duplicate on flatsat. Jim Mcfadden to review Jim L's email.**	
4030b	Correct Existing Data	5/17/10	Jim McFadden	1	Jim L	4030a prerequisite	
4030c	If scripts change - make changes to processing scripts	5/17/10	Jim Lewis	1	Jim L	4030a prerequisite	
4027b	Reprocessing GOES Data	4/5/10	Tami - SPDF	1	Jim L	Reprocessing on hold until Howard Singer delivers another batch of binary GOES data files.	
4070	"Add support to thm_cotrans, ssl2gse, and ssl2dsl for /pseudo_dsl keyword. If keyword is present, look for and apply eclipse delta_phi corrections as appropriate."	6/1/10	Jim L	1	Jim L	thm_load_fit and thm_load_mom, add keyword. In progress **Will review code Davin checked-in concerning tensor quantities in thm_load_mom.**	
2266	Timing of Spin Fit data	10/16/09	Jim McFadden	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	1	Jim L	Create a routine to clean up tplot variables. Use in the load routines were susecptible. Recommend that we just remove what is needed to make the time tags monotonic, and issue a warning indicating that the user should consult the THEMIS software team about that data.	
2149h	integrate time tag fixer-upper with TDAS load routines		Jim L	1	Jim L		
4008a	He requested some extra datetime formats. A. Numerical month & time (ie 2007-03-23/00:00:00). this option isn't listed.	3/12/10	Pat from a scientist (Martin Connors?)	1	Jim L		4 hrs
4008b	He said there is an ANSI standard to separate date & time using a capital T and requested the option to put datetimes in this format. (ie '2007-03-23T00:00:00')	3/12/10	Pat from a scientist (Martin Connors?)	1	Jim L		

ID	Description	Date	Requester	Pri	Assigned	Notes	Time
4016	Our "save data as" menu doesn't remember the previous directory > that the user saved to. It could and it should.	3/12/10	Pat from a scientist (Martin Connors?)	1	Jim L		1 day
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:	9/10/09	Jim L	2	Jim L		2 hrs
4135	Now that the L1 ESA/SST/MOM reprocessing is underway, these CDFs will soon contain the full ESA and SST configuration words, in addition to the solar wind flags, sweep modes, and so forth. With the full configuration data available, if someone wants to use a property of these instrument configurations that's not already present as a L1 variable, we don't need to reprocess L1 to add it -- we just write a little more code for TDAS, to extract the new attribute from the configuration data that's already present.						2-4 hrs
4135a	Write some TDAS routines that take an apid and a configuration word, and return a structure with all the relevant properties of that configuration. This is basically reimplementing some logic that's already in the L0->L1 processing code (written in C). If anyone ever needs other attributes of the instrument configuration (for example: the angle maps corresponding to each configuration), we would update these routines to return the additional information.	9/10/10	Jim L	2	Jim L		
4135b	In the load and/or calibration routines for ESA, SST, MOM: rather than using the ESA solar wind flags and sweep mode from the L1 CDFs, use the ESA full configuration instead (which is present in all three L1 types, for convenience), and use the routines from 4135a to extract the solar wind flags, sweep mode, and any other useful attributes. I think SST does not have any configuration flags similar to the ESA quantities (there's the attenuator status, but that's separate from the instrument configuration word), but it needs them in the future, they should be handled the same way as ESA (extract from SST configuration word instead of adding L1 variables). I can do this, but if the routines from part (a) are well-documented, any of us could probably do this part.	9/10/10	Jim L	2	Jim L or tbd		
4022	Update L1 master cdfs to support SPDF hosting	3/25/10	David	3+	Jim L		
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/10	Jim L	3+	Jim L		
4040	Spinfits - separate E&B timestamps?	4/15/10	Jim L	3	Jim L	SPDF has issue creating plots on the L1 data with their software	
4046	either thm_load_fit or the GUI code that calls thm_load_fit should split the data into separate tplot variables for E and B, before importing them into the GUI data model. I think thm_load_fft already does something like this. **See task 4040**	4/23/10	Pat	3	Jim L	Jim M 4/23: thm_load_fit also splits into efit and bfit variables, so unless you need to look at raw bytes, the 'fit' datatype is not needed. Pat: Agreed. Short term, excluding the data type from the GUI seems like an easy solution.	
2082a	Spin modeling during shadows BugZid=43		Vassilis	3	Hannes	Jim L to write routine. Hannes send info.	
2035	Split L1 ESA (using Thomas's routine) in master ESA data cdf		Vassilis	3	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	
2036	GOES 10-12 Test data: h. update labels (Howard's request - minor tweak)		Vassilis	3	Jim L	determine if to be reassigned	3-4 days
2038	STATE Web Page (s)		Vassilis	3	Jim L	review web pages	
2039	bad timing sun pulse times (early January 2009)		Vassilis	3	Jim L	Clarification needed	
2040	L1 Data Processing History Info: SCM, EFI, STATE		Vassilis	3	Jim L		
2043	Refactor repeated CDF library code in CDF processing tools BugZid=50		Vassilis	3	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	3	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	3	Jim L	Discuss with SPDF whether having one variable with multiple data sources is difficult for them	
2047a	FGS sample times and values, showing repeated timestamps. BugzID=113 (BugzID=67 must be done first)		Vassilis	3	Jim L		
2047b	Repeated timestamps and gaps in spin fit data BugZid=113 (#67 may fix this one as well).		Vassilis	3	Jim L		
2077	Non Monotonic timestamps. BugzID=72		Vassilis	3	Jim L		
2078	bau_sunpulse_met assumes x86 endiannes (BugzID=13)		Vassilis	3	Jim L		
2047	task 2047 in my name: "Seperate E and B timestamps for spin fits", which is also a change to the L1 FIT master CDF and associated TDAS code. But unlike the spacecraft potential enhancement (which only adds new CDF variables, and is more-or-less backward compatible), 2047 would require us to bump the L1 FIT CDF version number to V02, and produce both V01 and V02 for a while, so users of TDAS 5.20 and earlier will still be able to load L1 FIT data. So I'm not sure whether the spacecraft potential task should include 2047, or not.	3/2/10	Jim L	4+	Jim L		
4075	describe the FBK data type, time tag specified to correspond to the beginning of the time interval of the data that went into the FBK data, the middle, or the end, or is that unspecified, and what's happening here is that the time tagging is being changed in year 3+ of the mission - in the L1 file definition document, at least, does not define the time-tagging conventions to this level of detail.	6/11/10	John Bonnell	4	Jim L		
4023	Before EOM reprocess L1 cdf's due to master cdf changes for SPDF	3/25/10	David	4	Jim L		
2080	Phantom packets" cause non-monotonic distribution times. BugzID=25, low priority.		Vassilis	4	Jim L		

ID	Description	Date	Requestor	Pri	Assigned	Notes
2081	Evaluate CDF compression algorithms BugZid=81		Vassilis	4	Jim L	
2083	Add "last processed" time to L1 (and L2?) CDFs BugZid=115		Vassilis	4	Jim L	
2084	. transforming one data point from SM coordinates to GSM coordinates. ct=time_double('2008-02-16/04:50:00') dipole=[[0],[0],[1]] v=[1,2,3] store_data,'dipole_sm',data={x:ct,y:dipole,v:v} cotrans,'dipole_sm','dipole_gsm',/SM2GSM cotrans,'dipole_gsm','dipole_gse',/GSM2GSE get_data,'dipole_gse',data=dipole_gse xdipgse=dipole_gse.y[0] ydipgse=dipole_gse.y[1] zdipgse=dipole_gse.y[2] tilt=atan(xdipgse,zdipgse) When I check the data for 'dipole_gsm', the values are 0,0,0. I'm not sure what they SHOULD be, but I know that their magnitude should equal 1. sqrt(x^2+y^2+z^2)=1		Christine	4	Jim L	
4097	cdf's with MD5 checksum	7/19/10	Jim L	4	Jim L	Jim L to send email with subtasks and estimates

Jim M

ID	Description	Date	Requestor	Pri	Assigned	Notes
2057	SCM CAL File Processing Doc		Vassilis	1	Jim M	5/21/10 Olivier will review - pinged Olivier again on 7/30/10
4004	Sort out if TDAS software can run off SPDF cdf's	3/5/10	David	1	Jim M	**test tdas software with cdaweb data**
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	3/2/10	Jim L	1	Jim M	**Run independent test on thm_load_esa_packet. Awaiting Jim McFadden to review.**
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.	2/22/10	Vassilis	1	Jim McFadden	**3089 is prerequisite** - Vassilis 4/23: un-rotate the V's from the dphi and the onboard spinphase) and compare with the ground-processed V from the distribution functions. ESA and MOM code to use new features of spin model. In progress and being done in conjunction with 3099f. **Jim Lewis needs to review spinmodel2 and thm_load_esa_packet to see how to incoporate spin model correctly.**
3041	Update overview plots to handle survey FFTs? Task modified as follow as of 8/30/2010: One overview plot for the three inner probes - 4 products (FBK-2,FFF-2) and one plot for the outer two probes (4 products for each).			1	Jim M	**Vassilis: The plots look very nice. The only change I would suggest would be the labels (make them smaller) because they overlap and I cannot tell what is plotted. Some underscores would work fine to change lines. Go ahead with implementing (but do ensure that it's OK with Olivier and Bonnell). 11/2/10 - Jim M - in progress**
2103	EAC offsets	8/1/09	John Bonnell	1	Jim M	John sent Jim M code from Chris Cully showing how the offset should be calculated (8/12). **8-20-10 Jim M send John B for review a database of offsets. 9-2-10: John B to have feedback by 9-11.**
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,	9/3/09	John Bonnell	1	Jim M	Jim M to create an option in thm_cal_efi.pro so that data in physical units can be gotten out before any spin dependent offsets are applied. **8-20-10 Jim M committed changes and will send John B an email to review. John B to have feedback by 10/22/10**
4157	THEMIS: switching from E12 to E34 for EFS on THB in the L0->L1 processing?	10/19/10	John Bonnell	1	Jim M	Jim M committed and waiting for John's approval.
2216	Fix the sign reversal of e34.	8/13/09	John Bonnell	1	Jim M	John sent Jim M a date/probe combination that Forrest Mozer used to establish the correct sign of e34 (8/12). Jim M will make the appropriate thm_spinfit corrections. **John B to have feedback by 10-22-10.**
4137	What I'm imagining would be a crib that loads the RAW TM data, then the NO_EDC_OFFSET data, then the fully-calibrated data so one can see the various stages in the calibration process directly. If you have time in your schedule to start developing something like that, that would be a natural next step for this part of the effort, and it would mean one more step forward.	9/13/10	John Bonnell	1	Jim M	**sent to John B and waiting for feedback; demonstration of task 2228**
2225	L2 EFI cdf (quality flags)	8/31/04	John Bonnell	1	Jim M	Quality flags and L2 cdf will be addresses when we have a clue about offsets, spinfits, etc
4056	EFI Calibration Document	4/30/10	David	2	Jim M	
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.	11/2/09	Jim Mcfadden	2	Jim M	
2175	L2 File Definitions Document		David	3	Jim M	
2087	Administrator's Guide		Vassilis	3	Jim M	
2088	Themis Developers Guide		Vassilis	3	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	3	Jim M	
2091	Once Jim McFadden completes his mods for n_3d_new_3 reprocess L2 cdf's - entire mission		Vassilis	3	Jim M	
2092	thm_load_mom changes - reconcile mods with Davin at an appropriate time.		Vassilis	3	Jim M	
2055	ESA L2 from L1 (not packets) - create L2 and test thoroughly, then reprocess ESA		Vassilis	3	Jim M	On Hold; awaiting Jim L to split L1 into master cdf
4003	Document: ESA File and Calibation Processing	3/5/10	David	3	Jim M	
4042	Script to run every two weeks to runs IDL TDAS and checks if a file can be loaded from THEMIS SPDF file (s)	4/19/10	Pat	3	Jim M	
2093	AE Indices issue Ada 8-12, keyograms Jan 12-13, Stripes- Vassilis: minor		Vassilis	5 4	Jim M	

ID	Description	Date/Req	Name	Pri	Assignee	Notes	Est
2094	Overview plot change: mode bar seems thick		Vassilis	4	Jim M	nothing we can do easily	
2095	Mosaic Processing - permanent script needed		Vassilis	4	Jim M		
2100	EFI calibration		John Bonnell	4	Jim M		
2100d	DC offset between 4sdo and 2sdo in boom plane		John Bonnell	4	Jim M	Which is better? Assigned to J. B. (low priority).	
2100h	Try to track down frequency scaling problem in DPWRSPC (dlimit setting? Compare to old plots?).		John Bonnell	4	Jim M	On Hold - low priority	
2100p	Modify THM_CAL_FIT to treat efs datatype - Install E12/E34 conditional based on th?_fit_code TPLOT variable. If E12 switched to E34 software needs to be revised to handle		John Bonnell	4	Jim M		

		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		
2070a	Augsburg (MACC's)		Vassilis	0	Pat		
2070b	Alberta		Vassilis	0	Pat		
2070c	Greenland - **I think the following stations in our archives are essentially unusable scientifically (non calibrated-mis labeled): nrsq amk atu dmh dnb gdh kuv naq nrd sco skt stf svs thl umq upn Following up with DTU on ways to correct. ***Periodic Download - go for it ***Old data not calibrated - what to do? ***Release Greenland to SPDF? Integrate into load routines (yes)**		Vassilis	3	Pat	**On #1** Is there any way for us to calibrate the DMI data - answer is NO. Basically what he's saying is that all our old greenland data is in raw format, but none of our documentation is labeled to indicate this. Someone could easily use the greenland data by accident and think that it is actually calibrated. Replacing the old data with calibrated data would be the best option, but we may not be able do that for all dates/sites. For the remainder we should probably have very clear documentation, or maybe not distribute the data at all. Without calibrations it shouldn't be used to do science. **On #2** I think HDZ is the format we want, but we	
3034	U Alaska all working	12/7/09	Jim M	0	Pat		
4114	Once Jim completes latest round of L2 reprocessing - reprocess the Onboard moment overview plots	8/16/10	Pat	0	Pat	**in progress, two scripts running**	
4139	thm_part_getspec and thm_part_moents bug	9/14/10	Pat	0	Pat	**monthly announcement**	
4138	Install the new GEANT model when released. 4.9.4 is currently in beta.	9/14/10	Davin	1	Pat	awaiting new model 4.9.4, actual data coming by 11/19 from Rob Lillis. First pass of data received	1-2 hrs
4152	verify the location of the sun-contaminated bins for each spacecraft and any change in location over time(they should change very slowly if at all). They would then re-activate the sun contamination masking. It was previously disabled because the masking was originally in the from place. Davin said that he wants to create the new configuration files that would be uploaded to the spacecraft.	10/8/10	Vassilis and Davin	1	Pat	**Davin to handle S/C change. Pat is done.**	
3055	**SST calibrations - Davin to Review code**	12/18/09	Davin	1	Pat	wait for SST calibrations	
4072	Put eclipse spin model correction code in SST as already has been done for esa packet pgm	6/8/10	Jim M	1	Jim M		
4068	Lynn Wilson possible enhancements	6/1/10	Lynn Wilson	1	Pat	Review Lynn's software and generate list of features	
4156	Calibration of different anodes - energy efficiency	10/18/10	Vassilis	1	Pat	**Need to talk to Davin**	
4143	Just a note that Haje will contact you when ready to start working on the Tsyganenko code for Solaris. I hope that will be within the next 3 months, in order to match the time of the next software release. Please assist Haje with access to Solaris machines or provide test information as necessary.	10/8/10	Vassilis	1.5	Pat	waiting for Haje	
4129	We would like to incorporate the Hermanus gmag data into the THEMIS database in some form of external ground station, like the Greenland chain. Can you implement this with the help of Jiang? I think Jiang will be writing code to read and validate the reading process anyway, for his own work, soon.	9/8/10	Vassilis	2	Pat	in progress	
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat		
4002	Document: SST File and Calibation Processing	3/5/10	David	2	Pat		
4119a	Reorganize sun contamination keywords. (Add 'manual' option to method_sunpulse_clean)	8/26/10	Vassilis	2	Pat		
4119b	Add 'automatic' option to method_sunpulse_clean which will sum across time range provided by user in new keyword.	8/26/10	Vassilis	2	Pat	in progress	
4119c	Create a new crib that shows only a few simplified options to the users. (all_angle_median,scale_sphere,manual bin selection(for fill), automatic bin selection)	8/26/10	Vassilis	2	Pat	4119a and b prereq's	1-2 hrs
4012	When Cindy & I tried to load tha_eff on 2007-03-23, it didn't load and said some calibration quantity couldn't be found. When I tried to load the same thing, I didn't have a problem. So the trick would be to find out what changed from my computer to Cindy's computer and to figure out how often our user's computers are going to have the same problem that Cindy's computer had.	3/22/10	Pat	2	Pat	**Jim M: I have no trouble with EFF data either for linux or windows.**	4-6 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.	7/29/09	Pat	2	Pat	set to most recent user action for all routines	2-4 hrs
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.	11/4/09	Christine	2	Pat		
4045	For the beta and official sites we want to add a button at the bottom to the right of the existing two buttons. Official site web page url: http://themis.ssl.berkeley.edu/summary.shtml?autoload=1 Please center the 3 buttons. The new button will have the words "Plot Descriptions" and if clicked will link to the following: ftp://apollo.ssl.berkeley.edu/pub/THEMIS/3 Ground Systems/3.2 Science Operations/Science Operations Documents/THEMIS Summary Plot Description Tables	4/19/10	Pat	2	Pat		

ID	Description	Date	Name	Priority	Assigned	Notes	Hours
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	3	Pat		
4120	Add title support to plotxy	8/27/10	Christine	3	Pat		
4121	Add multi-row/column span to plotxy	8/27/10	Christine	3	Pat		
2090	that streamlines the generation of gmag stackplots and a crib to show how to do this. (< than a day)		Vassilis	3	Jim M		2 hrs
3053	102. Tplot_gui -- overwrite warning when importing data, even if variable gets renamed.	2/3/10	Pat	3	Pat		6 hrs
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]			3	Pat		
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.	10/19/09	Pat	3	Pat		
4013	Plot Description Doc Button	3/22/10	David	3	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.	7/20/09	Aaron	3	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. 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	16
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.	8/5/09	Pat	3	Pat		40
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.	2/19/10	James Weygand	3	Pat		
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.	2/22/10	Vassilis	3	Pat		
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.	2/10/10	Aaron	4	Pat	chech draw object	
4005	The TDAS Software will be enhanced to incorporate data from the STEREO mission.	3/8/10	David	4	Pat		8 hrs
4006	add the following ancillary ground-based observations: MAGDAS Network, Auroral Electrojets (AE) and Ground Radars (SuperDarn, AMISR and Sondrestorm)	3/8/10	David	4	Pat		4 hrs
3007	EPO-GMAG msgs: modify the script and only issue this message if > 2 days	12/8/09	David	4	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?	10/23/09	Tim	4	Pat	see 2277	
2135	I didn't realize the cotrans messed up the velocities for earth centered coordinates. Maybe what we really need to do is modify cotrans so that it correctly transforms velocities. Users can incorrectly transform velocities just as easily using thm_cotrans on the command line, as they can using the coord keyword.		Pat/Jim L	4	Pat		
2124	I loaded a plot which had the line color as white. Because the legend plots in the same color as the line, the legend text did not show up. We should probably just put in a check for this case. If the line is white and the background is white then draw the text in black		Pat	4	Pat		
2063	Problem with edit3dbins is being caused by IDL's mouse system variable not being updated correctly on Macs. The ctime procedure, used to interactively select a time from a tplot window, relies on this variable to determine when a selection has been made in the tplot window. If the variable is never updated then ctime gets caught in an infinite loop. It's unclear whether this is specific to a particular OS version, but the routine should probably be modified at some point to maximize compatibility with Macs. In the meantime the alternate method of calling gettime that I copied you on yesterday should provide a temporary way around this bug.		Aaron	4	Pat	verify note in quick reference guide and then task will be closed	
2106	Add the ability to right-click on a variable in the widget-tree and display a popup with basic information about the quantity such as dimensions, range, or other meta data as well as the ability to rename variable		Pat	4	Pat	originally part of task 64, however, after further evaluation, it was determined this best belonged with the widget tree rather than the analysis window	

2220	I found a small bug in the z-axis panel in the gui. If I change the z-axis annotation size of a layout with 2-panels each with one spectrogram, when I apply this change, it gets applied to both panels, even if set-all is off.	8/27/09	Pat	4	Pat		
3063	40. CL tplot options -- setposition test plots all look the same	1/15/10	Pat	4	Pat	Long-standing tplot bug, may not ever be fixed	
4029	One of Michael Hartinger (a grad student in atmos) is having trouble with thm_part_getspec when the SST is in fast survey mode. The routine can take a very long time to run because of the higher resolution. I think we should put a feature request on the list to automatically downsample the particle data in time. Normally, I would suggest that uses downsample using one of our interpolation routines, but because the particle data is stored in a special common block, there is no easy way for end users to perform this operation.	4/6/10	Michael Hartinger / Pat	4	Pat	Michael supplied code for thm_part_moments	4-8 hrs
	Misc						
447	Save THEMIS document: Attempting to save to a read only file in Windows			1		IDL Error report to ITT	