

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
	To be Assigned or Discussed							
	thm_part_getspec							
4519	getspec (CL) rewrite for maintainability	2/21/2012	Pat, Aaron, Jim M			Code has become prone to bugs, very difficult to understand and maintain, would benefit greatly from rewriting from scratch with "lessons learned" up to this point. Level of effort?		
4506	GUI Getspec: Some regrid values yield all while plots (noticed in GUI getspec test suite for TDAS 7). If a re-write of thm_part_getspec this would be done as part of it.	2/8/2012	Aaron			In this case phi/theta values of 40x20, 45x20, and 64x20 yield plots but 50x20 and 49x20 do not. All energy fluxes appear normal. This is certainly something strange happening in thm_part_moments2, so we probably want to wait until after QA to fix it.		
4521	GUI getspec: issues when setting phi limits and starting phi at same time -	2/8/2012	Aaron			I produced two phi plots with the phi limits set to 45 - 180; the second plot also had the start angle set to 90 degrees. That plot begins at 90 degrees and appears as it should until just past 160 degrees at which point the remainder appears to be 'smeared' and ends at a maximum of ~440. Because of this it is also hard to tell if it looped back to the data between 45-90 correctly.		
4507	GUI getspec: no way to return just an energy spectrogram	2/8/2012	Aaron			Formerly QA099		
4760								
4761								
	v7.0 QA Tasks for Review with Vassilis							
	Hannes							
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	Exclude List up to date as of 8/20/2012		
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes	9/03/2012: Cal files updates, THA from 2012-06-24, THD from 2012-06-06, THE from 2012-07-05		
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes	Updated for inner probes, 2012-07-18		
4472	Inter-spacecraft FGM calibration for ARTEMIS.	1/4/2012	Vassilis	1	Hannes	6/4/12 from Hannes: Artemis inter spacecraft differences		
	Aaron							
4468	Ongoing - Review all commits by Davin, Peter, etc for impact to TDAS.	3/27/2012	David	0	Aaron	Provide weekly report and spreadsheet		
4468	Modify ESA packet loading code to use standard spinmodel routines rather than deprecated ASCII files.		Jim L	1	Aaron	After TDAS 7.0.	1 day	
4468a	Routine to dump common block data to tplot variables (for regression testing)			1	Aaron			
4468b	Replace ESA time tagging code with std spinmodel routines			1	Aaron	Reduced mode first (always 1 spin/sample), then other modes, using tmtools L0->L1 processing as reference implementation		
4135a	Write some TDAS routines that take an apid and a configuration word, and return a structure with all the relevant properties of that configuration. This is basically reimplementing some logic that's already in the L0->L1 processing code (written in C). If anyone ever needs other attributes of the instrument configuration (for example: the angle maps corresponding to each configuration), we would update these routines to return the additional information.	9/10/2010	Jim L	1	Aaron			
4468c	Verify ESA data correctly time-tagged			1	Aaron			
4468d	Add spinmodel loading code to thm_load_sst			1	Aaron			
4468e	Add eclipse delta-phi correction to ESA and SST common blocks			1	Aaron			

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4034a2	thm_parts_moments update (spin moments mods)	11/22/2010	Vassilis	1	Aaron	initial simple way, final fix is to fix esa and sst 3D data structures. Probably a good idea to make a THEMIS-specific moment calculation routine, to avoid extensive changes to WIND code currently being used. Jim McFadden (as of 3/26/12) said he would review what Jim L sends him. After 4468.		
4509	Some array accesses still use () instead of [].	2/6/2012	A. Breneman	1	Aaron	For example the ESA packet loading routines, thm_load_peif, thm_load_peek. Work to be done when 4034a2 work continues		
Cindy								
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Cindy	Next October 2012		
4706	Missing data from McGrath and Kiana magnetometer sites	7/18/2012	Cindy	1	Cindy	Sites are reported as working, but no recent files at the other end, so nothing for wget to pick up. Contacted Harald Frey and Ian Schofield 7/18/2012. Diagnosis in progress. 9/14/2012: Time to ping again, now that school is back in session?		
4481	New data product, AE index from THEMIS+std sites	1/9/2012	Vassilis	1	Cindy	awaiting Russian data 7/2/2012: Still need data from 2007-2010. 7/27/2012: Getting current data again, still waiting for older data.		
4738	More concise error reporting for GMAG download/processing	9/5/2012	Cindy	1	Cindy	Current scripts generate large volumes of notifications for missing data. Is there a way to maintain a per-site or per-network "green, yellow, red" status, then report status changes only rather than reporting each missing file?		
4750	Temp files for GMAG processing in data product area, causing problems for mirror site rsync jobs	9/10/2012	Jim L	1	Cindy			
4721b	Add NRCAN GMAG sites (EHB, actually chain of 5 GMAGs)	8/3/2012	Cindy	1	Cindy	In progress – working with Ian Schofield and Martin Connors to get data back to 2007. 8/24/2012: Vassilis is working with them to see if the data can be made available en masse rather than requesting individual plots.		
3086b	MACCS download server moving to new hostname, download scripts will need an update	9/11/2012	Cindy	2	Cindy	New server should be up and running week of Sept 26 2012		
4751	Add new GMAG sites to thm_load_gmag and GUI load panel	9/11/2012	Jim L		Cindy	Possibly some inconsistencies with the keywords used to select sites by network (e.g. CARISMA sites?)		
4752	LRV download script looking for weird dates (year far in the future), error messages copy/pasted from other script but not customized				Cindy			
4753	Repulse Bay 2012 data				Cindy	CDF and ASCII processing in progress		
4757	MACCS site CDR, we have L2 CDFs and ASCII but some raw data is missing				Cindy	Raw file downloads in progress		
4758	MACCS download script: ever since site name changed, extra components added to directory paths (also an issue with LRV)				Cindy	Maybe related to wget options? In progress.		
4759	Ualaska GMAG: after correcting range_epoch bug, a handful of files were not successfully reprocessed				Cindy	Troubleshooting in progress		
Jim L								
4709	Manual eclipse processing resets "last processed" date for automated processing; some processing logs not preserved	7/24/2012	Jim L	1	Jim L	If the automated processing is up to date, and I manually reprocess a time range early in the mission, the "last processed" date will get reset to the earlier date, which could trigger an unintended reprocessing of the full mission. "last processed" date should only be updated if it moves forward in time.		
4716	Add examples of eclipse spin model corrections to crib sheets (fgm, efi, scm, fit, mom)	7/27/2012	Vassilis	1	Jim L	fgm, fit, mom, updated; efi, scm, new eclipse crib in progress.		
4735	Socware ksh directory cleanup	8/24/2012	Jim L	1	Jim L	/disks/socware/thmsoc_dp_current/src/ksh out of sync with repository; some files/subdirectories not present in SVN; some junk files (emacs backups, etc)		

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4656	THEMIS Orbits - Discuss with Dan Cosgrove on July 9th. From time to time, the first orbit determination after a maneuver is very "raw" due to the shortness of the arc, causing large discontinuities in definitive position ephemeris when the arc is propagated back to the maneuver burnout time.	6/4/2012	Vassilis	n/a	Jim L	Dan C. and Jeff M. suggest that after each maneuver or series of maneuvers, the MOC can curate the orbit determination data so that the back propagation is done from a higher quality orbit solution (e.g. 7 days rather than a few hours). There will still be discontinuities but they should be much smaller. MOC will provide improved definitive ephemeris files to JWL (est. late August 2012). We will reprocess a few days of L1 STATE for each incident. We will also provide Hannes a list of reprocessed ephemeris time intervals, so he can check for any changes		
4718	ESA energy table updates – L0->L1 processing mods (tmttools)	8/2/2012	Jim L	0	Jim L	Modified tables will need a new ESA config word – tmttools L0->L1 code needs to be updated to recognize it as a valid ESA mode. Waiting for Jim McFadden to help us update the mode spreadsheet with new config words and table configuration.		
	Jim M							
4152b	change the ESA tables such that the minimum magnetospheric electron energy becomes lower (about 3eV, or lower). McFadden can specify the lower energy	10/20/2011	Vassilis	0	Jim M	only ARTEMIS probes - Need to talk to Jim McFadden. Also need MOC Support. 8/10/2012: FLATSAT energy weights don't match Jim McFadden's spreadsheet, need to discuss with him, possibly 8/10/2012. 9/10/2012: Energy weight table discrepancy resolved, flatsat and probe EEPROM tables are fine.		
4152c	change the ESA tables such that electrons and ions can be changed separately into magnetospheric and solar wind modes.	10/20/2011	Vassilis	0	Jim M			
4703	New FGM overview plots (EMIC spectrograms)	7/12/2012	Vassilis			A copy of the IDL code, along with the IDL save sets we used as data and a full day's set of plots from January 1, 2012, can be found at ftp://yspace.augsburg.edu/themis/. You will see that the IDL batch file is set up to produce one daily spectrogram and four 6-hour spectrograms for each axis, in two frequency ranges (0-1 and 0-2 Hz). It didn't take Jennifer very long to produce all of these plots for the past 1 - 1/2 years of Themis data. Having so many different plots may be overkill -- one can often identify events using only the 0-2 Hz, 24-hour plot showing only X axis (transverse to B) data... but you can decide how many of these might be optimal for you to produce. If you or your colleagues have any questions, please get back to Jennifer (posch@augsburg.edu) or me.		
4703c	Plot key captions -> Emmanuel who will make the plot key			1	Jim M			
4731	thm_make_ae: add FCC station (when not on exclude list)	8/20/2012	Vassilis	1	Jim M	Data now available, need to modify thm_make_ae script		
4694	Developers guide/admin guide update: troubleshooting SSH (SVN/rsync) access	7/6/2012	Jim L	1	Jim M	When setting up SVN access for a new user (or an old user using a new computer), or if a host key has changed, might need to do an interactive SSH login to answer the host key verification prompt before SVN or rsync will work. Dev guide due to SVN+SSH issue, Admin guide due to rsync over SSH issue. Additional note: people using putty/pageant on 64-bit machines should make sure they're using the latest version of putty, otherwise will have hard-to-diagnose access problems.		
4003	Document: ESA File and Calibration Processing	3/5/2010	David	1	Jim M			
4312	Quality flags for efi are wrong including electric field offsets in computation. On hold until Michael Hartinger sorts out.	8/8/2011	Vassilis	1	Jim M	discuss with Vassilis		
4233	Angular Correction for particle data - use Jim McFadden's code if available	1/9/2011	Vassilis	2	Jim M			

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4241	Dieter and I have tested the variables, there are two that don't seem to have data for the mission, and their catdesc's seem to indicate that they won't... so can we "turn these off", or is there a plan to use them in the future? EFS_Q_MAG (Data Quality Parameter: set to NaN for EFS, as there is no good measure of data quality.) EFS_Q_PHA (Data Quality Parameter: Set to NaN, as there is no good way to measure data quality for EFS data.)	6/6/2011	Tami Kovalick	2	Jim M	They are empty at the moment, by design -- we may have a use for them in the future. Nothing needs to be done with SPDF. Look into EFS_Q_PHA and check with John Bonnell about the future. If we add these variables notify SPDF.		
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			
2035	Split L1 ESA (using Thomas's routine) in master ESA data cdf		Vassilis	2	Jim M	On Hold - awaiting Jim McFadden release: Then send David Sub Task List; Calibration variables removed from L1 data master CDF. (Side note: found and reported a bug in SKTEditor, which the Goddard team has agreed to fix...) Waiting for feedback from Jim McFadden about how calibration data should be handled (TH-A ASCII calibration file (used for all probes) doesn't match anything I removed from the data CDF).		
4208a	Enhanced MOM Instrument Web Pages	3/5/2010	David	2	Jim M	Talked to David first.		
	Pat							
	Updated FGM calibrations for solar array currents, ADC nonlinearity available?	5/30/2012	Vassilis	0	Pat	Last Recieved - May 2012. May need to remind FGM team if we go a long time without updates.		
4712a	Add a keyword to the SST code which would extrapolate SST data down to the ESA	7/24/2012	Vassilis	0	Pat	Some diode degradation on the SST instrument is increasing the gap between the SST and the ESA. The task is to add a keyword to the SST code which would extrapolate SST data down to the ESA. It would use ESA intercalibration factors that are going to be generated by Drew(or a student), but it would not actually interpolate to the ESA data. If the keyword is set, a linear regression(log energy v log counts) of sst data would be performed for each look direction of the SST. Additional points would be generated using the regression to extend the SST down to the ESA; maintaining the dE/E of the SST instrument. 9/07/2012: Mostly working, exposed a bug in thm_part_moments2 that needs to be fixed.		
4712b	Routine to smooth particle data across time	8/31/2012	Vassilis	0	Pat	8/31/2012 In progress		
4712c	Routine to edit particle calibration parameters on the fly	8/31/2012	Vassilis	0	Pat	8/31/2012 In progress		
4713	Since the diode degradation will be modeled as shifting the minimum energy of the SST up, we'll need to interpolate the SST efficiency parameters to the new energy bins.	7/24/2012	Vassilis	0	Pat	After 4712. This may not actually be done by someone on the software team, but I thought I'd report it anyway, so that it doesn't get lost in the shuffle once the other calibrations are completed. 4733 a prerequisite.		

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4724	Issues with implementation of specplot datagap keyword	8/9/2012	Pat	0	Pat	The way that the keyword is implemented is that it breaks the main spectrogram into smaller spectrograms, using any time gaps bigger than the parameter provided in the datagap keyword as the condition for splitting spectrograms. It then loops over each spectrogram and draws it separately. The problem is that the code it is looping over is basically a copied and pasted version of the single spectrogram version. Some of the parameters that are determined inside each iteration of the loop are then used outside the loop. What this means is that the parameters that get used after the loop are basically set arbitrarily depending on the loop order and on how each parameter is set. May be similar problems, but haven't examined further.		
4737	calc enhancements	9/3/2012	Vassilis	1	Pat	For newly created variables, ytitle should default to the variable name; scale should reset to automatic and forced to be linear. Or, maybe better if it takes the lin/log options from a variable on the right hand side, if that's feasible.		
4723	tplot feature request: formatting callbacks	8/7/2012	Pat	1	Pat	There doesn't appear to be a way to explicitly format a var_label in tplot using a callback function, the same way that I can format an annotation using a callback in normal IDL-plot. This is a pretty big limitation on the var_labels. Right now it only		