

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								
4792								
4793								
4794								
v7.0 QA Tasks for Review with Vassilis								
General								
	Tips of the Month		David		Jim L	Next Candidates: Lynn Wilson Routines; Eclipse auto processing; FGM Reprocessing, CDF library 3.4.1 released (fixes memory issue for Linux users), Simplified eclipse spin model corrections, new SST calibrations, specplot datagap		
4664	Laptop locks UCB and UCLA	6/6/2012	David	0	Team			
4661	I tried to load 3dp datatype pm for 2012 - the testscript says to check availability at http://sprg.ssl.berkeley.edu/data/wind/3dp/ and test different combinations. There are cdfs for 3dp pm for 2012 on that site, but the have are _v05 and don't load. Should they load?	6/6/2012	Lydia	1	Jim L	Wait till after WIND reprocessing and see what happens to version numbers, if they're all consistent then 5 minute change to load routine. Will not do "load highest version" -- responsibility of WIND developers.		
4464	All plug-ins for v7.10 - add a section to User's Guide for Plug-ins	3/22/2012	David	1	Jim L	Discuss at the appropriate time what the content would be. Also add a link for VM on the Software Web Page or Developers web page?		
4647	I am reviewing a paper for GRL that uses THEMIS data incorrectly. Basically, the authors are trying to publish solar array switch spikes as evidence for DLs. I am sorry that I cannot give you more details. I will notify the editors of this problem. However, it is entirely possible that such a paper could have been published and I want you to be aware of this problem. Perhaps a warning should be posted on the web site: (1) Axial boom data are not necessarily valid, particularly in the subsolar region. (2) THEMIS EFI data have unwanted "spikes" which come at four times per spin. These spikes are removed in released THEMIS data analysis programs, but the removal process can leave a residue.	6/1/2012	Bob Ergun - Colorado U	1	David/Emmanuel	Will discuss with David 6/18. All changes need to be approved by John Bonnell (very busy with RBSP at the moment). David will wrap up. Emmanuel made changes in beta site 7/5/2012. JB pinged week of Aug 10, no response yet.		
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	10/03/2012: Cal files updates, all probes from August 2012 on.		
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes	10-22-2012 Updated for 2012-04-01 – 2012-06-30		
4472	Inter-spacecraft FGM calibration for ARTEMIS.	1/4/2012	Vassilis	1	Hannes	6/4/12 from Hannes: Artemis inter spacecraft differences show good results with current calibration		

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2074c	quality flag for FGM data. Dependencies on Ben's tasks 3093 and JWL's tasks 4142 and 2266.		Vassilis	2	Hannes	quality flags for FGM data: Hannes talked to Ferdinand and suggests some flags in the state CDF: times when eclipse spin model adjustments were performed; times when spin fit & FGL data used to refine the eclipse spin model; times when V03 attitude corrections are available; times when spin fit timing had problems. Some of these flags already present in state CDF spin model variables. JWL will document in L1 file definition document. Final item not so easy, since we have trouble even detecting the timing problem in spin fits. Keep task open, Vassilis says we can come back to it when we have clarity on the spin fit timing.		
	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		
4762	SST vs ESA timing discrepancy in thm_part_getspec	9/24/2012	Mitsuo Oka	0	Aaron, Jim McT, Jim L	Sample times differ by ½ spin between ESA and SST. Do integration intervals differ due to look angles? (probably not, will confirm with Jim McF and Davin). ½ spin correction being applied in L1->L2 (maybe needed for L0 ESA but not L1 SST?) Aaron to check getspec and related code to identify any ½ spin corrections. Probably in SST load routines, will recheck after those are fixed.		
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 tmttools L0->L1 processing as reference implementation. Testing full and reduced modes, timestamp differences very minor and expected (on the order of 100 usec or less).		
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	10/26/2012 In progress		
4468e	Add eclipse delta-phi correction to ESA and SST common blocks			1	Aaron	10/26/2012: ESA done, SST in progress		
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	ESA packet loading code fixed, probably some other occurrences to be updated.		

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4777	thm_part_dist_array modification	10/2/2012	Aaron	1	Aaron	The task would be to vectorize thm_part_dist_array by having it directly access the common blocks where particle data are stored instead of looping over thm_part_dist. This would mean writing some vectorized sub-fuctions that recreate the operations done in datatype-specific routines called by thm_part_dist. Also, for this to work and be most effective all background/contamination removal and other similar routines would need to work on arrays of data structures.		
4719	ESA energy table updates – TDAS mods (ESA packet processing, calibration, summary plots, etc)	8/2/2012	Jim L	1	Aaron	Support new ESA config word in TDAS code. After 4718 (Jim L).		
4685	Widget tree expansion, IDL 8.2	6/26/2012	Pat	2	Aaron	IDL fixed a bug which we had worked around, need a version check to enable/disable the workaround so it will work on all IDL versions.		
4505	Add a TDAS routine to do 1-d cuts - when ready to work send Aaron Bennenman an email for clarity of task and then review at the S/W meeting again with Vassilis.	2/6/2012	Aaron Breneman	2	Aaron	You could obtain a 1D cut of a slice by aligning the custom orientation vector (slice_orient keyword) such that the desired cut is along the x or y axis. The data could then be pulled directly from the array returned by thm_part_slice2d via the 'part_slice' keyword. This returns an R x R array containing the interpolated slice data (R=resolution). The x & y axis values for the array are returned in the 'xgrid' and 'ygrid' keywords.	1 hr	
4298	the slices code should probably have a keyword to use the new SST calibrations.	7/27/2011	Pat	2	Aaron	On hold till the SST calibrations have found wider use.		
	Cindy							
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Cindy	Next March 2013		
4781	GMAG station status: troubleshoot stations with no data reported				Cindy			
4789	Process Kiana GMAG back data	10/19/2012	Cindy		Cindy	Just started receiving data from site after permissions problem fixed by Harald.		
4706	Missing data from McGrath and Kiana magnetometer sites	7/18/2012	Cindy	1	Cindy	10/19/2012: File permissions problem fixed for Kiana and data is flowing, need to check back data too. McGrath: Firewall issue at their end (no incoming ports open so we can't get in), Stu Harris is working with admins on their end, but might take a while to resolve.		
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.		
4787	gbo_asi_rt_mirror.ksh reports unzip errors, but downloaded file was OK	10/19/2012	Cindy		Cindy			
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? 9/24/2012: Eliminated warnings for rsync error code 0 (success), removing defunct EPO sites should help, too.		
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.		
4760	Add McMac magnetometer network (12 sites) to our data set.	9/17/2012	Vassilis		Cindy			
4761	Add STEP polar magnetometer network (6 sites) to our data set.	9/17/2012	Vassilis		Cindy			
4783	OMNI load routine for GUI	10/15/2012	Vassilis	2	Cindy	Test case for new GUI load tab API		
4695	GUI API for other missions to add GUI tabs, load routines, etc	7/6/2012	Jim L	2	Cindy	Proposed GUI load tab registration routine has required arguments for status bar, history window, and other GUI objects. That makes them part of the API; expand writeup to include documentation for most useful methods (excluding "internal-use-only" methods) on each of these objects. 10/12/2012: In progress, writing dummy load routine to demo data tree manipulation from GUI load panel.		

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3086b	MACCS download server moving to new hostname, download scripts will need an update	9/11/2012	Cindy	2	Cindy	Will activate download scripts after gaps are filled on MACCS server.		
4758	MACCS download script: ever since site name changed, extra components added to directory paths (also an issue with LRV)				Cnidy	Maybe related to wget options? In progress. After 3086b.		
2062	Alberta - At the moment the data files are from Dawson (daws), Churchill (fchu), Island Lake (isl) 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	Cindy	Waiting for CARISMA - our side coding done - run a test when data available		
4409	AE Stations: I am interested in including the "standard AE ground stations" i.e. the ones that go into the computation of the AE index - there are 12 - into the THEMIS pipeline. This is because we can then include them into the computation of our own pseudoAE. They include: FCC: Fort Churchill, LRV: Leirvorgur, a couple in Russia and one in Scandinavia etc. They should be available somehow. The ones in Russia have been made available through APL, and THEMIS has contributed to their refurbishment. I think we have established communication with APL's Kazue Takahashi and he said a couple of years ago that routine delivery of the Russian stations was impending. So by now they should be ready...I think he should be a good source of information about the other stations as well, if you cannot find them on the web by searching or at WDC Kyoto.	10/19/2011	Vassilis	2+	Cindy			
4409b	Dixon (DIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Cindy	Downloads in progress. Data from 2011 on has been made available; they have agreed to provide data back to 2007. No 1 sec data available (minimum 1 minute sample interval). Sasha pinged 8/20.		
4409c	Cape Chelyuskin (CCS) (AARI, Russia)	10/19/2011	Vassilis	2+	Cindy	see 4409b		
4409d	Tixie Bay (TIK) (AARI, Russia)	10/19/2011	Vassilis	2+	Cindy	see 4409b		
4409e	Cape Wellen (CWE) - closed, replaced with Pebek (?) (AARI, Russia)	10/19/2011	Vassilis	2+	Cindy	see 4409b		
	Jim L							
4791	Build TDAS 7.01 release with SPDF URL patches only	10/22/2012	Jim L		Jim L	10/26/2012: In progress, need to fix a few structural issues in repository		
4790	Reprocess V03 state for updated spin axis attitude and spin phase corrections	10/18/2012	Hannes		Jim L			
4764	Steps/Sawtooth pattern in FGS data near perigee	9/24/2012	Vassilis	1	Jim L	Sudden changes at packet boundaries, probably a spin fit timing issue.		
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.		

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4786	Merge IUGONET code into TDAS	10/17/2012	Jim L		Jim L	Some modified TDAS routines were provided in order to support IUGONET load routines and GUI tab – TDAS code may have been modified since then, need to ensure no regressions from taking IUGONET mods.		
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)		
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. 9/28/2012: New modes & config words may already be present in latest ETC spreadsheet.		
4326c	L1->L2 reprocessing for eclipse spin model corrections	8/18/2011	Vassilis	1	Jim L	After 4034a2, when eclipse spin model corrections are trustworthy enough to enable by default for L1->L2.		
4670	Since the full distribution data is at 3 second resolution when we're in fast survey, we might want to consider stopping transmission of reduced distribution data when we're in fast survey. We could use the saved bandwidth to transmit reduced distribution data in 6 angle mode when we're in slow survey.	6/4/2012	Vassilis	1	Jim L	Requires flatsat testing & MOC support; on hold until NuStar launch/EOC.		
4451	operating the particle instruments in "accumulate" rather than "snapshot" mode. So we'd be getting into some unexplored territory. The time tagging code in the L0->L1 particle distribution processing would need some slight modifications to support "accumulate" mode. The ESA load routines use the L0 packets directly, and probably also assume "snapshot" mode, so that's another potential set of required modifications. I wouldn't be surprised if the ESA and SST calibration code also assumes snapshot mode. It would need to be tested with real data (since we have no way to generate a realistic particle data stream on FLATSAT).	12/1/2011	Vassilis	1	Jim L	5/21/12 as per Vassilis - give it a shot; Awaiting flatsat availability - after SST table updates and ESA energy table updates. Probably will have to wait until NuStar launch/EOC. In Progress		
4451b	Modify instrument scripts to enable accumulate mode, flatsat testing	6/12/2011	Jim L	1	Jim L / Ops	When MOC support available, probably after NuStar.		
4451c	tdas mods - if accumulate mode approved discuss at S/W meeting	12/1/2011	Vassilis	1	Jim L	double chech slices and getspec as per Aaron (next up)		
4451d	Put one probe in accumulate mode and verify correct L0->L1 and L1->L2 processing with live data.	6/12/2011	Jim L	1	Jim L			
4612	GOES 2008 Data	4/20/2012	Andrei Runov	0	Jim L	7/26/2012: Some telemetry was lost in the process of an internal reorganization, Howard is looking into whether any additional magnetometer data can be recovered.		
4027b	Reprocessing GOES Data	4/5/2010	Tami - SPDF	3	Jim L	Reprocessing on hold until Howard Singer delivers another batch of binary GOES data files. In conjunction with task 4612.		
4142	issue with FGS processing - timestamps	9/30/2010	Vassilis	1	Jim L	not trivial		
2266	Timing of Spin Fit data	10/16/2009	Jim McFadden	1	Jim L	see 4142		
4476	Discuss thmsoc_dp_current deployment process, avoid unintended updates from trunk	1/5/2012	Jim L,David	1	Jim L	After QA, review CDF "software version" requirement with SPDF.		
4465	Diagnose, repair? Spikes in FGS data.	12/14/2011	Vassilis	1	Jim L	No code changes required. Document on web site (anomalies/watch out fors) as something to be aware of when		
2074c	quality flag for FGM data - Jim L perform analysis, define task - someone else to do development		Vassilis	1	Jim L	quality flags for FGM data: Hannes talked to Ferdinand and suggests some flags in the state CDF: times when eclipse spin		
4034a3	awaiting feedback and performing analysis	11/22/2010	Vassilis	1	Jim L	Tips of the Month at some point?		

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4236	Ferdinand P. suggests that we make available a diagnostic quantity produced by the eclipse spin modeling procedure. Add "phase" diagnostic quantity (from eclipse spin modeling process) to L1 STATE CDF, to give end users a sense of the expected angular error in the eclipse spin model.	5/23/2011	Ferdinand	1	Jim L		1-3 days	
2047	Separate E and B timestamps for spin fits: a) make a revised V02	before the	Vassilis	1	Jim L	Hard for SPDF to deal with, with their plotting tools - review		
4030	cross-check SST psir6 and psif data types for excess counts in psir6	4/8/2010	Jim McFadden	1	Jim L	Jim L talked to Davin and sounds like we can shut the data off. Jim L will send email on the time saved by shutting this off.		
4030b	Correct Existing Data	5/17/2010	Jim McFadden	1	Jim L	4030a prerequisite		
4030c	If scripts change - make changes to processing scripts	5/17/2010	Jim Lewis	1	Jim L	4030a prerequisite	4-5 days	
QA110	as you know we have a few folks here in our SPDF group who are using the THEMIS-B and C data for a lunar project. They have found and I've confirmed through CDAWeb, that the time stamps and associated data measurements for October, 9, 2010 THEMIS-B ESA, after time 15:58:40.695 are of a different resolution and the data values are either 0.0 or -NaN.	2/7/2011	Tami	1	Jim L	Web Site - instruments will have a web page with "Sources of Data Anamolies". The first one being the ESA issue		
4301	"bad" themis thg l2 files - instrument files; L0->L1 processing produces incomplete/empty CDFs	8/1/2011	Tami	2	Jim L	one fixed - one priority 2 (data type VBx appeared once due to corrupted packet, produced empty CDF)		
2248	once in a while (maybe 10-20 occurrences per probe during the entire mission), the FGM range doesn't change on all three axes at once:	9/10/2009	Jim L	2	Jim L			
	Jim M							
4784	Add RBSP orbit data to THEMIS plots	10/16/2012	Vassilis		Jim M	10/26/2012: John B will provide link for RBSP orbit data. I received a request to plot RBSP data on the THEMIS plots. Maybe as a fourth click to show both inner probes and RB?		
4774	file_http_copy issue for RBSP data	10/4/2012	Peter Schroeder	1	Jim McT	10/19/2012: Initial fix didn't work for maven, need to add robust directory globbing capability. No impact on THEMIS mirror sites, SPDF. Anyway, this morning I had to make a tweak to the path on their server and now loading data does not work. I think I have traced the problem to line 341 of file_http_copy, but I'm unclear what the heck is supposed to happen in the lines just before this. When I run my current version of rbsp_load_emfisis, file_http_copy at line 341 does something nonsensical. The arguments in strmatch look like this: rbsp_emfisis> print,w -1 rbsp_emfisis> print,sub_pathname Flight/RBSP-A/Quick-Look/2012/09/21/ rbsp_emfisis> print,links[0] http://emfisis.physics.uiowa.edu/Flight/RBSP-A/Quick-Look/2012/09/21/rbsp-a_HFR-spectra-burst_emfisis-Quick-Look_20120921_v1.2.2.cdf rbsp_emfisis> print,sup_pathname Flight/RBSP-A/Quick-Look/2012/09/21/rbsp-a_magnetometer_emfisis-Quick-Look_20120921_v*.cdf rbsp_emfisis> print,sub_pathname+links[0] Flight/RBSP-A/Quick-Look/2012/09/21/http://emfisis.physics.uiowa.edu/Flight/RBSP-A/Quick-Look/2012/09/21/rbsp-a_HFR-spectra-burst_emfisis-Quick-Look_20120921_v1.2.2.cdf		

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4779	SVN commit hooks for updating "Help->About" screen with current revision number. Possible for TDAS version string as well?	10/9/2012		1	Jim McT	It might be a good idea to add some functions like "get_tdas_revision" or "get_tdas_version_string", so that only a couple of files would be subject to version string updates, rather than having version string literals scattered around the TDAS code base that would all have to be updated. Will try making an ASCII file in bleeding_edge and release builds, see how that works before implementing SVN hooks.		
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. 9/28/2012: New modes & config words may already be present in latest ETC spreadsheet		
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			
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. 10/10/2012: Recent versions of MacOS ship with a different version of OpenSSH which causes problems for svn+ssh URLs. Resolution: edit .subversion/config [tunnels] section, add new 'tdas' protocol with "tdas = ssh -T -p 36867", then use "svn+tdas" instead of "svn+ssh" URLs.		
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		
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.		

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	Nick							
2043	Refactor repeated CDF library code in CDF processing tools BugZid=50		Vassilis	1	Nick	e.g cdf_readall, cdf_writeall code is repeated in several of the tmttools programs that deal with CDFs. Should be pulled out into a new library.		
4286	Create and maintain a list of FBK and FFT (and possibly other?) configuration parameters versus time, to be used by other researchers to located time intervals containing data that was acquired in a particular configuration. Examples (totally made up): THEMIS A Filter Bank Source Selections: 2007-02-23 - 2008-01-01 e12dc, scm3; 2008-01-01 - 2008-05-01 scm2, e34ac; THEMIS A FFT configuration: 2007-02-23 - 2008-01-01 16 frequency bins, e12dc, e56dc, scm1, scm3; 2008-01-01 - 2008-05-01 32 frequency bins, e12dc, e56dc, scm1, scm3	7/15/2011	SPDF - Jim L	1	Nick	10/26/2012: FBK in progress (bash script and C program), FFT next.		
4778	Developers guide update: how and when to enable or disable tabbing between user interface elements	10/9/2012		1	Nick	Current tabbing support various throughout the GUI. Sometimes you can tab to controls that don't accept input (e.g. frames or borders). Document IDL widget keywords pertaining to tab order.		
959	When removing a middle panel with locked axes on and you have more than 2 panels, the space the removed panel occupied is drawn blank, rather than moving the panels below it up.		Cindy	1	Nick	By design. Document in User's Guide.	2 days	
960	Add a change all pages option in the Page Options panel		Aaron	1	Nick	Still needed (see 810).	2 days	
1063	Axis Options: #1 When I turn off show-line and turn on mirror, the mirror doesn't show. This is not important, because it is not incorrect that it doesn't show, but we could maybe gray out the mirror check box + others when the show flag is not checked.		Pat	1	Nick	Still an issue.	1 day	
1133	When I am removing panels in the layout panel, it always resets the selection to the bottom panel in the list after I remove a panel. This can be annoying if there are several panels because I have to keep scrolling up and clicking.		Pat	1	Nick	Still an issue.	1/2 day	
1139	We should turn on the hourglass and/or include a progress indicator when we generate angular spectra.		Pat	EL		Still an issue.	get spec overhaul - 2 hr	
1177	The above Axis Annotation tab buttons should probably get changed from "first/last" to "range min/max". They used to apply to tick positions, but now are really just the plot box (range) min/max.		Michael	EL		Still open.	for discussion, 2 hrs	
1298	One item that I think we forgot about when discussing the spinner issues is that it returns strings in it's event structures but doubles when using get_value from widget_control. We should make it more consistent by returning doubles in the event structu		Aaron	BL		Still an issue.		
	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.		
4780	Additional SST energy extrapolation tasks	10/11/2012	Drew/Vassilis	0	Pat			
4780a	Implement keyword to add energies to the existing set of energies instead of requiring the full array of energies to be specified.	10/11/2012	Drew/Vassilis	0	Pat			
4780b	Either implement logic to automatically remove the ESA retrace bin or add a keyword to allow end-users to remove bins.	10/11/2012	Drew/Vassilis	0	Pat	10/26/2012: Jim M to provide clarification on ESA retrace bins		

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
4780c	Make a log-log fit the default.	10/11/2012	Drew/Vassilis	0	Pat			
4780d	Add option to perform least squares fit on specific bins.	10/11/2012	Drew/Vassilis	0	Pat			
4780e	In the crib, the extrapolation should be done on counts/sec instead of en efflux.	10/11/2012	Drew/Vassilis	0	Pat			
4780f	Add a "see also" section to the cribs.	10/11/2012	Drew/Vassilis	0	Pat			
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	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.		
4773	Redo SST calibrations with new scheme: match intervals during quiet periods early in the mission, to establish relative efficiencies, then later in the mission to estimate degradation.	10/1/2012	Vassilis	0	Drew			
4771	Writeup for new SST calibration	9/28/2012		0	Pat/Drew	For senior review. After 4773.		
4788	scmode data, possible issue with date boundaries?	10/19/2012	Justin Lee	1	Pat	Might need to take a look at scmode L1 CDF production.		
4785	Unicode font support?	10/17/2012	Nick	1	Pat	When I try to use Greek letters in the title of a panel, it works fine for the IDL window (thm_ui_panel_options.pro) however, the plot itself does not show the characters correctly. Perhaps in the font spinner for panels (and maybe other objects too) we could add a unicode font as well? My guess is that the five available fonts are not unicode, so they do not contain many languages...		
4782	Statistical error (based on counts) for SST data	10/15/2012	Christine G	1	Pat	Already exists for ESA, add equivalent feature for SST After 4775 but before 4780s.		
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.		
4519	getspec (CL) rewrite for maintainability	2/21/2012	Pat, Aaron, Jim M	1	Pat/Vassilis	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? Pat and Vassilis to go over code, improve documentation, and identify areas that could be improved.		
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			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. After 4519		
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. After 4519		
4507	GUI getspec: no way to return just an energy spectrogram	2/8/2012	Aaron			Formerly QA099 After 4519		
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		
4711	GUI cotrans error checking	7/24/2012	Pat	1	Pat	When looking at the replay/overwrite logic in the GUI, I noticed a small issue. If you try to cotrans a variable that is not a 3-vector, it still asks you if you want to load the support data that is necessary for the transformation. I'm wondering if it might be better for it to check whether the variable can be transformed at all, before it tries to load the support data needed to run the transformation.		

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4545	Axis options: Major ticks by interval/Annotate every: For a non-time axis, switching between log/linear doesn't update the major tick every field as might be logical. ie. if you set to every 10000 n^1 on linear then switch to log it still tries 10000 10^n. Usually this means it fails to place any ticks/annotations if you switch between log/linear with either major ticks by interval or annotate every set.	3/14/2012	Lydia	1	Pat	Formerly QA271. If you have major tick every set and a mix of log and linear axes on the page and then use set all panels, you're bound to end up with no ticks on the panel with different scaling.		
4537	Deletion of data not reflected in saved/reloaded THEMIS document. Formerly QA206. Also remember to overwrite prompt setting (yes to all, etc)	3/2/2012	Lydia		Pat	I loaded data for probes b and c and then went to plot the data and realised I should have loaded a and b for the tests. I returned to the load data panel and loaded the probe a data before deleting the probe c data. After saving as a themis document and reopening, the c data was loaded but not deleted. The data that was loaded and deleted using delete all data following the testscript does not appear when you reopen the document (as you'd expect).		
4460	Add New Routines from Lynn Wilson	3/22/2012	Vassilis	1	Pat			
4460-1	Include: safe, minimal effort, obvious benefit. (21)		Vassilis	1	Pat		3-4 days	
4460-2	Documentation only: LW3 has documented a routine that didn't have documentation previously, but incorporating routine body is not worthwhile.(possible bugs or too much effort) (12)		Vassilis	1	Pat		1 day	
4460-4	Not sure: Need a scientist's opinion on the benefits of the routine. (26)		Vassilis	?	Pat	Vassilis will talk to Lynn Wilson and ask the benefits of these routines		
4460-5	Not sure: Need more programmer time to make confident recommendation. (14)		Vassilis	?	Pat	Vassilis will talk to Lynn Wilson and ask the benefits of these routines		
4460-6	Helper, only include if required by an included routine. (9)		Vassilis	1	Pat			
4627b	SST: Andrei did some work that makes it look like we may need to look at the inter-anode calibrations for probes B & C.(This may be more Drew than me)	5/17/2012	Vassilis	1	Pat	Complete 4627a - d by August 1		
4627c	SST: We need to generate a combined spectrum product that includes the FTO(low) channel. This would be adding the FTO(low) channel to the F+FT combined spectrum that we've already created.	5/17/2012	Vassilis	1	Pat			
4267c	Write code to remove proton and electron contamination from the electron and proton distributions using data and efficiencies from the F & O channels.	6/27/2011	Pat	1	Pat	Working on noise removal, etc.		
4627d	SST: After #a-c are done, we need to reprocess SST L2 with sun contamination removed and new calibrations applied.	5/17/2012	Vassilis	1	Pat	need 4267c to be completed		
4603	make new SST Cal standard	3/22/2012	Vassilis	1	Pat	Revisit in July ** on hold **		

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
4717	A limitation for tplot came up for the EMIC plots. If you want to use the var_label feature(for example, to plot spacecraft position below spacecraft data) you can only put the var labels at the very bottom of the plot. In the case of EMIC, what we actually want to do is a layout that looks like this (from top to bottom) Plot1PrbA Plot2PrbA VarLabelPrbA Plot1PrbB Plot2PrbB VarLabelPrbB Plot1PrbC Plot2PrbC VarLabelPrbCetc...	8/2/2012	Pat	2	Pat	You can't actually do this in tplot right now. To work around this limitation for the EMIC plots, I'm going to do some tricks making separate plots in the z-buffer and concatenating them then reposting them to the z-buffer. This will work for the overviews, but it is an ugly kluge. We should consider a task that adds this feature to tplot.(The task would be to add the feature to tplot and to add examples to the tplot cribs showing how to use the features) 8/6/2012: Workaround exists for EMIC plots, assess level of effort for more general solution. Will need Davin's approval if changes are nontrivial. Probably 2-4 days effort.		
4686	There were several reports that the dproc window was too small in IDL 8+. It looks like this is a side effect of the font change.	6/27/2012	Pat	2	Pat	For whatever reason, many widget sizes are specified in characters, instead of more standard units. This means that if the base font size of a character changes, so does the size of a viewable area. Just an FYI, I'm going to be rolling this one into the font size one. I'll list it as a reason why the font size change is such a pain in the rear.		
4550	Major ticks by number/major ticks by interval: It might be nice to have major ticks by interval default to something logical rather than 1 n^1. If you change 'Major ticks every' then 'Major ticks by number' is updated to something that closely matches that interval, but the reverse isn't true. I'm not sure if we necessarily need 'Major ticks every' to update when 'Major ticks by number' is changed, but it might be good to have it default at the beginning to something that sort of matched.	3/15/2012	Lydia	2	Pat			
4520	The bug that Drew had reported yesterday turned out to be not a bug, but because the bins that the sun decontamination code selected differed depending on the date selected and this wasn't clearly reported to the end-user. I put an informational message in to clarify what is happening, but after talking with Drew there are two other solutions that don't fit within the scope of QA, but would be good to consider later. There features are: #1 Add a keyword that returns the the bins that were flagged by automatic sunlight decontamination to the end user. #2 Provide an option to window the automatic sunlight decontamination code so that one test is not applied to the entire time period.	2/22/2012	Pat	2	Pat			
2060	L2 cdf Quality Flags: for SST		Vassilis	2	Pat			
4208b	Enhanced SST Instrument Web Pages	3/5/2010	David	2	Pat	See current ESA Instrument Web Pages - Make recommendations to Vassilis to improve.		