

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes	Estimate	A&E; crib; script; suite; UG; DevG; Qref; AdmG
<b>To be Assigned or Discussed</b>								
4622	I noticed what seems to be a non-intuitive behavior from the ssl_set_compliment routine. It works as expected (returning the complement of a set of values with respect to a second set) when there is a union between the two sets, but returns -1 when no union exists. In such cases I would expect it to return the entire set. The change itself looks simple and it does not appear that it's current usage relies on this behavior. e.g.: comparing [1,2,3,4] and [4,5,6] returns [5,6] while comparing [1,2,3,4] and [5,6,7] returns -1	5/8/2012	Aaron	1	Aaron	Pat: I agree with Aaron. The current version assumes that the first set is a proper subset of the second set. It would be a one liner to remove that assumption, which would make the routine more useful, in my opinion. If we decide not to make the change, we should at least update the documentation to indicate this restriction on the inputs.		
4623	Regarding the data directory it sounds like we are all agreed to move the data out of the the directory /thg/greenland_gmag/l2 and into /thg/l2/mag where the other gmag data is. This will require some changes to the download and processing scripts, along with changes to the IDL load routines to pull the data from the new location. We also need to set up some sort of symlink or redirection for backward compatibility.  From my perspective it would be simplest to combine both tasks i.e. process the new rotated data directly into the new location. I'd need advise from Pat on the best way to sort out the backwards compatibility. As a rough estimate I think it would probably take me a day or two to make the necessary changes to the processing scripts and the IDL routines. Updating all the mastercdfs might take another day (there are a lot of sites). The actual download and processing of the data will be very time consuming but for the most part it won't require me to be actively involved (other than testing and confirming it is all working). I don't know what sort of time would be involved in sorting out symlinks or whatever solution is best for backwards compatibility.	5/10/2012	Lydia	?	?			
4624	The data we currently have is "Sensor XYZ", this is uncalibrated variation data relative to what seems to be an arbitrary baseline in some cases. For the most part the sensors are oriented with local magnetic north, east, vertical so the data matches the other GMAG data, however for some sites the sensors are oriented differently so the data we have is being mislabeled. If Vassilis approves we can move to downloading calibrated data in geographic XYZ coordinates. This data would then be rotated by the declination angle provided by TGO for each site, to get data in local magnetic coordinates. The declination angle will be stored in the CDF attributes. To do this I need to make minor changes to the download scripts, IDL processing routines, and update all the mastercdfs before redownloading and reprocessing the data.	5/10/2012	Lydia	?	?			
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."	6/1/2010	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.		

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v7.0 QA Tasks for Review with Vassilis								
4535	Onboard moments (peim velocity X-component) incorrect, 2010-12-07, THA, 14:59:10 through 14:59:40. Ground-computed moments from burst data look OK.	3/5/2012	Forrest Mozer	0	Jim L	VX turns positive, should be negative throughout. Fluxes are large. May be overflow in onboard calculations (can't fix, may be detectable), or error in lossy moment compression (can fix going forward, via FSW patch), or error in decompression (can fix retroactively). Probably not a TDAS problem. Forrest wants me to hold off any fixes/reprocessing while he looks for other cases where this might have happened. <b>Look at ASAP after QA.</b>		
4538	We should enable the sun decontamination for the multi-probe overviews of SST data. It would make the plots look much better.	3/7/2012	Pat	?	?			
4540	Linux: file_http_copy has long timeout if server is unreachable	3/13/2012	Lydia			There is a !themis setting for this, but windows times out much faster than linux. -- Formerly QA267		
General								
4501	Documentation links from THEMIS web site should be http: instead of ftp: links.	2/2/2012	Jim L	1	Emmanuel	<b>Jim L has found a few not yet working.</b>		
Hannes								
4153	maintenance of gmag stations "Exclude List"	10/11/2010	David	0	Hannes	<b>Exclude List updated 7/11/11. David 5/4/12: Has this been updated since?</b> <b>What is the status?</b>		
4018a	New Calibration FGM parameters and spin axis offsets	5/10/2010	Hannes	1	Hannes			
4080	Attitude Determination next few months	6/21/2010	Hannes	1	Hannes			
4472	Inter-spacecraft FGM calibration for ARTEMIS. <b>David 5/4/12: is this ready to be worked?</b>	1/4/2012	Vassilis	1	Hannes			
Aaron								
4493	2D slices, 1.5D Pitch Angle Distributions - command line in progress; GUI?	1/23/2012	Vassilis	1	Aaron	<b>Exact method probably unworkable, is working on approximate method. Eta 5/16</b>		
4494	2D slices, 2D Pitch Angle Distributions - command line in progress; GUI?	1/23/2012	Vassilis	1	Aaron	<b>waiting on 4493 - then talk to Andrei and Xuzhi to test further</b> <b>fixed awaiting resolution of 4622</b>		
4498	sst contamination removal: excessive console output if no bins selected - <b>simple solution</b>	1/30/2012	Jim L	1	Aaron			
4621	I was loading random things to test changes to file_http_copy and came across an error. I was trying to load state data in the GUI, datatype spin_tend (also happens with some of the other spin data types).	5/10/2012	Lydia	1	Aaron			

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4530	When I despise thd_peim_flux on 2-10-12 I am left with data points that I expect should have been removed. All the spikes were surrounded by NaNs, but the those that consisted of more than one data point were removed while those that were only a single point were not. The values of the single-point spikes were comparable to those of the others. <b>Aaron 5/1/12:</b> I think the issue here is that the routines used to determine where spikes exist are not particularly good. It's hard to say how long it will take to gain a substantial improvement until I've looked into it a bit more.	3/1/2012	Aaron	1	Aaron	e.g. 3 and 4 were removed but 1 and 2 were not  1: 271376.90 NaN -2.4147143e+009 NaN NaN 2: NaN NaN 1.8829594e+009 NaN NaN 3: NaN NaN -2.5399129e+009 2.4763575e+009 NaN 4: NaN -2.5399129e+009 2.4763575e+009 NaN NaN	2-? Hrs	
<b>Ben</b>								
4616	Chile having download issues	4/26/2012	Marina Stepanova	0	Ben	<b>working with Chile and UCLA mirror sites to identify reason for slow transfer rate reported by Chile. Will compare download speeds for "rsync" versus "scp" tools, and speeds reported by Chile vs UCLA, to confirm our suspicion that the problem is at Chile's end of the connection, rather than something to do with our server.</b>		
4612	GOES 2008 Data	4/20/2012	Andrei Runov	0	Jim L / Ben	<b>Jim to sent email to Howard - on hold until data arrives</b>		
4027b	Reprocessing GOES Data	4/5/2010	Tami - SPDF	3	Ben	Reprocessing on hold until Howard Singer delivers another batch of binary GOES data files. In conjunction with task 4612.		
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	1	Ben			
3093c	integrate into L1 pipeline	2/22/2010	Jim L	1	Ben	<b>In progress, tracking down a few minor problems but close to being finished.</b>		
3093d	Reprocessing	2/22/2010	Jim L	1	Ben	<b>Reprocess L1 State Data into QA</b>		
3093e	Update Admin Guide	2/22/2010	Jim L	1	Ben			
4458	Horae (rsync server for mirror sites) is dying and needs to be migrated to a VM Astrea.	12/8/2011	Jon L	1	Ben	<b>** In Progress **</b> Testing with UCLA; Once UCLA has completed the catch up rsync to test the UCLA data with the GUI doing loads, creating plots. Ben to ping Todd as to the status.		Y
<b>Cindy</b>								
4479	themis dependencies in ssl_general	1/9/2012	Davin	1	Cindy	<b>in progress</b>		
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)	7/1/2010	Vassilis	2	Cindy			
<b>Jim L</b>								
4613	Prevent Email Storms when data servers go down	4/25/2012	Jim L	1				
4613a	Design database table to support logging and querying of error notifications	4/25/2012	Jim L	1	Jim L	<b>In progress</b>	1-2 hrs	
4365f	Process FLATSAT data to L0 packets/L1 CDFs, verify properly formatted SST data after the table update. (Note: data will be all zeroes, no way to test the sun contamination removal on	4/11/2012	Vassilis	0	Jim L			

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4034a2	thm_parts_moments update (spin moments mods)	11/22/2010	Vassilis	0	Jim L	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. <b>Waiting on Ben to finish 3093 so I can start testing.</b>		
4326b	Then for Particles and Spin Fits <b>Jim M</b>	8/18/2011	Vassilis	0	Jim L	in progress - dependent on 4034a2.		
4365	reverse-engineer the process of updating the onboard tables that define the ESA and SST angle/energy modes. <b>Jim M: he process of creating the RAW commands will result in an IDL routine which has the same functionality as the "lost" code that Davin wrote in 2008. This will make future changes easier.</b>	9/8/2011	Vassilis	0	Jim M			
4365f	Inspect apid 407 memory dump packets to verify that EEPROM was updated successfully.	4/11/2012	Vassilis	0	Jim M			
4365g	<b>If all goes well:</b> Ops team: Run the EEPROM update script on one of the probes. Verify that the EEPROM update has effected the desired changes.	4/11/2012	Vassilis	0	Jim M, Jim L, Ops Team, Science Team			
4365h	<b>If something goes wrong on FLATSAT:</b> Diagnose what went wrong, restore EEPROM to what it was before the test, retry with corrected table update procedure.	4/11/2012	Vassilis	0	Jim M, Jim L, Ops Team			
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.	10/8/2010	Vassilis and Davin	0	Jim M	<b>Persons that can provide information are: Davin, Deron Pease/McDonald, Michael Luldam and Robert Abiad. See task 4365 (same process)</b>		
4152a	change the SST tables to mask view directions that are affected by the sun. We need to do this for the reduced distributions only. If it can be done for the moments too it would be great. WE need to find the masking tables that were input before in 2007 and rescinded sometime in 2008 - but the actual bins that require masking are different than before.	10/20/2011	Vassilis	0	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			
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			
4003	Document: ESA File and Calibration Processing	3/5/2010	David	1	Jim M			
<b>Lydia</b>								
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Lydia	Next October 2012		

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4499	Greenland GMAG stations -- move data to standard location thg/l2/mag ?	1/31/2012	Tami	?	Lydia	will discuss with Tami at this week's SPDF meeting to see how badly they want this, and why. Vassilis slightly favors moving the non-THEMIS stations to a different area (the opposite of what Tami has requested), but will require some work on our part (changing load routines, putting symlinks in place so older code will still work).	1-2 days	
4481	New data product, AE index from THEMIS+std sites	1/9/2012	Vassilis	1	Lydia	in progress - code completed awaiting for the Russian stations		
4620	file_http_copy issues	5/7/2012	Lydia	1	Lydia	as of 5/8 Davin to verify changes.		
2062	Alberta - At the moment the data files are from Dawson (daws), Churchill (fchu), Island Lake (isll) and Fort McMurray (mcmu). I will add Rabbit Lake and Taloyoak at some time but we have some issues with mag pointing at those 2 sites. If you recall, the agreement between Ian and Vassilis was that this data wouldn't be copied to become part of a mirrored archive like the existing data we provide. Instead, each file would be obtained from this site each time it is requested (using curl or some such). This means we can use our own logs to monitor data usage. Themis Software to be able to retrieve from Alberta		Vassilis	2	Lydia	Carisma has changed the way their site works. They want us to start using a different URL to download data, but they have used an HTTP redirection method that is not supported by file_http_copy: 301 permanent redirects (not supported by TDAS yet) rather than 302 temp redirects (some support in TDAS). But requests for non-existent files get redirected to their main site, instead of giving a 404 "not found" status, and this makes it hard for TDAS to determine whether a file was successfully downloaded. Lydia will contact their admin and explain the difficulty, maybe they can make some minor changes to keep compatibility with TDAS. Otherwise we will need to modify file_http_copy to deal with 301 redirects, and possibly fix some bugs. Lydia to contact Davin to see if there's a reason he did it that particular way (e.g. to support some other mission), or if these are actual bugs that weren't caught in his testing. Another option is to use an IDL builtin capability to completely replace file_http_copy (it should correctly handle all aspects of the full HTTP protocol), but this IDL feature may not be compatible all the way back to IDL 6.3.		
4409l	Leirvorgur (LRV) (Iceland)	10/19/2011	Vassilis	2+	Lydia	code to download and process is done and Iceland can make the data available. Awaiting data.		
<b>Pat</b>								
	Overview plots - web behaviour - browser will keep a copy of the image will not always reloaded	12/30/2011	Pat	0	Pat	Pat to send email to Clarina		
4460	Add New Routines from Lynn Wilson	3/22/2012	Vassilis	1	Pat	Spreadsheeted completed. Results to be reviewed on 5/14 when David returns (50% time)		
4458	Create a set of Benchmark Tests against IDL future versions (now for v8.2 beta). Run these tests and produce a report. In addition present this report to Exelis in a web conference with a demo of TDAS. Benchmark Tests should include tests for PC, Mac (leopard and lion) and Linux O/S.	3/21/2012	David	1	Pat	Initial Test List complete and will be reviewed 5/14 (50% Time)		

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4619	crash in thm_sst_contamination_test	5/4/2012	Jim L	1	Pat	looking at two options to fix this and will let us know which approach is more workable.		
4470	Pre-deployment summary plot QA script	1/4/2012	Jim L	1	Pat	Check that summary plots are produced, and that they're roughly correct, before pushing updates into production. In progress		
4002	Document: SST File and Calibration Processing	3/5/2010	David	1	Pat	David to ask Davin for ppt document corresponding to pdf on ftp site concerning SST		