

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								
4615	In looking at recent months' ARTEMIS ESA plasma flow velocity components via CDAWeb and LunaSOX, I'm seeing a lot of spikes (and short intervals of high fluctuation levels) separated by ~30 hours. They are more consistently in P2 data than in P1 data, but when they're in both, they're in near-coincidence. This is just looking at ESA Full Mode Ion Moment Data Quality (0: Good data	4/26/2012	Joe King	?	?			
v7.0 QA Tasks for Review with Vassilis								
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 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					
4509	Some array accesses still use () instead of [].	2/6/2012	A. Breneman			For example the ESA packet loading routines, thm_load_peif, thm_load_peek. (Formerly QA069)		
4516	Can't save ISTEP or WIND config params from GUI	2/14/2012	Ben			Changes persist in current session, need to write to config file & read same config file before loading ISTEP or WIND data. Formerly QA130.		
4517	GUI slices: remove regridding option?	2/9/2012	Aaron		Aaron	The re-gridding option was primarily added to assist the nearest neighbor interpolation method, which is not used anymore. It can also be used with the other interpolation options but I'm not sure if any users will find this functionality useful. We may want to remove it for now to make the interface simpler and less cluttered. It could easily be added back in later if requested. Formerly QA121.		
4524	GUI error handling, must reset session to break out of error handling code in certain situations.	2/27/2012	Pat			Error handling blocks should do catch, /cancel to prevent infinite loops.		
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		
4493	2D slices, 1.5D Pitch Angle Distributions - command line in progress; GUI?	1/23/2012	Vassilis	1	Aaron	We need collapsed BV plots. I.e., we often do not care about gyrovelocity direction but only pitch angle direction. The electrons especially (but sometime ions too) are gyrotropic. Then we can increase the counting statistics if all the look directions with the same pitch angle (but different phases) are averaged into a single point. in progress - rechecking the math, Vassilis to check the plots		

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4494	2D slices, 2D Pitch Angle Distributions - command line in progress; GUI?	1/23/2012	Vassilis	1	Aaron	We sometimes need cuts in a very special direction: B-M, 2D cut, where the P direction is normal to a specific, user-specified N direction. The N direction needs to be specified by the user as (1,0,0) or (0,0,1) etc. Then the cut would be made such that M is along the Nx B direction, such that M,N,B form an orthogonal system. In progress		
4614	change level to dlevel (be sure Lydia's abort is fixed)	4/26/2012	Lydia / Jim L	1	Aaron	./themis/spacecraft/particles/SST/SST_cal_workdir/thm_sst_dist3d_16x64_2.pro: dprint,level=0,'ERROR: Keywords "ion" and "elec" are mutually exclusive' ./themis/spacecraft/fields/thm_load_fit.pro: dprint, level = -1, 'only one value may be specified for level' ./themis/common/thm_valid_input.pro: dprint, level = -1, \$./themis/common/thm_valid_input.pro: dprint, level = -1, \$./themis/common/thm_load_proc_arg.pro: dprint, 'only one value may be specified for level' ./themis/common/thm_valid_level.pro: dprint, level = -1, \$./themis/common/thm_valid_level.pro: dprint, level = -1, \$		
4498	sst contamination removal: excessive console output if no bins selected - simple solution	1/30/2012	Jim L	1	Aaron	Noticed in CL contamination test. May be hard to move that warning out of the loop.	1 hr	
Ben								
4616	Chile having download issues	4/26/2012	Marina Stepanova	0	Ben	in progress - Chile folks are looking into		
4458	Horae (rsync server for mirror sites) is dying and needs to be migrated to a VM Astrea.	12/8/2011	Jon L	0	Ben	** In Progress ** Testing with UCLA; Once UCLA has completed the catch up rsync to test the UCLA data with the GUI doing loads, creating plots		Y
3093	Automate processing of eclipse sunpulse data from FGM team	2/22/2010	Jim L	1	Ben			
3093b	apply eclipse sunpulse correction to L1 State data	2/22/2010	Jim L	1	Ben	Reprocess L1 State Data. Apply eclipse sunpulse corrections to L1 State CDFs - in progress. Will proceed with as-is version of corrections, and once automated, will extend/refine them.		
3093c	integrate into L1 pipeline	2/22/2010	Jim L	1	Ben			
3093d	Reprocessing	2/22/2010	Jim L	1	Ben	Reprocess L1 State Data into QA		
4613	Prevent Email Storms when data servers go down	4/25/2012	Jim L	1				
4613b	Write and test a few simple shell scripts to manipulate the log database (probably one to log errors to the DB, one to query for errors and make a single email notification):	4/25/2012	Jim L	1	Ben		2-4 hrs	
4613c	Modify existing processing scripts to log to the database rather than send their own emails	4/25/2012	Jim L	1	Ben	15 minutes per script, times 10-20 scripts	3-5 hrs	
Cindy								
4479	themis dependencies in ssl_general	1/9/2012	Davin	1	Cindy	dsl2gse, dsl2ssl, thm_load_goesmag, etc. After TDAS 7,		
4529	Remove items from GUI menus -- desensitized, cannot or probably will not implement these features.	3/14/2012	Team	2	Cindy	print preview, print multiple files, undo/redo, track additional variables - talk to Aaron		

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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	not allow velocity to go bad		
Jim L								
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		1-2 hrs	
4365e	Ops team: Put FLATSAT into engineering mode, run the checksummed RAW command files, supplied by Jim L, to update the EEPROM. Dump a segment of EEPROM memory to show the effect of running the table update scripts. Take whatever steps necessary to copy the EEPROM tables into the SST memory (run the SST startup scripts?). Put FLATSAT back into science mode, acquire some data to verify that the ETC is still outputting properly formatted packets after the table change. Let Jim L know when FLATSAT telemetry has been dumped and where to find it.	4/11/2012	Vassilis	0	Ops Team	New tables uploaded to FLATSAT EEPROM, still in the process of verifying the upload. Need another memory dump (first one didn't dump all the modified tables). And it seems we forgot to update a checksum somewhere. Peter Harvey is on the case, and will let us know what we need to do to fix the problem. So there will be a few more rounds of the ops team running commands and dumping tables, with me processing the telemetry and handing it off to Jim M to verify. On hold for Jim M and Ops team to dump so more data		
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			
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. in progress and awaiting 3093d		
Jim M								
4456	GET_MOMENT3D is bombing when it calls STORE_DATA.	3/7/2012	Peter	0	Jim M	will check with Davin		
4348	For Overview plot processing look at setting up multiple VM processors	8/24/2011	Pat	1	Jim M	** In Progress **		
4365	reverse-engineer the process of updating the onboard tables that define the ESA and SST angle/energy modes. 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.	9/8/2011	Vassilis	0	Jim M			
4365a	Sanity check of current configuration: Jim and Davin will provide a range of ETC memory addresses to be validated. Ops team will request a memory dump of those locations, probably on one of the inner probes, via apid 407 memory dump packets. JWJL (or maybe Ben S) will write a tool to stitch the memory dump packets back together into a memory image, which Jim and Davin can inspect to make sure we are working with the correct memory range. Hopefully this will be a targetted test -- a small range of addresses, rather than a complete memory dump (which would take extra care and error checking to interpret). If it's a small enough dump, we can possibly avoid having to write a tool and just look at the raw hex from a few 407 packets.	9/8/2011	Vassilis	0	Jim M			

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4365b	ETC table upload utility: Davin may have something in his backups. If not, JWL will resurrect a "cmd2raw" utility we used during I&T to convert ASCII files of IDPU commands to a properly checksummed RAW command file, which the ops team can then upload to the probes. Jim McFadden and/or Davin will have to provide the list of IDPU commands.	9/8/2011	Vassilis	0	Jim M	Peter confirmed that updating the EEPROM tables is probably the way to go (as opposed to sending CDI commands to manipulate the SST memory directly). We went over some scripts the ops team was able to find for an earlier table update. They make heavy use of "raw hex" commands. Jim M can convert his binary table images into a similar file of raw commands, but without filling in the checksum fields. I can adapt some of the IDPU GSE code to read in a file of raw commands (provided by Jim M), fix the checksums, and output the properly checksummed commands. This is what we would give to the ops team in order to run the FLATSAT test.		
4365c	Produce a set of files with non-checksummed RAW commands implementing the desired EEPROM changes (and another set to revert the FLATSAT tables back to what they were before the experiment). (finish by early next week?)	4/11/2012	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	bombing IDPU - analysis in progress		
4365g	If all goes well: 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	If something goes wrong on FLATSAT: 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			
Lydia								
4358	Every 6 months check that the UCLA Mag Cal have not changed.	9/6/2011	David	0	Lydia	Next October 2012		
4499	Greenland GMAG stations -- move data to standard location thg/l2/mag ?	1/31/2012	Tami	?	Lydia	Discuss at Spdf Meeting - Nothing to do at this time		
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		
4497a	give the user the ability to add x/y axis titles	4/20/2012		1	Lydia			
4497b	make any changes necessary to the default behaviour (eg. move information from the y labels to the y titles, could be tricky if people are plotting two different things on one plot)	4/20/2012		1	Lydia			
4512	GUI plots: separate y-axis on right of panel	2/14/2012	Mark Wilber	1	Lydia	Significant changes to draw object; formerly QA128. Not a high priority for Mark. Analysis Only		
4497	Need axis titles for the GUI. This is a pretty big limitation insofar as almost all plots end up combining component labels with axis titles. (Often labels on one side and axis titles on the other.)	1/27/2012	Pat	1.5	Lydia			
Pat								
4460	Add New Routines from Lynn Wilson	3/22/2012	Vassilis	1	Pat	also lasp code? Ask Vassilis (50% time)		

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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	50% Time		
4504	Updated FGM calibrations for solar array currents, ADC nonlinearity available?	2/3/2012	Pat	1	Pat	These usually come from David Fischer in Germany, separately from the cal files Hannes periodically updates. Pat sent email and David Fischer answered will handle.		