

Task #	Task Description	Date Opened	Reported By	Pri	Assigned To	Notes
To be Assigned or Discussed						
4104	try to compare density SST from onboard MOMent data and from the full distributions. But different value of density comes out.	4/19/2010	Igor Kirpichev	?	?	8/30/2010 Pat forwarded email from Igor to Davin. Davin thinks it may have to do with attenuator status flag. Will check onboard versus ground moments.
4118	Vassilis to talk to Jim McFadden concerning background removal code.	8/23/2010	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.	8/6/2010	Pat	?	Pat	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
Jim L						
4030	cross-check SST psir6 and psif data types for excess counts in psir6	4/8/2010	Jim McFadden	1	Jim L	Talk to Davin as well.
4030a	Review Onboard Scripts for possible error.	5/17/2010	Jim Lewis	1	Jim McFadden, Davin, Robert Abiad	can duplicate on flatsat. Jim Mcfadden to review Jim L's email.
4030b	Correct Existing Data	5/17/2010	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
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.
Jim M						
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	3/2/2010	Jim L	1	Jim M	Run independent test on thm_load_esa_packet. Awaiting Jim McFadden to send code of separate routine.
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.	2/22/2010	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 incorporate spin model correctly.
3041	Update overview plots to handle survey FFTs?			1	Jim M	As of 8/9/10 tweak FBK to look similar to FFF plots. Test plots sent out 8/12. John B: what you propose would work to put the FFF and FBK on a more equal footing, unit-wise. It would make the FFF like the output from laboratory spectrum analysers. I would suggest adding the description of the processing to the pop-up plot description, if possible, and point out that the displayed FFF data are thus different than what would be loaded for FFP, FFW, or FFF; yes? Vassilis: Yes, totally, we need to make sure the description is clear, so people realize that plotted is not the same product they will get from the L1 or L2 data. Maybe we should also call it AFFF (for amplitude) or something else.
2103	EAC offsets 10/8/2010 11:56 AM	8/1/2009	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 seny John B for review a database of offsets. 9-2-10: John B to have feedback by 9-11. 20101008 - Themis Software Task Priorities.xls

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,	9/3/2009	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. 9-2-10: John B to have feedback by 9-11.
2216	Fix the sign reversal of e34.	8/13/2009	Michael	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. In progress
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.	9/13/2010	John Bonnell	1	Jim M	sent to John B and waiting for feedback
2225	L2 EFI cdf (quality flags)	8/31/2004	Vassilis	1	Jim M	Quality flags and L2 cdf will be addresses when we have a clue about offsets, spinfits, etc
Pat						
3025	Particle Moment Calibrations	12/18/2009	Davin	1	Pat	need to reprocess MOM
3025a	Determine scales and offsets for correcting on-board moments to match ground based moments during solar wind mode.				Pat	
3025b	Determine when spacecraft is in solar wind mode, and apply corrections.				Pat	Jim L 4033a completed - this is ready to be worked
4134	I noticed some discrepancies in the SST attenuator calibrations for the on-board moments and the ground-computed moments. The on-board moments use a scaling factor of 1./128. and they use a 4-bit check to determine if the attenuator is open or closed. The ground-computed moments use a scaling factor of 1./64. and but they only check the least significant digit of the 4-bit attenuator flags to determine if the attenuator is opened or closed. I asked Davin and said I should change the code such that both use a scaling factor of 1./64. and both use the 4-bit check. This is a fairly simple change, but it does change how the attenuator is handled significantly.	9/10/2010	Pat	1	Pat	
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	1	Pat	
3055	SST calibrations	12/18/2009	Davin	1	Pat	
3055c	Extend thm_pdist to populate all dist struct fields(mass etc...) so that moments can be correctly generated	7/1/2010	Davin	1	Pat	Davin to Review 3055c - 3055j and see if further changes needed
3055d	3055d1 Energy Scales. Scales for scaled raw energy boundaries. There will be 4 parameters. One for each sensor head. 3055d2 Energy Offsets. Offsets for scaled raw energy boundaries. There will be 4 parameters. One for each sensor head. 3055d3 Geometric factors. Scaling factors for raw fluxes. There will be 4 parameters. One for each sensor head. 3055d4 Efficiencies. Scaling factors for raw fluxes. There will be 16x4 parameters. One for each combination of energy bin/sensor head.	7/1/2010	Davin	1	Pat	
3055e	Provide initial calibration file which contains calibration parameters that were previously hard-coded. This will serve as a template for future modifications.	7/1/2010	Davin	1	Pat	
3055e	In first version, I had split time in calibration file; used separate column for year month date hour minute second, Davin asked that it be stored as one column. This is already done.	7/12/2010	Davin	1	Pat	
3055f	The calibration file should include an additional factor: the nominal g-factor. The other 4 g-factor parameters will be corrections applied to the new factor.	7/12/2010	Davin	1	Pat	
3055g	include 4 new parameters for the sst attenuator calibration	7/12/2010	Davin	1	Pat	
3055h	Need to include new parameters for dead time corrections. I need to review code to determine appropriate number of parameters and verify with davin.	7/12/2010	Davin	1	Pat	
3055i	Need to version calibration files. Looking at FGM for version control example/precedent.	7/12/2010	Davin	1	Pat	

3055j	.Right now, the calibration files are one line only. timestamps are included in the files, but they are not yet used by calibration code. add support for time varying parameters.	7/14/2010	Davin	1	Pat	
3055k	Davin delivers SST calibration parameters	7/19/2010	Davin	1	Davin	
3055l	Install SST calibration parameters	7/19/2010	Davin	1	Pat	dependent on 3055k
4072	Put eclipse spin model correction code in SST as already has been done for esa packet pgm	6/8/2010	Jim M	1	Pat	wait for SST calibrations
4068	Lynn Wilson possible enhancements	6/1/2010	Lynn Wilson	1	Pat	Review Lynn's software and generate list of features