

| Task # | Task Description  | Date       | Reported By       | Pri | Assigned To | Notes   | Estimate | Script; Suite; UIC; DevC; |
|--------|---|------------|-------------------|-----|-------------|---|----------|---------------------------|
|        | <b>To be Assigned or Discussed</b>  |            |                   |     |             |   |          |                           |
| 4929   | Improve "basic" cribs   |            | Pat               |     | TBD         | The tplot cribs under ssl_general/examples are good examples  |          |                           |
| 4929   | Improve "basic" cribs   |            | Pat               |     | TBD         | Missing a basic "esa" crib  |          |                           |
| 4929   | Improve "basic" cribs   |            | Pat               |     | Volunteers? | Still to do: asi cotrans dproc efi export fbk fft fgm fit spinfit gmag  |          |                           |
| 5026   | Add heat flux (derived from eflux) to L2 ESA  |            | Tai Phan          |     | TBD         | Will implement after Tai does some testing to determine how   |          |                           |
| 5045   | Develop mini-GEM tutorial with SPEDAS 1.00 updates  |            | Vassilis          |     |             | Tutorial: incorporate examples using Van Allen probes, POES,  |          |                           |
| 5049   | spedas.org: add article with full list of capabilities (not just since last   |            | Nick              |     |             |   |          |                           |
| 5050   | spedas.org: road map for future development   |            | Nick              |     |             |   |          |                           |
| 5051   | Load Data tabs: each tab should get some text stating the time range for which data exists  |            | Nick              |     |             |   |          |                           |
| 5054   | THEMIS web page   |            | Bob McGuire       |     |             | Add page to THEMIS site describing pseudo-AE index products, which stations they are derived from. Bob M will update master CDFs at CDAWeb to link to this page.  |          |                           |
| 5055   | Recurring task: periodically check CDAWeb plots, legends, etc. To ensure that they're consistent with what our software produces. |            | Bob McGuire       |     |             | Especially important when new CDFs or variables are added, or when people are prepping for Senior Review  |          |                           |
| 5071   | Host SPEDAS downloads on spedas.org rather than at SSL.   |            | Vassilis          |     |             |   |          |                           |
| 5072   | Add documentation search (php + database) to web page   |            | Nick              |     |             |   |          |                           |
| 5073   |   |            |                   |     |             |   |          |                           |
|        |   |            |                   |     |             |   |          |                           |
|        |   |            |                   |     |             |   |          |                           |
|        | <b>Hannes</b>   |            |                   |     |             |   |          |                           |
| 4018a  | New Calibration FGM parameters and spin axis offsets  | 5/10/2010  | Hannes            | 1   | Hannes      | <b>12/06/2012: Cal files updates, all probes from mid-August 2012 on.</b>   |          |                           |
| 4080   | Attitude Determination next few months  | 6/21/2010  | Hannes            | 1   | Hannes      | <b>5-24-2013 Updated for 2012-12-01 – 2013-02-21, tha, thd, the</b>   |          |                           |
| 4472   | Inter-spacecraft FGM calibration for ARTEMIS.   | 1/4/2012   | Vassilis          | 1   | Hannes      | <b>6/4/12 from Hannes: Artemis inter spacecraft differences show good results with current calibration</b>  |          |                           |
|        | <b>Aaron</b>  |            |                   |     |             |   |          |                           |
| 4468   | Ongoing - Review all commits by Davin, Peter, etc for impact to TDAS.   | 3/27/2012  | David             | 0   | Aaron       | Provide weekly report and spreadsheet   |          |                           |
| 5070   | Exercise and troubleshoot simulation software   |            |                   |     | Aaron       |   |          |                           |
| QA030  | Enhancement: 2d slices during eclipses?   |            | Aaron             |     |             | One of the researchers down here came by wondering if there was an option to apply the eclipse corrections when producing 2D slice plots. At the moment we can't use the corrections because the slices code assumes that energy and angle bins are static within a mode (this was primarily done to boost performance) and the big question is how to do that. |          |                           |
| 4730   | Integrate idlneturl into file_http_copy?  | 06/25/13   | GEM-SPEDAS        |     | Aaron       | Would have to sacrifice IDL 6.3 compatibility, but most users should have upgraded by now. <b>OK to proceed.</b>  |          |                           |
| 4968   | SPEDAS wiki   |            |                   | 1   | Aaron       | Slices (done), spectrograms (done), moments (in progress), background info & documentation for general particle   |          |                           |
| 4725   | Generate combined ESA/SST moments in GUI  | 06/25/13   | GEM-TDAS tutorial | 2   |             | Very preliminary at the moment, add to GUI in 6-12 months (so probably sometime in 2014)  |          |                           |
| 4929   | Improve "basic" cribs   |            | Pat               | 2   | Aaron       | sst mom part_products   |          |                           |
|        | <b>Cindy</b>  |            |                   |     |             |   |          |                           |
| 4153   | maintenance of gmag stations "Exclude List"   | 10/11/2010 | David             | 0   | Cindy       | Weekly on Mondays   |          |                           |
| 4358   | Every 6 months check that the UCLA Mag Cal have not changed.  | 9/6/2011   | David             | 0   | Cindy       | <b>Check again in February 2015</b>   |          |                           |
| 4781   | GMAG station status: troubleshoot stations with no data reported  |            |                   |     | Cindy       |   |          |                           |

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|        | Ping Sasha for status of back AE station data   |           |             |     |             | Maybe Vassilis can ping? Or try contacting Oleg?   |          |                          |
| 4687   | Check with Ian Schofield about status of Dr. Hayashi's 1-sec STEP data set.   | 41369     | Cindy       |     | Cindy       | 2013/10/17: Data being converted now, should be available in a couple of weeks   |          |                          |
| 5038   | New GIMA ground station (Toolik Lake)   |           | Cindy       |     | Cindy       | There's a new station, Toolik Lake .   |          |                          |
| 4975   | Quick start guide for plugin developers, including design guidelines for CDFs, better documentation for time_double, file_retrieve, and other useful tools for creating load routines and GUI plugins |           | Mini-GEM    |     | Cindy       |  |          |                          |
| 4967   | SPEDAS wiki   |           |             |     | Cindy       | SPEDAS API documentation and other notes for plugin developers   |          |                          |
| 4761   | Add STEP polar magnetometer network (6 sites) to our data set.  | 9/17/2012 | Vassilis    |     | Cindy       | 4/04/2013: May take a year or more for Ian Schofield to collect and process Kanji Hayashi's data. Some 1-min data available for public use at <a href="http://step-p.dyndns.org/~khay">step-p.dyndns.org/~khay</a> (Dr. Hayashi's web portal). 2014-10-01 Some data is there on the server, but it looks sparse...is there anything missing? |          |                          |
| 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. 12/17/2012: Older data in different formats, Sasha is getting some other people involved and expects to deliver by Sprin  |          |                          |
|        | Eric  |           |             |     |             |  |          |                          |
| 5039   | New Load Data tab for POES mission  |           | Vassilis    |     | Eric        | Need to figure out what level of cleanup has been done in the CDF version of the data set – e.g. Is the 2 second data already contamination-removed? Also, some of the metadata seems incorrect (labels, units, etc). Will probably need some back-and-forth between us, SPDF, and NOAA to figure out exactly what we're getting.            |          |                          |
| 5068   | Develop a compound widget to make the Data Analysis window code reusable by plugins   |           |             |     | Eric        |  |          |                          |
| 5046   | User guide updates  |           |             |     | Eric        |  |          |                          |
| 4935   | Use FGS-FGL correlation, FGS-FGE correlation, and presence of spikes in dB/dt to detect timing issues in FGS data.  |           |             |     | Eric        | FGS-FGL and FGS-FGE comparisons should be performed and reported packet-by-packet. See if spikes are detectable in very low fields (e.g. ARTEMIS). Output format should be amenable to further processing. Alternate approach: compare integrals, as opposed   |          |                          |
| 4956   | Detect/repair missing(?) samples near FGM range changes in both waveform and spin fit data  |           | Vassilis    |     | Eric        |  |          |                          |
| 4966   | SPEDAS wiki   |           |             |     | Eric        | Document GOES plugin (data source, available data sets, processing notes if any)   |          |                          |
|        | Jim L   |           |             |     |             |  |          |                          |
| 2074c  | quality flag for FGM data. (see also 5024, 4921)  |           | Vassilis    | 2   | Jim L       | 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 not available, times when FGM data is noisy post-eclipse                |          |                          |
| 4921   | Add data quality flags (1 minute cadence) to state CDF, similar to ROI/maneuver flags.  |           |             |     |             | For example: SDT time intervals, spin rate out of bounds, boom deployments, shadows, misconfigured EEPROM tables   |          |                          |
| 5024   | L2 FGM and other CDFs do not exclude eclipse time intervals   |           | Bob McGuire |     | TBD         | Remove eclipse intervals from FGM L2, also add quality flags at 1 minute cadence. Then implement similar strategy for other instruments.   |          |                          |
| 5024   | L2 FGM and other CDFs do not exclude eclipse time intervals   |           | Bob McGuire |     | TBD         | Remove eclipse intervals from FGM L2, also add quality flags at 1 minute cadence. Then implement similar strategy for other instruments.   |          |                          |

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| 5033   | Draft document: "general" development guidelines  |            |              |     | Jim L       | Circulate to Davin, and then the rest of the change committee members  |          |                          |
| 4983   | Steps in plot of FGS-Tsyg – related to timing problems or new issue?  |            | Vassilis     |     | Jim L       |  |          |                          |
| 4960   | Glitches at eclipse entry/exit that look like FGM range changes; some real range changes seem to be handled improperly  |            | Yuri K, Eric |     | Jim L       | May be a problem with FGM L0->L1 processing and detection of range changes.  |          |                          |
| 4969   | SPEDAS wiki   |            |              |     | Jim L       | Spin model and eclipse processing, L0->L1 processing   |          |                          |
| 4748   | Jumps in FGS and FGL around times of FGM range changes  | 07/29/13   |              |     | Jim L       | May be a dropped sample at the time of the range change? Problem goes away with the start of the next L0 packet.   |          |                          |
|        | <b>Jim M</b>  |            |              |     |             |  |          |                          |
| 5056   | FGM b_total data shows up as sometimes scalar, sometimes 1-element array  |            | Bob McGuire  |     | Jim M       | Master CDFs corrected, issue was limited to FGM. <b>Hold reprocessing until 5024 and related tasks (FGM quality flags) are implemented.</b>  |          |                          |
| 5057   | Apply offset correction to equalize pxxm_pot with vaf s/c potential (optional keyword)  |            | Jim M        |     |             |  |          |                          |
| 4977   | MAVEN plugin  |            | Mini-GEM     |     | Jim M       | Start with the "boilerplate" plugin code to get a MAVEN tab implemented; "guts" of the plugin will be implemented as instrument leads develop their data products & load routines.   |          |                          |
| 5065   | Autodetect SDT intervals from science or housekeeping data?   |            | Jim M        |     | Jim M?      | See 4921. We can get a list from the MOC but it would be a very manual process. If we can reliably autodetect SDTs from science or housekeeping data, that would be better.  |          |                          |
| 4821   | Use improved IDLDOC procedure to generate TDAS HTML documentation?  | 12/11/2012 | Mini-GEM     |     | Jim M       | better format, more web-friendly? IDL 8.0+ versions OK since it won't be distributed with TDAS, only the HTML output.  |          |                          |
| 4965   | SPEDAS wiki   |            |              |     | Jim M       | ESA instrument info, data structures, calibration processes  |          |                          |
| 4758   | Clean up s/c potential (onboard and ground), FBK and EFS data for time intervals when SDTs are running  |            |              |     | Jim M?      | Cleanup to be done in L1->L2 processing, using time intervals when SDTs were being run. Eliminate this contaminated data from summary plots and L2 data files. Time intervals to be provided by MOC and/or John Bonnell. <b>After Jim L's task 4921.</b>       |          |                          |
| 4927   | Rename SPEDAS str_replace function to resolve conflict with Fanning's popular "Coyote graphics" IDL library.  |            |              |     | Jim M       |  |          |                          |
| 4739   | Investigate SVN-level access controls (e.g. keep SPEDAS developers out of ssl_general?)   | 07/01/13   | Jim L        |     | Jim M       |  |          |                          |
| 4690   | thm_mom_cotrans_cltestsuite is obsolete, either needs a complete rewrite to conform to current thm_load_mom usage, or merge any non-redundant tests into existing test scripts. | 03/04/13   | Jim M        |     | Jim M       | This test script can be dropped. In fact, most of the "cotrans" CL test scripts should be folded into the instrument "load" CL tests, with the exception of tests like cotrans_all_combos.   |          |                          |
| 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 |          |                          |
| 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 is |          |                          |
| 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. <b>On hold until Michael Hartinger sorts out.</b>  | 8/8/2011   | Vassilis     | 1   | Jim M       | <b>Other QF issues for EFI: SDT time intervals; incorrect biasing on THA due to changes in photoemission</b>   |          |                          |

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| 4208a  | Enhanced MOM Instrument Web Pages                                   | 3/5/2010  | David       | 2   | Jim M       | Talked to David first.   |          |                          |
|        | <b>Nick</b>   |           |             |     |             |  |          |                          |
| 5047   | CDAWlib compatibility issues  |           | Nick        |     | Nick        | Compile a report of issues we had (mixed case filenames, execute() calls, namespace issues, required subset to support "Load Data from CDAWeb") and forward to Tami to see which changes can be easily made at their end.  |          |                          |
| QA053  | config settings   |           | Aaron       |     |             | There doesn't appear to be a way to control where files for the geomagnetic/solar indices are stored. This may be more of a feature request than a bug.  |          |                          |
| QA076  | Layout options (feature)  |           | Aaron       |     |             | (feature) I think it would be best to move the manual panel placement widgets from the panel options window to layout options (perhaps a new tab). That way all panel placement options would be in a single window, which seems more intuitive and should lessen potential conflicts. |          |                          |
| 5067   | Create a plugin based on the code we received from BARREL           |           |             |     | Nick        |  |          |                          |
| 4743   | Clean up GMAG processing scripts                                    |           | Cindy       | 2   | Nick        | many variations of wget wrappers, will be much cleaner when code is consolidated. Should also look into consolidating database schemas for the various scripts.  |          |                          |
| 4961   | Improve error reporting for cron jobs                               |           | Jim L       |     | Nick?       | The summary plot and AE index processing are particularly prone to misleading or confusing error reports. There is probably a lot of room for improvement in our logging and error reporting process for these and other automated processing jobs.                                    |          |                          |
|        |   |           |             |     |             |  |          |                          |
|        | <b>Pat</b>  |           |             |     |             |  |          |                          |
|        | Updated FGM calibrations for solar array currents vs. spin phase?   | 5/30/2012 | Vassilis    | 0   | Pat         | Last Recieved – Jan 2013. May need to remind FGM team if we go a long time without updates. <b>Check again in mid-August 2013</b>  |          |                          |
| 4929   | Improve "basic" cribs   |           | Pat         |     | Pat         | calc, trace, plotxy, plotxyz   |          |                          |
| 5036   | Troubleshoot/enhance CL test scripts for file_http_copy, file_touch |           | Jim L       |     | Pat         |  |          |                          |
| 5069   | Add keyword options to tinterpol_mxn to simplify working with NaNs  |           |             |     | Pat         |  |          |                          |
| 5064   | Particle data doesn't load correctly if operation is repeated       |           | Drew Turner |     | Pat         | We've got some code that is supposed to prevent re-loading the data if you've already loaded it. The code is getting confused because normally particle data is stored in a common block, but /sst_cal data is stored as a tplot variable.   |          |                          |
| 4973   | Best way to load higher-dimensional data into GUI?                  |           |             |     | Pat         | Will this require changes in tplot? How can we support high-dimension data in the GUI (to at least allow it to be loaded, and let plugins supply the visualization/rendering code?) Probably not for upcoming release, but we should at least have a credible                          |          |                          |