

Minutes for FUG Meeting, August 24, 2010, Telecon

In attendance: FUG Members: Alan Marscher, Pat Slane, Henrich Krawczynski, Don Kniffen, Buell Jannuzi, Wei Cui, Jamie Holder, Scott Ransom, Matthew Baring, Alicia Soderberg, Luigi Piro

Others: Peter Michelson, Julie McEnery, Neil Gehrels, Liz Hays, Dave Thompson, Bill Paciesas, Chris Shrader, Ilana Harrus, Elizabeth Ferrara, Sandy Barnes, Lynn Cominsky

Alan – Welcome and Introductions

Moving date for face to face to right after GBM status.

Julie – Mission Update

Since last F2F operations have been smooth with nearly continuous uptime. There has been one calibration period. In the past, we have discussed high temperatures on the battery. We switched to 50-deg rocking angle survey profile and this is working well, no concerns. Tried 45-deg but performance wasn't very good. Since we last met, Dawn had a failure in its reaction wheel (added to the AGILE failure). Now looking at ways to mitigate our risk, by reducing the speed of the reaction wheels during the slews. Don't expect an impact to science, but will discuss in more depth at next F2F.

On collision avoidance, we commissioned the CA team to do a study of the evolution of main debris clouds (Chinese, and American/Russian satellite collision) to show how they will interact with the Fermi mission. The results are that we don't expect that the probability of a need to do a maneuver will increase. This means that our current readiness status is sufficient for the mission. However, based on previous experience, we have made a few changes to our preparedness.

Regarding the Einstein fellows program (replaced Chandra and GLAST Fellows), the deadline is November 4th. This is a program focused on high-energy astrophysics. Please encourage your students to apply.

Don: Has there been a study of the reaction wheel failures to indicate why they failed?

Julie: This is an ongoing set of failures which may have also affected FUSE and TIMED (wavy washer issue). Since that determination, most of the focus has been on reducing risk by keeping the outer race from moving by lowering wheel speed.

Luigi: What is the redundancy?

Julie: We have 4 reaction wheels, and can operate with three. With less than 3 we can't do the current survey mode, but can perform a spin-survey. The Earth would pass through the field of view, but performance degradation is only ~20%.

Bill: How many for reentry?

Julie: Zero. We built that in from the start.

Peter – LAT Status

Everything is working well, and the LAT is stable. One hardware issue since last meeting was one pin diode readout channel got noisy and had to be deactivated.

Alan: When is the next catalog coming out?

Peter: The catalog has two components. The next source catalog should be ready before the Fermi Symposium. The new diffuse model will likely be available early next year, maybe January.

Alan: Should we warn the users that they will need to reanalyze their data once the new diffuse model is out?

Julie: We could come up with a mission update and include that information in it.

Alan: Good idea.

Julie: Especially with respect to GI deadlines. Also, I realize I didn't mention that we haven't been approving second no-cost extensions.

Alan: Yes, that's been discouraged by NASA for some time now.

Julie: The first extension is automatic and guaranteed, but the second is discretionary.

Scott: User complaint from me: I still don't have my cycle 2 money.

Julie: You're not the only one. We have had issues with some of the interagency agreements. But this is the sort of situation where we would grant a second no-cost extension. It would be helpful for me to know when people encounter these situations.

Bill – GBM Status

GBM continues to work well. There are no instrument issues. Recently, we did a fairly significant FSW revision designed to improve TGF detection capabilities. This enabled the instrument to generate TTE data for significant portions of the orbit. Includes both arrival time and energy. Can do searches on the ground for TGFs, which are often shorter than on-board trigger timescales. In scheduling this data acquisition, we've used what we know about the distribution of these sorts of events. This mode has been implemented, and the results have been highly successful, increasing the detections by a factor of ~8. Still analyzing the data. Have a format for SSC delivery so it's available to the community. In the winter season we will shift to other regions based on the seasonal occurrence rate.

There was a solar flare on June 12th that had gamma-ray line emission. We're working on the data analysis now. One thing we saw was that low-energy X-rays produce significant system deadtime. This has us thinking about what will happen when we get X-class flares. We're considering operational changes to mitigate the deadtime issues when the probability of a bright flare rises.

Regarding catalogs, we had decided to not do a 1-year catalog, but rather do a catalog for the first two years. We're fairly close to releasing that catalog. It includes a general GRB catalog and 2 different GRB spectroscopy catalogs. We'll soon release a catalog of the first 50 TGFs.

Alan - Date for next F2F at Goddard

It would be nice to have some time in November. This would be six months after our last face-to-face meeting. What are constraints?

Agreed to find the optimal meeting time via doodle poll

Alan – Executive Session

Regarding the proposal to include an Executive session at next FUG F2F, are there any thoughts about that? I'm thinking to hold the session about 2/3 of the way through the day.

Pat: We could add it as a standing item. But we won't need to do it if there's nothing to discuss.

Alan: Does anyone think this is a bad idea?

(No response)

Chris - NRA changes

Three significant changes were in the draft I circulated. I'll describe each one, and then we can discuss them.

1) Introduce a new proposal category with a 2-year duration. The grant cap would be the same as a 1-year proposal. Unlike for large projects, there would be the possibility of de-scoping the proposal during the peer-review process.

2) We're planning a joint program with Suzaku. The observing time is (250ks) and a typical Suzaku observation is 50-100ks so this will support a few proposals. There are still details to be worked out regarding the phasing of the review/observation cycles.

3) We're also planning to expand the work plan portion of the proposals. Currently, we ask for 1 paragraph and instruct the proposer to not include dollar amounts. We're considering adding an RPS form.

Pat: Can you summarize what information has been lacking that would be improved by this request?

Ilana: When there's no detailed description of what the proposer is planning to do, the budget proposal often has a disconnect between what's there and what's in the science proposal. We need more detail on what resources they will actually need to complete the project. Another advantage is that it makes the budget review much quicker.

Pat: Some proposals have these large sections asking for pages and pages of information. I feel that this gets in the way of writing a good proposal.

Chris: We're not looking for anything so detailed.

Alan: Are you saying you'd like estimates for each item?

Ilana: Yes, estimates, but not so detailed.

Chris: The template currently asks for non-dollar specific amounts; FTEs, number of trips, etc. One example was a proposal where a large amount of the grant was going for telescope consortium fees. This may be fine, but it's better to include that fact as part of the peer review.

?: Looking at the template, I'm not clear what the units are. Please clarify the units when this gets released.

Ilana: Travel and publication charges have to be in dollars.

Alan: FTEs has to be in person months. When does the NRA have to be set in stone?

Ilana: Depends on the date of the proposal deadline.

Alan: I'd like to propose an Action Item. We should have a few external members of the FUG work on these details before the release. The template probably needs a few iterations. I'd like volunteers. (Pat volunteers.) I'll ask Wei and Matthew by email. One comment about the language regarding the budget cap: you can't have "approximate" estimates when the budget cap is a maximum.

Chris: Yes, we still have some wordsmithing to do.

Ilana: This is why we are asking for comments now. I'd like to have a clear understanding of the comments from the FUG for this addition to the NRA.

Alan: We'll have a subcommittee work on it and will discuss their recommendations among everyone.

Julie: I agree, we should iterate the wording of the NRA.

Ilana: We need to aim to have the wording in place by the end of September.

Ilana - News from HQ

Three FUG members are rotating off: Henric, Luigi and Matthew. I want to thank you for being part of this group.

Julie: I agree. Their inputs have been really great, and these three have been here since before launch.

Lynn - Education and Outreach

We held our biannual educator ambassador meeting late July. Many have been attending since 2002 and this was their 5th meeting. We'll be going to the USA Space and Engineering festival being organized by NASA HQ (Oct 23-24). They don't want us to have handouts, but do want us to do demos. We'll be sharing a booth with Kepler, and HQ is making all the booths.

Julie: We should talk about that. A few years ago we had a Fermi booth on the mall for the Smithsonian Folklife festival. It may be nice to have a Fermi scientist come down and bring pieces of Fermi for people to play with.

Lynn: Anyone local is more than welcome. I sent Julie copies of all the handouts.

We got funded to do an online college curriculum, but issues with the publisher and procurement caused a major delay in getting out the first issue. We're just continuing ahead but won't have online content until we have a contract with a publisher.

We'll be part of the GRB meeting in Annapolis. I haven't heard anything about press yet. Sandy will bring it up with the meeting planning people.

Julie: We have already been discussing this. There are enough small rooms for pressrooms, but we need to get you abstracts, which are due Sept. 15th.

Lynn: We're working on Fermi sky-map poster with callouts and additional info around the oval. The callouts will be based on things we've done press on already. If anyone has something they feel should be included, please send me a note.

On PR, the most recent release was the V407 Cyg nova. That came out very well.

Julie: We're very happy with that here as well. It was a credit to the press group.

Lynn: Yes, it's a great public interest story. Also, putting out a blog release at the same time as a press release seems to generate a lot more interest than just the press release alone.

Chris - Workshop Series

The FSSC held several successful data analysis workshops last year where we also discussed proposal prep. These are two related but separate issues: data analysis, and user participation with GI program. The proposal portion seemed to get less time and less interest, being at the end of the day after everyone was tired from a day of data analysis. The idea now is to expand the workshops to two days, with the second day focused on Fermi science and GI proposal preparation. Also, we want to start earlier than last year. Our goal is to do these in October/November time frame.

Pat: How many are you planning?

Chris: We're planning a similar number as last time; 3 regional and one local. Also, we'll be doing a joint Swift/Fermi GRB workshop.

Julie: We're thinking similar regions as before; NY/Boston, Bay Area, and possibly Texas. Your suggestion for useful locations is valuable input. It's better to move them around each year.

Pat: I've said this before, but consideration should be given to having electronic participation. You won't get everyone by hitting individual spots.

Julie: When we discussed this before, our thinking was that it would be primarily internet based. And we haven't really pursued that idea because we had noticed that the hands-on sessions were when most value happened. That doesn't map well to an electronic format. That doesn't mean we can't have a couple hour demo on how to perform a particular analysis. If we expand existing workshops to have electronic access, that's different.

Pat: Broader access to tutorials would be good, with the ability to have electronic feedback. So people can submit questions and plots and get feedback in real time.

Alan: Two hours at a time would likely be as much as is worthwhile.

Julie: I like the suggestion. There's something special about saying there's a particular time when people will be available to answer questions.

Chris – Software

We have a new version of the Science Tools bundled and ready to release. Discussion is ongoing with the LAT team regarding IRFs and when a new release will be ready. This will be discussed/decided next week at the internal collaboration meeting. The FSSC will be ready with whichever set is approved. Our target date for release is Sept. 8th.

Alan – Action items

AI – 43 and 54 can be closed

57 & 59 are still being worked.

There's an AI on tracking papers.

Julie: I've made a start on this. Each month I select a list of Fermi-related papers and put them in a private library. My hope is to have a list to be posted publicly.

Alan: I think we can adjourn. Look for an email about the google poll for the next meeting.