Minutes for FUG Meeting, May 12, 2010, face-to-face

In attendance: FUG Members: Alan Marscher, Pat Slane, Wei Cui, Luigi Piro, Jamie Holder, Buell Jannuzi (telecon)

Others: Julie McEnery, Neil Gehrels, Liz Hays, Dave Thompson, Bill Paciesas, Steve Ritz, Chris Shrader, Ilana Harrus, Bill Atwood, Dave Davis, Elizabeth Ferrara, Jeremy Perkins, Mike Corcoran, Robin Corbet

Alan – Welcome and Introductions
Purpose is to get reports from the mission principals and to discuss suggestions between the principals and the users. (Introductions) Lynn Cominsky will be unable to join today.

Ilana – News from HQ
(see presentation: Harrus-FUG-presentation_May122010.pdf)
Need to think about costing. If too much money lies around, it will be taken back by Congess. Julie will discuss options.

Neil: I think there's a law that they have to allow a certain amount of time for costing.
Bill: For PIs at other institutions, the movement of the money creates an automatic delay.
Wei: Are people with multi-year grants spending better?

Julie – GI Program, Budget, and Costing
(see presentation: FUG_GIbudget_v2.pdf)
Preference is to only send out money once a year, of course. Propose to create a new proposal type that combines two years, to handle the fact that Fermi science is a long timeline activity.

Discussion: May reduce the development of new ideas. May reduce the oversubscription rate. Julie: I think it may increase the oversubscription rate by making some people not have to repropose, who will then be available to create new proposals.

Action Item (AI): Need to prepare NRA language for the next meeting to discuss the new proposal type.

Julie: We also need to decide how to handle the $4M cut. Option 3 appears to be very undesirable.

Chris – Cycle 3 GI Proposal Review
(see presentation: Chris-Cycle3-Review.pdf)
Went well, though some panels seemed to focus on budgets to try to approve more proposals. This resulted in some ruffled feathers in the merging session, but we solved that easily. Resolved NRAO scheduling issue in real time. Award letters sent today. Budget deadline stated as June 4, but that is optimistic. We will hold NSPIRES open longer.

Julie – Mission Status
(see presentation: FUG-Mission-2010May.pdf)

There was little information when planning the TOO on 3C 454.3 in April 2010 to understand the needs of the broader community. There was no information that M87 was in an exceptional state, for example. The information provided about multiwavelength observations is also used by the LAT team to schedule their calibration activities to minimally affect the broader community. In the future, the threshold will likely be higher to approve another TOO. This was also performed for programmatic reasons to exercise the machinery since it hadn't been used nearly 2 years into the mission.

Alan: Sun angle should be a consideration regarding ToOs. Anti-solar region is optimal as it facilitates a large number of ground- and space-based observatories.

History of observation type is available on the web. Could revisit the 5-hour duration of Autonomous Repoint Requests (ARRs). Could also review the decision not to follow GRBs outside the LAT field of view since the LAT is seeing temporally extended emission.

Pointed observations should be minimally supported as they are so infrequently used. No pointed observations are being requested in proposals. Requests for sky-survey profile modification are possible, but have not had interest shown so far.

Dave T. – First LAT Catalog
(see presentation: FUG_1FGL_Catalog.pdf)
Catalog is 11 months because we were hoping to release it by the Fermi Symposium, and had to have it released before the proposal cycle. We just barely made it. Only ~30% of the EGRET sources have been confirmed by the LAT. Could this be explained by variability? Only in some cases… All AGN that have flared are seen in the summed map. But if the flare period is removed, they may not be seen as anything other than upper limits.

Bill P. – GBM Status
(see presentation: FUG_May_10_GBM_Status.pdf)
<50% of the GBM bursts are in the FOV of the LAT. Only 14 had repoints, because only the bright ones will result in a repoint. Looking at ways to improve capabilities by changing Bismuth Germanate (BGO) detector hardness parameters. Of the 16 LAT bursts, only a couple did not result in repoints. No real evidence that the ones without repoints (weak LAT detection of prompt emission) would have had a reasonable level of extended emission.

Julie – LAT GRB Algorithm
(see presentation: FUG_grbalg.pdf)
Will be updating within a week or so. Will change the frequency of the triggers. Update is being made because the LAT excess occurs at a different time than the GBM excess. Right now, the LAT is looking at the wrong time. New method will wait to trigger until a certain threshold is reached. Additional change will provide information to GRB Coordinates Network (GCN) users regarding how likely it is that the LAT position is good.

Steve – LAT Status and Results
(see presentation: Ritz-FUG-2010May-v3a.pdf)

Disturbing correlation between "c" sources and galaxy maps. However, this is very interesting information for those studying the galactic diffuse background model. We don't know what to say beyond the caveats currently in the catalog paper. You cannot treat the diffuse model as a black box. I would not say to ignore these sources. However, if you're interested in those sources, you must be interested in the diffuse. The diffuse model work is moving as rapidly as possible to be ready to generate the second catalog. Timescale for public release is likely to be late this year, more likely early next year. If there is something you see as a source, don't discount it, because the 1FGL catalog is not stated as complete.

Dave T. – Multiwavelength Studies
(see presentation: FUG-MW-2010_May.pdf)
Luigi: Are there ways to make joint spectral fits in XSPEC using LAT data?
Julie: Response functions are available and such fits are often done during GRB studies.

Chris – FSSC News
(see presentation: Chris-FSSC-Status.pdf)
Regional workshops were well attended. Also supported two international workshops, one at ISDC Switzerland conference and one at COSPAR analysis school in India.

Steve: It seems there may be a need for a more proposal-focused workshop to help the user community understand better what can be proposed for.

Discussion: Still interest in web-based analysis assistance. If not pre-recorded sessions, then perhaps a live chat period where there is a person available to provide assitance.

Elizabeth – LAT/Non-LAT Publication rates
(see presentation: Publication_report_20100512.pdf)
Sense in the user community is that LAT data analysis is hard. Would be interesting to see how many non-LAT team articles are based on LAT data analysis.

Valerie – RMFIT Update
(see presentation: vg_fug_100512.pdf)

Dave D. - FSSC System Report
(see presentation: FSSC_Davis.pdf)
GBM Burst Alert Processor was also moved at the same time as the GCN.

Julie – Fermi Symposium
(see presentation: FUG_symposium.pdf)
AI – verify if the end date is the 11th or 12th.

Alan – Other Issues?
Next meeting in August – telecon
Next F2F where?
Since most people supporting the meeting are from FSSC, best to have here.
When?
GRB meeting is 1st week of Nov. Maybe immediately after.

When is ROSES text set in stone? Text can be written between telecon and meeting. Should send text out for comments by email. Waiting for comments until Nov. is too late. Should we move the FUG meeting earlier in Oct. to be sure we can get discussion on the text? AI – send email to determine best dates.

Other general issues?
Major topic several times has been the concept of increasing oversubscription rate. Ways to do this? Perhaps a way to do this is have members of our community with experience to advertise when they give presentations that include Fermi information. Could be more of a grassroots effort. Proposal workshops have been reasonably well attended. Another issue is that there are whole communities that cannot participate because their institution has such large overhead that the remaining grant is too small to justify the work. Also, the catalog came out very close to the proposal deadline and many communities didn't realize their source types were possibly gamma-ray sources.

Julie – Data Analysis school
Two weeks in India was excellent to push students past the mechanics of the tools to the more subtle issues. Student levels varied from beginner to those who already work with the LAT team. There were undergrads, grads, post-docs, and junior faculty. Each person was given a machine with the tools already installed. Helped them learn the science, the details of the analysis, and the interpretation of results. Seems it would be valuable to have a workshop like this in the US. Very different nature from the 1-day workshops.

We would like to have a 2-week school between Jan & May in the DC area. Jointly organized by project, FSSC, LAT and GBM teams. Welcome any FUG member who would like to become involved. No more than 30. Prefer to start with a workshop to install the tools on each person's individual machine.

Currently there isn't a method for performing the analysis at GSFC through a webapp. Don't know what overhead there might be to get that in place for the Fermi science tools. Nice to have for those who have difficulty getting the tools installed.
Chris: The FSSC has explored incorporating the science tools into HERA. We will revisit that idea.

Wei: There may be a general sentiment within the community that the LAT data analysis is too complex to undertake w/o a team or FSSC collaborator. Workshops or similar activities help to alleviate that, but need to engage a larger audience.

Pat: Our group worked hard to gain confidence in the data analysis; for this purpose we emulated some published results. Maybe analysis threads could follow this concept?

Alan – Adjourn