GLAST USERS' COMMITTEE (GUC)
Minutes
November 17-18, 2006

Present:
Committee members: Josh Grindlay (chair), Roger Brissenden, Jim Buckley, Wim Hermsen, Don Kniffen, Jim Ling, Alan Marscher, Reshmi Mukherjee, Rene Ong, Luigi Piro, Greg Stacy, and Mark Strickman

Ex Officio committee members: David Band, Lynn Cominsky (by phone), Neil Gehrels, Rick Harnden, Julie McEnery, Chip Meegan, Peter Michelson, Steve Ritz, and Chris Shrader

Colleagues: Valerie Connaughton, Analia Cilis, Dave Davis, Robin Corbet, Masa Hirayama, James Peachey, and Alan Smale

Friday, November 17:

Meeting called to order at 1:10 pm

Review of the May '06 meeting and July and Sept '06 Telecon Minutes (Josh)—no corrections to the posted minutes.

The view from HQ (Rick)—The mission rebaselining was completed in October. Launch remains October 7, 2007, but there are reserves for slipping the launch into November. The integration of the instruments onto the spacecraft is underway, but there are problems with the spacecraft. HQ support for the mission remains strong. The schedule threats continue. There is a high probability that the launch will ultimately slip from the early October launch date.

GUC membership is for 3 years; most members have been on for longer. Ideally one third of the members should rotate off each year. Therefore, to avoid wholesale membership turnover, some of the current members whose terms have expired will be asked to serve longer.

The GI program will be announced in ROSES 2007. The GLAST text has been drafted and was circulated to the GUC later in the meeting.

The Fellows program cannot legally be part of ROSES or run independently by the GSSC. It may be contracted out to Chandra or STScI. This issue was discussed later in the meeting.

Recent project activities and issues (Steve and Julie)—The GLAST booth was at the HEAD meeting in San Francisco, where there were ~20 GLAST posters and a special GLAST session. GLAST and GI program handouts were handed out.

One of the HEAD sessions at the AAS meeting in January will be devoted to GLAST. The GLAST booth will be at the meeting. GUC members will again be asked to help out with shifts at the booth to answer questions about GLAST, given the upcoming Symposium and NRA for Cycle 1.

Steve will visit a number of institutions to talk about the GI program. A science workshop will be held here at GSFC devoted to the GI opportunities; this type of workshop will be devoted to the science that can be done with GLAST, and not to present the software.

Discussions continue with NRAO (Ulvestad) about dedicated GLAST-related observations. The NSF senior review recommended cuts in the VLBA budget, which might reduce the VLBA's duty cycle. GLAST funding of observers might pick up some slack in the NSF funding. Steve discussed GLAST-dedicated time on Spitzer (Werner); a difficulty may be that the data rights policies differ.

The Fellows program will have to be managed by a NASA contract center that has a similar program (the government cannot fund individuals). We want control over the peer selection committee and we do not want our process joined with another Fellows program. Perhaps it can be done by Stanford? We have had discussions with Chandra and Spitzer, and will have with Hubble. Tabled until later in the meeting.

Steve advocates no restrictions on the Fellows program, e.g., on years past PhD or number of Fellows at an institution. Other programs do have restrictions. Roger stated that Chandra found it was best to have the different Fellows programs (i.e. Chandra, Hubble, Spitzer) synchronized (salaries, timetable, restrictions). There should be a yearly GLAST Fellows workshop. Tabled until later in the meeting.

Julie—We need a methodology to update the list of 20 sources that the LAT team will monitor. The sources should be relevant scientifically—this will mean both adding and dropping sources. Soliciting suggestions of sources to be monitored from the community and observatories will raise the awareness that GLAST will be monitoring sources. The list should be allowed to grow to <25. Julie presented a list of observatories and groups that will be contacted, and asked the GUC members to suggest additional observatories and groups.

LAT status (Peter)—The LAT is at General Dynamics waiting to be integrated onto the spacecraft. The flight processors reboot every ~100 hours; flight software fixes have not fixed the problem. The thinking is that software induces the reboot. During the mission rebooting would require a command from the ground, and thus must be done at a contact; this could lead to losing data for approximately an orbit. The data compression algorithms are still under development. The onboard gamma-ray burst detection software is being implemented; this capability may be included in the flight software at launch but not turned on immediately, or it may be uploaded after launch.

The site of the LISOC facilities is being renovated at SLAC, and should be completed in December.

GBM status (Chip)—The NaI detectors are mechanically integrated onto the spacecraft, and most are electrically integrated. The BGO detectors will be mechanically integrated after the LAT is installed. One of the NaI detectors was under consideration for being swapped out, but probably will not be. The interface with the clock (PPS) from the spacecraft is not as specified, resulting in excess noise, and requiring an extra interface box. This box is being built; since the box must be space-qualified, construction is time-consuming.

GSSC status (Chris)—Preparing for the beta test has been major effort. The GSSC has been participating in the ground tests with no GSSC issues. The operations software is moving along; the GSSC will run an internal TOO end-to-end test next week. User support tools are coming together, and soon should be available for demonstration. An additional programmer will be added to the GSSC staff.

What is the followup to the beta test? The testers will send comments to the GSSC. Should there be a gamma test? Outside testers? Since the analysis system's simulation tools have not been reviewed, they should be included in a gamma test. Two action items (finalized below) resulted from this discussion: a gamma test of the analysis tools should be scheduled; and the proposal tools should be reviewed at the next GUC face-to-face meeting on Feb. 4 at Stanford.

The next GUC face-to-face meeting will be held at Stanford on Sunday, 2/4/07, at noon, before the GLAST Symposium.

GLAST Symposium Planning and SWG activities (Steve)—The last SWG telecon was held 10/19. A review of the mission performance relative to the science requirements will be held the Friday before the GLAST Symposium (2/2/07). W. Hermsen, D. Kniffen and E. Fenimore will join the SWG as reviewers.

The symposium poster is about to be posted. The organizing committees have been busy with the website. The contract with AIP for the proceedings has been signed.

The scientific posters will be up only half the conference because the display space is needed for the banquet and the parallel sessions.

The GSSC will have a booth at which information will be distributed.

Project update (Al)—The LAT will be integrated onto the spacecraft in late November; mechanical installation will take only ~8 hours, while the electrical installation will take approximately one week. The spacecraft integration is ongoing. The flight battery will be activated in January and delivered in August. The flight IEM box, which has been most problematic, is in thermal-vac testing.

MOC-to-spacecraft interfaces have been tested in preparation for mission end-to-end tests.

Spacecraft I&T should be complete 12/06, with a pre-environmental review 1/07. The Observatory I&T will be May through August, 2007. Launch is still scheduled for 10/7/07.

Discussion of cycle 1 NRA (Rick, David)—Discussion of various issues—such as how the Fellows program will be run—occurred elsewhere in the meeting. Although the launch is still scheduled for early October, 2007, it is likely that it will slip to November. For a variety of reasons, it makes sense to schedule the Cycle 1 peer review for late September, 2007, when reviewers are likely to be available. The beginning of the cycle will still be about 60 days after launch.

Technical review of GI proposals (Don)—Technical feasibility reviews may be needed. Hardware, software and operations issues may need review. Instrument experts need to sign confidentiality statements. CGRO had the GSSC instrument specialists do the evaluation in real time at the peer reviews. These reviews are probably not a Cycle 1 issue. GI proposals to change the instrument settings that would require technical evaluation may not be allowed—a statement to define this policy should appear in the Science Policy Document.

Science Policy Document (Roger, Steve)—A draft SPD has been released, and the GUC should comment upon it. The policy on budgeting observation time is <20% pointed and >80% sky survey. GRB autonomous repoints will likely be ~5% of the observing time—from which budget should it come? Autonomous repoints, such as GRBs, will equal about a quarter of the total pointed budget, and therefore should be allocated to the sky survey budget. Thus:
Year 1— >80% sky survey; and <20% Mission Discretionary Time (MDT—unplanned TOOs, calibrations, engineering time).
Year 2— >70% sky survey plus GRB autonomous repoints; <20% pointed observations and planned TOOs; and <10% MDT.

The wording of §6.2.1 on multi-year proposals should be reviewed. The validity of the first sentence (that NASA doesn't accept multi-year proposals) is suspect, and therefore the sentence will be dropped.

The NRA will establish the number and budget for the large proposals.

The peer review panels should not be given allocations for the different proposal categories: analysis of released GLAST data, correlated multiwavelength observations, theory, data analysis methodology. But guidance must be provided as to what multiwavelength observations will be supported. Clearly the observations should be related to GLAST. But how will the proposers know that a source is observable by GLAST? The multiwavelength observations need not be related to GLAST data available in Cycle 1. Theory investigations related to GLAST science should be given an estimated allocation of up to approximately 10%, consistent with a recommendation in the past Decadal Survey.

If multiple pointed observations are accepted by the peer review panel in GI solicitations beyond Cycle 1, relative priorities should be established for pointed observations that need to be done at the same time.

Should we encourage foreign scientists who don't want US funding or pointed observations to propose so they can go to their funding agency for funding? This item sparked discussion, with Josh arguing it would be good for the mission and GLAST science for this to be encouraged; it was discussed later in the meeting.

PDMP (review of "final" version) (David)—The document is not yet done; the reviewers have not provided David with comments (Greg Stacy subsequently gave David comments, which were discussed when this AI was considered later in the meeting). We met the requirement that a draft be ready by mission confirmation. Posting the document with lists of databases would be useful. See the disposition of AI #33 below.

Fellows program—administration. If we have the Chandra or HST centers administer the program, then we might not need to have a contract competition. But how do we control the peer review process? It would be best if the website and the peer review were in house. Can we get away with having the Chandra center just cut the check? The GUC concluded as basic principles that GLAST should control the selection, and that the GLAST and Chandra Fellows programs should not be merged into a single high energy Fellows program. Josh (and several others) argued that the GLAST Fellows should have the same general guidelines (eligibility, number per Institution, etc.) as the Hubble, Chandra and Spitzer Fellows programs so that the GLAST Fellows were not viewed as somehow of different merit or status.

Saturday, November 18:

Discussion of open AIs (Josh, all):

AI #7 Develop Science Policy Document (Steve, Roger)—Still open, though as discussed yesterday considerable progress has now been made with the draft.

AI #8 SAE Demonstrations at GUC meetings (Jay)—Given the past presentations and the beta test, there is no need for further demonstrations. Closed 11/18

AI #20 A Listing of Instrument Parameters (Steve)—Still open, closure date changed to the May-June, 2007, GUC meeting.

AI #26 Multiwavelength Statement (Rene et al.)—The GUC agrees that a statement should be written. The document should be posted on the GUC website; the GLAST ROSES text will link to it. GLAST has already produced 2 open letters on multiwavelength observations. The multiwavelength statement will be circulated in the next few weeks. This AI should be closed by the next (Feb. '07) meeting.

Bilateral discussions with NRAO were successful. Steve will talk with NOAO. Because Chandra now makes fewer observations per year due to increased constraints on pointing directions, they are not encouraging joint observations and unplanned ToOs are very unlikely. INTEGRAL, Suzaku, Swift, XMM, and Spitzer are relevant. If someone had INTEGRAL time, they could propose (in Cycles >1) for GLAST survey mode observations during the INTEGRAL observation (to preclude GLAST pointed observations during the INTEGRAL observations). Starting with the next round of proposals for these missions (e.g. INTEGRAL, Swift, Suzaku, Spitzer) is the time to submit proposals for GI programs to trigger TOOs based on GLAST observations. The problem is that many missions require a specific target for a TOO.

The multiwavelength webpage (and the SPD, as well as link from the Cycle 1 NRA) should have an explanation of GLAST's response to transients and how to inform GLAST (e.g., to stay in survey mode). Notices should be sent out as ATELs.

The multiwavelength committee should give Steve lists of any additional observatories to contact for possible joint observation programs with GLAST. The committee should also generate a list of GLAST capabilities that are particularly relevant to Multiwavelength observations.

AI still open, closure in February, 2007.

AI #29 Method to Update List of 20 Monitored Sources (Steve, Peter)—Steve drafted a statement that will be linked to the AI webpage. AI closed.

AI #30 Include the List of 20 Monitored Sources in the NRA (David)—The GLAST ROSES text links to the list of 20 sources on the GSSC website. There will also be a link to the data release policy. During the proposal period no sources should be deleted from the list of monitored sources. AI closed.

AI #33 Review PDMP (David, Ann, Don and Greg)—A few reviewers have read it over; David will incorporate comments in a new draft. Changes to the data plan will be reported to the GUC during the course of the mission as they are contemplated. AI closed.

AI #34 White Paper on Scanning vs. Pointing (Jim B., Julie)—The current closure date is the release of the Cycle 2 NRA. But it would be useful to have a document that can be given to new GUC members, and therefore the white paper should be written by Feb, '07. The draft should be passed first by Luigi (as a new member) and then circulated to the full Committee before the Feb. meeting. AI remains open with a new closure date of 2/07.

AI #35 Statement in Support of Multiwavelength Observations (Rene et al.)—The GLAST ROSES text mentions multiwavelength observations will be supported and links to a statement on the GSSC website. AI closed, pending posting of this Statement on the GUC website (which can also be linked to in the Cycle 1 NRA).

The current ROSES text mentions that proposals should not reproduce the instrument teams' core science programs. The statement should be changed to inform proposers that the teams have core science program (with a link to webpages describing each of these programs).

[Note added in proof: Following this meeting, email exchanges among GUC members and the GLAST PI's resolved the issue of core science programs (aka "key projects") by eliminating all mention of them from the NRA. The statements in ROSES 2007 take precedence over the above comments on this subject.]

AI #36 Try Out RPS forms (David)—AI remains open.

AI #37 List of Candidate Sources for Monitoring (Rene et al.)—Such a list exists. AI closed.

Review of GLAST ROSES Text: Rick e-mailed the latest draft of the text, but because of a delay by an e-mail server, the committee did not receive the text during the meeting. GUC members are to send suggested revisions to Rick by Friday, 11/24. The following are some revisions:

- 1st paragraph—make clear that Cycle 1 event data are released at the end of Cycle 1.
- Drop the sentence on LAT's size and weight.
- The LAT should be called the 'primary instrument,' not the 'main instrument.'
- The nature of the lightcurve data released for the monitored sources should be clarified.
- Support of data analysis techniques—we need to provide a list of the tools and data products.
- Delete the limit on the fraction of GI funding that can be granted to GLAST-affiliated scientists.
- RPS should allow a list of targets to be uploaded
- RPS should not have an agile.gsfc.nasa.gov address.

Report on GLAST E/PO (Lynn, by telecon)—The Sonoma State EPO website is being revised. Lynn is also working on the NASA portal for GLAST for launch. Two new Space Mystery games are under development. Tens of thousands have played the existing three games. GLAST and Swift have joined the myspace community!

GLAST has 9 educator ambassadors. The program has shifted from providing only content at the workshops to normalizing the content (i.e., all presentations should cover the same content). Two of the educator ambassadors (one each from the Swift and GLAST groups) found this too constraining; when they became too disruptive, they were dropped from the ambassador program. The original group sponsored by different missions has been reduced by attrition (health, retirements, etc.).

In FY06 2200 teachers, 1500 students and 500 members of the public have participated in workshops, classroom presentations and lectures.

The AGN popup book is out. It is expensive to produce. The target audience is 3rd-5th grade and adults. It will also be useful for blind people.

The supernova educator unit has been reviewed by educators, and is now under review by scientists.

The black hole FAQ brochure was funded primarily by EXIST, and is handed out at planetarium shows.

The EPO program created a GLAST section of the SLAC's virtual visitor's center; the webpages are posted. Completion of these webpages was one of EPO tasks for GLAST's launch.

The NOVA program "Monster of the Milky Way" was broadcast. NOVA had complete editorial control.

The planetarium show is spreading. Teacher workshops are usually held in conjunction with the show. An educators' guide is posted on the GLAST EPO website.

Two southern sites were added to GTN (PROMPT, Pi of the Sky). These are GRB afterglow systems that observe blazars when not following an afterglow.

EPO is gearing up for launch; most of the promised products have been completed. In progress are the paper model of GLAST and the folders to be distributed at the launch. There are difficulties in producing the model within budget.

DC2 Report (Julie)—Wiki was used for internal communication among those participating. A source catalog created by Jean Ballet was provided before DC2.

Simulated data should be released with the tools when real data are not yet publicly available. This should be no later than the release of the cycle 2 NRA (to enable GIs to prepare for investigations using flight data); a workshop will be conducted to introduce the community to the analysis tools. These simulated data should include a source catalog.

Josh suggested that the advanced analyses that different scientists performed in DC2 should be captured as analysis threads. An overview of the analyses performed in DC2 could be presented at the upcoming GLAST Symposium to demonstrate the science that can result from the mission.

The two data challenges have been useful as artificial software deadlines; in these data challenges the analyzers did not know what was included in the sky model. Now it is more useful if the analyzers know about the model so that they can test software.

DC2 resulted in scripts linking the SAE tools. The GSSC should have a script library.

At the conclusion of the DC2 presentation, the GUC thanked Julie and the GSSC for the outstanding job done in conducting the DC2 and for bringing it, and the current versions of the analysis tools to the GUC for the Beta Test held just prior to this meeting.

New Action Items:

AI #38—The advanced analyses developed in DC2 and the services challenges should be captured in analysis threads that are included in the documentation presented to users. Assigned to Julie. Closure date— time of planned Workshop on SAE tools for GIs.

AI #39—A prioritized list of ~10 GLAST science workshop locations should be developed based on suggestions from the GUC. Assigned to Josh. Closure date—2/4/07

These one day workshops will be planned by Steve, Julie and Neil with assistance from the instrument PIs.

AI #40—A GUC gamma-test of the SAE should be scheduled. Assigned to Chris. Closure date—2/4/07

AI #41—The beta test 'lessons learned' should be captured. Assigned to Chris. Closure date—2/4/07

AI #42—The proposal tools will be demonstrated to the GUC at the February meeting. Assigned to David. Closure date—2/4/07.

Meeting adjourned at 2pm

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Agenda for GLAST User's Committee (GUC)
GSFC, Building 26, Room 210-212 Nov 17-18, 2006

Friday, Nov. 17:

1:05 Welcome and Introductions (Josh, Steve)

1:07 Review May '06 meeting and July and Sept '06 Telecon Minutes (Josh)

1:10 The view from HQ (Rick)

1:25 Recent project activities and issues (Steve and Julie)

1:45 LAT status and schedule, upcoming milestones (Peter)

2:00 GBM status and schedule, upcoming milestones (Chip)

2:15 GSSC status and issues (Chris)

2:30 GLAST Symp. Planning and SWG activities (Steve)

3:00 Break

3:30 Project status (Al)

3:50 Discussion of cycle 1 NRA (Rick, David)

4:20 Technical review of GI proposals (Don)

4:30 Science Policy Document (AI#7) (Roger, Steve)

5:00 PDMP (review of "final" version –AI#33) (David, Ann, Don and Greg)

5:15 New Business for tomorrow? (all)

5:30 adjourn

Saturday, Nov 18:

8:30 Coffee, rolls to feed conversation/collaboration…

9:00 Discussion of open AIs (Josh, all)
#8 SAE Demonstrations at GUC meetings (Jay)
#20 Instrument Parameters (Steve)
#26 Multiwavelength statement (Rene et al.)
#29 Method to update list of 20 monitored sources (Steve, Peter)
#30 Include list of 20 monitored sources in the NRA (David)
#36 Try out RPS forms (David)
#37 List of candidate sources for monitoring (Rene et al.)

10:30 Break

11:00 Remaining (significant) AIs
#34 White paper on scanning vs. pointing (Jim B., Julie)
#35 Statement in support of multiwavelength observations (Rene et al.)

11:30 Report on GLAST E/PO (Lynn, by telecon)

12:00 Lunch (in conference room) and *Talk: What we learned from DC2* (Julie)

1:00 Open discussion by Committee
- NEW business; what else should we be focusing on?
- action items; writing assignments; issues raised for Project/GSSC
- date for next GUC meeting

2:00 Adjourn