

GLAST SWG Telecon Minutes

January 20, 2005

Attended:

David Band
Guido Barbiellini
Ronaldo Bellazzini
Dan Blackwood
Elliott Bloom
Patrizia Caraveo
Lynn Cominsky
Brenda Dingus
Neil Gehrels
Kevin Grady
Isabelle Grenier
Rick Harnden

Neil Johnson
Tune Kamae
Don Kniffen
Giselher Lichti
Chip Meegan
Julie McEnery
Peter Michelson
Martin Pohl
Steve Ritz
David Thompson
Stephen Thorsett

Steve Ritz welcomed everyone.

The minutes were approved as posted on the SWG website. We agreed to post the minutes, marked preliminary, on the website soon after each meeting (<1 week), when they are emailed to the SWG, and to adopt the minutes at the following meeting. This will help the community stay current with the SWG.

Neil Gehrels - Swift Status:

- BAT activated in mid December, XRT in late December and UVOT this week.
- Great start - the BAT detected 11 bursts. 9 during the 1st week. The December 17 burst was observed jointly with INTEGRAL.
- SGR1806, December 27, 2004 was a Galactic Neutron Star, extremely bright. Had a significant impact on the ionosphere. 6 papers submitted to "Nature" and a press conference held.
- Performance of the spacecraft bus is outstanding. [GLAST is based on the SWIFT bus.]

Kevin Grady - Mission Report:

- The FY05 budget dominated this past week. Working with HQ for solution. Have been able to fully fund the LAT for FY05. Full complement of instruments still in program.
- LAT trackers - production continues. One has been delivered and the 2nd is undergoing environmental testing in Italy.
- In Italy, ASI funding for the remaining towers is being discussed. The contracts with industry have not been signed and must be by next week.
- Calorimeters - there are 5 at Stanford and 10 completed at NRL.
- Spacecraft integration in the next year; GBM by March 2006 and LAT by the end of March 2006.

Burst Reprint Report Discussion (review of BWG report):

- There was a need for an additional LAT person in the Burst Working Group Committee - the new person is Francesco Longo from Trieste.
- Discussion of responsibilities. Steve: the mission is compiling a list of operating parameters (broader issue). SWG and GUC will discuss configuration control of these parameters during operation. First thing to be done is list of parameters that are changeable. Mission levels responsibility to make sure everyone is in agreement. **Item for discussion at the next face-to-face meeting.
- Should be added to document: LAT Algorithm - what are the requirements and directions of algorithm development?
**ACTION for the next face-to-face: LAT will make a presentation.
- Current document, and previous SWG discussions: we will initially follow ~2 bursts per year that start outside of field of view (and 26-52/year that start within the LAT FOV). Number proposed should be raised to about 5, due to uncertainties of small statistics.
- Elliott: what happens if LAT generates a reprint request and GBM doesn't trigger? Answer: There will be a reprint. The reprint request to the spacecraft is handled by LAT.
- Thresholds initially set so that the 4 different trigger types are equally sampled.
- Neil Johnson asked: what about reprints to observe solar flares? And should there be a solar flare rep on the committee?
- From Chuck Dermer: For the GLAST Burst Reprint Request report, I have one major remark. In the last sentence of Section 2, it is stated,

"We make the unjustified but reasonable assumption that the GBM measurements of peak flux, fluence, and spectral hardness are the parameters of interest." As I understand it (Brenda Dinguş can correct me if I am wrong), EGRET/LAT observations (and EGRET/TASC observations as well) detected high-energy radiation always from the very brightest (i.e., largest peak flux in the 50-300 keV band) BATSE GRBs. Thus it is expected that the brightest GRBs will display the brightest GLAST emission, so the assumption is justified.

BATSE and the GBM preferentially trigger, however, on classical GRBs in the 50-300 keV range, with reasonable sensitivity to trigger on the short hard GRBs. BATSE/EGRET did not, however, give us any indications about the likelihood that the X-ray flashes or X-ray rich GRBs will have high-energy emission because of poor sensitivity to these events. Besides peak flux, the repoint request should therefore also include GRBs with low peak flux and soft spectra (i.e., $E_{pk} \ll 50$ keV) so that a fair sample of the X-ray rich GRBs is also monitored. Thus the criterion in point 2, Section 6, for "peak flux + hardness ratio" should include, at least, low peak flux and soft spectrum GRBs.

- Suggested that, in addition to the criteria in the document, we also follow a fraction of *all* bursts detected to minimize biases.
- Questions about information passing. ACTION: Steve will circulate the LAT/GBM ICD.
- This discussion will continue at the March face-to-face.

Rick Harnden, Don Kniffen, and Dan Blackwood - NASA HQ

- Serious budget problems: 5% cut across the board - return to flight overrun.
- FY05 budgets being revised.
- There is very strong support for GLAST at HQ.
- Italian situation has taken a lot of time - Al Diaz and Sergio Vetralla (ASI) have talked face-to-face. Diaz was told the contract would be signed by 1/21. The contract is still not in place, however.
- Giselher stated that DLR is supporting the GBM. Money is short, but will be made available when needed.
- Ronaldo stated that Tower A is at SLAC, Tower B is being tested and will ship on 2/3/05. Tower 1 will ship in February.
- Rick saluted Don for an excellent job and thanked him for helping Rick come up to speed. All applauded Don.

Peter Michelson - LAT Report:

- #1 issue is the ASI contract. Have to have the contract signed by Monday. If not in place, will have to look at descope of LAT. The most likely scenario would be removal of the four corner towers. This is very painful.
- Integration activities going on at SLAC.
- LAT Team Collaboration Meeting in March.
- Forming LAT science analysis groups.
- Steve & Peter: May need to call an emergency SWG meeting if things don't get resolved in Italy. Patrizia stated that ASI has the money, it's just the contract paperwork. Schedule is the issue. This has been the problem for many months; however contractors will now stop work soon if the contract is not signed.

Chip Meegan and Giselher Lichti- GBM Report:

Chip:

- Procurement of thermostats has been a problem, but finally found a company that will make it to specifications and deliver on time in February.
- DPU flight unit is close to completion.

Giselher:

- BGO assembled this week.

Lynn Cominsky - E/PO:

- Copies of "Scale the Universe", TOPS Module II are available.
- GLAST held a "Modeling of the Universe" workshop the day before the AAS meeting.
- NOVA contract is progressing, along with the show and the accompanying planetarium show.
- Supernova educational activities are being tested.
- Space Mystery - animation of active galaxy.
- GLAST LAT simulations.
- Co-sponsoring high energy workshop, March 21-23, at New Mexico State in Las Cruces, New Mexico.
- Telescope operational.
- GLAST image gallery on line.
- GLAST article being published.

- GLAST/Swift lecture in San Francisco.
- Suggested an event display on line - after GLAST launch, post events as they are happening.
- Government printing office is changing and it's becoming more difficult to get things printed. There is now a pre-approval stage.

IDS Reports:

Chuck Dermer (via e-mail):

- The black-hole plerion concept to explain the TeV emission from Sgr A*, which I talked about at the Stanford/SLAC meeting, is now published in ApJ Letters (Atoyan and Dermer, ApJL, Dec. 20, 2004). With postdoc Truong Le, we are developing the theory of the termination shock formed by the wind from the Galactic Center black hole to make predictions for GLAST.
- I am writing two papers with students: one with Kurt Mitman on microquasars, with predictions for GLAST in view of interesting associations of unidentified EGRET sources with galactic microquasars, and a second with Jeremy Holmes on cosmic rays from Gamma Ray Bursts in the Galaxy.

Brenda Dingus:

- Hired new postdoc.
- Report that Milagro is completing papers on Galactic Plane emission and searches coincident with HETE bursts.
- Student finishing up PhD thesis using EGRET data - 30 bursts; papers to be published soon.

Stephen Thorsett:

- New student has joined the group.

Martin Pohl:

- Finally got his post doc from Taiwan.
- Cosmic ray work was published in ApJ.
- EGRET data paper submitted to ApJ.

Calendar:

Next face-to-face will be at Stanford on March 7, 2005. Peter will circulate logistical information

The Agenda so far:

- Continue discussion on repoint parameters
- LAT sources in year 1
- Operations parameters and configuration control
- End-to-end data latencies report
- Longer mission element reports
- LAT presentation on onboard burst algorithms

The next telecon is scheduled for March 24.

And for the remainder of the year:

- May 26,
- July 28,
- Sept. 22,
- Dec. 1

Jonathan requested changing the day/time of the telecons. After polling the SWG, there was no other time that isn't much worse than the current day/time. It was decided that everything will remain the same - Thursday at 11:00 AM East Coast Time.

ACTION Items:

1. Ensure representation at the Texas Symposium and AAS meetings - CLOSED. Mission Poster is on the mission website. Feel free to use it.
2. Circulate LAT-GBM ICD
3. Update Action item page on web.

Meeting Adjourned.

1/27/2005