



Fermi Users Group



FSSC News & Operations Report

Chris Shrader,
Fermi Science support Center
NASA/GSFC

Major Activities



- User support; helpdesk, meetings, workshops
- GI program management
- Archive and Software support and maintenance
- Operations support; scheduling and planning

Staffing, Task Changes



- Since last FUG:
 - Software team: one replacement hire
 - Subsequently another resignation, now seeking replacement
- Hope to retain flat staffing level through FY14

- LAT data steering committee telecons
 - Smooth transition to revised data, IRFS
- FSSC science staff members participate in LAT-team science (e.g. Perkins, Ferrara, Donato)
- GBM team, regular participation in FSSC meetings via telecon



Science Tools, Data Products



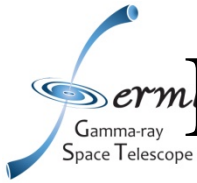
- Last major ST release August 2011 w/P7 data, minor release April 2012
 - Next in fall 2012 timeframe (other presentations)
- Aperture photometry: SW & LC database
- PySPEC analysis tools for GBM burst data
- Preparing for continuous GBM TTE data archive
- LLE data; ingest tests completed, Browse table online!



Solar Workshop Support



- FSSC has worked with organizers and presenters to devise scheme for porting 3 very different SW packages over multiple OS environments
- Web site is now set up; internal tests proceeding
- Participation and real time support planned



From Robin:

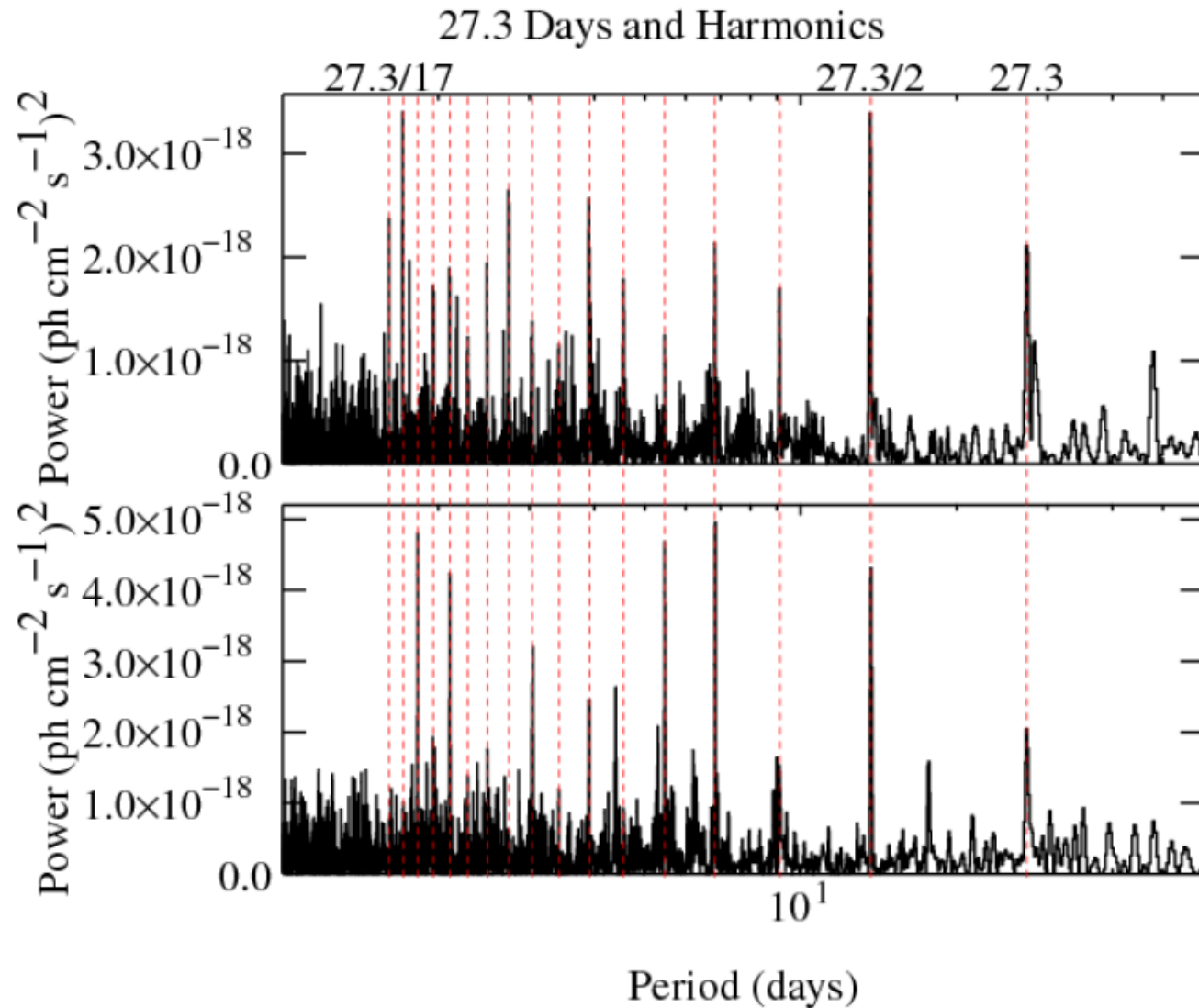
Lunar Contamination of LAT Light Curves

- In a search for new gamma-ray binaries (R. Corbet), aperture photometry light curves were made for all 2FGL sources.
- Power spectra calculated for all light curves.
- Noticed peculiar sets of peaks in 2FGL J0753.2+1937 and 2FGL J2356.3+0432

Lunar LC Contamination

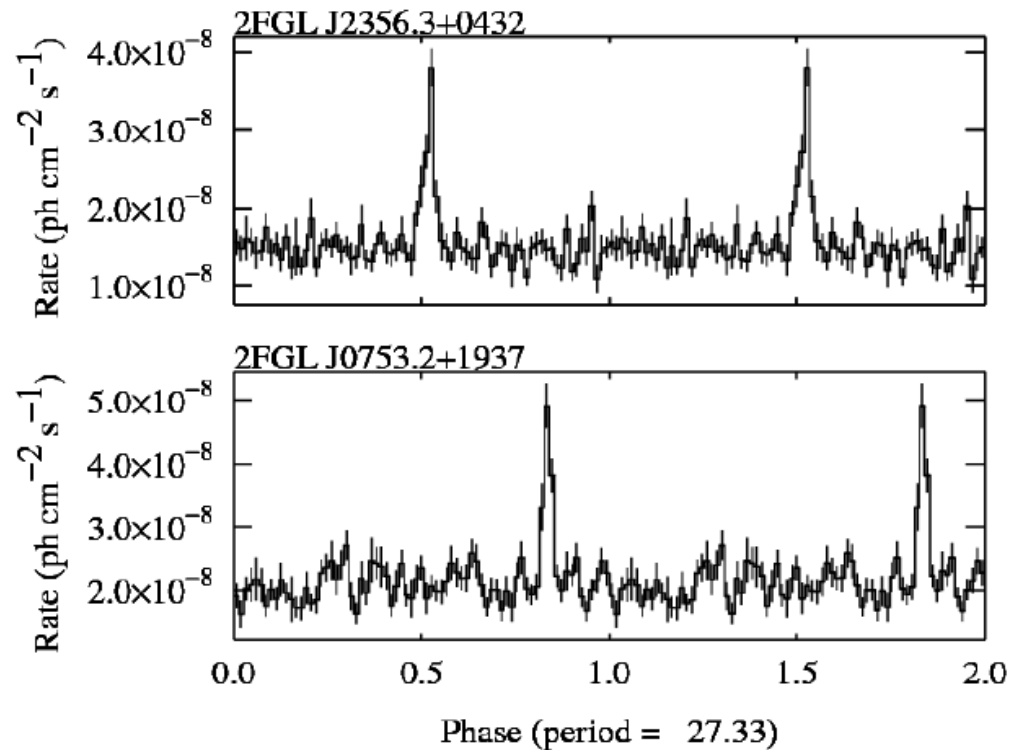


Peaks found to be harmonically related.



Lunar LC Contamination

Folded Light Curves



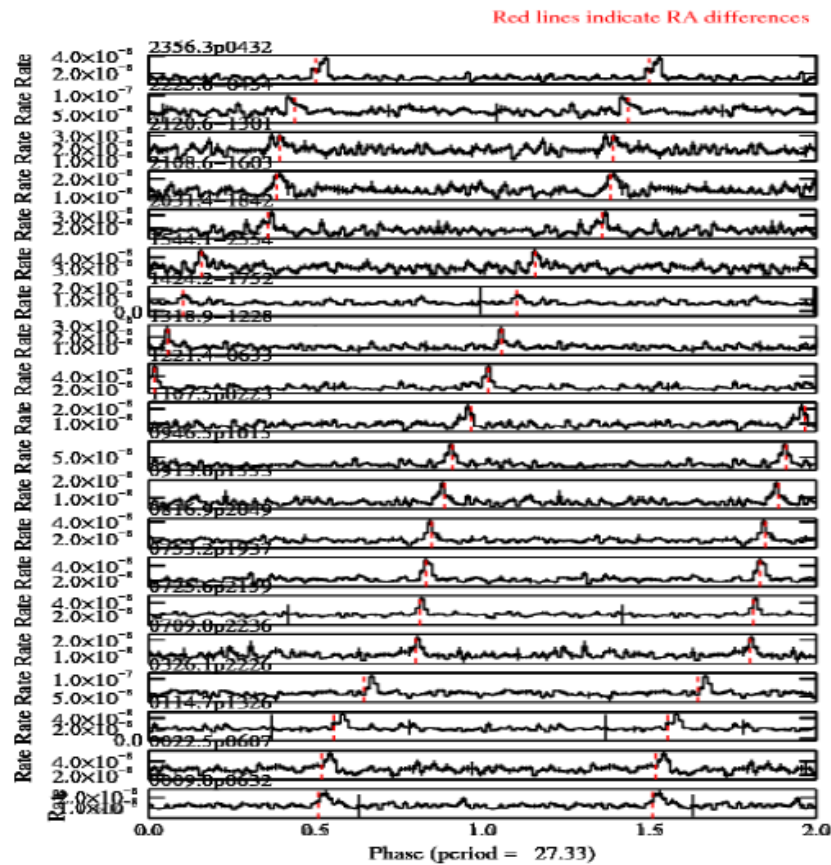
27.3 days is the lunar sidereal period.

The light curves are contaminated by emission from the Moon when it is close to a source.

Lunar LC Contamination



Additional analysis showed that ~20 sources in the path of the Moon are noticeably affected



Removing the Moon

- Want to filter out times when Moon is close to a source.
- But spacecraft files do not include lunar coordinates.
- Paul Ray (NRL) has provided software to add lunar coordinates to spacecraft files.
 - Enables filtering using `gtselect`.
 - Removes lunar signal from light curves.
- Available from FSSC/“User Contributions”.

Cycle-5 Summary



- 220 proposals:
 - 5% increase in number, but 40% in oversubscription due to multi-year obligations
 - 3 large, 83 2-yr requests, 2 foreign, 5 progress reports
- Late March peer review
 - Stage-I selections announced early May
- Stage-II selections announced last week
- Grant administration underway
 - ~60% to be funded in FY12

Cycle-5: A Few Details

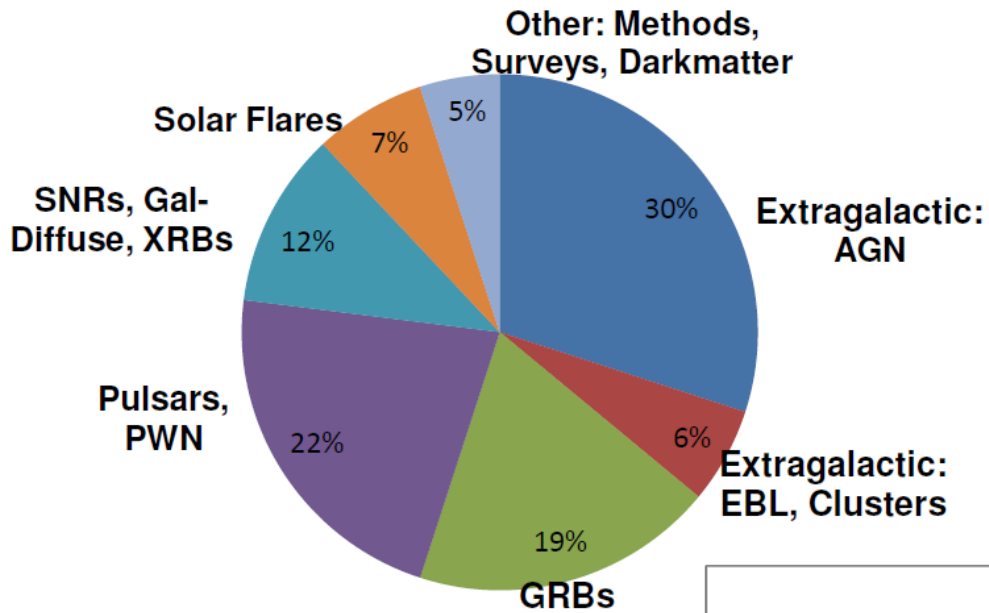


- Stage-I selections made by NASA HQ, 5/6/2012
 - 65 new selections, includes 2 large, 22 2-yr
 - 22 of 33 2-yr programs selected at stage-II
 - NRAO: 10 proposals (570 hrs, 68%) selected
 - 55/211/305 (EVLA/GBT/VLBA)
 - NOAO: 4 proposals, (118 hrs, 65%)
 - Suzaku: 1 proposal, (50 ksec, 10%)
 - 4 “pointed” observations

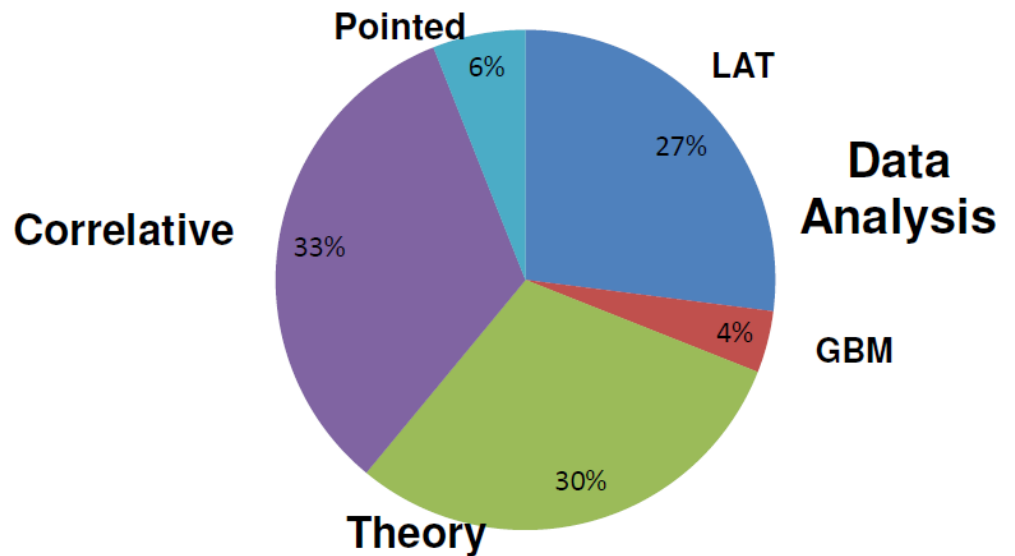
Cycle-5 Summary



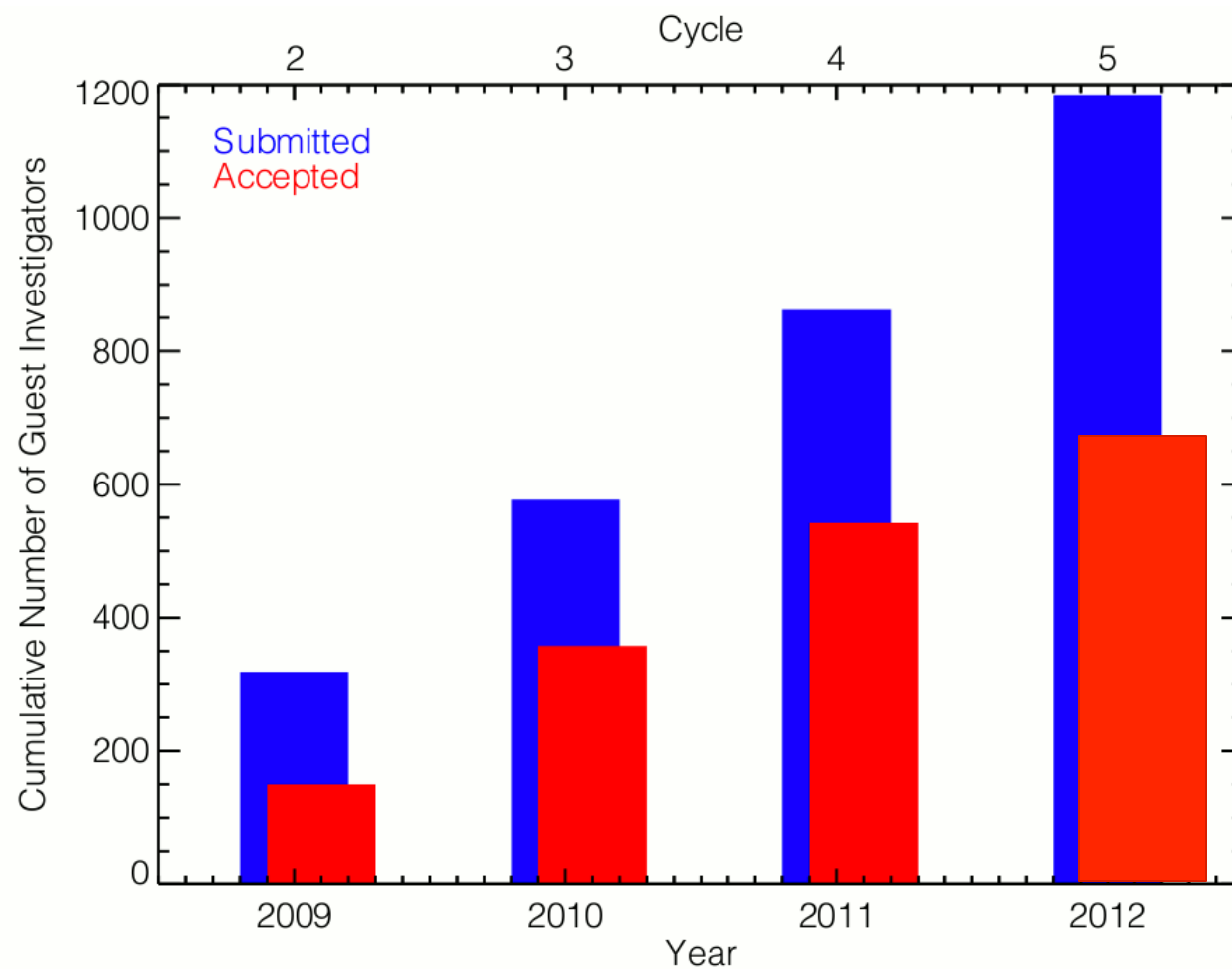
Topical Breakdown



Proposal Types



	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5
<i>Submitted</i>	167	198	182	208	221
<i>Approved</i>	36	77	75	87	67
<i>Large</i>	8	3	2	3	2
<i>multi-year</i>	NA	NA	NA	30/72	22/80
<i>\$ Over subscription</i>	3.9	2.5	2.4	2.4	3.5



Proposer Feedback



- Progress report submission and evaluation procedure needs better clarification
- Two-year proposals: NRA and stage-I selection language need to be revisited

New for Cycle 6



- MOU defining VERITAS joint program completed
- Up to 120 hours (~15% of available time)
- Technical requirements: observing season, lunar cycle, RA bands
- PI of successful proposal will collaborate w/ VERITAS team (subject to their internal publication agreement)

- As described in the MOU there are restrictions on proposal categories:
 - Projects designated as Category A are VERITAS collaboration key projects and participation through this program is not allowed
 - Category B consists of projects ongoing within the VERITAS collaboration. Fermi GIs can propose to join those ongoing collaborations.
 - Category C projects are new ideas not conflicting with any collaboration activities and Fermi GIs who propose them are expected to lead those efforts



VERITAS Joint Program



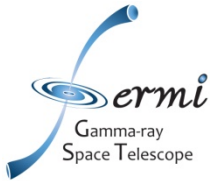
- VERITAS team co-I will perform basic data reduction
- Time loss from weather, technical issues not reimbursed
- Propose through Fermi NRA. Technical evaluation by VERITAS team.
- NOI strongly encouraged w/feedback to be provided as warranted.
 - FSSC will coordinate this process w/VERITAS



New for Cycle 6: Arecibo



- Arecibo joint program also expected for Cycle 6 and beyond
- Arecibo management at all levels (including NSF) has expressed enthusiasm
- MOU defining the details of the agreement will appear in the near future.
- In rough terms the program is expected to be closely analogous to the Fermi-NRAO joint agreement.



Arecibo Joint Program



- Arecibo will make available up to 300 hours of observation time.
- There will not be a constraint on ToO or large project time, however:
 - Arecibo is a difficult telescope to schedule.
 - Certain LST ranges, especially if they occur at night, are much more oversubscribed than others.

Arecibo Joint Program



- We therefore expect constraints on the distribution of the allocated joint-Fermi time that depend on LST.
- In particular, Galactic Plane time will be more difficult to accommodate, than high-Galactic-latitude targets.
- These issues will be addressed in the technical evaluation process.