Fermi Proposer Workshop

Workshop Agenda

1:00-2:30 PM (EST), Fri, Jan 28, 2022

Welcome, Session Overview, and Goals	Chris Shrader
Mission Overview and News	Liz Hays (~10 min)
Overview of FSSC Online Services	Don Horner (~10 min)
The Fermi Light Curve Repository	Janeth Valverde (~15 min)
GI Program Description, Opportunities, Genaral Discussion	Chris Shrader (~20 min)
GI Science Nuggets	1-VG Attendee Contributions (~5-min)

Fermi Guest Investigator Opportunities

Chris Shrader,
Fermi Science support Center,
NASA/GSFC

Fermi GI Program Overview

- **Broad community participation greatly enhances the scientific productivity of the Fermi mission**
  - **This is facilitated through a rigorous Guest Investigator (GI) program**
- **Primarily proposals for grant support**
  - **All science data products and basic analysis tools are publicly available through the FSSC as are proposal preparation and submission details**

Program Overview (con.)

- **Participants can propose:**
  - **Analysis of all public data products**
    - Includes development and dissemination of methodologies, e.g., algorithms, SW tools
  - **Correlated observations relevant to Fermi**
    - Includes opportunities for joint observation programs w/partner observatories; NRAO, NOAO, VERITAS, TESS and INTEGRAL
    - Proposers with separate access to other observatories can propose correlative programs
  - **Theoretical investigations relevant to Fermi**

Program Overview (con.)

- 2-stage review process
  - The first stage is the *science review*
    - Dual-anonymous peer-evaluation process
  - Budget proposals are solicited from successful first stage proposers
    - Internal review by NASA
- Support for ~35 research programs
  - Our goal is for ~$75k average grants, although
  - Also 1+/-1 new Large Projects @ ~$125k per year

Recent History: Cycle 13-14 Summary

- ~100 proposals received, ~35 selected
- ~35% approval rate represents an improvement *wrt* past cycles
  - Cycles 5-10 average was 22%
- Recent Fermi selection rate is ~consistent with the average for NASA GO programs

Joint Observation Programs

- The Fermi project has organized partnerships with several other observatories to establish joint program opportunities
- Participants include NRAO, NOAO, INTEGRAL VERITAS and TESS.
- It is STRONGLY recommended that prospective proposers carefully review the appropriate MOU(s) on our website.

Allotted Joint-Program Quotas

NRAO:	450-600 hrs on GBT, VLA & VLBA
NOAO:	3-5% for various telescopes
VERITAS:	120 hrs
INTEGRAL:	250 ksec
TESS:	1,000 2-minute cadence and 50 20-second cadence target slots

Joint Program Statistics

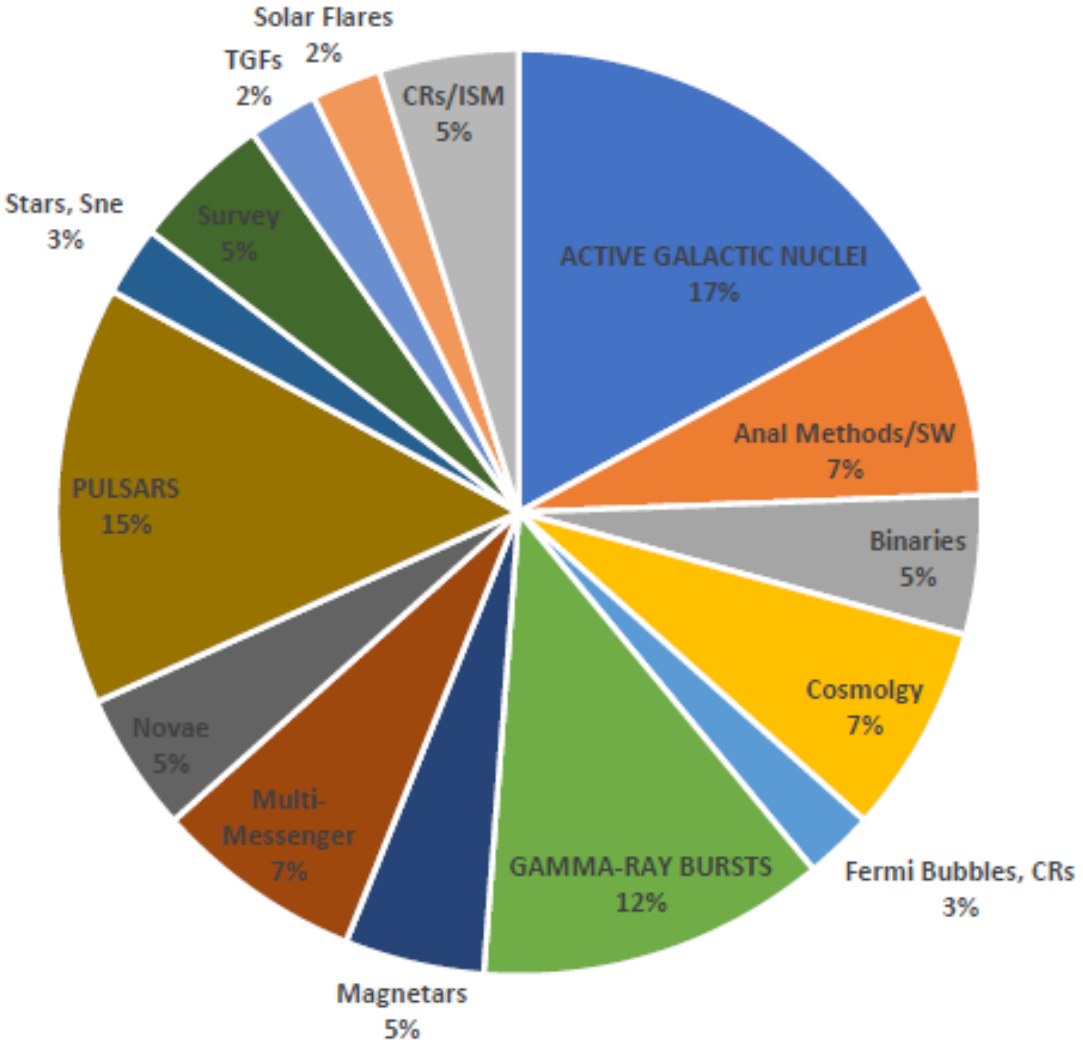
Cycle-14 Requested (proposals/obs time) / (time available)

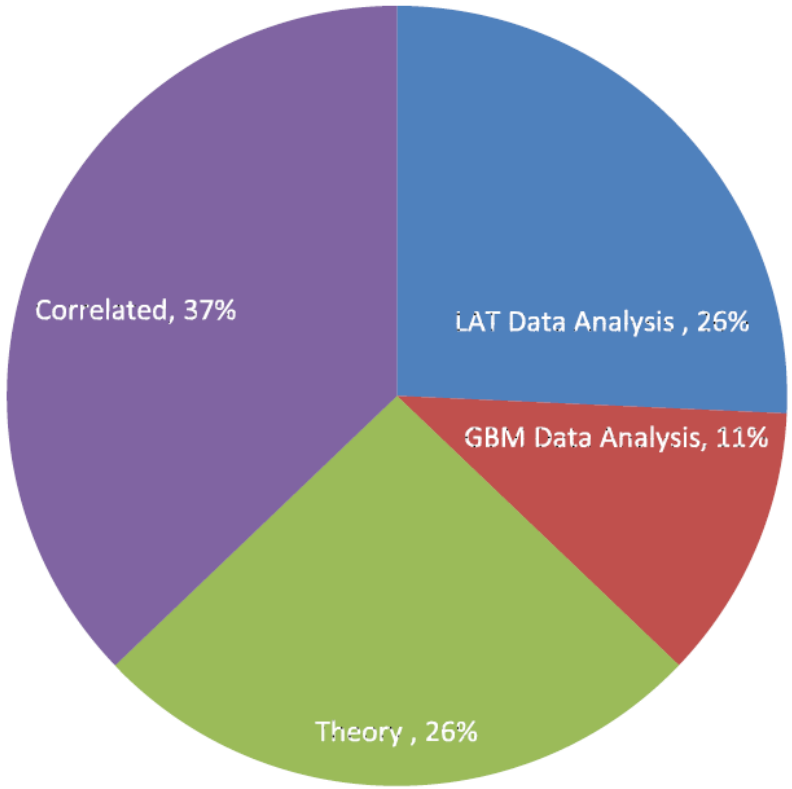
NRAO: (7/310) / (450-600 hrs on GBT, VLA & VLBA)
NOAO: (8/380) / (3-5% for various telescopes)
VERITAS: (1/536) / (120 hrs)
INTEGRAL:(1/) / (250 ksec)
TESS: (1/38) / (33 hrs)

Awarded: (proposals/obs time)

NOAO: 2 / 250 hrs
NRAO: 4 / 160 (3 VLA/VLBA, 1 GBT)
INTEGRAL: 1/250ksec
VERITAS: 0/0
TESS: 0/0

Topical, Proposal Type Distribution





SA/GSFC

Proposal Evaluation Process

- Following the model of all NASA GI/GO programs each proposal is evaluated by NASA-convened, anonymous peer panel
- Begun in Cycle 14 and continuing henceforth Fermi will employ a **dual-anonymous peer review process**
- This is now the case for all NASA GO/GI programs as well as ADAP, ATP and some externally managed ones, e.g., Chandra, HST, JWST

What is Dual-Anonymous Peer Review?

- In dual-anonymous peer review, the reviewers do not have explicit knowledge of the identities of the proposing team during the scientific evaluation of the proposal.
- The primary intent of dual-anonymous peer review is to eliminate “the team” as a topic during the scientific evaluation of a proposal.
- This creates a shift in the review-panel discussions, away from the individuals, and towards a discussion of the scientific merit of a proposal.
- The goal is to **eliminate or at least minimize Conscious and Subconscious Bias** in the selection process**.**

Dual Anonymous Proposal Preparation

- Stage-I proposal submission done as before via ARK/RPS
  - Include PI/co-I info but names are hidden from reviewers
  - Numerical references, no "first person" attributions
  - Panelists may not speculate PI, co-I identities
  - Include "team identity and expertise" page
  - Cite access to specific facilities as private communications or arrangements
- Relaxes certain types of panelist conflicts of interest
- **After** deliberation and grading names will be revealed
  - A proposal can then be disqualified, but not re-scored

Example of Anonymization

- *In Rogers et al. (2014), we concluded that the best explanation for the dynamics of the shockwave and the spectra from both the forward-shocked ISM and the reverse-shocked ejecta is that a Type Ia supernova exploded into a preexisting wind-blown cavity. This object is the only known example of such a phenomenon, and it thus provides a unique opportunity to illuminate the nature of Type Ia supernovae and the progenitors. If our model from Rogers et al. (2014) is correct, then the single-degenerate channel for SNe Ia production must exist. We propose here for a second epoch of observations which we will compare with our first epoch obtained in 2007 to measure the proper motion of the shock wave.*

- Here is the same text, again re-worked following the anonymizing guidelines:
- *Prior work [12] concluded that the best explanation for the dynamics of the shockwave and the spectra from both the forward-shocked ISM and the reverse-shocked ejecta is that a Type Ia supernova exploded into a preexisting wind-blown cavity. This object is the only known example of such a phenomenon, and it thus provides a unique opportunity to illuminate the nature of Type Ia supernovae and the progenitors. If the model from [12] is correct, then the single-degenerate channel for SNe Ia production must exist. We propose here for a second epoch of observations which we will compare with a first epoch obtained in 2007 to measure the proper motion of the shock wave.*

Cycle 15 Timeline

- Schedule: Feb. 17, 2022, proposal due date
  - ~late April 2022: virtual review
  - ~late May/early June 2022: Stage-I selections
  - July/August stage-II awards
- Hope to again select 30-40 programs
- No significant policy changes *wrt* Cycle 14

Additional Information

- Again, for all proposal preparation details please visit the FSSC Web site, in particular the “Proposals” page:
  - ***https://fermi.gsfc.nasa.gov/ssc/***
- Also, feel free to make use of our helpdesk with any Fermi-related questions
- **Good luck with your Fermi proposals!**