



National Science Foundation

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APS April Meeting

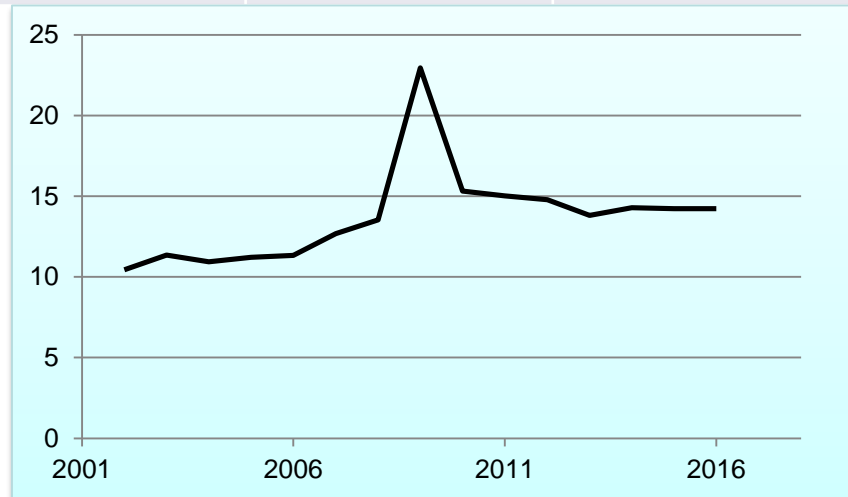
Salt Lake City, Utah– April, 2016

Budget news

Progression of NSF budget in the last three fiscal years (FY) and FY17 request (in millions):

	FY14 Actual (Δ from last FY)	FY15 Actual (Δ from last FY)	FY16 Estimate (Δ from last FY)	FY17 Request (Δ from last FY)
NSF	\$7,131 (3.3%)	\$7,398 (3.7%)	\$7,463 (0.9%)	\$7,964 (6.7%)
MPS Directorate	\$1,268 (1.5%)	\$1,376 (8.5%)	\$1,349 (-2.0%)	\$1,436 (6.4%)
PHY Division	\$267 (6.8%)	\$276 (3.4%)	\$277 (0.4%)	\$295 (6.5%)
Gravity programs	\$14.3 (3.6%)	\$14.3 (0.0%)	\$14.3 (0.0%)	?

Gravity programs
(in millions)



Division of Physics: Investigator-Initiated Research Project

NSF 16-XXX

- Starting in 2014, **all proposals** submitted to the Division of Physics programs (*LIGO Research Support, Theor. Grav. Physics, Exp. Grav. Physics, etc.*) **have to go through this solicitation!**
- This includes:
 - **Conference** proposals.
- This does not include:
 - **CAREER, MRI, INSPIRE, RUI**, etc. and any other proposal that pertains to an NSF-wide solicitation.
 - **Supplements** and **EAGER**. You can use NSF 16-1 GPG
- It has **Deadlines** (instead of Target Date).
 - All three Grav. Physics programs: **Oct 26, 2016 (estimated)**
- See Auxiliary slides for more information



On Fastlane, choose solicitation
NSF 16-XXX

Do **NOT** choose
NSF 16-1 GPG or anything else.
Proposal will be **returned w/o
review!**

Program Announcement / Solicitation Number Selection

Select a Program Announcement or, if not in response to a program announcement, choose 'NSF 14-1 GPG: Not in response to a program announcement/solicitation'. If the program announcement is within multiple divisions or programs, the next page will allow you to select from the associated divisions and programs. If the program announcement is associated with only one division and program, the unit of consideration will automatically be selected.

There are currently 305 Program Announcements/Program Descriptions

Program Announcement / Solicitation Number

Select one of the items below.

NSF 14-1 Grant Proposal Guide - GPG
NSF 14-579 Facilitating Research at Primarily Undergraduate Institution...
NSF 14-578 Science of Science and Innovation Policy Doctoral Dissertat...
NSF 14-577 Advanced Technological Education
NSF 14-576 Division of Physics: Investigator-Initiated Research Project...
NSF 14-575 US-Japan Big Data and Disaster Research
NSF 14-574 Methodology, Measurement, and Statistics
NSF 14-572 Tribal Colleges and Universities Program
NSF 14-571 NSF/Intel Partnership on Cyber-Physical Systems Security and...

Select

Go Back

Unit Selection Lists

Select the organizational unit you wish to consider your proposal from **either** the Division selection box (if you want to review the NSF Divisions and associated Programs) **or** the Program selection box (if you know the Program you wish to select).

Note: Some program announcements will be associated with multiple Divisions and Programs. In these cases, a logical step-by-step selection process is provided.

Divisions

Select a Division within NSF 14-576

Directorate, MPS Directorate for Mathematical & Physical Sciences
PHY-Division of Physics

Programs

Select a Program within NSF 14-576

Accelerator Science
ASTROPHYSICS & COSMOLOGY THEOR
ATOMIC & MOLECULAR PHYSICS
ATOMIC THEORY
COMPUTATIONAL PHYSICS
ELEMENTARY PARTICLE ACCEL USER
ELEMENTARY PARTICLE THEORY
GRAVITATIONAL EXPERIMENTS
GRAVITATIONAL THEORY

Select Program Show the divisions in this program.

Choose the Program in the next
screen



What is different?

- The solicitation has **Deadlines** instead of Target Dates
 - Gravitational Physics: **Oct. 26, 2016** (and last Wedn. in Oct. thereafter).
- PIs who have or anticipate **additional concurrent sources of support should clearly explain the differences** between this proposal and the other awards.
- **List of collaborators** has to be uploaded as a Single Copy Document (not in Biosketch anymore). See next slide. This does not include the full LSC membership (I know who you are!). Only add those persons from the LSC you collaborate closely enough to generate a conflict of interest.
- **Letters of Collaboration** should follow the following single-sentence format:

“If the proposal submitted by Dr. [insert the full name of the Principal Investigator] entitled [insert the proposal title] is selected for funding by the NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description.”



New Fastlane Submission rules (PAPPG 2016)

- Effective January 25, 2016
- NSF will **enforce** 5:00PM local time deadline!
- Authorized Organizational Representative (AOR) signature has to be present before deadline. **No more 5-day grace period!**
- Proposal Preparation. Upload the following individual files for each Senior Personnel listed on the proposal (i.e., they **cannot longer be grouped** into one single file).
 - Collaborators & Other Affiliations (as Single Copy Document. **No more in Biosketch!**).
 - Current & Pending
 - Biosketch



Other programs' deadlines

- **INSPIRE**
 - \$1M max / Duration up to 5 years
 - Support of two or more Prog. Directors from different disciplines
 - No LOI needed / No Deadlines (similar to EAGERs)
- **SI2: SSE (elements-small), SSI (interdisc.-larger), S2I2(institutes- largest):**
 - Part of CIF-21: Div. of Advanced Cyberinfrastructure (ACI) solicitation
 - Deadlines: **Many!**
- **MRI**
 - New revised solicitation in 2014
 - Major change: In **Acquisition** proposals the 70% cost requested from NSF can only be used for **equipment**: personnel costs (if any) have to come from the cost-sharing 30%.
 - Deadline: **January 11, 2017**
- **CAREER**
 - Deadline: **July 22, 2016**
- **CDS&E / PIF – Computational Physics**
 - Deadline: **December 1, 2016**



DFG-NSF Lead Agency Agreement

New DFG-NSF opportunity for collaborations between US and German groups in Gravitational Physics (experimental, computational & theoretical projects)

- First review process conducted in February 2016. Results to be announced soon.
- This works in a way similar to the NSF “Collaborative Research” proposals: single proposal core with two sets of budgets, CVs, etc.
- Researchers decided which is the “Lead” agency (NSF or DFG)
- The Lead Agency conducts the review process with participation of officers from the non-lead agency (i.e., single review simplifies administrative workload)
- It incentivates international collaborations for small groups
- Deadline:
 - If NSF is Lead Agency: **Oct. 26, 2016**
 - If DFG is Lead Agency: **None**



Gravitational Wave Agencies Correspondents (GWAC)

- The GW scientific community recommended “... a closer link between the global funding agencies, to start to coordinate medium- and long-term planning, and looking for synergy between the agency capabilities to most effectively stimulate the field.” (“What Comes Next for LIGO?” Workshop, May 2015, Silver Spring MD.)
- NSF created an informal communication framework between funding agencies called “*Gravitational Wave Agencies Correspondents*” (GWAC).
- Homepage <http://www.nsf.gov/mps/phy/gwac.jsp>.
- The first meeting conducted October 9, 2015 (teleconference).
- Current member agencies: ARC (Australia), CFI (Canada), CNRS (France), CONACYT (Mexico), DFG (Germany), INFN (Italy), NASA (US), NSF (US), STFC (UK).



Writing proposals: Mentoring program

Mentoring Program: The goal is to make the expertise of senior researchers on proposal writing available to young investigators

How does it work?

- The Mentee requests a Mentor (email me at pmarrone@nsf.gov).
- I will send you a list of Mentor Volunteers. You can contact anyone you like without identifying them to NSF.
- The Mentor will read your proposal and provide feedback once. Send the proposal timely! Mentors are busy people.
- NSF accepts no responsibility on the interaction/outcome of the program!

But, does it work?

Physics Division has decided to implement a pilot across the Division based on or experience in Grav. Physics!



Ideas Lab – “Measuring Big G”

The Newtonian constant of gravitation, G , is the fundamental constant of physics known with the least precision (CODATA relative uncertainty = $1.2 \cdot 10^{-4}$). Measurements made in the past decade and a half show a spread of values larger than their individual estimated errors, creating a discrepancy at a level of 10σ .

- Ideas Lab: Special NSF mechanism to promote new ideas and projects
- Interested PIs send a two-page preliminary proposal (i.e., application) to participate in the workshop: No expertise in measuring G required!
 - Solicitation NSF 16-520
 - Deadline for applications: **May 16, 2016**
- Invited applicants spend a week with Mentors at NIST: The novel ideas get refined, clarified, evolved, etc.
 - Workshop from **July 18 - 22, 2016** at NIST (Gaithersburg, MD)
- The top selected projects are invited to submit design concept proposals to the Exp. Gravity program for funding.
 - Invited full proposal deadline: **October 26, 2016**



For the latest news:

<http://www.nsf.gov/div/index.jsp?div=PHY>

NSF 16-XXX

DFG-NSF Agreement

Email any questions to
pmarrone@nsf.gov
or call (703)292-7372

Auxiliary slides

Solicitation NSF 16-XXX

“Division of Physics: Investigator-Initiated Research Projects”



What are the exceptions?

- RUI proposals
Use the RUI solicitation instead but **follow the new Deadlines** for each Physics program
- CAREER, MRI, INSPIRE, SI2, etc.
NSF-wide solicitations or solicitations from other Divisions (AST, ACI, etc.) are unaffected.
- Supplement proposals and EAGER are unaffected (i.e., you can use NSF 16-1 GPG)
- Conference proposals are **not** excepted! They also have to be submitted through NSF 16-XXX and, thus, before the Oct. deadline



What is different?

- The solicitation has **Deadlines** instead of Target Dates
 - Gravitational Physics: **Oct. 26, 2016** (and last Wedn. in Oct. thereafter)
 - PIF Computational Physics: **Dec. 1, 2016** (and first Thursday in Dec. thereafter)

Note: These deadlines are estimated. Check solicitation page!

- PIs are strongly encouraged to submit **single proposals** for possible co-review **instead of multiple similar proposals** to different programs



Additional Criteria I

- PIs who have or anticipate **additional concurrent sources of support should clearly explain the differences** between this proposal and the other awards (including ALL grants regardless of the agency of origin)
 - Where? **Project Description** or **Current & Pending** (you may need to upload a separate file in this case)
 - *“The proposal review process will include an assessment of the proposers’ ability to carry out the proposed research in light of these commitments”*
 - PIs with similar proposals for different agencies will be expected to withdraw all other applications should one of them be funded



Additional Criteria II

- For proposals involving development or construction of **complex instrumentation** (typically above \$1M), the following aspects will be assessed by during the review:
 - Ability of the proposers to deliver within the proposed budget
 - Cost, schedule and risk mitigation management (project management documentation should be uploaded as a Supplementary Document)
 - **Contact the corresponding NSF Program Officer for details**



Additional Criteria III

- **List of collaborators** should be included as Single Copy Document
 - For those who belong to the LSC, identify those members with whom the PIs and Co-PIs work closely (i.e., publish non-full LSC authorship papers, etc.).
 - The full list of LSC **is not required** for proposals submitted to LIGO Research Support. However, do include any other affiliation (i.e., ANTARES, Ice Cube, etc.)



Additional Criteria IV

- **Letters of Collaboration** should follow the following single-sentence format:

“If the proposal submitted by Dr. [insert the full name of the Principal Investigator] entitled [insert the proposal title] is selected for funding by the NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description.”

- **Letters of Support are NOT allowed.**

