The View from NSF

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NSF Welcomes Virgo!

- NSF is gratified that gravitational-wave research is accelerating its approach toward a global network under this MOU.
- The sharing of data and resources will greatly assist in the discovery of gravitational waves and in the characterization of their sources.
- The agreement codifies an extraordinary spirit of international cooperation.

Good News from Congress — finally

- The 2006 Congress funded the government on a Continuing Resolution (CR) that extended most gov't operations at 2006 levels and excluded new measures, notably the ACI.
- In February the 2007 Congress bypassed the President's Budget request and finded the government under its own CR — but it also restored aspects of the ACI, giving NSF R&RA activities a 6.6% increase for FY 2007.

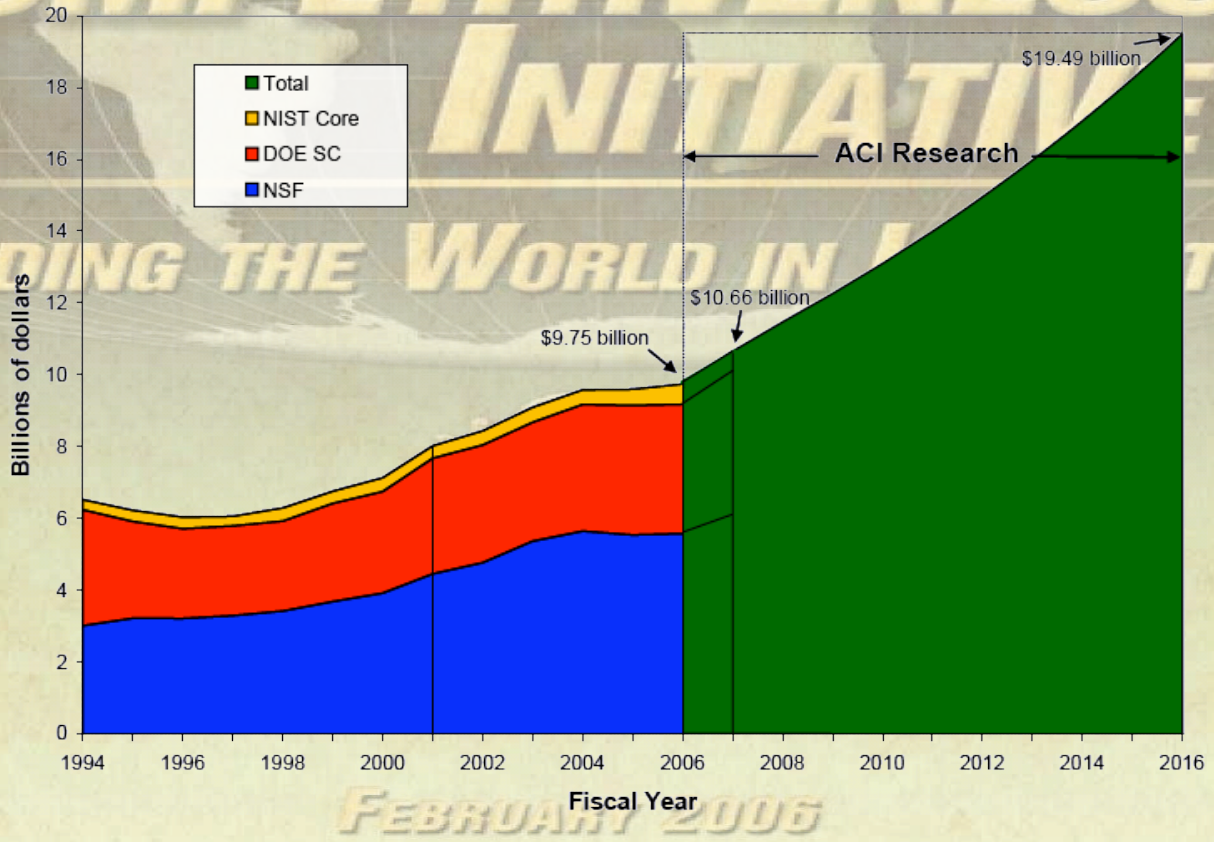
  ⇒ *LIGO will be funded in FY 2007 at its full requested level of $33M.*

- NSF construction projects are also funded for FY 2007

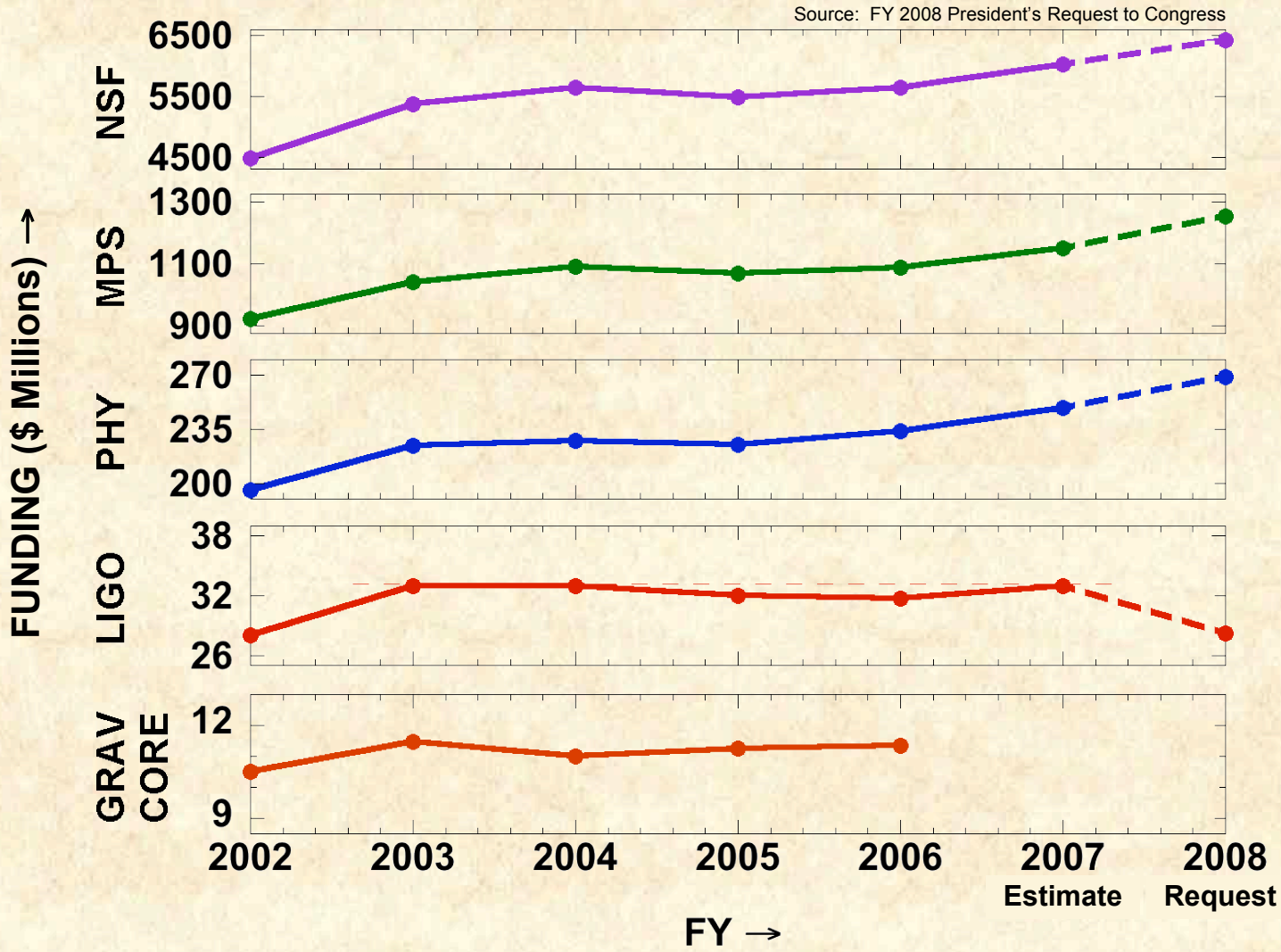
  ⇒ *Advanced LIGO is at the top of the queue for FY 2008 funding.*

The ACI

- An Executive Branch response to the National Academies' report "*Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*"
- Proposes doubling over 10 years the budgets of NSF, DoE, and NIST Core



Funding Breakdown FYs 2002-2008



Funding Breakdown FYs 2002-2008

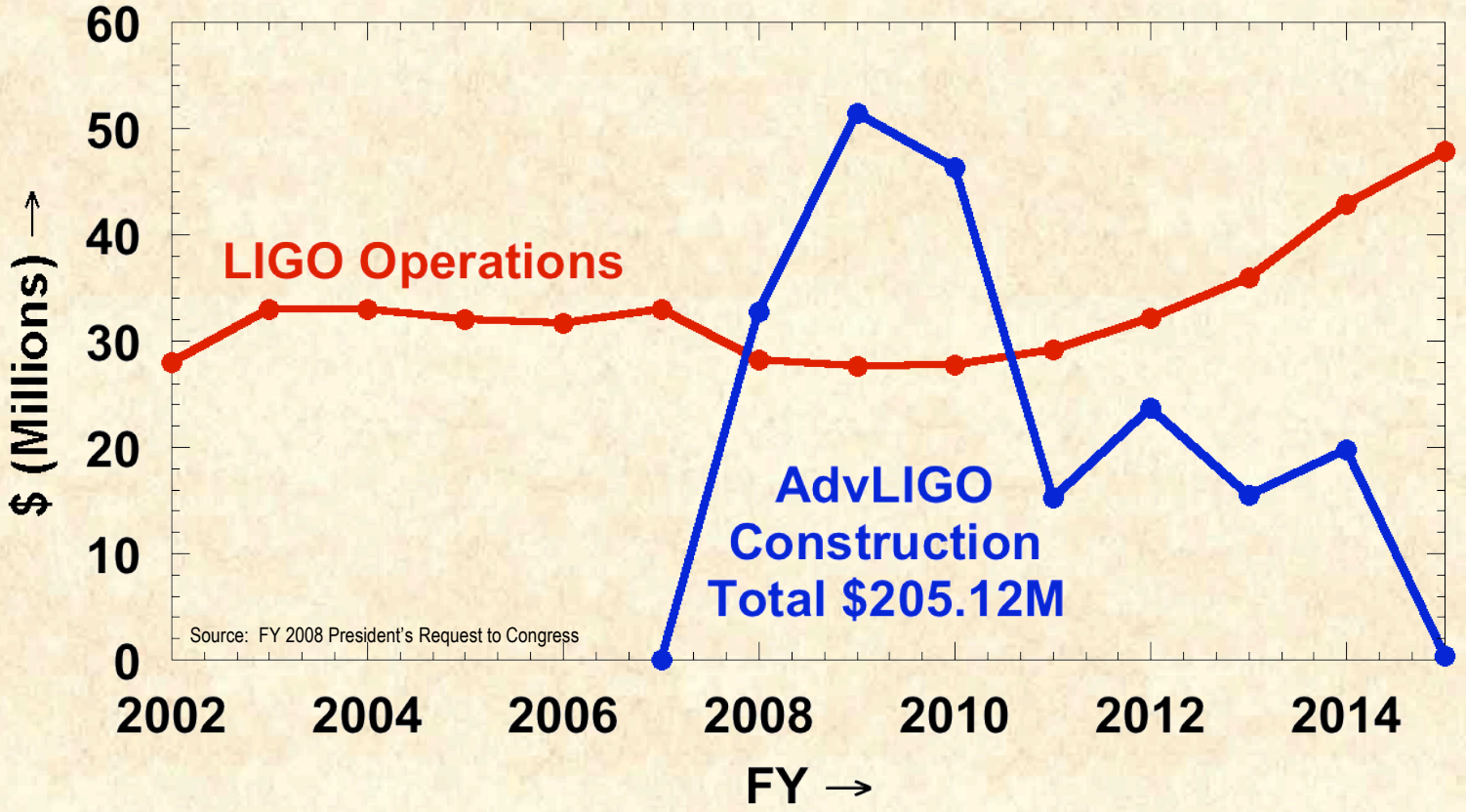
	FY06* Actual	FY07* Estimate	FY08* Request	CHANGE FY06–07	CHANGE FY07–08
NSF	5645.79	6020.21	6429.00	+6.6%	+6.8%
MPS	1086.61	1150.33	1253.00	+5.9%	+8.9%
PHY	234.15	248.50	269.06	+6.1%	+8.3%
LIGO	31.68	33.00	28.20	+4.2%	–14.5%
GRAV CORE	11.33	(A long story…)	—	—	—

Source: FY 2008 President's Request to Congress

*amounts in $Millions.

LIGO & Advanced LIGO Funding

Advanced LIGO is in the FY 2008 President's Budget Request to Congress!



November 2006 Annual Review

- ***"The Review Panel congratulates LIGO for the wonderful progress made this past year on all fronts.*** **In particular, the Panel was pleased with the fine progress of science run S5 at sensitivities meeting the design sensitivity, and the rapid progress in extracting the science results."**
  - **"The improvements the LIGO collaboration has made in the sensitivity of the interferometers are impressive.**
  - **"The Advanced LIGO design, general directions and plans are well thought out, and the related research and development programs appear to be on track.**
  - **"Enhanced LIGO is a well thought-out phase of operations between initial LIGO and advanced LIGO, and represents a well-justified choice of improving sensitivity more aggressively than duty factor.**

November 2006 Annual Review
cont'd

- "LIGO has a multi-faceted approach to **Education and Public Outreach** (EPO) with a number of very impressive efforts that impact K-12 students and teachers, undergraduate and graduate students, and the general public.
- "The basis for planning appears to be well thought out and the approach to handling a **transition to Advanced LIGO** seems to be a good one, with buy-in from NSF.
- "The Review Panel was particularly pleased with the smooth transition to the new **top management of LIGO**.
- "The LIGO project has done a reasonable job over the past couple years of implementing basic **cybersecurity measures** for the Laboratory. Their security goals and the measures that they have taken so far are all reasonable."

Upcoming NSF Reviews

June 5-6, 2007:

- Advanced LIGO Final Design Review—
  - to consider only changes from the 2006 Baseline Review
  - to be held at NSF headquarters in Arlington, VA

November 2007:

- LIGO FY 2007 Annual Review +
- LIGO FY 2009-2013 Operations Proposal Review

~December 2007:

- AdvLIGO Final Design Baseline
  - After Congressional appropriation of funding but before funds are released
  - Timing is unpredictable but speed is necessary
  - Might be an internal NSF review

Funding Opportunities

Physics Division

Program	Synopsis	Deadline
Gravitational Physics	Emphasizes the theory of strong gravitational fields and their application to astrophysics and cosmology, computer simulations of strong and gravitational fields, and gravitational radiation; and construction of a quantum theory of gravity.	26 Sept 07
Physics at the Information Frontier (PIF)	Support for physics proposals in three subareas: computational physics, information intensive physics, and quantum information and revolutionary computing.	26 Sept 07
AMO Physics	Precision Measurements, Atomic and Molecular Dynamics, Atomic & Molecular Structure, and Optical Physics	26 Sept 07
Education & Interdisciplinary Research (EIR)	Activities in conjunction with NSF-wide programs such as Faculty Early Career Development (CAREER), Research Experiences for Undergraduates (REU), and programs aimed at women, minorities, and persons with disabilities.	26 Sept 07

Funding Opportunities

Computing

Program	Sol. #	Synopsis	Deadline
Computational Science Training for Undergradu-ates in Math (CSUMS)	06-559	Enhance computational aspects of the education and training of undergraduate students in the mathematical sciences and to better prepare these students to pursue careers and graduate study in fields that require integrated strengths in computation and the mathematical sciences.	17 Oct 07
High-Performance Computing for Sci & Eng Rsch & Ed (HPCOPS)	06-559	A competitive opportunity for institutions that have significant HPC systems with an expected useful life that extends beyond 2007 and which they wish to make available, through the TeraGrid, to the science and engineering community without restriction to discipline.	—
Cyberinfrastruc-ture Training, Education, Advancement & Mentoring (CI-TEAM)	06-548	Prepare current and future generations of scientists, engineers, and educators to use, support, deploy, develop, and design cyberinfrastructure; and foster inclusion in cyberinfrastructure activities of diverse groups of people and organizations, with particular emphasis on traditionally underrepresented groups.	—

Funding Opportunities

NSF-Wide

Program	Sol. #	Synopsis	Deadline
Faculty Early Career Development (CAREER)	05-579	Offers the National Science Foundation's most prestigious awards in support of the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization.	19 July 07
Developing Global Scientists & Engineers	04-036	Opportunities for international research and education for early career stages of scientists and engineers, i.e., as undergraduates and graduate students.	15 Sept 07
International Research Fellowship Program	06-582	Introduce scientists and engineers in the early stages of their careers to international collaborative research opportunities, thereby furthering their research capacity and global perspective and forging long-term relationships with scientists & engineers abroad.	11 Sept 07
Pres. Awards for Excellence in Science, Mathematics & Engineering	04-525	Seeks to identify outstanding mentoring efforts that enhance the participation of groups (i.e., women, minorities, and persons with disabilities) that are underrepresented in STEM.	4 Mar 08

☛ `http://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=rcnt`
has a complete list of active funding opportunities.

Gravitational Physics

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5628&org=PHY&from=home

Gravitational Physics

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PROGRAM GUIDELINES

Apply to PD 06-1244 as follows:

For full proposals submitted via FastLane: standard Grant Proposal Guidelines apply.
For full proposals submitted via Grants.gov: NSF Grants.gov Application Guide; A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf)

DUE DATES

Full Proposal **DEADLINE: September 26, 2007** unless *prior arrangements* are made with the PO.

SYNOPSIS

Emphasizes the theory of strong gravitational fields and their application to astrophysics and cosmology, computer simulations of strong and gravitational fields, and gravitational radiation; and construction of a quantum theory of gravity. The program oversees the management of the construction, commissioning, and operation of the Laser Interferometer Gravity Wave Observatory (LIGO), and provides support for LIGO users and other experimental investigations in gravitational physics and related areas.