

ago, got a bill passed, and then nothing happened," Williams said. "It was essentially feel-good legislation, but to actually accomplish anything, the money has to be appropriated."

John Marburger, director of the Office of Science and Technology Policy, was pleased that the COMPETES Act included most of the programs Bush had called for in the ACI, but he was not pleased by the billions of dollars in extra funding contained in the bill. Indeed, the day before Congress approved the COMPETES Act, Marburger said the bill was "over the top" and could face a presidential veto. Marburger said the ACI "is more focused and tries to prioritize science funding within the constraints of the budget."

The *Gathering Storm* report, he said, listed many things that needed to be done to strengthen science in the US, "but it was done without too much regard for the realities of the budget." And Marburger echoed both Augustine and Williams in noting the difference between authorization and appropriations.

"I like it that Congress is so positive about getting money to science and science education," Marburger said. "It's really a good thing. But I know that when the appropriations bills come through and the dust settles, there won't be enough money to fund everything."

An analysis of the COMPETES Act by the American Association for the Advancement of Science shows that Congress funded the large increases the administration proposed in its FY 2008 budget for the physical sciences, then went further and authorized more money for every major nondefense R&D funding agency in the federal government. Many of those increases replaced funding cuts proposed by the administration. According to an overview prepared by the House's science and technology committee staff, if the COMPETES Act is fully funded, it will do the following:

- Keep research budgets at NSF, NIST, and DOE's Office of Science on a path to double over the next seven years.
- Provide \$43.3 billion for science, technology, engineering, and mathematics research and education programs across the federal government over the next three fiscal years.
- Increase funding to NASA's aeronautics program, which a National Research Council report recently said was in serious trouble because of a shrinking budget (see PHYSICS TODAY, September 2006, page 29).
- Convert NIST's Advanced Technology Innovation Program and authorize al-

most \$400 million in funding over the next three years.

► Create new K-12 science and technology education programs at DOE and authorize \$150 million to fund them.

► Give large increases to the National Oceanic and Atmospheric Administration, with climate change and ocean-related research receiving significant boosts.

While the White House is expected to pressure congressional appropriators throughout September to significantly scale back the money for the COMPETES Act, Augustine will likely be working the phones again, trying to make sure the appropriations match the authorizations.

"We can afford this," Augustine said. "We can afford two times as much as a country if we think it is important. Whether it is this amount, or 50% more, or 100% more, we can afford it. That is not an issue in my mind." **Jim Dawson**

Grants to women come up short in pilot study

In nuclear theory, women get about 50 cents for every dollar men get in grant money from the US Department of Energy. Why the discrepancy? And does it exist in other physics subfields too?

The American Physical Society's (APS's) Committee on the Status of Women in Physics decided to see how things stood for physics after learning that two studies—from the Government Accountability Office in 2004 and RAND Corp in 2005—found that some agencies, notably the National Institutes of Health, give smaller grants to women than men. The GAO study reported a "serious data limitation" from DOE, a major funder of physics research, so the CSWP started there.

"We picked one subfield, nuclear theory, for a pilot study because we had anecdotal information about problems in that area," says Roxanne Springer, CSWP vice chair and a nuclear theorist at Duke University. Later, DOE worked with the CSWP on a more complete analysis of the same data—comprising 57 research grants from fiscal year 2005. That includes individual and group grants, with awards to a total of 103 investigators, 9 of them women.

The analysis revealed that men got \$123 850 per year on average, compared with \$64 310 for women. The average for group grants was slightly higher than for individuals, but the gender disparity remained.

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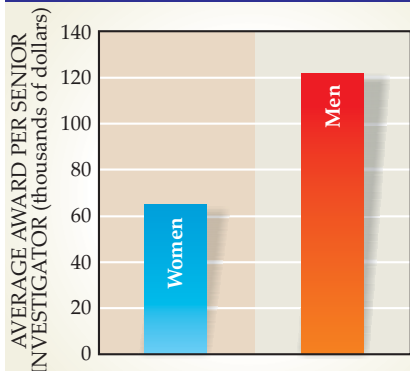


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Average awards to men and women in nuclear theory in fiscal year 2005

SHERRY YENNELLO



The discrepancy may be due to women asking for less. According to Sidney A. Coon, DOE program manager for nuclear theory, "Both men and women got about 80% of what they asked for. Men ask for two and a half times as much as women." That, he says, "begs the question of whether [women] have low-balled their request." Adds Sherry Yennello, a nuclear chemist at Texas A&M University and past CSWP chair, "There is social science literature that says women tend to ask for less than men. There may also be coaching involved. If women are asking for less than men, why is that so? This is the next set of questions."

Springer and Yennello also analyzed the time since earning the PhD to see if seniority would explain the discrepancy in award amounts, but they found no correlation. Another contributing factor, says Springer, is that "you'll probably find that the largest funding per person occurs at the highest-ranked nuclear theory groups. And historically speaking, those groups don't tend to have women."

Springer says she wasn't surprised by the funding discrepancy. "Maybe nuclear theory is unusual, maybe it's not. Either way, it's worth taking a look at the data across all fields," she says. "We want people to become aware of any discrepancies and their causes. Funding may be only a part of the problem."

The robust turnout of representatives from DOE and other funding agencies at APS's workshop on gender equity this past May (see PHYSICS TODAY, July 2007, page 35), adds Yennello, shows that "they realize they have a role to play in gender equity, and they are willing to step up to the plate and do that."

"Our funding should reflect the value to the scientific community and the impact of the science that we fund," says Coon. It's premature to make a firm

statement, he adds, but from a citation analysis, "my memory is that we were seeing value from women—they were having an impact out of proportion to their funding." Coon notes that even before the nuclear theory data was looked at, DOE's Office of Science had begun planning for a system to track voluntarily provided demographics of grant applicants and awardees.

Toni Feder

DOE fines LANL managers

In July the US Department of Energy fined current and past managers of Los Alamos National Laboratory \$3.3 million for the latest in a long string of national security breaches. DOE officials said they fined the University of California, which managed the lab from 1943 until June 2006, \$3 million. Los Alamos National Security, LLC, the consortium that took over management of the lab in June 2006, received a fine of \$300 000. In addition to the University of California, the consortium includes Bechtel National Inc, BWX Technologies Inc, and Washington Group International Inc (see PHYSICS TODAY, February 2006, page 23).

The fines stem from a raid by Los Alamos police on a methamphetamine lab in a private home. During the raid, according to the police report, "officers realized that some of the items seized appeared to belong to the Los Alamos National Laboratory." One of those items was a thumb drive used to download data from a computer. Officials later determined that the thumb drive contained classified data that had been downloaded by a former contract worker who had a high-level security clearance. The worker pleaded guilty to a misdemeanor.

In a letter to laboratory director Michael Anastasio, William Ostendorff, acting administrator of DOE's National Nuclear Security Administration, said, "This incident is particularly troubling because many of the violations cited . . . are of the same nature as other performance deficiencies that have occurred at LANL. The history of problems and violations concerning the protection of classified information at LANL are matters of deep concern."

A string of security incidents beginning with the Wen Ho Lee case in 1999 led to a seven-month stand-down of the lab in 2004, and the new management consortium took over operations of the lab with the specific charge of fixing the security problems.

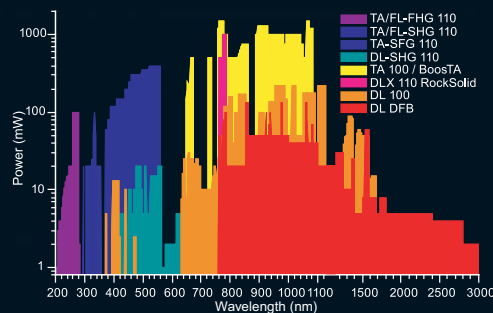
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