

Push for Kerry by Scientists Draws Republican Ire

A growing number of politically active scientists, dismayed with how science has fared under the Bush administration, are urging their colleagues to work for John Kerry.

Physicist Burton Richter was in his office at SLAC, both growling and laughing as he was read a comment from powerful Michigan Republican Congressman Nick Smith that described the Nobel laureate as a “passionate liberal ideologue.” Representative Smith, chairman of the House Research Subcommittee, released a statement attacking Richter as part of the Republican response to a 21 June letter from 48 Nobel Prize winners highly critical of the Bush administration’s science policies. The Nobel

letter went on to endorse Senator John Kerry (D-MA) for president.

But Richter was in good company. Smith, trying to blunt the impact of the letter, went on to say that although the “Nobel Prize winning endorsers” claim to be “speaking on behalf of the welfare of science and discovery itself,” it is “clear that these scientists are, collectively, also passionate liberal ideologues with an extensive record of support for the Democratic Party.”

“It’s unfortunate,” Richter said,

“that [Smith] reads ideological differences into some rational opposition to the administration’s policies.” Richter went on to say that the last time he had dinner at the White House was at the invitation of President Ronald Reagan. He also noted that he’d published an opinion piece supporting Bush’s withdrawal from the Kyoto accords on global warming—hardly the action of a liberal ideologue.

Richter, the former head of SLAC, has spent years in Washington’s corridors of power encouraging lawmakers to support SLAC, particle physics programs in general, and, more recently, the Department of Energy’s Office of Science. He is one of a handful of politically savvy, elite scientists

Projected R&D Cuts Alarm Science Community

At the 8 July press conference during which the Union of Concerned Scientists unleashed its latest broadside of charges claiming misuse and abuse of science within the Bush administration, a reporter asked UCS Board Chairman Kurt Gottfried if the complaints didn’t really stem from a perceived lack of federal funding for much of science. After all, the reporter said, Office of Science and Technology Policy Director John Marburger has repeatedly pointed to record R&D spending by the administration.

Gottfried suggested that the reporter carefully look through the UCS report. “I believe . . . you will find that the word ‘funding’ doesn’t appear,” he said. The issue, he continued, is the distortion of science, not its funding.

Although that is true of the UCS report, there is widespread concern in the science community about the administration’s funding of the sciences—particularly the physical sciences. Henry Kelly, president of the Federation of American Scientists (FAS), said that concern was heightened even further by an American Association for the Advancement of Science (AAAS) analysis of the administration’s science funding projections. That analysis, based on numbers in an Office of Management and Budget (OMB) memo leaked to the media in late May, portrays a bleak five years for almost all nondefense science funding and, according to several scientists, has played a role in mobilizing many in the scientific community against the administration.

The AAAS analysis states its key finding this way: “The

Bush Administration’s plan to reduce the federal deficit in half over the next five years would cut R&D funding for 9 out of the 12 largest R&D funding agencies in real terms over the next five years, with the steepest cuts in [fiscal year] 2006 after this year’s election.” Administration officials say the projections don’t accurately reflect future budget requests. An OSTP official pointed to FY2002 projections for science agencies that showed FY 2005 numbers that were significantly lower than the administration actually proposed in its latest budget. Despite the administration’s claims, the AAAS analysis concludes that if the OMB guidelines are followed, “nondefense R&D outside NASA and DHS [Department of Homeland Security] would decline steeply in FY 2006 unless there is either a change in the White House or a major change in Bush Administration policy.”

Some of the AAAS highlights reveal the nature of the proposed cuts, all adjusted for expected inflation:

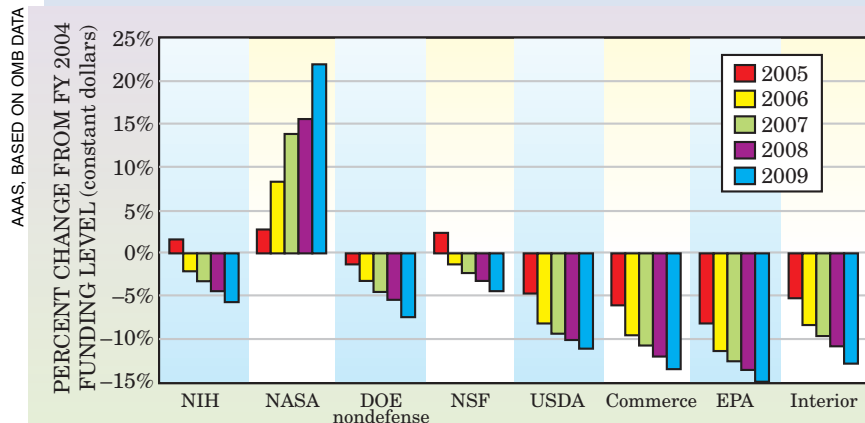
- ▶ The nondefense R&D portfolio, excluding NASA and DHS increases, would fall by 6.7%.
- ▶ Over the five-year period, National Institutes of Health funding—which was doubled between 1998 and 2003—would fall by 5.8%.
- ▶ The Office of Science R&D budget at the Department of Energy, flat for the past four years, would fall 9.5%. Intense efforts by physicist Burton Richter and other American Physical Society members over the past two years to boost that

funding were credited by Energy Secretary Spencer Abraham with “avoiding a doomsday scenario.”

- ▶ The NSF budget would see a slight boost in FY 2005, but by 2009 would fall by 4.7%.

“If you look at the AAAS research forecast,” Kelly said, “basically everything takes a knock except NASA, homeland security, and defense, and even in defense the basic research funds are under attack. There really is a legitimate concern about whether the pipeline is continuing to be filled. You have to look to the future and ask, Are we jeopardizing our leadership—not this year, but two years from now, or a decade from now?”

Jim Dawson



who, having grown so alarmed at the administration's handling of just about every aspect of science and science policy, are trying to mobilize the broader science community into a political movement.

Administration officials have responded by saying that science is flourishing and the scientists are simply wrong. The activist scientists have countered by intensifying their criticism and, recently, urging colleagues to vote for Kerry. And that, in turn, has triggered the charges of partisanship and the use of "liberal" as a dirty word by Smith and other Republicans to describe scientists.

The 48 Nobelists' signatures on the Kerry endorsement letter were gathered over 10 days by a small group of scientists including Richter, former National Institutes of Health Director and Nobel winner Harold Varmus, Nobel laureate and MIT chemist Mario Molina, Federation of American Scientists (FAS) President and former Office of Science and Technology Policy (OSTP) Deputy Director Henry Kelly, and MIT physicist and former DOE Undersecretary Ernest Moniz.

The Nobel laureates' endorsement of Kerry is one part of the movement against the administration; the other

is the recent Union of Concerned Scientists reports attacking the administration for what the UCS sees as systematic abuse of the scientific process. (The Nobelists and UCS officials are not working together, Richter said.) The first UCS report, released in February, claimed that the Bush administration had, "among other abuses, suppressed and distorted scientific analysis from federal agencies, and taken actions that have undermined the quality of scientific advisory panels." A letter supporting the UCS, signed by 62 "preeminent scientists," including 20 Nobel laureates, accompanied the report (see PHYSICS TODAY, April 2004, page 30).

Charges disputed

OSTP Director John Marburger dismissed all of the UCS allegations and issued a report to Congress disputing the charges (see PHYSICS TODAY, May 2004, page 29). On 8 July, about four months after its first report, the UCS released another one renewing and expanding its attacks on the administration. More than 4000 scientists, including dozens of Nobel laureates and National Medal of Science recipients, have signed a UCS statement of concern.

Marburger responded essentially

as he had the first time, saying the latest UCS report made "sweeping generalizations based on a patchwork of disjointed facts and accusations that reach conclusions that are wrong and misleading." He noted, as he has many times, that Bush has increased federal R&D spending by 44% since fiscal year 2001 to a record \$132 billion in the FY 2005 budget request. Richter, UCS officials, and many other scientists point out that most of that money is going into defense, particularly weapons development. With the exception of the doubling of the NIH budget, a process that began in the last two years of the Bill Clinton administration, much basic research funding—particularly for the physical sciences—has barely kept pace with inflation.

As the passions increase, the substance of the arguments is becoming almost beside the point, as evidenced by Smith's response to the July UCS report. He said the report was "funded by liberal foundations such as the Barbra Streisand Foundation," then went on to link the scientists with the singer. "Just as Barbra Streisand is a liberal activist who also happens to be a famous singer, those that have signed onto these [UCS] accusations are nothing more than liberal ac-

tivists who also happen to be famous scientists.”

For Varmus, two themes pervade the political mobilization of scientists. The first concerns “the undermining of a tradition . . . in which the government has sought nonpartisan advice to formulate policies,” Varmus said. “What we’ve applauded through a series of administrations, either Republican or Democratic, including the administration of Mr. Bush’s father, was a process in which scientific advice was sought independent of political leanings.” That isn’t happening in the current administration, he added.

The other theme, Varmus said, “is the support of Mr. Kerry, which is based both on our concern about the way in which science is being dealt with, but more importantly for a lot of us, includes the way in which this government has gone to war in Iraq, and the way in which many social and economic issues are being presented.” In this argument Varmus is going beyond the comfort level of some of his colleagues, who want to keep the discussion focused strictly on science. But for Varmus, “this election is so important for science and for the whole nation that we’ve got to be taking a stand if we have any influence over others. I feel strongly enough that I don’t care what other people think.”

Like Varmus, Kelly cites the role of science policy advice in the administration as a critical problem. “It has declined,” he said. Kelly is also concerned about the funding of science, particularly the administration’s projections for the next few years (see accompanying story on page 32). Kelly’s list goes on and includes the visa problems faced by foreign scientists trying to enter the US and the intrusion of politics into stem-cell research. “Taken together,” he said, “these are things where even the person most determined to stay out of politics is drawn in.”

Of the prominent scientists who have publicly criticized the administration, Kelly said, “for things to get bad enough for them to come out and not only make public statements but be politically active and support a political candidate, I don’t know of any precedent for it. Many of these people are active scientists who are in the middle of their careers, and this is a gutsy thing for these guys to do.”

At the center of the storm is Marburger, who has been defending an administration record that Kelly, Richter, and many others say is indefensible. “I haven’t been particularly impressed by the content of the reply,” Kelly said of Marburger’s

blanket rejection of the UCS charges.

Varmus was sympathetic to what many scientists see as Marburger’s plight. “I think he’s fighting a losing battle,” Varmus said. “He’s the guy with his finger in the dike, and his finger isn’t big enough.”

Richter was both amused and annoyed by charges from Vice President Dick Cheney’s office that of the 48

Nobel laureates who signed the Kerry endorsement letter, 16 had contributed to Democratic candidates at some point in their lives. “I observed that you didn’t have to be a Nobel laureate to figure out that 32 of them didn’t contribute to Democrats,” Richter said, “which didn’t make it sound to me like it was a very partisan group.”

Jim Dawson

Light and Color for Minority Middle Schoolers

Underrepresented middle-school children are the focus of a new optics outreach program. “It’s all about fun and exploration,” says Steve Pompea, manager of science education at the National Optical Astronomy Observatory (NOAO) in Tucson, Arizona. “We don’t even call it optics. We call it light and color.”

Hands-On Optics: Making an Impact With Light (HOO) pairs optics professionals with teachers to work with kids in informal settings such as science centers and after-school programs. The optics professionals will be volunteers culled from the memberships of the Optical Society of America (OSA) and the International Society for Optical Engineering (SPIE). The program’s other partners are NOAO, which is developing HOO’s experiments, and Mathematics, Engineering, Science Achievement (MESA), an organization with a track record of helping and inspiring underrepresented students to perform well in

math and science. In 2000–01, 74% of underrepresented students who received a bachelor’s degree in engineering in California had participated in MESA programs.

“It’s very unique to get two major professional societies working together,” says HOO principal investigator Anthony Johnson, director of the Center for Advanced Studies in Photonics Research at the University of Maryland, Baltimore County. Indeed, several years ago, OSA and SPIE made a controversial and unsuccessful attempt at merging (see *PHYSICS TODAY*, November 1999, page 63).

“We are going to go into those areas where kids don’t have access,” says Johnson. “You’ve been hearing about the 50th anniversary of *Brown v. Board of Education*—the 1954 Supreme Court decision to integrate schools—and just how separate and unequal it still is. I’ve been doing this [kind of outreach] for years, but it’s

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At a test session for Hands-On Optics experiments, sixth graders in Tucson, Arizona, arrange mirrors and lasers to learn about the law of reflection.