

WASHINGTON REPORTS

DOE's Richardson Rescinds His Budget Decree to Shut Down MIT's Bates Lab in Fiscal 2000

In an unusual and unexpected action, Energy Secretary Bill Richardson reversed his department's formal intention to close MIT's Bates Linear Accelerator Center next year. His decision was made on 1 February, within an hour after the Department of Energy's budget request to Congress came out with blunt assertions in seven different places that Bates would cease operations in fiscal 2000, which begins on 1 October. In her signed introduction to the budget volume for Congress, Martha Krebs, director of DOE's science office, put it succinctly: "The MIT/Bates Linear Accelerator Center, which has been a major world center for nuclear research for over 25 years, will end operations in FY 2000."

DOE's decision to dump the Bates lab shocked MIT officials. Robert Birgeneau, MIT's dean of science, said he had discussed Bates's future with Krebs in his office in December and was assured that, although the lab was vulnerable in a tight science budget, it was "too important" to close. According to Birgeneau, Krebs said Bates was doing outstanding science and training great students. She was optimistic that money would be found to keep it running while its new detector, the Bates Large Acceptance Spectrometer Toroid (BLAST), is completed next year by an international collaboration of about 50 physicists and that the center would continue operating until 2004 or 2005. "I thought I had a commitment from Martha," lamented Birgeneau.

Birgeneau first learned of Bates's death sentence the day DOE's budget was released. "I was flabbergasted, but I considered it my job to tell people the grim news," he recalled. "I considered wearing dour clothes for a somber occasion." But before he had a chance to meet with the scientists and staff, MIT President Charles Vest called to say that Richardson had just phoned him to explain that DOE had made a mistake. In a month or two, Richardson told Vest, the department would

amend its budget request for Bates. "Now I had joyous news to convey," Birgeneau asserted, "so I put on a pink shirt and a bright tie and went to the lab."

President Clinton's budget proposes that funding for Bates's basic research into the structure of the atomic nucleus would drop from \$10.8 million this year to \$2.5 million in fiscal 2000. The budget calls for decommissioning the accelerator lab, but Krebs told a House science subcommittee on 3 March that DOE is seeking approval from the White House Office of Management and Budget to add \$7.5 million to its request for Bates. Krebs said DOE would most likely find the additional money in other parts of the science program, not necessarily in nuclear physics. DOE is asking Congress for



BATES'S FATE IS SWITCHED: After the Department of Energy announced that the MIT accelerator lab was to be closed in 2000, Richardson (top left) called Vest (bottom right) to recall the decision.

\$342.9 million for nuclear physics in fiscal 2000, an increase of \$8.4 million, or 2.5%, over the current year.

Richardson's resolve to keep Bates open leaves DOE officials scrambling to find the money without damaging the rest of the nuclear physics program. The decision to close Bates was based on a report last September by a panel of the Nuclear Science Advisory Committee (NSAC), operated jointly by DOE and the National Science Foundation. Under the constraints imposed by a flat or nearly flat budget scenario in fiscal 2000, the panel warned, DOE would have no other choice than to support the highest priorities in the

field of intermediate-energy nuclear physics—namely, the Continuous Electron Beam Accelerator Facility at the Jefferson Laboratory in Newport News, Virginia, and the Relativistic Heavy Ion Collider at Brookhaven National Laboratory on New York's Long Island—and to scuttle the Bates lab to save money.

The panel's own conclusion followed the recommendations of NSAC's 1996 long range plan, which called for "vigorous pursuit of the scientific opportunities provided by the nation's recent investments in forefront instrumentation and facilities" and awarded the top priority to CEBAF and RHIC. The plan also proposed two new projects—an Isotope Separator On-Line, which would provide radioactive beams at higher energy levels to augment an upgraded Michigan State University facility, and the Light-Ion Spin Synchrotron, a cooler ring with 15 GeV polarized proton beams, to be built at an unspecified location.

NSAC's chairman, Claus-Konrad Gelbke of Michigan State University's cyclotron lab, said he welcomed the news that Bates will remain open a few more years. "Our decision was one of damage control," he said. "We never felt there was a scientific justification to close [Bates]." NSAC was unanimous on closing Bates if no additional money were made available in the nuclear science budget, said Gelbke. "The loss of Bates is a matter not to be taken lightly."

Over the past quarter century, the government has spent about \$95 million on the Bates center, with \$30 million of that for major upgrades during the past decade. Bates lived up to its purpose: to pioneer experimental techniques in electromagnetic nuclear physics. Its polarized beams have been used to test the Standard Model and probe the structure of nuclei. It generated data with two main detectors—SAMPLE, which studied proton magnetism and the Out-of-Plane Spectrometer (OOPS), which examined the proton's shape. A third detector, BLAST, is being built at a cost of \$4.6 million, to examine nuclear spin.



Since it opened in 1974, Bates has educated and trained 114 PhDs. Ten graduate students are currently engaged in doctoral work there.

Gelbke contended that NSAC considered shutting down Bates "a great waste, not only because of the money that had been spent to build and operate it but because of the careers that would be damaged or destroyed." DOE needs to give Congress compelling arguments to continue supporting Bates, said Gelbke. "My hope is that reason will prevail. We can't limp along for another year or two. Without additional funding of 10% above this year's nearly constant level, the country's world leadership in nuclear physics

will be jeopardized and there will be a significant sacrifice of excellent science and talent. It should not come down to robbing Peter to pay Paul."

Last January, Representative John Tierney, whose Massachusetts district embraces the town of Middleton, home to the Bates lab, which is 25 miles north of the MIT complex, and Senator Edward Kennedy of Massachusetts sent letters to DOE and OMB to stop DOE's impending decree about the lab. Richardson, who had represented New Mexico as a House Democrat, knows how persuasive his former colleagues can be at times. But DOE sources say Richardson never saw the letters. Krebs argued that Richardson acted

after learning the consequences of the closing on nuclear research and graduate education. Richardson attempted to get an opinion on Bates from Ernest Moniz, who is DOE undersecretary and Richardson's principal science adviser. But Moniz, a highly regarded nuclear scientist and former director of Bates, said he had to recuse himself from any decision because of his MIT connection.

Other DOE officials admit that they failed to recognize that the Bates closing warranted a careful reassessment. "We should have informed the secretary in December or even in early January," said one official, "when there was still time to revise the budget before it went to press." **IRWIN GOODWIN**

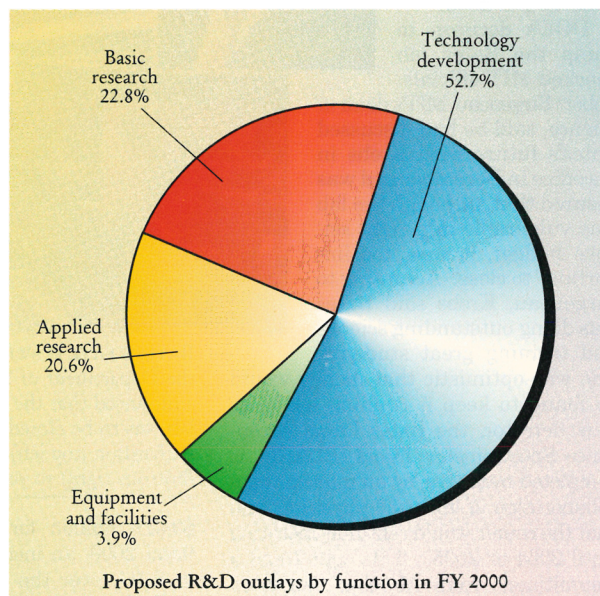
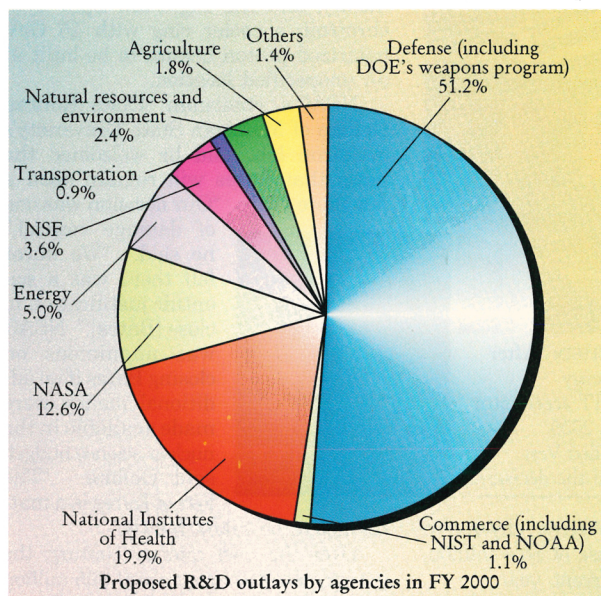
With the Snarling Over on Impeachment, Congress Focuses on Fiscal 2000 R&D Budget

With the conclusion of President Clinton's lengthy impeachment saga, Congress is getting on with its main business—legislation. Both Democrats and Republicans want to change the subject that has occupied the 106th session since its start in

January and instead work on how much to spend and where to allocate funds in fiscal 2000, which begins on 1 October. But that mutual interest only goes so far. Beyond their shared relief that the impeachment ordeal is over, there are powerful forces at work

that make it hard for the parties to reach agreement on how to apply the budget surplus to save Social Security and strengthen Medicare before deciding on how to spend whatever remains of the surprising surplus.

The President anticipates a \$117



MODEST INCREASES FOR THE NEW MILLENIUM. After boasting about expanding "investments" in science and technology at Federal agencies over the past six years, the Administration's budget request for fiscal 2000 marks the smallest increase for R&D of the Clinton Presidency. While the new budget authorizes spending \$78.2 billion for R&D, \$1 billion more than in the current fiscal year, the increase amounts to just 1.3%, which is below the expected 2% rate of inflation. But the Administration's own spending figures indicate that R&D outlays in fiscal 2000 would come to \$73.6 billion, about \$275 million above the estimated current expenditures, or just 0.5% more than this year's expected expenditures. Although spending on weapons and salaries for the military would go up, defense R&D, including the Energy Department's nuclear weapons program, would fall \$2.2 billion to \$38.5 billion, a decline of 5.3% from fiscal 1999. Even so, defense outlays would continue to amount to more than 51% of all R&D expenditures.

Basic research continues to be a high priority in the Clinton Administration. It would total \$18.2 billion, an increase of \$727 million or 4.2%, after an even higher jump of \$1.8 billion in fiscal 1999. In terms of anticipated outlays, basic research is reckoned at \$17.6 billion, of which \$16.4 billion is designated for civilian agencies. Applied research would go up 3%, to \$15.9 billion. The best news is that Federal outlays for R&D at colleges and universities would rise to \$14.4 billion, a \$708 million increase, or 5% over the current fiscal year.

IRWIN GOODWIN