

wrong target. "If they beat on Congress half as much as they are beating on NSF, the result would be a lot better for all of us," he says. By a quirk of congressional appropriations rules NSF's budget falls in the same category as housing, the Veterans Administration, and the space program, so NSF is chronically fighting against some political sacred cows. And in some cases, Congress has been sold on a science project that really isn't one.

"There's no scientific justification for the space station, that's for sure," Bloch says. "But it's in the same committee with our budget, therefore I look at it as head-to-head competition." Bloch is also skeptical about the decision to proceed with other big-ticket science projects, like the Superconducting

Super Collider and the Human Genome Project. "I'm as much in favor of the SSC as anyone else. But I would not [have] put it as a first priority in 1989, or 1988 when it was put in place. My high priority was doubling the foundation's budget first. Go focus on people first. Go focus on the infrastructure that has to be in place for an SSC to be effective," he says. He adds that the foundation is presently spending around 20% of its budget on facilities, and he would like to see that grow to 25%.

"There has to be a change in attitude which acknowledges that, by God, we cannot do everything, and therefore you have to set priorities." He believes that the amount the government spends on R&D—about \$72 billion—is reasonable. But he argues

that it should be allocated better, split evenly between civilian and military uses, and not lopsided in favor of defense as at present.

If priority setting was important 6 years ago, it is crucial now when the NSF—like all federal agencies—will face extreme pressures to curb spending. Bloch sees a hard struggle in the years ahead—harder even than the past 6 years, if the current gyrations over cutting the deficit are anything to go by. He seems glad to be stepping out of the fray, at least for now. When pressed for his parting words to the science community he had supported, confronted, cajoled, and challenged, he said with a smile, and an eye on the door, "Goodbye."

■ JOSEPH PALCA
ELIOT MARSHALL

Magnet Lab: Science to the Highest Bidder?

Last week, an old aphorism in big science grant awards—"them that has, gets"—got a new twist. "Them that has" usually means the big schools—the ones with lots of Nobelists and political muscle—while "them that hasn't" means almost any university located in the Midwest, South, or Southwest. But this time around, them that had were the administrators at Florida State University, who secured a 5-year, \$58-million commitment from their state legislature that helped them snare a \$60-million grant for the National High Magnetic Field Laboratory (NHMFL) from the National Science Foundation. And them that didn't have were officials at the Massachusetts Institute of Technology, who sought \$81 million in NSF funds to locate the facility at MIT, but who could put up only \$36.5 million themselves—and nothing at all from the state of Massachusetts.

On the face of it, NSF got a bargain: a \$118-million facility for only \$60 million, instead of a \$117.5 million facility for \$81 million. But did big money win out over scientific merit? MIT officials certainly think so. They were particularly upset because the decision overruled NSF's scientific advisory panel, which had recommended awarding the grant to MIT. And indeed, although NSF officials won't use those terms, David Sanchez, NSF's assistant director for mathematical and physical sciences, emphasized the importance of state support in the decision. "When you want to build a high-quality lab, you need the support of the institution and the state," he said. "We didn't see that [in Massachusetts]." MIT's proposed contributions to the project amounted to little more than renovation of its existing Francis Bitter National Magnet Laboratory, Sanchez said, whereas Florida State plans to construct new facilities and hire 30 new faculty members.

MIT president Paul E. Gray argues that this kind of logic plays into the hands of the public universities in boom states. Private institutions such as MIT cannot afford to match NSF grants, he says. Given an economic downturn in New England and persistent state deficits, "the thought that one might get money for such purposes from Massachusetts is ludicrous." Gray also says

he can't justify putting much of MIT's capital into a "user facility" where only 20% of the users will be MIT scientists.

But this sort of attitude may have led NSF officials to doubt MIT's commitment to the magnet laboratory. Even the scientific advisory committee that rated MIT's proposal technically superior said: "At MIT, it was difficult to sense any real enthusiasm on the part of the administration for the NHMFL on their campus. . . . MIT has stated quite clearly that it could not and would

not do the job if the budget were cut in any significant way." Henry Kolm, a retired co-founder of the Bitter laboratory, said he was saddened by the NSF decision, but added that it was "not entirely undeserved. I did my work on magnet applications despite MIT, not because of it," he says.

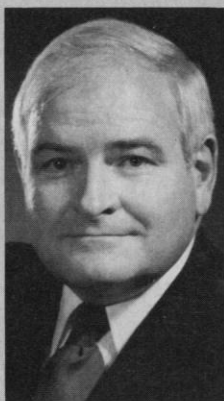
The "commitment factor" appeared to outweigh MIT's scientific advantages. Researchers at MIT's upgraded Bitter lab probably could have produced a magnet with a 45-Tesla field strength—one of the NHMFL's goals—within 5 years. Florida State, on the other hand, "has no demonstrated capability in magnet technology and no individual who could serve as a leader in a state-of-the-art magnet development program," according to the advisory committee's report, a copy of which has been obtained by *Science*. The Florida State facility, which will include the University of Florida and Los Alamos National

Laboratory as partners, "will undoubtedly require a minimum of 5 to 8 years to catch up even if it is successful."

MIT was quick to pick up this theme once NSF announced its decision. A few hours after the decision, its news office was faxing reporters a press release in which president Gray asked the NSF to "reconsider" its decision in the best interests of "America's international competitiveness."

Asked whether the NSF decision represented "science to the highest bidder," Florida State provost Gus Turnbull said it was "about time" for the southeastern United States to receive a high-quality science facility. "The people of Florida contribute a lot to the federal treasury," he pointed out. "The whole region has been shortchanged in terms of federal support."

■ DAVID P. HAMILTON



Have-not. Paul Gray asks NSF to reconsider.