RESEARCH BUDGET

Headed for a Brick Wall?

When the 1992 budget runs out on 30 September, Washington will plow head-on into a fiscal brick wall, and there could be "a lot of pain" in the science community, predicts Michael Telson, an engineer and staffer on the House budget committee. Telson, speaking at the annual American Association for the Advancement of Science R&D colloquium on 16-17 April, noted that all agencies will have to make sacrifices to comply with spending caps created by the budget rules written in the fall of 1990. The ordeal, he warned, could be tough on science and engineering programs, for they are part of the domestic discretionary budget, which the government finds easier to cut than "entitlements" such as Medicare and Medicaid.

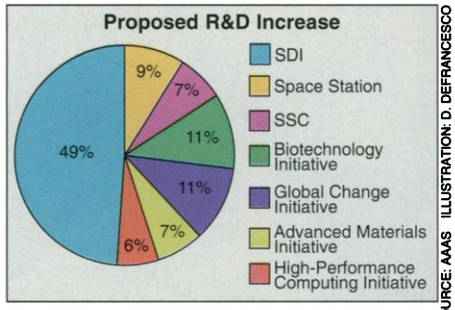
The key problem, as Telson described it during a session on "Prospects for R&D in an election year," is that even if growth in the budget were held down to the rate of inflation (3.5%), domestic spending would exceed by $6.4 billion what is permitted by the 1990 caps. They set limits in three areas: domestic, international, and defense programs. Some Democrats tried to breach the divisions between these categories earlier this year, arguing that they no longer make sense in a post-cold war world. Representative John Conyers (D–MI) and Senator James Sasser (D-TN) proposed bills to tear down the "firewalls," so that money could be shifted from Pentagon accounts to domestic programs without increasing the total amount of spending. This peace dividend would have come to about $6 billion. But the move faltered in the Senate on 26 March, and collapsed (by a vote of 238-187) in the House on 31 March.

This outcome means that there will be no letup in the pressure to cut domestic programs. To stay within the caps, Telson calculates, all domestic programs would have to be cut by 1.3%. The alternative to imposing a mass sacrifice like this would be to cut selected programs severely to permit growth in others.

That's what President Bush proposed in the budget he sent Congress last January, which provided for growth in R&D by cutting back programs such as support for low-income housing. Congress is expected to balk at these cuts, however, and it is unlikely to go along with the Administration's priorities within R&D itself. For example, according to an analysis by AAAS, the Administration would give the largest share of increased R&D funding—almost half the "new money"—to the Strategic Defense Initiative (see chart). Next in priority after SDI on the president's list are biotechnology and global change research (each getting 11% of the new money), and the space station (with 9%).

"We are about to see a gigantic game of musical chairs" in which programs vie for inclusion in the 1993 budget, Telson said. "When the music stops, there won't be enough chairs to go around." Both Telson and Steven Palmer, a senior staffer on the Senate Commerce, Science, and Transportation committee, agreed that it's going to be a "wild" and "ugly" scene.

Two projects within the R&D budget stand out as the most vulnerable: the space station and the Superconducting Super Collider (SSC). President Bush wants $2.25 billion next year for the station and $650 million for the SSC, large requests that will surely draw flak in Congress. At this point, however, it's very difficult to predict what will happen to them, Telson said. Both projects have strong political supporters as well as detractors. And John Holmfeld, executive director of the Council of Scientific Society Presidents, says he detects no enthusiasm in the community to "bloody ourselves" as some did last year in a failed attempt to stop the station. But the competition will be keen.



SOURCE: AAAS ILLUSTRATION: D. DEFRANCESCO

One man's meat. SDI would get most "new money" in the president's R&D budget.

Senator Barbara Mikulski (D–MD), chair of the appropriations subcommittee that handles the space program, the National Science Foundation (NSF), housing programs, and veterans affairs, has already sounded a warning. On 24 March, she said, "I will tell you, if the firewalls do not come down, we might have to shrink or even cancel the space station." She added that it might be necessary to "eliminate as many as 2000 grants" from the NSF budget. Was this merely an attention-seeking threat? Perhaps, but she is not alone in warning of dire consequences for the R&D budget. Senator Bennett Johnston (D–LA), chair of the energy appropriations subcommittee, said on 25 March that, "We have to have a substantial increase in the Superconducting Super Collider. But I am frank to say right now I do not know where the money is coming from."

The pressures of the election year and the extremely tight limits on spending may make Congress skittish about increasing funds for R&D in 1993. And Telson warned that it will require "extraordinary arguments and extraordinary efforts" by the scientific community to persuade Congress that such increases are needed.

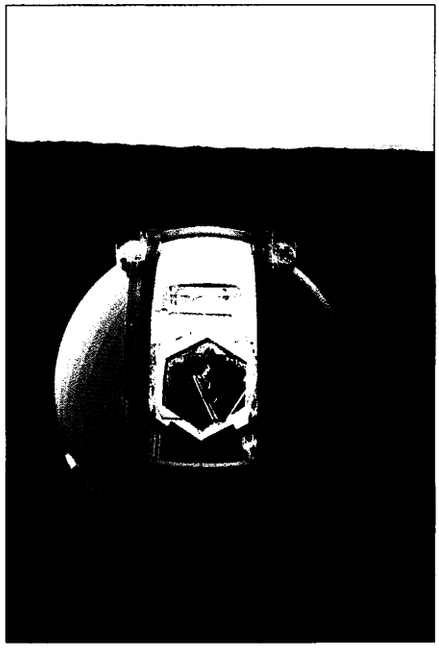
–Eliot Marshall

KECK TELESCOPE

Last Piece of Jigsaw in Place

Last week, the giant Keck telescope was formally completed atop Mauna Kea, Hawaii, when the last segment of the instrument's mirror was gently lowered into place. The 10-meter primary mirror—twice the diameter of the Hale Telescope on Mt. Palomar, currently the largest fully functioning telescope in the world—consists of 36 hexagonal glass segments nestled together to form a single smooth surface. The $94 million instrument will be tested over the next several months and is scheduled to be in full operation early next year. "This is really the completion of the project," says project manager Jerry Smith, who has been overseeing the construction. As an encore, Smith will manage construction of a twin 10-meter telescope, Keck II, a few hundred feet away. A start will be made on Keck II this spring and it is scheduled to be completed in 1996. The Los Angeles-based W.M. Keck Foundation provided grants of $70 million and $74.6 million respectively for the telescopes, which will be operated jointly by the University of California and Caltech.

–C.N.



Eye on the sky. Aerial shot of the world's largest telescope.