SCIENCE FUNDING

Gain for Space Station; Pain for NSF

Space station advocates were delighted last week when Congress gave decisive support to the $40 billion project, but there was no cheering in the basic research community. The same bill that boosted the station seems to rule out any increased funding for investigator-initiated research at the National Science Foundation (NSF) in 1993. In fact, NSF's budget is likely to be shunted into a holding pattern for at least a year. And to make matters even worse, if instructions handed down by a Senate committee are carried out, NSF may be asked to promote education and "economic competitiveness" projects at the expense of basic science.

That analysis comes from NSF's congressional experts after a quick review of a bill that cleared the Senate Appropriations Committee on 31 July. The legislation provides funding for all the independent agencies, including NSF, the National Aeronautics and Space Administration (NASA), the Environmental Protection Agency, the Veterans Administration, and the Department of Housing and Urban Development. The House passed its version of the bill on 30 July, and with surprising speed, the Senate appropriations committee decided to take up its own bill the next day. Both bills aim for roughly the same targets in 1993: a modest decrease for NASA from $14.3 billion to around $14.1 billion, and a flat budget for NSF, inching up from $2.6 billion to $2.7 billion, which means the agency may not quite keep up with inflation.

While NASA may be relieved to get its space station, NSF is feeling let down. In fact, the NSF got so little attention during the debate that it bothered the manager of the House bill. Robert Traxler (D–MI), chairman of the House appropriations subcommittee on independent agencies, said "my door got kicked in" by "demands that we fund the station." But he was "saddened" that "I did not get a whimper of protest from anyone that the NSF was held to zero growth." Traxler, who will retire at the end of the year, concluded that "we are hurting science" and "damaging our higher education institutions" with this year's pinched budget.

Pinched though it may be, this package is not likely to get much fatter between now and the election. It could clear the Senate as early as this week; some version of it will emerge from a congressional conference in the fall. It is too early to predict what the final bill will look like, but even at this early stage, NSF staffers are wondering how they will avoid cutbacks in basic research.

NSF is caught in a vise. On one hand, the agency has been told it cannot exceed a budget for research and related activities of about $1.86 billion (compared with $1.88 billion last year—far less than the $2.21 billion NSF sought.) At the same time, NSF is being told to increase funding for other, applied projects. For example, the Senate appropriations committee wants NSF to retain funding for the national computer network, for an electronic "testbed" that would allow nonacademic users access to supercomputers, for an "industry-oriented" plan for new "environmental technologies," for an "industry-led institute" that would investigate "agile manufacturing techniques," and so on.

But while NSF will have to trim, NASA will make big sacrifices. NASA will not get the $2.25 billion it sought for the station; the House is offering only $1.73 billion, and the Senate bill, just a little more—$2.1 billion. A group of adversaries led by Senator Dale Bumpers (D–AR) will try again to kill the station during the Senate debate, but their chances are slight. Since NASA chief Daniel Goldin revealed that he would be satisfied if NASA received as little as $1.9 billion for the station, that is probably what NASA will get. However, this low figure may force NASA to restructure the program again.

To finance the station, NASA is being asked to make cuts elsewhere. One big surprise is that the House went against the wishes of its powerful appropriations committee chairman, Jamie Whitten (D–MS), and voted to kill a NASA item worth $350 million in his home district this year—the Advanced Solid Rocket Motor project (*Science*, 14 April 1989, p.135). Although these new rockets were intended to make the shuttle safer and more powerful, many reviewers have said they are not necessary. Other NASA projects that are likely to be cut or dropped are the search for extraterrestrial intelligence (SETI), R&D for the national aerospace plane, and the attempt to develop an "advanced launch system." NASA will have to cut funding of science programs, too, although the specifics aren't clear yet. Even though both the Senate and House did back one basic-research project NASA didn't even ask for—the Gravity Probe B experiment to test Einstein's theory of general relativity—the overall message from Congress this year seems to be that basic science is in for some belt tightening.

–Eliot Marshall

SUPERCONDUCTING SUPER COLLIDER

Senate Issues a Stay of Execution

In the latest sign that the fortunes of the troubled Superconducting Super Collider (SSC) are on the rise, the Senate last Monday voted 62 to 32 to restore $550 million for the project, a month and a half after the House of Representatives voted overwhelmingly to kill the project (*Science*, 26 June, p. 1752).

The resounding Senate support for the project—the winning margin was five votes larger than when the Senate considered a similar measure last year, at a time when the SSC seemed far less threatened—gives supporters of the $8.25 billion proton accelerator a big boost going into a House-Senate conference committee later this summer. While no one is confident enough to make hard predictions about the outcome of that conference, House aides admit that opposition to the SSC in the House is soft, and they note that the majority of the House members on the conference committee are strong supporters of the SSC.

Both sides in the Senate debate credit a tough lobbying effort by SSC supporters and the White House for the lopsided margin. Shortly after the House vote, a coalition of senators from Texas and Louisiana—notably Bennett Johnston (D–LA), Lloyd Bentsen (D–TX), and Phil Gramm (R–TX)—launched a campaign to "educate" other senators about the SSC's scientific importance. Johnston, who chairs the Senate Energy Committee, personally invited senators to attend a hearing last month at which several scientific luminaries testified in favor of the SSC. Later, a coalition of supporters from industry and academia called the National Association for the Superconducting Super Collider arranged for what they say were nearly 100 physicists to visit senators and their staffers. Among the procession were Nobel Prize–winning physicist Jerome Friedman of the Massachusetts Institute of Technology and cosmologist George Smoot of the University of California, Berkeley, who led the team that recently detected "bumps" in the cosmic microwave background.

These efforts clearly paid off—not only in the size of the winning margin, but also in changing the terms of debate. Unlike House opponents of the SSC, who ridiculed the accelerator at every opportunity (Ohio Democrat Dennis Eckart said "the only things colliding in the land under Texas will be taxpayer dollars"), the project's Senate critics tended to acknowledge its scientific merit. That admission, however, limited them to attacking the SSC for its expense, which proved a less powerful argument than it had been during the House debate, when a recently defeated balanced budget amendment had focused public attention on the budget deficit. Now that unemployment is the topic of the day, many legislators found it easiest to vote in favor of what they considered an important scientific project that has the virtue of looking like a public works project as well.

–David P. Hamilton