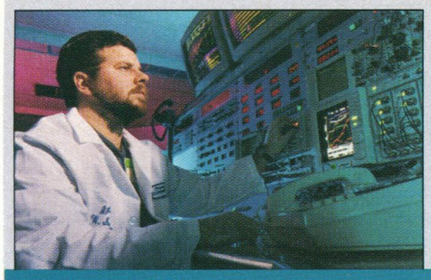


ARGONNE

Intense Pulsed Neutron Source
Argonne National Laboratory

Built: 1981
Upgrade Cost: $450 million

Intense Pulsed Neutron Source (IPNS) to almost half a megawatt—but at a cost of $450 million. The advisory panel charged by Krebs with examining the upgrade options rejected the high price tag, and Krebs concurred. "We feel we're being left out," says Bruce Brown, IPNS director, adding that the lab's proposal is the least expensive upgrade that is worth the money. While other lab researchers give IPNS officials high marks for squeezing a lot of science in recent years from a relatively weak source, they say Argonne's proposal ignored fiscal realities.

In the wake of Argonne's aborted proposal, DOE officials are said to be considering closing IPNS to help cover the costs of upgrades at other labs. "It certainly is a target," says Steve Shapiro, a Brookhaven physicist and treasurer of the Neutron Scattering Society (NSS). Dehmer and Thomas decline to discuss IPNS's future, but one lab official predicts the facility will be closed by 2000, as LANSCE comes on line.

Poor politicking

The need to make such hard choices grates on some neutron researchers. In March Sam Werner, a University of Missouri, Columbia, physicist and then-president of the 700-member NSS, wrote lawmakers about his "deep concern and frustration with DOE's stewardship of facilities for neutron research in the United States." Despite a quarter century of pleas by the labs, Werner complained, there has been "no real support from the DOE" to build new facilities.

The letter outraged members of the NSS's executive committee, who did not approve it before it was sent and feared it would damage the already strained relations between DOE and neutron scientists. Under pressure from the committee, Werner assured Krebs a month later that he wants a "constructive partnership with DOE." NSS members say a senior Argonne official angered by the rejection of the IPNS upgrade drafted Werner's first letter, which they characterized as a case of sour grapes. Neither Werner nor the Argonne official could be reached for comment.

Although the blowup has subsided, the incident underscores the continuing bitterness and angst within the community. "Things are spiraling down, and DOE has to show some leadership," says NIST's Rush. "They have dropped the ball." Dehmer, however, says the anger directed at DOE really stems from the community's unhappiness over the ANS termination. But she detects a change in the past few months. "I have the sense the community is willing to come together to do what's best, although it may not be what they hoped for," she says.

Others say it is too soon to predict an end to the rivalries. But Dehmer says the penalty for disunity will be stiff. "If they don't speak in the same voice and make realistic plans, neutron science won't go anywhere," she says. In other words, when it comes to showing respect, the U.S. neutron community may need to teach by example.

–Andrew Lawler

SPACE STATION

Construction Costs May Bite Into Science

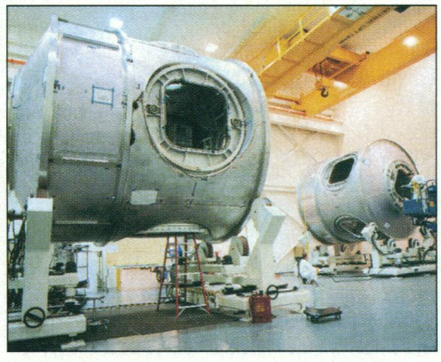
NASA space station officials are planning to divert money set aside for scientific facilities aboard the orbiting laboratory to pay for engineering problems that have surfaced in its construction. The move would likely delay research planned for the station, which will be launched in pieces starting in November 1997. It also worries researchers already concerned about the agency's commitment to science aboard the station.

"Obviously this is of great concern, and it shows a sad state of affairs," says Claude Canizares, the Massachusetts Institute of Technology astrophysicist who chairs the National Research Council's Space Studies Board. NASA officials insist that they will try to limit the proposed funding shift to protect science, and add that the transfer won't affect the station's eventual scientific payoff.

The problem for agency managers is an inflexible $2.1 billion cap on annual spending and a tight assembly schedule. But expensive changes to the first of two nodes, or small modules, are forcing managers to cast a hungry eye on the $280 million a year allocated to design and build seven major science facilities, including a centrifuge, a furnace, and a biological research center. The first node is slated for a December 1997 launch, but testing has raised questions about its structural integrity. To strengthen it, engineers are adding braces at either end. That change and other smaller problems have added to the station's cost.

"They have a cash-flow problem because of the node overruns," says one congressional staffer. "Either they slip the schedule or move the money." How much would be transferred is not yet decided, NASA sources say.

The effort to dip into the science money comes as no surprise to Canizares. "Our cynicism is well-honed," he says. Canizares and other agency advisers complained this spring when NASA headquarters ceded control of the space station budget to Johnson Space Center in Houston (*Science*, 26 April, p. 478). They feared Johnson's focus on engineering would endanger the science money. Canizares says he is nevertheless distressed by NASA's most recent move, as NASA Administrator Daniel Goldin assured him this spring the science budget would be protected. A NASA official said other savings may be found in Johnson's budget or from contractors.



BOEING

Costly connection. NASA may tap science to meet higher costs of building one of the station's connecting nodes.

NASA is moving swiftly to win congressional support. The first step is winning Senate approval in September. The final amount will be worked out later when the House and Senate hammer out a conference agreement on the agency's 1997 spending plan.

The funding transfer could force NASA to postpone shuttle flights dedicated to shipping scientific equipment and experiments to the station, because the payloads may not be ready in time. One agency manager says the agency is exploring ways to provide researchers with additional flights on the shuttle, the Russian Mir station, and on free-flying satellites to make up for the delay. But it is unclear where funding for these flights would come from.

Arnauld Nicogossian, acting chief of NASA's life and microgravity research and applications office, insists that the transfer is not a done deal. "No one is taking any money at this point," he says. "We're working the budget with the space-flight office." And he says his office this year intends to expand to 680 the pool of researchers who conduct space experiments—and who are funded from another account. But those assurances may not be enough to calm skittish researchers.

–Andrew Lawler