U.S. SPACE SCIENCE

Pace of NASA Change Worries Advisers

Civility is in short supply these days at the National Aeronautics and Space Administration (NASA), as agency officials engage in a frantic attempt to slash budgets, reduce personnel, and radically revamp the space program. Last week, outside advisers to the agency's $2 billion space science program got a taste of the sour atmosphere when they complained they have been left out of the loop in planning NASA's future. Comptroller Malcolm Peterson snapped: "This is not a discussion about you. This is an internal agency discussion." It could have been worse—a fistfight broke out last week between two senior NASA officials in the agency's fitness center.

It's not surprising that passions are running high. NASA Administrator Dan Goldin wants to put a plan in place by this fall that will result in major reductions in the agency's sprawling network of labs and centers, and a team of agency officials has proposed shutting down science efforts at several NASA facilities (*Science*, 3 March, p. 1259). These proposals are generating serious internal opposition. NASA chief scientist France Cordova, for example, has drafted a memorandum rejecting the claim that there is scientific duplication between NASA facilities and arguing that "nearly all the centers should have a research core." Next week she heads for California on the first leg of a campaign to find plausible alternatives to Goldin's plan that will also save money.

Cutting costs will be essential. Wes Huntress, associate administrator for space science, forecasts a drop in his budget from almost $2 billion in 1995 to $1.5 billion in 2000. Others predict the decrease will be even more dramatic. The completion and launch of the Saturn-bound Cassini probe in 1997 and the Advanced X-ray Astrophysics Facility in 1998 will make room for a few new starts, but they will be modest spacecraft. Two high priorities in the 1996 budget, the Stratospheric Observatory for Infrared Astronomy and the Space Infrared Telescope Facility, are in danger, warns Representative James Sensenbrenner (R–WI), who chairs the House Science space subcommittee. The crunch has already forced Huntress to scale back the Far Ultraviolet Spectroscopic Explorer mission, from a $300 million to a $100 million effort, and put on indefinite hold probes to orbit the sun and Pluto.

"This process [of downsizing NASA] is like an incredibly fast bullet train," Cordova warned the advisory panel last week. And many in the space science community feel they're being left behind. Anneila Sargent, an astronomer at the California Institute of Technology who chairs the panel, says, "There's a feeling there hasn't been enough input from the university community."

Cordova's trip to California is an attempt to sound out the academic community. It includes discussions with Stanford University and University of California officials of ways to turn the Ames Research Center, now a NASA-run facility, into a nonprofit science institute. She is also looking at turning over to private industry some operations and data distribution performed at Goddard Space Flight Center in Maryland, where half of NASA's approximately 2000 contractor and civil-service scientists work. And she suggests Columbia University could run New York's Goddard Institute for Space Studies.

Cordova hopes that contracting to private organizations could save money, protect expertise, and help to preserve the agency's science programs. "The main challenge is to make sure we have a viable science effort at the end of the day," she said.

The tension at NASA headquarters is likely to intensify as competition for funds grows more fierce. But advisory panel members warned against an outbreak of internecine warfare. "We should come together as a community," pleaded Sargent. "Otherwise it will look like we're a bunch of squabbling children." Adds Glenn Mason, physics and astronomy professor at the University of Maryland: "If the science community starts attacking each other, it is going to be even more perilous."

–Andrew Lawler

FRENCH BIOMEDICINE

A $51 Million Incentive to Cooperate

PARIS—French biomedical researchers breathed a sigh of relief last week when research minister François Fillon unveiled a plan to coordinate research efforts in the life sciences. Fillon announced that over the next 2 years, the research ministry will spend $51 million to encourage research in 14 areas chosen for "concerted action." Each area will have its own scientific committee, appointed by the research ministry, which will invite grant proposals and decide which laboratories and institutions get the money. The result, says Fillon, will be a "light structure of coordination" of the numerous public bodies involved in life sciences research, particularly the CNRS basic research agency and the biomedical research agency, INSERM.

Biomedical researchers had feared something far more sweeping, for Fillon had earlier toyed with the idea of creating a new superagency within his ministry to oversee all of France's life sciences research. Although most agree that biomedical research has suffered from duplication and lack of coordination, there was concern that a new layer of bureaucracy within the research ministry would simply complicate the situation. But rather than a heavy-handed top-down approach to the running of France's research agencies, Fillon has opted for "incentives" to steer scientists into doing research the ministry deems important. The 14 specific research areas fall into seven general "thematic fields": genetics; biology of development, reproduction, and aging; structural and pharmacochemical biology; environmental sciences; mechanisms of physiopathology; use of computers in biology; and biotechnology.

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Light touch. Science minister François Fillon.

Although they are relieved, some French scientists argue that Fillon's reforms aim at the wrong target: The problems facing French biology, they say, are due more to lack of money than to lack of coordination. "There has been no real overall increase in the research budget this year," says Pierre Chambon, head of the new Institute of Genetics and Cellular and Molecular Biology in the Strasbourg suburb of Illkirch. And one leading French researcher, who asked not to be identified, says that "usually if the laboratories aren't busy in a particular area, it's because they don't have enough money."

But André Capron, director of the Pasteur Institute of Lille, says that Fillon's plan may provide an important stimulus to research areas in need of a boost. "It's sometimes necessary to make what may be seen as a modest investment, [which then] becomes the point around which crystals grow," Capron says. And Chambon, whose recently opened institute gets 60% of its funds from industry or private charities, says he is "definitely interested" in applying for grants under the new program. "We desperately need money," he says. "It's bad to be so dependent on nonpublic sources for basic research."

–Michael Balter