

## Will Goldin Wave Bye-Bye to Pluto Flyby?

Pluto, the only planet in our solar system not yet visited by a spacecraft from Earth, may remain cloaked in mystery longer than National Aeronautics and Space Administration (NASA) scientists had hoped. A NASA mission to the remotest planet, proposed for launch in 2000, may be delayed in NASA Administrator Dan Goldin's "smaller, cheaper, faster" space agency.

Ironically, Goldin has publicly lauded the "Pluto Flyby"—two small spacecraft to arrive at Pluto and its moon, Charon, around

2007—as the type of project fit for the agency's new image. NASA staffers at the Jet Propulsion Laboratory (JPL) hope to establish a permanent footing for it in the agency's budget planning next year. But at a routine meeting of mission scientists in August, Goldin threatened to quash the project unless its \$1.3 billion price tag—including launch costs—shrank dramatically (he didn't say by how much).

Now, a top NASA official told *Science*, the word is out that Goldin will consider funding Flyby only if it costs around \$500 million.

Goldin's gauntlet has left JPL scientists searching frantically for

ways to trim projected expenses. "We've found lots of ways to bring the cost down," says Stacy Weinstein, a JPL engineer in charge of mission design. Her team quickly found savings by changing the launch vehicle from a Titan 4 rocket (two rocket launches would cost at least \$500 million) to a much cheaper ride on the shuttle or a Russian Proton rocket. JPL also may try to cut costs by wooing foreign collaborators and reducing the size of the spacecraft.

So far, JPL scientists have reduced the price tag to about \$1 billion. They have about 18 months to cut \$500 million more before Goldin must decide whether to request full funding for Flyby in the 1996 budget.

## Congress Gunning for Science Cuts

A budget-cutting wave now sweeping Congress could wipe out more than \$2 billion in science funding. A bipartisan group led by Representatives Timothy Penny (D-MN) and John Kasich (R-OH) has proposed a bevy of cuts and consolidations—many aimed at science agencies. The House may pass most of the items next week, but few of them are expected to survive the Senate.

Some proposals truly would change the face of science. One would consolidate the Department of Commerce, the Department of Energy (DOE), the Environmental Protection Agency, the National Aeronautics and Space Administration (NASA), the National Science Foundation, and the Office of Science and Technology Policy into a single Department of Science (5-year savings: \$500 million). Other proposed cuts include: reducing fusion R&D by 20% (\$375 million over 5 years) and a 50% cap on university research overhead (\$1 billion over 5 years). The package would also establish a commission to consolidate some of DOE's national labs. Lawmakers will consider these ideas along with a slate of proposed cuts to the 1994 budget—called rescissions—offered by President Clinton last week.

Other legislation threatens the space station. Representative Barney Frank (D-MA) intends to offer a station-killing amendment to the rescission package that's likely to come up for a vote on 19 November; staffers say the project's survival isn't assured. Extra heat may come from a disgruntled private sector. With the station in flux as NASA merges its plans with the Russian space program, some U.S. aerospace contractors have been told their services will no longer be needed. Project backers are concerned not only that these contractors may cease lobbying for the station, but that they may even oppose it in the hopes of freeing up money for new projects they can bid for.

## Congress Warms To Varmus

It's been 3 months (close to 2400 hours, if you're counting) since the Clinton Administration chose Harold Varmus, a virologist at the University of California, San Francisco, to be director of the National Institutes of Health (NIH) (*Science*, 13 August, p. 820). Now, the Senate is ready at last to send his nomination to the floor and probably to approve it by Thanksgiving, predicts Senator Ted Kennedy (D-MA),

chair of the Senate Labor and Human Resources Committee.

Varmus himself appeared before Kennedy's committee last week for his confirmation hearing. It turned into an hour-long love fest, with two Californians—Senator Barbara Boxer and Representative Nancy Pelosi—extolling Varmus' accomplishments and Kennedy calling him an "outstanding" nominee.

Varmus previewed some of his plans. He said he seeks "more authority to make appointments,"

and wants to pay salaries "commensurate" with those of academia. The internal research program, Varmus said, faces scrutiny and perhaps an overhaul, while external grant review also needs sprucing up. He offered no details, nor did legislators ask for any.

Varmus wrapped up the hearing with his first job decision: He has chosen Ruth Kirchstein, a 20-year NIH veteran who until recently was director of the National Institute of General Medical Sciences, to be his deputy.

## The Hazards of Frequent Flying

Do female flight attendants have a high risk of miscarriage? Do their babies suffer more birth defects than other babies? A research team at the National Institute for Occupational Safety and Health (NIOSH) hopes to answer these questions with a study to start next summer.

For years, airline personnel and scientific journals have buzzed with anecdotal accounts of reproductive problems among attendants. In these accounts, airplane cabins are stalked by several potential villains, including high levels of cosmic radiation, ozone, and even air-pressure fluctuations. However, the few studies to explore these leads have yielded only equivocal results and, "for the most part, weren't well done," asserts NIOSH epidemiologist Barbara Grajewski.

That was how things stood until 1987, when the Federal Aviation Administration (FAA) asked NIOSH to give the problem a look-see. NIOSH scientists concluded that the two most important risks for flight attendants appeared to be cosmic radiation—which exceeded limits recommended during pregnancy for one-third of crew members in an FAA-sponsored study in 1992—and disruption of circadian rhythms.

More recently, NIOSH has been planning a 2000-woman study and wrangling over nuts-and-bolts questions, such as how to get attendants to collect and transport urine, says Grajewski. "This is pioneering methodology, tracking a woman over her menstrual cycle," she says. NIOSH will do a feasibility test before starting the \$10 million project.



**Airsick?** NIOSH plans study of risks to female flight attendants.