Other Highlights From the Budget

Jupiter Is a Blue State, Mars Is Red
The timing could not be more ironic. Just as a joint U.S.-European spacecraft is making exciting and front-page discoveries from distant Saturn, the White House proposes a budget that could scrub the agency’s only major mission planned for the outer solar system. Another victim is an earth science flight to study aerosols, and several other longer-term projects, from planet finders to dark-energy seekers, would be put on hold.

The strains placed on NASA by the Columbia failure and U.S. President George W. Bush’s new exploration vision are evident in the request, which includes only half the increase the White House had promised last year for 2006. Ongoing NASA Administrator Sean O’Keefe says the request would have been far worse without the exploration plan Bush laid out last January: “It’s rather remarkable, given the circumstances.”

The request would not cut any ongoing science programs, says science chief Al Diaz, whose budget would stay relatively flat. But a host of missions still in the early stages of planning would be delayed, some indefinitely. The most dramatic impact would be on the Jupiter Icy Moons Orbiter (JIMO), an elaborate and expensive mission that would harness nuclear electric technology to provide unprecedented access to Europa and the giant planet’s other moons. The technology made JIMO “a high-risk venture,” says Craig Steidle, NASA exploration chief. Technology funding for the mission would be slashed from $432 million to $320 million, and JIMO would be delayed at least until 2018—6 years later than NASA officials had projected just a year ago.

Instead, Diaz said NASA would reconsider a simpler mission to Europa that was canceled in 2002. Diaz says it may be included in a revamped science strategy this summer.

The request contains bad news for scientists working in other fields. The launch date for the Kepler mission, designed to search for extrasolar planets, has slipped from 2007 to “to be determined,” according to NASA documents. The Dawn project, which would visit the asteroid belt, would be downsized and delayed. And the 2007 flight of the Glory satellite, which would measure atmospheric aerosols, would be abandoned, although some of its instruments might be used on other spacecraft. Technical challenges will delay the Space Interferometry Mission, planned for launch in the next decade to search for Earth-sized planets. And the Beyond Einstein program, which would launch a series of spacecraft to test Einstein’s theories (p. 869), remains a dream.

Ocean Research Budget Ebbs
Ocean policy is hot, but advocates say that President George W. Bush’s proposed budget is tepid when it comes to addressing the needs of the nation’s troubled waters. A 10% cut in the $580 million research budget for the National Oceanic and Atmospheric Administration (NOAA), the government’s key ocean research and protection agency, “provides a rather distressing signal about the level of commitment [to the oceans],” says Ted Morton, federal policy director for a Washington, D.C.-based advocacy group called Oceana.

Not so, says NOAA Deputy Administrator James Mahoney. The 2005 figure was inflated by legislative earmarks, he says. A more accurate measure of the Administration’s commitment, he argues, is that the president requested 7% more for NOAA than he asked for last year.

Last fall a presidential commission urged the White House to devote more attention to the Great Lakes and coastal and marine resources and said $1.5 billion was needed to jump-start a successful national ocean program. Three months later, the president’s U.S. Action Ocean Plan established a Cabinet-level, interagency task force on oceans (Science, 24 December 2004, p. 2171). The 2006 request is the next step, says Mahoney.

While some NOAA programs are being squeezed, a few efforts tied to marine research are getting boosts. The agency has requested $38.5 million for a new fisheries survey vessel, $1.5 million more for the $25 million coral reef program, and $10 million for an expanded tsunami warning system (Science, 21 January, p. 331). In a surprise move, the White House submitted a level budget for Sea Grant, which supports marine and Great Lakes research and education in coastal states. The program historically has relied on Congress to keep it healthy.

—Elizabeth Pennisi

and the author of Powerful Medicines: The Benefits, Risks, and Costs of Prescription Drugs. But any changes, he says, also require a new “culture of openness.”

Homeland Security: The department wants $227 million for a new Domestic Nuclear Detection Office to sniff out attempts to bring bombs into the country. Several federal agencies will contribute staffers to the new office, which President Bush mentioned in last month’s State of the Union address.

Defense: Although the Pentagon’s basic research account would slump by 13%, officials hope to scale up a pilot scholarship program to attract more U.S. citizens into government defense jobs. The first 25 awards in the Science, Mathematics, and Research for Transformation program are due to be announced this spring, and the 2006 request would allow for up to 100 2-year undergraduate and graduate scholarships in 15 disciplines.

Graduates must return the favor by working for the department. But Michael Corradini, a mechanical engineer at the University of Wisconsin, Madison, worries that the requirement could scare off potential applicants. He suggests instead that graduates should be required to do a summer internship in the department.

“If students have a meaningful experience during the internships,” he says, “they might be inclined to pursue a DOD career.”

The $2.5 trillion proposed budget now goes to Congress, which will tinker with the president’s priorities and add in its own. That means the fate of these and other research programs, although traditionally nonpartisan, will be shaped by larger forces—from Social Security to tax policy—stirring the political waters.

—Jeffrey Mervis

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