

materials and conditions that formed the rocky inner planets of the solar system more than four billion years ago. "These asteroids are the fossils of our own solar origins," he says.

MUSES-C will hang around the asteroid for two months, making three landings to drop off a sample-collecting robotic rover built by NASA's Jet Propulsion Laboratory. The rover, weigh-

ing only 1 kg, will be the smallest ever deployed in space, says Jürgen Rahe, head of NASA's solar system exploration program. If all goes according to plan, a reentry capsule laden with samples will parachute to Earth in January 2006.

A cooperative agreement on MUSES-C was signed on 2 May by Atsuhiko Nishida, director general of ISAS, and Wesley Huntress Jr, NASA's

associate administrator for space science. The asteroid rover is a direct descendant of the technology used to build the Sojourner rover that is due to touch down on Mars with the Mars Pathfinder lander on 4 July. The rover for MUSES-C will carry two scientific instruments—a visible imaging camera and a near-infrared point spectrometer.

WASHINGTON DISPATCHES

► **Science at a Price** Since the Clinton Administration's budget request for fiscal 1998 was released last February, leaders of nearly four dozen scientific and engineering societies, as well as some key members of Congress, have issued calls for more funds for R&D programs in nondefense government agencies. Federal funding for such programs, amounting to \$33 billion in proposed outlays next year, has fallen more than 3% in "real" (inflation-adjusted) dollars since 1994. And the bipartisan agreement reached last month by President Clinton and Republican leaders in Congress appears even grimmer for the next four or five years, with a 14% decline scheduled in the protracted effort to eliminate the federal deficit by 2002. Indeed, in the budget category for General Science, Space and Technology, which includes funding for the National Science Foundation, NASA and basic science in the Department of Energy, the budget resolution would authorize a decline from \$16.2 billion next year to \$15.6 billion in 2002 in "as spent" dollars and even more, to be sure, when inflation gnaws away at purchasing power.

So when Franklin Raines, Clinton's budget director, spoke to the President's Committee of Advisers on Science and Technology (PCAST) on 9 June, he delivered some powerful words in a soft voice. Spending for most discretionary programs, which includes all scientific research, will be "very tight," with increases roughly equal to inflation, which has been reckoned at between 2.5% and 3% in the last two years. "But half of the programs will have real declines," said Raines, who came to the Office of Management and Budget at the start of Clinton's second term from the vice chairmanship of the Federal National Mortgage Association, better known as Fannie Mae.

As for those scientists who call for larger allocations for research, Raines said: "The more there is an appeal for more money, the more there is reason to ask, Where should the dollars go?" The country's corporate community has to make funding decisions five to ten years ahead, he observed. "Government needs to make choices about funding discoveries and increases in knowledge." A wish list for research programs among competing scientific constituencies is not helpful, he indicated. What is needed is a fundamental reordering of government priorities and policies for research to meet the fiscal realities. Raines then asked: "How do we get the scientific disciplines together to work out the choices and priorities? Any ideas you might have will be welcome." PCAST members didn't come up with any answers then and there.

► **Juries of Peers** Science is usually portrayed as a noble, inviolate enterprise. To support the concept, scientists point to the peer review procedure—the scientific version of the judicial system's impartial jury of peers. But a paper published in the 22 May issue of *Nature* casts doubt on the peer-review system as the impeccable guardian of scientific integrity. In examining the peer-review operations of the Swedish Medical Research Council, one of the main funding

agencies for biomedical research in Sweden, Christine Wennerås and Agnes Wold, both microbiologists at Göteborg University, found that the success rate of female scientists applying for postdoctoral fellowships in the last six years was less than half that of their male counterparts. The reviewers persisted in overestimating male achievements and underestimating female performance, as shown by multiple-regression analysis, the authors stated. In conducting their study, they were first refused access to peer-review evaluation scores and resorted to legal action to obtain the records. The scores revealed that the peer reviewers "deemed women applicants to be particularly deficient in scientific competence." But when the authors examined the *Journal Citation Reports*, they found women to be virtually equal in productivity and creativity. Their conclusion: "One must recognize that scientists are no less immune than other human beings to the effects of prejudice and comradeship. The development of peer-review systems with some built-in resistance to the weaknesses of human nature is therefore of high priority. If this is not done, a large pool of promising talent will be wasted."

► **Lobbying for R&D Tax Credits** More than a thousand US companies and two dozen trade associations have endorsed a letter to President Clinton and prominent members of Congress urging them to restore the research tax credit that expired on 31 May. Since 1981, Congress has renewed the R&D tax credit seven times, but last year the Republican majority let the credit run out for the first time, as an example of its opposition to "corporate welfare." The credit is "critically important" to supporting R&D, says Bill Sample, senior director of taxes at Microsoft Corp and head of the R&D Credit Coalition, a special interest group that corralled the corporations and associations. As the letter to Clinton and Congress points out, corporate research decisions are usually made in five-year planning cycles and research may take decades to attain technological results, so companies are often reluctant to take on far-out projects "that lead to the next great technology," says Sample.

"American industry is on a worldwide high in the benefits of R&D," Sample observes, "but the uncertainty of the R&D credit is likely to have unintended stop-go consequences." The R&D credit, which costs the government about \$2 billion per year, has a tenfold return, he contends. According to the letter, it is "a critical, effective and proven incentive for companies to maintain and increase their investment in US-based R&D."

The Clinton Administration supports a one-year extension of the credit, and many lawmakers agree. But the business community isn't so sure Congress will approve the credit retroactively because of the all-out push to balance the federal budget. They are especially nervous because the credit was allowed to lapse from mid-1995 to mid-1996 before being reinstated in modified form last year.

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