activity—should not tie their future to short-term industrial research and development. Panel members say labs are not well equipped for that role, which could put them in competition with the private sector; some also worry that such an emphasis is more of a fad than a sustainable mission. Instead, they say, the labs should focus on longer term research that would benefit industry: Allenby suggests exploring environmental technologies, while other members cite alternative energy and health research. "They are bullish on the traditional sciences," says one Administration official.

Such an approach runs counter to O'Leary's campaign to have the labs work more closely with industry. Since 1989, the three weapons labs alone have signed more than 300 Cooperative Research and Development Agreements with industry to conduct cost-shared collaborative research, and lab directors say they wouldn't want to abandon such ties. "The labs must have a core government mission," says Sig Hecker, director of Los Alamos National Laboratory. "But if we don't stay in touch with industry, we run the danger of becoming obsolete. I hope [the Galvin panel] doesn't throw out that crucial part."

Despite its emphasis on basic research, the report stops short of recommending that individual labs be leaders in particular fields. "It was extremely unlikely we would come out with specific job assignments for specific labs," says Victoria Tschinkel, panel member and a senior consultant with Landers & Parsons in Tallahassee, Florida. "The report turned out as more of a series of guideposts—it doesn't say close lab X." Among the three weapons labs, however, Lawrence Livermore National Laboratory appears to be facing the most difficult transition. "In the short term, Livermore is not that threatened," Sapolsky says. But panel members say Livermore must spell out a clear mission to remain viable in the long run.

"The labs are not in the business of helping industry."

—Harvey Sapolsky

The most detailed recommendations in the report concern management practices, and the consensus is that the department must streamline its operations. "That may be the only thing that the entire task force agreed on," says Allenby. Panel members are especially critical of the system DOE uses to monitor the labs, which are operated by private contractors who, in turn, are overseen by DOE field offices. But the savings from these changes would be modest, says Tschinkel: "We're not talking about hundreds of millions of dollars."

Maybe not, but savings of that magnitude and larger are exactly what some members of Congress are contemplating. Representative Roscoe Bartlett (R–MD), for example, has reintroduced a bill (HR 87) to create an independent commission that would examine the DOE labs and make recommendations in a process similar to what was followed to close military bases. "We've had four lab studies since 1986, and nothing has happened," he told *Science*. "Everybody is protecting their turf."

Bartlett's bill, which stalled last year, has garnered little support in the House Science Committee and faces opposition even within his own party. "A lot of labs and field offices are in Republican districts," one staffer says. One notable example is New Mexico, where Representative Steve Schiff (R–NM), the new chair of the basic research subcommittee that would take up the bill, represents a district that contains Sandia and is adjacent to Los Alamos. But Administration officials and congressional staffers admit privately that Bartlett could win converts if the House is asked later this year to make large cuts in DOE's budget.

Galvin himself declined comment on the details of the report until it is released, noting only that "I don't think the political changes affect the thrust or essence of the report." Nevertheless, it is clear his report will set the tone for a heated political battle over the future of the DOE labs.

–Andrew Lawler

SPACE SCIENCE

Joint Japanese-German Mission Misfires

TOKYO—Last week Japan and Germany failed on their first attempt to join an elite club of nations with the ability to retrieve a capsule from orbit. But officials from the two countries say the loss of the 750-kg EXPRESS (Experimental Reentry Space Vehicle) on 16 January, due to a malfunctioning by a Japanese-built rocket with a proven track record, is only a temporary setback to their plans to increase activities in space.

EXPRESS was planned as a 5-day mission to grow crystals in microgravity as well as to test a better heat shield and conduct other experiments for developing future re-entry vehicles. The $160 million mission was a showcase of international cooperation: In addition to the joint scientific projects, Japan supplied the rocket, Germany contracted with Russia for the capsule, and Australia provided the landing site. The critical point was supposed to come when the capsule was scheduled to re-enter Earth's atmosphere and parachute to a landing. But the mishap occurred at the beginning of the mission, when the capsule was boosted into an unplanned, higher orbit. Contact was lost a few hours later, and the capsule is believed to have crashed as it headed across the Pacific.

For Japan's Institute for Space and Aeronautical Science (ISAS)—a small agency that runs most of the science part of Japan's space program and which handled the launch—the mission was a key step in its plans to develop an independent capacity to recover scientific payloads. One application would be a proposal now under review for an asteroid landing early in the next decade that would collect samples and return them to Earth for analysis. Another possible mission is a probe of Mars. Without that capability, ISAS must rely on agreements with other space powers; for example, its Space Flyer Unit, a reusable platform for space-based observations and experiments to be launched next month, will be recovered by the U.S. space shuttle.

For Germany, EXPRESS offered an opportunity not only to share data in the crystal research but also to test a silicon-carbide nose cone material that the German Space Agency (DARA) hopes will be adopted by the European Space Agency on future missions. The material can function as both structure and heat shield, explains Hermann Hald of the quasi-governmental German Aerospace Research Establishment. That would be an improvement over the current design of the U.S. shuttle, in which an insulating material covers structural elements.

The failure of the M3-S2 rocket, designed to boost small payloads into low Earth orbit, breaks ISAS's 19-year streak of successful scientific launches. But it is the second major setback for Japan's space program in the last 6 months. In August a motor on a $415 million experimental communications satellite built and launched by the National Space Development Agency—Japan's main space agency—failed to place the satellite into the proper orbit.

However, these mishaps are not expected to undermine public support for the space program, which has been fanned by the presence of Japanese astronauts on the U.S. space shuttle. That support has been translated into steadily rising budgets for the two agencies. Indeed, ISAS officials hope the loss of EXPRESS ultimately will mean little more than a longer wait for samples of asteroid rock.

–Dennis Normile