

## FUSION RESEARCH

## Energy Panel Asks U.S. To Rejoin ITER

GAITHERSBURG, MARYLAND—U.S. fusion researchers are trying to reignite their field. A panel of scientists meeting here last week recommended that the United States rejoin negotiations to build the International Thermonuclear Experimental Reactor (ITER), a multibillion-dollar international project that the Americans abandoned in 1998. But they also argued that the country should initiate its own fusion experiment if the government lacks the budgetary will to return to the ITER fold. "The consensus is that we're ready to build a machine and do the science," says Stewart Prager of the University of Wisconsin, Madison, one of 17 members of the Department of Energy's (DOE's) Fusion Energy Sciences Advisory Committee (FESAC).

The consensus emerged at a July meeting of fusion scientists in Snowmass, Colorado (*Science*, 2 August, p. 751). Last month a group met in Austin, Texas, to concoct a strategy. As endorsed by FESAC, the strategy is two-pronged: Try to join ITER, and begin design work on a less expensive domestic experiment, the \$1.2 billion Fusion Ignition Research Experiment (FIRE). If DOE does not get a seat at the ITER table by mid-2004, the report recommends, the United States should proceed with the FIRE project instead. The FIRE alternative "shows the international partners that we're serious about the discussion and that ITER is not the only game in town," says Vincent Chan, a FESAC member who works at General Atomics in San Diego, California.

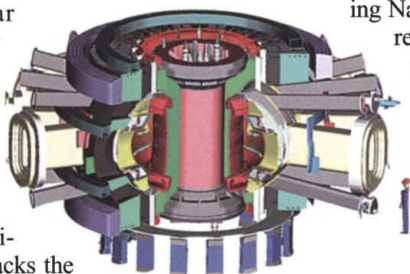
Full U.S. partnership in the ITER collaboration would cost an additional \$100 million a year, most likely for a decade or more. DOE has set aside \$1 million to estimate the costs of the project, which is currently pegged at \$5 billion-plus.

Ray Orbach, director of DOE's Office of Science, is enthusiastic about the twin tracks, saying his office "is committed to implementing the work of Snowmass and the recommendations of the panel and the committee." But \$100 million a year is likely to be a stretch. "I think the U.S. can afford \$50 million [per year]," says Anne Davies, associate director for fusion energy sciences.

Congress has left open the door to a U.S. return to ITER but has not signaled that it would cross the threshold. Language in energy bills going through both houses directs

DOE to develop a plan to build a magnetic fusion experiment but is silent on creating such a facility. "It's hard for Congress to take the long view when there are so many immediate problems," says Representative Zoe Lofgren (D-CA), a key congressional backer of fusion research.

Orbach acknowledges that "political as well as scientific issues play a key role" in any decision. But he hopes an upcoming National Research Council report on fusion power, a draft of which might be ready in early December, will help him make a case. "I would



Flame on? FIRE fusion project could win out if ITER fails.

like to give the president, by mid-December, the full scientific view of how to get from here to there," Orbach says.

This week the ITER partners—Europe, Japan, Canada, and Russia—met in Toronto to discuss a timetable for selecting a site and to hear technical reports on Canada's site. A final agreement is expected sometime in 2004.

—CHARLES SEIFE

## SPACE STATION

## NASA Plans Expansion, New Research Agenda

PASADENA, CALIFORNIA—The international space station might be going off its diet. In a sign that 18 months of turmoil is ending, NASA last week quietly laid out plans to expand the station beyond a stripped-down version that was the product of large cost overruns and management problems.

The new plan would increase the number of shuttle flights to the station, start design on a spacecraft that could return a larger crew, and make room down the line for additional pressurized space for experiments. Officials also proposed new research priorities, slashing funding for structural and evolutionary biology in favor of studies into radiation health and advanced life-support systems. Yet even as a new U.S. program takes shape, some international partners in the program are struggling with budget troubles that hinder their ability to participate.

Neither the expanded station nor the research plan will be official for many months, and both are certain to engender controversy. But the briefings to NASA's advisory council meeting here at the Jet Propulsion Laboratory were concrete evidence that NASA Administrator Sean O'Keefe and his team are preparing to move beyond a truncated design—due for comple-

## ScienceScope

**Close Call for Boehlert** One of the science community's favorite members of Congress has barely survived a primary election. House Science Committee chair Sherwood Boehlert, a moderate Republican from upstate New York, squeaked out a 52% to 48% win over a conservative challenger in a 10 September vote.

A staunch environmentalist and abortion-rights supporter, Boehlert is often at odds with Republican leaders and has drawn increasingly stiff challenges from his party's conservative wing. Two years ago, a conservative challenger won 43% of the vote in the contest to choose the Republican nominee. This year, changes in the boundaries of Boehlert's district helped David Walrath, a state legislator and medical director of a drug-treatment center, come within 1427 votes of a major upset.

"It was surprisingly close; I'm still shaking," says one science-group lobbyist, noting that Boehlert has earned a reputation as an enthusiastic—but tough-minded—advocate for research spending. Boehlert is expected to easily win another 2-year term in the 5 November general election, as he should draw votes from Democrats and independent voters, who can't participate in the Republican primary.

**Unwanted Advice?** The Bush Administration let two scientific advisory groups die in recent weeks, one on genetic testing standards and the other on the use of human subjects in research. Both dealt with hot topics; both advised the Department of Health and Human Services (HHS); and both included holdover members from the Clinton White House. But after a story in this week's *Washington Post* suggested that the panels were killed in response to complaints from industry or conservative groups, HHS spokesperson William Pierce hastened to explain that the committees will be recreated "very soon" with new members and "broadened" mandates.

That explanation didn't satisfy Representative Edward Markey (D-MA) and other Democrats on the House Energy and Commerce Committee. In a 17 September letter to HHS Secretary Tommy Thompson, the group wrote that it was "deeply disturbed" by these and other changes—such as a shakeup of an environmental health panel (*Science*, 30 August, p. 1456)—and demanded a total accounting of any changes since January 2001 to "scientific advisory groups, committees or task forces." HHS's response is due by 4 October.

**Contributors:** Jennifer Couzin, Andrew Lawler, David Malakoff, Eliot Marshall