Agreement moves ITER forward

The seven international partners in the multibillion dollar ITER fusion energy project initialed an agreement in late May to begin construction of the facility in Cadarache, France, early next year. After the US Congress and the governments of the other participating nations approve the preliminary agreement, a final pact is expected to be signed on 29 November, with the eight-year construction process beginning a few months later.

Raymond Orbach, the new Undersecretary for Science at the US Department of Energy, and representatives of the six other ITER partners—the European Union, Japan, China, India, South Korea, and Russia—initialed the agreement in Brussels, Belgium. Orbach, who has been a strong advocate for ITER since joining DOE as director of the Office of Science in 2002, was passionate in discussing the implications of the agreement, and the eventual importance of fusion energy.

Calling the signing "a momentous occasion in the history of science," Orbach told journalists that the project is "so important and has such consequences that not to pursue it would be an outrage." ITER, Orbach said, "has the potential to free the quickly growing global economy and population from the looming constraints of decreasing energy supplies and the unfortunate effects of environmental degradation."

Soon after the agreement was initialed, DOE officials announced that University of Wisconsin physicist Raymond Fonck will be the chief scientist for the US portion of ITER.

The US dropped out of the ITER project in the late 1990s because of the high cost. In response, the project was scaled back, and Orbach eventually convinced the Bush administration to rejoin. Orbach listed ITER as the top priority project in the Office of Science's 20-year facilities plan released in 2003 (see PHYSICS TODAY, January 2004, page 23).

DOE

Representatives of the seven international partners in the ITER fusion energy project gathered in Brussels, Belgium, on 24 May to initial an agreement to begin construction of the facility.

Under the agreement, the US will provide $1.1 billion for construction, with 80% of that in contributions of material. The US has also agreed to pay 13% of the operating costs, says Orbach, "a little bit more than some of the other partners, but we chose to do that because we want a say in the nature of the research and the outcome of the research." **Jim Dawson**

Chilean site chosen for LSST

Cerro Pachón, in northern Chile, beat out Mexico's San Pedro Mártir as the favored site for the Large Synoptic Survey Telescope, project leaders announced in May. If construction proceeds on schedule, ground will be broken in 2009 for the 8.4-meter LSST and first light will be in 2012.

The LSST "goes wide, fast, and deep," says project director Anthony Tyson of the University of California, Davis. The telescope will scan the entire visible sky every three nights, detecting objects that change or move, such as supernovae, near-Earth asteroids down to 100 meters in diameter, and Kuiper belt objects. Other key areas of study will be dark matter and dark energy. For such studies, Tyson says, "you'd like to have knowledge of the Hubble constant as a function of redshift and of how dark matter is clumped over cosmic time. LSST has multiple probes of both."

C.CLAVER, NOAO/LSST

El Peñón, on Cerro Pachón in Chile, is the selected site for the Large Synoptic Survey Telescope.

What makes the LSST unique, says Tyson, is its etendue, or throughput—the product of the telescope aperture and its field of view. "Ours is 320 $m^2 deg^2$," he says. A similar but smaller project, PanSTARRS, under construction by the US Air Force in Hawaii and seen by many as a precursor to the LSST but also as a potential rival for funding and early observations, has an etendue of about 13 $m^2 deg^2$. Other existing and planned telescopes have etendues ranging from 2 to 50 $m^2 deg^2$, Tyson says.

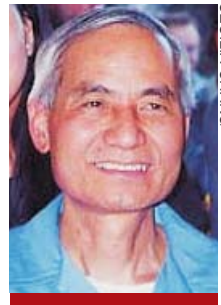
The price tag for the LSST is expected to be around $300 million, including infrastructure, telescope, camera, software, and US-based data centers. That money is still being raised, mostly from US government agencies and private investors. So far, NASA is not pitching in, although the project would satisfy the agency's congressional mandate to search for potentially Earth-threatening asteroids (see PHYSICS TODAY, January 2003, page 19). **Toni Feder**

news notes

Ex-LANL scientist settles case. Wen Ho Lee, the Los Alamos National Laboratory physicist who in 1999 was accused by the FBI of spying for China (see PHYSICS TODAY, April 2000, page 53), has won a $1.65 million settlement in his suit against the federal government.

Lee sued the government for leaking details to the media about his employment history, finances, travels, and polygraph tests. Although only the federal government was named as a defendant in the suit, the *New York Times*, the *Washington Post*, the *Los Angeles Times*, the Associated Press, and ABC News together are covering nearly half of the settlement costs. According to a statement by the five news organizations, their $750 000 share will go directly to Lee. The $895 000 from the government will cover Lee's legal fees and taxes.

CECILIA CHANG



Lee

The news organizations became involved in the case because of their refusal to reveal who leaked them information about Lee. On 5 June, two days after the settlement was reached, the Supreme Court rejected the news organizations' final appeal to keep their sources under wraps. The rejection is viewed by the organizations' lawyers to be a warning not to expect favorable treatment in similar cases in the future.

In the run-up to his trial, Lee spent nine months in prison, largely in solitary confinement. The espionage charges against him were eventually dropped, but he did plead guilty to one count of mishandling classified data. **PKG**

DOE science undersecretary confirmed. Raymond Orbach, director of the US Department of Energy's Office of Science, was confirmed by the Senate in May as the first-ever Undersecretary for Science