great we've been able to set up a more formal structure."

Targeting kids before high school is key, Johnson adds. "A few years ago, I gave a seminar at an inner-city high school. Their eyes glazed over. After they hustled out, two young ladies snuck back into the auditorium. They didn't want their peers to know they were interested in the science. It wasn't cool to be smart. Then I gave the same talk at an elementary school. The bright young faces were all excited. That's the difference between high school and elementary school."

HOO projects will include building kaleidoscopes and telescopes, experimenting with UV and IR light, and arranging mirrors so that a laser shines on a predetermined spot. The program's planners are also developing an optics competition like the egg-drop and bridge-building competitions that MESA sponsors. And to show kids what sorts of careers are possible in optics, HOO will use posters, videos, and class visits by professionals.

The first training program for teachers and volunteers took place last month, and the experiments will be taken into communities in southern California and Washington State this fall. HOO aims to reach 40 000 kids across the US by August 2006.

After that, having used up its \$1.7 million in NSF seed money, HOO is supposed to become self-sustaining. Jason Briggs, OSA program manager for HOO, says it's too early to estimate the cost of keeping the program going, but the plan is to raise funding and inkind contributions from industry. Information about HOO will be available at the end of this month on the Web at http://www.hands-on-optics.org.

Toni Feder

Chu Named Berkeley Lab Director

Y father wanted me to be an architect. He said the competition in physics was too strong," recalls Steven Chu, who, of course, went on to win a Nobel Prize in Physics. On 1 August, Chu took the helm of the Department of Energy's Lawrence Berkeley National Laboratory, succeeding Charles Shank, who served for 15 years.

Despite stepping down, Shank says he will work with Chu on the immediate task facing LBNL: preparing a bid for the University of California to retain the management contract for the lab. UC has run LBNL since the lab's creation in 1931. But largely because of security breaches at DOE's weapons

labs in Los Alamos and Livermore, it's anticipated that DOE will, for the first time, open the LBNL management

contract for bids. At a press conference announcing Chu's appointment, UC President Robert Dynes said, "We will go into this potential competition with all resources ablazing." Although "nothing in this world is bullet proof," he added,



the prestige and visibility that UC gains from Chu's being a Nobel laureate "puts us in a very strong position."

Coming to LBNL is a homecoming of sorts for Chu. He did graduate and postdoctoral research at UC Berkeley. He then spent nine years at Bell Labs—overlapping with both Dynes and Shank—before joining Stanford University's physics department, where he had been since 1987.

Among the subfields represented at LBNL are computing, nanoscience, biophysics, Earth sciences, and cosmology. The lab has a workforce of about 4000, and its annual budget is \$521 million.

Chu says he was attracted to the LBNL top job because "it's a great lab. And it has a lot of pieces that I have a personal scientific interest in. I hope I can make a difference in really getting

these pieces to work closely together. Opportunities like this don't come along all that often." He shared the 1997 Nobel Prize with Claude Cohen-Tannoudji and William Phillips for cooling and trapping atoms with lasers. These days, Chu's research is mainly in biophysics.

Toni Feder

Fusion Science Centers Reach Out to Other Fields

This month, the US Department of Energy launches two research centers with members from university, industry, and government labs. They are the Center for Multiscale Plasma Dynamics, headed jointly by UCLA and the University of Maryland, College Park, and the Fusion Center for Extreme States of Matter and Fast Ignition Physics, led by the University of Rochester.

The multiscale center will focus on interactions between microscale turbulence and large-scale plasma effects. "You are dealing with things that might vary by six orders of magnitude in nonlinear systems," says Bill Dorland of Maryland, center codirector with UCLA's Steve Cowley. "These kinds of challenges need new algorithms, not just new computers."

At the fast ignition center, scientists aim to trigger thermonuclear ig-

WEB WATCH

http://www.ornl.gov/sci/fed/stelnews/stelnews.html

For the past 15 years, thanks to increasing computer power, stellarator research



has burgeoned. Ten stellarator projects are under way worldwide. To keep track of the latest developments, plasma physicists and others turn to **Stellarator News**, a newsletter edited by James Rome of Oak Ridge National Laboratory.

http://visibleearth.nasa.gov

Forest fires, ocean currents, and dust storms are among the phenomena observed by NASA's fleet of remotesensing satellites. Images of these phenomena, both real and simulated, are freely available on NASA's **Visible Earth** Web site.





http://pubs.acs.org/cen/nanofocus

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Compiled and edited by Charles Day