

PHYSICS COMMUNITY

Waxahachie Site Finds No Takers as SSC Physicists Move On

When Congress decided to halt construction of the Superconducting Super Collider in October 1993, hopes were high in Texas that some research or educational facility, with its attendant high technology and highly educated personnel, would survive at the Waxahachie site. (See PHYSICS TODAY, November 1993, page 77, and February 1994, page 87.) Now even those modest hopes have been dashed.

In late May the Texas legislature decided it would dispense no further funds on the defunct project: It effectively canceled a proposed medical facility to be built at the SSC site and ordered the liquidation of state-owned assets there. In mid-June the last of the SSC's 190 PhD physicists left for a new job. A few days later trucks began carrying away some \$2 million worth of equipment donated by the Department of Energy to a Texas education program. Unless someone steps forward with a plan (and the money for it), the people of Waxahachie will soon be left with some abandoned buildings and a very big hole in the ground.

No physicists

Fred Gilman was the last SSC physicist still employed as such by Universities Research Association, which continues to operate the SSC project for the government. In July Gilman, who was the associate director of the physics research division and later the laboratory's deputy director, became the Buhl Professor of Theoretical Physics at Carnegie Mellon University, in Pittsburgh, Pennsylvania.

Not all of the SSC physicists had named chairs waiting for them. Many have left physics altogether. An article in *Science* magazine (28 October 1994) estimated that about half have found work outside the field.

One who has made the much-discussed transition from physics to finance is Jim Dunlea. After receiving his PhD in 1987 from Ohio State, he became a research associate at the University of Rochester. He became involved in the SSC's GEM (Gamma-Electron-Muon) detector project, receiving funds through Rochester

After the expenditure of billions of dollars, little of value marks the presence of the SSC in Texas.

while resident at Fermilab and commuting biweekly to Texas.

Dunlea told PHYSICS TODAY that after the cancellation he did not see much of a future in high-energy physics. He was not sure of what he wanted to do, and one of the problems he found "was getting people to understand what you did and what skills you had."

Eventually he connected with I-Kinetics, a business consulting firm that specializes in helping companies take advantage of new information systems technologies. Luckily for Dunlea, the president of I-Kinetics had been a physicist. Through I-Kinetics, Dunlea has been working at Fidelity Investments in Boston since February 1994.

Other physicists from the SSC remain in Texas, some working, some not. John McGill is an accelerator physicist who has spent the last year overseeing the SSC's computing department. Mostly, his job is to "collect and shut down" the computers, but he has also been maintaining the machines that support the business systems at the site. Now those are about to be turned off, and the remaining accounting software will be transferred to personal computers.

McGill wonders if to some extent the first reaction of many physicists to the SSC's closing was an overreaction, where they saw "nothing but darkness and death for the field." Although he recognizes that getting the money to do the big projects that are necessary to advance high-energy physics will continue to be a difficult task, he still sees a few opportunities where he may be able to do accelerator-based research. McGill also says that some potential employers have called him because of what he has learned about client-server systems.

George Yost, a former leader of the GEM project, helped manage the SSC library before his employment ended in April. He still hopes for per-

manent employment doing physics somewhere. In the meantime he has taught himself Visual BASIC, and he says he will support himself with contract work, if he can get it. Without bitterness, Yost observed that Congress and now Texas have "thrown away all the resources, including the most valuable resource, the people."

No facilities

When the SSC was canceled, thoughts immediately ran to using the site for something else. According to Robert Diebold, DOE's deputy director for the SSC in the Office of Energy Research, of the 30 or 40 ideas put forth, eventually 9 proposals were reviewed in the fall of 1994, including one for an "applied superconductivity and cryogenics technology center" and another to study the "velocity of light in a magnetic field."

In its review DOE pointed out several stark realities about funding (there was none), infrastructure (also none), timeliness (necessary) and stability—a "key element" of which would be financial support by the State of Texas.

The report did not review the planned Regional Medical Technology Center, a proton-therapy cancer treatment facility for which \$65 million of SSC termination funds had been set aside. (The center had been reviewed earlier, and Texas and DOE administrators were awaiting the results of an environmental assessment study.) As recently as early spring many Texans were still confident that the medical facility would be built, but at the end of May the state legislature refused to appropriate any operating expenses for it. The legislature also directed the Texas National Research Laboratory Commission, which had been created in 1985 to deal with the development of the SSC and now oversees Texas's interests in the termination, to liquidate all state capital at the site. Commission director Ed Bingler said that with that decision, "operating programs utilizing SSC assets were terminated."

Jim Pitts, the state representative for Waxahachie and surrounding areas, said that many of his 130 000 constituents had seen the medical

center as at least a partial "reward for their suffering." Now, he said, "it was all for nothing. We're pretty discouraged."

As for the \$65 million promised for the medical facility, the legislature decided that Texas should apply those millions to help pay for the \$500 million in revenue bonds that the state had issued to fund its share of the SSC. That may or may not happen. US Representative Joe Barton, a Republican from Texas, argues that if his state will not build the center, that money should be returned to the Federal government to help balance the US budget. Others believe that the agreement between Texas and DOE allows the funds to remain in Texas.

Shortly after the legislature's decisions, *The Dallas Morning News* observed in an editorial that "wishful thinking, politics and self-interest may have occasionally subverted a rational evaluation of proposals to reuse the collider's assets." Now one rumor floating through Texas has the state bulldozing the site this fall if no use can be found.

A little education

In a small footnote to the project, some Texas students may be the sole beneficiaries of the SSC. On 20 June DOE announced that it was donating about \$2 million worth of SSC assets to the newly formed Texas Science Education Collaborative. The donation consists mostly of furniture, office equipment and portable buildings to be used as mobile classrooms.

The collaborative, which has a planned three-year lifetime, is designed to improve science education in Texas. Poirot, who is the associate dean for research and professional development in the University of North Texas's College of Education and the project director of the university's Texas Center for Educational Technology, heads the effort. The center had originally proposed a program that would use tens of millions of dollars of SSC assets, including the computing facilities and space at the site. In January DOE informed Poirot that it would allocate up to \$2 million worth of noncomputer assets for a project, but only if the center could create a feasible plan and, said Poirot, "obtain an assured level of funding."

Twelve school districts, including Waxahachie's, each agreed to pay \$100 000 to become "stakeholders" in the collaborative. In a final irony, Representative Pitts said that Waxahachie might not be able to participate in the program. The school district is currently unable to fund its entry fee because of a dispute over

some "mitigation money" that Pitts believes Waxahachie is owed by DOE.

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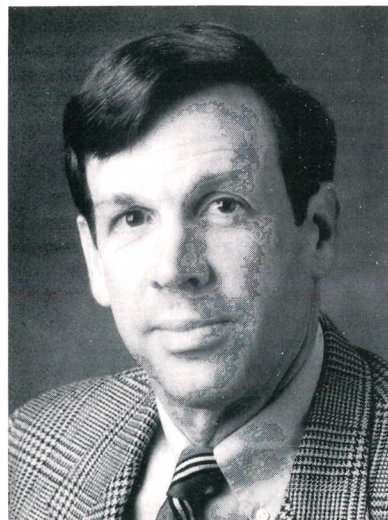
Tarter Takes Charge of Livermore in Uncertain Times

As director of one of the US's largest defense-research laboratories, C. Bruce Tarter now spends a large part of his time defending the lab itself. Tarter, who assumed full responsibilities for Lawrence Livermore National Laboratory late last year, faces general post-cold-war priority shifts and a budget-cutting Republican Congress. He must also deal with specific recommendations from February's so-called Galvin report of DOE's entire laboratory complex (see PHYSICS TODAY, March, page 75) and from a later study by a task force headed by Daniel Yergin, which examined the energy R&D programs of the Department of Energy.

Tarter was named acting director in May 1994 after the resignation of John H. Nuckolls. Nuckolls was accused by some of continuing to be an old cold warrior after dramatic international changes had made such a stance politically untenable. Tarter seems more flexible. He sees imperfections in the operations of the national laboratories and touts Livermore's history as "innovative" while he attempts to juggle this era's more nebulous priorities for the laboratories. For example, Livermore recently advertised for a deputy director of science and technology with technical experience in "global ecology and biosciences" as well as "global security."

An astrophysicist by training, Tarter received his SB in physics from MIT in 1961 and his PhD in physics from Cornell in 1967. He then joined the theoretical division of Livermore, where his astrophysics research included studies of accretion-disk objects such as quasars and x-ray sources. Using his knowledge of radiative transport and non-local-thermodynamic-equilibrium processes, Tarter also worked in the lab's weapons and fusion programs. He rose through the Livermore hierarchy, becoming group leader, division leader, deputy associate director for physics, associate director for physics, associate director for physical sciences in March 1993 and finally deputy director in January 1994.

In a recent newsletter Tarter noted that Livermore's role has been "complicated" by the Galvin committee's recommendation that some of the lab's weapons work be transferred



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to the "other design laboratory," that is, Los Alamos National Laboratory. Since the end of the cold war Livermore has seen its budget cut by about 12% and its staff reduced. The lab now employs about 7300 people and has an annual budget of about \$860 million. In addition to the weapons and other defense-related work, LLNL has programs in, for example, education, arms control, environmental restoration, basic science, projects with NASA and magnetic fusion.

In his newsletter piece Tarter assured employees that many people on the outside support a strong role for Livermore. But since significant changes may occur over the next several years anyway, Tarter is modifying internal practices to try to make the laboratory more competitive and resilient in responding to external impacts. These reforms, as he called them, include a "radical overhauling of business practices and major changes in the human resource area." Diversity is being emphasized, and if layoffs are required, a new policy will stress skills rather than seniority in deciding whom to keep.

Not surprisingly, Tarter spends much time communicating with those he identifies as laboratory constituencies: people in the Defense and Energy Departments, the White House Office of Science and Technology Policy, members of Congress and their staffs, and other policymakers. Such efforts may explain why Tarter can tell us that the laboratory will maintain a "long-term presence in national security." But, he added, "There is no public constituency for a return to 'the good old days.'"

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