

on the BEPC II as a natural step toward China's playing a significant role in the ILC. "We have joined the discussion," says Chen. "But I can't see any serious commitment to host the linear collider.

It will take time. But certainly the Chinese particle-physics community is interested in the linear collider, and we will actively join the collaboration."

Toni Feder

Marburger says communications directive unnecessary

In the wake of a May memorandum in which the National Science Board (NSB) called for the Bush administration to issue a "government-wide directive" to encourage the "open exchange of data and results of research conducted by [government] scientists," a spokesman for presidential science adviser John Marburger said no evidence exists "that the situation requires the development of a mandatory one-size-fits-all government-wide policy."

Benjamin Fallon, Marburger's legislative affairs assistant at the Office of Science and Technology Policy, said that after a January incident in which a NASA official tried to prevent agency scientist James Hansen from publicly discussing climate change research, Marburger "took a hard look at the question of the communication of scientific information." Marburger, director of OSTP, was pleased by the new scientific communication guidelines NASA developed in response to the Hansen incident, Fallon said, "and he issued a letter to every chief scientist government-wide recommending the [NASA] guidelines as a best-practice that they may want to consider." (See PHYSICS TODAY, May 2006, page 27.)

In the letter, which included a copy of the NASA policy, Marburger described the space agency's new approach as "exemplary" and urged the chief scientists to "compare your own current policies with it and strengthen or clarify them if necessary."

The science board memorandum, issued in response to a request in February by Senator John McCain (R-AZ), concluded that "there exists no consistent Federal policy regarding the dissemination of research results by Federal employees. An overarching set of principles for the communication of scientific information by Government scientists, policy makers, and managers should be developed and issued by the Administration to serve as the umbrella under which each agency would develop its specific policies and procedures."

The science board, an independent panel that oversees NSF and advises both Congress and the president on scientific issues, surveyed the communi-

cations policies at nine federal agencies and asked NSF's inspector general to poll counterparts at those agencies for any related information. The memorandum, signed by NSB chairman Warren Washington, said, "The American public must have confidence that scientific information they receive from the Federal Government has not been suppressed or distorted."

The Bush administration has repeatedly been accused by members of Congress and some science organizations of suppressing and altering scientific findings that conflict with the administration's policy goals (see PHYSICS TODAY, April 2004, page 30). Marburger, a physicist and the head of Brookhaven National Laboratory before becoming Bush's science adviser, has said in response to those claims that although mistakes have been made, the administration does not manipulate science for political ends.

The science board made four recommendations that the administration should carry out to ensure there is no "loss of confidence by the American public and broader research community regarding the quality and credibil-

ity of Government sponsored scientific research results."

► A government-wide directive should be issued that "clearly articulates the requirement for all agencies to develop unambiguous policies . . . to encourage open exchange of data and results" of government research. The policies should also prevent the "intentional or unintentional suppression or distortion of research findings."

► A clear distinction should be made between communicating professional research results and data versus the interpretation of data that reflect the personal views of the researchers. (The new NASA policy does not prevent scientists from expressing their personal views as long as those views are identified as such.) The policies should also be widely communicated to all agency employees and to the public so everyone is aware of them.

► An objective dispute-resolution mechanism for disagreements involving the public dissemination of research findings should be developed.

► A government-wide review of the implementation of the NSB recommendations should be established.

Although Marburger isn't issuing the directive recommended by the NSB or directly responding to the other recommendations, Fallon said the OSTP director "monitors this issue closely, and we look long and hard at reported cases. Where there are problems, it's usually where somebody didn't go through the proper public affairs process," he said, not an attempt to suppress science.

Jim Dawson

World regions in stalemate over particle accelerator conferences

For years, the main particle accelerator conferences have alternated between North America, in odd years, and Europe, in even years. Beginning in 2011, to make room for Asia's PAC to join the rotation, Europe will switch from a two-year to a three-year cycle, but the organizers and sponsors of the North American PAC are resisting such a switch.

In April, Michigan State University's Stanley Schriber, who chairs the NA PAC steering committee, broke a tied vote in the committee, coming down against switching the conference to a three-year cycle.

Arguments for switching include keeping the total number of conferences in the field down and treating North America, Europe, and Asia as

equal partners in the field's increasingly global endeavors. Arguments against switching center on the nature of the NA PAC, which includes more engineers and technicians than the other PACs; on the rotation around North America, which gives graduate students and others an opportunity to attend without extensive travel; on the smaller size of the Asian PAC (APAC); and on worries that restrictions by the US Department of Energy (DOE) would limit the number of attendees at foreign conferences.

Albrecht Wagner, chair of the International Committee for Future Accelerators and director of the German Electron Synchrotron (DESY) laboratory in Hamburg, says he is "very disappointed" that the NA PAC is sticking

with the two-year cycle. ICFA and directors of the world's major accelerator labs, he notes, have endorsed "the internationalization and coordination" of the PACs, so that one is held each year, with the venue rotating around the world. Adds SLAC director Jonathan Dorfan, "We cannot optimize science regionally anymore. We have to take full advantage of international opportunities, and therefore Asia should be part of the triumvirate."

Shin-ichi Kurokawa, a deputy director of the KEK accelerator lab in Japan, notes that in 2010 the APAC will be held in Japan, and "for the first time there will not be another PAC in the same year." By then, he adds, "it should be clear that in Asia accelerator physics is growing and is equivalent in spending and content to the rest of the world. I appreciate that the Europeans are switching to a three-year cycle. And I hope the Americans will do the same soon."

An early suggestion by a subgroup of the NA PAC steering committee to keep the two-year cycle and to hold conferences in the three world regions at eight-month intervals got the thumbs-down in both Europe and Asia. "The conferences would be too close together and there would not be much new information to report," says European PAC chair Chris Prior of the UK's Rutherford Appleton Laboratory in Oxfordshire. Subsequent suggestions by the subgroup, put forward this summer, include holding a PAC in North America every two years, and one in either Europe or Asia in the off years; and finding a way to shuffle the three-year cycles of EPAC and APAC with a two-year NA PAC.

"There is no specific acceptance of a particular sequence that would be followed by all three PACs," says Schriber. "But there is an expression of good will, and a willingness to work together." Any decision to change the cycle of the NA PAC would require, in addition to the steering committee's vote, agreement of the meeting's two sponsoring groups, the American Physical Society's Division of Physics of Beams and the Institute of Electrical and Electronics Engineers' Nuclear and Plasma Sciences Society.

"We have come up with ideas to move ahead," Schriber says. The NA PAC committee will look for ways "to help strengthen the [2010] Asian PAC." Another indicator of what compromises might be acceptable, he adds, "is whether the US government manages to get approval for a large number of [US] people to go to Canada, which

Former Bell Labs research building faces wrecking ball

It's history—in more ways than one.

The decades-long reign of Bell Labs' research campus in Holmdel, New Jersey, as a major force worldwide in technological discovery and development is over, and so is any chance for the building to recapture its former years of glory. Parent company Lucent Technologies is selling the 6-story, 2-million-square-foot industrial research laboratory to a private developer who plans to demolish it, probably next year.

The building's size, combined with its lab-specific design—a windowless structure with a series of deep cement bays every 40 feet on each floor and a vast amount of common space—makes it economically infeasible to operate as is or to convert into an office building. The building was opened in 1962 by then-parent company AT&T during its fat and sassy years as a monopoly. Lucent was spun off in 1996, 12 years after AT&T was broken up by federal antitrust legislation.

"No one would build anything like that today," said Michael O'Neill, CEO of Preferred Real Estate Investments Inc, based in Conshohocken, Pennsylvania. The firm has an agreement to buy the tree-lined, grassy 472-acre property next year from Lucent for an undisclosed sum. "Back then [in the 1960s], gas and electricity and oil were very cheap. Today the cost [to maintain the building] is way up, 10 times what it was."

In an interview with PHYSICS TODAY, O'Neill said he doesn't want to knock the building down, but in the year and a half of talks between his company and Lucent about acquiring the site, he's come up with no other solution for making it attractive to potential commercial tenants. "I lie awake nights figuring out how to preserve the history of this building," he said. "I kick myself for not coming up with a way to save it. We are just as emotionally attached to the history of the site [as Bell researchers]."

Since its earliest days, the building—which at one time was Bell's largest installation and home to some 5500 researchers and other staffers—was an internationally renowned research center where crucial scientific and technological discoveries and developments were made. But a market pinch in the 1990s, followed by the telecom bust of 2000, sent Lucent into a financial tailspin. Forced to cut costs, the company responded by downsizing its physical sciences research staff, including the number of researchers at the Holmdel site (see PHYSICS TODAY, October 2001, page 26). Today, about 1000 researchers and tech staff still occupy the building, but by August 2007 all Bell employees currently there will be relocated to Lucent facilities in Murray Hill and Whippany, New Jersey.

"The reason for the sale of Holmdel is the proper utilization of our real estate portfolio," Lucent spokesman John Skalko said. "Since we had existing space in Murray Hill and Whippany, it was financially wise [to sell the building]."

At least one former Bell researcher is wasting no time waxing sentimental about the work once done in the building. Its day in the sun is over, said Kumar Patel, a professor of physics at UCLA who worked at the Holmdel site from 1966 to 1976.

"The building became superfluous once Bell Labs decided to move its R&D activities [to other Lucent sites]," Patel said. "It's only a symbol, not the central feature of what R&D at Bell Laboratories once was. It's not useful to maintain a symbol that no longer has any real function."

The site's ultimate fate is still in limbo. O'Neill expects to close on the purchase of the property by next August and is conducting "neighborhood meetings," informal hearings with area residents, to determine how they would like to see it used. That information will be integrated into his final plan for building and commercially marketing and leasing the site, a process that could take up to five years.

Skalko emphasized that the pending sale of the building does not affect Bell Labs' continuing operation. "It's important to note that Bell Labs is still in business," he said.

Karen H. Kaplan



A historic Bell Labs site's future is uncertain.

LUCENT TECHNOLOGIES

is considered foreign travel," for the 2009 NA PAC in Vancouver.

As of earlier this year, DOE regulations were tightened so that agency labs wanting to send more than 30 people to a conference—domestic or international—or spend more than \$10 000 for conference attendance must now get approval from the DOE Office of Science. But, says Robin Staffin, the office's associate director for high-energy physics, "that's a reporting threshold, not a cap." Moreover, he says, if the NA PAC is switched to a three-year cycle, "we would make every effort to accommodate this decision by facilitating travel." **Toni Feder**

NASA's future workforce a complex problem

Concern has grown in both NASA and Congress over the past few years about how the space agency—a massive and complex bureaucracy with 17 000 civil service employees and more than 40 000 contract workers—would reorient its workforce as the quest to return to the Moon has waxed and the space shuttle program has waned. In April, NASA officials tried to address those concerns by submitting to Congress a "workforce strategy" document showing that the agency has a plan to ensure it has the right people in the right positions to return to the Moon, prepare to go to Mars, and conduct myriad other scientific projects over the next 15 to 20 years. But although the document was full of language about new approaches to workforce planning and integration of business and resource activities, an interim National Research Council (NRC) report on NASA's workforce issues says the agency has "not yet translated that [workforce] analysis into a strategy and action plan."

While the issues facing the NASA workforce can easily be lost in a fog of bureaucratic planning jargon, members of the House subcommittee on space and aeronautics tried during a hearing in June to better understand the problems the agency faces. The hearing's background document put together by the subcommittee staff noted that NASA is entering a critical period for ensuring that it has a workforce of the appropriate size and with the proper skills to carry the agency through the next 15 years. "NASA has several major new undertakings related to the goal of returning to the Moon by 2020," the document said. "To free up funds for that purpose,

it is terminating the space shuttle program in 2010, reducing aspects of the International Space Station research, and reducing the budget for aeronautics."

The NRC report says NASA needs to develop a plan that first deals with the next five years, which covers the end of the space shuttle program, and then lays the foundation for a longer-term process. In addition to space-oriented programs, the report says, NASA needs to fund university-based research programs in aerospace sciences to ensure that "universities continue to sustain curriculum, faculty, and student interest."

NASA must also determine the right balance between scientists and engineers who are federal employees and those who work for outside contractors. The concern expressed by congressional staff members and several people testifying at the hearing was that if NASA contracts out too much work, it will lose the in-house science and engineering expertise that has been critical to the agency's past successes.

Testifying as the co-chair of the NRC report, David Black, president of the Universities Space Research Association and an astronomer at Rice University, said the NRC committee's "initial reaction to NASA's work done so far is that it is incomplete and reflects a top-down view of what skill mixes are needed and as such is more theoretical than empirical." Black also said that NASA management must find a way to give a sense of "hope and promise to potential future members of the agency's workforce. Twenty years ago, the mere mention of NASA was an attractor," he said. "It had vocational pizzazz. That is no longer the case."

Black cited the delay and cancellation of NASA projects over the past few years and added, "There are fewer opportunities for NASA staff to be engaged in meaningful science and engineering. I am concerned that many of the best and brightest young people are attracted to the science part of what NASA does, but the inability of the administration and Congress to properly fund NASA's implementation of [President Bush's Moon/Mars initiative] will mean that support for science will erode."

NASA also faces a "retirement bulge," and subcommittee chairman Ken Calvert (R-CA) called the age distribution of the agency's workforce "troubling." More than 30% of NASA's employees are currently eligible for regular or "early out" retirement, and NASA estimates that by 2011, just after the space shuttle program is shut down, 28% of its engineers and 45% of its scientists will be

eligible to retire. Currently, 12% of its engineers and 21% of its scientists are eligible to retire.

Calvert noted that NASA's civil service workforce has shrunk by more than 20% during the past 10 years and asked how NASA will prepare for its future needs and how it can successfully recruit and retain the necessary scientists and engineers.

Toni Dawsey, NASA's assistant administrator for human capital management and chief human capital officer, told committee members that NASA's workforce strategy plan will allow the agency to "deal effectively with the critical issues" that loom. She added that NASA "does recognize that some future events, such as the retirement of the space shuttle program, require long-term planning."

Black said it is clear from the data gathered for the interim NRC report that NASA officials don't know how to manage a workforce problem as complex as the one confronting them. "Does anybody know how to do it? I can't give you a categorical yes or no on that," he concluded. The final NRC report is due out early next year. **Jim Dawson**

Nakamura wins prize for solid-state lighting

The creator of the first blue, green, and white light-emitting diodes and the first blue laser diode—each of which has represented an important milestone in the development of new energy-saving light sources—has won the 2006 Millennium Technology Prize.

Shuji Nakamura will receive the award from Finland's Millennium Prize Foundation at a September ceremony in Helsinki. The honor, which carries a cash prize of €1 million (\$1.3 million), recognizes outstanding technological achievement aimed at promoting quality of life and sustainable development. Nakamura is a professor of materials and of electrical and computer engineering at the University of California, Santa Barbara, where he is also codirector of the solid-state lighting and display center.

In a recent interview with PHYSICS TODAY, Nakamura said he started working with LEDs and laser diodes



Nakamura

RANDY LAMB, UCSB