

professional societies and the public."

Senate report. Frequently mentioned during the SDI sessions and press conferences at the APS meeting on 30 April was a congressional staff report prepared by aides to Democratic Senators William Proxmire of Wisconsin, J. Bennett Johnston of Louisiana and Lawton Chiles of Florida. The central finding of the report, which was based on extensive interviews with more than 75 people involved in SDI work, was that there was nothing to justify claims by SDIO officials that progress had been "incredible" or "amazing" or that there had been "genuine breakthroughs."

The report attributed changes in the SDI program to technological failures, not budget cuts (see *PHYSICS TODAY*, January, page 53), and argued that the SDI program is *not* strictly a research program in the normal sense of the term.

At the APS meeting on 30 April, there was much talk about what participants called a "more balanced" research program in the morning session, which featured experts from the Office of Technology Assessment, MIT and Stanford, as well as an SDI official. The discussions were mostly calm and sober, though there were frequent questions from representatives of Lyndon LaRouche's National Democratic Policy Committee, who seemed intent on provoking confrontations. The same was true at the evening session, which ended with a talk by Charles Schwartz of the University of California

at Berkeley.

Schwartz was worried mainly about how students would find jobs outside the growing military-research sector. In a speech he predicted many would find offensive, Schwartz characterized physicists supporting SDI as "the American counterparts of Lysenko—political ideologues and hucksters in science, acting under the patronage of a powerful chief of state."

Schwartz made two proposals: one for a worldwide "strike" by physicists, that is, a "collective and gradual withdrawal of our services in all ways that contribute to the arms race"; the other a call for development of hard data about military and nonmilitary job prospects for graduating physicists. It probably would be fair to say that Schwartz's second proposal aroused some interest, especially among the students in attendance, and that his proposal for a strike was greeted with more-or-less friendly tolerance.

Brecher, however, reacted sharply to it. She thought it would be ridiculous to stop teaching physics just because physics is subject to abuse. When she was challenged by a Canadian member of the audience, who described the idea of "value-free science" as a "naive" notion found almost exclusively among US citizens, Brecher retorted that she had lived in Rumania, Israel and the United States and had found physics to be the same science everywhere. What varied, she indicated, was the amount of political "rubbish."

—WILLIAM SWEET

Education

AIP reports on enrollments and degrees

The latest AIP education surveys—the 1984–85 bachelor's survey and the survey of enrollments and degrees—reveal few new trends or patterns at the graduate level but some interesting developments in the undergraduate population.

The number of bachelor's degrees in physics last year exceeded 5000 for the first time since 1972. Half the bachelor's recipients were going on to do graduate work, three out of five of them in physics. Most of the other half were seeking employment in the civilian sector and already had at least one job offer at the time they were surveyed.

The average starting salary for the bachelor's recipients who responded to the survey had increased 6% over last year's, to a record high of \$1990 per month. The highest average salaries were offered in manufacturing industries, as usual, and the lowest in high-school teaching.

The number of responding bachelors who went into high-school teaching

increased to just over 20, and the average starting salary offered teachers increased from \$1100 in 1983–84 to \$1270 in 1984–85 but remained far lower than what was paid to average physics bachelors in other occupations.

Military issue. In most respects the distribution of the responding bachelors among employment sectors remained essentially unchanged. The military attracted 23% of the employed bachelors in 1984–85, compared with 24% the year before. These statistics do not shed any light on the proportion of bachelor's recipients whose work in the civilian sector was funded by the military, a matter of growing concern among some physicists.

At the recent APS meeting in Washington (see preceding story), Charles Schwartz of the University of California at Berkeley complained about the absence of data on how many graduating physicists are taking work funded by the military and suggested that the Committee on Opportunities initiate or

lobby for a special study. At an evening meeting on SDI and the physics community Schwartz said, with some confirmation from his fellow panelists, that graduate students increasingly claim they are unable to find work that is not funded by the military.

Susanne D. Ellis, the education-studies analyst for AIP, says that she is hearing the same complaint from bachelors. It used to be the case, she says, that graduating bachelors hardly ever wrote anything in the part of the questionnaire reserved for comments. But in the last two years, she reports, respondents mention increasingly frequently that they are unhappy with the job prospects outside the defense sector: A typical comment is "The reason I have had such trouble finding a job is that I do not want to do defense-related work."

Enrollments and degrees. A bright spot in the latest survey results is the 4% increase in the number of first-year physics graduate students in 1985–86, though the increase is entirely attributable to growing enrollments of foreign students. The number of US citizens among the entering graduate students dropped to 1721 from 1747. The proportion of foreign students continued to rise, reaching a record level of 42.1%.

Just 7.6% of the students awarded doctorates were women, though the situation may be gradually improving: The bachelor's survey indicated that 14% of the students starting graduate study in physics were women.

Eight blacks earned physics PhDs in 1985–86, down from 15 in 1984–85 and 17 in 1983–84. The number of blacks earning bachelor's degrees in physics, however, increased to 141 in 1985–86 from 124 in 1984–85.

The 1984–85 *Survey of Physics and Astronomy Bachelor's Degree Recipients* and the 1986 edition of *Enrollments and Degrees* are available from Susanne D. Ellis, Manpower Statistics Division, American Institute of Physics, 335 East 45th Street, New York NY 10017.

Triangle education coalition picks up members and support

The Triangle Coalition for Science and Technology Education, a partnership of business and labor associations, science and engineering organizations and education groups, was founded in late 1984 to promote the formation of local "alliances" in support of pre-college science and engineering education (*PHYSICS TODAY*, March 1985, page 111). This year, at age 1½, it is on its feet and walking.

Thanks largely to the dogged efforts of John M. Fowler, who heads the coalition's small staff at the National Science Teachers Association in Wash-

ington, the coalition has substantially broadened its membership base, raised considerable sums of money to support its activities, started several projects and—most recently—cosponsored a highly successful and well-publicized National Science Week.

Building on last year's much more modest Science Week, the Triangle Coalition this year used NSF funding to send nearly 10 000 copies of a specially prepared science packet to elementary-school teachers around the country. The packet was designed by the Biological Sciences Curriculum Study at Colorado College and contained posters, a cover letter and suggestions for eight student activities—three to be done prior to Science Week, five during the week.

The main activity of Science Week, which was 11–17 May, was the coordinated launch of balloons from about 700 sites on 11 May. Each balloon carried a card to be returned to the American Geological Institute in Washington, which will prepare a map for distribution to participants showing wind patterns and the major routes the balloons took. A similar balloon launch was done on a smaller scale in 1985.

Growth. Relatively recent recruits to the Triangle Coalition include Hewlett-Packard Company, the National Science Supervisors Association, the Acoustical Society of America, the American Nuclear Society, the Council for Elementary Science International and the Native American Science Education Association. Support for the Triangle staff comes from assessments that are scaled to the annual budgets of the member organizations.

Significantly, the Triangle Coalition has wooed and won the National Education Association and the American Federation of Teachers, which represent most pre-college teachers in the United States. Their support means that teachers, who initially were inclined to view the Triangle Coalition with suspicion as an organization that might try to make them work harder

without higher pay, can now be expected to support the Triangle's local alliances.

Fowler says he did not need to make concessions on policy to bring NEA and AFT into the coalition. "They just learned about what we were doing and decided they wanted to join," he says.

Mary H. Futrell, the president of NEA, has replaced Alice Moses as the Triangle's chair for education. Futrell joins Glenn T. Seaborg, who is chair for science and engineering, and Robert C. Forney, executive vice-president of E. I. DuPont de Nemours and Company, who is chair for industry. Moses, a past president of the National Science Teachers Association, has gone to NSF to be associate program director for the teacher-enhancement program.

Carnegie grant. In March the Triangle Coalition received a grant of \$250 000 from the Carnegie Corporation in New York to sponsor a two-year program of alliance building. The coalition will identify local alliances, link them and encourage the formation of new ones. It has started a newsletter for alliances, established a clearinghouse with current information on existing alliances and provided alliances with information about relevant programs.

The coalition also will hold five regional conferences on alliance building in 1986 and 1987. The coalition is also planning a national conference this summer. It will concern elementary-school science, and the primary objectives will be to write a rationale for stressing science education at the elementary-school level and to develop a method for disseminating it. A secondary objective will be to discuss political strategies for improving elementary-school education. The conference will not aim to develop a curriculum.

—WILLIAM SWEET

AIP hires Condell to head its new office in Washington, DC

William J. Condell Jr, previously of the Office of Naval Research, has agreed to serve as manager of AIP's expanded office and activities in Washington, DC. That office is being set up in the American Geophysical Union's building on Florida Avenue (PHYSICS TODAY, April, page 55).

One of Condell's first assignments will be to monitor Federal funding of physics research, with particular attention to the impact of Gramm–Rudman legislation and the Strategic Defense Initiative. He will also develop a visiting-physicist program for four-year colleges and handle administrative responsibilities.

Condell was scientific officer in physics with the Office of Naval Research

Education fellow sought

The American Institute of Physics has established a new program to support an "AIP senior-staff education fellow." AIP will select a fellow to work for one or two years at AIP headquarters in New York, at the new office in Washington, DC, at AAPT headquarters in College Park, Maryland, or, in rare cases, at the individual's home institution. It is anticipated that the fellow generally will be on sabbatical, on a leave of absence or retired. The senior-staff education fellow will be paid a salary corresponding to his or her regular pay.

AIP's educational-policy committee has established a search committee to select the first senior-staff education fellow. The members of the committee are Gerald F. Wheeler of Montana State University (chairman); Peggy A. Dixon of Montgomery Community College in Tacoma Park, Maryland; Joe P. Meyer, a high-school teacher in Oak Park, Illinois; and John W. Layman of the University of Maryland. Meyer and Layman are former presidents of AAPT.

from 1966 to 1973 and director of the physics division at ONR from 1973 to 1984. In 1971–72 he was liaison scientist in London for ONR and in 1980–81 he was ONR chief scientist in London. He was assistant to the director of ONR from 1984 to 1986.

Condell studied at the Catholic University of America, where he earned a bachelor's degree in chemical engineering in 1949, a master's in physics in 1952 and a doctorate in physics in 1959. He worked as an electronics engineer at the Naval Ordnance Laboratory in White Oak, Maryland, in 1951–52, as a research physicist at the Engineer Research and Development Laboratory in Fort Belvoir, Virginia, in 1952–58 and as a research physicist at the Laboratory for Physical Sciences in College Park, Maryland, in 1958–66.

AIP writing award goes to journalist Fisher

Arthur Fisher, the science and technology editor at *Popular Science* magazine, received the 1986 AIP Science Writing Award for a journalist. He won the award for an article called "Chaos: The ultimate asymmetry," which appeared in the January–February 1985 issue of *Mosaic*, a magazine published by NSF. Fisher received the award, which consists of a check for \$1500, an inscribed chair and a certificate, at a ceremonial luncheon held in Washington on 28 April, the first day of the APS meeting.

Fisher is a graduate of the Bronx High School of Science and New York University. He has worked at *Senior Science* and *Science World* (a magazine published by Scholastic Magazines for high-school students), Dodge Books and Harcourt, Brace. □

AIP seeks new editor

Gilbert J. Perlow, who has been editor of *Applied Physics Letters* since 1970, is retiring. A search committee has been established to look for a new editor. The members are Nick Holonyak Jr, chairman (University of Illinois), Theodore Geballe (Stanford), John Hulm (Westinghouse), Israel Jacobs (General Electric), James Krumhansl (Cornell), Rolf Landauer (IBM) and George Stegeman (University of Arizona). Recommendations are solicited by the committee and should be addressed to Holonyak at the Department of Electrical and Computer Engineering, University of Illinois, 1406 West Green Street, Urbana IL 61801.