AIP SURVEY FINDS INCREASE IN POSTDOCS

Physicists earning physics doctorates in 1986 were much more likely to accept postdoctoral positions and much less likely to take potentially permanent jobs compared with those who received PhDs the year before, according to the report on AIP's 1986 employment survey. Based on replies to the survey, done in December 1986, 62% of the new physics PhDs were doing postdocs versus 51% the year before. One-third of the 1986 physics PhDs were in potentially permanent jobs, while in 1985 nearly half were. "Thus," the report observes, "an approximate 1:1 ratio between postdocs and potentially permanent positions in 1985 became nearly a 2:1 ratio between the two groups in one year."

The proportion of foreign students among respondents to the AIP survey increased from 27% to 32% between 1985 and 1986, and foreign students earning PhDs were much more likely than US students to take postdocs. Among experimenters, for example, 74% of the foreign students were doing postdocs in 1986, and just 55% of the US students.

Commenting on the shift from potentially permanent to postdoctoral employment, the report says: "Both US and foreign graduates contributed to this shift but for different reasons. Foreign graduates by and large hold visas that restrict their employment to temporary postdocs; US degree recipients, on the other hand, choose temporary postdocs when they perceive the market to be favorable and consequently feel free to pursue specific research interests for a limited time."

The report includes tables contrasting the ability of new PhDs to continue working in their specialties in potentially permanent jobs and in postdocs. To take an extreme example, among the students doing postdocs, 76% of those who did their doctoral work in nuclear physics were continuing to do research in nuclear physics; among those who accepted potentially permanent jobs, just 10% of those with nuclear physics PhDs obtained positions in that subfield.

Newly employed PhDs in potentially permanent jobs earned a median monthly salary of $3250 in 1985–86, up from $3120 the year before. Median salaries ranged from $2000 at four-year colleges to $3570 in industry.

Physics masters earned a median monthly salary of $2300, and bachelors $1930. Bachelors working for defense contractors had a median monthly salary of $2315, while those teaching earned $1350. Those with BA rather than BS degrees in physics tended to earn less but they were more likely to have jobs.

The 1986 employment survey is available free of charge from Susanne D. Ellis, Education and Employment Statistics Division, American Institute of Physics, 335 East 45 Street, New York NY 10017.

BECKERS LEAVES NOAO FOR ESO PROJECT

Jacques Beckers, the associate director for advanced development at the National Optical Astronomy Observatories in Tucson, Arizona, is leaving that job, effective 1 August, to work for the European Southern Observatory in Garching, West Germany.

Beckers's main responsibility at NOAO was designing and planning the National New Technology Telescope, which was intended to have an effective light-gathering area of 15 meters, and he has resigned specifically because of the bleak outlook for that project. Beckers will join the design team working on ESO's Very Large Telescope, a $250 million project that received official approval from ESO's governing council last December (PHYSICS TODAY, April, page 80).

The US 15-m telescope was singled out as a top priority by the Astronomy Survey Committee of the National Academy of Sciences in 1982, and following reorganization of the national observatories and establishment of NOAO in 1983, it was decided that the instrument—intended to be the world's largest—would be a multiple-mirror telescope consisting of four 7.5-m honeycomb mirrors of the type designed by Roger Angel at the University of Arizona (PHYSICS TODAY, January 1985, page 91). Soon after that design was adopted, however, Caltech announced that it would build the 10-m Keck Telescope on Mauna Kea in Hawaii, employing a segmented-mirror technology developed by Jerry Nelson at Lawrence Berkeley Lab.

At ESO, Beckers will be responsible for a project aiming at high angular resolution by means of adaptive optics on existing optical telescopes and the Very Large Telescope. A native of the Netherlands and a naturalized US citizen, he earned a doctorandus degree in 1959 and a doctorate in astronomy in 1964, both at the University of Utrecht. From 1962 to 1979 he worked as a research physicist at Sacramento Peak Observatory and for shorter periods at the High Altitude Observatory in Boulder, Colorado. He became director of the Multiple Mirror Telescope Observatory on Mount Hopkins in 1979, and director of the advanced development program at NOAO in 1984.

AIP HISTORY GROUP WILL STUDY LARGE COLLABORATIONS

The Center for History of Physics at the American Institute of Physics has launched a study on the documentation of multi-institutional collaborations in physics and allied sciences. The objective of the project is to provide guidance on preserving meaningful historical records of large scientific collaborations.

In an initial two-year phase, the history center will study collaborations in high-energy physics, gathering information from experiments conducted since the early 1970s at Brookhaven, Fermilab, SLAC and Cornell University's Newman Laboratory of Nuclear Studies. It is anticipated that collaborations in space science and geophysics will be studied next.

History center staff will identify patterns of collaboration, define problems associated with the documentation of collaborations, test possible approaches to securing documentation and formulate recommendations for archivists at laboratories and other scientific institutions.

Partial support from the National Historical Publications and Records Commission and a commitment from NSF have permitted the history center to start up the project. A panel of distinguished advisers has been assembled, and the project manager is Joan Warnow.

FEL INVENTOR MADEY LEAVES STANFORD FOR DUKE

John M. J. Madey is leaving Stanford University for Duke University, where he plans to build a program to explore broad scientific and medical applications of free-electron lasers. Toward the end of this year the Mark III free-electron laser will be moved from Stanford to an underground nuclear physics facility at Duke that housed a retired Van de Graaff parti-

cle accelerator. In addition, Duke has promised to build a new $2 million laboratory for a 1-GeV free-electron laser. A 1-GeV high-brightness storage ring has been built to serve as a driver for the FEL, and Madey proposes to install a long undulator in a 27-m straight section of the ring as a laser oscillator producing wavelengths down to about 200 Å.

Madey expects the team working at the FEL lab to include about 35 members, and he has mentioned the relatively favorable living conditions and costs for graduate students in the Raleigh–Durham–Chapel Hill area as one reason for his making the move from Stanford to Duke. Another major reason, he says, is the broad range of research being conducted in the Research Triangle area in interface science, semiconducting and optical materials, basic biology and biochemistry, and laser applications to medicine.

Madey earned a BA and MA at Caltech in 1964 and 1965 and a PhD at Stanford in 1970. He has been at Stanford ever since, most recently in the department of electrical engineering. He is generally recognized as the principal inventor of the free-electron laser, which he conceived as an undergraduate.

CHARO AWARDED AIP CONGRESSIONAL FELLOWSHIP

Arthur Charo, a physicist at Harvard University's Center for Science and International Affairs, has been awarded the first Congressional Fellowship sponsored by the American Institute of Physics. AIP established the fellowship program last year. Charo, who was selected for the fellowship by a committee headed by George Shaw of the University of Minnesota, will work for a Congressional office or committee during the 1988–89 academic year.

Charo received a BS from the State University of New York at Stony Brook in 1973 and an MA from Stony Brook in 1975. He continued with graduate work in chemical physics at Duke University, earning a PhD in 1981. He did postdoctoral work on molecular beams at Harvard with chemist William A. Klemperer from 1982 to 1985, when he joined Harvard's Center for Science and International Affairs as a MacArthur Foundation fellow in international security. He stayed on at the center as a staff member from 1986 to 1988.

Charo most recently has been working on strategic air defenses—defenses against cruise missiles and bombers—and their significance in different missile-defense and missile-deployment scenarios. He also has worked as a part-time consultant on missile defenses to MITRE Corporation in Bedford, Massachusetts.

In September, Charo will join a group of Congressional fellows from various professional societies for a two-week orientation program in Washington, DC, which is sponsored each year by AAAS. He hopes to find a position with the House Armed Services Committee, a member of that committee or, possibly, the Office of Technology Assessment. His main interests are in defense and arms control policy.

JOURNALIST PRESTON WINS AIP AWARD FOR SCIENCE WRITING

Richard Preston, a free-lance writer based in New York City, is this year's winner of the award for science writing in physics and astronomy that the American Institute of Physics confers annually on a journalist. The 1988 award recognizes Preston's *First Light* (Atlantic Monthly P., New York, 1987), which is about the search for quasars at the Hale Telescope on Palomar Mountain in California. The book conveys the human side of observational work.

Preston was presented the award, which consists of a check for $3000 and a citation, on 18 April at a ceremony in Washington, DC. Morgan Entrekin, Preston's editor at Atlantic Monthly Press, also received a citation.

Preston received his BA from Pomona College in Claremont, California, and his PhD in English literature from Princeton University in 1983. He lectured in English at Princeton in 1983 and worked as a writer for the university's development office in 1984–85.

AIP MAKES FIRST CHILDREN'S SCIENCE WRITING AWARD

The American Institute of Physics has made its first annual award for children's science writing to the authors and illustrator of *Splash! All About Baths* (Little, Brown, Boston, 1987).

The authors of the book, Susan Kovacs Buxbaum and Rita Golden Gelman, first met 24 years ago, when they both had four-year-old daughters. They have collaborated on two other children's science books and on a crafts book. Their editor at Little, Brown, Karen Klockner, selected the illustrator for *Splash!*, Maryann Cocca-Leffler.

Buxbaum, Gelman and Cocca-Leffler share a $3000 prize, and each receives a certificate of congratulation and an inscribed Windsor chair.

Buxbaum, a graduate of Mount Holyoke College and a former medical researcher, currently is field director for the elections unit at ABC News. Gelman, who writes full-time, has done more than 70 children's books. She has a bachelor's degree from Brandeis University and a master's in anthropology from UCLA. Cocca-Leffler is a graduate of the Massachusetts College of Art and has done illustrations for many major textbook publishers as well as *Parents* magazine and *The Boston Globe*.

MINER IS REELECTED SPS PRESIDENT FOR TWO-YEAR TERM

George K. Miner of the University of Dayton has been reelected to a two-year term as president of the Society of Physics Students. SPS is a national organization with about 7000 student members in chapters at over 500 colleges and universities. SPS includes Sigma Pi Sigma, the national physics honor society, and it is part of the education division of the American Institute of Physics. It currently has its national office at one of AIP's locations on Long Island, but will soon move with the education division to Washington.

Miner received his BA in 1958 and his MS in 1959 from Notre Dame University; he earned a PhD in physics at the University of Cincinnati in 1965. He taught physics at Thomas More College from 1964 to 1976, rising from instructor to full professor. He joined the University of Dayton as an associate professor in 1976 and became a full professor in 1983. He has done research on electron paramagnetic resonance of rare earths in flourites and on transport properties in semiconductors.

In other news, three student members of SPS have received $1000 SPS scholarships for 1988–89: Timothy P. Grayson of the University of Dayton; David G. McCoy of Texas A&M University; and Urszula W. Tajchman of West Virginia University. ■