

CHINESE TEAM TAKES FIVE GOLD MEDALS IN XXII PHYSICS OLYMPIAD

The XXII International Physics Olympiad was held this year in Havana, Cuba, in July, and this in itself made the event a singular experience for the US contestants. "It was interesting to see one of the last real Communist countries in the world," says Derrick Bass, a member of the US team who came away with a gold medal. Arthur Eisenkraft, a high school teacher who has coached the US team since the first year it participated in the competition (1986), says this time "it felt like we were entering a time warp."

The big news this year was the performance of the team from the People's Republic of China. The Chinese scored the Olympiad equivalent of a grand slam, with each member of the five-person team claiming a gold medal. "The Chinese team was amazing," says Bass. "We were awed."

The international competition, which took place on 1-9 July, drew 149 high school-age competitors from 31 countries. The exam consisted of three theoretical problems, which had to be solved in 5 hours, and one experimental problem to be solved in 4-1/4 hours. As is customary, physicists from the host country devised the exam.

The stellar performance of the Chinese was nearly equaled by the Soviets, who took three gold medals, including the top score. The Soviet Union's Timour Choutenko obtained 48.2 points out of a possible 50, just edging out Canada's Michael Montour of Duncan, British Columbia, who had 47.8 points.

For the American team, Bass took the only gold, while R. Michael Jarvis of Bedford, New York, and Eric D. Miller of San Francisco earned a silver medal and honorable mention, respectively. The other two US competitors were Jason Sachs (Middletown, New Jersey) and Theresa Lynn (Durham, North Carolina), who placed first among the five female contestants.



Members of US team pose in Havana: (from left), Eric Miller, Jason Sachs, Derrick Bass, Theresa Lynn and R. Michael Jarvis.

This is Bass's second Olympiad medal; two years ago he won a bronze at the XX Olympiad in Warsaw, Poland. "I was really surprised," Bass told PHYSICS TODAY. Having one competition under his belt didn't hurt. "It was easier for me this time around," Bass said. "I found I could plow my way through a problem even when I wasn't sure what it was about at first. In Poland the questions had tricks to them."

Training pays off

The US team is organized by the American Association of Physics Teachers. Funding for the team is handled by the American Institute of Physics; to date, contributions for the 1991 team have been made by several AIP member societies and 14 corporations.

The five members of the US team were selected from an initial pool of 450, who took a written exam last February. The top 75 scorers were given a second, somewhat more difficult exam in March. That group was

further narrowed to just 20, who then attended a training camp at the University of Maryland, College Park, in June.

Fourteen hours a day for seven straight days, the teenagers were drilled and lectured and tested by Eisenkraft (Fox Lane High School, Bedford, New York) and Larry Kirkpatrick (Montana State University), the team's academic directors, with assistance from Avi Hauser (AT&T Bell Labs). At the end of the session the five finalists were chosen.

Though a week of intensive physics is a pretty restrictive diet, Eisenkraft says, it pales in comparison to the Chinese and the Soviets, whose training typically runs for two months or more. Although such a strategy seems to have paid off this year, Eisenkraft says, he doesn't anticipate adopting it for the American team. "It would be quite intrusive into the kids' personal lives."

For Eisenkraft the outcome of this year's Olympiad was a personal victory in more ways than one. Two

years ago he began tutoring a couple of his best students during his spare time. They reviewed problem sets and proofs together, and he gave the students books—including college texts—and experiments to work on at home. One of those students was Jarvis.

Looking ahead

Of the five American contestants, four have now entered college: Bass and Lynn are at Harvard, Sachs is at MIT and Jarvis is at Caltech. Eric

Miller has begun his senior year at San Francisco University High School.

Olympiad organizers are also looking to the future. Next year's competition will be held in Helsinki, Finland. And the following year? For the first time ever the competition will be hosted by the United States. Leon Lederman of the University of Chicago is head of the committee organizing the 1993 Olympiad.

—JEAN KUMAGAI

AIP, APS AND AGU NAME 1991-92 CONGRESSIONAL FELLOWS

The American Institute of Physics, The American Physical Society and the American Geophysical Union have selected a new group of physical scientists to spend a year working in Washington, DC. The Congressional Science Fellows for 1991-92 are: Rosalyn B. Ritts (AIP); Peter D. Saundry (APS); Tina M. Kaarsberg (APS); and Vivian Pan (AGU). Saundry and Pan begin their one-year terms on 1 September; Ritts and Kaarsberg will start in January.

The new fellows will attend a two-week orientation this month to be initiated into the Congressional scene and to meet some of the key science policy staff members. They will then interview for positions in Congressional offices and committees.

Prior to his appointment as APS fellow, Saundry was a researcher at the University of Southern California's ultra-low temperature laboratory. His work there included the study of low-temperature fluids and the design of experimental apparatus used in the millikelvin range. He also worked on environmental issues for the Sierra Club, and he currently chairs the club's Clean Coastal Waters Task Force.

Saundry received a BSc from Southampton University in 1982, an MS from Adelphi University in 1984 and a PhD in physics from USC earlier this year.

Kaarsberg, the other APS fellow, has been a staff member in the APS Office of Public Affairs since fall 1990. Among other things, working with Robert Park, the head of the public affairs office, she organized the society's first Congressional Day, which took place during the April APS meeting and brought together 130 physicists and 175 Congressional leaders and their staff members (see PHYSICS TODAY, July, page 67).

Kaarsberg received a BA from Yale

University in 1982, and an MA in 1983 and a PhD in 1988 from the State University of New York, Stony Brook. She then became an assistant research physicist at the University of California, Los Angeles, and did experimental work on rare kaon decay at Brookhaven National Lab.

The 1990-91 APS science fellow was Priscilla S. Auchincloss, who worked as a legislative assistant to Louise Slaughter, a Democratic US representative from New York. Auchincloss reviewed legislation related to energy, telecommunications, technological competitiveness, the manned space station and the SSC, among other things. After her term expired in August, she returned to her postdoctoral position in the department of physics and astronomy at the University of Rochester.

Ritts, the new AIP fellow, is a researcher at Stanford University's Center for Integrated Systems, where as a graduate student she designed a new class of circuits known as merged BiCMOS to meet speed and power requirements for integrated circuit technologies with dimensions smaller than 1 micron. Her other interests include transnational trade and the funding of university research and education. She has served as a mentor in the Stanford Women's Science and Engineering Network for the past four years.

After earning a BS from Duke University in 1984, Ritts worked for Cordis Corporation for two years before returning to Stanford, where she received an MS in 1988 and a PhD in electrical engineering this year.

The 1990-91 AIP fellow is William T. Elam; his term ends in December. Elam has been working for Senator Kent Conrad, Democrat of North Dakota, who sits on the Senate Energy and Natural Resources Committee. Much of Elam's work has centered

around the Senate energy bill, which was introduced in February.

Pan, the new AGU fellow, was most recently a research associate in the geology department at Arizona State University. Her research there was in experimental geochemistry of silicate planetary bodies, including the determination of the mineral melt fluid chemistry of magnetic systems. Pan says she plans to spend her fellowship year working on science education issues.

Pan earned a BA from the State University of New York, Binghamton, in 1983, and an MPhil and a PhD in geology from Yale in 1985 and 1989, respectively.

The outgoing AGU fellow is Jeffrey Payne, who spent his term working on energy and environmental issues for Congresswoman Jolene Unsoeld, Democrat of Washington. One of his projects culminated in Unsoeld introducing an energy bill emphasizing greater conservation and efficiency and better use of renewable energy sources; the bill is still pending. After an "enlightening" year on Capitol Hill, Payne says he would like to continue doing science policy work.

IONSON BECOMES HEAD OF RESEARCH AT POLAROID

A few years ago, as director of the office of innovative science and technology for the Strategic Defense Initiative, James Ionson took a trip to Cambridge, Massachusetts, to give a talk about Star Wars at MIT. Though he was by that time no stranger to controversy, he was unprepared for what he encountered: Rows of protesters had draped themselves in black capes and donned masks of the sinister antihero Darth Vader. And so it is with some satisfaction that Ionson now returns to Cambridge, this time to become vice president and director of research at Polaroid.

An astrophysicist by training, Ionson spent years as a researcher at NASA's Goddard Space Flight Center before joining SDIO in 1985. He attended the University of Michigan where he earned a BS in 1972, and two master's degrees in 1973 and 1975. He then attended the University of Maryland, where he received a PhD in physics in 1977.

At SDIO Ionson oversaw defense research being done by some 200 companies, 60 universities and 1000 scientists. By his own estimation about \$1 billion in research contracts was awarded during his three-year