

in the Science/Math Education Project.

AARP project

In 1984 the American Association of Retired Persons launched a somewhat similar volunteer project in the whole DC area, including the Maryland and Virginia suburbs, involving just older scientists and engineers (see *PHYSICS TODAY*, July 1984, page 67). It has been less successful than the Federal City Council's project precisely because the difficulty of placing volunteers satisfactorily was underestimated. Charlotte Nusberg, who has coordinated the project for AARP, says that out of some 250 people on the volunteer roster they assembled, perhaps 100 ended up doing something useful, even though placements were not limited to schools.

Community agencies are not accustomed to dealing with professional volunteers, Nusberg says. Furthermore, particularly with the schools, it often turned out that there was no follow-through after the initial friendly contacts between AARP and school placement officers. According to Nusberg, the demonstration project did lead to some significant achievements, especially in forging an *esprit de corps* among participants and in raising the consciousness of professional societies to the needs of their older members. But AARP has decided not to give the project further support as a national model, and another sponsor is now being sought.

The Federal City Council's project, on the other hand, does appear to be successfully creating a national model. The Triangle Coalition for Science and Technology Education, which promotes the building of education alliances among community leaders, is distributing copies of a manual based on the project, "Scientists in the Classroom: One School District's Experience with Science and Mathematics Volunteers in Elementary and Secondary Schools." The Triangle Coalition and the National School Volunteer Program have submitted a proposal to NSF to initiate similar projects in ten other communities where alliances are forming. The National School Volunteer Program supports another successful science volunteer project in Salem, Oregon.

The Science/Math Education Project may well be the largest project of its kind in the US, according to John Fowler of the Triangle; it may also be one of the few that has been subjected to a careful independent evaluation. The review was completed last year by the Bureau of Social Science Research Inc., a consulting firm in Wash-

ington. "The most overwhelming impression in looking at the volunteer coordinator's role and activities was that the level of effort required was underestimated," the evaluation said. "A major responsibility of the volunteer coordinator during the demonstration phase of the project was to find schools and teachers willing to host professional volunteers and then see that the principals and teachers fulfilled their role in making contact with volunteers and developing appropriate activities for them. As the first year of the program progressed, it became clear that this portion of the volunteer coordinator's responsibilities was much more difficult and time-consuming than had been anticipated."

Despite those difficulties, "the number of professionals applying to

become part of the project exceeded expectations and preparations. Those who participate in the program wish to continue to participate. Teachers and principals view the project as beneficial and are willing to continue to apply for volunteers for their schools. Finally, there is evidence that working with a volunteer is enjoyable for students, that they feel they do perform better as a result of working with a volunteer and that their attitudes become more positive about science and math coursework and careers."

Copies of the Federal City Council's report on the project, "Scientists in the Classroom," can be obtained for \$10 from the National School Volunteer Program, Suite 300, 701 North Fairfax Street, Alexandria VA 22314.

—WILLIAM SWEET

AIP REPORTS ON SALARIES OF MEMBER-SOCIETY MEMBERS

Not all physicists necessarily are torn about whether they'd rather be dead or in Philadelphia, à la W. C. Fields. But if they were working in 1985 and their main concern was making money, they would have done a lot better living in Albuquerque, New Mexico. The median cost-of-living-adjusted salary of individuals belonging to member societies of the American Institute of Physics was \$52 800 in Albuquerque that year, while in Philadelphia it was \$32 300.

This is one of the findings in a new report, "1985 Salaries: Society Membership Survey," which was released late last year by AIP's Education and Employment Statistics Division. The report is based on a survey of about one-sixth of AIP's US and Canadian member-society membership. The survey was carried out in spring 1985,

and the response rate was 65%.

Physicists in Philadelphia can take heart that New York City continues to be the most expensive city in the continental US. Upon adjustment for the cost of living, the median salary of member-society members in New York drops from \$49 000—one of the highest metropolitan salaries in the country—to \$36 400.

Philadelphia physicists also can take solace in the fact that their relatively low salary position largely results from their heavy employment at colleges and universities, many of them very prestigious. Albuquerque, on the other hand, has the lowest proportion of academically employed members in the list of selected metropolitan areas included in the AIP report.

Place and type of employment gen-

Salaries for member-society members with PhDs who changed employers between 1983 and 1985

1983 Employer/ 1985 Employer	Median salary	Mean salary	Median age	Number in sample
University (postdoctorates) University	\$19.5 K 30.6	\$20.2 K 31.3	33	21
University (non-postdoctorates) University	33.6 45.0	39.4 49.9	40	41
University Industry	21.4 43.7	24.8 46.6	35	33
Industry Industry	45.0 55.0	49.1 59.0	42	87
Government & government labs Industry	44.1 55.0	46.1 61.3	44	20

erally are the dominant factors accounting for differences in salary levels and salary increases between 1983 and 1985. PhD physicists working in industry commanded the highest median salary, \$52 600, in 1985; those employed at universities on 11- to 12-month contracts earned a median of \$42 700; at four-year colleges, those on 9- to 10-month contracts earned a median of \$30 000.

Member-society members staying with the same employer generally saw their salaries increase at about twice the rate of inflation from 1983 to 1985. Their median salary in industry went up by 15.5%, in four-year colleges by 14.8% and at universities (on a 11- to 12-month basis) by 17.9%. Median salary increases varied quite strongly among those who switched employers. Those who switched universities, for example, saw their median salary increase by \$11 400. Those who changed industrial employers registered a median increase of \$10 000. The 33 sample respondents who moved from university to industry positions chalked up a median increase of \$22 300—an increase of more than 100%.

The gap between men's and women's salaries in academia and industry is closing. In 1981 women's sala-

ries lagged behind men's by 25% at colleges and universities and by 16% outside the academic world. During the next four years women physicists consistently received proportionally larger salary increases than men, so that their salaries lagged in 1985 by 12% inside academia and 10% outside. At entry level, women earned on the average only 3% less than men in 1985, but at the most experienced level the gap was 27%. These findings are consistent with a detailed profile of The American Physical Society's members, which was based partly on AIP survey data and partly on information from the National Academy of Sciences (see page 107).

Overall, median salaries for members of AIP member societies increased to \$44 100 in 1985 from \$40 000 in 1983. "The aging of the university professoriate... continues to be a major concern," the report notes. Over 60% of the society members who hold a professorial rank in a university are full professors, and their median age climbed to 52 in 1985 from 49 in 1981.

Individual copies of the 1985 salary report are available free of charge from the Education and Employment Statistics Division, AIP, 335 East 45 Street, New York NY 10017.

tory courses.

Foreign students represented 40% of all physics graduate students in the US in 1986-87, 44% of first-year physics graduate students and 51% of physics TAs. Their overrepresentation in the ranks of the teaching assistants may be related to their greater preference, in comparison with US students, for theoretical over experimental research. Research assistantships, the other major support mechanism, are given primarily for experimental work.

The AIP survey found that nine out of ten physics departments screen foreign candidates for assistantships with some kind of written English test, and that three departments out of four use the Test of English as a Foreign Language. But department heads do not generally consider TOEFL to be an adequate test of spoken English skills. Despite that fact, only about a third of the physics departments require any kind of oral test. Instead, most monitor the reactions of students to the TAs and provide remedial or corrective action where necessary. TAs are offered formal instruction and informal opportunities to practice English at most universities. When a TA's English is found to be inadequate, the most prevalent solution is to assign the assistant to tasks that do not involve direct student contact.

Although three-quarters of the departments noted undergraduate complaints about the communication skills of TAs who are not native English speakers, department heads disagree about whether the heavy use of TAs has caused or may cause serious problems. "As might be expected," the AIP report says, "those departments that felt that the screening was good were less likely to have encountered problems."

The report concludes: "Although

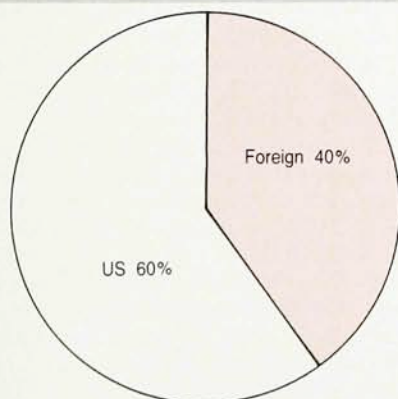
SURVEY EVALUATES USE OF FOREIGN TEACHING ASSISTANTS

A majority of PhD-granting physics departments responding to a recent survey reported that 50% or more of their teaching assistants were from abroad. AIP's Education and Employment Statistics Division sent the survey in fall 1986 to the heads of the 172 PhD-granting departments in the US, and the response rate was 80%. In 76 of the 138 responding depart-

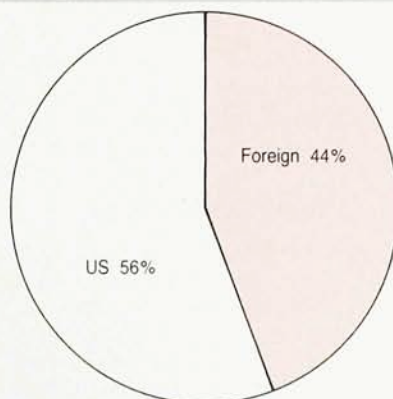
ments half or more of the teaching assistants were foreign citizens. The concentration of foreign teaching assistants was most frequently between 40% and 60%.

Three out of five foreign-born TAs were responsible for supervising labs, and about half graded papers; only 17% taught recitation sections and just 10% taught required or introduc-

TOTAL GRADUATE STUDENTS
11 400



FIRST-YEAR GRADUATE STUDENTS
3 700



TEACHING ASSISTANTS
4 300

