

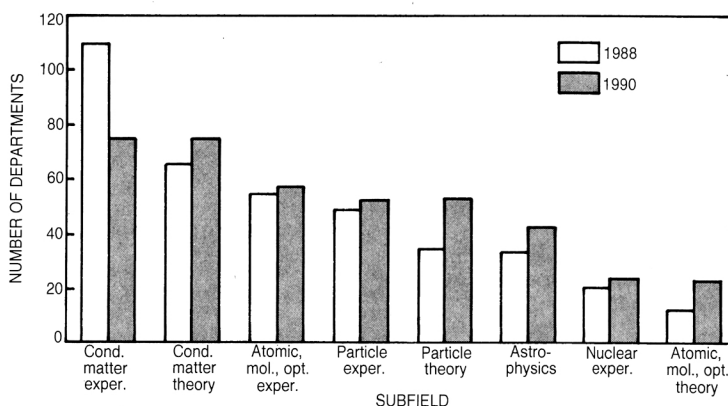
ACADEMIC SURVEY FINDS LIMITED JOB OPENINGS EXCEPT IN SOME SUBFIELDS

While the number of openings in US physics departments continues to be small, there are significant shortages of qualified candidates in certain subfields, according to the latest academic workforce survey conducted by The American Physical Society and the American Institute of Physics.

Since 1986 the average number of professorships that need to be filled each year has remained at about 6% of the faculty size. "There are comparatively few academic positions for young physicists," the survey report said. Less than half of the academic openings—2.4% in 1989 and 1990, the years covered by the survey—are associated with retirements. Although two out of five physicists who now hold professorships will be eligible for retirement by the year 2000, it seems we have yet to see an increase in job openings.

APS and AIP have been conducting the academic workforce survey every two years since 1986 (see PHYSICS TODAY, February 1989, page 101). The latest survey polled physics department chairs at all 170 PhD-granting institutions in the US, and an additional 130 chairs at schools that grant either physics master's degrees or bachelor's degrees. As in the previous two surveys, the response rate this year was very strong—86% of the departments participating.

Like its predecessors, the survey identifies changes in spot demand for certain physics subfields (see figure). Physics department chairs rated the overall supply of qualified candidates in 1989 and 1990 as adequate. However, chairs of PhD-granting departments continue to report too few qualified candidates in condensed matter experimental physics and atomic, molecular and optical experimental physics. By contrast, the supply of elementary particle experimenters and theorists in elementary particles, nuclear and condensed matter is more than adequate. Condensed matter experimenters are still the most sought-after group, although there has been a dramatic drop in the



Number of PhD-granting departments—out of a total of 170—seeking candidates in certain subfields in 1988 and 1990. Although still the most sought-after discipline, demand for condensed matter experimenters has fallen sharply. Other subfields have experienced small increases in demand. (Data for nuclear theory and plasma physics were too small to report.)

number of departments seeking them: Approximately 75 departments have been looking for condensed matter experimenters in 1990, down from about 110 in 1988. This decrease has been offset by smaller increases in the demand for candidates in particle theory, condensed matter theory and astrophysics. "These changes in the areas of specialization... appear to be consistent with many of the recent changes in funding availability," the report says.

Respondents from BS-granting schools say they have difficulty finding candidates who can both teach and do research. Although they report an abundance of applicants, BS department chairs consider themselves lucky if "five in one hundred" have the requisite science, teaching and social skills to function well in an educational environment. Respondents blame the paucity of good candidates on the lack of attention given to developing teaching skills during the graduate school years.

"The supply and demand picture for the academic workforce in physics

has become more complex in 1990," the survey report concludes. While there are still limited academic openings, this situation is expected to ease slightly when current professors retire. However, the production of new PhDs has remained at a steady state for several years and the unpredictable state of funding for physics research may discourage students from entering graduate study in physics.

The survey report was co-authored by Bernard Silbernagel of Exxon Research and Engineering Company, who is a member of the APS membership committee, and Roman Czujko of the AIP statistics division, which assisted in preparing and analyzing the survey.

The full-length report on the 1990 Physics Faculty Workforce Survey will be distributed to the department chairs who participated, and additional reporting will appear in an upcoming issue of the *Bulletin of The American Physical Society*. Copies of the report are also available from APS, 335 East 45 Street, New York NY 10017. ■