while in the New England and Mid-Atlantic states, nearly 40% did so. In those areas where the student-age population is expected to grow in the next decade, namely the West Coast, the Western Mountain regions and certain parts of the South, students typically had lower graduation rates and math aptitude test scores, and they studied less science. The projected population growth may further strain the education systems in these areas, the report says.

The ubiquitous practice of "tracking," which channels students into separate curricula based on their career plans and, to a certain extent, their abilities, seems to exclude many high schoolers from taking more than the minimum amount of science. A small, academically elite group made up of the 28% of students who were both in a college preparatory track and scored above average on achievement tests accounted for four-fifths of the enrollment in calculus and two-thirds in physics. Very few students who were not in a college preparatory track took any advanced math or science courses, regardless of their aptitude.

For a copy of "Who Takes Science?" contact Roman Czujko, Education and Employment Statistics Division, American Institute of Physics, 335 East 45 Street, New York NY 10017. —JEAN KUMAGAI

AIP SURVEY FINDS WEAKER 1988–89 JOB MARKET

The job market for physics graduates deteriorated somewhat in 1988, according to the latest employment survey prepared by the American Institute of Physics. The survey found that 1988 physics master's and bachelor's degree recipients took longer to find jobs, that PhD recipients commanded lower starting salaries and newly employed PhDs expressed lower job satisfaction than their counterparts did in 1987.

The survey is conducted annually by AIP's Education and Employment Statistics Division to find out how those physics and astronomy graduates who were interested in full-time employment, as opposed to further schooling or temporary postdoctoral positions, coped with the transition from school to the workplace during the half-year following graduation.

Only 38% of physics bachelor's degree recipients and 36% of master's degree recipients had jobs lined up when they graduated, compared with 44% for both groups the previous year; among 1988 PhD recipients, 11% had jobs upon graduation, compared with 13% the year before. The proportions of graduates who spent more than seven months searching for employment also rose slightly in 1988.

Newly employed PhDs showed lower job satisfaction than did their 1987 counterparts. Overall, more than a third of the PhD holders responding to the survey said they were interested in changing jobs, compared with 22% the previous year. Job dissatisfaction rose most sharply among those hired by industrial employers: 33% said they were interested in a job switch, compared with only 13% a year earlier.

The average monthly salary for newly employed PhDs fell from $3500 in 1987 to $3340 in 1988. During the same period, the average monthly salary for newly employed astronomers jumped from $2300 to $2900, a 26% increase. A smaller rise was seen in the average salary for physics masters, from $2400 to $2580, while the average salary for physics bachelors remained about the same at $1920 per month.

Industry remained the largest employer of new physics PhD recipients who took permanent jobs, but the proportion hired by industry fell by 13 percentage points from the previous year, from 52% in 1987 to 39% in 1988. This significant drop was coupled with smaller increases in hiring by other types of employers. For example, the proportion of new PhDs hired by government labs rose from 8% in 1987 to 14% in 1988.

Industry was also the biggest source of jobs for physics bachelor's and master's degree recipients, and its relative position grew in 1988, the survey found. From 1987 to 1988, the proportions of physics masters and bachelors working for industry rose from 50% to 55% and from 47% to 50%, respectively.

The 1988 employment survey is available from Susanne D. Ellis, Education and Employment Statistics Division, American Institute of Physics, 335 East 45 Street, New York NY 10017. —JEAN KUMAGAI

EC FRAMEWORK PROGRAM ADOPTED FOR 1990–94

In December the 12 member nations of the European Community have adopted a new framework program, amounting to 5.7 billion ECUs (approximately $6.25 billion), for European research and development during the years 1990–94. The EC Commission had proposed a hefty increase for the framework program, but members opted instead for a no-growth budget—the previous five-year program amounted to 5.4 billion ECUs.

The largest single elements within the framework will remain the ESPRIT and RACE programs, which are devoted to information technology and telecommunications, respectively. In addition, a "European Nervous System" is to be established—a supernetwork linking government and industry computer-communication systems throughout Europe.

Environmental research programs in climatology, marine science and atmospheric chemistry—EPOCH, MAST and STEP—are to be expanded to embrace regions beyond the EC's boundaries, social and economic aspects of climate change and environmental monitoring technologies.

Continuation of the Joint European Torus project to 1996 is recommended, subject to ministerial approval, and it is anticipated that construction of a successor fusion reactor might begin toward the end of the new framework period.

New initiatives include a program to send graduates for two-year postdocs at institutions outside their native countries and a project exploring subterranean disposal of radioactive waste, with pilot sites in Belgium, France, West Germany and Britain.

FRG DESIGNATES NEW 'SPECIAL RESEARCH AREAS' IN PHYSICS

The German Research Society, the Federal Republic's equivalent of NSF, has designated eight new *Sonderforschungsbereiche*, or "special research areas"—cross-disciplinary and cross-institutional collaborations deemed worthy of long-term support. Two of the newly established special research areas are in physics.

A *Sonderforschungsbereich* described as dedicated to "physical foundations of low-temperature plasmas" has been set up at the University of Bochum, with participation by the University of Düsseldorf and the Jülich Research Center (the KFA). Researchers at the three institutions have been collaborating since 1986 in a plasma working group and wish to explore low-temperature phenomena, which have received less attention than high-temperature plasmas de-