

**Graduate Enrollment Near Normal Despite Draft, Budget Cuts**

Threat of the draft and federal budget cuts appear to have changed the plans of some individual students, but graduate physics departments expected near normal enrollments as classes resumed this fall. Such was the finding of a preliminary survey taken during the summer by the American Institute of Physics. A more detailed survey, begun 1 Oct. after classes resumed, will provide exact numbers.

The surveys are part of a continuing effort by AIP's Committee on Physics and Society (COMPAS) to assess trends in physics, particularly the impact of major shifts in government policy. The first, conducted last winter, was concerned only with the effects of federal budget cuts (PHYSICS TODAY, April, page 87). The October survey will cover both enrollment and finances.

This year's June graduates were the first class to cope with the elimination of graduate-student draft deferments. Betty Vetter, executive director of the Scientific Manpower Commission had warned (PHYSICS TODAY, June, page 71) that her commission and the Council of Graduate Schools had found that 65% of potential first-year graduate students could be affected by the announced policy of drafting older men first. Since she spoke, however, draft calls have been unusually low; the November call for 10 000 men is the lowest in three years.

793 departments received questionnaires in the summer survey; nearly half, including a majority of the graduate schools, responded. Department chairmen said that of the physics majors graduating from schools that offered only a bachelor's degree, 24% fewer than last year planned to go on to graduate school. For graduates of schools also offering a master's or PhD, the corresponding figure was 19%. The number of those going into military service (voluntarily or otherwise) rose 12% and 8% respectively for the two classes of institution.

At the same time graduate depart-

ment chairmen said they expected nearly as many first-year students as in a "normal" year. A few chairmen said they were admitting students this year who would not have been admitted a year ago.

A reduction in the amount of money available for support of graduate students was an important factor. One prestigious school reported that of 105 first-year graduate students admitted, only 29 accepted: Last year the same school had nearly 100 students beginning graduate work. Many of those who chose to go elsewhere, or not to attend graduate school at all, were unable to obtain the financial aid they needed.

Schools faced with a potential drop in graduate students made other plans to staff elementary laboratories and recitation sections. One chairman said frankly he was prepared to drop the labs. Others said they might use undergraduates or spread the

teaching load of their faculty members. Many mentioned "4-F's, foreigners and females," all unaffected by the draft.

**House Committee Hits Foreign Research; DoD Trims Spending**

One victim of this year's round of federal research budget cutting is support of scientific projects in foreign lands. After issuance of a report by the House Research and Technical Programs Subcommittee criticizing grants to foreign scientists, the Department of Defense ordered a tightening up.

Rep. Henry S. Reuss (D-Wis.), chairman of the Committee on Government Operations subcommittee, estimated annual spending for research projects outside the US at about \$20 million and noted that only about one fourth is being spent in underdeveloped countries, lands that need dollar aid or have surpluses of US-owned

**RESONANCES**

**East-West scientific exchange continues** despite the August invasion of Czechoslovakia. Both the State Department and the Foreign Secretary's office of the National Academy of Sciences report only temporary disruption immediately following the invasion. The US did cancel some high-visibility exchange programs, including concert tours and US participation in a trade fair.

**Physicists' response to the invasion** from at least one group was immediate. About 260 of some 800 attending a high-energy conference in Vienna signed a message to their colleagues in Czechoslovakia deploring the invasion and expressing "fervent hope for a prompt departure of foreign troops from their country."

**A Czechoslovak appeal** for physicists around the world to join in protest was received by PHYSICS TODAY a few days later. In a four-page "appendix" to the *Czechoslovak Journal of Physics A and B*, the editors asked for help. The final three lines said Soviet troops had occupied their offices on 22 Aug. and "prevented any editorial activity."

**Italy and West Germany will support the 300-GeV** accelerator planned by CERN. Austria, Belgium and France already had agreed; Great Britain had dropped out. British withdrawal has forced a scaling down of the plans; revisions were to be announced 2 Oct.

**Canada has stopped work on its 3.8-meter telescope.** The government had already spent \$4.5 million on the British Columbia project.

local currency. Three fourths go to countries that already have a surplus of dollars.

The subcommittee report, "Foreign Research Dollar Drain," concludes that dollar grants to foreign scientists for nonurgent research is inappropriate at a time when the nation is trying to eliminate an international payments deficit. The subcommittee particularly accused government agencies of imposing lax criteria and criticized the Budget Bureau, the administration's financial watchdog, for merely asking agencies to adopt tighter controls rather than requiring them.

The criticism is directed at the Departments of Defense and Health, Education and Welfare, the Atomic Energy Commission, the National Science Foundation and the National Aeronautics and Space Administration. The report recommends two immediate actions. First, new foreign research financing should be limited to just those projects urgently needed by the US that can not be carried out here and that a foreign government will not finance itself. Second, all current, uncompleted projects should be reviewed and a report submitted within three months to the subcommittee on whether such projects would meet the new-project limitation.

At the end of July John S. Foster Jr, director of defense research and engineering at the Department of Defense, announced new review and evaluation procedures for research proposals, a fine screening of all proposals, closing of two of three European science offices and limitation of support to urgent projects only. DoD foreign research is the subcommittee's biggest target because it represents about 40% of the total. The department spent \$8 120 000 on research outside the US in 1967 and put more than 70% of that into developed countries.

### **AAS Plans Quarterly Journal, Increased Subscription Rates**

A new publication and increases in subscription rates and page charges for existing journals have been announced by the American Astronomical Society.

Lodewyk Woltjer, coeditor with Norman H. Baker of the *Astronomical Journal*, said the new *Bulletin of the American Astronomical Society* will

publish all unrefereed material that now appears in the *Journal*. This material includes observatory reports and abstracts of papers presented at society meetings. The *Journal* expanded its scope this year to include papers on astrophysical as well as astronomical subjects. The new quarterly will be patterned after the *Bulletin of the American Physical Society*.

The first issue of the new publication will appear in January. Members will pay \$2 a year, nonmembers \$5. Woltjer said he expected that members' dues, now \$14 a year, would be adjusted to include the *Bulletin*.

Next year the society will drop its requirement that members subscribe to either the *Astronomical Journal* or

the *Astrophysical Journal*. At that time, member rates of the *Astronomical Journal* will rise from \$9 to \$12, while *Astrophysical Journal* member rates will rise from \$18 to \$25. Non-member rates will go to \$20 and \$50, respectively. Members who subscribe to both journals and the *Bulletin* will receive the *Astronomical Journal* for \$8 rather than \$12, however.

Page rates for the *Astronomical Journal* will go up with the August issue from \$25 to \$45 for papers and observatory reports and to \$30 for abstracts. *Astrophysical Journal* page rates will rise with the 1 Nov. issue from \$20 to \$36 in the *Journal* itself and from \$30 to \$40 in the separate letters section.

### **Election Will Not Change Federal Research Support**

Whoever occupies 1600 Pennsylvania Avenue after the November elections, Richard Nixon or Hubert Humphrey, the course of government support for basic research will not be drastically altered. PHYSICS TODAY asked both camps about the candidates' positions concerning science and the role the government should play in supporting it. The conclusion: The golden years for growth in research money are over, but both Republicans and Democrats support a strong research program as essential to the general health of the country. Here are statements by both sides.

"The Republican administration under Richard Nixon will remain committed to the cause of science, a commitment dating from the administration of Dwight Eisenhower. Mr. Nixon is especially concerned about the apparent disorganization, duplication of efforts and unnecessary expense, which now characterize the nation's science effort. He plans a thor-

ough study of the problems and a streamlining to coordinate the present disparate policies and programs and is sympathetic to the idea of establishing one agency as the top science agency."

"Hubert Humphrey is never more enthusiastic than when he is discussing the potential benefits of science and technology. He was one of the strongest advocates in the Senate of basic or 'pure' research. He is chairman of the national councils on space and oceanography. Leadership of these two cabinet-level councils gives the Vice-President the chief responsibility for advising the President and keeping him informed of developments in the fields of space, aeronautics and marine sciences. He was one of the first members of the Senate to push for federal scholarship loans to science students, later included in the National Defense Education Act. Hearings under his chairmanship of a Senate government operations subcommittee paved the way for the Of-

