

Study Shows More Physicists Will Lose Federal Support

The impact of the sharp cutback in federal support in recent years has been a heavy one for the physics community according to a survey completed this spring for COMPAS, the Committee on Physics and Society of the American Institute of Physics. And the worst is yet to come, the survey indicates.

More than one fifth of the staff members of the departments responding to the special two-part questionnaire will lose all financial support for their research projects in the 1968-69 academic year. The estimate is 21% and is an acceleration of the trend that in 1965-66 saw 10% of the department members lose all such support. The figures rose to 12% in 1966-67 and 16% this year.

The survey found that the research projects of 537 staff members at 94 departments have been affected in this academic year. These findings indicate that nearly 1100 staff members at the 187 departments polled were affected this year.

Lewis Slack, AIP associate director and secretary of the committee, said, "It is clear now that some physics departments are beginning to hurt badly. The real pinch is in first application funds. This is even hitting established people who have moved and are applying for first-time support at new institutions. Even some established people have been cut off. There has been an increasing amount of concern. We decided we wanted to document this."

Questionnaires were sent to a total of 187 physics and astronomy departments that give doctoral degrees. More than 80% of these departments sent back completed forms, a return one federal official called an "unusual volunteer response." The questionnaire was in two parts. The first part dealt with qualitative information. It asked for statements concerning the limitation or abandonment of projects, deferment of expansion plans and the search for alternate financial support.

The second part of the questionnaire asked more detailed questions about actual numbers of people af-

ected in each department. Department heads were asked to give figures for the past three academic years and an estimate for the coming year. The two questionnaire forms were printed on separate sheets so that one could be returned immediately in case there was a delay in obtaining the actual figures involved.

The survey also disclosed that the growth rate in faculty, which was 9.1% between 1965-66 and 1966-67, has fallen to an estimated 4.3% between this year and 1968-69. During the years covered by the survey, the mean number of faculty members increased from 19.8 to 24.1 while the actual yearly gain in faculty slid from 1.8 to 1.0.

The number of full-time graduate students fell from a mean of 18 in

1965-66 to an estimated 16.9 for next year. Part-time graduate students are expected to make up a larger share of the total next year, an apparent result of the falling off of available financial assistance. The ratio of faculty to graduate students dropped steadily. It was 1 to 3.7 in 1965-66 and is estimated at 1 to 3.2 next year.

The appointment of postdoctorates is also due to feel the pinch from the federal support squeeze. The ratio of postdoctoral appointees to total faculty has been on a plateau of 34% for the past three years, but the department-head estimates indicate this will fall to 29%, meaning that the new post doctorate will be the first to go.

The second pressing problem facing the graduate school heads this fall, the possible depopulation of the graduate classrooms because of draft calls, was not covered in the study. However,

FACED WITH A CUT IN GOVERNMENT FUNDS, PHYSICS DEPARTMENT HEADS SAY:

"Hardest hit is the new project or the new investigator. There is nothing available for either. Ongoing projects using existing equipment stand the best chance for survival. The loss in new work not undertaken is disastrous for basic research."

"We have considered ourselves as an 'emerging' institution in physics, but it is clear that our emergence will be hindered or postponed indefinitely if new and active staff members cannot get research support."

"Our major trouble now is that we cannot get information as to whether several of our expected sources of support can help us or not."

"... It is now practically impossible for a young staff member, coming ... fresh from his PhD, to obtain grant support. This comes at exactly the time when he should be encouraged in every way possible to continue his research so as to be a productive member of the graduate staff."

"Without federal funds for research, staff and graduate students, this physics department cannot survive ... We are unable to fit out even the first floor of our new three-story physical science building without federal funds. We are operating in temporary space 10 miles from campus ..."

"We have curtailed experimental work in molecular spectroscopy ... and in experimental solid state physics ... and have abandoned a program in experimental nuclear structure."

"Our overall departmental budget, which includes both university and federal funds, decreased approximately \$100 000 from '66-67 to '67-68."

"In general the biggest effect at this point is in changing the atmosphere from an ambitious adventurous one to a very much more cautious and self-protective one. This does threaten somewhat the spirit for significant achievements in research and teaching."