

state & society

Budget outlook bright or dim, depending on your viewpoint

Although the exact dollar figure is unavailable, funds for physics research in the President's budget for fiscal year 1972 are down, especially if you take inflation into account. One educated guess is that funds for basic research in physics at universities in fiscal 1972 will be about \$120 million, down about \$5 million from fiscal 1971.

Presidential Science Adviser Edward E. David Jr is billing the budget outlook as favorable to science, pointing to an increase in research obligations of 9.3% and an increase in research at colleges and universities of 14.7%. But the Administration's emphasis is on relevance to the immediate needs of society and on the social sciences at the expense of the physical sciences. The budget is, of course, only a proposal and must await Congressional action over the next several months.

The picture for physics at NSF looks good, but the losses at other agencies, such as the Defense Department and Atomic Energy Commission, appear to be greater than NSF's gains. Furthermore, some of the DOD agencies are tending to change their definitions of basic research to include topics considered "applied research" in the past. Current estimates of projects being dropped by Federal agencies other than NSF are between \$80 and \$90 million. NSF has budgeted \$40 million to respond to the scientific pressure generated by "dumping" from other agencies. In addition, NSF has asked for \$12.8 million to pick up the 12 Interdisciplinary Laboratories being dropped by the DOD's Advanced Research Projects Agency (*physics today*, February, page 61) and \$1.8 million to support the MIT National Magnet Laboratory being dropped by the Air Force Office of Scientific Research.

The NSF budget is for \$622 million, 23% more than FY 1971. The budget includes a large increase for individual research project support (see table 1), an emphasis on the program called "RANN" (Research Applied to National Needs), increased support for projects previously funded by other agencies and reduction or elimination of direct student and postdoctoral support and institutional development.

In the Physics Section, research proj-

ect support, not including that for the National Magnet Lab, is up about \$10.2 million, from about \$31 million to \$41.2 million (see table 2).

One problem facing the Atomic, Molecular and Plasma Physics Program will be to increase its support of basic plasma research because the AEC

has tended to concentrate its plasma effort on fusion research; at the same time the program will try to meet the flood of proposals in atomic physics and other related areas.

The \$4-million increase in the Elementary-Particle Physics Program is
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Employment debated at meeting

During the joint APS-AAPT meeting, held in the New York Hilton and Park Sheraton Hotels, 1-4 February 1971, a total of 855 invited and contributed papers describing current activity in many fields of physics were delivered. At the same time, considerable activism was displayed by a small group of physicists and students concerned with the interaction of physics and society.

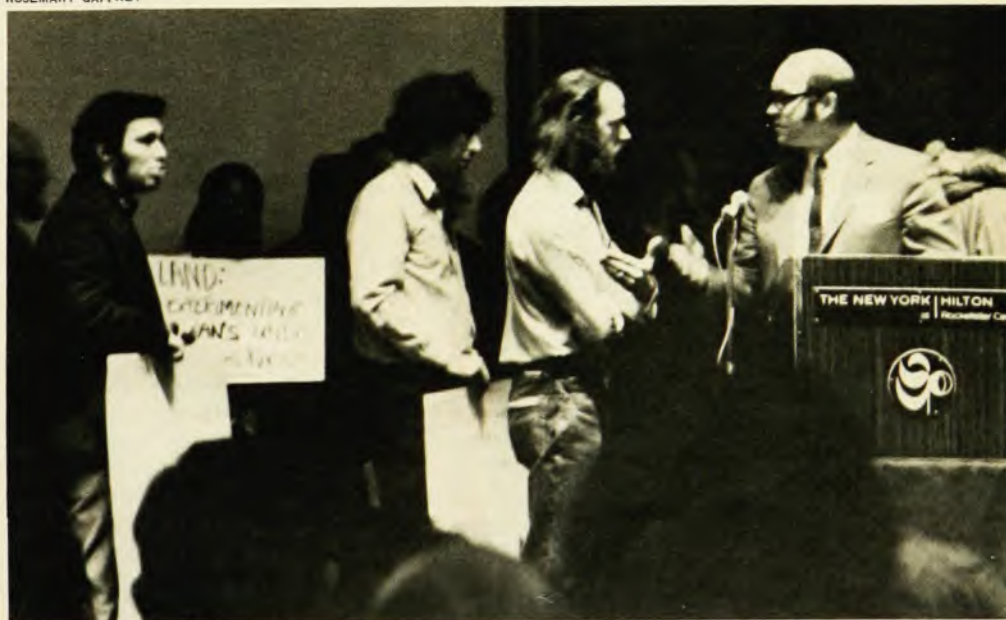
Much of the visible activism consisted of placard-carrying and leaflet distribution. Some members of Scientists and Engineers for Social and Political Action (SESPA) discussed the social significance of physics research

at sessions where staff members of the Los Alamos and Livermore laboratories presented papers.

A vociferous debate occurred during the ceremonial session, when the Richtmeyer lecturer, Edwin Land of the Polaroid Corporation, was confronted by a group of dissidents about the role of the Polaroid Corporation in South Africa. A spokesman for the group stated that the sale of Polaroid camera systems to South Africa helps that country in furthering the Apartheid program (see page 9).

There were 4640 registrants at the New York meeting. For the 1970 meet-

ROSEMARY GAFFNEY



Demonstration at APS-AAPT ceremonial session. Bailey Donnally (right), who was presiding, confronts dissidents protesting Polaroid Corp. role in South Africa.

ing in Chicago, there were 3659 registrants, and for the 1969 New York meeting, there were 5808 registrants.

Employment. As preliminary data from the AIP placement service indicates, the job situation for physicists is still rather grim. Six hundred and sixty two job hunters registered at the New York meeting; 1162 placement applications were received. Fifty six employers were present. At this meeting, there were 121 specific job openings posted. Eleven employers posted positions without giving a specified number of openings. These figures compare with the 101 employers and 1347 placement registrants at the 1970 Chicago meeting.

Raymond Sears, Placement Counselor at AIP, conducted Seminars on Professional Employment directed at the job-hunting physicist.

One reaction to the job crisis was the Arden House proposal, which was presented by Stuart Kasdan, a graduate student at Brown University, during the session on "Physics in the Seventies." This proposal, which is effectively being implemented by many universities (see earlier issues of *physics today*) would support new PhD's who can not find employment, at predoctoral salary levels, at the expense of new graduate students. The Arden House proposal was first introduced at a conference sponsored by the Commission on College Physics at Arden House, Columbia University, in Harriman, N.Y., 19-21 November 1970.

Concern about the employment crisis in physics was also expressed at the session on graduate education. Members of the audience and two graduate students who were allowed, at the last moment, to serve as panel members, confronted the announced panel members with the problem of



AIP exhibit of the National Information System for Physics and Astronomy.

PhD overproduction. Causes and possible cures for the crisis were discussed.

Exhibits. There were 182 exhibit booths at the New York meeting, as compared to 184 booths at the 1970 Chicago meeting and 196 booths at the 1969 New York meeting. One of the exhibitors was the AIP Information Division, which presented a demonstration of NISPA, the National Information System for Physics and Astronomy. A magnetic tape service, *Searchable Physics Information Notices* (SPIN), which is now available from the Information Division, was displayed. Some of the proposed printed services of NISPA, which are also designed to cope with the scientific data explosion by reducing the time and effort required to perform literature searches and maintain awareness of current publications in physics, were displayed. These included samples of *Current Physics Titles*, *Preview Abstracts in Physics and Astronomy* and bibliographies. The NISPA exhibit provided a demonstration of the potential utility of computers in performing literature searches; visitors to the booth could put search questions to a computer terminal (connected to MIT) and see the results printed out.

Elections. The APS announced election results. Joseph E. Mayer, Professor of Chemical Physics at the University of California, San Diego, is the new APS vice-president elect. Mayer, whose field is theoretical and experimental chemical physics, edited the *Journal of Chemical Physics* from 1941 to 1952. Mayer wrote *Statistical Mechanics* with his wife, Maria Goeppert Mayer, in 1940, and wrote *Equilibrium Statistical Mechanics* in 1968. Mayer defeated Charles P.

Slichter, Professor of Physics at the University of Illinois, who has worked in experimental solid state physics and is the author of *Principles of Magnetic Resonance*.

Succeeding Edward Purcell of Harvard University as president is Robert Serber of Columbia University, and Philip M. Morse of MIT is the new vice-president. New members of the APS council are Leo Esaki of IBM, Harry L. Morrison of the Lawrence Radiation Laboratory, and Steven Weinberg of MIT.

The voting membership of APS voted overwhelmingly to establish a Physics and Society Forum that would continue the activities of the Committee on Problems of Physics and Society. The vote on the creation of this forum was 9325 in favor and 2304 opposed. —GM

New information center on precision measurements

A new information center on precision physical measurement and related theoretical work relevant to the determination of the fundamental physical constants has been established at the National Bureau of Standards through its Office of Standard Reference Data. As its initial venture the center has started a bimonthly preprint list similar to the one operating for high-energy physics, which is called *Preprints on Precision Measurement and Fundamental Constants*. It will also publish a post-publication list at less frequent intervals, and will serve as a newsletter for conference notices and other matters of interest. The editors, Barry Taylor and David Lide, would like to receive appropriate preprints at the

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