



PRICE

sion and back fusion. This was obviously a source of concern to the JCAE members, many of whom have worked for years to get the fission program going. The point was repeatedly made by the scientists at the hearing that fusion could not be expected to replace fission at this point because CTR is not yet at a working stage.

There was, however, a feeling of optimism that was shared in varying degrees by almost all the physicists at the hearing and many of the subcommittee members. Many involved in the hearings thought that fusion should get money according to Gould's lower-limit guidelines. On the committee side, several obviously felt that funding for fusion should be increased. Senator Stuart Symington told us, "We should put more money into fast breeder reactors and fusion reactors because they, especially the latter could well decide the world's future." Others felt that, while fusion holds bright promise, the CTR program has to fit in along with a lot of other funding requests and will have to go step by step. Congressman Craig Hosmer told PHYSICS TODAY that he predicts about \$35 million for the next fiscal year, and he said that CTR funding will have to be evaluated on a yearly basis. —SMH

Staff changes at NSF Physics Section

The new head of the Physics Section at NSF is Marcel Bardon, formerly program director for intermediate and high-energy physics. He replaces Paul F. Donovan, who is now director of the Division of Advanced Technology Applications in the RANN (Research Applied to National Needs) program.

J. Howard McMillen, formerly program director for elementary-particle physics, has retired from NSF. His replacement is Jonas Schultz, who is on

leave from the University of California, Irvine.

Solid-state and low-temperature physics support (except for three small grants) has moved to the Division of Materials Research, where Howard Etzel is deputy director and Richard Silbergliitt is assistant program director for solid state and low-temperature physics. Both men were formerly in the Physics Section.

Continuing in their former positions are William S. Rodney (nuclear physics), Rolf Sinclair (atomic, molecular and plasma physics) and Howard S. Zapolsky (theoretical physics).

Paul Craig, formerly staff associate in the Physics Section, is now a program manager in the Division of Advanced Technology Applications. —GBL

NSF recommendations for environmental science

Environmental Science—Challenge for the Seventies has been issued by the National Science Foundation. This is the third annual report of the National Science Board, the 25-member policy-making body of the NSF.

In the report, environmental science is defined as "the study of natural processes, their interactions with each other and with man, and which together form

the earth systems of air, water, energy and life."

Colleges and universities should provide new curricula for the training of environmental science specialists and the retraining of persons originally educated in other fields, the report recommends.

The report says that future environmental efforts will necessarily follow three directions: the attempted solution of global problems, attempts to solve regional or local problems and basic scientific investigation of environmental phenomena. According to the report, the Federal Government should determine priorities and feasible time-scales for national environmental programs, provide for coordination of the efforts of all Federal agencies engaged in support of performance of research in environmental science, establish organizational and employment incentives for environmental science projects through the support of national centers and specialized institutes and encourage state and local governments and private supporting organizations to participate in the national program.

The report, which was prepared under the direction of H. E. Carter, the chairman of the National Science Board, is available from the Superintendent of Documents, Washington, D. C. for \$0.40 per copy.

NSF, NRC and AIP report on job problems

Physicists with PhD degrees are having fewer employment problems than chemists and engineers, although new PhD physicists are having more difficulty than other new PhD scientists and engineers. The current rate of unemployment for all PhD physicists is only 1.8%, but the combined rate of unemployment and underemployment for new PhD physicists is 5.0%. These are some of the findings of an employment survey by the National Science Foundation for all scientists and another by the National Research Council for scientists who received their PhD degrees in 1970. A survey conducted by the American Institute of Physics, of physicists who reported having difficulty finding employment, indicated that after six months of seeking a job, 7.0% of these PhD physicists were still unemployed.

When the NSF survey, which was issued earlier this year (see PHYSICS TODAY, September, page 63), was studied with regard to age and degree, it showed that employment seems to be especially difficult for young physicists. The unemployment rate for those physicists in the 24-and-under and the 25-29 age groups is almost twice the rate of physicists in other age groups (see Table 1). Young chemists and young engineers do not appear to be having as tough a time

Table 1. Unemployed physicists

Age	Unemployed	Labor force	Rate (per cent)
24 and under	9	149	6.0
25-29	346	4878	7.1
30-34	297	7534	3.9
35-39	149	5114	2.9
40-44	109	3931	2.8
45-49	92	3323	2.8
50-54	65	1902	3.4
55-59	28	1170	2.4
60-64	19	698	2.7
65-69	4	317	1.3
70 and over	4	77	5.2
No report	4	38	10.5
Total	1126	29 131	Avg. 3.9

as do young physicists. For while the overall unemployment rate for chemists is 3.0%, the unemployment rate for those chemists in the 24-and-under age group is 4.6% and for those chemists in the 25-29 age group, 5.5%. Similarly the overall unemployment rate for engineers is also 3.0%, while for those in the 24-and-under age group it is 5.5% and for those in the 25-29 age group, 3.3%. However, young PhD physicists