

himself while working at Hanford. He believes his is the only such clock in the world.

The conversation turned to the fusion program, which McCormack believes will have a feasibility demonstration within five years. He feels, however, that going to a power-producing reactor will be just as big a step as the first one, mainly because of the materials-testing requirement. As a shortcut, he suggests that before feasibility is demonstrated that we build a materials-testing reactor using a laser pellet system; this would save five years and might cost \$500 million, he said.

Although he feels that fusion research is adequately financed now, he believes that we must look five years ahead to make sure that we will have enough funds for the next generation of fusion devices that will be needed. —GBL

More support urged for atoms and molecules

A report on atomic and molecular physics by the National Research Council recommends that federal support of basic atomic and molecular research in the universities should be increased by at least \$8.2 million in the next three to five years.

The report, entitled *Atomic and Molecular Physics*, was compiled by the

Committee on Atomic and Molecular Physics of NRC, chaired by Benjamin Bederson of New York University. It cites unofficial National Science Foundation figures showing a 20% drop in federal atomic and molecular physics funding between 1964 and 1968 and a 28% drop in federal support for the combined fields of atomic and molecular physics and plasma physics between 1966 and 1970.

According to Bederson, "One of the problems is that various federal agencies supported atomic and molecular physics, and then their missions changed and there wasn't any agency responsible for picking up the programs that were dropped."

In response to this, the report recommends that the Government attempt to revitalize support of basic research in atomic and molecular physics through programs in NASA, AEC, DOD and other agencies that have supported this type of work in the past. It also urges that NSF "establish an effective method of supporting the research that is intermediate on the basic to applied continuum," and that this support be closely coordinated with programs in the National Bureau of Standards and the National Institutes of Health and other agencies.

Also recommended are increases in funds of about \$0.9 million per year to offset inflation and provide for ten young scientists to enter the field of

atomic and molecular physics each year, and an additional \$1.8 million per year for the purchase of capital equipment for experiments.

Nuclear data centers coordinate efforts

The heads of eight data centers in low- and medium-energy nuclear physics met recently at Brookhaven to coordinate their efforts in filling the information needs of specialists. The group took steps to facilitate data exchange between their centers in peripheral areas of information and arranged for greater cooperation in loans of reference files.

Other subjects the directors plan to investigate are international cooperation, the use of computers for data files and bibliographic lists and the effect of journal publication policies on data-compilation efforts.

Those present at the meeting were: Charged Particle Cross Section Center at Oak Ridge (F. K. McGowan), "Chart of the Nuclides" at Knolls Atomic Power Laboratory (N. E. Holden), "Energy Levels of Light Nuclei" at the University of Pennsylvania (Fay Ajzenberg-Selove), Gamma Ray Spectrum Catalogue at Idaho Nuclear Corp (R. L. Heath), National Neutron Cross Section Center at Brookhaven (Sol Pearlstein), Nuclear Data Project at Oak Ridge (D. J. Horen), Photonuclear Data Center at the National Bureau of Standards (E. G. Fuller) and "Table of Isotopes" at the University of California, Berkeley (Jack M. Hollander).

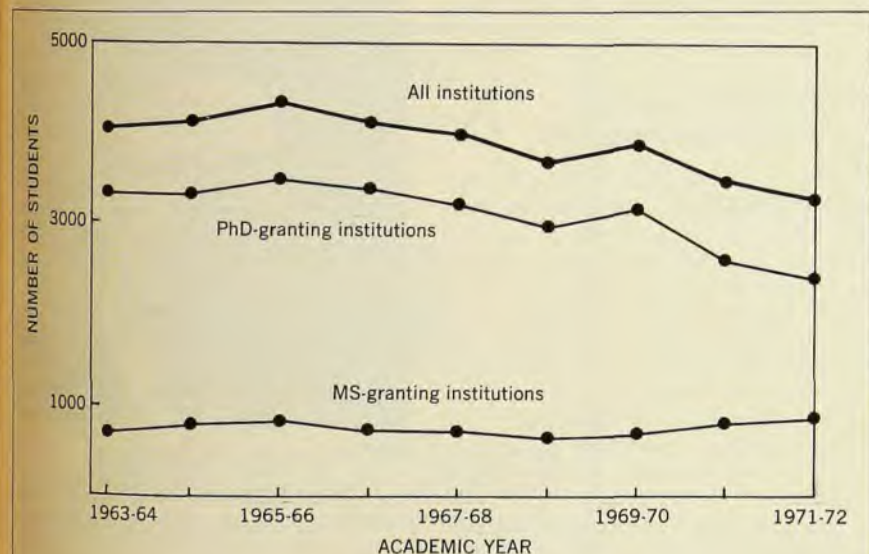
Future meetings of the group are planned, with the possibility of extending participation to include other data centers and users.

Those wanting information about this group should contact Sol Pearlstein, NNCSC, Brookhaven National Laboratory, Upton, N.Y. 11973.

NSF project assesses computer instruction

The National Science Foundation has instituted a \$15-million project designed to test the effectiveness of two computer-assisted instruction systems (CAI).

The two CAI systems are TICCIT (Time-Shared, Interactive Computer Controlled Information Television), which was developed by MITRE Corp under the direction of Kenneth J. Stetten, and PLATO IV (Programmed Logic for Automatic Teaching Operations, Fourth Generation), which was developed by the University of Illinois' Computer Based Educational Research Laboratory under the direction of Donald L. Bitzer.



First year graduate physics enrollment curves

This chart, formulated by the American Institute of Physics' Division of Manpower, shows a relatively stable enrollment at MS-granting institutions from 1963 to 1972, but a significant decline in enrollment at PhD-granting institutions. The number of first-year graduate students at PhD-granting institutions reached its maximum of 3500 in 1965-66 and has declined ever since, with the exception of 1969-70. The last point on this curve measures 2450. A summary report of physics enrollments and degrees, including the data shown in this chart, is available on request from the Manpower Statistics Section of the American Institute of Physics, 335 E. 45th St, New York, N. Y. 10017.