

industry in the supply of radioactive isotopes.

**Rutherford.** Across the road from Harwell is the Rutherford Laboratory, home of the Nimrod 7-GeV proton synchrotron, where we spoke to Godfrey Stafford, deputy director. This laboratory is supported by the Department of Education and Science, through SRC. It was set up to help universities, providing those facilities for high-energy physics that are too big for a single university; the laboratory has a permanent staff of 120 scientists, 30 of whom are high-energy physicists, and a fluctuating number, currently about 200, of university staff and graduate students using their facilities. In Stafford's words, "The collaboration with universities has been happy and convenient."

Rather than cutting back, the Science Research Council's funds are expected to increase over the next few years. Nuclear physics (including British contributions to CERN) absorbs over 40% of the funds available to SRC. It is therefore the intention to reduce the nuclear physics share of the financial cake. There should nevertheless be a 2-3% per year growth in the funds available to the Rutherford Laboratory.

SRC does not necessarily expect industrial application of the laboratory's basic research. Nevertheless some techniques originated at Rutherford, for example in the field of superconducting wires and magnets and a miniature electronic logic system, do have commercial applications and are being followed up. Stafford was obviously proud of these contributions to industry but pointed out that they were "post facto": the laboratory receives its support regardless of developments like these. —JTS

### **AIP Classifies Vocabularies for Computer Retrieval System**

Vocabularies in chemical physics, plasma physics and the field of lasers and masers suitable for computerized information retrieval have been published by the AIP Information Division. Researchers have submitted real search requests to test the system and are now evaluating the results.

At the same time the vocabularies and their system of classification have been submitted to Chemical Abstracts Service and the Institute of Electrical

and Electronics Engineers to test their compatibility with the needs of researchers in other fields (PHYSICS TODAY, April, page 47). The three vocabularies are available from AIP as documents ID 68-3 and ID 68-4 and ID 68-5.

Also available is the third survey of *Physics Abstracts* in this decade. The first two, by AIP for the year 1961 and by the International Council of Scientific Unions/Abstracting Board for 1964, involved computer analysis. The latest, an AIP analysis

### **NSF Bill Reflects Congressional Drift from Basic Research**

The latest congressional bill to reorganize the National Science Foundation poses a further threat to physics research, already buffeted by declining federal budgets. PHYSICS TODAY, after talks with NSF personnel and congressional observers, found that basic research, the main realm of concern to physics, was losing ground in Congress to the social sciences and to applied research.

Physics may suffer because of two big changes, among many changes, that the reorganization bill will bring to NSF. The bill contains specific recommendations that NSF support more social science research than it has so far done and that it support applied research as a supplement to basic research. Several other changes will affect the way NSF operates. For example Congress would relieve the National Science Board of administrative responsibility for NSF while investing it with overall science policy formulation responsibility. In addition, the Senate added a provision that NSF obtain annual authorization for its programs as other federal agencies now do. This provision will give NSF officials a chance to put their case before Senate and House committees that are generally more receptive to scientific projects than are the economy-minded appropriations committees, which tend to look only at finances.

The reorganization bill, H. R. 5404 passed the House last year. The Senate Labor and Public Welfare Committee sent it to the Senate floor in May after holding hearings last November. It cleared the Senate late in May and last month the House accepted the Senate changes.

The bill authorizes NSF to support applied research at academic and non-profit institutions when necessary as long as basic research, the central NSF

for 1965, involved manual methods and is not quite so detailed.

It was prepared to give a more accurate and up to date profile of the literature. The study notes that in 1961 *Physics Abstracts* covered 20 287 papers in 405 journals published in 39 countries. The survey of 1965 shows 32 279 papers in 495 journals published in 40 countries. The number of abstracts rose by 60% while the number of journals abstracted rose only 22.5%. The study is available from AIP as document ID 68-1.

mission, does not suffer. NSF may also support applied research at other types of institutions, such as industrial laboratories, when directed to do so by the President in connection with a national problem. In widening the NSF charter in the direction of social sciences, Congress prodded NSF to become more deeply involved in a field it is fully authorized to support. The bill also broadens NSF participation in international coöperation and national security by approving NSF support of scientific activities beyond research and education, which it already has the authority to support.

NSF will also cut a wider swath in the field of information. It can now support the use of computers and related methods in scientific research and education. It is responsible for the analysis and interpretation for Congress of the national scientific and technical resources data it already collects, including the manpower register. A new task for NSF will be collection of data on where federal research money goes and how it gets there.

The bill changes other aspects of NSF. The basic responsibility for weather modification research, added to the NSF charter in 1958, would be removed. Most important is the separation of the foundation and the National Science Board, which has been the governing body of NSF and made up of 24 nongovernment members active in scientific and public affairs. Since 1962, when a reorganization bill took away from NSF the authority to coöperate scientific research conducted by other federal agencies, the role of NSF in national science policy has been vague. Now the responsibility to recommend and encourage a national science policy has been firmly placed with the National Science Board. □