
Miscellany

Notes from CERN

A new "Pauli Memorial Room" at CERN headquarters in Switzerland was inaugurated on June 14 to serve as a permanent home for the personal library of the late Wolfgang Pauli. His library, consisting primarily of some 700 books ranging from theoretical physics through philosophy to literature, also includes sets of periodicals and a "unique collection" of reprints. Prof. Pauli, who received the 1945 Nobel Prize in physics, was a member of the faculty at the Eidgenössische Technische Hochschule in Zürich from 1928 until his death in December 1958. His library collection was transferred from Zürich to CERN in Geneva at the suggestion of Mrs. Pauli.

Expressing the opinion that the state of high-energy physics research a decade from now will compel the CERN organization to employ "a new tool of research", E. Amaldi, chairman of CERN's Scientific Policy Committee, has urged the CERN Council to consider the need for planning nuclear facilities which will be as important in 1970 as the 25-Bev synchrotron is in 1960. The Council, meeting in mid-June, agreed that serious thinking about CERN's long-term program is necessary. At the same session, the Council confirmed the appointment of J. B. Adams of Great Britain as acting director-general of CERN, a post he assumed following the airplane accident in New Jersey last April which took the life of C. J. Bakker. CERN has also announced that two cooperative agreements have been reached with other research establishments: (1) CERN and the Soviet high-energy research center at Dubna have completed negotiations for the reciprocal exchange of scientific personnel and have agreed upon the details of the first exchange which is expected to involve visits by three scientists from each laboratory; (2) CERN and the ETH in Zürich have agreed to cooperate in the construction and eventual experimental use of a 150-cm cloud chamber which is now being assembled and is hoped to be in operation by the end of this year.

MIT Magnet Laboratory

A national magnet research center is to be established at the Massachusetts Institute of Technology under the terms of a \$9.5 million contract announced on July 15 by MIT and the Air Research and Development Command. Construction of the proposed MIT

Magnet Laboratory is to start by the middle of next year and the center is expected to be in full operation by 1964 with an anticipated annual research budget of \$2 million. To be equipped with an array of generators capable of producing a continuous magnetic field estimated at 250 000 gauss, the center will be concerned primarily with basic research and will provide opportunities for work in solid-state, low-temperature, nuclear, and plasma physics.

Francis Bitter, a specialist in the development of magnets and in the study of high-field magnetic phenomena, is resigning his position as associate dean of science at MIT in order to assume primary responsibility for the design and construction of the laboratory. He will also be chairman of its policy committee and will assume new duties as professor of geophysics to initiate studies relating to solar and planetary magnetization and the role of magnetic phenomena in the evolution of the solar system.

Benjamin Lax, head of the Division of Solid-State Physics at the Lincoln Laboratory, will serve as director of the magnet research center, and Donald T. Stevenson, a group leader in the same Division, has been named assistant director. The two will be responsible for assembling the laboratory's permanent staff and directing its research program. The scientific staff will also include Henry H. Kolm and D. Bruce Montgomery, both of whom have played a leading role in the recent development of high-field magnets and are expected to contribute to the design of the over-all installation and its new magnetic devices. James M. West, now associate director of MIT's Division of Sponsored Research, will become the assistant director for administration of the laboratory.

The magnet research center will be located on a site adjacent to MIT's nuclear reactor at the edge of the school's campus in Cambridge, Mass. The laboratory will have a power plant of 8 million watts and an additional pulsed capacity of 32 million watts. Motor-generators for the magnets will be housed in the basement along with heat exchangers and service facilities, while the test cells, a control room, shops, office space, and assembly laboratories will be located on the first floor. The building's second floor will contain additional laboratory space. Because of the high temperatures generated by the magnets, it will be necessary to cool them by using water pumped to the laboratory through pipes laid to the Charles River.

Atmospheric Research Center

Two years ago the National Science Foundation received specific authorization from Congress to initiate and support a program of study, research, and evaluation in the field of weather modification, "giving particular attention to areas that have experienced floods, drought, hail, lightning, fog, tornadoes, or other weather phenomena". The establishment of a new atmospheric sciences program was announced shortly thereafter by the Foundation. That program, consisting largely of

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sponsored research in cloud physics carried out at various universities, has been the responsibility of the Foundation's Division of Mathematical, Physical, and Engineering Sciences.

Early this summer, NSF Director Alan T. Waterman, together with Henry G. Houghton, chairman of the University Corporation on Atmospheric Research (UCAR), announced the creation of a national center of atmospheric research which is to serve as the administrative headquarters for the coordination of a major national weather research program. Consisting of a central scientific group charged with stimulating and supplementing university research, it will also provide facility management for what may become a large and widely dispersed research effort.

The center will be under the direction of Walter Orr Roberts of the High Altitude Observatory in Boulder, Colorado. During the coming year Dr. Roberts will undertake exploratory work in cooperation with UCAR to determine the feasibility of selected research projects. For that purpose a senior scientific staff of eight or ten individuals will be employed, suitable office, laboratory, and shop facilities will be rented, and in collaboration with university groups a general research program will be planned. Funds for establishing the center are provided under the terms of a half-million-dollar Foundation contract with UCAR. Once established, the group will draw up recommendations concerning personnel as well as the location and characteristics of the permanent facilities that will be required.

Research programs to be undertaken by the group will probably be concerned with atmospheric motions and with energy exchange processes, water substance, and physical phenomena in the atmosphere. It is anticipated that a year or so of exploratory investigation will be required before specific long-term research projects can be defined.

In announcing the establishment of the center, the Foundation emphasized that Dr. Roberts and his group will work in close cooperation with the university scientists. "It has been generally agreed by the scientific community," Dr. Waterman said, "that universities should continue to play the leading role in basic research in the atmospheric sciences. Deficiencies in the present program are well understood. The two actions—appointment of Dr. Roberts, and the NSF contract with UCAR—are outgrowths of extensive studies of ways to remedy these deficiencies and especially to provide opportunities for collaborative enterprises for major problems in the atmospheric sciences. Paralleling this development will be increased NSF support for atmospheric research at universities."

Because of the nature of modern atmospheric research, the staff is expected to consist of representatives of many different disciplines, including physics, chemistry, engineering, and meteorology.

Member universities of UCAR are Arizona, California, Chicago, Cornell, Florida State, Johns Hopkins, MIT, Michigan, NYU, Penn State, St. Louis, Texas A & M, Washington (at Seattle), and Wisconsin.



Walter Orr Roberts

Programs

The Physics Program of the National Science Foundation has announced the availability of grants for research in high-energy physics for university physicists who plan to conduct experiments making use of high-energy accelerators (one Bev or above) not available on their own campuses. Interested scientists are invited to submit proposals before January 1, 1961, for grants to be awarded beginning July 1, 1961. Applicants should follow the instructions used in submitting applications for regular research grants as described in the Foundation's booklet entitled "Grants for Scientific Research" which can be obtained by writing to the National Science Foundation, Washington 25, D. C.

An Office of Institutional Programs has been established at the National Science Foundation for the administration of a new experimental program of institutional grants designed to strengthen the over-all scientific research and research-training effort of the Nation's colleges and universities. It will be headed by Louis Levin, formerly deputy director of the Foundation's Division of Biological and Medical Sciences. The grants will be awarded to institutions for unspecified research activities. Amounts of grants allowable to any one institution under the new program will be limited to five percent of the Foundation's research grant payments made to that institution during the previous year and in any case will not exceed \$50 000 for a single year. Reports on expenditures of the funds will be made annually to the Foundation. The new Office will also handle the existing NSF program under which grants are made for modernization and expansion of research laboratories in colleges and universities in the United States.