Miscellany

Public Use of MTR Facilities

The Atomic Energy Commission has announced that the facilities of the Materials Testing Reactor in Idaho are now available to the public on a limited basis. According to the contractor, Phillips Petroleum Company, the peak thermal neutron flux of this reactor, which is now two years old, is 5×10^{14} neutrons per cm^2 per second; this figure is ten times that of Canada's NRX reactor and one hundred times that of the Argonne and Brookhaven reactors. Thermal neutron fluxes available for irradiations range from 2×10^{9} to the maximum figure, and brief irradiation at even the highest levels can be carried out by means of shuttle tubes operated by air or water pressure. Fast neutron fluxes of about 10^{14} are also present in certain locations in the reactor.

High-intensity gamma radiation of the order of 10^{6}–10^{7} roentgens per hour is also obtainable at the MTR reactor station. Discharged fuel units, highly radioactive, must be stored for several weeks before shipment to the processing plant, and by stacking these units appropriately "an intense field of essentially pure gamma radiation has been made available".

Charges for public irradiations will be based on depreciation and overhead as well as on direct operating expenses, according to the AEC. Applications must be filed with the Isotopes Division, U. S. Atomic Energy Commission, Oak Ridge, Tennessee, which issues authorizations to persons or firms "equipped to handle radioactivity in a safe manner". Information concerning the services available at the MTR, scheduling, and price lists can be obtained directly from the contractor, Phillips Petroleum Company, Idaho Falls, Idaho.

Reorganized

The research department of the Naval Research Laboratory in Washington, D. C., has undergone its first major reorganization since the end of World War II as a result of recommendations based on a six-month study of the Laboratory's scientific organization and program-planning. As before, the research department is headed by a director of research, E. O. Hulburt. Under the new plan, he has three associates, one each in the fields of electronics, materials, and nucleonics, who are R. M. Page, O. T. Marzke, and E. H. Krause, respectively. There are now 13, instead of 12, scientific divisions, which conduct research, development, and evaluation work in the physical sciences. The names of these divisions suggest the scope of the Laboratory's scientific program, which includes long-term as well as short-range planning objectives: Applications Research; Atmosphere and Astrophysics; Chemistry; Electronics; Mechanics; Metallurgy; Nucleonics; Optics; Radar; Radiation; Radio; Solid State; and Sound. New superintendents and their divisions are: R. C. Guthrie, Radar; J. P. Hagen, Atmosphere and Astrophysics; W. S. Pellini, Metallurgy; A. H. Schooley, Electronics; and C. V. Strain, Nucleonics.

The new NRL divisions were created by combining or regrouping existing branches in the research department, so that no expansion in scientific personnel is contemplated at this time, according to Captain W. H. Beltz, director of NRL. The mission of the Laboratory remains the same as it was when it was established in 1923, following the recommendations of the Naval Consulting Board, which was headed by Thomas A. Edison. It was created, in the words of the Board, "to increase the safety, reliability, and efficiency of the Fleet by the application of scientific research and laboratory experimentation to Naval problems". Originally a part of the Office of the Secretary of the Navy, NRL was administered in succeeding years by various Navy offices and bureaus. In 1946, it was made a field of activity of the Office of Research and Inventions, now the Office of Naval Research. The character of its organization (namely, a research laboratory under Navy management, staffed by civilian scientists) has not changed in its 31 years of existence.

The Baltimore headquarters organization of the Air Research and Development Command has also seen some major internal changes in recent months. The new headquarters organization is described as being "somewhat similar to that of an industrial organization rather than the traditional military organization, although titles and certain terms have been retained to keep within the framework of the Air Force". There has also been a gradual shifting to the Baltimore headquarters of early planning on weapon systems, much of which was formerly accomplished by subordinate ARDC centers. The ARDC Office of Scientific Research, which is responsible for maintaining a contract program with research laboratories in universities and elsewhere, will continue unchanged in its mission and method of operation. It will, however, have an increased responsibility for furnishing technical and scientific advice to other branches of the ARDC headquarters staff.

Research Notes

The strong focusing principle, which makes use of fields that cause an ion beam to alternately converge and diverge in producing a collimated stream of particles, was originally devised in connection with high-energy proton accelerators. In the *Journal of Applied Physics* for April A. M. Clogston and H. Heffner take up in detail the analogous problem of focusing electron beams, and consider axially symmetric and