

program for the instrument was under the supervision of J. C. Chu, who had worked during the war on the design and construction of ENIAC, the first all-electronic digital computer, which was assembled at the University of Pennsylvania and is now being used by the U. S. Army Ordnance Department at the Aberdeen Proving Grounds in Maryland.

New Physics Building

To be Constructed at Pennsylvania

The University of Pennsylvania has announced plans for the erection of a \$2,700,000 physics, mathematics, and astronomy building intended primarily to supplant the Randal Morgan Laboratory of Physics, which is now more than fifty-five years old. The new building, to be located at the southeast corner of 33rd and Walnut Streets in Philadelphia, will contain some two hundred rooms with a total floor area of more than 125,000 square feet. The university's betatron laboratory, built adjacent to the new site in 1948, will become a functional adjunct of the main structure. The building will centralize the classrooms, offices, and laboratories of the physics department, headed by Gaylord P. Harnwell, the mathematics department, headed by John R. Kline, and the astronomy department, of which Charles P. Olivier is chairman and Frank B. Wood is executive director of observatories. Rooms will include 17 laboratories, 52 research office-laboratories, 17 classrooms, 55 offices, five shops, three lecture halls, a library, and an astronomical observatory. The building will be the fourth major structure to materialize under the University's \$32,000,000 development program intended to transform 148 acres of West Philadelphia into a new campus.

National Science Foundation

Grants in Support of Science

The National Science Foundation has reported approval of a second group of grants for 1953 in support of research in the physical and biological sciences and of studies and conferences on science and scientific education. The latest awards, amounting to \$685,200, bring the total under this fiscal year's budget to \$1,340,650. Eight of the seventy-eight new grants are in physics, and the amount given for physics research is \$88,700. The awards were made to institutions in widely separated parts of the nation and were approved by the National Science Board upon the recommendation of NSF director Alan T. Waterman. Since the beginning of the program, the Foundation has awarded 231 grants totaling \$2,481,225. New grants listed under the category of "physics" are as follows (the amount, duration, and name of the principal scientist are given parenthetically):

Brigham Young University, "Research in Musical Acoustics" (\$10,000; one year, H. Fletcher).

University of California at Berkeley, "Research in

the Field of Gaseous Electronics" (\$4000; one year; L. B. Loeb).

University of Chicago, "Mass Spectrometric Investigations" (\$20,000; one year; M. G. Inghram).

University of Colorado, "Solar Radiation in 2100 Angstrom Region" (\$6900; one year; W. B. Pietenpol).

Duke University, "Mass and Momentum Spectra and Interactions of Charged Cosmic-Ray Particles" (\$15,000; two years; M. M. Block).

Florida State University, "Anomalous Transmission of Radiation Through Single Crystals at Bragg Angle" (\$16,800; two years; G. Schwarz and G. Rogosa).

Georgia Institute of Technology, "Angular Correlation Between Nuclear Radiations" (\$7000; one year; L. D. Wyly).

Northwestern University, "An Investigation of the Hall Effect in Metal Single Crystals at Low Temperatures" (\$9000; one year; J. A. Marcus).

Other awards of interest in the latest group include a grant of \$8000 to the Rice Institute (W. V. Houston, principal scientist) for the Third International Conference on Low Temperature Physics; a grant of \$4100 to the State University of Iowa for three years (G. W. Stewart) for the support of the annual Colloquium of College Physicists; and a grant of \$25,000 to the Library of Congress (R. L. Zwemer) for the compilation of lists of scientific and technical serial publications.

Hot Fruit Flies

New Air Force Project

An upper air research project, in which fruit flies will be used to obtain data on the effects of cosmic radiation at very high altitudes, has been announced by the United States Air Force. The research will be carried out as an additional phase of the Air Research and Development Command's balloon research project, which seeks data on the state of winds, temperatures, atmospheric pressures, turbulence, and types of cloud formations at altitudes between 50,000 and 100,000 feet. Controlled balloons launched from West Coast sites will carry, in addition to recording instruments, pressurized test tubes containing harmless fruit flies (*Drosophila*), similar to those sometimes seen on bananas. The balloons will be launched when the prevailing winds are from the west, so that they will travel over and come down in the United States.

Success of the project, according to the Air Force, depends heavily on prompt action by the public in returning the equipment containing the fruit flies. The containers will be marked plainly with complete instructions to the finders regarding their return to the U. S. Air Force. With the returned fruit flies, the Air Force will carry on genetical studies to determine the biological effect of cosmic radiation on the mutation rate and will compare these mutations, if any, with those caused by x-ray, neutron, and gamma radiation.

The research balloons, which are from 45 to 110 feet in diameter, have been sent aloft by the Air Force since