SCIENCE EDUCATION

Berkeley physics course

A new two-year elementary physics course being developed at Berkeley has produced its first textbook, *Laboratory Physics, Part A*, which appeared at the end of September. Work on the course goes back to 1962, when an interuniversity committee was formed at Berkeley to develop it. Specific objectives of the committee were to introduce coherently the ideas of special relativity, quantum physics, and statistical physics into an elementary curriculum. The material which is emerging is intended for all students who have had a physics course in high school and who are taking a calculus course concurrently.

Five volumes have been projected for the course. These include *Mechanics* (Ruderman, Knight, and Kittel), *Electricity and Magnetism* (Purcell), *Waves* (Crawford), *Quantum Physics* (Wichmann), and *Statistical Physics* (Reif).

To accompany the course, A. M. Portis has designed the *Berkeley Physics Laboratory*, of which *Laboratory Physics, Part A*, is the first section. It will appear in three parts, each including twelve experiments plus supplementary material.

Each volume of the course will have been tested for three or more semesters before the preparation of the final manuscript. The first volume is scheduled for January 1965, and the second volume for the summer of 1965. This fall, a preliminary version of the first volume is in use by regular classes at the University of Texas, Austin; the University of Michigan; Long Beach State College; and at the Santa Barbara and Berkeley campuses of the University of California. In addition, the preliminary version of the second volume is being used this semester at MIT, Austin, and Berkeley.

A special effort has been made by the large-scale use of questionnaires to locate specific difficulties experienced by students with the draft course material. In general, the new material has been observed to interest a wide range of students, teaching assistants, and instructors.

The course and laboratory materials are being published by the McGraw-Hill Book Company, Inc. Copies of the preliminary materials as available can be obtained by persons concerned with undergraduate instruction by writing to Mrs. Gerald Maloney, Berkeley Physics Course Committee, Department of Physics, University of California, Berkeley 4, Calif.

The project was encouraged by the Commission on College Physics, and has been supported by the National Science Foundation through a grant to Educational Services Incorporated. Members of the original Berkeley Physics Course Committee included L. W. Alvarez, W. B. Fretter, C. Kittel, W. D. Knight, P. Morrison, E. M. Purcell, M. A. Ruderman, and J. R. Zacharias. Several of the original members have dropped out, and A. M. Portis, E. D. Commins, F. Reif, F. S. Crawford, Jr., and E. H. Wichmann have joined the committee. Many other people, including astronomers, biophysicists, geophysicists, and mathematicians, have helped with the program.

Twin-tower observatory

This fall, Northwestern University will begin construction of a twin-tower observatory as the first step in its projected Benjamin F. Lindheimer Astronomical Research Center. The new observatory, designed for on-site research by students and faculty, will cost almost $1 million and will be supported by matching grants from the National Science Foundation and the family of the late Mr. Lindheimer. The facility will consist of two 70-foot-high domed towers connected by a structure housing a telescope control room and various equipment. A 40-inch Cassegrainian/Coudé reflecting telescope will be the principal optical instrument in one of the domes, and the addition of an electronic image conversion device to this telescope is expected to increase its light detecting ability an estimated 100 times. The dome on top of the other observatory tower will house a 16-inch reflector telescope. At the base of the towers