
Miscellany

Research Facilities

Funds in the amount of \$4 million have been allocated by the National Science Foundation to the Association of Universities for Research in Astronomy, Inc. (AURA), for the construction of a solar telescope. A total of \$7 545 000 has been allocated thus far for the erection and operation of a national astronomical observatory on Kitt Peak in the Quinlan Mountains of Southwestern Arizona. An additional \$1 million has been appropriated by Congress for construction of an access road to the observatory site. The solar telescope will have a 60-inch image-forming mirror with a focal length of about 300 feet. The size of the image of the sun at the focal plane will be approximately 32 inches. The telescope will be several times larger than any now in existence and its focal length will be about twice that of the 150-foot tower telescope on Mount Wilson. Stellar instruments at the observatory will consist initially of a 36-inch telescope of the reflector type, and an 80-inch reflecting telescope with auxiliary instrumentation.

Kitt Peak, a mountain sacred to the Papago Indians, is on their reservation. Legislation permitting the Indians to enter into a lease with the National Science Foundation for the use of their land was enacted by the Congress and approved by the President last August. The lease permits the National Science Foundation the use of 2400 acres on and surrounding Kitt Peak for "as long as the land is used for astronomical study and research and related scientific purposes". In consideration of these rights, the Foundation has agreed to pay the Papagos \$25 000 for access rights to the site and \$10 per acre per annum for approximately 200 acres to be used for development of the facilities. Payment for the right to use approximately 2200 acres of a protective perimeter area is at the rate of 25¢ per acre per annum. The Indians will also have the right to use space on the site for the sale of their arts and crafts.

AURA, Inc., was incorporated in the State of Arizona, October 28, 1957, and presently comprises the following universities: California, Chicago, Harvard, Indiana, Michigan, Ohio State, Wisconsin, and Yale. These universities have had experience in operating large observatories and have strong programs of research and graduate instruction in astronomy. Directors-at-Large are Carl Seyfert, professor of astronomy at Vanderbilt University and director of the Arthur J. Dyer Observatory, and Peter Van de Kamp, professor of astronomy at Swarthmore College and director of

the Sproul Observatory. As the project develops, it is expected that other universities and individuals will be added to the Association.

A new laboratory for studies in mathematics and physics at the California Institute of Technology will be constructed in Pasadena under a grant of more than \$1 million from the Alfred P. Sloan Foundation. It will be built within an existing building which for many years has housed Caltech's experimental high-voltage laboratory. When completed, the new five-story structure will be renamed the Alfred P. Sloan Laboratory of Mathematics and Physics. In addition to offices, conference and seminar rooms, a lecture hall, and a library, the building will house facilities for cryogenic studies and for research on the nuclear reactions of light elements. The chief instrument to be used in the latter program will be a new 10-Mev Van de Graaff accelerator, which is being supplied by the Office of Naval Research.

Two new science buildings, one at Temple University and one at LaSalle College, both in Philadelphia, are expected to be completed by mid-1960. The \$4 million Temple Science Building will be the first unit of the school's projected university science center to be erected as part of a \$50 million expansion program. Special features will include closed television circuits for education, a planetarium and meteorological station, a science museum, and an anechoic chamber for acoustics research. The \$2 million LaSalle Science Building will have a science library and sufficient laboratory, office, and lecture-room space to enable the school to quadruple the number of science students previously accommodated.

An Institute of Space Sciences has been formed at the University of Cincinnati for the purpose of giving advanced training and carrying on research in the field of astrodynamics. Beginning with the September 1959 semester, the Institute proposes to give a three-year curriculum leading first to a master of science and then to a doctor of philosophy degree in dynamical astronomy, which will involve training in mathematics, certain branches of physics, dynamical astronomy, and observational astronomy. The Institute will be headed by Paul Herget, director of the Cincinnati Observatory and scientist in charge of the Vanguard computing center in Washington, D. C. It grew out of the recommendations of a recent National Science Foundation-sponsored conference which urged that "vigorous programs for support of training and research in dynamical astronomy be initiated without delay and without geographical restriction". In the past 14 years, according to Dr. Herget, only two doctorates in this field have been awarded in the US.

Publications

An expanded *Journal of Geophysical Research* will be published beginning with the January 1959 issue. The new publication will combine the format of the

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For further information write to:

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Technical Operations is a medium-sized research and development firm, operating in such fields as physics, electronics, chemistry, operations research, and applied mechanics. Our headquarters laboratory is at Burlington, Massachusetts and research facilities are maintained at Washington, D. C., Hampton, Virginia and Monterey, California. Our staff presently numbers about 200.

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former *Journal* with the *Transactions, American Geophysical Union* and will be published by AGU with the assistance of the Carnegie Institution of Washington and the support of the National Science Foundation. It will consist of original research reports, a "Letters" section to provide for brief publication of unusual results or discussion of previous papers, and abstracts of papers presented at AGU meetings. Nonmember subscriptions are available (\$16 per year) from the American Geophysical Union, 1515 Massachusetts Avenue, N. W., Washington 5, D. C.

The Department of Commerce will begin publication this month of a periodical planned to serve as a central source of information in the US on Russian and other technical translations available to scientists. Entitled *Technical Translations*, it will be published twice a month by the Office of Technical Services in cooperation with the Special Libraries Association and will incorporate SLA's *Translation Monthly*. It will list and abstract translated materials available from US government sources, SLA, cooperating foreign governments, educational institutions, and private sources. *Technical Translations* will be sold at a subscription rate of \$12 a year (foreign rate, \$16); a single copy will cost 60¢. Orders should be addressed to the Office of Technical Services, US Department of Commerce, Washington 25, D. C.

A new set of tables of the Wigner $6j$ -symbol has been prepared (with the support of the British Department of Scientific and Industrial Research) as a University of Southampton Research Report, US 58-1. The tables were duplicated from stencils cut directly from the output tape of a digital computer, the Ferranti Pegasus, using a teleprinter with ribbon removed. The square of each $6j$ -symbol is printed as a rational fraction in terms of prime factors and not (as previously on a computer) as a decimal fraction. There are 205 pages of tables with approximately 12 500 entries. All integral and half-integral parameters are included for $(j_1 + j_2 + j_{12})$, $(j_2 + j_3 + j_{23})$, $(j_1 + j_{23} + J)$, $(j_{12} + j_3 + J)$, all less than or equal to 17. Thus all $6j$ -symbols with parameters less than 6 and some with parameters up to $17/2$ are included. A limited number of copies are available on application to K. M. Howell, Mathematics Department, The University, Southampton, England.

Education

The National Science Foundation will sponsor 350 summer institutes at 255 educational institutions this year. Most of the institutes will be for high-school teachers of science and mathematics, but some will be open to college teachers only and others will accept both high-school and college teachers. Tuition and fees will be paid by the Foundation and each participating teacher will receive a stipend of not more than \$75 per week for the duration of the institute, plus an allowance for travel and dependents. The summer pro-