

to relieve a temporary emergency situation. On the basis of the earlier Koenigstein Agreement, the states are already jointly supporting a number of research institutes, particularly those of the Max Planck Society. Under the new agreement, the federal government will assume 50 percent of the expenditures required to maintain these institutes in the fiscal year 1957. The states, in turn, must use the resulting 22 million mark fund for constructing new classrooms and laboratories and for equipping these facilities.

## Chest X-ray Surveys

The great decrease in the number of tuberculosis cases and the recognition that even in low doses x-rays may be hazardous have led the U.S. Public Health Service to recommend that future mass x-ray surveys for tuberculosis be confined to those groups of the population in which the risk of infection is high. Among these are people admitted to hospitals, patients and employees of mental hospitals, inmates of penal institutions, inhabitants of slum areas, migrant laborers, and alcoholics. In groups in which the incidence of tuberculosis is low, the service recommends the use of the tuberculin skin test as a first step, to be followed by x-ray diagnosis only when the test is positive.

The Public Health Service also recommends frequent inspection of all x-ray equipment in order to protect people from unnecessary radiation:

"For many years it has been known that there is a risk of excessive radiation exposure involved in the use of x-ray machines. Current findings in this field that emphasize the significance of relatively low level radiation exposure, now serve to focus attention on the need to maintain and operate x-ray equipment in such a way as to eliminate all unnecessary radiation." The American Trudeau Society, a constituent association of the National Tuberculosis Association, has made essentially similar recommendations.

## Surface Measurement of Gravity in Ocean Areas

The first successful surface measurements of gravity in the open sea were made on 22 November by J. Lamar Worzel, professor of geology at Columbia University's Lamont Geological Observatory. The measurements were made as part of a program to chart gravity variation throughout the world during the International Geophysical Year. Worzel used a new sea gravimeter developed by Anton Graf of Munich, Ger-

many, to make the unprecedented surface measurements. The instrument was mounted on a gyro-stabilized platform installed aboard the *U.S.S. Compass Island*. Previously, gravity values for ocean areas had to be measured in submarines submerged to quiet depths.

Surface gravity measurements from the *Compass Island* were taken in 9 hours, as compared with 2 days for the earlier submarine measurements. The data were reduced in just a half-day, as compared with 2 weeks needed to adjust and compute the data from submarine measurements.

Although 80 percent of the earth's surface is covered by water, to date there have been only 4000 measurements of gravity at sea made throughout the world. Roughly half of these have been made by the Lamont Geological Observatory in the past 10 years.

Gravity measurements are used to determine the shape of the earth, the true direction of the earth's center, and the density of the material of the topmost layers. With gravity and seismic measurements together, the thickness of the earth's crust can also be calculated.

Gravity determination of the true vertical and the shape of the earth are important geodetic tools. Once sufficient values of gravity are taken over a wide enough area of the oceans, maps and charts will be greatly improved.

## Contract for Observatory

The recently organized Association of Universities for Research in Astronomy, Inc., signed a contract on 13 December 1957 with the National Science Foundation to build and operate an optical astronomy observatory for basic research. Alan T. Waterman, director of the foundation, pointed out that the contract was in keeping with the foundation's established policy to support those basic research facilities for which private capital could not be expected. A sum of \$3.1 million for the construction of an optical observatory was included in the foundation's appropriation for fiscal 1958.

The Association of Universities for Research in Astronomy, Inc., consists of seven universities, all with large observatories and all with strong programs of research and graduate instruction in astronomy. The universities are California, Chicago, Harvard, Indiana, Michigan, Ohio State, and Wisconsin. Other universities may be added as the project develops. The chief officers of the association are: president, R. R. McMath, who is director of the McMath-Hulbert Observatory, Michigan; vice president, F. K. Edmondson, who is chairman of the Department of Astronomy, Indiana; and secretary, J. M. Miller, who is as-

sistant vice president of business affairs, California. The main office of the association is in Phoenix, Arizona.

Choice of a site for the astronomical observatory has been narrowed to three locations: Kitt Peak (6875 feet), 40 miles southwest of Tucson, Arizona; the Hualapai Mountains (7350 feet), 13 miles south of Kingman, Arizona; and Mormon Mountain (8440 feet), 35 miles south of Flagstaff, Arizona. A final decision about the site is expected in the middle of 1958. Initial plans for the instruments call for an 80-inch and a 36-inch telescope.

## News Briefs

A newly formed subsidiary of Beckman Instruments, Inc., will occupy a new plant under construction in Glenrothes, Scotland. The new facility will engage in the manufacture of precision potentiometers for electronic instruments and systems.

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The Board of Managers of Haverford College, a Quaker institution, announced recently that the college would not sponsor any applications for research grants from the Department of Defense.

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The number of mental patients in the United States is decreasing for the second straight year, it has been announced by F. Barry Ryan, Jr., president of the National Association for Mental Health. There was an estimated decrease of 5000 patients between June 1956 and June 1957, and in 1956 there was a total decrease of more than 7000 patients.

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The U.S. Department of Agriculture has begun a cooperative federal-state-local program for eradication of the imported fire ant. Eradication and control measures have begun in Louisiana and Georgia; they will be extended to other states.

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Formation of Vitro International, with headquarters in Switzerland, was announced recently by J. Carlton Ward, Jr., president of Vitro Corporation of America, New York. The new division will represent all Vitro operations overseas.

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A certificate of award and a silver cup have been presented to Argonne National Laboratory for a motion picture about its experimental boiling-water reactor. The award was won by the Argonne film at the Fourth International Electronic and Nuclear Energy Exhibition and Conference, held in Rome, Italy. Presentation was made at the U.S. Atomic Energy Commission's headquarters in Washington, D.C.