

TOM) large-scale power plants using nuclear reactors of types on which research and development have been carried to an advanced stage in the United States, having a total installed capacity of approximately one million kilowatts of electricity, by December 31, 1963 (except that two reactors may be selected to be in operation by December 31, 1965), and under conditions which would approach the competitive range of conventional energy costs in Europe."

No specific deadline for the submission of proposals is being established in this continuing program; however, those proposals which are on hand by 1 April will receive early consideration by the joint board. The guide for submission of proposals may be obtained by writing to the EURATOM-U.S. Joint Research and Development Board, 51 Rue Belliard, Brussels, Belgium, or to the Director, Division of International Affairs, U.S. Atomic Energy Commission, Washington 25, D.C.

Pioneer IV

At 11:30 A.M., Friday, 6 March, Pioneer IV, America's first artificial asteroid, sent its last message to earth. It had by then reached a distance of more than 410,000 miles from the earth and was traveling at a speed of almost 4000 miles an hour into an orbit around the sun.

Before the mercury batteries went dead, the asteroid had established a long-distance record for communication, after a lifetime of more than 83 hours. The Soviet Union said it had tracked its Mechta space probe—now in orbit round the sun—to a distance of 370,000 miles before the batteries became exhausted, after 62 hours of flight.

At perihelion, its closest approach to the sun, which it reached on 17 March, Pioneer IV was 91.7 million miles from the sun, or 1.2 million miles inside the earth's orbit. At aphelion, its farthest point from the sun, it will be 106.1 million miles from the sun, or 13.2 million miles outside the earth's orbit. It will reach that point on 29 September. It will circle the sun every 394 $\frac{3}{4}$ days, traveling in its orbit at an average speed of 60,000 miles an hour, as compared with the 66,000-mile average for the orbital speed of the earth.

Pioneer IV is expected to produce more scientific information than Mechta. From Pioneer's radio, NASA personnel got information about temperatures, radiation, and cosmic rays. NASA scientists said that, according to information already evaluated, no major band of radiation has been encountered above the two previously discovered by the United States' Explorer satellites.

Congress Asked for Larger Science Budget

Alan T. Waterman, director of the National Science Foundation, has strongly protested the Administration's reduction of the foundation's budget and has suggested, further, that the present \$280-million level of government support for basic research be increased by about 50 percent. In testimony presented on 12 March before the House Select Committee on Astronautics and Space Exploration, Waterman reported that the NSF budget for the coming fiscal year had been cut from the \$206 million that had been requested to \$160 million. Most of the \$46-million reduction was in the programs for support of basic research and for construction of new research facilities.

Pointing out that universities and non-profit research institutions could no longer afford to modernize or replace their facilities, Waterman said that some laboratories "have become obsolescent to a point which is detrimental to the country's research effort." He then described a number of the foundation's programs that would have to be sharply curtailed, or eliminated completely, if more funds were not provided. Included was the program for building university nuclear research reactors and computer centers.

Test Detection Study

It has been reported that a panel of leading United States earthquake specialists, assembled by the Government to map a program aimed at foolproof detection of underground nuclear blasts, has recently completed its work.

The group met in secrecy. Its recommendations, now being transmitted to the White House, may not be made public for several weeks or months. The group, known as the Panel on Seismic Improvement, is an offshoot of President Eisenhower's Science Advisory Committee, headed by James R. Killian, Jr.

The task of the panel was to evaluate the most recent detection techniques and to report to the White House on an appropriate research program. Its recommendations may have a crucial bearing on the progress of the East-West talks in Geneva on the banning of nuclear arms tests. The negotiations appear deadlocked on the issue, among others, of inspecting regions where detection has suggested the possibility of a blast. The Soviet Union has charged that such inspection could be used to cloak espionage. The problem primarily concerns underground explosions, since it is difficult to distinguish between the shock

waves of earthquakes and those produced by bomb blasts. Surface and aerial shots can be observed in a number of ways and with sufficient accuracy so that on-the-spot inspection is not essential. If an equally foolproof system could be devised for underground blasts, the Geneva log jam might be broken. However, such a system seems some time off.

Science Honor List

The University of Bridgeport, Bridgeport, Conn., will have a "Science Wall of Honor" in the Charles A. Dana Hall of Science that is now under construction. A roster of 25 names will be chosen, and suggestions are invited. Any individual in the world's history may be nominated, except that only those who have been deceased at least 10 years will be considered. Recognition in all instances will be limited to accomplishments in the fields of natural science—not in philosophy, history, or the social sciences.

To be considered, an individual must have made a fundamental discovery regarding the laws of nature or have been responsible for an invention not based on a previously known fundamental law of nature. The discoveries and inventions will be rated on their general value to mankind as well as on their contribution to man's knowledge. In most cases preference will be given to those who made discoveries, rather than to those who followed with practical applications.

After the selection of the original 25 names, one additional name may be added every year for 25 years until such time as there are a total of 50 names on the wall. At that time, only one name may be added every 5 years.

News Briefs

The World Health Organization has announced that World Health Day is scheduled for 7 April. Its theme this year will be "Mental Illness and Mental Health in the World of Today." Although generally more acute in countries of high economic development, mental illness is an international problem, one that no nation escapes. And it may become greater as the world level of industrialization and technology rises.

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The Atomic Energy Commission has announced that the public is now permitted to participate in consideration of the safety aspects of all reactor projects in the commission's Power Demonstration Reactor Program. Heretofore, the public has had opportunity to take part in the review of safety aspects of only those reactors in the program that were