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News of Science

Asian Nuclear Center

The United States Government has announced that it will provide about \$20 million to help establish the proposed Asian nuclear center that is to be located in Manila. The money will be used for capital expenditures and initial operating costs.

A team from the Brookhaven National Laboratory has been investigating for some months the problems involved in establishing the Manila center. The team's report stated that the center, "is an entirely feasible enterprise, capable of rendering a valuable service to the progress and development of the area." However, the report recommended, among other things, that the nations involved agree in advance on a formula for sharing future operating costs.

The \$20 million for the project will come out of the special \$100 million Asian regional development fund set up by Congress in the 1955 Foreign Aid Bill. The money is available for 3 years.

IGY Upper Atmosphere Research

Three special National Science Foundation grants of more than \$325,000 have been awarded to Stanford University scientists for radio investigations of the upper atmosphere during the International Geophysical Year. The work will involve a network of 24 radio-radar stations extending from the Arctic Circle in the north to Little America near the South Pole. Allan M. Peterson, Robert A. Helliwell, and O. G. Villard, Jr., all of the Radio Propagation Laboratory, are the recipients of the NSF awards.

Peterson's research is related to the IGY's aurora and airglow studies. He will establish and direct the work of 13 ionospheric "scatter-sounding" stations ranging from Greenland down both

coasts of North America. Other stations will be located in Central and South America and in Australia. Unusual equipment at the stations will provide a radarlike picture of invisible ionized cloud effects in the upper atmosphere for 1000 miles or more around each post.

Helliwell's work, part of the IGY's ionospheric physics program, has to do with the curious "whistler" sounds believed caused by lightning flashes which generate radio signals that travel far out into space. There will be ten stations located in the Northern and Southern Hemispheres participating in this research. Villard's grant will be used for radar meteor investigations in Little America.

Free Radicals Research Program

A 3-year program of basic research on free radicals has been undertaken by the National Bureau of Standards. The object of the program is to increase fundamental knowledge of the formation, properties, and storage of these highly reactive molecular fragments. The series of experimental and theoretical investigations is receiving support from the Department of Defense through the Office of Ordnance Research, U.S. Army.

Over-all direction and coordination of the work is centered in a Free Radicals Research Section recently established for this purpose. Herbert P. Broida, who has been named chief of the new section, will serve as technical coordinator for the entire program; Arnold M. Bass is assistant chief of the section.

To encourage broad dissemination of the information obtained in the program, and also to minimize interference with other established projects at the Bureau, participating scientists are being drawn largely from other institutions. Approximately half of the technical staff for the

free radicals research program will be on loan from industrial research laboratories, working under an unusual cooperative plan. Others will come from universities and various government agencies. It is expected that the work of this central research group will be continued and expanded in many of the industrial laboratories after termination of the present program.

A technical data center is being set up so that free radical research at other laboratories, both in the United States and abroad, may be closely followed. Other activities serving to knit together the various research projects making up the program will include weekly colloquia and a general conference now being planned for mid-1957.

Male Fertility Index

A new index to fertility in males has been discovered by scientists of the Southwest Foundation for Research and Education (San Antonio, Tex.). In studies of thoroughbred horses conducted at the institution's branch in Lexington, Ky., it was found that the sulfhydryl content of seminal fluid provides an index to the ability of the semen to induce pregnancy.

When the sulfhydryl content is high, there is a reduction in the capacity of the sperm to maintain its ability to move. This is associated with failure to cause pregnancy. The sulfhydryl concentration varies from day to day. Studies are now in progress to determine whether or not this new index is applicable to human beings.

Pioneer in X-ray Therapy

Emil H. Grubbe, probably the first American to treat a patient with x-rays, has undergone his 90th operation for cancerous burns resulting from his own early exposure to radiation. Sixty years ago, in Philadelphia, Grubbe gave x-ray therapy to a woman suffering from cancer. This was only a few months after Wilhelm Roentgen, the German physicist, had announced a method for generating x-rays.

Now 81, and living in retirement, Grubbe has lost his left hand, nose, upper lip, and most of the right side of his face. His right hand is enfeebled. He