

GEOPHYSICS

Senate Notes IGY Plans

Program for International Geophysical Year, a cooperative probe of the earth as a planet by at least 5,000 scientists in 46 countries, outlined in special report.

► THE MOST SEARCHING STUDY man has ever made of the earth and its atmosphere will start July 1, 1957.

The program, a cooperative venture of 5,000 scientists in at least 46 nations, is known as the International Geophysical Year—a world-wide look at this planet, its seas and its ocean of air.

The launching of 12 man-made satellites during the IGY, or "Iggy" as it is called, has been the most publicized of proposed activities, but other studies are expected to have equally important results, significant improvements in weather forecasting being an example.

Every experiment planned, from taking motion pictures of an aurora's dancing lights to measuring the X-rays hurled out by the sun some 93,000,000 miles away, will yield vital information affecting the lives of everyone in the United States. Each study, particularly those in the Antarctic, will result in data never before available.

To explain this "unparalleled scientific effort," the Senate Committee on Appropriations, whose chairman is Senator Carl Hayden (D., Ariz.), has published a special report on the U. S. program for the International Geophysical Year.

Sen. Hayden explained this "unusual action" was because of the "dramatic scope" and "importance to the people" of the IGY, scheduled to last from July 1, 1957, to Dec. 31, 1958. This period was chosen because a high point in the 11-year sunspot cycle is expected then, and many solar effects on the earth will be enhanced.

Dr. Alan T. Waterman, director of the National Science Foundation, prepared the special report at the request of Sen. Warren G. Magnuson (D., Wash.), chairman of the Senate Subcommittee on Independent Offices and General Government Matters.

Sen. Magnuson said he is convinced the "cooperative effort will undoubtedly unlock secrets of nature of vast importance to the welfare of mankind."

Dr. Waterman called the cooperative undertaking "one of the most significant" in man's history. Total cost of the U. S. program is expected to be \$42,000,000, not including logistic support by the Defense Department for launching the earth satellites.

The National Science Foundation administers the funds for the U. S. National Committee for the IGY, which is a part of the National Academy of Sciences and the National Research Council.

International coordination of the technical effort is directed by a special committee of the International Council of Scientific Unions, established especially for the pur-

pose and known as CSAGI, or the Comite Special de l'Annee Geophysique Internationale.

A suggestion in the special report that seismologists may gather sufficient data to enable them to predict where and when earthquakes will occur indicates results of the program may save lives as well as many more dollars than its \$42,000,000 cost. The San Francisco earthquake of 1906 caused property damage of \$400,000,000 and a death toll of 700.

Results of the international effort relating to weather forecasting, communications and transportation will be of particular importance, Sen. Magnuson said, so the program should be called to the attention of all citizens, particularly high school students. The "exciting nature" of the IGY should serve, he said, as a "stimulant to our youngsters toward careers in science."

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PUBLIC HEALTH

Polio Booster Needed

► SOME OF THE CHILDREN who got Salk polio vaccine in the 1954 field trials need a booster shot now, Dr. Jonas E. Salk, University of Pittsburgh scientist who developed the vaccine, advises doctors and parents in a letter to the *Journal of the American Medical Association* (May 26).

Others need more than one injection.

Nearly 40% of the children in the field trials did not develop immunity from the vaccinating as done in 1954. The 60% who did cannot be told from the 40% except by blood test, Dr. Salk says.

Children in the field trials were offered another injection in the spring of 1955. This could be considered the "booster" for the 60% who developed an immune response from the 1954 injections.

For the almost 40% who did not develop immunity from the 1954 injections, the 1955 single injection should be considered the first injection of a second series. They would benefit from another dose now. They should then get another injection before the 1957 season, to round out the three injections needed.

Children in the 1954 trials who got two injections in 1955 should get a third injection now, if there is enough vaccine after others needing it more have gotten theirs, or should get their third booster-injection before the 1957 season.

Children in the 1954 trials who have had no injections since then should be treated as if they had not yet been vaccinated and

● RADIO

Saturday, June 16, 1956, 1:45-2:00 p.m. EDT
"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Richard E. Peret, Committee of Stainless Steel Producers, American Iron and Steel Institute, New York, will discuss "Stainless Steel Today."

INVENTION

Making Manganese Alloy From Waste

► DR. EDWIN C. WRIGHT, head of the department of metallurgical engineering at the University of Alabama, has developed what he claims to be the first satisfactory process for making ferro-manganese having more than 60% manganese from waste steel mill slags and low grade natural ores.

To produce his alloy from lean manganese-containing material, Dr. Wright supplements a normal blast furnace charge with a sufficient quantity of such material to produce a pig iron containing five percent manganese. After smelting and bathing, the slag is then treated so as to reduce the manganese oxide to manganese. Dr. Wright was granted patent No. 2,746,857 for his invention.

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should now have two injections four to six weeks apart, and a third injection before the 1957 season.

For some of the children in the field trials, there might be "an unjustified sense of security," Dr. Salk says, if reliance is placed only on the number of injections of vaccine without considering the possibility that "some received vaccine that was, in terms of our present knowledge, less than optimal."

Because of the contribution the 1954 field trial children made, Dr. Salk points out that "it would seem proper" they be given, as soon as possible, full advantage of the information gained from the trial and since then.

Additional reason for making sure all the field trial children get the extra injections needed to give them immunity is that, otherwise, if some of them develop polio, it might be thought the vaccine does not give long-lasting protection.

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Fish flour, which has no smell or fishy taste, is a new and potentially valuable product of a South African west coast fishery.

Spotted alfalfa aphids give birth to two to four young a day for up to 30 days and within six days the young start reproducing.