

GEOPHYSICS

Find Electro-Jet Current

► THE EXACT location of the electro-jet current, a globe-circling system of concentrated electricity high in the atmosphere, has been found from the first records made of geomagnetism during the International Geophysical Year.

At one point in the electro-jet's world-girdling path, it passes directly above Koror Island, which is in the Palaus about seven

degrees north of the geographic equator. The location was reported by Rear Adm. H. Arnold Karo, director of the U. S. Coast and Geodetic Survey.

The electro-jet is thought to be part of a planet-wide system of electric currents, active primarily during the daylight hours, responsible for changes in the earth's magnetic field in the equatorial regions. Obser-

vations of it near the equator are very important because changes there are not always accompanied by disturbances in the polar regions, but the reverse is not always true.

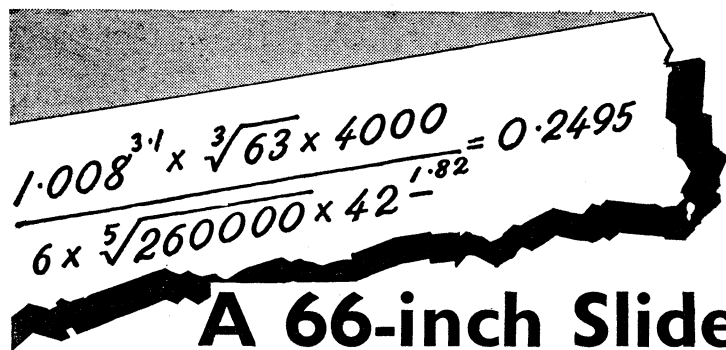
Koror Island was chosen for an IGY observing point because it is near the magnetic equator, and is the only magnetic observatory in the Pacific Ocean now in operation. Since the electro-jet is thought to straddle the magnetic equator, the Koror records can be compared with those from stations outside the area influenced by the high altitude current.

When further information is received at the Survey's IGY record center in Washington, D. C., scientists believe the electro-jet's nature and cause will be found. The Koror records already have indicated unusual conditions of the magnetic field not present at the Guam observatory just a few degrees northeast of Koror.

The magnetic equator is the line connecting all points where the direction of the earth's magnetic field is completely horizontal. It wanders to the north of Koror at one time of day, then moves an equal distance south at another time of day.

The Koror records were received at the recently opened record center for the Western Hemisphere. IGY information on geomagnetism, gravity and seismology are kept there, including some from behind the Iron Curtain in Romania.

Science News Letter, October 19, 1957



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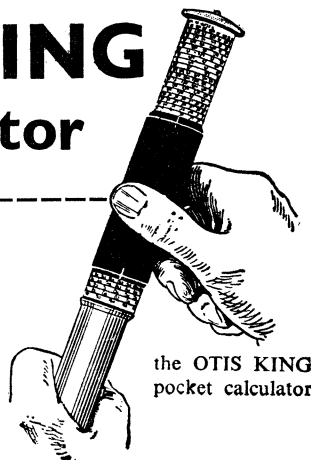
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PLANT PHYSIOLOGY

Gibberellic Acid Reverses Virus-Caused Stunting

► GIBBERELLIC acid, the "wonder" growth-promoter, can cause virus-stunted plants to grow again, a scientist reports in *Science* (Oct. 4). Previous research has showed the hormone-like substance can overcome both genetic and physiologic stunting.

Dr. Karl Maramorosch, plant pathologist at the Rockefeller Institute for Medical Research, New York, tested the chemical on three virus-susceptible plants: hybrid sweet corn, China asters and crimson clover. He used leafhopper-borne viruses known to cause severe stunting.

Six weeks after inoculation one group of severely stunted plants was sprayed with a freshly prepared water solution of gibberellic acid at 100 parts per million. The control group of similarly stunted plants was sprayed with distilled water and both groups kept on the same greenhouse bench. Two other treatments were given the plants at weekly intervals. In all three plants—corn, asters and clover—gibberellic acid "influenced significantly the growth of virus-stunted plants." Corn resumed growth within 48 hours of its first treatment, reports the scientist, while growth was visible in the other plants after five days.

Even though the gibberellic acid overcame the stunting effects of the virus, Dr. Maramorosch points out that the diseased plants retained other signs of infection. The tiny insect leafhoppers recovered the viruses from both treated and untreated plants.

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