



**WEATHER FORECASTS BY COMPUTER**—Called the Maniac, this electronic computer at the Los Alamos Scientific Laboratory, N. M., is one of the few in the world fast enough to do numerical weather forecasting. It is the same type as the machine at the Institute of Advanced Study, Princeton, N. J., on which experiments with numerical weather forecasting are now being carried out.

## METEOROLOGY

## "Brains" Get Weather Trial

► ELECTRONIC "BRAINS" to predict the weather five days in advance will probably be tried out at the U.S. Weather Bureau in the next year.

This will be the first application of the new numerical forecasting system to long range forecasts. However, it will be on a highly experimental basis, with practical use still years away, it was said.

"We have set up several research projects to determine the feasibility of adapting numerical forecasting to longer range periods," Dr. Harry Wexler, director of the Bureau's Scientific Services, told SCIENCE SERVICE. "Right now the complicated and numerous calculations are being done by hand, but we hope next year to have the funds for purchase or rent of an adequate electronic computer."

The project will be carried out in the Extended Forecast Section, which now regularly issues five-day and 30-day weather predictions, based on the "old-fashioned" synoptic method. Jerome Namias, head of the section, and Philip Clapp, who will actually carry out the numerical projects, see good chances of success for their research. Mr. Clapp is just back from a year's study of numerical forecasting in Sweden under Dr. Carl-Gustav Rossby, the father of modern meteorology.

Mr. Clapp has found that the same formulas used for 24-hour numerical predictions can probably be used for predicting

the weather over an average of five days in advance. In addition, he can use a longer time interval, so the number of predictions made by the electronic "brain" are the same as in a 24-hour forecast. Right now, he is working on several problems which, successfully solved, would prove this more conclusively.

Science News Letter, December 20, 1952

## ASTRONOMY

## Russian Book Gives Planet Data to Americans

► A SCIENTIFIC book published at Moscow is being circulated in the United States. And just in case you cannot read Russian, it is accompanied by an English translation.

Designed to help astronomers keep track of minor planets as they wander across the skies, the volume of elements and ephemerides of the minor planets for 1953 was compiled at the Institute of Theoretical Astronomy at Leningrad.

To avoid duplicate effort and expense of editing and printing, the annual volume usually published by the Cincinnati Observatory will not be issued this year. Instead, the Russian volume is being distributed as widely as possible, supplemented by a translation of the text into English by Dr. Peter Musen of the Observatory.

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## MEDICINE

## Radioactive Iodine Gets Into Mother's Milk

► DOCTORS WERE warned that it may be dangerous to give radioactive iodine to mothers while they are breast feeding their babies.

The warning came in a report by Drs. Carl E. Nurnberger and Alys Lipscomb of the University of Tennessee College of Medicine, Memphis, to the *Journal of the American Medical Association* (Dec. 6).

Enough of the radioactive chemical gets into the mother's milk to allow a sizable amount to be taken up by the baby's thyroid gland. If the radioactive iodine is being given the mother for treatment of thyroid trouble, the baby might get so much that its thyroid gland would become "seriously" underactive or might even stop functioning completely.

If the chemical is given in tracer doses for diagnosis of possible thyroid trouble in the mother, enough of it would be diverted via the milk to the baby so that the result of the test might be inaccurate.

In one of the cases reported by the Memphis doctors, the baby's thyroid gland had taken up five percent of the diagnostic tracer dose of radioactive iodine given the mother 24 hours previously, while the mother's gland had taken up 34%. Tests of the mother's milk showed some of the radioactive iodine present in it.

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## SURGERY

## Patch Half-Dollar Size Hole in Boy's Heart

► A 13-YEAR-OLD boy with a hole in his heart the size of a half dollar has had it patched with a piece of the fibrous sac that encloses the heart.

This new bloodless operation was performed at the Indiana University Medical Center, Indianapolis, following 16 months of surgical research supported by the James Whitcomb Riley Memorial Association and the Office of Naval Research.

The hole in the boy's heart was between the right and left auricles. The left auricle is the heart chamber that receives oxygen-rich blood from the lungs to be pumped through the ventricle to the rest of the body. The right auricle receives blood from the veins after it has given up its oxygen. As a result of the opening between the two auricles, the boy's heart was enlarged and he was in a state of chronic heart failure.

The operation devised by the Indiana University surgeons does not interfere with the functioning of the heart or require artificial means of maintaining blood circulation while the delicate operation is being performed.

The 13-year-old who has just undergone this operation is Harold Richard Duffy, son of Mr. and Mrs. Clifford Duffy of Linton, Ind.

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