

PHYSICS

"Brain" Studies Cancers

➤ A GIANT electronic "brain" is being put to work in the fight against cancer, three scientists have reported to the American Physical Society in New York.

Using the Los Alamos Scientific Laboratory's computer, the MANIAC, they calculated the beginning time and the period required for tumorous cells' division, assuming that cells split according to the laws of chance.

The size of tumors formed is dependent on the time lag between succeeding cell division in transplantable DBA mouse tumors, Drs. N. Metropolis and V. Gardiner of Los Alamos Scientific Laboratory and Dr. Joseph G. Hoffman of Roswell Park Memorial Institute found.

Other highlights of scientific reports presented to the American Physical Society meeting in New York included:

Certain red giant stars with temperatures of over 100,000,000 degrees Fahrenheit are stoked by the direct conversion of three alpha particles, which are the hearts of helium atoms, into carbon 12, with beryllium as an intermediate step. Dr. E. E. Salpeter of Cornell University, Ithaca, N. Y., reported his calculations for the rate of this reaction, which depends on the temperature and density of the star.

A new, naturally occurring isotope of tantalum, known as Ta 180, has been discovered with the aid of a mass spectrometer by Drs. F. A. White, T. L. Collins and F. M. Rourke of General Electric's Knolls Atomic Power Laboratory.

An electronic computer, the ORACLE, was used at Oak Ridge National Laboratory to analyze the reactions of atomic nuclei after bombardment by Drs. L. C. Biedenharn, now at Rice Institute, and A. Simon.

Dr. S. F. Singer of Maryland University suggested that cosmic rays smashing into the earth's atmosphere from space may result

from the breakup in interstellar space of radiation consisting mostly of iron.

A "meson-generator" is being used to increase by five the number of cosmic ray particles, known as K-mesons, stopped in the stripped photographic emulsions flown at high altitudes to catch tracks of atomic fragments. The emulsions are put inside an iron and paraffin block to get the increase, Drs. N. Seeman, M. M. Shapiro and B. Stiller of the Naval Research Laboratory in Washington reported.

Science News Letter, February 19, 1955

ASTRONOMY

Hoosier Astronomers Discover Asteroid

➤ A MINOR planet or asteroid, discovered by Hoosier astronomers, is now officially named Indiana in honor of astronomers from Indiana University's Link Observatory in Bloomington, Ind., who first spotted it.

Asteroids are a host of small bodies swarming in paths around the sun between the orbits of Mars and Jupiter. Indiana was first found by Mrs. Beryl Potter, research assistant, on photographic plates made in 1950 by Robert Cameron, then a graduate student.

The asteroid was photographed again in 1953. Two sightings are required before a minor planet is officially discovered. Finders are allowed by custom to name them, and the name Indiana has now been approved by the International Astronomical Union.

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Questions

AERONAUTICS—How may the convertiplane be used commercially? p. 114.

ICHTHYOLOGY—What are the sleeping habits of baby fish? p. 120.

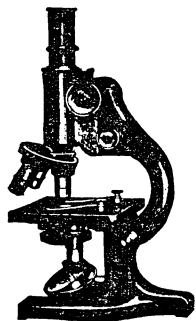
MEDICINE—What are some of the new uses for reserpine? p. 119.

TECHNOLOGY—What is a "chopper"? p. 119.

ZOOLOGY—What is the nearest living relative of the horse and the rhinoceros? p. 121.

Photographs: Cover, Bell Aircraft Corp.; p. 115, Morrison-Gottlieb; p. 117, Dr. H. M. Powell; p. 118, Reni Photos; p. 119, General Electric Research Laboratory; p. 123, American Museum of Natural History; p. 128, John Duty and Sons.

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