

NUCLEAR PHYSICS

Atom-Smasher Isotopes

➤ **RADIOACTIVE** isotopes—the exploding chemical elements used for scientific research—will be produced for scientists in the famed atom-smashing cyclotron, the U. S. Atomic Energy Commission announced.

These important tools of modern science have been produced in the chain-reacting atomic furnace in Oak Ridge, Tenn., and shipped to scientists for nearly three years. But use of cyclotrons will give a wider variety of isotopes than is possible for the pile.

Under this plan, the Carbide and Carbon Chemicals Corporation is authorized to purchase cyclotron time for making isotopes from institutions which have these atom-smashers. Institutions which will be utilized include the Massachusetts Institute of Technology, University of Pittsburgh, Washington University, and the Crocker Radiation Laboratory at the University of California. Assistance to the general program will be rendered by the department of terrestrial magnetism of the Carnegie Institution of Washington.

Some of the elements and their atomic weights which will be available to scientists for the cyclotron production include: beryllium 7; sodium 22; iron 59; iron 55; zinc 65; arsenic 63; and iodine 125. Only isotopes with a half-life longer than 30 days will be shipped at first. The half-life is the length of time in which the radioactivity of the isotope is diminished by half.

The AEC said that the new cyclotron-isotope program was strongly urged by the National Research Council, because of the need for the additional varieties of isotopes it can make available.

Cost of the newly-available isotopes will be higher than the pile-produced ones, so the AEC plans to subsidize the program.

As with the pile isotopes, distribution will be made free of charge for cancer research.

Processing of the isotopes will be carried on at the Oak Ridge National Laboratory.

Because cyclotrons are available in many countries abroad, the new program will be limited to the United States and its territories and possessions.

Science News Letter, August 6, 1949

ICHTHYOLOGY

Record Fish May Have Had Too Much Mouth

➤ **WHEN** is the mouth of a bass small? That's the scientific puzzler which may upset a world's record in fishing.

Walter Harden is credited with catching the world's record smallmouth bass, a 14-pounder, 28 inches long, in Lake Apopka, near Oakland, Fla. But two scientists now contend the fish wasn't a smallmouth bass.

Dr. Carl L. Hubbs of the Scripps Institution of Oceanography and Dr. Reeve M. Bailey of the University of Michigan have just published a study of black basses. Among their scientific observations is their opinion that Mr. Harden's record-breaker was really a largemouth bass.

It's really difficult for the average sportsman to distinguish between the two basses, the biologists point out, but some of the features which differ are the coloration, scales, body shape and, oh, yes, the size of the mouth.

"We recommend the removal of the Florida fish from consideration for the title of 'world's record' smallmouth bass," write the scientists, but they "leave to others the decision as to what fish deserves the distinction of holding the record."

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On This Week's Cover

➤ **THIS** model of the new Northrop Raider C-125 military assault transport shows it with its huge jaw-like ramp door open. This plane can be loaded with five tons of cargo in a few minutes. It has been designed to operate from small, un-surfaced airstrips by virtue of its double-slotted flaps, heavy-duty, fixed landing gear, and three engines. A total of 23 of these planes are being built for the Air Force for use in Arctic rescue work.

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