

Science Announces Particle To Annihilate Basic Matter

By RENNIE TAYLOR
AP Science Reporter
BERKELEY, Calif. (AP)—Atomic science took another big step forward today with the announcement of the discovery of a particle which annihilates the basic unit of all matter.

The discovery was made in experiments utilizing the University of California's biggest atom smasher, the bevatron. It was announced jointly last night by Prof. Ernest O. Lawrence, famed nuclear scientist, and the Atomic Energy Commission, which financed the \$12-million-dollar machine.

The new particle, sought for a generation by researchers, is the antiproton. Although it is a powerful annihilator of matter, it con-

stitutes no threat as a super-weapon, no new hazard to the world.

Instead, it opens up the way for exciting new discoveries about the nature of matter. Conceivably some of these may lead to great new practical achievements of the future.

Its immediate value, said Prof. Lawrence, is that it clears up some of the uncertainties in the theory of nuclear structure. In this respect, he added, it is comparable to the filling in of a key word in a cross-word puzzle — it permits the operator to go ahead.

In Washington, a nuclear physicist said discovery of the antiproton increases the prospects of releasing — in controlled fashion — vastly greater energy from the atom than now is possible by the fission process.

The physicist, not associated with the Atomic Energy Commission, said the discovery improves the chances of tapping energy from the nuclear heart of the atom by an "annihilation process" rather than by fission or "atom splitting."

"What you would have to do," the scientist said, "would be to devise some means of getting a steady stream of antiproton particles and use them to bombard the atomic nuclei so they would strike protons. These would be annihilated and perhaps 99 per cent of the matter involved in the annihilation would be released as energy."

In the fission process only about one tenth of 1 per cent of the total mass is converted to energy, and yet that produces an A-bomb explosion.

The new particle is the antiproton or negatively charged proton. It is the counterpart of the proton, which carries a positive electrical charge and is the main building block of all the elements in nature.

A team which included Dr. Owen Chamberlain, Dr. Emilio Segre, Thomas Ypsilantis produced the new particle by bombarding a copper atom with ordinary protons of very high energy, 6.2 billion volts.

Out of this bombardment, they said, came a proton pair, one positively charged, the other negative. They shot out at a speed of better than 100,000 miles per second. They traveled only a few feet, then collided and vanished.

Just what happened in this disappearance is not yet known, Dr. Segre said, but they probably

turned into mesons, which are short-lived breakdown products of atomic disintegration, then into X-rays, which are energy as distinguished from matter.

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River Plan Gives Hope

WASHINGTON (AP)—American officials are talking hopefully again about winning Arab approval of a river development plan conceived as a means of reversing Arab-Israeli tensions.

"Prospects are very good," special envoy Eric Johnston said last night as he reported to Secretary of State Dulles on the status of the Jordan River development plan.

This attitude contrasts strongly with the gloomy picture painted in Washington last week. The assessment then was that the 120-million-dollar irrigation-dam proposal was on the verge of collapse after the Arab states, led by Lebanon and Syria, voted at Cairo to delay it for further study.

"The Arab states asked for more time and that seemed like a reasonable request," Johnston said. "After all, both Lebanon and Syria have governments which are less than two weeks old."



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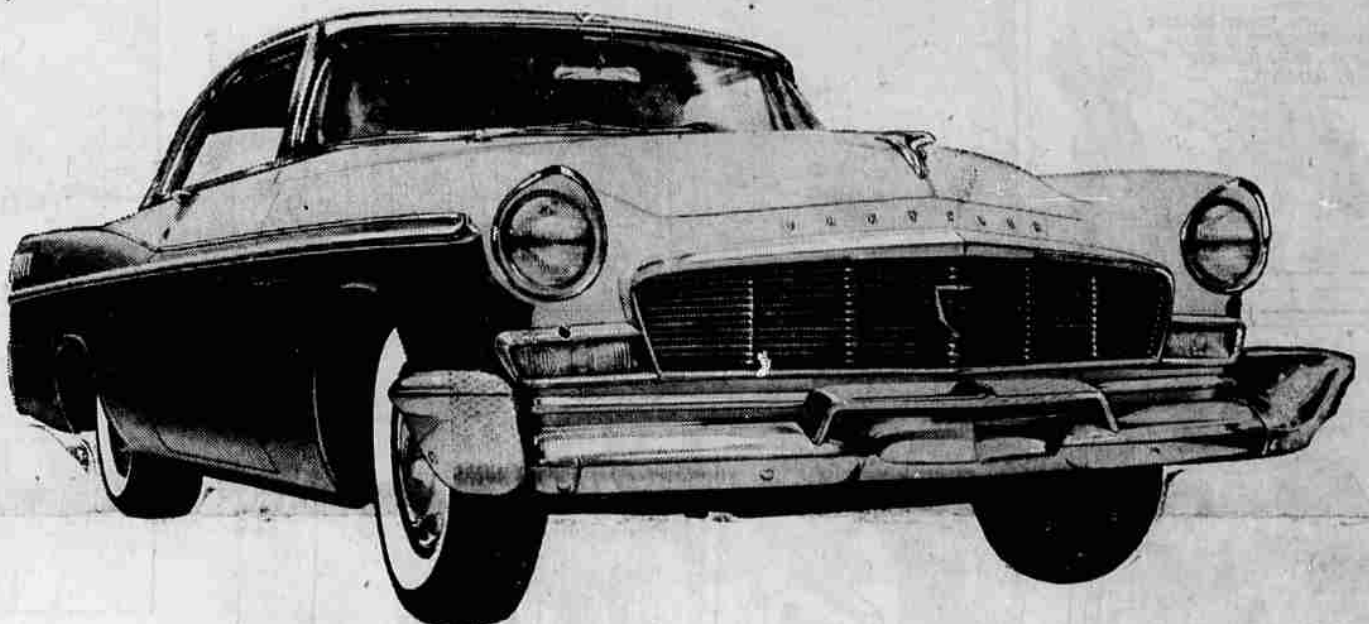
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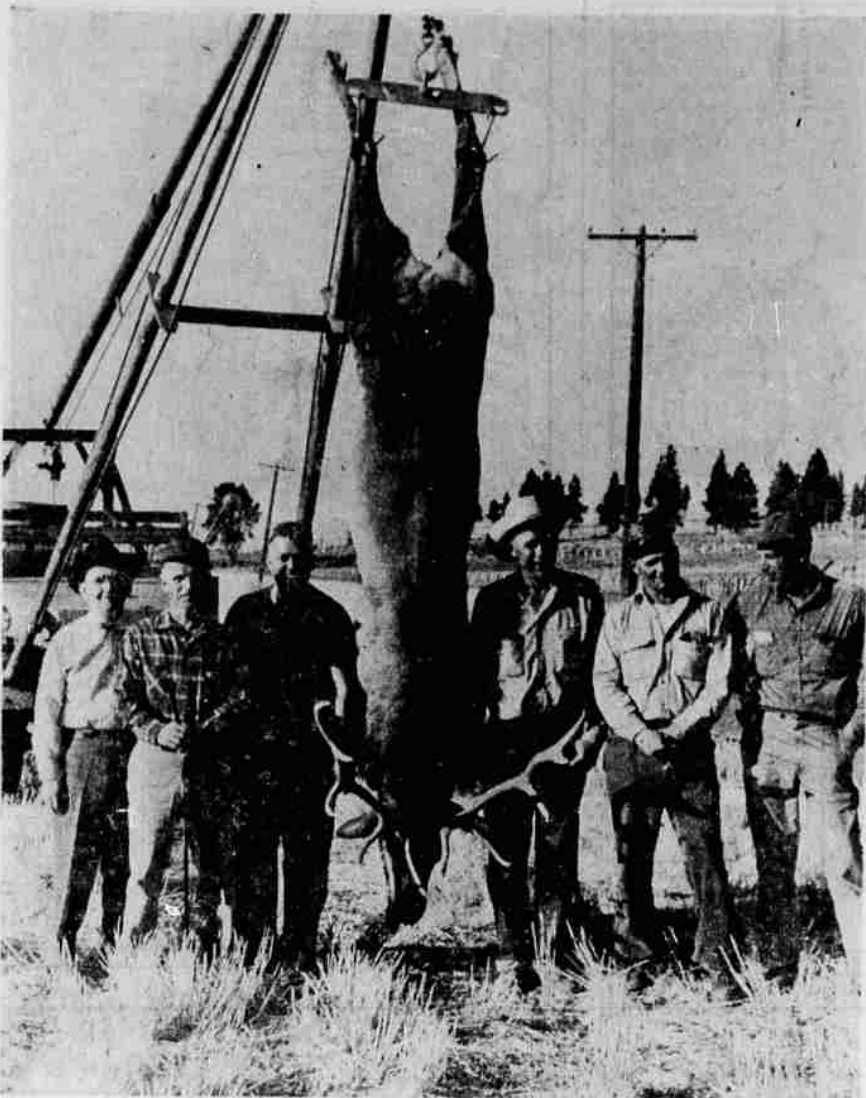
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PLENTY OF HELP was on hand when this big Elk was butchered at Tulana Farms in Williamson River Saturday. The meat will be served at an Elk feed at the Masonic Temple on Klamath Avenue, Saturday evening, October 22. Chilquin Lodge 197 AF and AM, sponsors of the banquet, have extended an invitation to the public as well as to lodge members. The Elk was donated by Tulana Farms. Butchering crew consists of, from left: Andy Sullivan, John Manning, Harley Zeller, Lawrence Myers, Mel Kirkpatrick and Gail Ridenour.

Poles Swindle Government As Part Of National Sport

WARSAW (AP)—The national sport in Poland today is swindling the government.

The Communist regime winks at some of the tricks. Try as it will, it can't stamp out the ingenuity of the Pole turning over a fast shifty. Those who get away with something are regarded as local heroes and soon become the main topic of restaurant and bar conversation.

In a country short of manpower and trying to industrialize while maintaining a high standard of agriculture, the government simply lacks the police to curb the swindlers.

Shops cheat on taxes and often cheat the customer on prices too. The official party press reported, for instance, that a flying squadron checked 30 shops in Sietlin and found only three with correct books.

City slickers are always selling the peasants the rights to collect tolls on little bridges in their neighborhood. Often they are party men and the peasant never knows beyond doubt if the racket is

legitimate with government backing or not. Sharpies who know the law and also the police operation often bend the spirit of both by some shady, frequently brilliant coup. Court dockets are full of such instances.

The most able swindlers deal in scarce commodities. They manage through some dodge to obtain rare materials and in most cases can prove that the subterfuge used served the public interest in the long run. Warsaw chuckled for weeks over one case. It concerned a man who searched around for aluminum to make medals for Roman Catholics. He knew it was useless to ask the government for a priority.

Finally, the man discovered that the two-groschen coin was ideal for the purpose. He cornered as many as he could and made a million medals. He pocketed a fortune. The security police suddenly discovered a remarkable shortage of two-groschen pieces and traced the case.

The manufacturer was arrested and tried. The court ruled that he had broken no law. Indeed, it pointed out that he had even paid his taxes properly. He was acquitted.

SILVER PRICES

NEW YORK (UP)—Handy & Harman, bullion dealers, today cut the price of silver 1/2-cent to 91 1/2 cents a fine ounce, the first drop in the price of the white metal in more than four months.

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