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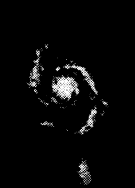
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greeting cards, and sidewalk Santas. With these hints for science shopping ease, it is hoped you will have more time for full enjoyment of the festivities and good will of the season. Happy Holidays!

Many of the items mentioned will be found in local department stores, hobby shops, or other establishments. This article is not advertising. Suppliers are listed below as a service to our readers:

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• Science News Letter, 82:306 November 10, 1962

PSYCHOLOGY

Sleepy Rats Sought For Sleepy Experiments

➤ A MOVEMENT is on, in the interest of science, to produce a breed of sleepy rats.

The sleepy rats will be used eventually to find out why people wake up easily or "hate to get up in the morning."

University of Florida psychologist Dr. Wilse B. Webb is searching for the secret of sleep centers and their relationship to hereditary factors. The rats were chosen for the experiments, because of the obvious impracticability of genetic experiments with humans.

In a given group of rats, some will generally sleep more readily and longer than others, despite changes in environment. To demonstrate this, Dr. Webb is trying to produce the sleepy breed.

In addition to genetic factors, Dr. Webb also believes other factors such as training and motivation contribute to an individual's efficiency in awakening.

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PHYSICS

Heaviest Heart of Nitrogen Discovered

➤ A NEW type of nitrogen nucleus, the heaviest yet, has been created and found.

This discovery fits into place one more identifiable member of a strangely puzzling new series of elements having normal chemical properties but unstable nuclei, now called hyper-nuclei.

"This indicates that it may prove possible to make hyper-nuclei that correspond to all normal nuclei," said Dr. Derek Prowse of the University of California, Los Angeles, physics department, where the research was done with the cooperation of staff members of the Lockheed California Company's Biophysics Research Laboratory.

A normal nucleus consists of neutrons and protons. But in a hyper-nucleus one of the neutrons is replaced by a lambda hyperon, a particle that is neutral and that in some ways behaves like a neutron but is actually unstable, so that it decays in one-billionth of a second. Hyper-nuclei can be made only by using high-energy accelerators.

A powerful beam of negatively charged K-meson particles from the University of California, Berkeley, Radiation Laboratory's bevatron was used to bombard a special block of photographic emulsion in which the tracks of individual particles were recorded.

One of these K-meson particles collided with the nitrogen nucleus of a nitrogen atom in the photographic emulsion, changing one of its neutrons into a lambda hyperon and producing at the same time a pion particle. The "new" nitrogen hyper-nucleus traveled a short distance—only about one-thousandth of a centimeter—then it decayed into a normal oxygen nucleus and another pion particle.

The existence of the new nucleus was then established by means of detailed measurements of all the particle tracks in the emulsion. Before the evidence was in hand, however, a great deal of painstaking detective and deductive work was required.

• Science News Letter, 82:310 November 10, 1962

Do You Know?

Today there are more than 29 million Latin Americans living in cities of 2,000 or greater population who need water.

The *silverfish*, although neither silver nor a fish, is one of the peskiest of American domestic pests, thriving on starchy items such as bookbindings, wallpaper paste, and pipe insulation.

By 1955, reported cases of infectious *syphilis* had declined to six per cent of the 1947 level.

Approximately 70 millions pounds of *casein* and 45 million pounds of isolated soy protein are used annually for industrial purposes.

• Science News Letter, 82:310 November 10, 1962