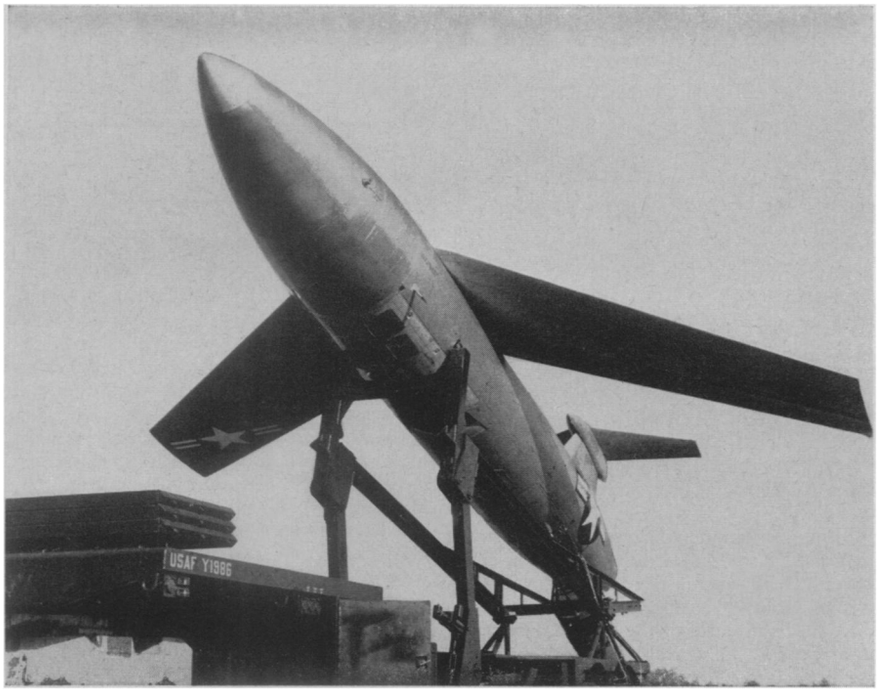

LAUNCHING POSITION—This is how the U. S. Air Force's B-61 Martin Matador, powered by a turbojet engine, looks when ready for launching. The first squadron equipped with the pilotless bombers is now in West Germany after training at Cocoa, Fla. It is the first overseas deployment of any unit using a pilotless, radar-controlled aerial weapon. The B-61 is platform-launched with the assistance of a rocket bottle that falls off when its thrust is expended.

NUTRITION

Milk for Heart Patients

➤ HEART PATIENTS in the Los Angeles area can now drink fresh fluid milk without getting more salt than their doctors think they should have.

The new milk is a low-sodium, or low salt, milk made by a process developed by Dr. A. L. Chaney, a chemist of Glendale, Calif., with the assistance of the Los Angeles County Heart Association.

It will be delivered to heart patients in their homes as well as to hospitals on a doctor's prescription. Patients in other parts of the country will be able to get it as soon as licensing arrangements now being made with major milk companies are completed.

Milk is an important food, but its high sodium content has banned it for patients whose doctors put them on a salt-free diet because of certain types of heart disease or high blood pressure. Until now, these patients had to rely on powdered milk products that had to be reconstituted with water to produce a fluid milk for drinking or pouring over breakfast cereals.

Dr. Chaney's process removes 90% of the original sodium content of ordinary milk, but does not otherwise change the milk. The final product is a fluid said to be indistinguishable in taste from ordinary milk. It costs about 40% less than most powdered low-sodium milks.

Dr. Edgar F. Mauer, president of the Los Angeles County Heart Association, described the new product as an "outstanding contribution to the treatment of heart failure through diet." He said about 10% of the menus of hospitals in Los Angeles County call for low-sodium meals, a ratio he termed typical of hospitals throughout the country. The new milk, he said, will also prove beneficial in low-sodium diets prescribed for patients suffering from illnesses other than heart or circulatory disease.

Three years of experimental work, undertaken by Dr. Chaney at the urging of Heart Association physician members, preceded the perfection of the new process on a test-tube scale. The Los Angeles County Heart Association was instrumental in arranging for its subsequent trial by a commercial dairy, and in winning approval from the California State Bureau of Dairy Service for large-scale production and distribution.

Science News Letter, April 3, 1954

Radio telescopes are rapidly becoming a standard astronomical instrument.

PHYSICS

"Layer Cake" Used To Track Cosmic Rays

➤ "LAYER CAKES" are now being used by physicists to pry into the secret life of an atom's heart. They give at least 100 times more information about the mysterious cosmic rays bombarding earth from space than could be obtained previously.

The "layer cake" is made up of paper-thin sheets of film emulsions, stripped from their backing, then "pasted" together into piles an inch or two thick. Sent high into our atmosphere by balloons, the piles of stripped emulsions record the tracks of cosmic ray particles hurtling at the earth with more than three times the energies yet obtained by man in his giant atom smashers.

By studying these tracks, physicists can learn about the forces within an atom's nucleus, which contains the energy of the universe. Using the layer cake method gives tracks up to 10 times longer than those previously available, and the longer the track, the more information it yields.

Drs. Maurice M. Shapiro, Bertram Stiller and Francis W. O'Dell of the Naval Research Laboratory in Washington will report on how to make and use the emulsion piles in the *Review of Scientific Instruments* (April).

They are now scanning emulsions recently exposed to cosmic ray bombardment at the equator, where the earth's magnetic field sorts out and bends away all cosmic rays except those with very high energies.

Since it takes about a month to scan a single emulsion not much thicker than four or five sheets of paper, no results are yet available. A quick preliminary survey, however, Dr. Shapiro said, looks "very promising."

Science News Letter, April 3, 1954

METEOROLOGY

Local Weather Forecasts Will Cover Three Days

➤ BETTER LOCAL weather forecasts covering a three-day period in advance were available at the breakfast hour in most communities across the country starting April 1, according to the U. S. Weather Bureau.

Previously, such forecasts were issued in the late forenoon to cover only the following 48 hours. Farmers are particularly interested in the forecast for the third day because cutting, drying and storing hay generally takes three days, during which the ideal forecast is "no rain."

Hay is the third largest agricultural crop in the U. S., following corn and wheat. Farmers want the weather prediction early in the morning, while they make plans at breakfast for the day's work. The Weather Bureau plans using early morning radio programs to bring the local forecasts to each community. Dr. James Beall is coordinating the new nation-wide program.

Science News Letter, April 3, 1954