

ASTRONOMY

May Test Universe Theories

AN ASTRONOMER has photographed the most distant, identifiable celestial object ever captured by photography. The object, believed to be a galaxy or a pair of galaxies in collision, is so far away its light takes six billion years to reach the earth.

The find will probably be used to test current theories about the nature and origin of the universe.

The object was photographed by Dr. Rudolph Minkowski, a staff member of the Mt. Wilson and Palomar Observatories, through the 200-inch Hale telescope at Mt. Palomar. The telescope is the world's largest optical instrument.

Dr. Minkowski announced his unprecedented observation at the Astronomical Society of the Pacific meeting in Eugene, Ore.

He not only photographed the object, he made two photographs of its spectrum. These photographs showed the spectrum had shifted much farther into the red than any obtained before. The normally invisible ultraviolet light appeared in the green.

The shift indicates that the object is receding from the earth at 46% the speed of light. This recession of 90,000 miles a second is the fastest ever measured by far.

Dr. Minkowski has been looking for an extremely distant object to help determine which of several theories about the universe is correct, if any is.

One major theory says that matter is being generated continually throughout the universe. The other, which has several variations, says the universe began with a great explosion and is continually expanding, its parts receding from the center.

The quest for the object now photographed began after radio astronomers in Cambridge, England, discovered and roughly located a source of radio signals in the constellation of Bootes. Dr. Minkowski was unable to locate the object until the source was located more precisely recently at Cambridge and at the California Institute of Technology Radio Observatory.

The photograph of the celestial object required a two-hour exposure. The object appears as a blurred dot on the photographic plate. But this blurred dot, if definitely established as the same object as that radio source recorded in England and California, may provide a major test of current theories of the origin and present state of the universe.

Science News Letter, June 25, 1960

TECHNOLOGY

"Serpents" Transport Oil

"SEA SERPENTS" are making regular commercial deliveries from a refinery at Fawley, near Southampton, England, to the Isle of Wight. They are also being used

extensively in Nigeria and in the Far East.

These "serpents" are huge nylon-fabric bags that float in the water for towing.

At the time of the Suez crisis, in the fall

of 1956, a group of scientists at Cambridge University, Cambridge, England, conceived the idea of using flexible containers, made from immensely tough proofed nylon fabric, as an alternative to oil tankers.

Since then, Dracones—from the Greek word for serpents—have rapidly developed, sponsored by the British Government's National Research Development Corporation, and now a company, Dracone Operations Ltd., has been formed to carry on worldwide commercial development of the idea.

They are proving economical craft for many jobs on coastal waters and inland waterways, and their possibilities are not confined to the transport of petroleum products; they are also being used to move solvents, liquid chemicals, edible oils, grain and rice.

The fabric from which they are made is immensely tough nylon, proofed on the outside with Neoprene and on the inside with oil-resistant acrylonitrile rubber.

Dracones, when empty, can be folded up and carried on a truck, railroad car or the deck of a ship. Or they can be wound onto pontoons and towed away.

The 100-foot version has a capacity of 35 tons but weighs only 2,576 pounds. Bigger ones, 200 feet long with a capacity of 320 tons, weigh about 13,500 pounds.

Present indications are that the life of a Dracone is upwards of five years even under rough working conditions. The initial cost is less than for steel barges and they are cheaper to operate. Very little maintenance is required. Very high standards for safety are achieved because there is no air space in which explosive vapors can build up.

Science News Letter, June 25, 1960

MEDICINE

Drug Lowers Cholesterol In Tissue and in Blood

TRIPARANOL (brand name MER/29) reduces cholesterol levels not only in the blood but in body tissues as well, research indicates. See SNL, June 4, 77; 355, 1960.

Dr. William Hollander of the Massachusetts Memorial Hospitals in Boston told the American Therapeutic Society in Miami Beach that by hooking radioactive tracers to cholesterol, he and Drs. Aaron Chabanian and Robert W. Wilkins found that triparanol reduced the level of total cholesterol in all body tissues and in the blood. Their subjects were 89 patients on an unrestricted diet, 43 of whom had evidence of coronary artery disease.

It was previously suspected that the drug reduced blood cholesterol levels merely by transferring cholesterol to the tissues. The doctors' research indicates that this is not the case.

In previous tests triparanol was shown to lower blood cholesterol and inhibit its production in the liver in about 80% of the persons tested.

Dr. Hollander said that if additional cholesterol is manufactured by arteries themselves, as other investigators have reported, he is willing to speculate that triparanol inhibits production at this site as well as in the liver.

Science News Letter, June 25, 1960



SEA SERPENT—A 100-foot dracone enters Newport Harbor, the Isle of Wight, England, with a load of kerosene.