● RADIO

Sat., August 17, 1957, 1:45-2:00 p.m., EDT.

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Dr. Justin M. Andrews, director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Md., will discuss "Research on Allergies."

SURGERY

Device Matches Colors For Artificial Noses

➤ WHEN ARTIFICIAL ears or noses are prepared for plastic surgery cases, one of the problems is to make them the right color so that they match the face to which they are attached.

A device that does the job quickly and eliminates all trial and error usually necessary is described by Drs. B. Jolles and R. G. Mitchell, General Hospital, Northampton, England, in *The Lancet* (June 29).

Called a hand tintometer, the machine looks like a short fat telescope and contains a graded series of colored glass filters that can be placed together in various combinations. The operator looks through the eyepiece and combines the filters until their color matches that of the area being studied. The particular filter combination is then used as a reference for making the matching color.

The tintometer allows accurate reading of the three attributes of skin color: hue, intensity and saturation. Other methods have allowed only the measurement of the intensity of reflected light, the authors report.

Aside from plastic surgery, the tintometer has proved useful for recording the skin's color changes after radiation. All color matching in one case should be done by the same person, since color perception itself is a personal thing, the authors point out.

The device was developed by Lovibond Tintometer Ltd., Salisbury, England.

Science News Letter, August 10, 1957

GEOPHYSICS

Scientists Talk From North to South Poles

➤ TWO UNITED STATES scientists, one near the North Pole and the other in Antarctica, have talked to each other over more than 11,200 miles, the second known direct pole-to-pole conversation in history.

The Columbia University scientists are at their remote stations to conduct research for the International Geophysical Year, an 18-month international study of the planet earth. They reported reception on the "ham" radio band was "clear as a bell."

The two are Dr. Charles R. Bentley of Syracuse, N. Y., who is in the Antarctic, and Maurice J. Davidson of Lynn, Mass., who is in the Arctic.

Reason for the rarity of direct pole-to-pole conversations is that there seldom is activity at both places at the same time.

Science News Letter, August 10, 1957

MEDICINE

Uranium May Kill Cancer

➤ A URANIUM COMPOUND may be able to kill cancers by making them explode inside with tiny atomic particles. This possibility arises from research reported by Dr. Robert E. Bases from the New York University College of Medicine in *Science* (July 26). Dr. Bases is currently working at the National Institutes of Health, Bethesda, Md.

The new compound is called uranyl protoporphyrin and is made of both uranium and a biological chemical, protoporphyrin, which forms the basis of hemoglobin, the blood's oxygen-carrying substance. Since 1942 the protoporphyrin part of the compound has been known to concentrate in tumors as well as in embryonic and inflammatory tissue.

The theory behind the research is that if a cancerous growth can be made to concentrate uranium inside its borders, it could then be bombarded with neutrons. These neutrons would cause a small chain reaction similar to that taking place inside the atomic fission bomb.

The concentrated uranium would release enormous amounts of energy over very short ranges and the resulting fission particles might then destroy the cancerous cells and tumor.

So far, attempts to do this have been hampered by the kidney-damaging property of uranium salts, which have proved too toxic for use in humans.

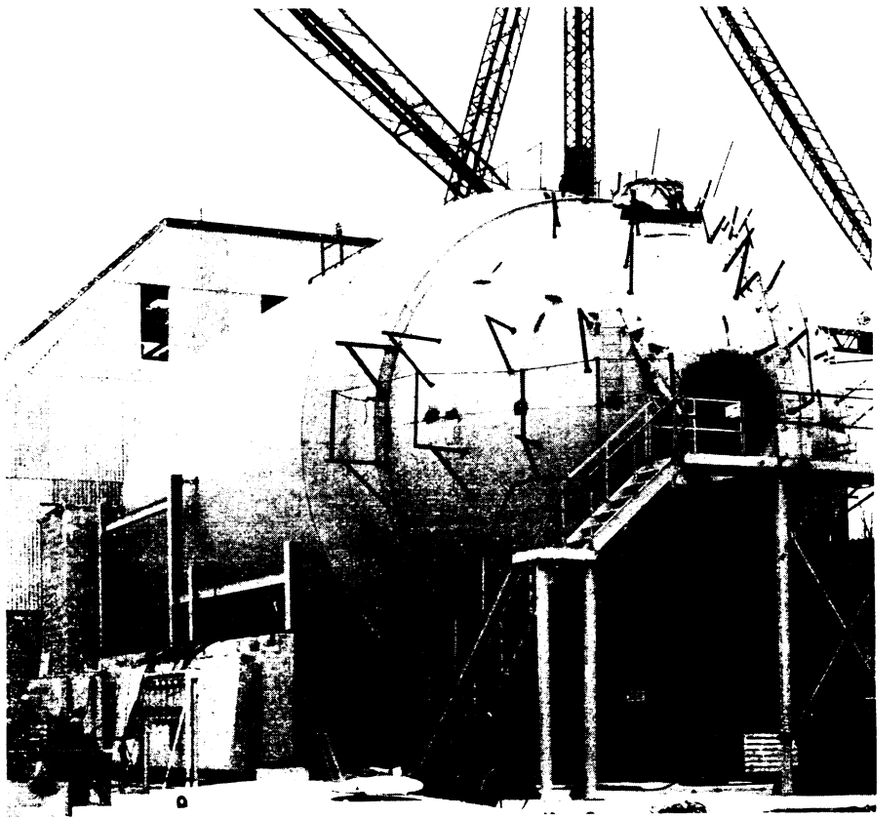
However, the new compound appears to be non-toxic and to have an affinity for cancerous tissue.

A small number of trials on mice have thus far shown the uranium compound to be non-toxic. Animals that received nine times the usually lethal dose of uranium were unharmed as long as the uranium was combined with protoporphyrin.

Further toxicity studies are being made. If they confirm the results of these early ones, a new type of cancer therapy may be possible.

A local or intravenous injection of the uranium compound could be made and then, after allowing time for it to concentrate, the tumor would be treated by bombarding it with neutrons from an atomic reactor.

Science News Letter, August 10, 1957



TRITON—The submarine hull section shown nearing completion at West Milton, N. Y., will house the prototype of the nuclear propulsion plant for the U. S. Navy's submarine, Triton. Described as the largest underwater craft ever built, it will be powered by two pressurized water reactors and will be the first such plant ever developed for submarine propulsion. Both the prototype and actual nuclear propulsion plant are being designed and developed at the General Electric Company's Knolls Atomic Power Laboratory.