

Alpher and Herman honored for radiation research

Ralph A. Alpher of the General Electric Research and Development Center and Robert Herman of the General Motors Research Laboratories are the joint recipients of two awards—the Magellanic Premium of the American Philosophical Society (the oldest award in the US for scientific research) and the Georges Vanderlinden Prize of the Belgian Royal Academy of Sciences, Letters, and Fine Arts. They were chosen to receive these prizes as a result of their prediction of 3K black-body radiation.

In 1948 and 1949, while at The Johns Hopkins University applied physics laboratory, they proposed that if the universe originated in a "Big Bang," remnants of that event should be detectable now as a background noise in the microwave region throughout the universe. The theory remained unconfirmed until 1965, when a research team at Bell Laboratories observed the predicted radiation and obtained an apparent black-body temperature of 3.3K. Since then, many independent observations have been made, and experimenters at Berkeley, California, have recently confirmed the black-body character of the radiation at 2.99K. The existence of 3K black-body radiation is cru-



ALPHER

cial to the so-called "Big Bang" theory.

Alpher received his PhD in physics from George Washington University in 1948. In 1955 he joined the GE Research and Development Center, working in exploratory high-temperature gas dynamics and investigations of magnetohydrodynamics. Recently he joined the Center's energy-sciences branch to



HERMAN

do research on energy conversion and transmission problems.

Herman earned his doctorate in physics at Princeton University. Before joining General Motors in 1950 he taught at the University of Maryland. In 1959 he became head of the theoretical physics (now traffic science) department at GM Research.

Williams named recipient of 1975 Coolidge Award

The American Association of Physicists in Medicine recently named Marvin M. D. Williams, professor emeritus of biophysics at the University of Minnesota, as the fourth recipient of the Coolidge Award. The award, named for x-ray pioneer William D. Coolidge (1873–1975), recognizes "distinguished contributions to medical physics" and consists of a bronze plaque bearing a likeness of Coolidge. It was presented 5 August during AAPM's 17th annual meeting in San Antonio, Texas.

Williams completed his doctorate at the University of Minnesota in 1931 and then spent four years as assistant professor at Union Medical College in Peiping, China. Returning to the US in 1936, he became research assistant in biophysics at the Mayo Clinic in Rochester, Minnesota. In 1950 he was appointed full professor in the Mayo

Graduate School, from which he retired in 1967. A charter member of the AAPM, he has been very active for almost a half-century in the scientific, educational and professional aspects of medical physics. His work has previously been honored by his medical colleagues through the award in 1965 of the Radiological Society of North America's Gold Medal.

DeLoach receives IEEE's David Sarnoff Award

Bernard C. DeLoach Jr has received the David Sarnoff Award in electronics of the Institute of Electrical and Electronics Engineers. DeLoach, head of the gallium-arsenide laser department at Bell Laboratories, was named winner of the \$1000 award in appreciation of his work on the impact avalanche and transit time device.

DeLoach earned his doctorate in

physics in 1956 from Ohio State University. He has made contributions to microwave solid-state devices and their circuit applications and is now interested in developing solid-state lasers.

Observatory named for Gerard P. Kuiper

The world's largest flying astronomical observatory has been dedicated by the National Aeronautics and Space Administration to the memory of the late astronomer Gerard P. Kuiper. Kuiper, who died in December 1973, was active in NASA's early space programs, including missions to the Moon, Venus, Mercury and Jupiter. He was a pioneer in using aircraft for infrared astronomy. Kuiper founded and directed the University of Arizona lunar and planetary laboratory, which, under his guidance, produced detailed studies and maps of the Moon's surface that facilitated the