# WE HEAR THAT

## IEEE Gives Annual Awards

At its annual honors ceremony in June, the Institute of Electrical and Electronics Engineers presented awards to 17 individuals. Among the recipients were **Floyd Dunn**, **Carver A. Mead**, **Martin A. Uman**, **Alan G. Chynoweth**, **Sol Triebwasser** and **Leon Lederman**.

Dunn, a professor emeritus in the department of electrical and computer engineering at the University of Illinois at Urbana-Champaign, earned IEEE's Edison Medal for "contributions to . . . ultrasonic propagation in and interactions with biological media." Mead was given the IEEE John Von Neumann Medal for his "leadership and innovative contributions to VLSI [very large scale integration] and creative microelectronic structures." The Heinrich Hertz Medal went to Uman, a professor in and chair of the electrical and computer engineering department of the University of Florida for "major contributions to the understanding of lightning electromagnetics and its application to lightning detection and protection."

The recipients of the IEEE Engineering Leadership Recognitions were Chynoweth, who is retired from Bell Communications Research in Morristown, New Jersey, and Triebwasser, director of technical journals and professional relations at IBM's T. J. Watson Research Center in Yorktown Heights, New York. Chynoweth was cited for "the initiation, organization and inspired leadership of Bellcore's applied research division." Triebwasser was honored for "pioneering leadership in the development of MOS [metal oxide semiconductors] large scale integration."

Lederman, the Pritzker Professor of Science at the Illinois Institute of Technology and director emeritus of Fermilab, was named an honorary member of IEEE.

On a separate occasion in June, **Wallace M. Manheimer** received the 1996 Plasma Science and Applications Committee Award given by IEEE. Manheimer is a senior scientist for fundamental plasma processes at the Naval Research Laboratory in Washington, DC.

## IN BRIEF

This fall **John P. Holdren** is moving to Harvard University, where he will be the Teresa and John Heinz Professor of Environmental Policy at the Kennedy School of Government. Holdren has been the Class of 1935 Professor of Energy at the University of California, Berkeley, and a visiting distinguished scientist at the Woods Hole Research Center in Massachusetts.

**Freeman Dyson** is the 1996 recipient of Rockefeller University's Lewis Thomas Prize, which honors scientists for their artistic achievements. The citation says, in part, that Dyson, who is a professor emeritus of physics at the Institute for Advanced Study in Princeton, New Jersey, "has mastered the art of transforming his deeply humane vision of science into pellucid prose."

**Robert Cava** has become a professor in the chemistry department at Princeton University and in the university's Princeton Materials Institute. Cava had been a distinguished member of the technical staff at Bell Laboratories, Lucent Technologies.

# OBITUARIES

## Robley Evans

Robley Evans, a professor emeritus of physics at MIT, died on 31 December 1995 in Paradise Valley, Arizona, where he had been living in retirement.

Born on 18 May 1907, Evans received his BS in physics in 1928, his MS in 1929 and his PhD in 1932, all from Caltech. For his doctoral thesis, which was supervised by Robert A. Millikan, he measured the background radiation coming from Earth, so that one could distinguish it from the cosmic radiation. From 1932 to 1934, Evans studied the biological effects of radiation as a National Research Fellow at the University of California, Berkeley. In 1934, MIT invited him to join the faculty and establish an academic course in nuclear physics. He accepted, and remained at MIT for the rest of his career.

At MIT, Evans was instrumental in building the Markle Cyclotron, the first such machine to be used for biological and medical purposes. In 1935, he established the physics department's radioactivity center, to do research in nuclear physics and to foster the application of radioactivity to such fields as biology, chemistry, nutrition and geology. Evans directed the center for the next 37 years.

With the collaboration of Joseph Aub, head of medicine at Massachusetts General Hospital, and Austin Brues, then at Huntington Memorial Hospital in Boston, Evans began to study individuals who had ingested radium in the 1920s. In 1941, based on his studies of 27 people, he was able to establish one ten-millionth of a gram of radium as the "maximum permissible body burden." Having such a standard was crucial because the US was about to embark on its atomic bomb program, during which large numbers of workers would be exposed to radioactivity in unprecedented ways. The study that Evans originated at the radioactivity center went on to include more than 900 subjects.

Together with James Howard Means of Massachusetts General, Evans developed the use of isotopes of iodine for the diagnosis and treatment of thyroid disease. Evans and Earl Chapman wrote the first definitive paper on this form of therapy in 1946.

Evans also helped develop a technique to preserve human whole blood. This research was undertaken with the Harvard Medical School to benefit servicemen wounded in World War II. Researchers used radioactive forms of iron and iodine (produced in MIT's cyclotron) to determine how long stored blood cells remained viable, by determining how long they remained in the blood of the recipient. Evans and his colleagues found a chemical to preserve the blood for up to three weeks, the time required to reach distant battlefields. The chemical was used in blood banks for several decades. Unbeknownst to his neighbors, Evans also set up a laboratory in his home during the war to make an accurate assessment of the uranium in ore samples from the Belgian Congo; the uranium was destined for use in atomic bombs, while the radium was to be returned to Belgium.

Evans was a superb teacher and wrote a widely circulated practical manual on teaching, *You and Your Students*. He also wrote a popular basic text for graduate and undergraduate students in nuclear physics, *The Atomic Nucleus* (McGraw–Hill, 1955), and served as editor, associate editor or member of the editorial board for a number of journals.

Evans served as a consultant or committee member for many hospitals, institutions, government agencies and