

Clinton J. Davisson, 1937 Nobel laureate, died on February 1 at his home in Charlottesville, Va. His age was 76. A native of Bloomington, Ill., he received his BS from the University of Chicago in 1908 and his PhD from Princeton University in 1911. That same year he became an instructor in physics at the Carnegie Institute of Technology. In 1917 Dr. Davisson left Carnegie Tech on a leave of absence to work during the first World War with Western Electric Co. After the war he stayed at the Western Electric Research Laboratories, which in 1925 became known as the Bell Telephone Laboratories.

Dr. Davisson and Sir George P. Thomson shared the Nobel Physics Prize in 1937 for their independent discovery ten years earlier of the diffraction of electrons by crystals, which provided the first experimental verification of the wave nature of the electron. His discovery of electron diffraction (in collaboration with L. H. Germer, also of the Bell Laboratories) has been referred to by Davisson himself as the most notable of "the many lucky breaks which came my way during the years". The following account of that event has been given by a colleague:<sup>1</sup>

"... It was just a fortunate chance that he had taken up the study of the reflection of very slow electrons from metal surfaces, for it was in the course of this study that he discovered that the reflected electrons grouped themselves into clearly-defined beams. Accident played a dramatic part. Davisson's first observations were made upon polycrystalline masses of metal; then one day the tube broke and the target got oxidized, and in the course of the prolonged heating necessary to undo the harm, the metal was changed from an aggregate of a large number of small crystals to an aggregate of a few large crystals. The system of beams was radically changed. Davisson trained the incident electrons against the surface of a large single crystal, and the key was in his hand."

During his thirty years with the Laboratories, Dr. Davisson's work in electron physics led to important applications in the development of communication systems, and during World War II he made significant contributions to the magnetron and crystal physics programs then in progress at Bell Laboratories. He retired in 1946 at the age of 65, and from 1947 until 1949 he held a research professorship in physics at the University of Virginia. He was a fellow of the American Physical Society.

Willis M. Rayton, professor of physics at Dartmouth College, Hanover, N. H., died of cancer on September 21 at the college infirmary. His age was 48. Born in Rochester, N. Y., he received his bachelor of science degree from Hamilton College in 1931. He later attended the University of Rochester, where he was awarded the MS degree in 1933 and the PhD in 1936. After serving as an instructor of physics at the

<sup>1</sup> K. K. Darrow, "Electron Physics in America", *Physics Today* IX:8:25 (August 1956).

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Massachusetts Institute of Technology during the period 1936-39, Dr. Rayton joined the Dartmouth physics staff, attaining a full professorship in 1947.

During World War II, Dr. Rayton was involved in sound propagation research and he collaborated in the development of equipment used in the Navy's underwater sound program. At the time of his death he was project director for an ionospheric research program at Dartmouth in connection with the International Geophysical Year. The project, financed by a National Academy of Sciences grant, was designed to study ionospheric radio-wave absorption in the polar regions and Dr. Rayton was in charge of stations at Knob Lake, Quebec, and Hanover.

Dr. Rayton was a member of the American Physical Society.

Fred M. Uber, a physicist at the US Navy Electronics Laboratory, San Diego, Calif., died on December 13 from injuries suffered in an automobile accident. His age was 52. Born in Locust Lane, Pa., Dr. Uber received his AB degree from Dickinson College in 1926 and his MA from Syracuse University in 1928. He then went to the University of California as a Whiting Fellow and received his PhD in physics in 1931. After five years devoted to research in biophysics at the University of California, he joined the University of Missouri faculty in 1936 as an assistant professor of biophysics. He joined the Navy Electronics Laboratory as a physicist in 1944, but left San Diego two years later to accept a full professorship at Iowa State College. In 1948 he returned to the Navy Electronics Laboratory, where he remained until his death. Dr. Uber was a member of the American Physical Society and the Acoustical Society of America.

Willis R. Whitney, founder of the General Electric Research Laboratory, died on January 9 in Schenectady, N. Y., after suffering a heart attack a week earlier. He was 89 years old. Born in Jamestown, N. Y., Dr. Whitney was graduated from the Massachusetts Institute of Technology in 1890 and received his PhD from the University of Leipzig, Germany, in 1896. In 1908, after having served as assistant and associate professor of theoretical chemistry at MIT for 8 years, he was named nonresident professor of chemical research, a title which he still held at the time of his death.

In 1900, Dr. Whitney joined GE to work with Charles Steinmetz and from that year until 1932 he became the founder and active director of the GE Research Laboratory. During the last four years of this period he also served as vice president in charge of research for the company. In 1932 he retired from the directorship of the laboratory and, in 1941, from the vice presidency. Since that time he had continued research in the capacity of honorary vice president and consultant to the laboratory.

Dr. Whitney held many awards and honorary degrees of international origin. He was a member of the American Physical Society.