

OBITUARIES

Sir Charles Darwin, theoretical physicist and retired head of Great Britain's National Physical Laboratory, died at his home in Cambridge on December 31, 1962. He was 75 years old. Sir Charles was the son of Sir George Darwin, Plumian Professor of Astronomy at Cambridge, and the grandson of Charles Darwin.

After completing his studies at Trinity College, Cambridge, in 1909, he was appointed as a reader in mathematical physics at the University of Manchester, where he worked under the direction of Lord Rutherford during the period when Bohr and Moseley were there. Darwin's main work at that time was in the field of x-ray diffraction.

Following five years of military service in World War I, he became a fellow and lecturer of Christ's College, Cambridge, in 1919. In 1923, he was appointed professor of natural philosophy at the University of Edinburgh and remained there for fourteen years. He then returned to Cambridge as master of Christ's College. In 1938 he was named director of the National Physical Laboratory, the post he held until his retirement in 1949. During the period 1941-42 he was placed in charge of the British Central Scientific Office in Washington.

His honors included his knighthood (bestowed in 1942); honorary degrees from the Universities of Bristol, Manchester, St. Andrews, Edinburgh, and Delhi; honorary fellowships at Trinity and Christ's Colleges; and a Royal Medal of the Royal Society, of which he was a fellow.

Royal C. Bryant, director of the Electromechanical Division of Atlantic Research Corporation, died on December 26, 1962, at the age of 55. A native of Keene, N. H., he studied chemistry at Western Reserve University, where he graduated in 1928 and received a master's degree the following year. He then went to Oxford as a Rhodes Scholar and studied physics, earning an Oxonian BA in 1932 and an MA in 1935.

He spent the year 1941-42 as assistant professor of physics at Kenyon College and then joined the B. F. Goodrich Company as a research physicist. He left Goodrich for the Navy in 1945 and, serving as a lieutenant in the Naval Reserve, spent a year with the Office of Naval Research, where he was concerned with the administration of research contracts. In 1946, he joined Engineering Research Associates, Inc., as a senior physicist, and became director of research of the firm in 1949. He was appointed to his post with Atlantic Research Corporation in 1954.

He was a member of the American Physical Society and the Society of Rheology.

Hans Kopfermann, professor of experimental physics at the University of Heidelberg, died in Heidelberg on January 28. Born on April 26, 1895, at Breckenheim bei Wiesbaden, he studied at the Universities of Erlangen, Berlin, and Göttingen and received his PhD from Göttingen in 1924. In the same year he became an assistant at the Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry in Berlin. He was named dozent at the University of Berlin in 1932 and at the Berlin Technische Hochschule in 1934. In 1937, he went to the University of Kiel as ordentlicher professor and remained there five years. He moved to the University of Göttingen in 1942. In 1953, he became professor at the University of Heidelberg and director of the First Physical Institute, posts which he held until his death.

Professor Kopfermann began studies of optical hyperfine structure in 1931. He was one of the pioneers in measurement of nuclear spins and nuclear isotope shift and in later years moved into the fields of pure quadrupole resonance and atomic beams. In addition to many contributions to scientific journals, he was the author of a book, *Kernmomente*, which has been translated into English as *Nuclear Moments*. In 1955 a special issue of the *Zeitschrift für Physik* was dedicated to him on the occasion of his 60th birthday. He was a member of the Academies of Science of Göttingen, Heidelberg, and Copenhagen.

William C. Dash, a physicist with the General Electric Company, died at his home in Glenville, N. Y., on November 3. He was 37 years old.

Born in Hazelton, Pa., he did his undergraduate work at Lehigh University, where he received his BS degree in 1946. He received his PhD from Cornell in 1952 and joined the staff of the General Electric Research Laboratory immediately thereafter. A specialist in solid-state physics, Dr. Dash developed new techniques for studying dislocations in silicon crystals, and he also played a leading role in research that produced large, defect-free, single crystals of various materials important in the development of transistors and other semiconductor devices. He was a fellow of the American Physical Society.

J. L. Pawsey, well-known Australian radio astronomer, died in Sydney at the age of 54 on November 30, 1962. At the time of his death he was assistant chief of the Division of Radiophysics of the Commonwealth Scientific and Industrial Research Organization.

A native of Ararat, Victoria, he earned his MSc degree at the University of Melbourne and then went to England to work under Lord Rutherford at the Cavendish Laboratory. He received his PhD from the Univer-