in Section F from 1899 until 1911. The Royal Statistical Society, of which he was a Council member as early as 1898, awarded him the Guy Medal (Gold) in 1935 and elected him president during 1938-40. The International Statistical Institute called upon him on numerous occasions; he wrote several of the Institute's reports, and he served as treasurer and bureau member during 1929-36 and again from 1947 until 1949. The statistical work of the League of Nations in the early years was furthered by two reports commissioned from him. With Sir Dennis Robertson he visited India in 1934 to prepare a scheme for an economic census. He was created C.B.E. in 1937 and made a knight bachelor in 1950; he was elected a Fellow of the British Academy in 1922.

Bowley was the author of more than twenty books and pamphlets, in addition to numerous articles, reports and memoranda. Some of them are of continuing value, particularly his "Wages and Income in the United Kingdom since 1860" (published 1937), in which he brings together much of the work on wages he undertook from 1895 onwards. Two of his "An text-books are still used quite widely: Elementary Manual of Statistics" (seventh edition, 1951) and "Elements of Statistics" (second impression of sixth edition, 1946).

In the nature of things, Bowley is survived by few of his contemporaries; but he will be missed by all those who knew him and so came to appreciate his incisive mind, his liberal outlook and his dry sense of humour. R. G. D. Allen

## Dr. F. A. Henson

DR. FREDERICK ARTHUR HENSON, lecturer in the Department of Geology, University of Nottingham, died suddenly on January 14. Born at Wolverton,

NEWS and VIEWS

Physics at the Imperial College : Dr. C. C. Butler

DR. C. C. BUTLER has been appointed to the chair in physics tenable at the Imperial College of Science and Technology, London, left vacant when Prof. S. Devons was appointed to the University of Manchester in 1955. Dr. Butler, who was born in 1922, graduated at the University of Reading in 1942. His first postgraduate work was with T. B. Rymer at Reading on precision measurements in electron diffraction. In 1945 he became assistant lecturer in physics in the University of Manchester and lecturer in 1947. When Prof. P. M. S. Blackett moved to the Imperial College in 1953, Dr. Butler was appointed reader in the University of London, and since 1955 he has been assistant director of the physical labor-atories at the Imperial College. During 1946-47 in Manchester, Dr. Butler, in collaboration with Dr. G. D. Rochester (now professor of physics in the Durham Colleges in the University of Durham), discovered the charged and neutral V-particles, using a countercontrolled cloud chamber in a magnetic field. In 1956 the Physical Society awarded them jointly the Charles Vernon Boys Prize for this work. In 1951 Dr. Butler moved this apparatus to the Pic-du-Midi laboratory in the Pyrenees and has directed the work of the group running it ever since. Very soon after the work started in the mountains, the negative Bucks, on June 30, 1919, he proceeded to the University of Reading in 1937. During 1940-45 he was on active service, first as a fighter pilot in the Fleet Air Arm and later as staff meteorological officer on the personal staffs of Admiral Somerville and Admiral Mountbatten in the South-East Asia Command. Resuming his studies after distinguished war-time services, he completed his degree course and proceeded to research work in the University of Reading on the geology of the Channel Islands, for which he was awarded the degree of Ph.D. of his University.

In 1947 Dr. Henson was appointed lecturer in the University of Nottingham and developed courses in petrology and economic geology. His work on the Channel Islands continued, and a series of important papers, some of which are still in manuscript, have emerged on the granites and the migration of trace elements associated with granitization in Jersey. During the past three years he stimulated researches on the basalts and associated rocks of Iceland, and with enormous energy and enthusiasm made two expeditions to study these rocks. At the peak of his career it seems so tragic that the results of this important field of research had just reached the stage of publication.

Ĥis writings covered a wide variety of topics; and he was also responsible for the teaching and development of a complete university course of study in photogrammetry. He was an active member of the Board of the Faculty of Pure Science in the University of Nottingham, the University representative on the Outward Bound Trust and a lieutenant-commander in the R.N.V.R. His stimulus and influence on all sections of University life will be a great loss, and his ever-ready help to expeditionary projects will be sadly missed by the undergraduates of the Universities of W. D. EVANS Nottingham and Reading.

cascade hyperon was discovered and the neutral V-particle transforming into a proton and a meson was first identified.

Ministry of Supply: Chemical Defence Research : Mr. A. E. Childs, C.B.E.

On January 16, after thirty-six years continuous service in the field of chemical defence research, Mr. A. E. Childs retired from the headquarters post of director of chemical defence research and development in the Ministry of Supply. He graduated at the University of Cambridge in 1920 and later at the University of London. During the First World War he held appointments as divisional gas officer and general staff officer (3) with the British Expeditionary Force in France. In 1921 he joined the staff of the Chemical Warfare Research Station, Porton, where his resourceful and energetic disposition found ample scope. Later, he held senior posts in the chemical and research divisions of the Establishment. During the Second World War his activities included a mission to chemical warfare establishments in the Commonwealth countries and the United States. and in 1943 he was appointed principal technical adviser to Mr. Davidson Pratt, the controller of research and development in the chemical warfare field. At the end of the War Mr. Childs became leader of the