obituary

Sir George Thomson, who died on September 17 at the age of 83, was famous for the discovery of electron diffraction. This classical experiment confirmed the hypothesis of de Broglie, and the basis of Schrödinger's wave mechanics, and it also opened the way for an important new technique, which has become an indispensable tool of solid-state physicists and others.

He shared the 1937 Nobel Prize in Physics with Davisson who, with Germer, had seen electron diffraction independently of Thomson, at almost the same time in 1927. They were led to the discovery by an accident, which they described in their fundamental paper, whereas Thomson, inspired by the new theory, knew that such an effect was likely and set out to find it. In his Cornell lectures, which describe the early experiments, he omitted, with characteristic generosity, to mention this difference.

His work depended on a full appreciation of the then new theories and of fundamental physics, and also on the skill and caution of a great experimenter. His discovery was not published until it had been confirmed by more checks and tests than many others would have thought necessary. This discovery, and the manner in which it was made, ensure him a place among the pioneers of pure physics, but he always had an eye for the applications.

He saw immediately the possibilities of electron diffraction as a tool, and over the years contributed much to its development; for this he put to good use not only his experimental skill and flair for the technical, but also his mathematical ability, proved by gaining Firsts in Parts I and II of the Mathematical Tripos. Another subject that attracted his interest was aeronautics, with which he became involved during the First World War, and which remained a major interest for some time afterwards. He served on the Aeronautical Research Committee at the beginning of the Second World War.

In the 1930s he became interested in neutron physics, and, with his eye for applications, took up the problem of nuclear energy as soon as fission had been discovered. A committee under his chairmanship, set up on his initiative, studied the possibilities of slow-neutron fission. When it became clear that the short term possibilities depended on fast neutrons, he became chairman of the new 'MAUD' committee, whose report led to the project being given high priority in Britain, and probably also accelerated the pace of work in the United States.

After the Second World War, another fundamental field of physics with potential applications aroused his interest. He started to study plasma physics as a means of reaching the high temperatures required for a controlled fusion reaction. This hope has not yet been realised by anyone, but Thomson and his collaborators made important contributions to the early stages of the work.

He was the son of J. J. Thomson, the discoverer of the electron, the founder of a great school of physics in the Cavendish Laboratory, and a great personality. It is often difficult to follow such a father in his own profession, but 'G.P.' did not seem conscious or embarrassed by being so overshadowed. This was no doubt due to his attitude, which was completely lacking in self-consciousness, but was governed by a warm interest in other people and a concern for the essence of the problem in hand. In his many contacts with committees and with administrative problems, there were, of course, occasions when people disagreed with him, but they were always able to respect his point of view, and the dominant image that one took away from any encounter with him was of absolute integrity, warm humanity, and frank, even blunt, talk. His action in sharing his Nobel Prize with the technician who had been involved in the discovery is characteristic not only of his decency, but of his belief in the importance of technical innovation for the progress of the subject.

One might well apply to him a comment he made when writing about his father: "He was by no means the conventional scientist guided always by logic—if indeed such a creature exists. He was guided by intuitions, not always without prejudice."

George Paget Thomson was born in 1892, educated at the Perse School and Trinity College, Cambridge, where he obtained Firsts in the Mathematical Tripos, Parts I and II, and in Natural Science Part II. His teaching at Corpus Christi College was interrupted by the First World War, when he served in France, transferring to the Royal Flying Corps. He returned to Cambridge in 1919 and was Professor of Natural Philosophy in Aberdeen from 1922 to 1930; he moved to the chair of physics in Imperial College where he remained until he became Master of Corpus in 1952. He retired from that post in 1962, but remained active in many capacities to the end. Among his numerous honours were his knighthood in 1943, the Hughes (1939) and Royal (1949) Medals of the Royal Society, the Faraday Medal (1960) and the presidency of the Institute of Physics (1958–60) and of the British Association (1960).

After the tragically early death of his wife in 1941 he always found time, among his heavy commitments, to remain close to his four children.

announcements

International meetings

December 12–17, **Water resources: water for human needs,** New Delhi (C. V. J. Varma, Indian National Committee for International Water Resources Association, Central Board of Irrigation and Power, Kasturba Gandhi Marg, New Delhi 110001, India).

November 20, **Energy transfer in photosynthesis,** London (Dr G. S. Beddard, Davy Faraday Research Laboratory, The Royal Institution, 21 Albemarle Street, London W1X 4BS).

December 9–11, **Second international conference on electrical safety in hazardous environments,** London (Anne-Marie Cunningham-Swendell, The Institution of Electrical Engineers, Savoy Place, London WC2R 0BL).

December 29, **Gordon Research Conference: Metals and metal binding in biology,** Santa Barbara (Dr A. M. Cruikshank, Gordon Research Conferences, Pastore Chemical Laboratory, University of Rhode Island, Kingston, Rhode Island 02881).