

effected and many problems of national importance were made the subject of special study: such contributions were of the utmost value during the First World War and for this work Mr. Lucas was awarded the O.B.E. A few years later he retired on pension. The fruits of these various experiences form the material for his "Forensic Chemistry", now in its third edition.

Egypt became the land of Lucas's adoption, and Egyptology the main hobby of his retirement. A stimulus was given to these studies by his association, as official chemical adviser, with Dr. Howard Carter at the opening of the tomb of Tut-ankh-Amūn; and his contributions on the "Chemistry of the Tomb" in

vols. 2 and 3 of Carter's book ("The Tomb of Tut-ankh-Amen") are of outstanding interest and lasting importance.

Lucas has done much by example and precept to establish safe laboratory methods for the treatment of antiquities. His book on "Antiques, their Restoration and Preservation" is deservedly well known, and his "Ancient Egyptian Materials and Industries" is already a classic.

His life was a triumph over illness and circumstances; it left him with a deep sympathy for his fellow-men, and with a quiet but keen sense of humour which was the delight of his friends.

H. J. PLENDERLEITH.

NEWS and VIEWS

Royal Astronomical Society: Award of Gold Medal

THE Gold Medal of the Royal Astronomical Society has been awarded to Prof. J. H. Oort, for his investigations on the dynamics and rotation of the galactic system. The hypothesis of the rotation of the galactic system about a point near the centre of the system of globular clusters was suggested by Lindblad in 1925 as a possible explanation of the systematic differences of the motions of the globular clusters and R. R. Lyrae variables from those of the brighter stars in our neighbourhood. Prof. Oort provided the first direct observational evidence that the galactic system was rotating. For this purpose he employed several groups of stars of high luminosity and analysed both their radial velocities and proper motions. A series of brilliant investigations fully established the rotation of the galaxy, provided estimates of the distance of the centre of rotation, of the velocity of rotation at the sun's distance, and of the total mass of the system. Important conclusions about the distribution of mass and the absorption of light in the galactic plane were obtained. Determinations were also made of secular parallaxes and of the precession and motions of the equinox. Investigations of the dynamics of the galactic system established that both star-streaming and the systematic motions of stars of high velocity can be considered as steady phenomena. Prof. Oort has made many other contributions of importance to astronomy. During the German occupation of the Netherlands, Prof. Oort resigned his professorship, along with most of the other professors of the University of Leyden, rather than submit to Nazi dictation. He has recently been appointed director of the Leyden Observatory. Since 1935 he has been general secretary of the International Astronomical Union.

Institution of Electrical Engineers Awards:

Honorary Membership

THE Earl of Mount Edgcumbe has been elected an honorary member of the Institution of Electrical Engineers, in recognition of his distinguished work as an electrical engineer, and of the services rendered by him to the Institution. Lord Mount Edgcumbe, who is a fellow of University College, London, served his pupillage with Crompton and Co. at Chelmsford, and in 1897 joined the staff at Northampton Polytechnic Institute in London. In 1900 he founded the firm of Everett Edgcumbe and Co., Ltd., of which he is chairman and managing director.

He has been associated with the Institution of Electrical Engineers since 1897, and was president during 1928-29. He is the author of a number of papers read before the Institution and published in its journal, for which he has received several premiums, including the Ayrton Premium and the Silvanus Thompson Premium. Lord Mount Edgcumbe has also contributed valuable assistance in the international field, particularly in his capacity, from 1927, as honorary secretary of the International Electrotechnical Commission. He is also a vice-president of the International Commission on Illumination, vice-president of the British Electrical and Allied Manufacturers' Association and a past president of the Illuminating Engineering Society of Great Britain.

Faraday Medal

SIR EDWARD APPLETON has been awarded the Faraday Medal of the Institution of Electrical Engineers, for the conspicuous services rendered by him in the advancement of electrical science, particularly in the field of radio propagation. This Medal is awarded not more frequently than once a year, either for notable scientific or industrial achievement in electrical engineering or for conspicuous service rendered to the advancement of electrical science, without restriction as regards nationality, country of residence or membership of the Institution. Educated at Bradford, and then at St. John's College, Cambridge (scholar and exhibitor), Sir Edward became, in 1920, assistant demonstrator in experimental physics at the Cavendish Laboratory. He was Wheatstone professor of physics, University of London, during 1924-36 and Jacksonian professor of natural philosophy, Cambridge, during 1936-39. His early researches in connexion with the propagation of radio waves, and particularly on their reflexion and refraction, have been acknowledged by naming one of the ionospheric layers after him. His work was of fundamental importance in the development of radio-location. In his capacity of secretary of the Department of Scientific and Industrial Research, which he has filled since 1939, his inspiration and guidance of the use of science in many fields of national activity have been major factors in the success of the scientific effort of Great Britain. Sir Edward, who was elected to the Royal Society in 1927, is chairman of the British National Committee for Radio-telegraphy, vice-president of the American Institute of Radio Engineers and president of the International Scientific Radio Union.