

Obituary.

MR. FRANK E. BAXANDALL.

WE greatly regret to record the death of Frank E. Baxandall, which took place on Oct. 30 at Cambridge, in his sixty-first year. He was a native of Keighley, and after obtaining his degree of A.R.C.Sc. at the Royal College of Science, London, entered the service of the Solar Physics Committee under Sir Norman Lockyer. The chief part of the work at that time (1888) consisted of the observation of sunspot spectra and their reduction with respect to chemical origin and variation during the sunspot cycle. The great impetus to astrophysical research instituted by Prof. E. C. Pickering at Harvard College Observatory, Mass., resulted in similar instruments being installed at the Solar Physics Observatory, and Baxandall's duties were then extended to take part in subsequent night observations, taking photographs of stellar spectra with the new 6-inch Henry prismatic camera, and also the work of reducing the spectra for inclusion in a comprehensive analysis of the brighter stars which was published in 1892.

Soon after, it was realised that the then existing information concerning the available terrestrial spectra was inadequate for the reduction of the better stellar spectra given with the new equipment, and provision was made for an entirely new series with a large concave grating which had been obtained from Prof. Rowland at Baltimore. From this time, Baxandall's inclination was directed more towards the tabulation and correlation of the celestial and terrestrial spectra, and for some years he was to a large extent responsible for papers published giving the results of the investigations.

After the transference of the observatory and staff to the University of Cambridge in 1913, Baxandall continued this work, making a revision of part of Rowland's Tables with special reference to the elimination of blended lines which had in the past led to important misidentifications of details

of spectral types. Quite recently, he was engaged on investigations of the spectra of several variable stars.

When Baxandall attended the Observatory on the day before his death there was no indication of anything abnormal, and his sudden death came as a great surprise to his numerous friends.

C. P. B.

PROF. AUGUST FRIEDRICH HORSTMANN, a pioneer in the field of physical chemistry, whose investigations of the thermodynamics of chemical processes are well known, died recently in Heidelberg at eighty-seven years of age. We are indebted to the *Chemiker-Zeitung* for the following details of his career. Born at Mannheim in 1842, Horstmann studied under Bunsen and Kirchhoff at Heidelberg, where he was appointed extra-ordinary professor in 1872 and honorary professor in 1889. He conducted numerous researches upon dissociation, vapour-pressure, combustion, chemical equilibria, and solutions, but for very many years his active participation in scientific research was prevented by almost complete blindness. His thermodynamical studies of chemical processes were published in Ostwald's "Klassiker der Naturwissenschaft", edited by Prof. van 't Hoff.

WE regret to announce the following deaths:

Sir Graham Balfour, from 1903 until 1926 Director of Education for the County of Staffordshire, who contributed notably to the progress of technical education in Great Britain, on Oct. 26, aged seventy years.

Dr. Thomas Alexander Wemyss Fulton, superintendent of scientific investigations, Fishery Board for Scotland, from 1888 until 1921, on Oct. 7, aged seventy-four years.

Sir Thomas Hungerford Holdich, K.C.M.G., K.C.I.E., president in 1916-18 of the Royal Geographical Society, on Nov. 2, aged eighty-six years.

News and Views.

THE Nobel Prize for medicine for 1929 has been divided between Sir Frederick Gowland Hopkins, professor of biochemistry in the University of Cambridge, and Dr. C. Eijkman, of Utrecht, for their discoveries in connexion with vitamins. Hopkins' work on vitamins is well known: so early as 1906 he realised that animals cannot flourish on pure protein, fat, carbohydrate, salts, and water, in this respect confirming work by Lumin, Stepp, and others. But the importance of these experiments lies in the fact that he emphasised the point that the failure to live might be due to the absence from the diet of certain unknown accessory food factors, since it occurred even although the animals were eating sufficient food of suitable composition to support growth, as was shown when a source of the accessory factors was added to the diet. These experiments were published in 1912, and from this date the real study of the influence of these factors, or vitamins as

they are now called, in nutrition may be said to have commenced. Dietary diseases were not unknown at this period, but other explanations for the symptoms were accepted: the importance of Hopkins' work lies in the new orientation which was given to the study of their causes: thus absence of a factor from the diet may result in failure to grow or other symptoms; previously the symptoms had been explained as due to some influence of the incomplete diet, the deleterious effects of which were neutralised by adding the missing substances.

DR. EIJKMAN will be remembered for his pioneer work on beriberi or polyneuritis. He was the first to realise, in 1897, that the disease arose only when decorticated, or polished, rice was the staple article of diet, and not when whole rice was consumed. He was led to this conclusion by noticing that the poultry of the prison in Java at which he was medical officer