

quiet day variation. The outcome of his work on this theme, which covered the period from before the Second World War to his later years, was the 3-h K_p index, and, more experimentally, the 15-min index Q . Thanks to its sound physical basis and the many careful investigations Bartels made to evaluate its validity and usefulness, K_p is now internationally accepted in many geophysical disciplines as an authoritative index not just for geomagnetic activity but for comparison with all effects associated with the solar corpuscular wind.

In addition to his comprehensive grasp of the physics and mathematics of geomagnetism, Bartels had an exceptional flair for handling statistics and succinctly displaying their main import. His personal contributions to the subject in a series of papers on the harmonic dial, stereograms, harmonic analysis of a single day's data, and random fluctuations and persistence in quasi-periodicities have been adopted as present-day practice in many fields. He had a special and justifiable pride in the amount of concentrated information displayed in the 'musical diagrams' which he issued regularly from Göttingen to show the sequence, every three hours, of the planetary indices, K_p , over successive rotation intervals of the Sun.

In addition to his personal research work, the results of which appeared in a long series of papers, Bartels wrote

several texts on magnetic observatory practice and the theory behind it: in 1940 with S. Chapman he produced the two great volumes on geomagnetism which immediately became and still remain the definitive comprehensive text on the subject.

Since 1946 Bartels had held the joint posts of director of the Geophysical Observatory and professor of geophysics in the University of Göttingen. He took an active part in the international organizations related to his subjects, being president of the International Association of Geomagnetism and Aeronomy (1954-57), and vice-president of International Union of Geodesy and Geophysics (1957-63), and chairman of various committees and commissions related to International Geophysical Year, International Year of the Quiet Sun and, more recently, the Committee on Space Research (COSPAR). In 1953 he was awarded the Charles Chree Medal by the London Physical Society. He was awarded posthumously the Bowie Medal by the American Geophysical Union. In recent years (since the death of Prof. Regener) he had been director of the Max Planck Gesellschaft Institute of Aeronomy at Lindau.

Bartels was a kindly, friendly man with a great fund of quiet humour and with catholic tastes in music and the arts.

S. K. RUNCORN

NEWS and VIEWS

Director of the Post Office Radio Services:

Mr. H. G. Lillicrap

MR. H. G. LILICRAP has been appointed director of the Radio Services Department of the Post Office in succession to Mr. Alan Wolstencroft, who became deputy director general on August 15. Mr. Lillicrap is at present a deputy director of finance in the Accountant General's Department at the Post Office. He started work in the Research Laboratories of the General Electric Co., Ltd., at Wembley, and joined the Post Office as a probationary assistant engineer in 1936. Apart from an early spell at Exeter, he spent most of the next ten years or so at the Post Office Research Station at Dollis Hill, London, working on the design of radio transmitters and receivers. In 1947 he moved to the Radio Branch of the Engineer-in-Chief's Department, where he was concerned with frequency allocation and the technical side of broadcasting. In 1951 he became a principal in what was then the Overseas Telecommunications Department (now the External Telecommunications Executive), of which he became a deputy director in 1958. While in this work he attended numerous international conferences at Buenos Aires, in the United States, Canada, Japan and various European countries. In 1960 he became a deputy director of finance.

School of Applied Sciences in the University of Sussex:

Prof. J. C. West

PROF. J. C. WEST, at present professor of electrical engineering in Queen's University of Belfast, has been appointed professor of engineering and dean of the School of Applied Sciences in the University of Sussex. Prof. West graduated at the University of Manchester in 1943 and then joined the Royal Navy Volunteer Reserve, being stationed in Northern Ireland for a period, engaged in anti-submarine warfare. He returned to the Electrical Engineering Department at Manchester in 1946, where he was appointed successively assistant lecturer, lecturer and senior lecturer. In 1958 he was appointed professor and head of the Department of Electrical Engineering in Queen's University of Belfast (*Nature*, 180, 1168; 1957), where he has been responsible for the rapid expansion of the Department. Prof. West is well known for his contributions to the analysis of non-linear servomechanisms, and for his more recent work on unconventional electrical

machines. He is the author of two text-books on automatic control. As dean of the School of Applied Sciences in the new University of Sussex, Prof. West is eager to introduce undergraduate courses differing significantly from the traditional specialized subjects, and one of his first tasks is the specification of new buildings for engineers, the third time he has performed this operation.

Electrical Power Engineering in the University of Southampton:

Prof. P. Hammond

MR. P. HAMMOND, Fellow and director of studies in electrical sciences in Pembroke College, Cambridge, has been appointed to the chair of electrical power engineering at the University of Southampton. Mr. Hammond was educated at Steyning Grammar School and Emmanuel College, Cambridge. He served a graduate apprenticeship in electrical and mechanical engineering with the English Electric Co., Ltd., and afterwards joined the staff of this Company as a designer of synchronous machines. He was appointed to a lectureship at Cambridge in 1949 and was later elected to a fellowship at Pembroke College. He has twice been invited to serve as visiting professor overseas: at Stanford in 1955-56 and at Kuala Lumpur in 1962-63. Mr. Hammond is the author of a number of papers and one book on electromagnetism. His research work has been largely concerned with eddy current losses in rotating machines and he has written a number of articles on the early history of electromagnetism.

Fibre Science in the University of Leeds:

Prof. A. Robson

DR. A. ROBSON has been appointed professor of fibre science in the Department of Textile Industries in the University of Leeds as from September 1. After graduating from the University of Leeds in 1947, Dr. Robson worked under the late Prof. F. A. Paneth at the Londonderry Laboratories for Radiochemistry in the University of Durham, on the microanalysis of uranium. He was awarded a Ph.D. degree in 1949, and in the autumn of that year he joined the staff of the Wool Industries Research Association at Torridon, Leeds, as a senior scientific officer; latterly he has been head of the Fibre Chemistry Department. Dr. Robson's main interests have been in the application of radioisotope techniques