

nical College, Glasgow, during 1933-44. While in Glasgow he was responsible for the inception there of the high-voltage laboratory and gained his Ph.D. at the University of Glasgow. In 1944 Eric Bradshaw moved to his old Department in the College of Technology, Manchester, as senior lecturer in high-voltage engineering; he was appointed professor of electrical engineering in October 1952.

After the War he was a pioneer in the organization of courses at a very high level for the senior engineering staff of the newly nationalized electricity supply industry and was responsible for many such courses at Electricity Hall, Buxton, during the years 1947-52. Most of these courses, changing their content from time to time but retaining Bradshaw's form of organization, eventually became a standard part of the educational activities of the Central Electricity Authority (later the Central Electricity Generating Board) and the Area Boards. During the same period he founded, in 1948, the *Bulletin of Electrical Engineering Education*, and continued thereafter as organizer and editor until his untimely death. This journal to-day circulates to between four and five hundred universities, colleges and other subscribers throughout the world.

Bradshaw's published work and interests lay in four categories. In the field of units, symbols and nomenclature, he was one of the authors of a well-known symposium of papers to the Institution of Electrical Engineers on the M.K.S. system of units, was the author of a book on the same subject, and served on British standards and international electro-technical committees. During his career at Glasgow and his early years at Manchester he published work on high-voltage measurements using oscillating electrode systems. Immediately afterwards his attention

turned to problems of the power supply industry, and he was responsible for several devices for the direct measurement of rate of change of frequency, one of which was published by the Institution of Electrical Engineers. His latest interests lay in the field of electric railway traction. He was responsible for the design and building at Manchester of a track performance calculator for British Railways, the details of which were published in a paper for the Institution of Electrical Engineers; latterly this work had extended to analogue devices for determining short-time thermal ratings of traction equipment.

He was known throughout the length and breadth of Britain for his work in furtherance of higher education; many were the advisory committees, colleges and universities to which he gave his time. Many indeed, furthermore, are the individuals, both within and without his profession, who have reason to be grateful for his kindness of heart. Eric Bradshaw was incessant in his activity on behalf of cases of adversity and hardship which came his way; this particularly, but in no way exclusively, applied to any student who through no fault of his own was likely to be incapable of pursuing his studies.

Eric Bradshaw was a keen amateur musician, played with the orchestra organized from time to time in the College of Science and Technology, and generously gave his time and support to musical events in the College, particularly those centred around the organ. Perhaps his greatest lay interest was in the history of the Industrial Revolution. He was intensely interested in the development of railways and canals, and frequently lectured to societies and schools on these subjects. He married Joyce Ena Smith in 1935, by whom he is survived.

C. ADAMSON

NEWS and VIEWS

The Norman Lockyer Observatory :

Mr. D. R. Barber

MR. D. R. BARBER retired on September 30 from his post as superintendent of the Norman Lockyer Observatory at Sidmouth, after twenty-five years service (see also p. 108 of this issue). He was appointed as assistant to the late W. J. S. Lockyer in September 1936 and on Lockyer's death in December continued with the new director, D. L. Edwards, until 1956, when Edwards died; Barber then became superintendent. Edwards and Barber introduced precise methods of photographic photometry into the evaluation of stellar spectra. From 1938 they applied the Greenwich colour temperature technique in a modified form to the measurement of spectrophotometric gradients and their work on the changes in the continuous spectrum of γ -Cassiopeia (*N.L.O. Comm.*, 58, 62, 64) is well known. About this time Barber built the first of a series of night-sky photometers, designed to measure the green, OI, line of the air-glow. This instrument was taken to the Lick Observatory, Mount Hamilton, on Barber's appointment to a Martin-Kellogg fellowship in the University of California (1940-41). With this he demonstrated for the first time a definite correlation between the intensity of the green line and geomagnetic activity (*Nature*, 148, 88 (1941)).

During 1941-45, Barber worked at the Kodak Research Laboratories in England, and on his return

to the Observatory he became interested in the sodium *D*-line emission in the twilight and night skies, which he studied by photographic and photoelectric methods. He established the presence of highly polarized twilight emission following solar flare and geomagnetic activity (*J. Atmo. Terrest. Phys.*, 10, 172; 1957), and a dependence of the intensity of emission on lunar phase, presumably because of tidal movement of the upper atmosphere at the level of sodium emission, 70-110 km. (*Intern. Astro. Union Draft. Rep.*, Berkeley Meeting, August 1961; *Rep. Comm.*, 21, *Luminescence du Ciel*). Lately Barber's interests have broadened to include solar-terrestrial relationships; certainly he has already obtained fascinating and remarkable results. Those on the effects of living organisms will certainly keep him occupied in his retirement.

John T. Tate Medal of the American Institute of Physics :

Dr. P. Rosbaud

DR. PAUL ROSBAUD has been awarded the first John T. Tate International Medal for distinguished service to physics. The Medal is of gold and has been established in order to recognize distinguished service to physics by individuals who are neither residents nor citizens of the United States. 1,000 dollars accompany the award. The late Prof. J. T. Tate, who died on May 27, 1950, was dean of the College of Science, Literature and Arts at the University of Minnesota, and served as research professor of physics,