holding the chair of experimental psychology in the University. Dr. Mackworth, a whole-time member of the Council's staff, was formerly assistant director. Under arrangements recently agreed between the University and the Council, the larger part of the Unit's work will in future be done outside the University Department of Experimental Psychology, in accommodation acquired by the Council at 15 Chaucer Road, Cambridge, which will be the official address of the Unit from October 1953; but the association with the Department will be preserved, and some members of the Unit will continue to be accommodated in it. A few former members of the Unit have been detached and will in future work wholly in the Department under the general direction of Prof. O. L. Zangwill, who has succeeded Sir Frederic Bartlett as professor and head of the Department.

British Caribbean Meteorological Service

THE director of the British Caribbean Meteorological Service, the most recently formed weather service within the British Commonwealth, has recently published his first annual report (British Caribbean Meteorological Service. First Annual Report 1952. Pp. 23. (Trinidad: Government Printing Office, 1953.) 24 cents). The service was formed in accordance with recommendations made by a conference representing the local Colonial Governments and H.M. Government in Great Britain which met in January 1951. The director, Mr. W. A. Grinsted, formerly of East Africa, set up his headquarters in Trinidad in November 1951 (see *Nature*, **168**, 769; 1951). The service has three main meteorological offices providing weather forecasts for a large area and long-distance aviation route forecasts at Piarco (Trinidad), Palisadoes (Jamaica) and Nassau (Bahamas). The provision of hurricane warnings is a very important part of their work during the hurricane season. These offices were previously in the charge of the British Meteorological Office, many of whose staff are still serving in them on loan to the new organization. Reporting stations are maintained in many of the islands and continental territories from the Bahamas to British Guiana and Barbados to British Honduras. Climatological records are collected at the Headquarters and many inquiries have been answered from them. Our best wishes are extended to the new organization with its heavy responsibilities for the meteorological service of this great area.

Characteristics of Current Types of Photomultipliers

As a detector of light signals the normal photo-cell and valve amplifier is limited by the inherent thermal noise of the coupling resistance and the shot effect of the first valve, so that in the fields of spectroscopy, astronomy and nuclear physics, where a highly sensitive light detector is required, the photomultiplier has recently gained popularity. The survey of current types of photomultipliers which is given in the article by Dr. W. E. Turk, of E.M.I. Research Laboratories, Ltd., Hayes, Middlesex (Photoelectric Spectrometry Group Bulletin, No. 5; pp. 100; October 1952) is therefore very useful. First a brief description is given of the phenomenon of secondary emission and of the basic and early designs of photomultipliers. The characteristics of an ideal tube—for example, a highly photosensitive cathode, wide spectral response, high gain in the multiplier section and a high signal/noise ratio—are then outlined, together with the various corresponding practical requirements. Next, the different commercially available tubes are examined and compared with one another and with the ideal tube. A table, in which is collected the essential data of five Cintel, eight EMI, three Mazda and seven RCA types of photomultipliers, is given, and this should be a valuable and easy guide to the selection of the most appropriate tube for a particular purpose. Finally, some very useful practical comments are made about the various techniques employed to improve the signal/noise ratio, the variation in the dark-current of photomultipliers after storage in the dark, and power supplies for photomultipliers.

Petroleum Consumption in Great Britain during 1951–52

THE Petroleum Information Bureau (29 New Bond Street, London, W.1) has issued a booklet on "Statistics Relating to Consumption and Refinery Production 1951 and 1952" which reveals that the consumption of petroleum products in the United Kingdom still shows an upward trend. The total for all products for 1951 was 16,887,908 tons, and for 1952 17,520,145 tons. Of these, the delivery of motor spirit, industrial spirits (including benzole), white spirit and kerosene, accounted for 1,435,811 tons in 1951 and 1,443,173 tons in 1952. Heavy fuel oils (including refinery consumption) consumed by the inland trade were 6,001,013 and 6,354,269 tons, respectively. Other products include lubricating oils and greases, paraffin wax and scale, propane and butane, bitumen, etc. Indigenous materials made available for distribution (excluding shale and crude oils) amounted during the respective years to 111,862 and 108,899 tons of motor and aviation spirit (by hydrogenation) and 78,996 and 175,493 tons of refined benzole. It is noted that no distribution of motor spirit by low-temperature carbonization was made in the two-year period covered by this statistical analysis.

Spectrophotometric Study of the Shell Star ζ Tauri

A SPECTROPHOTOMETRIC comparison of the shell spectrum of ζ Tauri has been made by Anne B. Underhill, of the Dominion Astrophysical Observatory, Victoria, B.C., from high-dispersion plates in 1948 and 1950, and details of the study have been published by the Observatory (Pub. Dom. Astrophys. Obs., **9**, No. 2; 1952. Ottawa: Queen's Printer; 25 cents). It is known from the previous work of Adams, Miss Losh, and Struve and Hynek, that this star shows radial velocity changes which suggest binary motion with a period of 132·91 days, and that secondary irregularities of a variable nature, apparently connected with the shell, are superposed on this motion. After Slettebak had announced in December 1949 that the shell spectrum of the star was unusually strong, many more lines being visible than in 1940 and 1941, it was decided to use moderate- and high-dispersion plates to investigate the change and also to determine the physical properties of the shell, by a comparison of the previous plates of 1938 with those of 1950. In the spectrum of the underlying star were lines of NII, OII, SiIII, AlIII and also HeI and H, for which reason the star has been classified as *B*2 or earlier, not *B*3 as given by previous authors. The periphery of the underlying star was