

research were a matter for agreement between all participating Governments, and if it became apparent that there might be advantage in reconsidering them, the Government would be ready to join in examining alternative possibilities. An interim conference of representatives of participating Governments was to be convened next year and a special committee appointed to review certain aspects of the working and financing of the Bureaux. This would provide an opportunity for discussion of possible changes in the existing arrangements, including any extension of existing collaboration with non-Commonwealth Governments. He thought that the terms of reference already recommended for the interim conference were wide enough to cover all points, including the cost of the abstract periodicals, the price of which was doubled on January 1, 1962. The Government was reluctant to believe that any of the participating Governments would be so short-sighted as to think of leaving the Bureaux.

The Royal College of Science and Technology, Glasgow

IN a written answer in the House of Commons on May 29, the Chief Secretary to the Treasury, Mr. H. Brooke, stated that the University Grants Committee had informed him that, both on general grounds and in view of the need for more university places in Scotland, a decision to enable the Royal College of Science and Technology, Glasgow, to increase its number of degree students and to broaden the scope of its academic work should now be made. In particular, if the new Faculty of Industrial and Social Studies was to be developed adequately within the quinquennium, work on the necessary accommodation and recruitment of the necessary staff must be started this year. Although the work of the Robbins Committee is not yet complete, the University Grants Committee has felt justified to agreeing to the College's proposal to include accommodation for industrial and social studies in their building programme for 1962, and took into account the College's wish to develop these studies in their submission to the Chancellor of the Exchequer on the financial needs of British universities for the quinquennium 1962-67. The Committee accepted the case for the College being granted full university status, including the power to award its own degrees, but pending the report of the Robbins Committee they have deferred their final advice to the Committee and limited present action to that indicated.

The Royal Society and Nuffield Foundation Commonwealth Bursaries Scheme

THE eighth annual report of the Royal Society and Nuffield Foundation Commonwealth Bursaries Scheme covers the year ended December 31, 1961 (Pp. 8. London: Royal Society and the Nuffield Foundation, 1962). The report records 18 awards, of which five were for visits from the United Kingdom (three to Australia, one to Australia and New Zealand, and one to South Africa), nine for visits to the United Kingdom (two each from Australia, New Zealand and India, and one each from Malaya, Hong Kong and South Africa) and four for visits between countries of the Commonwealth other than the United Kingdom. At the end of 1961 applications were not accepted from persons wishing to visit South Africa or from South Africans wishing to work in the United Kingdom, but applications would be accepted from South Africans wishing to work in other Commonwealth countries.

University of London Observatory

A NEW laboratory at the University of London Observatory was opened by Sir Ifor Evans, provost of University College, London, on June 18. The laboratory is built around an Ebert-type plane grating spectrograph vertically mounted in a 12-ft. pit. There will be facilities for a wide variety of light sources including the Sun, fluid and solid rotatory arcs and flash tubes. Above the new laboratory, offices have been provided to relieve the overcrowding of the existing accommodation, allowing better accommodation of staff and postgraduate students. An undergraduate room having places for eight additional students attending practical courses at the Observatory has also been provided.

U.S. Research in Astronomy using High-Altitude Balloons

THE Air Force Cambridge Research Laboratories are to conduct a series of research projects in astronomy using high-altitude balloons beginning later this year. Three separate projects, *Star Gazer*, *Sky Top* and *Balast*, are involved. The primary objective is to obtain more complete and accurate information about space environments with emphasis on the Moon, Mars and Venus. Only one of the three programmes, *Star Gazer*, will include a manned balloon flight. *Star Gazer*, under the scientific direction of Dr. J. A. Hynek, chairman of the Department of Astronomy, Northwestern University, Evanston, will measure the effect of turbulence of the atmosphere on image clarity at altitudes up to approximately 86,000 ft. A photoelectric experiment will investigate the variations in brightness of a star image caused by the atmosphere, while experiments will be conducted using infra-red techniques to determine how much effect water vapour has on different wave-lengths of light at different altitudes. The project *Sky Top*, under the direction of Dr. J. W. Salisbury, will carry its experimental payload to altitudes of 86,000-120,000 ft. It is hoped that temperature measurements will be obtained of the Moon at night that are accurate to within 5 degrees. An interferometer will be used to determine the amount of heat-energy released by the Moon at various wave-lengths of the infra-red spectrum. It is also hoped to determine the mean temperature of the reflecting surfaces of Mars and Venus; infra-red spectroscopy will be used to investigate the atmospheric composition of both these planets. The payload of *Balast* will weigh about 1,400 lb. and will be carried to an altitude of approximately 85,000 ft. In contrast to *Star Gazer*, the tracking system uses a completely passive (no moving parts) sensor. The system, under the direction of Dr. J. Strong of Johns Hopkins University, is expected to track Venus and other planets with an accuracy of ± 5 sec. of arc.

Education of Engineers

PROF. G. B. WARBURTON, giving his inaugural lecture as professor of applied mechanics at the University of Nottingham, spoke about "Some Effects of Recent Advances in Knowledge on the Education of Engineers" (Published in book form. Pp. 23. Nottingham: The University, 1962. 2s.). After surveying the present situation in Britain and the United States, he discussed possible changes in undergraduate courses, including regrouping of subject-matter, the provision of 'engineering science' and 'industrial engineering' options, and the provision of