

SPACE RESEARCH IN BRITAIN: GRANTS

SIXTEEN grants to British universities for space research projects, totalling £184,540, have been made on the recommendation of the British National Committee on Space Research, set up by the Royal Society under the chairmanship of Sir Harrie Massey. The grants, which cover a variety of periods, are for salaries of staff, travel and subsistence, and development or purchase of special equipment. These grants have been approved by the Steering Group for Space Research, set up by the Minister for Science under the chairmanship of Sir Edward Bullard, and the financial responsibility for them is with the Department of Scientific and Industrial Research:

University College of Wales, Aberystwyth, £16,530 over 3 years, to Prof. W. J. G. Beynon for measurement of electron density/height profiles with rockets using the Doppler method and the pulse method.

Queen's University, Belfast, £15,005 over 2 years, to Prof. D. R. Bates for upper atmospheric rocket research, including artificial air-glow, altitudes of night-glow layers, and a study of micrometeorites.

University of Birmingham, £26,000 over 3 years, to Prof. J. Sayers for electron and ion-population studies of the upper atmosphere and interplanetary space.

University of Cambridge, £1,694 over 2 years, to Dr. K. G. Budden for research into the theory of propagation of radiations from artificial satellites; £2,678 over 2 years, to Prof. M. Ryle for the recording and the interpretation of Doppler and Faraday effects in the radiations from artificial satellites; and £11,230 over 26 months, to Dr. F. G. Smith for the measurement of cosmic radio noise by receivers mounted on rockets and satellites.

University of Leicester, £13,006 over 39 months, to Prof. E. A. Stewardson for investigations of solar and stellar soft X-ray emissions.

Imperial College of Science and Technology, London, to Dr. H. E. Elliot, £7,275 over 2 years for satellite measurements of the primary cosmic-ray energy spectrum, and £1,500 over 2 years for an investigation into cosmic-ray intensity variations at rocket altitudes; also £7,935 over 3 years to Dr. S. H. Hall for geomagnetic field measurements in the Earth's upper atmosphere.

University College, London, to Dr. R. L. F. Boyd, £8,880 over 3 years for the development and use of photoelectric satellite tracking equipment, and £35,450 over 3 years for rocket research in the upper atmosphere of: (1) atmospheric temperature, density and winds; (2) ionospheric temperature, density and composition; (3) short-wave-length solar radiation; and (4) stellar ultra-violet light.

University of Manchester, to Dr. R. C. Jennison, £15,277 over 40 months for micrometeorite investigations from an Earth satellite (to be carried out at the Nuffield Radio Astronomy Laboratories, Jodrell Bank), and £15,020 over 44 months for low-frequency radio astronomy from an Earth satellite (to be carried out at the Nuffield Radio Astronomy Laboratories, Jodrell Bank); also £2,500 over 1 year, to Prof. A. C. B. Lovell for the tracking of satellites and space probes (to be carried out at the Nuffield Radio Astronomy Laboratories, Jodrell Bank).

University of Oxford, £4,560 over 18 months, to Dr. J. T. Houghton for the development of photoconductive material for satellite measurements of infra-red radiation.

THE BANGOR RESEARCH STATION OF THE NATURE CONSERVANCY

THE new Welsh headquarters of the Nature Conservancy was formally opened on July 20 by Prof. W. H. Pearsall, chairman of the Scientific Policy Committee of the Nature Conservancy. The building, of rough-cast stone and slate-roofed in the local Welsh style, is primarily designed as a laboratory, and its chief function is to act as the Conservancy's research station in Wales. It will, however, also house regional officers mainly concerned with the management of nature reserves and with the cartographic and advisory work of the region. The whole will be under the supervision of Dr. R. Elfyn Hughes, who has been appointed director (Wales), so that the Welsh organization of the Nature Conservancy now resembles that in force in Scotland.

As at present organized, the laboratories are equipped mainly for research in plant ecology. The special equipment is designed mainly for plant analysis and for detailed soil studies, especially the estimation of mineral elements and the properties

of clay minerals. A notable feature is the provision of an X-ray fluorescence spectrograph, a new type of apparatus which it is expected will speed up and greatly extend the range of mineral analysis.

The facilities available are suitable for studying the general problems present in all nature reserves, the relation of vegetation to soil and the trends of change affecting these relationships. There are, however, special problems in Wales which are of fundamental importance and of the widest interest to highland Britain as a whole. The great range of rainfall easily accessible in Snowdonia as well as the diversity of rock type make it a most favourable centre for research on the effects of these factors, singly or interacting, upon the development of soils and vegetation. In Snowdonia the interest in this field lies especially in the grasslands and their animal life, and notably in the pattern of grazing by sheep. The evidence already obtained by Dr. Hughes stresses the