

function of acoustic pressure and the crest of the sound wave travels more rapidly than the null point, while the trough is retarded. If two waves are superimposed and are subjected to this effect, new frequencies can be generated. Thus it is possible to emit narrow beams of high frequency from comparatively small transducers. Constancy of beam width can be maintained over a 10:1 range in frequency but, of course, the power density applied to the transducer is inevitably high; up to 40 watts/sq. cm have been used.

At present electronic circuitry implies high cost and bulk in the transmitting and receiving systems, and there is little immediate prospect of these developments becoming tools in the hands of the fisherman. Nevertheless, with the micro-miniaturization of circuits which is now possible and the application of digital techniques, the day may not be far off when a fish has small chance of avoiding detection and identification.

European Rockets

THE European Space Research Organization has announced that the first launchings of sounding rockets from its launch at Kiruna in Sweden will take place during the weeks ahead. Six French *Centaure* rockets will be launched. Altogether there will be three different payloads to which groups in Belgium, Denmark, Germany, The Netherlands and the U.K. have contributed. The experiments in the first batch of rockets are largely concerned with auroral phenomena, and indeed are intended to exploit to the full the advantages of the Kiruna launch.

Velvet Lab Coats

MR. HAROLD WILSON, the Prime Minister, returned to a theme which won him acclaim in 1963 when he spoke at a ceremony installing him as the first Chancellor of the new University of Bradford. He described Bradford as a shining example of partnership between education, industry and government, and deplored the mystique that had been allowed to surround pure science, and which had sometimes meant that royalties had had to be paid to Americans and others because of their ability to clothe British research with American know-how. As well as becoming Chancellor, Mr. Wilson became Britain's first Doctor of Technology when an honorary degree was conferred on him.

All this, however, has not caused Bradford to forget the other appurtenances of its new status; it has just presented to a startled public its designs for academic dress. Anything less technological than these is difficult to imagine.

Bradford has been at pains to justify its decision by emphasizing its close links with the woollen industry and—presumably for local consumption—has let it be known that “the robes . . . have been designed and prepared and the material finished entirely by firms in the Bradford area”. The robes are of velvet, with silk linings and moiré collars, and will be worn by all graduate members of the university. To forestall howls of protest from the Students' Union, undergraduates will not be gowned, but their president is to have “a robe of blue stuff with saffron trimmings”. Even this pales into insignificance beside Mr. Wilson's robe: it is magnificently ecclesiastical, wine coloured with a collar of gold braid.

Parliament in Britain

IN a written answer on October 31, the Secretary of State for Education and Science, Mr. A. Crosland, stated that, including building, furniture and equipment, professional fees and land, additional student places in British universities were currently estimated to cost £1,500 in arts and social studies, £3,400 in science and £4,800 in applied science. These correspond with the figures given for 1961–62 in the University Grants Committee Quinquennial Report for 1957–62 and for 1962–63 in Appendix IV to the Robbins Report. Also in a written answer on November 2, Mr. Crosland stated that some 92,000 candidates, including overseas candidates and candidates without the minimum academic qualifications for the university courses to which they sought admission, but excluding Scottish candidates for certain Scottish universities and candidates for London medical schools, who apply direct, applied for admission to British universities in 1966–67 through the Universities Central Council on Admissions. If the number of candidates rose strictly in proportion to the number expected to leave schools or further education institutions with two or more G.C.E. passes at advanced level or the equivalent Scottish qualification, the corresponding number in 1967–68 would be 93,300; in 1968–69, 95,200; and in 1969–70, 98,200. These figures can be regarded as minimal, since they exclude increases in the rate of application and the effects of extending the scope of application through the Central Council. On the assumptions made by the Robbins Committee, 51,600 places for new entrants would be available in 1967–68, 51,400 in 1968–69 and 51,900 in 1969–70, and Mr. Crosland expected that at least these numbers of places would be available. Separate figures for candidates for Scottish universities were not available.

University News:

Stirling

DR. I. C. PERCIVAL, reader in applied mathematics at Queen Mary College, London, has been appointed to the chair of theoretical physics.

Appointments

PROF. C. A. MOSER, of the London School of Economics, is to be seconded to British Government service for three years as head of the Central Statistical Office in succession to Sir Edmund Campion. Prof. Moser has made his reputation by the statistical analysis of educational systems, in Britain and elsewhere. He was chiefly responsible for the statistical appendices to the report of the Robbins Commission.

Announcements

THE Royal Society has enlarged its overseas visiting professorships scheme which provides for visits of about four months to universities or research institutions overseas. The scheme, established in 1962 by the Royal Society and the Leverhulme Trust, with two Royal Society Leverhulme visiting professorships to India annually, has been extended to provide a further four such professorships each year tenable in Poland, Czechoslovakia and other foreign countries. The following appointments to Royal Society Leverhulme visiting professorships have been made for the year 1966–67: *India*, Prof. J. Chatt, professor of chemistry in the University of Sussex, to visit the University of Rajasthan; *Mexico*, Prof. C. T. C. Wall, professor of pure mathematics in the University of Liverpool, to visit the Centro de Investigacion del Insti-