

conventional sources. The peak of the spectrum will be at a few Ångström, but the immediate interest is expected to be in ultraviolet wavelengths of a few hundred Ångström, which will be a few orders of magnitude less intense than radiation at the peak but nevertheless better than conventional sources. Spectrometers and other equipment will be provided for this wavelength range in the first instance. Another valuable feature is that the synchrotron radiation is emitted in a narrow cone less than a milliradian across.

A panel will be appointed to allot time on the synchrotron radiation facility, which will be available to the universities and other research laboratories. The Science Research Council says it expects the laboratory to be used for such pursuits as the study of inner electrons in atoms, X-ray crystallography, and examination of biological specimens.

FOWL PEST

Outlook Gloomy

ALTHOUGH the daily tally of fresh outbreaks of fowl pest has shown a slight downward trend recently, there seems little in store to cheer Britain's poultry farmers. An expert in Newcastle disease predicted last week that although use of the Hitchener B1 live vaccine is already showing beneficial effects, it could well be two years before the disease is cut back to something approaching the pre-epidemic level.

By January 31, 1971, more than 4,500 cases of fowl pest had been reported from 51 counties. Late last year there were signs that the disease had run its course, but these have proved false omens; the direction of the wind changed, and the disease was carried from East Anglia to set up fresh centres of infection in Derbyshire and elsewhere. The virus causing the epidemic has already become known as "Essex 70"—a grudging tribute to its virulence and obstinacy.

What should have been done when the outbreaks started is now only of historical interest. The breeders claim that an immediate slaughter and compensation operation should have been mounted, whereas the Ministry of Agriculture has laid the blame squarely on those breeders who failed to maintain full and adequate protection in their stock. What is important are the steps now being taken to contain the epidemic and to prevent the recurrence of a similar tragedy. Both the Ministry and the National Farmers Union agree that more information must be made available to breeders about vaccines and vaccination. The Hitchener B1 vaccine is already in use, and trials are under way with the La Sota live vaccine, but Mr Wellstead, Secretary of the Poultry Committee of the National Farmers Union, pointed out that the use

of these live vaccines is nowhere near so simple in practice as it seems in theory. In fact, deciding when and how to apply the vaccine requires great judgment, for there is a complex interplay between the fowl's brief inherited immunity and the need for extra protection.

The only hope of reducing the incidence of outbreaks in the short term seems to lie in vaccination and in greater attention to hygiene. An agricultural scientist said last week that breeders pay too little attention to the arduous task of decontaminating buildings where infected birds have been housed, before moving in fresh, healthy stock. Neither vaccination nor hygienic practices can be forced on unwilling poultrymen by legislation; but perhaps effective propaganda will help to avert similar disasters in the future.

Miscellaneous

NOBODY knows whether railwaymen at Heysham are reading their way through 1,500 copies of *Nature* for January 22, blacked on their way to Dublin in an abortive attempt to beat the postal strike: if so, perhaps the railwaymen are already themselves considering the advantages of dismembering the nationalized industries along the lines recommended for the Post Office (see *Nature*, 229, 218; 1971).

MR RICHMOND POSTGATE, Controller of Educational Broadcasting at the BBC, has contributed to the *BBC Handbook 1971* the memorable claim that "broadcasting is the most penetrating agency of communication, reaching deeper into more homes than any other". What Mr Postgate means is that the claims of the BBC to be an educational agency should not be sniffed at. Somebody should measure the relative depths of penetration of *Gunsmoke* and *New Ways in Thermodynamics*.

ON the principle that to them that hath shall be given, it seems now to be assumed that J. B. Gurdon, distinguished for his embryological work and in particular cloning toads, will move to the MRC Laboratory of Molecular Biology at Cambridge later in the year. Has Oxford used up so much of its seductiveness in attracting molecular biologists from outside that it cannot manage to keep its own?

SOME of the officers of the British Association seem to be hoping that they can solve their chronic problem of what is called illiquidity by merging either with the Royal Society of Arts or with the Royal Institution. Even supposing that such a scheme is feasible, only lawyers can relish the proceedings that would have to be taken to persuade the Privy Council and the Charity Commissioners that such a course would be desirable. The British Association's friends will wonder whether it can last that long.

Parliament in Britain

US Defence Research Contracts

THE United States Department of Defense is financing 69 research projects at 25 universities in the UK. The values of these contracts in 1968, 1969 and 1970 were £324,000, £344,000 and £266,000 respectively, and they were for projects chiefly in the physical sciences. This information was given by Mr Nicholas Ridley, Undersecretary of State, Department of Trade and Industry, in reply to a question from Mr Tam Dalyell. But Mr Ridley said that none of these research projects is classified. In any case, the Department of Trade and Industry has no responsibility for the placing or financial control of the contracts and only receives information on them so that duplication with other government-sponsored research at British universities is avoided. (Written answers, January 25.)

Expenditure on Research

MRS MARGARET THATCHER, Secretary of State for Education and Science, said that government expenditure on research and development in 1970-71 is estimated to be £350 million for civil projects and £230 million for defence. The corresponding expenditures for 1969-70 were £350 million and £233 million. In 1967-68, a total of £962 million was spent in the United Kingdom on research and development, £493 million of which was provided by central and local government, and £405 by industry. This information was given in reply to a question from Mr John Osborn. (Written answers, January 26.)

Channel Tunnel

MR JOHN PEYTON, Minister for Transport Industries, said that the government has now reached the stage of embarking on the final studies of proposals for a tunnel underneath the Channel. Both the British and the French governments have studied the proposals put forward by a private international firm last July, and will soon be discussing with the group how an early start can be made on further studies which must precede the final decision. But Mr Robert Sheldon pointed out that the White Paper on the Channel tunnel is now eight years out of date, and accused the Department of Trade and Industry of not releasing information on traffic studies. He asked for another White Paper to be prepared setting out the objectives of the scheme, and for a revision of the whole concept of the tunnel link. Mr Peyton replied that he is sure that a White Paper will be necessary soon. Mr A. P. Costain also pointed out that the delay in coming to a decision on the project is causing serious inconvenience in the Folkestone and Hythe area. (Oral answers, January 27.)