field of chemistry—physical, analytical, organic, etc. —and his work made a notable contribution to the war effort. His appointment to Sydney will play an important part in the continuation of the close links which have for long existed between the universities of Great Britain and Australia.

Institute of Fuel : Appointment of New Secretary

Mr. P. C. Pope, who has been secretary of the Institute of Fuel from its earliest days, resigned on March 1 and will in future act as adviser to the Institute. In token of the energy and enthusiasm which Mr. Pope has always devoted to the Institute of Fuel, and to fuel technology in general, the Council of the Institute has unanimously recommended him for election as an honorary member.

Mr. R. W. Reynolds-Davies succeeds Mr. Pope as secretary of the Institute. Receiving his technical education at University College, Cardiff, and the South Wales School of Mines, Mr. Reynolds-Davies has had wide experience as a chemical engineer and fuel technologist. His first industrial experience was obtained on the coke-oven plant of the Cambrian Combine, now merged with the Powell Duffryn Associated Collieries, Ltd. He was later engaged as assistant with the late Dr. W. R. Ormandy on power alcohol and petroleum products. This work was followed by nine years as one of the chemical plant managers with British Industrial Solvents, Ltd. For the three years previous to his joining the Institute of Fuel last autumn as deputy secretary, he was manager of the Development Department of the Royal Ordnance Factory at Bridgend.

A Radiochemical Laboratory at the University of Durham

Since the early days of radioactivity, successful research in this field was frequently based on collaboration between physicists and chemists. In Great Britain, however, in the years between the two World Wars, the fundamental work done on the physical side of radioactivity, mainly by Rutherford and his school, was not adequately supported by chemical research on a similar scale ; nothing was attempted comparable to the continuous efforts in Paris (Laboratoire Curie) or Berlin (Kaiser Wilhelm Institute, under Otto Hahn) which, among other important results, led to the observation of the fission of uranium. As in the new phase of radioactivity inaugurated by this discovery the need for scientific workers trained in the chemistry of the radio-elements is even more obvious, the Council of the Durham Colleges, aided by the University Grants Committee, has recently decided to create the necessary facilities by founding a Radiochemical Laboratory.

The purpose of this Laboratory will be twofold. By incorporating a special course in radiochemistry into the curriculum of the Durhám students of chemistry, it is intended to make them sufficiently well acquainted with up-to-date knowledge and apparatus to enable them to act at least as chemical helpers in the various radioactive research centres and plants now about to spring up in Britain. Further, by undertaking chemical research connected with radioactivity, it is hoped to contribute also to the progress of radiochemistry in the broadest sense of the term ; micro gas-analytical methods, the development and use of which have formed a feature of Durham chemical researches during recent years, will naturally be linked up with this programme. The Durham Radiochemical Laboratory will, at the beginning, consist of two small buildings, separate from each other and from the main Science Laboratories, for the treatment of feebly, and of strongly, radioactive substances, respectively. Their erection is under way and will be completed before the autumn, when it is hoped to open them not only for Durham students, but also for a small number of advanced workers. They will form part of the Chemistry Department of the University, under the directorship of Prof. F. A. Paneth.

Fisheries Laboratory, Lowestoft

Although three members of the staff of the Fisheries Laboratory, Lowestoft, who were acting as coastal fishery officers, succeeded in making scientific observations which have given valuable information on the war-time recovery of fish stocks, all co-ordinated scientific work at the Laboratory was suspended during the War. The Laboratory reopened in September 1945, when ichthyometric work on the chief food fishes and age-composition observations on the North Sea plaice and herring were resumed at the appropriate ports of landing. Plans for work in the waters around the British Isles and in the Arctic fishing grounds are in active preparation. These include the construction of a new laboratory, the building of a large research ship of the type used by the Hull trawler owners for the prolific Arctic fishery, and the conversion for research work in the North Sea of the Admiralty trawler *Sir Lancelot*, built during the War on the model of a successful commercial type—the *Star of Orkney*. In the meantime, a 90-ft. motor fishing vessel of a class built by the Admiralty with a view to subsequent use as fishing boats has been borrowed and converted to carry a trawl on the starboard side. This vessel is to be known as the *Platessa*. While her main task will be to mark large numbers of plaice in the southern North Sea so as to obtain vital information on the yield of the stock at the present rate of fishing, it is also hoped to gain information on the suitability and efficiency of this type of craft as a commercial trawler.

Technical Education in Great Britain

In his reply to a lively debate on technical education in the House of Commons on March 22, the Parliamentary Secretary to the Ministry of Education, Mr. Hardman, stated that the national council for technology which is to be established to co-ordinate the work of the regions and ensure that a comprehensive national view is taken, as soon as the regional councils have been set up, will be expected to determine the question whether the technical colleges should award a diploma or a degree, which was left undecided by the Percy Committee. The Ministry has also in preparation a circular proposing to local education authorities the establishment for the major technical colleges of strong governing bodies representative of industry and of the authorities, and which should possess considerable executive freedom. Discussions are also proceeding with the various industries for the establishment of national colleges ; but Mr. Hardman's announcement that one has recently been established for watch- and clock-making will scarcely be reassuring to a body of opinion—which found admirable expression in the debate—holding that the real function of technical education is the creation of adaptable interest and intelligence and not the mere imparting of mechanical aptitude for any particular process. Mr. Hardman said further that the Ministry, after discussions with the Department of Scientific and Industrial Research and with the Federation of British Industries, is also seeking to encourage and considerably extend research work in technical colleges, and particularly research work which is directed towards the assistance of local industries.

In reply to questions about the disposal of scientific apparatus and other Government surplus stores, Mr. Hardman said that the Ministry is working in co-ordination with Government Departments selling surplus stores, and has its own representatives on the appropriate committees. The use of surplus stocks for the purposes of technical education has not been overlooked. Although the debate centred largely around the Percy Report, and it was admitted that the technical colleges and institutions of Britain should be developed so as to provide for a much bigger percentage of the school population, the question of technical education in relation to the universities was not pursued, and it is a sad reflexion on departmentalism that Mr. Hardman was unable to reply to numerous questions about the position of the universities, because they come more within the purview of the Treasury than of the Ministry of Education. Mr. Durbin's request that the Parliamentary Secretary should satisfy himself that the Ministry has communicated to the universities with sufficient clarity and force the essential need which the universities can meet in technical education, and that the universities are fully aware of the extent of that need, was virtually unanswered.

Seismic Sea Wave of April 2

On April 2 a strong tunami, beginning near Unimak in the Aleutians, ranged the Pacific Coast of the Americas and the Pacific Islands to distances of 7,000 miles. At Scotch Cape Lighthouse, near Unimak, it is reported to have attained a height of 100 ft. and to have killed ten people there. The effects were probably greatest at Hilo, Hawaii, at a distance of some 2,040 miles from Unimak Island. This town, with a population of 22,000, was devastated by at least three waves four to six feet high travelling at some 30 knots. Buildings on one side of Kamehameha Avenue were flung against those on the other side. In the town, sixty bodies have so far been recovered and twenty-three in the rest of the Hawaiian Islands. It is feared that the death-roll may reach 150, and damage is estimated at £2½ millions. At the time of the disaster, there were two ships in the harbour; one managed to put to sea, but the other, a freighter, was tossed up on the beach. The wave was less strong along the Californian coast, and in the neighbourhood of Arica and Iquique (Chile) it caused some apprehension. During the 24 hours following the Unimak earthquake, there were five strong aftershocks and forty or fifty smaller ones from the same or nearby epicentres.

Tunamis are often caused by the sudden rising or falling of a part of the ocean bed at the time of an earthquake. They are scarcely recognizable out at sea, but on reaching the head of a bay or harbour attain extraordinary heights, sometimes up to 100 ft. The outstanding feature of a tunami is its great wavelength—in the Pacific, 100 to 1,000 km.—and this explains the great distances such waves travel since the wave energy does not decline so rapidly as in ordinary wind waves. The principal period of the Sanriku tunami of June 15, 1896, was 15 minutes, and those of the Krakatoa eruption of August 27, 1883, one hour. The velocity of propagation is related to the depth of water through which the waves pass. The speed across the Pacific is about 450 miles an hour, and across the shallower Atlantic Ocean about 200 miles per hour.

Night Sky in South Africa

Dr. Mary N. Fysh, of "Canterbury", P.O. Devondale, Cape Province, South Africa, has sent an account of the night sky as seen from the high veldt country formerly known as Stellaland, in the Vryburg district of South Africa. There are probably few regions in the world better suited for such observations. Dr. Fysh states that the lightest film of cloud, such as will not hide even the faintest stars, is enough to obscure some of the appearances which she describes. Most of these will be recognized by astronomers and meteorologists as examples of the aurora, and a few perhaps refer to noctilucent clouds high up in the stratosphere.

Dr. Fysh writes: "On every clear night, soon after the brightest stars have appeared, on looking attentively straight overhead, one can see a fine pattern as if formed by tiny cloudlets, very delicately rose-coloured against the evening blue. Sir John Herschel, who noticed what seems to be the same appearance on the great nebula in Orion, describes it as 'like the breaking up of a mackerel sky'. The pattern gradually spreads outwards, around and downwards, until eventually the whole sky is encanopied as it were, the mottling being as a rule larger and more spaced out as it nears the horizon, and the colour changing from rose to lilac, then to lavender-grey or neutral against the pale primrose in the west where the sun has gone down. A little later, the zodiacal light interposes its softly glowing white, or faintly violet, pyramid between one's vision and the pattern, which is still to be seen overhead and in the eastern and southern sky. Sometimes, however, when the zodiacal light is less bright, both may be seen simultaneously, causing an observer to wonder whether the zodiacal light is seen through the pattern, or the pattern through the light. But we have only seen it thus on one occasion. As one watches, the pattern can often be seen to change a little, the mottling moving apart and closing up, as if blown hither and thither by some mighty wind, yet the whole held together in much the same delicate pattern. It is not always the same colour. As the night advances, the rose colour fades into lilac, then to a faint neutral or pearly grey. Or occasionally it is seen a quite deep red, against a dark, blue-black background. When this happens, it is striking enough to call forth exclamations of wonder from a casual observer, the red being very noticeable. The phenomenon is best seen out on the open veldt, far from the atmosphere of towns. There it can be studied at leisure, and its varying appearances under different conditions noted and recorded. Thus on moonlight nights the colour varies from pearl to silver, though then the rose colour may also sometimes be seen at its best; while under the mighty arch of the Milky Way we have seen it looking like myriads of soft snowflakes, so that one almost thinks there is a snowstorm going on up there."