

## THE FERMI CHICAGO PILE

ON December 2, 1942, at 3.25 p.m. Chicago time, the first self-sustaining nuclear chain reaction was initiated and controlled. The success of the experiment was mainly due to Enrico Fermi. He directed the construction and the operation of the pile situated in the West Stands, Stagg Field, University of Chicago, in what had been a squash-rackets court. To mark the twentieth anniversary of this historical occasion and as a tribute to the memory of Enrico Fermi the International Atomic Energy Agency has issued a special number of its *Bulletin* (December 2, 1962) containing an introductory article by S. Eklund, director general of the Agency, and thirteen other articles, by distinguished scientists, devoted to descriptions of the first atomic pile or developments in the field of nuclear energy in various countries. English, French, German, Russian and Spanish editions of the *Bulletin* are to be published.

In his introductory remarks, the director general comments that immediately after the Second World War when the basic knowledge of atomic energy spread all over the world it was thought that the new source of energy could be put to widespread practical use within a very short time. But now, twenty years after the first reactor was put into operation, we have learned that development in nuclear energy must follow the same sequence as in every other major technological advance and involve only small steps at a time. The introduction of nuclear power will not be a sudden event, but instead a gradual process. However, the benefits already accruing from radioisotopes, an important by-product of nuclear energy, and their wide use in research and industry, require especial mention.

All the articles, except the simple descriptive account of the first atomic pile entitled "The First Pile" by C. Allardice and E. R. Trapnell, which was written in 1946 and is reprinted in the *Bulletin*, are original contributions. They include a brief personal account by Laura Fermi of her husband during the period he was working on the so-called 'metallurgical project' and of the absolute secrecy he maintained, even from her, of the work he was doing. Lise Meitner writes about the right and wrong

roads to the discovery of nuclear energy; Otto Hahn on "Enrico Fermi and Uranium Fission"; H. D. Smyth on the publication of the "Smyth Report"; S. K. Allison on the "Initiation of the Chain Reaction" and his own particular task, the search for pure materials required for the pile; and G. T. Seaborg on the production of plutonium and its chemical extraction. Sir John Cockcroft describes the early days of the Canadian and British atomic energy projects. B. Goldschmidt discusses France's contribution to the discovery of the chain reaction and shows that the work of French scientists, while it did not contribute directly to the success of December 2, 1942, did nevertheless back up the efforts of Great Britain to persuade the United States to tackle the uranium problem on an industrial scale, and played a large part in the birth of nuclear activities in Canada and in the development of heavy water reactors. V. S. Emelyanov gives some historical details of the study of radioactive materials, and uranium, and graphite, by Soviet scientists leading up to the production of uranium and graphite for the first atomic reactor in the U.S.S.R.

In his article entitled "Thoughts on the 20th Anniversary of CP-1" E. P. Wigner states that on the memorable occasion of December 2, 1942, the scientists involved in the nuclear project realized that both the economic and political world would be affected by their great achievement. Economically they thought that the main effect would be cheaper energy, but so far this objective has not been realized. In the political field they hoped and expected that the terrible nature of nuclear weapons would have such a sobering effect on the Governments of all nations that they would forsake their conflicting aspirations and submit to a larger community of law and order. This was based on a misunderstanding. The issues of war and peace are governed not by the nature of weapons but by the conflicting desires of Governments.

The remaining two articles are by J. A. Wheeler and G. de Hevesy, who discuss "Fission, Then and Now" and "The Reactor and the Production of Isotopes", respectively. S. WEINTROUB

## THE BRITISH COUNCIL

THE annual report for 1961-62 of the British Council\* is in two parts, the general survey of the year being accompanied by an article "Teaching Courses" which, besides describing the Council's part in recruiting British teachers to serve overseas, seeks to answer some questions asked by potential candidates for overseas teaching posts. In addition to filling teaching posts in its own permanent service the Council recruited 226 teachers on short-term contract, of which 140 were for schools and 45 for universities and training colleges, about 25 per cent of those in universities being at the professorial level and rather more than half in English departments. Most of the Council's educational work in developing countries is complementary to technical co-operation, and experience in Nigeria and Ghana has clearly indicated that the opportunities open to the Council for educational work—especially in English language teaching—increase as the number of expatriate civil servants decreases. Arrangements have already been made for collaboration with the Department of Technical Co-operation in Nigeria which

may become the pattern for similar co-operation elsewhere in Africa.

The Council's English Teaching Information Centre, formed in 1960 to collect and co-ordinate experience and information about teaching English as a second or foreign language, now distributes about 1,000 copies of its *English-Teaching Abstracts and English-Teaching Bibliography* in more than ninety countries. Moreover, the Council has maintained close contact with the British Broadcasting Corporation and with the Centre for Educational Television Overseas in its investigations on the production of English language teaching films for television and for classroom work. A substantial financial contribution is being made towards the running costs over the next five years of the English schools in Nicosia; £34,000 was contributed for a library building in Port Harcourt, Eastern Nigeria; £12,000 towards one at Kaduna, Northern Nigeria; a grant of £35,000 was made to the Sierra Leone Library Board towards the capital cost of a Central Library and headquarters building in Freetown; late in 1961, £27,000 was granted towards the establishment of a central and headquarters library at Ibadan, Western Nigeria. In

\* *The British Council*. Annual Report, 1961-1962. Pp. vii+107+12 plates. (London: The British Council, 1962.) 2s. 6d. net.