

an authority on the development of nuclear energy resources.

In a written answer in the House of Commons on February 18, the Parliamentary Secretary to the Ministry of Works, as representing the Lord President of the Council, reported that substantial progress has been made in the construction of the laboratory and apparatus for the European Organization for Nuclear Research. The first accelerator should be in operation in the second half of this year. Recruitment is proceeding satisfactorily and the staff now numbers some 480. The research activities of the Organization are intended to be complementary to those of member countries, and in deciding its research programme the Council of the Organization takes fully into account research proceeding or proposed in member countries.

### Nuclear Power at the Imperial College

A SPECIAL one-year postgraduate course in nuclear power has been arranged at the Imperial College of Science and Technology following the recent appointment there of Dr. J. M. Kay as professor of nuclear power. The course is based on the belief that nuclear power is not a distinct technology but a new field for the application of existing branches of engineering and applied science. Entry to the course, which will start in October, will be open to those having a good honours degree in mechanical, civil, electrical, or chemical engineering. The principal aim of the course, in fact, will be to meet the needs of the engineering industry engaged in the field of nuclear power. Students taking part will be eligible for Department of Scientific and Industrial Research Advanced Course Studentships.

The syllabus will include a number of backbone lecture courses on basic nuclear physics, nuclear reactor theory, nuclear fuel technology, biological effects of radiation, and the design and construction of nuclear reactors for power generation. Optional lecture courses will cover such subjects as advanced fluid mechanics and heat transfer, the mathematical theory of neutron diffusion and transport theory, properties of special materials and unusual metals, isotope separation, fuel cycles, thermal design of nuclear power plants and steam cycles, instrumentation and control theory, and the design of reinforced concrete structures. Laboratory work will include the demonstration of neutron sources and gamma radiations, methods of detection of neutrons and radiation, counting equipment, measurements of neutron diffusion, the use of a reactor simulator, experimental work on fluid flow and heat transfer, and a number of other mechanical engineering problems.

The course will be under the direction of Prof. Kay in association with Profs. Ball (physical metallurgy); Blackett (physics); Danckwerts (chemical engineering science); Newitt (chemical engineering); Saunders (mechanical engineering); and Tustin (electrical engineering). Further particulars may be obtained from the Registrar, Imperial College, London, S.W.7.

### National Economic Statistics

IN his budget speech on April 17 last year, Mr. Macmillan said that he was considering ways of improving our economic statistics, and on August 1 he made a further detailed statement outlining seven ways in which the existing information could be improved, including quicker returns from industry and the collection of new or improved information in

six different fields. The need for greater guidance as to where to obtain statistics and how to use them was stressed by Prof. R. G. D. Allen in an article in *Economica* last November. A broadsheet from Political and Economic Planning, "Statistics for Government" (No. 406; January 28, 1957), reviews briefly developments since 1944, including the major advances in the past four years and Mr. Macmillan's proposals, and evaluates the success achieved in carrying out the recommendations of a White Paper on Employment in 1944. The main criticisms made of our national economic statistics are that too long a time elapses between collection and publication; that revisions are made too frequently; that there is insufficient analysis and official statisticians are over-cautious and afraid to commit themselves; and that presentation and publication require more attention. More specifically, Britain needs quarterly estimates of the national income like those already published in the United States, Canada and the Netherlands. These criticisms are not entirely consistent, and Political and Economic Planning concludes that the statistical services are faced with a complex of requirements that are often self-contradictory. The quality needed above all in the statistical divisions is flexibility, and this may sometimes be hampered by official modes of operation which are not readily adapted to public relations work in securing the co-operation of industry. There is need for fuller notes explaining how the published statistics can be used, and in particular, for a work which will not only act as a reference source outlining the sources and methods of compilation of the statistical tables, but which will also discuss more fully the nature, uses and limitations of the statistics. Finally, the dependence of the statistical services on the co-operation of industry is stressed.

### Christian Responsibility in the Nuclear Age

IN an article on "Nuclear Knowledge and Christian Responsibility" in the *London Quarterly* for January 1957, Prof. C. A. Coulson emphasizes that if the under-developed countries are also to enjoy the benefits of civilization, or indeed if our civilization is to continue, a fair and reasonable distribution of nuclear energy is an absolute necessity. For those who come to the nuclear age with real elasticity of mind, its problems afford stimulating and creative opportunities, and he argues that it is a Christian responsibility to see that nuclear energy, like any other scientific discovery, is rightly used. That responsibility is inherent in the nature of man and in our relationship to the material world. There are certain questions, not of a purely scientific character, which must be answered before we know how to use science properly. God, he argues, will not be fully known until He is found in a developed knowledge of the universe in which we live, and that therefore all science is a religious activity. Urging that we should be profoundly grateful for our nuclear knowledge, Prof. Coulson indicates some of the ways in which we should share and develop nuclear energy and its applications. We should look to the time when we shall harvest crops within the Arctic Circle and our control of biological techniques shall enable us to exploit the agricultural possibilities of every part of the world. Nothing less can cope with the rising world population and its demand for food. We should also rejoice in new possibilities for curing disease and improving health in parts of the world where disease is rampant and health poor and should