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** Since June 1967 the Commission of the European Communities has published 63 "TECHNICAL NOTES" reporting the results obtained under the Euratom research programme which are suitable for industrial use in the short term. Of these notes, 42 relate to patented techniques, 19 concern non-patented apparatus and two cover non-patented processes. This was stated in a reply by the Commission to a written question from Mr. Oele, a member of the European Parliament.

** One of the cooperative projects proposed by the Community's Working Group on Scientific and Technical Research Policy (Aigrain Group) "is aimed at the design and construction of a HIGH-POWER INFORMATION PROCESSING AND DATA STORAGE SYSTEM. In order to arrive at a clearer outline of this project, which is highly complex, the relevant Expert Group asked the firms of Philips, Olivetti, Siemens, AEG-Telefunken and Compagnie internationale de l'informatique (CII) to give their opinion as to what the technical characteristics of the project and the methods and procedures for carrying it out should be. ../..

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The firms in question considered that other European firms with special competence in this field, notably International Computer Limited (ICL), should be brought into their discussions".

This, in substance, is the reply given by the Commission of the European Communities to a written question from Mr. Vredeling, a member of the European Parliament.

** We announced recently (see "Research and Technology" No. 22) that the Commission of the European Communities had authorized the signing of six contracts of association for research on CONTROLLED THERMONUCLEAR FUSION AND PLASMA PHYSICS with the principal European institutions engaged on this work. A brief note on the subject is given in an ANNEX.

** In a notice published in the Official Gazette (No. C. 104) the Euratom Supply Agency invited users in the Community to send in their requests for PLUTONIUM SUPPLIES FOR THE YEARS 1970-73 INCLUSIVE.

** An agreement has been concluded between the the Commission of the European Communities and Stade nuclear power plant (KKS), Germany, for the EXCHANGE OF INFORMATION AND EXPERIENCE IN THE FIELD OF NUCLEAR POWER PLANTS. The information communicated to the Commission under this agreement will be made available to the Member States and to interested persons or enterprises inside the Community.

** A meeting of a group of experts responsible for establishing BASIC STANDARDS FOR RADIO-ACTIVITY was called by the Commission of the European Communities at The Hague in July 1969 to continue its work on a general revision of the Euratom radiation protection standards. An agreement was reached on the basic principles of workers' health surveillance. A new meeting is planned for next November and will deal with the provisions concerning the surveillance of the health of the general public.

Meanwhile, Professor A.S. Simon, Professor of Radiology at the Free University of Brussels, has been asked to compile a MEDICAL ATLAS OF RADIONUCLIDES used in medicine. This guide will be designed particularly for industrial physicians and radiation protection officers, and will contain, in a handy practical form, all the information available today on radio-nuclides.

** 200 KG OF FISSILE PLUTONIUM are to be supplied by the United Kingdom Atomic Energy Authority (UKAEA) in 1973 to the German firm of Nukem (acting on behalf of the West German Government) under the terms of a contract recently signed between the Euratom Supply Agency, the UKAEA and Nukem. The plutonium will be used by Alkem at Wolfgang near Hanau in the manufacture of fuel for the fast sodium-cooled reactor (SNR) prototype to be constructed in Germany by an international consortium formed by Siemens and Interatom (Germany), Belgonucléaire (Belgium), Neeratom (Netherlands) and Luxatom (Luxembourg).

** The Commission of the European Communities has informed the Belgian authorities, under the terms of Article 37 of the Euratom Treaty, that the RADIOACTIVE WASTE DISPOSAL project planned as a result of the increase in the amounts of fissile materials in the Belgo-nucléaire laboratories at Mol IS NOT LIKELY TO CAUSE SIGNIFICANT CONTAMINATION of the water, soil or airspace of another Member State.

The Commission of the European Communities associated in Community research on controlled thermonuclear fusion

The Commission of the European Communities has authorized the signing of six contracts of association concerning CONTROLLED THERMONUCLEAR FUSION and PLASMA PHYSICS with, respectively, the Commissariat à l'´nergie .tomique (CEA, France), the Comitato Nazionale per l'Energia Nucleare (CNEN, Italy), the Institut für Plasmaphysik (IPP, Germany), the Stichting voor Fundamenteel Onderzoek der Materie (FON, Netherlands), the Kernforschungsanlage Jülich (KFA, Germany) and the Belgian government acting on its own account (Ecole Royale Militaire) and on behalf of the Free University of Brussels. Actually, with one exception, the contracts concern the continuation of activities begun some ten years ago.

The long-term aim of these activities is to exploit, on an industrial scale, the energy released in nuclear fusion reactions between heavy hydrogen isotopes, an energy which has hitherto been released only in an uncontrolled manner in hydrogen bombs. The fuel is so abundant that if these reactions could be exploited it would mean a final solution to the problem of energy sources.

The nuclear fusion reactions between heavy hydrogen isotopes are the nuclear counterpart of chemical combustion reactions, but the temperature needed to start and maintain such reactions is enormous, ../..

being of the order of hundreds of millions of degrees. In principle, therefore, it is impossible to use any material container as a combustion chamber. But at such temperatures the hydrogen is completely ionized, i.e., broken down into electrons (negatively charged) and nuclei (positive), giving rise to a unique kind of gas known as plasma.

By its very nature the plasma is highly sensitive to the action of magnetic or, more generally, electromagnetic fields. It is therefore possible to set up suitable arrangements of quasi-steady magnetic fields which will confine the plasma for a certain time within a limited space, thus forming what one might call a "magnetic bottle". At present the most useful shapes appear to be those in which the plasma assumes the form of rings (toroidal configurations). Important progress has been achieved in this field in very recent years. The study of such configurations forms a major part of the working programme of the laboratories associated with the Commission of the European Communities.

The creation, heating and particularly the magnetic confinement of plasmas raise a great many problems of physics and technology, which are the subject of intense activity in numerous laboratories all over the world, for the difficulties that still have to be solved cover a very wide field. Hence they are the ideal subject for a Community programme, and the six association contracts concluded with the German, French, Italian, Dutch and Belgian laboratories cover nearly all European activity in this field. The Commission's action is the more efficient in that, by reason of its contributions ../..

of both finance and scientific staff it can genuinely coordinate the efforts undertaken, thanks to continuous concerting of the programmes which prevents expensive duplication.