France gains on US

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fast-breeder program is the 380-MWe Clinch River Breeder Reactor, which had been scheduled to go critical in 1983; this date is now threatened by significant delay arising out of the new Administration's stated intention to back off on the pace of nuclear-energy development. The first commercial-sized breeder, the 1200 MWe Super-Phenix, is already under construction in France near Lyons and will start operating in 1981. This plant is being built in collaboration with Italy and West Germany. The equivalent US plant, the Prototype Large Breeder Reactor, is scheduled by ERDA to begin operating in 1988 but this date now also faces delay.

A major reason for the more bearish attitude in the US towards breeders is the concern, widely publicized during the recent election, about nuclear proliferation—plutonium used by breeders might be diverted to produce nuclear weapons. European nations, especially France and West Germany, disagree with the US on how to resolve the proliferation issue. Both countries have now agreed under pressure from the US to refrain from selling nuclear-fuel reprocessing facilities to other countries. But there is no indication that France and other countries in Europe plan to share the position taken last fall by President Ford that "the US should no longer regard reprocessing of used nuclear fuel to produce plutonium as a necessary and inevitable step in the nuclear fuel cycle." France would appear to have no intentions of joining the US in a self-imposed moratorium on domestic reprocessing and recycling of plutonium; moreover, a CEA spokesman told PHYSICS TODAY that France, although it has agreed not to export reprocessing equipment, sees no reason why it should not export fabricated fuel containing plutonium to its nuclear customers as soon as it is commercially feasible.

Waste disposal. Another area of concern about nuclear energy in the US is the problem of long-term disposal for high-level radioactive wastes. Marcus Rowden, Chairman of the US Nuclear Regulatory Commission, observed at a recent conference that, although the US has the basic technology, we have yet to demonstrate a method of disposal that is technically sound and also socially acceptable. In a paper last July Robert Seamans Jr, as administrator of ERDA, pointed out that because commercial reprocessing of nuclear fuel has not been carried out in the US since 1972 no high-level wastes have been generated since that date. ERDA hopes to begin detailed design of a waste solidification plant in 1978 and have a geologic repository (probably a salt bed) in operation by 1985. In sharp contrast, the French have been operating a pilot industrial solidification plant at Marcoule since 1969 that has processed the high-level waste from 800 tons of irradiated fuels to date. A full-scale solidification plant will go into operation at Marcoule this year. The French strategy for ultimate disposal of wastes differs from the US in that the French plan routinely to let the solidified wastes cool down in intermediate storage in concrete wells for 40 years before ultimate storage in a suitable geological formation. This gives them 40 years, they note, to prepare acceptable sites. —HLD

Census Bureau seeks advice for 1980

The US Bureau of the Census has issued a request to national trade and professional associations and labor unions for recommendations concerning the 1980 census.

In an attempt to make its results more useful, the Bureau would like to obtain and review recommendations as it plans the upcoming census. Any suggestions or comments on the census, particularly on the content of the questionnaire (which must be developed by the spring of 1977), may be sent to: Director, US Bureau of the Census, Washington, D.C. 20233.

Bartol joins forces with University of Delaware

Bartol Research Foundation, the basic-research arm of the Franklin Institute (Philadelphia, Penna.), is now affiliated with the University of Delaware department of physics and astronomy. While remaining an integral part of the Franklin Institute, Bartol will conduct continuing research at the University of Delaware.

As a result of this collaboration, a joint graduate program in physics and astronomy (including graduate degrees) will be offered by a combined faculty of some 30 members. Cooperative research with the Delaware Institute of Energy Conversion and the Neurosciences Institute will be developed and opportunities to undertake new projects in applied science will become possible through Bartol's association with the Franklin Institute Research Laboratories.

in brief

ERDA has selected the General Atomic Co (San Diego, Calif.) as the project manager of a conceptual-design team for a major fusion-reactor research facility to be built in the mid-1980's. The first-year effort of the project will be supported by a $1.6 million contract.

Gordon and Breach, Science Publishers, Inc (New York) has announced that the *Journal of Nonmetals and Semi-conductors* has been renamed *Semiconductors and Insulators: A Journal of Ionic and Covalent Solids*. Leo Esaki (IBM Watson Research Center) has been appointed co-editor. The other co-editors are Roman Smoluchowski (Princeton University) and Arthur C. Damask (Brookhaven National Laboratory).

The following have been elected to new posts with Associated Universities, Inc, which operates Brookhaven National Laboratory and the National Radio Astronomy Observatory: John W. DeWire (Cornell University) and Donald N. Langenberg (University of Pennsylvania) as university trustees, Dixy Lee Ray (now Governor of Washington) as trustee-at-large and Charles K. Bockelman (Yale University) as chairman of the board.

Copies of NSF 75-317, *National Sample of Scientists and Engineers: Participation in National Programs and Changes in Educational Attainment, 1972–74* are available from the National Science Foundation, Washington, D.C. 20550.

The STD Research Corp has been awarded a $4.5-million contract by ERDA. Under the three-year contract, STD Research will provide engineering information and other support for ERDA's magnetohydrodynamic coal-to-electricity program.

Fiber Optics and Integrated Optics, a quarterly journal, began publication with the Spring 1976 issue. The subscription price for the first volume is $48.00. For more information contact Crane, Russak and Company, Inc, 347 Madison Avenue, New York, N.Y. 10017.

Avco Everett Research Laboratory Inc (Everett, Mass.) has been awarded a $19.7-million contract by ERDA to develop key generator components of a magnetohydrodynamic electric-power installation, which is scheduled for completion by the late 1980's. Avco will design and construct the first MHD channel for ERDA's planned Component Development Integration Facility to be constructed at Butte, Montana and will conduct additional research and development under the contract.

Space for Women: Perspectives on Careers in Science is a booklet intended for use by high-school and college-age women as a career-resource reference. The 46-page illustrated booklet will be distributed free upon request from the Publications Office, Center for Astrophysics, 60 Garden St., Cambridge, Mass. 02138.

Recently elected to a two-year term as president of the (British) Institute of Physics is B. John Mason of the Meteorological Office, Bracknell. Godfrey H. Stafford of the Rutherford Laboratory, Chilton, has been elected to a five-year term as vice-president. □