

uranium," comments Vincent Abajian, board chairman of Electro-Nucleonics.

In contrast to the simple, passive porous barriers of the diffusion method, the centrifuge approach involves a highly sophisticated technology having to do with precision-machined high-speed rotating equipment. In the past this has meant that the unit capital cost for centrifuge separators has been significantly higher than for diffusion barriers, with maintenance and replacement costs also higher. But development work on centrifuge technology has been bringing projected costs down. At this point, according to Abajian, his company estimates that the total costs for enrichment via centrifuge are potentially competitive with the diffusion process. This estimate takes into consideration the higher cost for power consumed in the diffusion method, which accounts for half the total enrichment cost in diffusion plants. In the future, Abajian argues, centrifuge costs may fall even further with improved technology while diffusion costs

can only go up as electric power inevitably becomes more expensive. This position is shared by major interests in the European nuclear industry. After studying how best to develop a European enrichment capability, a consortium of three European countries (UK, Netherlands and West Germany) decided to collaborate on the centrifuge process. The group has already built three pilot plants, which are just now coming into operation.

The emergence of European enrichment facilities raises the question of how hard the US should try to hold on to its position of world supplier of reactor fuel. AEC projections assume that the US will supply only 40-60% of new foreign (noncommunist) fuel requirements during the 1980's and 1990's. However, both AEC and private interests agree that the US should plan to do better than this. If this country can remain the primary supplier for foreign utilities it will be easier for US companies to sell nuclear power-plant equipment abroad and it could be a signifi-

cant factor in alleviating the balance of payments problem.

Returning to the question of who is going to put up the money to own and operate the new enrichment plants, some industrial interests are, at least, moving to form consortia that would be in a position to consider this responsibility seriously. In addition to the plans of Reynolds Metals mentioned above, Westinghouse is joining with Union Carbide and Bechtel to study the feasibility of building and operating a plant with a capacity of 8750 tons annually of separative work (about 2300 tons of 3% enriched uranium).

According to Charles Winters, who is manager of the uranium-enrichment project for Union Carbide, the group has not yet decided whether the study would focus on a diffusion plant or a centrifuge plant. A second consortium, composed of Electro-Nucleonics, Burns and Roe, Martin Marietta, Hercules and W. R. Grace, is studying the feasibility of a centrifuge plant that would have a capacity of 8750 tons or smaller. —HLD

the physics community

Medical physicists' association joins AIP

The American Association of Physicists in Medicine has been elected a member society of the American Institute of Physics. The AAPM, which has been an affiliated society of AIP since 1967, was elected to membership at the annual corporate meeting of AIP earlier this year. C. J. Karzmark, of the Radiology Department of the Stanford University School of Medicine, is the current president of the 800-member Association.

Medical physics is concerned with the application of physical principles and the use of physical techniques in the diagnosis and treatment of disease. In the early 20th century the subject was most closely associated with radiation therapy in the treatment of cancer. It has expanded to include the physical aspects of x-ray diagnosis, nuclear medicine, radiation safety, ultrasonics, lasers and thermography. Medical physics also involves other areas such as patient monitoring, general medical instrumentation and medical computing.

Members of AAPM are primarily involved in three main areas of activity: research and development, consultation and service, and teaching. The AAPM was founded in 1958 "to promote the application of physics to medicine and biology; to encourage interest and training in medical physics and related fields; and to prepare and

disseminate technical information in medical physics." The growth of the Association from 58 members at the original meeting to the present 800 indicates the increasing importance of the role of physicists in medicine.

Activities and publications of the Association are to be found in two journals. The *Quarterly Bulletin*, which is published for AAPM by AIP, contains much information of interest to members as well as abstracts and programs of meetings. *Physics in Medicine and Biology* is AAPM's scientific journal and is published cooperatively with the Hospital Physicists' Association (Great Britain), the Medical and Biological Physics Division of the Canadian Association of Physicists and the International Organization for Medical Physics.

Science-writer Edelson wins AIP-US Steel award

Edward Edelson, science writer with *The New York News*, has won the 1973 American Institute of Physics-United States Steel Foundation Science Writing Award to a journalist. The award, which consists of \$1500, a Moe-bius-strip trophy and a certificate, is given for "The Mystery of Science," a series of articles that appeared in *The New York News* during 10-14 April 1972. The editors of *The News* also received a certificate. Edelson accepted the award last month at the meeting of

the Washington, D. C. section of the National Association of Science Writers. Two AIP-US Steel Foundation Science Writing Awards are presented annually, one to a journalist and one to a scientist.

Godfrey appointed vice-president of APA

James T. Godfrey, a 1972 PhD graduate in physics at the University of Colorado, has been appointed vice-president of the American Physicists Association. Apart from managing the Washington, D. C. office of the Association, Godfrey is responsible for all APA legislative and lobbying activities. Other officers of the organization are Richard L. Smith, chairman of the Board of Directors and secretary; J. Robert Wayland, director and treasurer; J. S. Osmundson, director and president, and N. G. Smith, executive secretary.

The Board of Directors, which appoints the officers of APA, are elected annually by cumulative voting of the membership. A unique feature of APA, cumulative voting insures that minority groups in the physics community can elect representatives to the Board, which in turn governs the Association and sets its policy. All members of APA have equal rights to vote, hold office and participate in all its affairs. For additional information write APA, Box 19343, Washington, D. C. □