Briefing

Argonne Accelerator Nearing the End

In spite of years of tenacious struggle by its partisans, the physics research accelerator at the Argonne National Laboratory is due to be closed. Officials at the Energy Research and Development Administration plan to stop the operation of the 12 billion electron volt (Gev) accelerator at the end of 1978. Termination of the accelerator operation would affect only about 10 percent of the work done at the laboratory, which has large programs in nuclear and nonnuclear energy research. With a $150 million budget in fiscal 1976, Argonne is the largest of the ERDA laboratories, excluding the two dedicated to weapons development.

Physicists have consistently given priority to accelerators capable of higher energies, and the closing of the Argonne machine is apparently the price to be paid for the next step up the energy ladder. Operating the accelerator costs $15.5 million per year. In 1974, the Office of Management and Budget first requested a plan to phase out the Argonne Zero Gradient Synchrotron (ZGS). This was the same year physicists had recommended construction of a new electron storage ring facility at Stanford, after an 8-year hiatus in new accelerator construction. The study group that responded to the request named 1978 as the earliest cutoff date and it quickly became the latest possible date.

The $78 million Stanford storage ring was approved this year. Once it was authorized, the budget office apparently insisted that ERDA make firm plans to close the Argonne ZGS.

Without Argonne, the U.S. high energy physics program will be reduced to three experimental centers. Brookhaven National Laboratory on the East Coast has a 30-Gev accelerator on Long Island, the Fermilab at Batavia, Illinois, operates a 500-Gev facility in the Midwest, and Stanford has a 20-Gev electron accelerator presently feeding a small storage ring at Palo Alto, California. The three are supported by ERDA, and the National Science Foundation also supports an electron accelerator at Cornell University.

With the lowest energy available and the world's biggest accelerator practically next door, the Argonne machine was an obvious candidate for decommissioning. Although advisory panels were convened to consider the timing and methodology of shutting the ZGS, none were asked if it was the proper accelerator to turn off. In Washington, the selection was apparently a foregone conclusion, and the community of physicists did not challenge it.

But some physicists think no accelerator should be closed, and Argonne sees in this argument its last chance to keep the ZGS operating beyond 1978. According to laboratory director Robert Sachs, Argonne requested that ERDA conduct a follow-up suggested in the earlier studies to determine whether the current research would not warrant continuation. Headed by Robert Walker at Caltech, who says that his panel served much like a visiting committee, the follow-up study recommended extra funding for the remaining years so that the accelerator could operate 9 months of the year rather than the present 6. It also recommended 1 year of operation at reduced funding after the deadline to make use of Argonne's unique capability for experiments with polarized protons. Argonne officials had proposed three extra years operation with polarized protons.

The high energy physics operation has accounted for somewhat more than a third of the $42 million basic research program at Argonne. After the accelerator is shut down, the Argonne lab plans to continue accelerator development for applied projects as well as experiments at other accelerators. This program would require about $5 million per year.

"The Argonne ZGS is not in the center of the newest developments of particle physics," says Walker, "but it is doing significant and often unique work not unrelated to them." Upon closing, the ZGS will be the world's largest deactivated accelerator.—W.D.M.

NCI Director Resigns Because Congress Blocked Pay Raise

Frank J. Rauscher, Jr., director of the National Cancer Institute (NCI) since the "war on cancer" began 5 years ago, has submitted his resignation to the President because Congress has refused to give him a raise in pay. By a vote of 13 to 13, the House Committee on Interstate and Foreign Commerce killed a bill that would have raised his salary—and that of the other institute directors at the National Institutes of Health (NIH)—from $37,800 to $52,000 a year.

Earlier this year, Rauscher let it be known that with five children in, or about to enter, college he needed more money. (During the past 5 years the top salary for high-level federal officials has gone from $36,000 to $37,800, which does not even approach a cost-of-living increase.)

Faced with Rauscher's ultimatum, his great supporter Benno Schmidt, the investment banker who heads the President's Cancer Panel, approached members of Congress about a special bill. At first, there was talk of a bill that would raise the pay of only three health officials—Rauscher, plus the director of NIH and the assistant secretary of health. But it was silenced when it became apparent that such a discriminatory move would rightly enrage the directors of NIH's other institutes. And so, a bill to include the whole lot of them was drafted in the hope that it would get through Congress as an amendment to some health bill or another. In the Senate, the plan had the backing of Edward M. Kennedy (D–Mass.), chairman of the health subcommittee. In the House, it was supported by Paul G. Rogers (D–Fla.), chairman of the subcommittee on health and environment.

But in the end, it never got out of committee. When Rogers brought the bill before the full committee (Commerce), it ran into opposition from Republicans and young Democrats who did not see why health officials should make more money than other high-ranking federal employees.

In principle, there is no reason why they should. The justification, if there is one, is purely practical. NIH salaries are not competitive with academic pay scales, let alone those in the private sector. In a university, a person in Rauscher's position would be making at least $50,000 and have a string of fringe benefits besides. As a result, it has been extremely difficult to recruit persons for NIH jobs. Ironically, some of the other institute directors who, as M.D.s are eligible for V.I.P. or "variable incentive pay" in the Public Health Service's commissioned corps, already make salaries in the $50,000 range. But Rauscher, a Ph.D., does not qualify.

Rauscher will leave by 1 November for

New York where he will become a senior vice president of the American Cancer Society at a salary estimated to be in the $50,000 to $55,000 range. Schmidt told *Science* that he hopes to be able to recommend a successor to the President before the November elections, but he acknowledges it may be impossible to move that fast.—B.J.C.

Of Space Ships and Tall Ships

Now that the Viking missions to Mars are nearing an end, the space agency is polishing its apples to persuade Congress of the virtues of possible future projects. John E. Naugle, associate administrator of the National Aeronautics and Space Administration (NASA), testified to a House subcommittee on 15 September about some of the juicier projects the agency has in mind for the 1980's, besides the already-approved space shuttle.

Viking could be followed in 1986 with a "more substantial" martian landing, Naugle said, using a roving vehicle to land at one site and move to others. The payload could be shipped to Mars aboard a "Solar Sailor"—the closest thing the agency has ever proposed to a genuine space ship. The Solar Sailor would be driven by solar pressure, reflected light from the sun, which would be collected by very large, very lightweight sails. In NASA jargon the craft is a "reusable interplanetary spacecraft," but Naugle embellished his description, saying that after the Mars mission, "the Solar Sailor, like an ancient Yankee Clipper, would then remain in 'Port,' ready for its next interplanetary voyage."

Other future projects are a grander version of Landsat, the earth resources sensing satellite now being used to observe crop conditions in a joint project with NASA, the Department of Agriculture, and the Department of the Interior. Naugle proposed a "Global Information Services" satellite system which would combine the functions of earth sensing, meteorological and pollution observation, data transmission, and navigation. All the information collected by the satellite network would be available to the public at earth receiving stations. Naugle went on to suggest using the network for early warning of natural disasters. Or, it will be connected to home terminals "for the early morning transmittal of your daily paper—to be stored on tape for replay on a radio or home TV thereby substantially reducing the need to produce and then dispose of some 50 pounds of paper per week per family."

Naugle also proposed that the space agency study the possibilities for solar energy collection systems, on the ground or in space. He was cautious about how such studies would turn out, but said it was conceivable "that it may be better to conduct some of our industrial operations in space where there is abundant solar energy and an almost inexhaustible vacuum to act as a sink for thermal and chemical pollution." Thus, perhaps we should consider "moving a segment of our industrial society into space."

Naugle, and later, other agency spokesmen have noted that such plans are still in the design stage and that NASA is not ready to discuss these possibilities in detail. But with the boost that Viking has given those concerned with the space program, perhaps the sky will be the limit, after all.—D.S.

Science Board Meetings Open to Sunshine

The National Science Board, the governing body of the National Science Foundation (NSF), will open its meetings to the public as a result of a new "sunshine" law signed by President Ford on 13 September. The law opens the meetings of some 50 government agencies to the public. Meetings can only be closed by a vote of the group when it gathers, and, even then, a verbatim transcript of the deliberations must be made.

Vernice Anderson, the long-term executive secretary of the board, notes that the law does not take effect until March, so she and her small full-time staff have time to learn the new rules and procedures the sunshine act will entail. Since the science board is not one of the most controversial groups in Washington, some observers wonder who will bother to attend their meetings. Likely candidates, however, are those seeking large NSF grants, since the board must approve any award over $500,000. Currently NSF is considering awarding more of the larger "block" grants.

The sunshine bill was fought most bitterly by Arthur Burns, chairman of the Federal Reserve Board, who was adamant that the board's monetary deliberations remain secret. In fact, the bill's chief sponsor, Senator Lawton Chiles (D–Fla.), accomodated Burns' objections by permitting closed meetings, and the keeping of only summary minutes, when information regarding currency, securities, or commodities is to be discussed and when disclosure of the information would frustrate policy goals.

Both federal regulatory agencies and those they regulate will be affected by the bill, because it forbids ex parte communications between regulatory officials and anyone whose case is under consideration. An exception will be the Food and Drug Administration, because it is part of the Department of Health, Education, and Welfare: cabinet level departments are not covered by the act.

The science board's new rules may be unfamiliar, but the board's new members, recently announced, will include familiar faces. They are Raymond L. Bisplinghoff, chancellor of the University of Missouri and a former deputy director of NSF; Lloyd M. Cooke, corporate director-community urban affairs for the Union Carbide Corporation; Herbert D. Doan of Doan Associates; John R. Hogness, president of the University of Washington; William F. Hueg, Jr., a dean at the University of Minnesota; Marian E. Koshland of the University of California, Berkeley; and Alexander Rich of the Massachusetts Institute of Technology.

In a related development, the former director of the National Science Foundation, H. Guyford Stever, just sworn in as the President's science adviser, has announced that he is taking on two "senior advisers," William J. Nierenberg of the Scripps Institute of Oceanography and Donald Kennedy of Stanford University. Both will continue the work of the now-disbanded committees appointed by the President earlier this year to identify issues for the new White House science office. What with new rules for the science board and a new White House science office, the apparatus for setting policy is changing considerably. Maybe some of the policies will change, too.—D.S.