News Notes

European Governments Plan Cooperative Space Research

Britain and France are sponsoring an international space conference on 30 January in Strasbourg in the hope of developing a cooperative European research program. The governments that have been invited to participate in the meeting, which will be led by British Minister of Aviation Peter Thorneycroft, include Austria, Belgium, Denmark, West Germany, Italy, the Netherlands, Norway, Spain, Sweden, and Switzerland.

The immediate objective of the proposed joint project is development of a European satellite launching vehicle from the French Veronique rocket and the British Blue Streak. The latter was recently abandoned as a military weapon, but research on it as a satellite launcher has continued at a cost of about £1 million ($2,800,000) a month.

Another European Space Program

Another program for European cooperation in space was launched last month at the European Organization for Nuclear Research (CERN) in Meyrin, Switzerland. On 1 December, after a 4-day intergovernmental conference at CERN, an agreement for setting up a preparatory commission to establish a European Organization for Space Research was signed by nine of the ten countries invited, as well as by Spain, which was admitted as a member state during the conference after having taken part in its work as an observer. The other participating countries were Belgium, Denmark, France, Great Britain, Italy, the Netherlands, Norway, Sweden, Switzerland, and the Federal Republic of Germany. (The West German delegation did not have the authority to sign the agreement at the time of the meeting.)

At present three groups of scientists are working on the technical, administrative, and financial requirements of the new organization, which may be formed this summer and functioning by fall.

Space Symposium Planned

Still another event in European space activities was announced recently when the British Interplanetary Society reported that it is planning the First European Symposium on Space Technology. The meeting will take place in London, 26–28 June. Engineers and scientists from Western European countries, primarily those that are members of the Organization for European Economic Cooperation, will attend the symposium.

AEC Reports Status of Idaho Accident Investigation

Investigation into the cause of the 3 January accident at the Stationary Low Power Reactor No. 1 (SL-1) in Idaho continues to be slow and difficult because of extremely high radiation levels in the reactor building which impede efforts to obtain reliable data from instrumentation or visual observation as to the present conditions within the reactor itself. However, it has now been established that the reactor, located at the Atomic Energy Commission's National Reactor Testing Station near Idaho Falls, sustained an uncontrolled nuclear reaction.

Three men were killed in the accident, the first fatal accident in the history of U.S. reactor operation. The reactor is of conventional design and had been in operation for about 2¼ years. Two of the fatally injured men were certified reactor operators, and the third was a trainee scheduled to receive his certification next month. The men who were fatally injured were the only ones in the building.

So far as can be determined, a nuclear reaction is not going on in the reactor at this time, but it has not been possible to make a complete examination. Investigation of the reactor will, of course, be conducted cautiously to guard against the remote possibility that the investigation itself could initiate a nuclear reaction.

Concrete shielding blocks surrounding the top of the reactor prevent study from outside the building. However, an attempt will be made to examine the interior through nozzle openings or ports in the metal plate which covers the reactor vessel. Until the interior condition of the reactor is known, it cannot be determined with certainty what steps must be taken. Shielded television and photography appear to be the best methods of obtaining the initial information needed.

Aerial and ground monitoring continues to affirm that airborne radioactivity is being confined largely to the reactor building and the immediate vicinity. Direct radiation from the reactor building has shown no increase since the accident. Calculations from direct radiation readings are as follows: 1.1 r/hr at 100 ft; 0.037 r/hr at 500 ft; 0.009 r/hr at 1000 ft; and 0.002 r/hr at 2000 ft.

Cole Assesses International Atomic Agency's Progress

Sterling Cole, director general of the International Atomic Energy Agency, recently told the Atomic Industrial Forum in San Francisco that "none of us has been completely happy or satisfied with the agency's progress." Weak support from member governments, coupled with unstable financing, has reflected current international political tensions.

Nevertheless, Cole's annual report on IAEA to the United Nations General Assembly was on the whole encouraging. He indicated that today's assessment of nuclear power prospects is "generally more optimistic" than that of 2 years ago, although the production of cheap electricity, motive power, and heat from nuclear fuels "still remains to most countries a prospect for the future rather than a reality for the present." At present "the cost of nuclear power is falling quite fast, faster than that of conventional power, but from a greater height"; it is unlikely that the two curves will intersect until the latter part of the 1960's. The use of isotopes and radiation, on the other hand, continues to flourish and expand, and the agency is "beginning to see the first fruits of its own work in spreading this technology to the less developed areas," Cole said.

He pointed out that the "disappointment of earlier expectations" had influenced the development of the agency's work, noting that some nations had not used the agency as a clearinghouse for supplying atomic facilities and fuels to other countries, preferring separate agreements. As a result, the agency's program has been devoted to training and technical assistance, research and surveys, scientific meetings and publications, the elaboration of safety codes and regulations, and other preparatory and regulatory work.

Progress Described

Cole said that in these fields the progress made by the agency in the past year had been "positive and con-

siderable," and he gave some examples: some 420 fellowships were granted in the last year, to make a total of 1000 since the program started; experts and equipment were made available to atomic programs in 27 countries; 31 scientific reports were published; the first issue of the agency's journal on nuclear fusion research was published; draft conventions were elaborated governing the civil liability of operators of both land-based and nuclear-ship reactors; regulations for the transport of radioactive materials were drawn up and approved; technical recommendations for the disposal of radioactive wastes were worked out by a group of highly qualified specialists; and nine scientific meetings were held, attended by more than 2000 scientists from 40 countries.

The director general also reported on the "growing willingness of governments to place specialized facilities at the agency's disposal." He mentioned as examples the dosimetry experiment at Vinca, made possible through the cooperative attitude of the Yugoslav authorities and carried out with assistance from France, the United States, and the United Kingdom; the United Arab Republic's offer to convert its national isotope center to a regional center under the agency's aegis; Monaco's offer to make research facilities at the Oceanographic Institute available to the agency and to permit use of its research vessels; and the use of a reactor facility in Norway for a joint reactor physics research program.

Cole described the agency's function to establish and administer safeguards as "complementary to that of the United Nations in the field of atomic energy." He also referred to the services the agency is rendering the United Nations Scientific Committee on the Effects of Radiation on Man by performing analyses in its laboratory and by providing information on radiation protection problems.

Financing Improved But Inadequate

He termed the last session of the IAEA General Conference, held in Vienna in September, "the most constructive and encouraging conference that we have had since the agency was set up a little more than three years ago" and said that the fact that the conference had approved a substantial increase in the target for voluntary contributions to finance the technical assistance and laboratory activities of the agency showed that it shared his satisfaction over recent progress and his confidence in the agency's growing program.

However, he urged that a more stable basis be found for financing the agency's technical assistance work. The voluntary contributions upon which technical aid is dependent "consistently are insufficient" to meet the objectives set up by the various governments.

Livingston Compares Disarmament and Arms Control; Prods Federation of American Scientists on Policy

M. Stanley Livingston of Massachusetts Institute of Technology, chairman of the Federation of American Scientists, discusses "Disarmament and/or Arms Control and FAS Policy" in the federation's January newsletter. Excerpts from his statement follow.

Advocacy of disarmament is becoming respectable. . . . General agreement on the necessity for some arms control is one of the most significant consequences of the development of nuclear weapons. . . .

[However,] there is wide disagreement on the general formulas for disarmament, and also on the many competitive proposals for a "first step." But there is also serious disagreement on the ultimate goal, which can be characterized by the meanings implied in use of the two terms: "disarmament" and "arms control."

Both terms are used (or misused) by individuals whose philosophies are widely different. Enthusiasts for immediate total disarmament of all national military forces down to police levels conceive this goal to be the only true disarmament. . . .

Others believe that real disarmament means the ultimate elimination of all weapons of mass destructions, but expect it to take a long time and to be accomplished only by many successive small steps. . . . They use the term "arms control" to describe the successive steps and agreements; to them it is the means to the end, but not the goal.

A very much larger number conceive of "arms control" itself as the ultimate goal. To them the maintenance of national military force is essential for national security. "Arms control" means a delicate balance in number and type of national armaments designed to minimize the incentives for other countries to initiate a war. Basically, it is nothing more than military strategy in modern dress, and the international agreements for which they plan are those which would improve their own country's capacity for deterrence. Unfortunately, these spokesmen are only too willing to use the term "disarmament" as a facade to conceal their purpose and to gain public acceptance of their policies. . . .

FAS and National Policy

The FAS has wavered uncertainly in accepting responsibility for formulating a disarmament policy. Despite the efforts of a few dedicated individuals all attempts to formulate a policy acceptable to the Council have degenerated into almost meaningless generalizations. This is an untenable position for a political action group representing the opinion of socially conscious scientists. It is past time for the FAS to state its policies clearly and with force.

The FAS policy must be long-range, and must firmly set forth the ultimate goal; it should be flexible enough to allow a wide variety of first-step approaches, but should not attempt to formulate each step in the process. It should distinguish clearly between arms control and true disarmament, and should accept arms control proposals only as a means to the end. It should emphasize the ultimate necessity of international inspection and control under a world of law. In this policy the FAS should not attempt to design a step-by-step disarmament program, nor should it try to formulate compromises between realists and idealists. The need is for a forthright and idealistic statement of the ultimate goals, to supply the leverage for our country to move steadily closer to these goals.

Policy Statement Proposed

In order to start discussion and stimulate others in formulating a policy position for the FAS on disarmament and arms control, I suggest the following statement for FAS consideration:

"The Federation of American Scientists strongly supports the policy of comprehensive disarmament of all weapons of mass destruction, under a world of law with an international police force to provide inspection and control. Nothing less can be acceptable to anyone with a decent respect for mankind. In working toward this goal a massive effort is required to understand and evaluate the many economic, tech-

nical and political factors which lead to international misunderstandings and strife. We urge our government to stimulate and support a greatly expanded program of study of these factors, one which is commensurate with the scope and urgency of the problems involved. Specifically, we propose detailed analyses of the technical problems of systems of inspection and enforcement of disarmament agreements, and of their effectiveness and cost. We advocate international negotiations to clarify areas of concern, and distrust, and to formulate plans to remove or minimize legitimate sources of distrust. We advise our government to act quickly in several areas where agreements are potentially within reach, in order to test the sincerity of ourselves and other nations; we advise this even if it involves some short-term risks of unbalance of military deterrents. We believe that some risk is justified in view of the greater risk of failing to act. We consider such arms control agreements to be justified only if they lead to further and more meaningful disarmament agreements, and only if they are adopted as a part of a conscious effort to decrease the chance of uninhibited armed conflict. We recognize the need to build confidence in the United Nations as a forum for the discussions of international problems, and to strengthen the authority of the international police force in neutralizing aggressions. Above all we urge that the ultimate goal of true disarmament under a world of law be made the real, as well as the ideal, purpose of U.S. policy."

News Briefs

Biophysics placement service. The Biophysical Society will operate its placement service at the fifth Annual Meeting, to be held at the Chase Hotel, St. Louis, Mo., 15–18 February. This service will be available to registrants without charge. Rooms for interviews will be provided. Further information and forms for registration by prospective employers and candidates prior to the meetings may be obtained by writing: Biophysical Society Placement Service, Box 668, Frederick, Md.

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Epidemiological board. The Armed Forces Epidemiological Board celebrated its 20th anniversary on 11 January. The board, consisting of top civilian medical scientists who serve on 12 commissions, was originally established in 1941 to advise the Army, and later the other military medical services, on preventive medicine problems of military importance. President of the board is Gustave J. Dammin, professor of pathology at Harvard Medical School. Col. John Rizzolo, USAF, MC, is executive secretary.

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Parasitologists organize. The International Federation of Parasitologists is being organized from headquarters at the University of Illinois. Francis J. Kruidenier, University of Illinois zoologist, is secretary of the initial governing commission and executive committee. T. W. M. Cameron of McDonald College, Canada, is executive committee chairman.

The federation will include workers in medical, veterinary, and biological fields. It will consist of affiliated societies and individuals and will extend throughout the world, including scientists of both Eastern and Western countries. It hopes to work through the World Health Organization, serving as an international study group. Federation plans grew out of the first International Conference on Trichinosis, held in Warsaw in September under sponsorship of the Polish Society of Parasitology.

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Gerontological journal. The Gerontological Society, Inc., has authorized publication of a new quarterly journal to be known as *The Gerontologist*. It will be similar in format to the *Journal of Gerontology*. Publication will begin in 1961. The new publication will feature review articles, theoretical articles, historical articles, and articles dealing with current action programs. A dozen countries will be represented on the editorial board, emphasizing the international character of the enterprise. Oscar J. Kaplan, San Diego State College, San Diego 15, Calif., will serve as editor-in-chief. Manuscripts should be sent to him for consideration by the editorial board.

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Chinese scientific material. The Consultants Bureau, New York, has announced that it is planning to translate and publish selected Chinese scientific articles. During 1961 the program will cover from 500 to 1000 pages of highly specialized material in the fields of chemistry, physics, biology, earth sciences, mathematics, and metallurgy.

Grants, Fellowships, and Awards

Atomic energy. The Atomic Energy Commission will sponsor a summer institute in nuclear physics and atomic energy especially designed for members of the faculties of small colleges. To be conducted from 26 June to 18 August by the Oak Ridge Institute of Nuclear Studies in cooperation with Oak Ridge National Laboratory, the institute will give 20 participants an opportunity to learn or review basic nuclear-energy concepts, acquire an understanding of the current nuclear-energy developments, become familiar with nuclear equipment, and gain insight into the development of college courses in the field. Further information and application blanks are available from the Atomic Energy Institute, University Relations Division, Oak Ridge Institute of Nuclear Studies, P.O. Box 117, Oak Ridge, Tenn.

Geology. An international field institute for geology teachers in U.S. colleges will be held in Great Britain during the summer of 1961. It is sponsored by the American Geological Institute, under a grant from the National Science Foundation that will provide travel and subsistence allowances for participants. The purpose of the 8-week summer program is to permit 20 teachers of geology at the college and university level to become familiar, in the field, with classic geologic areas of Wales, northern Ireland, Scotland, and the south coast of England, under the leadership of recognized British geological scientists. Directors of the institute program for AGI will be Frank H. T. Rhodes, University College of Swansea, Wales, and Paul R. Shaffer, University of Illinois.

Applications must be filed *before 15 February*. Inquiries should be addressed to Professor Paul R. Shaffer, AGI International Field Institute–1961, c/o Department of Geology, University of Illinois, Urbana, Ill.

Southeast Asia. For the fifth consecutive year, the Southeast Asia Treaty Organization is offering a number of postdoctoral research fellowships to established scholars of the member states. The object of the fellowship program is to encourage study that will give insight into the present needs and future development of the Southeast Asia and Southwest Pacific areas.

Grants are normally made for a period of from 4 to 10 months and include a monthly allowance of $400 and

allowance for air travel to and from the countries of research. The competition for the awards for the 1961–62 academic year is now open. United States citizens may apply to the Executive Committee on International Exchange of Persons, Conference Board of Associated Research Councils, 2101 Constitution Ave., NW, Washington 25, D.C. This country's candidates for the awards are nominated by the Department of State; SEATO selects the final award winners.

Scientists in the News

Howard B. Andervont, a member of the original research staff of the National Cancer Institute and a former president of the American Association for Cancer Research, has relinquished his duties as chief of the institute's Laboratory of Biology. Although eligible for retirement, he will continue his research in the laboratory he has headed for 15 years. Supervisory responsibility has been assigned to **Walter E. Heston** as acting chief.

Andervont has also been appointed scientific editor of the *Journal of the National Cancer Institute*. In this capacity he succeeds **Michael B. Shimkin**, who was recently named the institute's associate director for field studies.

Andervont's career in cancer research for the U.S. Public Health Service began with his appointment 30 years ago as the biologist of the first cancer research group established by the Service. As one of the pioneers in recognizing the importance of studying the viral etiology of cancer and the use of inbred animals in cancer research, Andervont has made noteworthy contributions in studies of the Rous sarcoma virus in fowl and the Bittner mammary tumor virus in mice. By feeding animals milk containing the Bittner agent, through foster-nursing, he converted a strain of mice that seldom developed mammary tumors to one with a high incidence of such tumors.

Howard B. Andervont

Through research in chemical carcinogenesis, Andervont showed that the nature and duration of carcinogenic stimuli influence the biological properties of cancer. In studies of the role of hormones in the development of cancer, he demonstrated that some tumors may progress from hormone-dependence to autonomy.

Sir **George Thomson**, master of Corpus Christi College, Cambridge, is making a lecture tour in the United States under the auspices of British Information Services. His talks are on the general theme of the relation between pure and applied science.

W. N. Aldridge of Great Britain, a member of the Medical Research Council's staff at the Toxicology Research Unit in Carshalton, Surrey, is spending 2 months in the department of physiological chemistry at the University of Wisconsin, Madison.

Irving A. Taylor, senior research associate and project coordinator in the Institute for Developmental Studies at New York Medical College, has accepted the position of associate director of research at Nowland and Co., Greenwich, Conn., effective 1 February.

Ralph Feder, physicist, of the Physics Research Laboratory, Pitman-Dunn Laboratories Group, Frankford Arsenal, will spend the next 5 months in Argentina, where he will assist Jorge Sabato, head of the Metallurgy Division of the Argentine Atomic Energy Commission, in setting up an x-ray diffraction laboratory and organizing groups to work on several phases of a project on niobium.

M. A. Joslyn, professor of food technology, University of California, Berkeley, has resumed his research and teaching activities. Joslyn has been absent on an extended leave since July 1958. He served as food processing adviser to the Israeli Ministry of Commerce and Industry for a year and then spent his sabbatical traveling in Europe, working at the Institute of Agricultural Chemistry of the Eidgenosische Technische Hochscule in Zurich, and serving, for a term, as visiting professor of food technology at Massachusetts Institute of Technology.

Thomas J. King, former head of the department of embryology of the Institute for Cancer Research, Philadelphia, will receive a Fordham College Alumni Association Award at the association's 107th annual dinner on 2 February at the Waldorf-Astoria Hotel, New York.

Recent Deaths

Howard W. Ambruster, Fanwood, N.J.; 82; chemical engineer, writer, and lecturer, who spent a lifetime fighting for the strict enforcement of pure food and drug laws and opposing the international chemical trusts; 10 Jan.

Norman R. Blatherwick, Daytona Beach, Fla.; 72; retired in 1950 as director of the New York biochemical laboratory of the Metropolitan Life Insurance Company, a position he had held for 23 years; is said to have been the first U.S. research scientist to synthesize insulin; 13 Jan.

George H. Bretnall, Shepherdstown, W. Va.; 89; retired professor of biology at Shepherd College, where he had headed the biology department; 10 Jan.

Worth Hale, Hampden, Mass.; 84; associate professor emeritus of pharmacology and former assistant dean for admissions of the Harvard Medical School; 16 Jan.

Chevalier L. Jackson, Philadelphia, Pa.; 60; co-founder, with his late father, of Temple University Hospital's bronchoscopic clinic, which he headed; professor and chairman of the department of laryngology and bronchoesophagology at the Temple School of Medicine; 13 Jan.

Frederick W. Sinn, Sr., Philadelphia, Pa.; 48; head of the department of optics at Pennsylvania State College of Optometry; 11 Jan.

Ralph G. VanName, White Plains, N.Y.; 83; professor emeritus of chemistry at Yale University; 4 Jan.

Harlan H. York, Montgomery, Ala.; 85; taught botany at Brown University, the University of West Virginia, the University of Pennsylvania, and the University of Massachusetts (Fort Devens) and was forest pathologist in the U.S. Department of Agriculture, New York Conservation Department, and Alabama Division of Forestry; 7 Jan.