Rockets, Large and Small

Administration officials have described their ideas on a rocket to send a manned capsule to the moon. Space Agency officials told the Senate Science and Aeronautics Committee that the "Nova" rocket would stand about 120 yards high, that is the length of a football field, including the end zones. The first ("booster") stage would consist of eight rockets, each producing 1.5 million pounds of thrust. The second stage would use two such rockets. These would be topped by three further stages, requiring progressively small rocket clusters. The payload, of course, would have to include a rocket to bring the manned capsule back from the moon, but this would require only 1/500 the power of the original rocket, both because of the smaller gravitational pull by the moon and because the capsule would quite quickly reach a point where it would naturally fall toward the earth, rather than back toward the moon.

At the other end of the rocket spectrum, the Army last week demonstrated a "rocket belt" strapped on the back of a man. Harold Graham, a test engineer for Bell Aerosystems, which developed the rocket, made a 14-second demonstration journey in which he floated up 15 feet, sailed over a truck, and at about 20 miles an hour, was wafted to a landing about 50 yards away.

Announcements

Writing in the natural sciences and their engineering and technological applications, exclusive of the field of medicine, are eligible for the 1961 **AAAS Westinghouse Science Writing Competition**. The two $1000 awards, one for magazine writing and one for newspaper writing, will be presented at the annual dinner of the National Association of Science Writers on 27 December in Denver, Colorado. A magazine article or a newspaper or press association report, exclusive of those appearing in trade journals or professional scientific magazines, must have appeared in publications within the United States between 1 October 1960 and 30 September 1961 in order to be eligible. Each entrant may submit for consideration as many as three separate articles or series of articles published during the contest year. Persons other than the author may nominate entries. Deadline for all entries is *10 October 1961*.

In addition to the cash awards, citations will be awarded the newspaper and magazine in which the winning articles appeared. Honorable mention citations or other special recognition for distinguished service to science journalism will be made at the discretion of the judges. (Graham DuShane, AAAS, 1515 Massachusetts Ave., NW, Washington 5, D.C.)

A **fishery research vessel** is being built under the new national oceanographic program in which concerted attention will be given to the national effort in basic and applied ocean research. The vessel was designed by biologists and naval architects to meet the needs set forth by the fishery scientists of the Department of the Interior's Bureau of Commercial Fisheries. Its task will be to perform the numerous studies necessary to determine the distribution and variation in abundance of fish in the bottom Northwest Atlantic; to conduct various phases of oceanographic research in water temperature and factors affecting plant and animal life in the sea; and to obtain information on surface and subsurface water movements. The ship will cost $1,775,000, including basic laboratory and research facilities. It is scheduled to begin operating out of the Woods Hole Oceanographic Institution on Cape Cod in approximately 15 months.

A high-speed **electronic computer**, reported by the Atomic Energy Commission to be the largest and fastest situated on a university campus in this country, has been placed in operation at Rice University. The prime objective of the machine, now being used by the university's scientists and engineers, is to handle computations in theoretical physics and chemistry of particular interest to the Atomic Energy Commission's physical research program. It is also being used as a research tool in exploring ways to improve computers. It is anticipated that in the near future the machine will be made available to scientific personnel engaged in fundamental research in the Southwest.

Half of the cost of assembling the computer, approximately $250,000, was provided by the AEC; the remainder was provided from university sources.

The fifth volume in a continuing survey of **Soviet literature on air pollution** and related occupational diseases, being conducted by Ben S. Levine, is now available through the Office of Technical Services. The latest survey contains translations of 45 articles in six sections dealing with the concepts which form the basis of air pollution prevention in the U.S.S.R., the methods of approach, the scope and plan of the work, and progress evaluation. (O.T.S., U.S. Department of Commerce, Washington 25, D.C. $3.50)

Grants, Fellowships, and Awards

Grants-in-aid for research in **bacteriology and sanitary science** are available through the New York Academy of Medicine for the support of investigations, scholarships, or travel related to preventive medicine or public health. Preference will be given to applicants from the New York metropolitan area and for projects not supported by other major sources of research funds. Applications will be accepted *until 1 September*. (William C. Spring, Jr., Louis Livingston Seaman Fund, New York Academy of Medicine, 2 E. 103rd St., New York 29)

The National Science Foundation has announced that the next closing date for receipt of basic research proposals in the **life sciences** is *15 September*. Proposals received prior to that date will be reviewed at the fall meeting of the foundation's advisory panels, and disposition will be made in approximately 4 months. Proposals received after the closing date will be reviewed after the spring closing date of 15 January 1962. (Biological and Medical Sciences Division, National Science Foundation, Washington 25.)

Courses

A 2-week training course in **basic radiological health**, sponsored by the Public Health Service's Division of Radiological Health, will take place in Las Vegas, Nev., 11–22 September. The course will cover the basic nuclear physics necessary for a technical understanding of radiological problems in public health work, major sources of radiation exposure, modes of radiation injury, and units and terminology associated with this field. This course will also be given at the Radiological Health Laboratory, Rockville, Md., 23 October–3 November; at the Southeastern Radiological Health Laboratory, Montgomery, Ala., 4–15 December; and at the Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, 9–20 October.

In addition, a 1-week course on **engineering management of nuclear emergencies**, also offered by the Public Health Service, will be held at the Southwestern Radiological Health Laboratory, Las Vegas, Nev., 25–29 September. Major attention is devoted to potential sources and types of accidents, preplanning, first stage management and follow-up, and public relations. The advanced nature of this course requires prior training in basic radiological health. (Chief, Training Program, Robert A. Taft Sanitary Engineering Center, 4676 Columbia Parkway, Cincinnati 26, Ohio)

The Latin American School of Physics, offering courses in the general field of **low-energy nuclear physics**, will be held in Buenos Aires 3 July–4 August. This school is the third in a series designed to promote the interchange of ideas among Latin American physicists by providing annually a series of intensive courses related to recent research in various fields of physics. The following courses have been scheduled: direct reactions via single-particle modes; residual forces in single-particle models; the theory of nuclear matter; angular correlations of nuclear radiations; and nuclear instrumentation. In addition to the courses, seminars on problems of high-energy, molecular, and nuclear physics will be held. (Juan Jose Giambiagi, Department of Physics, University of Buenos Aires, Buenos Aires, Argentina)

New Journals

International Review of Tropical Medicine, vol. 1, Jan. 1961. D. R. Lincicome, Ed. Academic Press, 111 5th Ave., New York 3, N.Y. $10 per volume.

Space World, vol. 1, No. 7, Apr. 1961. O. O. Binder, Ed. Spaceways, Inc., 157 W. 57th St., New York 19, N.Y. Monthly, except Feb., May, and July. $0.50 per issue.

Science News, vol. 1, No. 1, Nov. 1960. L. Bertin and H. G. Hedges, Eds. Science Publications of Canada, 25 Hollinger Rd., Toronto 16. Eight issues. $1.50 per year.

Philippine Abstracts, vol. 1, No. 1, Apr. 1960. Division of Documentation, National Institute of Science and Technology, P.O. Box 774, Manila, Philippines. Quarterly. $2 per year.

The Gerontologist, vol. 1, No. 1, Mar. 1961. O. J. Kaplan, Ed. Gerontological Society, Inc., 600 S. Kingshighway Blvd., St. Louis 10, Mo. Quarterly. $5 per year.

Cuadernos de Psicologia, vol. 1, No. 3–4, July 1959–June 1960. L. Barrios, Ed. Escuela de Psicologiá, Universidad Central de Venezuela, Caracas.

The Amateur Scientist, vol. 1, No. 4, Fall 1960. N. M. Griggs, Ed. Science League, Box 1, Boyds, Md. Irregular. $2 per year.

DSH Abstracts, vol. 1, No. 3, Apr. 1961. J. D. Schein, Ed. Deafness Speech and Hearing Publications, American Speech and Hearing Association, 1001 Connecticut Ave. NW, Washington 6. Quarterly. $8 per year.

Japanese Periodicals Index, vol. 1, No. 4, Dec. 1960. Kinokuniya Bookstore Co., Ltd., 1–826 Tsunohazu, Shinjukuku, Tokyo, Japan. $30 per year.

Scientists in the News

Hans A. Bethe, nuclear and theoretical physicist and professor of physics at Cornell University, will receive the Atomic Energy Commission's Enrico Fermi award for 1961. The $50,000 award will be presented "for contributions to nuclear and theoretical physics, to peaceful uses of atomic energy, and to the security of the United States."

The following scientists have received the 1961 College Chemistry Teacher awards of the Manufacturing Chemists' Association.

Richard M. Badger, professor of chemistry, California Institute of Technology.

Samuel P. Massie, Jr., associate program director of advanced science education programs for the National Science Foundation and chairman of the chemistry department at Fisk University.

John R. Sampey, Jr., professor of chemistry, Furman University.

Ellis L. Krause, emeritus Erwin professor of chemistry, Marietta College.

Louis A. Pappenhage, professor of chemistry, Mount Union College.

R. Nelson Smith, professor of chemistry, Pomona College.

Gerhard Herzberg, director of the division of pure physics at the National Research Council of Canada, has been elected a corresponding member of the Société Royale des Sciences de Liège.

Three members of Harvard University's Faculty of Public Health will retire this summer: **Philip Drinker**, professor and head of the department of industrial hygiene; **Hugo Muench**, professor and head of the department of biostatistics; and **Donald L. Augustine**, professor of tropical public health.

Kenneth S. Pitzer, professor and former dean of the University of California's College of Chemistry (Berkeley), has been appointed president of Rice University. Pitzer is also chairman of the Atomic Energy Commission's General Advisory Committee and head of the chemistry section of the National Academy of Sciences.

Reinout P. Kroon, former aeronautical research engineer with the Westinghouse Electric Corporation, has been appointed George Westinghouse professor of mechanical engineering at the University of Pennsylvania. Kroon has been serving as visiting professor of mechanical engineering at the university's Towne School of Civil and Mechanical Engineering since last July.

John F. Dashiell, emeritus Kenan professor of psychology at the University of North Carolina, has been appointed distinguished lecturer in psychology at Florida State University, effective in September. During the current summer session he will serve as visiting professor of psychology at the University of Rochester.

Carlton S. Proctor has been reappointed to serve as Engineers Joint Council representative to the U.S. National Commission for UNESCO.

P. Edward Byerly, formerly with the U.S. Geological Survey, Washington, D.C., has joined the staff of the La Habra Laboratory, California Research Corporation, San Francisco, as a research geophysicist.

Kenneth F. Wertman, head of the University of Arizona's department of bacteriology and medical technology, will serve as visiting professor of microbiology at the University of Costa Rica this summer, under terms of a grant from the U.S. Department of State's educational exchange program.

Franz N. D. Kurie, retired technical director of the Navy Electronics Laboratory, San Diego, Calif., recently received the Navy's Distinguished Civilian Service award for the technical programs he initiated and fostered at the laboratory.

Earl H. Wood, physiologist at the Mayo Clinic, will become the American Heart Association's tenth career investigator on 1 July.

Paul A. Scherer, former executive officer of the Carnegie Institution of Washington and treasurer of the AAAS since 1954, has been appointed special consultant to the director of the National Science Foundation.

Norman H. Jasper, former head of the Ship's Dynamic Division at the Navy's David Taylor Model Basin, Carderock, Md., has been appointed superintending scientist of the Navy Mine Defense Laboratory, Panama City, Fla.

Saul D. Larks, assistant professor of biophysics at the University of California (Los Angeles), has been appointed professor of electrical engineering at Marquette University. His new duties will include the organization of a teaching and research program in bioelectric phenomena and biomedical engineering.

C. G. Hunter, former professor of physiological hygiene at the University of Toronto School of Hygiene, Toronto, Canada, has been appointed director of Shell Research's newly established Tunstall Laboratory in Kent, England.

David R. Mitchell has been named dean of the College of Mineral Industries at Pennsylvania State University. He will continue to serve as professor and chairman of the division of mineral engineering.

Roger E. Batzel, nuclear chemist and head of the chemistry division at the University of California's Lawrence Radiation Laboratory (Livermore), has been appointed associate director for chemistry at the laboratory.

Arnold L. Demain, currently with the Merck Sharp & Dohme Research Laboratories and president of the New Jersey branch of the American Society for Microbiology, has been appointed director of the summer microbiology program for secondary school students at the University of California (Davis).

G. Böhnecke has retired after 15 years as president of the Deutsches Hydrographisches Institut, Hamburg. He will continue to serve as secretary of the Special Committee on Oceanographic Research of the International Council of Scientific Unions.

Martin Block, associate professor of physics at Duke University, has been appointed chairman of Northwestern University's department of physics.

Ernest C. Herrmann, Jr., former head of Schering Corporation's virus and tissue-culture laboratory, has been appointed virologist at the Mayo Clinic, Rochester, Minn., in the section of microbiology.

Wilbur H. Goss, assistant director for technical evaluation at Johns Hopkins University's Applied Physics Laboratory, has received the Navy Distinguished Public Service award for his work on long-range supersonic antiaircraft missiles.

Benedict E. Abreu, presently with the clinical research department of Pitman-Moore Company, Indianapolis, Ind., has been appointed professor and chairman of the department of pharmacology, University of Texas School of Medicine, Galveston.

Joseph L. Gillson, retired chief geologist for the DuPont Company, has been named William Otis Crosby lecturer in geology at Massachusetts Institute of Technology for the Academic year 1961–62.

Stanley J. Sarnoff, chief of the National Heart Institute's laboratory of cardiovascular physiology, has received the 1961 Malcolm Rogers memorial award "for excellence in the field of cardiovascular disease."

Recent Deaths

Carl Gustav Jung, 85; founder of the the Jungian school of psychoanalysis; 6 June.

Frederick V. Rand, 78; editor-in-chief of *Botanical Abstracts* in the early 1930's; botany and plant pathology specialist with the U.S. Department of Agriculture from 1935 until his retirement in 1949; 6 June.

Wilber Stout, 84; retired state geologist of Ohio Division of Geological Survey; 20 May.

Robert E. Swain, 86; emeritus professor of chemistry at Stanford University and acting president of the university 1929–33; 31 May.

Erratum: The short course in medical genetics described in the announcement at the bottom of column 2, page 632, in the 3 March issue, is supported by the National Foundation rather than the National Science Foundation.