

primary or booster shots *during* the polio season.

2) Use all available vaccine immediately. Do not save it for "second shots," even though a sterilely punctured vial of vaccine can be kept under refrigeration for an indefinite length of time without impairing either the safety or the potency of the vaccine.

3) The increasing supply of vaccine should be depended on for second injections in 1956. The exact interval recommended between the first and second doses is not critical, so long as it is not less than 2 weeks. In fact, longer intervals seem to be advantageous. Therefore, the second dose may be given at any time without losing the benefit of the first.

4) The third dose should be given not less than 7 months after the second but may be given at any length of time thereafter.

On 13 Mar. the Surgeon General of the U.S. Public Health Service issued a statement endorsing the postponement of "booster shots" as a temporary measure "to enable more children to receive first or second doses and thus extend protection to more before this summer's poliomyelitis season."

On the basis of reports from manufacturers and the Surgeon General of the U.S. Public Health Service concerning estimated vaccine production, there is reason to believe that an adequate supply should be available for distribution before the seasonal advent of poliomyelitis in different regions of the United States. How much of this will get into the hands of private physicians is variable, depending on decisions of state and local health authorities and their advisory committees.

If the expected supply becomes available, it should be about enough to provide a high degree of protection against paralytic poliomyelitis before the 1956 polio season to all children in the most susceptible age groups (6 months through 14 years) and pregnant women who request it. In round numbers, there are approximately 50 million individuals in these categories. At least 10, and probably 15, million children have already received one or more injections of Salk vaccine. This leaves about 35 million children to be vaccinated on an emergency basis before the 1956 polio season.

Granting rapid and equitable distribution and no unexpected delays in processing and releasing vaccine (which requires a minimum of 120 days), there should be just about enough vaccine to give at least one, and usually two, injections each to 35 million people.

The ideal dosage schedule currently recommended is: Two 1-cubic centimeter injections, spaced 2 to 6 weeks apart, with a third 1-cubic centimeter

booster injection given not earlier than 7 months later. Ideally, the first two injections should be given immediately after the previous polio season, in the late fall, with the booster injection being administered just before the subsequent polio season. It is easy to see that this is a schedule impossible to follow under the emergency conditions of 1956.

In the future, vaccination against paralytic poliomyelitis, undoubtedly, will become a standard pediatric procedure, with a schedule of injections beginning at 6 to 9 months of age. But realistic consideration of the current situation shows that the effectiveness of the vaccine depends on the mass of antigen administered and the number and spacing of inoculations.

Plans for Atomic Power

The plans of the Soviet Union, the United Kingdom, and the United States for the production of electric power from nuclear energy have been outlined in general at a meeting in Bangalore, India, of the Electric Power Subcommittee of the United Nations Economic Commission for Asia and the Far East.

Frank Maddocks of the United Kingdom pointed out that the development of atomic energy is vital to his country, for coal is getting scarce and expensive. Britain must, therefore, embark on an ambitious atomic energy program as a practical proposition. Maddocks said that a prototype generating station in the north of England is nearing completion and will begin supplying electric power toward the end of this year. Twelve stations to be built over the next 10 years, of which two will be built next year and two more the following year, should supply a total of some 2 million kilowatts, he said. The four stations being built over the next 2 years should, by 1963, add between 400,000 to 800,000 kilowatts to the national grid.

The experience of the United Kingdom, Maddocks went on, would be made available to other countries. In this connection, he remarked that arrangements for training had already been made with India and Pakistan through the Colombo Plan. He added that the United Kingdom would be short of nuclear fuel for the next 5 years.

Speaking for the United States, Samuel F. Neville said that atomic power plants with a total estimated capacity of 750,000 kilowatts are under construction or being designed, including a fast breeder reactor of 100,000 kilowatts near Detroit, Mich. In the United States program, said Neville, atomic energy production must compete with power from conventional fuels. It is not expected

that such a stage will be reached before the second or third generation of reactors come into operation.

He pointed out that the United States has an installed electric power capacity of 115 million kilowatts and that it is estimated that, by 1975, it will need an installed capacity of from 360 million to 420 million kilowatts. By that time, he said, it is expected that atomic energy will supply some 40 million to 50 million kilowatts.

Nikolai M. Chuprakov, of the Soviet Union, said that the first atomic power station in the world using uranium had been operating in the U.S.S.R. since 1954, and that his Government is building 2000-kilowatt experimental atomic reactors to be used for training in Poland, Czechoslovakia, Rumania, Hungary, Bulgaria, and East Germany, and a 6500-kilowatt reactor for the Chinese People's Republic. Chuprakov remarked that the U.S.S.R. charges nothing for giving its experience, requiring payment only for the cost of the equipment it supplies.

News Briefs

■ The \$20-million suit for patent infringement that was filed in 1954 by Mary Marcus against Selman A. Waksman, the Rutgers Research and Endowment Foundation, and Merck and Company [*Science* 120, 966 (10 Dec. 1954); 121, 11 (7 Jan. 1955)] was dismissed on 26 Mar. by Federal Judge Thomas F. Meaney of the New Jersey District Court. He commented that

"It seems to me that Miss Marcus has consistently evaded all the processes of this court and has completely failed to give a satisfactory reason why she has not appeared for a deposition. She has been acting in bad faith throughout the case."

■ On 28 Apr. the Harvard Observatory Council is inviting the eastern astronomers and radio astronomers, and some friends of Harvard Observatory and the 21cm Project, to participate in ceremonies for the dedication of a new 60-foot steerable radio telescope and the associated electronic equipment at the G. R. Agassiz Station near Harvard, Mass. However, the equipment is not expected to be in full operation until 6 weeks after the dedication.

Participants in the program for the day are as follows: Bart J. Bok of Harvard University; Robert J. Grenzback of D. S. Kennedy and Company, Cohasset, Mass., builders of the new radio telescope; Harold I. Ewen, codirector of the 21cm Project at Agassiz Station and builder of the electronic unit; Donald H. Menzel of Harvard University; Alan T. Waterman, director of the National Sci-

ence Foundation; Edward M. Purcell of Harvard University; David S. Heesch, the present G. R. Agassiz radio astronomer; and A. Edward Lilley of the Naval Research Laboratory.

■ A map of the heavens as they appear from radio waves rather than light has been made at Ohio State University. H. C. Ko described the chart, which records 70 percent of the sky, at the recent meeting of the American Astronomical Society. The map shows the distribution of radio waves of 250 megacycles from the celestial sphere visible at Columbus, Ohio.

■ The 16 faculty members dismissed by the University of California for refusal to sign a loyalty oath in 1950 will be given a total of \$162,000 in back pay. Individual payments will range from \$2050 to \$23,116. Following a January 1953 ruling of the California Supreme Court that the oath was illegal, the 16 were returned to their jobs.

■ A "united institute of nuclear research" will be established in the Soviet Union to provide a coordinated atomic and thermonuclear research program for Communist countries. The U.S.S.R. announced plans for the institute on 26 Mar.

The announcement said the Soviet Union will turn over to the new organization its Institute of Nuclear Research, including its laboratory of electrophysics and a 680-mev synchrotron. Plans also were announced for construction of a new cyclotron, a laboratory of neutron physics, and a laboratory of theoretical physics.

The countries that signed the cooperative agreement are the People's Republic of China, Bulgaria, Hungary, North Korea, Mongolia, Poland, Romania, Czechoslovakia, and East Germany. North Vietnam has been invited to join the institute.

Scientists in the News

Viking Fund medals and an award of \$1000 each were presented to three men at the annual award dinner of the Wenner-Gren Foundation for Anthropological Research in New York on 2 Mar. The recipients were as follows:

A. IRVING HALLOWELL, professor of anthropology and curator of social anthropology in the Museum of the University of Pennsylvania. The citation read, in part, "From an early start in social work he turned to anthropology as a formal discipline, developing an exemplary breadth of interest. This is reflected in the more than sixty papers and monographs he has authored which range with

facility through prehistory, physical anthropology, ethnography, ethnology, personality and culture. . . .

"Hallowell is the leading scholar today in the study of personality and culture. Scheduled to appear this spring is a book by him entitled *Culture and Experience*. This book is in part a collection of brief papers to which new material has been added so as to make it a presentation of his most important ideas within a consistent over-all framework, including his latest contributions to a theory of culture and its relationship to psychological functioning. . . ."

WILFRID E. LE GROS CLARK, professor of anatomy at the University of Oxford. The citation read, "This choice is based on his long and distinguished series of contributions to primatology and human paleontology, running from earlier works as, *Early Forerunners of Man* to his numerous recent studies of Proconsul, Limnopithecus, and the Australopithecinae, and including his widely read and useful *British Museum Handbook: History of the Primates*, and his *Fossil Evidence for Human Evolution*. . . ."

J. ERIC THOMPSON, department of archeology, Carnegie Institution of Washington. The citation read, "J. Eric Thompson is today the outstanding man in Maya ethnology and archeology. He has published many technical and several popular books on the Maya and Aztec. His most recent book is the *Civilization of the Maya*. . . . His archeological researches in British Honduras, Yucatan, and his current work on the Maya calendar system are outstanding. He is a field man of wide experience and a scholar of deep perception and knowledge. His work continues fruitful today as it has been in the past."

GEORGE THOMSON, Corpus Christi College, University of Cambridge, Cambridge, England, will speak at the University of Maryland on 19 Apr. His talk on "The impact of science on modern life: the new industrial revolution" is one of a series of centennial lectures in physics. Other lecturers from abroad in the series have been WALTER E. THIRRING, of the University of Bern, Bern, Switzerland, "Consistency of quantum field theory," and L. LEPRINCE-RINGUST of the Ecole Polytechnique and the University of Paris, Paris, France, "Investigations of heavy mesons and hyperons."

JOHN LEAR is science editor for the new section on science and research that the *Saturday Review of Literature* began in its 24 Mar. issue (see editorial in *Science*, 6 Apr.). Lear has been an associate editor of *Collier's* magazine specializing in science, science feature writer for the Associated Press, and free-lance

writer on science for leading national magazines. He has received a number of major awards for distinguished journalism in the field of science, including the AAAS-Westinghouse award in 1951.

PAUL ROSENBERG, president of Paul Rosenberg Associates, consulting physicists, Mount Vernon, N.Y., received the Talbert Abrams award of the American Society of Photogrammetry at the society's annual meeting in Washington, D.C., on 22 Mar.

FRITZ LIPMANN, Nobel prize winner and professor of biochemistry at Harvard University, will be guest lecturer on 7 May at the dedication of the Ireland Research Laboratory, University of North Dakota Medical School.

LOUIS RODDIS, deputy director of the Atomic Energy Commission's Division of Reactor Development, and JOHN LAWRENCE, director of the Donner Laboratory, University of California, Berkeley, are visiting Thailand and Pakistan, and Roddis will visit Turkey, as consultants in connection with the development of atomic energy programs in these countries.

RAYMOND STEVENS, president of Arthur D. Little, Inc., Cambridge, Mass., will receive the gold medal of the American Institute of Chemists at its annual meeting in Boston, 10-11 May, for his "contributions to the wider understanding of essential procedures for the management and operation of industrial research."

GEORGE P. CRESSMAN of the USAF Air Weather Service has received the highest Air Force civilian honor, the decoration for exceptional civilian service for outstanding accomplishment in weather analysis and forecasting. Cressman is director of the Joint Numerical Weather Prediction Unit at Suitland, Md., a facility operated jointly by the Air Force, Navy, and Weather Bureau.

HARVEY M. MERKER, widely known speaker on medical and pharmaceutical subjects and director of scientific relations for Parke, Davis and Company, retired on 29 Feb. after nearly 50 years of service. He joined the firm as a part-time laborer in 1907 while he was still a student.

In 1919 he was promoted to superintendent of manufacturing at the company's Walkerville, Ont., plant, and in 1929 he was named superintendent of manufacturing in Detroit, a post he held for 24 years. Merker became director of inventory control in 1953, and 2 years later was appointed director of scientific relations.