News and Notes

International Geophysical Year Program

A major international geophysical research program, involving cooperation among more than 28 nations, is currently being planned for 1957 and 1958. The United States program, being prepared by a national committee appointed by the National Academy of Sciences–National Research Council, envisions a series of intensive observations and measurements in the principal fields of geophysics.

The compelling reason for a world-wide program in geophysics is the global nature of geophysical phenomena. Many of the major problems in geophysics require the simultaneous observation of phenomena in many parts of the world, and this need for synoptic data constitutes the fundamental criterion in the determination of the IGY program.

The importance of geophysical data in synoptic form, representative of a large region, was recognized in the last century in the conduct of the First Polar Year in 1882–83, when meteorological, magnetic, and auroral stations were established in the Arctic regions. This early exploration of geophysical phenomena produced significant results: in particular, it led to a considerable clarification of knowledge of geomagnetism and to the first orderly representation by Fritz of the geographic location of the auroral regions.

A second international Polar Year was held in 1932–33, 50 yr later, and ionospheric observations were included in the program. Perhaps the most important contribution of this endeavor was the knowledge of the ionosphere, obtained by utilizing the radio sounding techniques developed by Breit and Tuve a few years before, which greatly advanced the science of radio communications.

The proposed international effort for 1957–58 surpasses in scope, intensity, and geographic coverage these earlier efforts, which were largely limited to the north polar regions. Areas throughout the world will be included in the program—the Arctic and Antarctic regions as well as the major land and sea masses of the earth. In keeping with the increased activity and interest in geophysics, the magnitude of effort to be devoted to each of the fields under study will be appreciably greater, and the number of fields, in contrast to the three or four in the past, will be ten: solar activity, longitude and latitude determinations, glaciology, oceanography, meteorology, geomagnetism, aurora and airglow, ionospheric physics, cosmic rays, and upper atmosphere rocket studies.

The proposal that 1957–58 be the time for this major international effort was based in part upon the fact that this period corresponds with a period of maximum solar activity. It was based in part also upon the fact that advances in various fields of science, including instrumentation, suggest that significant advances might well be achieved through a properly integrated international activity. More than 28 nations have already indicated that they intend to participate, and American scientists, under the sponsorship of the National Academy of Sciences–National Research Council, have prepared a tentative program for the United States.

International coordination of the program is under the direction of the Special Committee for the International Geophysical Year established by the International Council of Scientific Unions. Sydney Chapman of Great Britain is chairman of this committee, L. V. Berkner of the United States is vice chairman, and M. Nicolet of Belgium is secretary general. The U.S. National Committee for the IGY, charged with responsibility for the preparation of the American program, was established, in response to a request from ICSU, by the National Academy of Sciences–National Research Council, which is the adhering body of the United States to ICSU and the various scientific unions. The membership of the U.S. National Committee includes: chairman, Joseph Kaplan, University of California; vice chairman, A. H. Shapley, National Bureau of Standards; recording secretary, N. C. Gerson, Air Force Cambridge Research Center; and L. H. Adams, H. G. Booker, Lyman J. Briggs, G. M. Clemence, C. T. Elvey, J. A. Fleming, L. M. Gould, F. W. Reichelderfer, E. B. Roberts, P. A. Siple, A. F. Spilhaus, M. A. Tuve, and A. L. Washburn. Ex-officio members are W. W. Atwood, Jr., L. V. Berkner, and William W. Rubey. H. K. Stephenson has been designated liaison representative to the Committee by the National Science Foundation. The National Academy of Sciences has appointed Hugh Odishaw, former assistant to the director of the National Bureau of Standards, as administrative secretary of the Committee.

The preparation of the U.S. program has been assigned by the U.S. National Committee to a coordinating group of reporters, each responsible for a particular aspect of the program: *world days,* A. H. Shapley, National Bureau of Standards; *meteorology,* Harry Wexler, Weather Bureau; *geomagnetism,* E. B. Roberts, Coast and Geodetic Survey; *aurora and airglow,* C. T. Elvey, Geophysical Institute, Alaska; *cosmic rays,* S. A. Korff, New York University; *solar activity,* S. B. Nicholson, Mount Wilson Observatory; *ionospheric physics,* H. G. Booker, Cornell University; *longitude and latitude,* G. M. Clemence, Naval Observatory; *glaciology,* W. O. Field, American Geographical Society; *oceanography,* E. H. Smith, Woods Hole Oceanographic Institution; and *rocketry,* J. A. Van Allen, Princeton University. The reporters are being aided in these preparations by a broad representation of scientists in fields appropriate to IGY. The Committee invites suggestions and participation by scientists of the nation. Communications may be addressed to the U.S. National Committee, International Geophysical Year, National Academy of Sciences, 2101 Constitution Ave. NW, Washington 25, D.C.

Annual Meeting of the AAPT

THE 23rd annual meeting of the American Association of Physics Teachers was held at Columbia University, Jan. 28–30, concurrently with the annual meeting of the American Physical Society. The combined meeting exhibited the property of induced radioactivity: just as the attempt to combine an excessive number of particles in a single nucleus results in the expulsion of one of them, so the attempt to place too many sessions on the Columbia campus caused one session to be expelled. In this case, it was the Friday morning AAPT session, which came to rest on the campus of the City College of New York.

The excited state of Columbia, owing to the bicentennial celebration going on, brought an untraditional aspect to this meeting; not one of the AAPT sessions could be held in a regular physics lecture room. It has already been announced that Columbia will not again be host to the APS meetings. This fact provides a vivid example of the growth of the sciences in the last 25 years. I recall my first visit to Columbia's campus, in 1928, when the University was able to be host to the entire AAAS. Now it cannot find space for a single major science.

The AAPT program was composed, in roughly equal parts, of short contributed papers, of panel discussions, and of invited papers. Prominent on the program, almost constituting a theme of the meeting, were audio-visual aids. On this subject, the Association has a continuing committee, which presented five new films recently made under its sponsorship by the McGraw-Hill Book Company. These covered such topics as wave motion and atomic energy. Also in line with the audio-visual theme was a 1-hour demonstration of the steps in the development of color television by a representative of RCA.

It is of interest that every scheduled talk, long or short, was recorded on tape. One purpose for this is to allow the smaller regional meetings to supplement their local programs with portions from the annual meeting.

The panel discussions were designed to explore some matters that are regarded as controversial. One subject for discussion was "The place of the physics department of engineering education." Another panel dealt with "Research subsidies and college teaching," with special reference to small colleges without present subsidized programs. Possibly most significant was a panel discussion that considered the present and future path of the Association itself and, in particular, of its organ, the *American Journal of Physics*.

One of the traditions of the joint annual meeting with the APS is a session at which the Association awards the Oersted medal, given this year to C. N. Wall, of the University of Minnesota, and listens to the annual Richtmyer Memorial lecture, in this instance delivered by John A. Wheeler, of Princeton University, on the subject, "Fields and particles."

The short contributed papers are the backbone of any AAPT program. Three that evoked considerable interest may be mentioned without prejudice against the others. One included the demonstration of a model of the scattering of alpha particles by thin foil; another was a report on college physics laboratory work in English universities; the other was a motion picture of the formation of tracks in a cloud chamber, which enables an entire class to observe the phenomenon simultaneously.

New officers for 1954 are president, Marsh White, Pennsylvania State University; president-elect, Ronald Palmer, Beloit College. The summer meeting will be held at the University of Minnesota, June 28–30.

ROBERT S. SHAW

The City College, New York

Science News

Alan T. Waterman, director of the National Science Foundation, has stated that the Executive Order signed by President Eisenhower on Mar. 17 [*Science* 119, 431 (Apr. 2, 1954)] will be valuable to the National Science Foundation and other federal agencies concerned with scientific research and development in that it defines their respective areas of individual responsibilities, as well as those which require cooperative action, and establishes certain mechanisms for implementing the National Science Foundation Act of 1950. Regarding the relative responsibilities of the Foundation and other Federal agencies in the support of basic research, Dr. Waterman pointed out that the order confirms the position taken earlier by the Foundation in its *Third Annual Report*. His statement follows:

> It has been the stated policy of the Executive branch of the Government to increase the responsibility of the National Science Foundation for Federal support of basic research. At the same time it is desirable for other agencies to support basic research closely related to the solution of problems for which they have statutory responsibility. . . .
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> The effort to centralize support of basic research in the Foundation is desirable from the standpoint of logical administration of Federal research support, but it will clearly work against the best interests of science in the United States unless the Foundation together with the other research agencies can provide adequate support for basic research in order to balance support given to applied research and development. . . .
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> The Foundation is in full accord with the view that other agencies should carry on basic research programs directly related to their operating functions. There are two principal factors in support of this position. First, there is the need of an operating agency for an assured and continuing direct flow of fundamental knowledge relating to its practical problems. Second, in view of the increasing dependence of these agencies upon scientific and technical developments, it is essential that the operating personnel maintain effective contact with the scientists of the country. Conversely, it is to the advantage of the country that scientists be encouraged to be interested in fields of great potential importance to national defense and welfare. Support of basic research in areas of immediate interest to the agency provides opportunity to maintain this two-way exchange on a healthy basis.

The order makes clear that in the area of developmental work each agency is expected to take responsibility for planning and conducting its own program in an effective and economical manner consistent with its operating mission.

Science has received from David W. Bailey, secretary to the Corporation of Harvard University, a communication which points out that the reproduction in *Science* of portions of a letter regarding administration of the **Arnold Arboretum** [*Science* **119,** 369 (Mar. 19, 1954)] "presents only one side of a controversy which for the past eight years has been the subject of conscientious, deliberate, and scholarly consideration and which has been brought to decision only after painstaking review and unanimous approval of both Harvard Corporation and Board of Overseers." Mr. Bailey asked that appropriate steps be taken to correct the partial and erroneous impression left with readers. *Science* gladly complies with this request for the presentation of both sides of the question. The succeeding excerpts are drawn from a lengthy and comprehensive statement, signed by the President and Fellows of Harvard University, that appeared in the *Harvard Alumni Bulletin* for Dec. 12, 1953.

We understand from Mr. Grenville Clark '03, a member of the Corporation from 1931 to 1950, that he has written a letter to the *Bulletin* setting forth his views on certain aspects of our administration of the Arnold Arboretum. We think that the alumni and other friends of Harvard are entitled . . . to know the history of the controversy over the Arboretum and our views on the questions involved. . . .

Early this year, Mr. Clark and a few others, acting through counsel, formally applied to the Attorney General of the Commonwealth of Massachusetts for permission to commence a proceeding in the name of the Attorney General to question our administration of the Arnold Arboretum, with particular reference to the validity of the removal of part of the library and herbarium of the Arboretum from Jamaica Plain to the new central building for botany in Cambridge. . . . After investigation, the Attorney General handed down an opinion, dated July 2, 1953, which closed with these words:

"There is not the remotest evidence here that Harvard has reached its decision in any manner other than honestly, faithfully and for what it considers to be the best interests of the Arboretum.

"There is no legal breach of trust. To permit the use of the name of the Attorney General in cases like the present, where it is clear to him the trustee is acting in good faith and within the bounds of reasonable judgment and sound discretion, simply because others, equally in good faith, differ with the decision of the trustee, would open the door to unreasonable and vexatious litigations. Accordingly, by direction of the Attorney General, the application is denied." . . .

On January 19, 1953, we adopted a resolution stating the policy of the Corporation regarding the administration of the Arnold Arboretum and the use of its endowment. The resolution provides for the removal of part of the Arboretum library and herbarium to the new central building in Cambridge which is being built entirely from unrestricted University funds. This move, by bringing together the principal collections in the University of research materials in botany, other than living collections, will greatly facilitate the work of scholars and students interested in the field in which the Arboretum carries on its important activities. A working collection of books and specimens will be retained at Jamaica Plain for use in connection with the living collections there. This decision has now become the principal issue in a controversy which had its beginning in 1945. The point at issue in no way involves the maintenance and continuation of the collections of living trees and shrubs of the Arboretum in Jamaica Plain. The primary issue now is whether certain books and dried specimens may be moved to Cambridge, or must be retained at Jamaica Plain.

Our resolution of last January was adopted more than seven years after the distribution among the Faculty, in June 1945, of Professor Irving W. Bailey's Plan for the coordination of activities in the field of botany and just seven years after the approval of the Plan the following January by the Department of Biology. It was adopted some two and one-half years after we had voted, in June 1950, to lay aside further consideration of the proposed central building so that the views of the Committee to Visit the Arnold Arboretum might be heard. . . .

Mr. Clark has criticized us for not having sought the instructions of a court as to our duty. We think that this criticism is wholly unjustified. We understand that as a matter of law instructions will be granted in Massachusetts only where the trustee has "real and serious doubts as to his duty." We have had no such doubts as to our duty in respect of the matters covered by our resolution of January 19, 1953. . . .

Mr. Clark has said that our position as one of the governing boards of the University as well as trustee of the Arboretum endowment prevents us from making a decision fair to the Arboretum on matters affecting both the University and the Arboretum. This seems to us manifestly unsound. When the trustees under the will of James Arnold selected the Corporation to carry out Arnold's broad charitable intent, they knew that the Corporation was already administering other endowment funds for closely related purposes in the fields of botany and horticulture. . . . We think it is clear that the donors of the Arboretum endowment intended that we should decide such questions as the question how the library and herbarium can best accomplish the purposes for which they were created.

Mr. Clark has also charged that we have acted improperly in defending before the Attorney General our decision to move part of the library and herbarium to Cambridge. . . . It was not our purpose, in putting the facts known to us before the Attorney General, to "shut off any judicial hearing whatever," as Mr. Clark has asserted. Our purpose was rather to make certain that the Attorney General, whose decision (as Mr. Clark recognized in applying to him) is necessary to a proceeding against the trustee, might have the benefit of hearing both sides of the controversy before exercising his discretion to take or decline to take that extreme step. We understand that the Assistant Attorney General made a most careful and thorough study of the question before reporting it to the Attorney General for final decision, . . . [and] in accordance with procedure established by law for just such a case as this, the impartial public officer entrusted by law with sole responsibility for such matters has determined that there is no breach of trust, and that we have acted in good faith and within the bounds of reasonable judgment and sound discretion.

The production and chemical identification of **element 100** has been reported by a group engaged in research for the Atomic Energy Commission in the University of California Radiation Laboratory. The work was reported by Bernard G. Harvey, Stanley G. Thompson, Albert Ghiorso and Gregory R. Choppin in the Mar. 1 issue of the *Physical Review*. However, the investigators state that owing to the existence of unpublished information on element 100 the question of its first preparation should not be prejudged on the basis of the present announcement.

The element was produced by a unique method of "fattening" up plutonium atoms with neutrons. In a two-stage process, a total of 15 neutrons was added to plutonium, which resulted in atoms of the element of atomic number 100 and mass number 254. The new element has no value for the production of nuclear weapons or nuclear power. It has a half-life of about 3 hr and decays by the emission of alpha particles of roughly 7.2 Mev. It is chemically analogous to erbium, element 68, a rare earth.

The most comprehensive study of a **solar eclipse** in history will take place on June 30 when scientists of the Air Force Cambridge Research Center and cooperating agencies study the first eclipse since 1947 spanning two continents. In a brief period of 2¾ hr, while the shadow of the moon races at 3000 mi/hr from Nebraska to Pakistan, experts will work at observation sites, some in extremely remote sections of the world. A year has been spent in making plans to view the eclipse because there will not be another total eclipse that spans North America and Europe until the year 2151. Three different methods of measuring long distances—Bonsdorff, Lindblad, and Gaviola—will be used. All are expected to give much more precise knowledge of the actual distance between points in the United States and Europe.

The eclipse path will start in Nebraska at sunrise, and proceed through eastern Canada, Labrador, southern Greenland, Iceland, the Faeroes and Shetland Islands, southern Norway and Sweden, Russia, Iran, Afghanistan, and Pakistan to its ending at sunset in northern India. Along this path will be four major sites and eight minor sites, the latter on the edges of the 80-mi wide shadow. American scientists will be responsible for observations at all places except the Scandinavian countries. In Norway and Sweden only a few U.S. observers will be present, and actual operations will be conducted by Finnish and Swedish scientists.

W. A. Heiskanen, director of Ohio State University's Institute of Geodesy, Photogrammetry and Cartography, will supervise the Bonsdorff and Lindblad methods. He will be assisted by T. J. Kukkamaki, Finnish geodesist, and J. Allen Hynek, professor of astronomy at the Ohio State University. Dr. Kukkamaki will be in charge of work at a position in Greenland, and Dr. Hynek will head the Ohio State party that goes to Iran. From Georgetown University, Francis J. Heyden, S.J., will conduct work with the Gaviola observations method, which he used on an eclipse expedition in Africa in 1952; in addition, he will have over-all charge of the eclipse station in Iran.

The three methods of observation will be employed simultaneously for the first time at four major sites: James Bay, Ont.; Knob Lake, Que.; the Okak Islands, off northeast Labrador; and Iran. The Bonsdorff method directly photographs crescents of the sun as the moon passes between it and the earth; the Lindblad method, also employing photography, shows the flash or reversed spectrum as the moon passes; the Gaviola method measures the decreasing light intensity as the moon shuts out the sun. It is felt that a true comparison of the relative accuracy of the three techniques will result from the June 30 studies.

A **supersonic hypodermic device** capable of penetrating 4 in. of tissue by hurling a tiny liquid column through the air at 1.75 times the speed of sound, has been developed by Benedict Cassen, Brian Dunne, Jr., and Herbert Gass at the Atomic Energy Project on the Los Angeles campus of the University of California. Liquid in a steel chamber is propelled through a 0.005-in. nozzle by the explosive action of a small wafer. The wafer is made from nitrosoguanidine, a heat-sensitive chemical, and is detonated by a small soldering iron in the device.

The most powerful particle accelerator yet built, the **University of California bevatron,** has gone into operation. The machine has accelerated protons to an energy of 5 Bev, the highest energy ever achieved by an accelerator. The $9,000,000 machine functioned successfully approximately 6 yr after its design first was conceived and 4 yr after construction began. It was built with AEC funds.

Recently President Eisenhower commended the **U.S. Geological Survey** for its scientific achievements and for the contributions it has made to the economic and cultural development of the nation. William E. Wrather, director of the Survey, accompanied by Secretary of the Interior Douglas McKay and Assistant Secretary Felix Wormser, was received at the White House by the President on the occasion of the Survey's beginning its 76th year.

Scientists in the News

Lyman Briggs, physicist and director emeritus of the National Bureau of Standards, has received the Merit Award of the American Society of Sanitary Engineering for "his contribution toward the advancement of sanitation" in directing the basic research on plumbing systems conducted by the Nationl Bureau of Standards.

William Brown, professor emeritus of plant pathology at the Imperial College of Science and Technology, University of London, is at present visiting

professor of plant pathology at Cornell University. He is teaching an advanced course on the physiology of parasitism in plants. Prof. Brown will return to Great Britain early in June. He will preside at the jubilee celebration of the Association of Applied Biologists in September.

The first faculty appointment for the new Albert Einstein College of Medicine in the Bronx, New York City, has been announced. **Leo M. Davidoff,** director of neurological surgery at Beth Israel Hospital (NYC) and neurosurgeon at Mount Sinai Hospital, has been named professor and chairman of the Department of Surgery at the college and director of surgery at the Bronx Municipal Hospital Center.

M. Edward Davis, a member of the University of Chicago Lying-in Hospital medical staff for the past 29 yr, has been named chief of staff. He succeeds **William J. Dieckmann,** chairman of the Department of Obstetrics and Gynecology. Dr. Dieckmann resigned his administrative post, which he has held for 12 yr, to devote full time to clinical activities and research as the Mary Campau Ryerson professor of obstetrics and gynecology.

Victor A. Drill, formerly professor of pharmacology at Wayne University of Medicine, has assumed the position of director of biological research for G. D. Searle & Co., Chicago.

Rolland F. Feldkamp, formerly director of basic research at the Smith-Dorsey Division of the Wander Company in Lincoln, Neb., has been appointed director of pharmaceutical development at Mead Johnson & Company in Evansville, Ind.

Victor M. Ganzer has been appointed executive officer of the Department of Aeronautical Engineering, University of Washington. He has been the acting head of the department during the past year following the resignation of **Fred Eastman** because of ill health.

Charles W. Goff, orthopedic surgeon of Hartford, Conn., has been appointed visiting professor of physical anthropology at the Hartford Seminary Foundation.

George T. Harrell, until recently research professor of medicine at the Bowman Gray School of Medicine, Wake Forest College, has assumed the duties of dean of the College of Medicine for the newly created University of Florida Health Center. A new building is soon to go up on the Florida campus, and the College of Medicine will be opened to the first 50 students in 1955.

Wm. Hugh Headlee, professor of parasitic diseases at the Indiana University School of Medicine and Medical Center, Indianapolis, is on leave of absence while he serves in Bangkok as medical parasitologist for the Foreign Operations Administration's Special Technical and Economic Mission to Thailand. Dr. Headlee's work is particularly concerned with the control of intestinal parasitic diseases, and with the teaching of parasitology in the two schools of medicine and the school of public health in Bangkok.

Peter King, formerly head of the High Polymer Branch of the Chemistry Division at the Naval Research Laboratory, Washington, D.C., has been named superintendent of the NRL Chemistry Division.

Tellis A. Martin, formerly with the Central Research Laboratories of General Analine and Film Corporation, has recently joined the Mead Johnson Research Laboratories, Evansville, Ind., as a senior research chemist in the Division of Organic Chemistry.

John Hugh Mulholland, George David Stewart professor of surgery in the College of Medicine of New York University-Bellevue Medical Center, has been appointed chairman, for a 3-yr period, of the Surgery Study Section of the Division of Research Grants of the National Institutes of Health, U.S. Public Health Service. Dr. Mulholland has been a member of the Section since Jan. 1, 1952. He is also chairman of the College of Medicine's Department of Surgery and chairman of the Cancer Institute of New York University-Bellevue Medical Center.

Herman R. Sweet, associate professor of biology at Tufts College, has been appointed assistant editor of the American Orchid Society's *Bulletin.*

Albert Szent-Gyorgyi, biochemist, director of the Institute for Muscle Research at Woods Hole, Mass., and 1937 Nobel Prize winner, has won the 1954 Albert Lasker Award of the American Heart Association. He received the $1000-prize for his "distinguished research achievements in the field of cardiovascular diseases which have led to new understanding of the basic physiology of the heart."

I. Barry Tarshis, formerly parasitologist for the Bureau of Animal Industry, U.S.D.A., at the Georgia Experiment Station, Experiment, Ga., has been made deputy chief, Transmission Section, Allied Sciences Division, Camp Detrick, Frederick, Md.

Oleg Yadoff, research professor at Manhattan College and Columbia University, has been appointed president and scientific director of the Applied Physics Research Foundation, Palo Alto, Calif.

Education

Steps to enable Cornell University's expanding "crash-injury" projects to work more effectively in the interest of the transportation industry and the travelling public have been announced. The crash-injury program aims to reduce death and injury from

transportation accidents through studies of crash survival. It is supported by industry, govenment agencies, and the military services. As a result of recent organizational changes, the **aviation section of Crash Injury Research** has become a division of the Cornell-Guggenheim Aviation Safety Center and has moved from the Cornell Medical College to the Center's quarters at 471 Park Ave., New York City.

The annual **Cornell Summer Laboratory Course in Techniques and Applications of the Electron Microscope** will be given, June 14–26, by the Laboratory of Electron Microscopy in the Department of Engineering Physics. Under the direction of Benjamin M. Siegel, it will have James Hillier of Melpar, Inc., Alexandria, Va., and C. E. Hall of the Massachusetts Institute of Technology as guest lecturers. The course is designed for those research workers, institutional and industrial, who have recently entered the field of electron microscopy or who are now planning to undertake problems involving application of this instrument. Inquiries should be addressed to Dr. Benjamin M. Siegel, Dept. of Engineering Physics, Cornell University, Ithaca, N.Y.

The **Hawaii Marine Laboratory** announces the completion of new research rooms and apartments for visiting investigators at its Coconut Island branch. The added facilities were made possible in part by a gift from Edwin W. Pauley. Applications for laboratory space and living quarters during any part of the year may be made to the Director, University of Hawaii, Honolulu.

Hans A. Krebs, professor of biochemistry, University of Sheffield, England, and Nobel Laureate in Medicine, will deliver Western Reserve University's 57th Hanna Lecture on Apr. 30 in the Allen Memorial Medical Auditorium, Cleveland.

Grants and Fellowships

The first and only award recognizing an individual's efforts to advance the technique, art, or science of **air pollution control** in this country has been established by the Air Pollution Control Association, Pittsburgh, Pa. The award, to be known as the Frank A. Chambers Award in honor of the early advocate of the "engineering approach" to air pollution control problems, will be presented at each annual meeting. This year's meeting will be held in Chattanooga, Tenn., May 3–6.

Allied Chemical & Dye Corporation of New York City has announced the award of 38 graduate fellowships for the academic year 1954–55 to stimulate advanced study in chemical and related fields and to develop skilled scientific leadership. The fellowships will provide $1500 for unmarried fellows and $2000 for married fellows, in addition to payment of tuition, and will be available in 27 universities and other educational institutions in the United States and Canada. Students in their final year of graduate study who have demonstrated an aptitude for research are eligible. Participating colleges will select the recipients and determine the research to be undertaken. The company exercises no control over the research work or the publication of results.

Nominations now are being accepted by The American Forestry Association for its seventh annual **conservation awards** to individuals who have contributed outstanding service in the field of conservation. Eligibility for nomination is not limited to persons actually working in the field of renewable natural resources. The awards, the first to be presented by a national organization to private citizens, are intended to recognize and reward individuals whose contributions to conservation have been beyond the demands of their regular means of livelihood. Five winners will be selected from as many categories, and for judging purposes nominees will be categorized on the basis of their primary employment rather than on the phase of conservation in which they have been active. The categories are public servants, business and industry, education, public information, and a classification that includes persons not embraced by the other four categories.

Presentation of the awards will be a highlight of AFA's 4-day annual meeting Sept. 6–9 in Portland, Ore. Nomination blanks for the 1954 awards may be obtained from The American Forestry Association, 919 17th St. NW, Washington 6, D.C.

Two fellowships for graduate work in the **Department of Aeronautical Engineering** at Princeton University have been established anonymously in memory of John Morris Legendre, class of 1925, who died in a plane crash in 1953. The two awards total $6000 a year.

Three full-time assistantships and a part-time graduate student fellowship are available to women applicants in the **Genetics Experiment Station at Smith College,** Northampton, Mass. The assistantships carry a salary of $2500 to $3000 per year; the fellowship, an honorarium of $1500 per year.

A new approach in hitherto unsuccessful attempts to establish **Hodgkin's disease**—a so-called cancer of the lymph glands—in experimental animals is now being made at the University of California School of Medicine as a result of a $12,000 research grant from the Dorothy H. and Lewis Rosenstiel Foundation.

The American League Against Epilepsy announces the **Jerry Price Memorial Prizes,** contributed jointly by Mr. and Mrs. Fred Markham and the League, for dissertations on epilepsy. The awards are $500, $200, and $300, and there are also book prizes and possible publication of one or more contributions in the journal *Epilepsia.*

The contest is open to the students of any approved

medical school in the United States or Canada. Any one of the many aspects of epilepsy may be covered. Essays should be original, typed double spaced, and preferably no more than 5000 words in length. *Contributions should be mailed before Aug. 1* to Dr. J. K. Merlis, American League Against Epilepsy, 150 S. Huntington Ave., Boston 30, Mass.

The Children's Division of the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, which is a joint undertaking with the Association for the Aid of Crippled Children, has announced the availability of a fellowship for a graduate professional nurse in **pediatric rehabilitation.** The fellowship, which, for a period of 6 mo, pays a stipend of $1500, is open to graduates of approved schools of nursing who have had a minimum of two years' experience, either in hospital or public health nursing. Six months of specialized clinical experience in nursing in the rehabilitation of physically handicapped children will be provided; some experience in working with adults will also be included. Applications may be made to Miss Mary Stewart, Children's Division, The Institute of Physical Medicine and Rehabilitaton, 400 E. 34 St., New York 16.

A limited number of fellowships for social scientists interested in the emotional, psychological and social factors related to the **rehabilitation of physically handicapped** persons were announced today by the National Foundation for Infantile Paralysis. These fellowships will be awarded to established professional workers or unusually promising graduate students who have completed a minimum of 2 yr of work toward the doctorate in one of the social sciences. The candidate must have the intention of working with the physically handicapped upon completion of the fellowship. Because the National Foundation is particularly interested in the unique problems of poliomyelitis patients with persisting respiratory difficulties, special consideration will be given to applicants planning to include work at a medical center concerned with rehabilitation where the opportunity for working with respirator cases is available.

Awards are based on individual needs of each applicant and will include an allowance for tuition, fees, and maintenance. Appointments will be made for 1 yr, but may be renewed. Partial fellowships are available for qualified veterans to supplement G.I. educational benefits. Application forms may be obtained from the Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York 5.

A new edition of the publication, ***Training and Research Opportunities under the National Mental Health Act,*** which has been revised to reflect recent policy changes with respect to traineeships (formerly called "stipends") and research fellowships, is available from the National Institute of Mental Health, Bethesda 14, Md. In addition to traineeships available in psychiatry, psychiatric nursing, psychiatric social work, and clinical psychology, a fifth area of study known as "public health mental health" has been added. These public health mental health traineeships are available to psychiatrists, clinical psychologists, psychiatric social workers, public health nurses with undergraduate degrees, and public health officers.

Research fellowships are now awarded to postdoctorate investigators only. This program is designed to assist young scientists and physicians in obtaining training and experience in research techniques and methodology which may be applied to the problems of mental health and illness. These fellowships are available to qualified research workers in such fields as biochemistry, neurophysiology, psychiatry, psychology, and sociology. The new edition of the pamphlet also includes more detailed information on the policies and procedures of the research grant program of the National Institute of Mental Health. If the person who is interested in applying for a traineeship will indicate in which profession he wishes to apply, a list of the universities and training centers awarding Public Health Service traineeships in that profession will be enclosed with the pamphlet. Copies of the pamphlet may also be purchased for 10 cts each, with a 25-percent discount on orders for 100 or more to be sent to one address, from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

The **Zoological Society of San Diego, Calif.** announces a fellowship available to graduate students and post-doctoral research workers at the Biological Research Institute. The problems pursued should make use of materials in the Zoological Garden and may include such branches of animal biology as pathology, bacteriology, parasitology, physiology, veterinary medicine, comparative anatomy, comparative biochemistry, animal nutrition, or animal psychology. The stipend is $2000.

Applications should be in the form of a letter, furnishing full information regarding academic preparation, degrees, letters of recommendation, and an outline of the proposed study. *Applications must be submitted not later than May 1.* Address Glen G. Crosbie, Biological Research Institute, Balboa Park, San Diego.

Meetings and Elections

The **American College of Cardiology** will hold its third annual convention in Chicago, May 27–29. An interesting program has been arranged which will be based on the topic "Prognosis of Heart Disease." Prominent guest speakers will participate in the scientific sessions, and in addition there will be exhibits outlining the latest advances in the field of cardiology. Further information may be obtained from the secretary of the College, Dr. Philip Reichert, 140 W. 57 St., New York 19.

The 45th annual meeting of the **American Home Economics Association** will be held in San Francisco, July 6–9. More than 3000 home economists are ex-

pected to attend. General sessions will feature education in one world, the importance of research in today's world, and the influence of world economics on standards of living for the world's families. Beulah V. Gillaspie, dean of the School of Home Economics at Purdue University and 1st v.-pres. of the Association, is chairman of the program committee.

The Pennsylvania State University will be host this summer to the **49th annual meeting of the American Dairy Science Association,** June 22–24. Approximately 1600 delegates from the United States and Canada are expected to attend. Technical research papers, symposia, and organized discussions on all phases of dairying will be features of the meeting. Interested persons are urged to write to the Registration Committee, Dairy Department, State College, Pa., for information.

Several thousand psychiatrists will convene May 3–7 in St. Louis, Mo., for the **110th Annual Meeting of the American Psychiatric Association.** With a membership of 7600, APA is the leading professional society for psychiatrists of the U.S. and Canada. Over 100 papers on recent developments in pyschiatry will be presented, together with psychiatric films and exhibits. Nonmembers are welcome to attend the scientific sessions. Information may be obtained from Robert L. Robinson, 1785 Massachusetts Ave. NW, Washington 6, D.C.

"Aviation and Electronics Look Ahead" will be the theme of a meeting scheduled for Apr. 22–23 at the Franklin Institute in Philadelphia. It is sponsored jointly by the Radio Technical Commission for Aeronautics, The Franklin Institute Laboratories for Research and Development, the Institute of the Aeronautical Sciences (Philadelphia section), and the Institute of Radio Engineers, Professional Group on Aeronautical and Navigational Electronics (Philadelphia chapter). Outstanding speakers, including K. C. Black of the Polytechnic Research and Development Co., Brooklyn, will present authoritative analyses on the economic aspects of future air transportation and its potential new markets, the design and operation of tomorrow's airports, and current and coming trends of development in electronic devices, fixed-wing aircraft, convertible aircraft, and helicopters.

A special feature of the program will be a presentation, "Destination Saturn," in the Fels Planetarium on the evening of Apr. 22. This will be a simulated flight in a space ship, illustrating electronics, navigation, and communications problems of interplanetary travel. Nonmembers may attend any of the sessions.

Incorporated in the District of Columbia, a new organization called **Citizens for Conservation** has been formed to promote the conservation of human and natural resources at the community level. Most of the societies and associations concerned with conservation operate on the national level, and many are directing their efforts toward the conservation of single resources such as forests and wildlife. The new group will fill a major gap by enlisting the support of communities and the general public in conserving community as well as national resources.

Officers of Citizens for Conservation are: pres., Gerald P. Nye, former U.S. Senator from North Dakota; sec., Clarence C. Case, formerly with the Michigan Dept. of Economic Development; and treas., Daniel W. Bell, president of the American Security and Trust Company. In addition to the officers, directors are John A. Behnke, associate administrative secretary of AAAS; Howard A. Meyerhoff, president of the Scientific Manpower Commission; John E. Hartshorn, attorney; and Fred Packard, executive secretary of the National Parks Association. Headquarters of the organization have been established at 1710 16th St. NW, Washington, D.C.

The **First International Instrument Congress and Exposition,** sponsored by the Instrument Society of America, has already received contracts from 287 exhibitors for 573 booths at the Philadelphia Convention Hall, Sept. 15–21. The show increased its exhibit area from 10,000 ft² in 1946 to 35,000 ft² in 1953, and the exhibit area so far sold for the 1954 show totals 57,000 ft². With only a few booths still available, the show management has found it necessary to contract for additional space which will increase the display area another 25 percent.

The attendance at the 1953 Instrument Conference and Exhibit was slightly over 11,000. More than 25,000 visitors from all parts of the country and many foreign countries are expected to attend the present Congress and Exposition. For further information address the Managing Director, First International Instrument Congress and Exposition, 845 Ridge Ave., Pittsburgh 12, Pa.

The Council of the **International Scientific Film Association** (38, Avenue des Ternes, Paris 17) at its meetings on Jan. 8–9 in Paris agreed, with the Italian Delegation, to the various arrangements for the Association's 8th annual congress which will take place in Rome at the end of October, 1954. In accord with UNESCO's experts on the subject, the Council gave its approval to the results so far obtained in establishing a central register of data on the films chosen for the Association's annual congresses (500 films from some 30 countries). The Council endorsed a plan whereby the French Institut de Cinématographie Scientifique would produce a series of "international science-magazine" films.

The International Scientific Film Association has accepted invitations to organize the presentation of international programs of scientific films at the First International Film Festival of São Paulo (Brazil) and at the International Festival of Documentary and Experimental Films of Montevideo (Uruguay). The President of the I.S.F.A., Jean Painlevé, will represent the Association at these Festivals. All inquiries

should be addressed to The Scientific Film Association, 164 Shaftesbury Ave., London W.C.2.

The 86th annual meeting of the **Kansas Academy of Science** will be held at Hays, Apr. 29–May 1. Fort Hays Kansas State College will be host to the Academy and Dr. H. S. Choguill, professor of chemistry, is the local chairman in charge of arrangements. There will be general sessions covering the usual range of subjects dealing with botany, chemistry, geology, microbiology, physics, psychology, and zoology. President R. E. Mohler, McPherson College, will give an address at the annual banquet. President-elect A. C. Carpenter will be toastmaster.

The **Mathematics Division of the American Society for Engineering Education** has planned an instructive program for the A.S.E.E. meetings to be held at the University of Illinois, June 14–18. Richard S. Burington, Bureau of Ordnance, Department of the Navy, is chairman of the Mathematics Division and is in charge of the program.

The sessions of June 16 will be devoted to a panel discussion on "Problems of training in the use of computing equipment," led by C. V. L. Smith of the Office of Naval Research. Members of the panel will include: W. H. Boghosian, University of Pennsylvania; John W. Carr, University of Michigan; W. J. Eckert, Watson Scientific Computing Laboratory; M. R. Hestenes, University of California; Phillip M. Morse, M.I.T.; and F. J. Murray, Columbia University.

On June 17 C. V. Newsom, Associate Commissioner of Higher Education, State of New York, will give his retiring address on "The introductory college course for engineers." In addition, there will be a number of lectures by other recognized authorities, including G. B. Price of the University of Kansas, B. Meserve of the University of Illinois, Karl Menger of the Illinois Institute of Technology, C. O. Oakley of Haverford College, L. W. Cohen of the National Science Foundation, and J. Weyl of the Office of Naval Research.

"The place of mathematical statistics and probability theory in engineering curricula" is the subject of another discussion to be conducted by Wm. P. Pabst of the Bureau of Ordnance, Department of the Navy. The members of this panel have been selected to reflect various points of view in industry, government, and education, and include J. H. Davidson of the General Electric Company, Forest Blanding of the Standard Oil Development Company, and I. Burr of Purdue University.

Roger H. Charlier of Chester, N.J., has been chiefly responsible for organizing the **New Jersey Academy of Science.** The first members have signed up, and other interested persons are urged to participate.

The **XIXth Cold Spring Harbor Symposium on Quantitative Biology** will take place at Cold Spring Harbor, Long Island, N.Y., June 7–14. The topic is "The Mammalian Fetus: Physiological Aspects of Development." It is being organized, as always, by the Cold Spring Harbor Biological Laboratory and is being sponsored by the Carnegie Corporation of New York, the National Science Foundation, and the Association for the Aid of Crippled Children. A list of the European participants follows:

E. C. Amoroso, Royal Veterinary College and Hospital, University of London.

Finn Böe, Research Division, Biological Department, Nyegaard & Co., Oslo, Norway.

F. W. Rogers Brambell, Dept. of Zoology, University College of North Wales, Bangor, Caernarvonshire, Wales.

J. C. McClure Browne, Institute of Obstetrics and Gynaecology, Postgraduate Medical School of London.

K. W. Cross, Physiology Dept., St. Mary's Hospital Medical School, London.

G. S. Dawes, Nuffield Institute for Medical Research, Oxford, Eng.

A. D. M. Greenfield, Dept. of Physiology, The Queen's University of Belfast, Northern Ireland.

J. P. Hoet, Hospital St. Pierre, Louvain, Belgium.

A. St. G. Huggett, Dept. of Physiology, St. Mary's Hospital Medical School, London.

Alfred Jost, Laboratory of Animal Biology, Faculty of Sciences, University of Paris.

M. J. Karvonen, Institute of Occuptional Health, Helsinki.

Ester M. Killick, Royal Free Hospital School of Medicine, London.

John Lind, Norrtulls Hospital, Stockholm.

R. A. McCance, of Experimental Medicine, Cambridge, Eng.

E. F. McCarthy, Low Temperature Laboratory, Medical Research Council of Ireland, Dublin, Erie.

A. S. Parkes, National Institute for Medical Research, Mill Hill, London.

G. Popjak, Experimental Radiopathology Research Unit, Hammersmith Hospital, London.

C. E. Räihä, Childrens Clinic, Helsinki.

James Walker, Dept. of Obstetrics and Gynaecology, University of Aberdeen, Aberdeen, Scotland.

G. B. West, Dept. of Pharmacology and Therapeutics, Medical School, Dundee, Scotland.

Miscellaneous

A 200-page report containing 15 papers presented at an **atomic power symposium** held at Chalk River last September has been published by Atomic Energy of Canada Limited. The 3-day symposium was attended by 75 engineers, business executives, and other representatives of private industrial firms who received the most comprehensive view of research results at Chalk River ever presented to private industry. The report costs $2.00 and is available from the Scientific Documents Office of the Crown Company at Chalk River, Ont.

The second in the 1954 Spring Series of **March of Medicine** network telecasts, presented by Smith, Kline

& French Laboratories and the American Medical Association, will bring to a nationwide audience a glimpse into current research on the problem of arthritis and rheumatism. The program, scheduled for Thurs., Apr. 29, at 10 p.m. EDT, will be carried over some 78 stations of the NBC television network. By means of actual live telecasts and by film, the program will visit medical research centers throughout the country where work is underway on this important problem in the field of degenerative disease.

The American Standards Association, 70 E. 45 St., New York, has announced that a **new international standard for testing electronic parts** used in radio communication and electronic apparatus has been published by the International Electrotechnical Commission (IEC), a commission composed of the national committees of 30 member nations. The document represents several years work by an IEC Technical Subcommittee on Electronic Components. E. F. Seaman of the U.S. Navy Bureau of Ships is chairman of the subcommittee.

The purpose of the new International Recommendation is to meet an urgent need for a standard international language in testing and rating electronic components for the various service conditions encountered in climates around the world and in the service conditions of land, sea, and airborne apparatus. However, recommendations of the standard are for conventional electrical apparatus; they are not intended for the military, where unusual conditions must be met. The 52-page work is identified as "Publication 68—Basic Climate and Mechanical Robustness Testing Procedure for Components."

Although there has been a gradual decrease in the number of applications for **scientific positions** during the past few months, qualified scientists are still urgently needed in various Federal agencies in the Washington, D.C., area. Salaries range from $3410 to $10,800 a year. For detailed information inquire of the U.S. Civil Service Commission, Washington 25, D.C., or any one of its regional offices.

"Training the Conservation Worker," a 7-page leaflet, is now available from the Conservation Project of the National Association of Biology Teachers. The leaflet contains suggestions on forestry training by O. F. Hall; on wildlife training by Robert A. McCabe; on fisheries training by Karl F. Lagler; on recreation training by William H. Marshall; and on teacher training by Richard L. Weaver. These five conservationists summarized their suggestions in a symposium held recently at the University of Wisconsin cooperatively sponsored by NABT and the American Institute of Biological Sciences. The leaflet was reprinted from the January 1954 issue of the AIBS *Bulletin*. Orders for the reprint, which costs 10 cts, should be addressed to Dr. L. Weaver, Conservation Project Leader, P. O. Box 2073, Ann Arbor, Mich. There is a 20-percent discount on orders of 100 or more.

The **U.S. Atomic Energy Commission** has announced the transfer of the feed materials production responsibilities of its New York office to the Oak Ridge Operations Office, effective July 1. The Commission will maintain a New York office to supervise the Health and Safety Laboratory at 70 Columbus Ave., New York; about 275 research and development contracts, chiefly at universities and laboratories; and the Brookhaven National Laboratory at Upton, N.Y. The consolidation of these production functions under Oak Ridge is designed to achieve greater efficiency and economy in the national atomic energy program.

UNESCO has been requested to assist in recruiting suitable candidates for the following **vacant posts.** The information presented is as of Jan. 31. The teaching language is indicated in brackets.

Burma

Professors of agronomic chemistry and soil chemistry; plant breeding; plant pathology; agronomic entomology; hydrobiology; and an adviser on agronomic research. Agronomic Research and Teaching Institute, Rangoon. (English)

Professors of anatomy; physiology; pharmacology; and pathology. Medical School, University of Rangoon. (English)

Professors of electrical engineering (power); civil engineering (and soil mechanics); mechanical engineering (specialty, refrigeration and air conditioning). Engineering School, University of Rangoon. (English)

Ecuador

Professor and director of astronomic observatory. University of Quito. (Spanish)

Israel

Professor and lecturer in physiology; professor of pharmacology, Medical School, University of Jerusalem. (German or English) Preference to candidates with knowledge of Hebrew; Mosaic religion not required.

Liberia

Professors of mathematics; physics; chemistry; and biology (either zoology or botany). University of Monrovia. (English)

Two teachers of biology, for two colleges (Secondary school level). (English)

Pakistan

Professors of mathematics; philosophy; psychology; Islamic learning; political science and international affairs. University of Karachi. (English)

Turkey

Professor of mathematics. University of Ankara. (German, English, or French)

Three professors of meteorology; and one for geology. Technical University of Istanbul. (German, English, or French)

Most of the posts are vacant now, or from the beginning of the next academic year. Those interested are invited to write for details to the Exchange of Persons Program of UNESCO, 19 Avenue Kléber, Paris 16e.