the neutrons produced by thermonuclear processes from those arising from other processes that are of no particular interest for controlled thermonuclear reactions. Since all neutrons are similar, their mode of origin has to be established by elaborate experiments. Such experiments are in progress in both countries.

Reports at the meeting in Princeton on the temperatures reached in the controlled thermonuclear experiments suggest that neutrons from thermonuclear reactions have been achieved, but more experimental work will be necessary to establish this as a fact. Realization of the objective of producing thermonuclear neutrons, if definitely established, would be an important step in the long-range effort to develop thermonuclear reactors for the production of economic power.

Development of Food Irradiation Reactor Suspended

The Atomic Energy Commission has suspended activities directed toward the design and construction of the Food Irradiation Reactor (FIR) and will terminate its contract with Kaiser Engineers, Oakland, Calif., for development work on this project. The reactor was being developed for use by the Army Quartermaster Corps in food irradiation experiments and other projects at the U.S. Army Ionizing Radiation Center, to be built at Stockton, Calif.

The Department of Defense has recently indicated an interest in the investigation of alternative sources of gamma irradiation, such as long-lived radioisotopes or spent reactor fuel elements. Pending the results of this investigation, the commission has suspended development work on the FIR.

Scripps Institution's Downwind Expedition

Two ships from the University of California's Scripps Institution of Oceanography have sailed on a 4½-month voyage to conduct studies in connection with the International Geophysical Year. The trip, called the Downwind Expedition, will take the research vessels *Horizon* and *Spencer F. Baird* to the southeast Pacific Ocean, scientifically one of the least known areas in the world. Henry W. Menard, Jr., associate professor of geology at the Scripps Institution, is scientific leader of the expedition, whose ports of call will include Tahiti; Pitcairn Island, settled by the *Bounty* mutineers; Robinson Crusoe's island, Juan Fernandez, off the coast of Chili; the South American ports of Valparaiso, Chile, and Callao, Peru; and Easter Island, noted for its mysterious stone statues.

However, only a few days will be spent in port, for the primary purpose of the expedition is to study how the deep waters of the ocean move. Practically nothing is known about deep currents because it is difficult and expensive to make measurements below the sea's surface, and effective methods have only recently been developed. In fact, so little is known about the circulation of the deep ocean water that nobody knows whether it takes 100 years or 10,000 for this water to travel from the Antarctic to the Equator and back again.

The expedition will also provide data for other IGY studies in the course of the more than 38,000-mile voyage. Twenty-five seismic stations will be occupied as part of the IGY seismological program. Samples for radiocarbon analysis of ocean waters will be taken from five locations. Such samples "date" ocean water. Air and water samples will be collected for analysis of carbon dioxide content.

In addition, the expedition's scientists will make a profile of the ocean floor along the line of 130° west longitude from the latitude of San Diego, Calif., to approximately 50° south. Several dredge hauls will be made to collect samples that will help determine the mineral resources of the sea floor. The atolls of the Tuamotu Archipelago will be studied.

One of the primary projects of the voyage will be investigation of the broad rises in the southeastern Pacific. Such rises are characteristic of all the oceans except the North Pacific, where most of the Scripps expeditions have been conducted. Surveys will also be made of the narrow, deep South American Trench just off the coast of Chile and Peru. The slope from the bottom of this trench to the crests of the adjacent Andes is the steepest in the world.

Scientists interested in joining the expedition at Valparaiso or Callao, or in having special observations or collections made, should communicate with Dr. Roger Revelle, University of California, Scripps Institution of Oceanography, La Jolla, Calif.

Golden Anniversary of the Pasteur Institute in India

This year marks the 50th anniversary of the Pasteur Institute in Kasauli, India. A souvenir volume published to celebrate the golden jubilee contains a tribute by its present director, N. Veeraraghaven, to the men who have guided the organization's development over the past half-century. Another section of the commemorative volume is devoted to a description of the institute's research activities, which have included significant work in the following areas: rabies, influenza, *Q*-fever, cholera, typhoid fever, diphtheria, fusospirochaetosis, serology of syphilis, tropical eosinophilia, malaria, leishmaniasis, venoms, and entomology.

Changes in vaccine for rabies and methods of production over the years are briefly described, and especial reference is made to the painstaking record-keeping, instituted by the first director and still maintained, of the history of hundreds of patients bitten by rabid animals, but untreated, considered in parallel with the results of treatment of persons bitten by the same animals. This continuing investigation is considered to be a unique record.

The last section is the scientific report of the institute for the year 1956. It describes an experimental evaluation of recent advances in antirabies treatment, an assessment of the value of 5 percent simple vaccine in human treatment, and studies on the cultivation of the rabies virus *in vitro*.

Postdoctoral Research Associateships

The National Academy of Sciences–National Research Council has announced that Postdoctoral Resident Research Associateships again will be offered for 1958–59 by the Argonne National Laboratory, the National Bureau of Standards, the Naval Research Laboratory, and the Oak Ridge National Laboratory. The associateships are tenable at the Argonne National Laboratory in Lemont, Ill.; at the Washington, D.C., and Denver, Colo., laboratories of the National Bureau of Standards; at the Naval Research Laboratory in Washington, D.C.; and at the Oak Ridge National Laboratory in Oak Ridge, Tenn.

These associateships have been established to provide young scientists of unusual ability with an opportunity for advanced training in basic research in the general areas of the biological, physical, and mathematical sciences. In addition, research associateships in visual psychophysics and engineering psychology are also available.

Applicants must be citizens of the United States. They also must produce evidence of training, in one of the listed fields, equivalent to that represented by the Ph.D. or Sc.D. degree and must have demonstrated superior ability for creative research. The stipend for these associateships is $7035 a year.

Application materials may be secured by writing to Fellowship Office, National Academy of Sciences–National Research

Council, 2101 Constitution Ave., Washington 25, D.C. In order to be considered for awards for 1958–59, applications must be filed at the Fellowship Office on or before *13 January 1958.*

News Briefs

The International Academy of Proctology has announced its annual cash prize and merit award for the best unpublished contribution on proctology or applied subjects. Contest entries must be received *before 1 February 1958,* by Alfred J. Cantor, International Secretary, International Academy of Proctology, 147–41 Sanford Ave., Flushing, N.Y.

* * *

The University of Wisconsin's botany and zoology departments are expanding their physical facilities for the first time in 45 years. They have begun to use the new $1,850,000 addition to Birge Hall, which was built in 1912. The new wing doubles the physical facilities of the two departments.

* * *

A $1-million science building was recently dedicated at Wilkes College. The building was named in honor of Admiral Harold R. Stark, who is a member of the board of trustees of the college. William L. Laurence, science editor of the *New York Times,* was principal speaker at the dedication dinner.

Scientists in the News

ERNEST O. LAWRENCE, Nobel laureate and director of the University of California Radiation Laboratory at Berkeley, will receive the Atomic Energy Commission's $50,000 Enrico Fermi Award on 2 December, the anniversary of the day when the late Dr. Fermi and his associates proved that nuclear fission could be self-sustained and controlled. Lawrence is being honored for his invention and development of the cyclotron and for his many other contributions to atomic energy and nuclear physics.

JAMES M. PRICE of the University of Wisconsin Medical School and SEYMOUR COHEN of the University of Pennsylvania are the first recipients of the American Cancer Society's new lifetime salary grants. These awards for two permanent faculty level positions in cancer research amount to $224,000 for the University of Pennsylvania and $392,296 for the University of Wisconsin.

TIEN-CHUAN WANG has recently joined Arthur D. Little, Inc., Cambridge, Mass., and is working in its Advanced Research Division in the field of microwave physics. He was formerly a member of the group at Columbia University which conducted research that led to the successful development of the ammonia maser. Before coming to the United States Wang taught and did research in electronic physics at several universities and institutes on the Chinese mainland. He has specialized in nuclear resonance and microwave spectroscopy.

VIRGIL P. SYDENSTRIKER has been named emeritus professor and emeritus chairman of the department of medicine of the Medical College of Georgia. He had served as professor of medicine for 35 years. Since his retirement last summer, he has been appointed to the staff of the Veterans Administration Hospital in Augusta, Ga.

GIAMPIETRO PUPPI, director of the Institute for Physics at the University of Bologna, is a visiting professor in the physics department of the University of Maryland for the fall semester, 1957–58. In the spring and summer semesters, Cyril Domb, professor of theoretical physics at the University of London, will be a visiting professor.

DONALD E. THOMAS and KENNETH M. GOLDMAN, metallurgists at the Bettis atomic power division of the Westinghouse Electric Corporation, have received special company awards of $2000 each for the discovery in 1952 of a broad range of zirconium alloys that have a high corrosion resistance and are therefore especially capable of withstanding the high temperature and pressure generated in atomic power plants. The discovery helped solve one of the major problems in the design and development of the reactor for the *U.S.S. Nautilus.*

ARTHUR C. ALLEN, formerly associate pathologist at the Memorial Center for Cancer and Allied Diseases and associate professor of pathology at Cornell University Medical School, Sloan-Kettering Division, has accepted appointment as professor of pathology at the University of Miami Medical School and attending pathologist at the Jackson Memorial Hospital.

WILLIAM H. FORSTER, associate director of research in charge of semiconductor research and development at the Philco Corporation, Philadelphia, has been named director of research in charge of the newly formed solid state electronics department of the company's Research Division. CARLO V. BOCCIARELLI is assistant director of research for the new department.

GIUSEPPE BERTANI, geneticist and for the past 3 years a senior research fellow in biology at California Institute of Technology, has been appointed associate professor of medical microbiology at the University of Southern California.

The following staff changes have taken place in the department of geology and geophysics at Massachusetts Institute of Technology.

WALTER L. WHITEHEAD retired last June, but continued as director of the 1957 M.I.T. Summer School of Geology at Crystal Cliffs, Nova Scotia, and has been appointed lecturer in geology at M.I.T. and visiting professor at St. Francis Xavier University, Antigonish, Nova Scotia.

HERBERT E. HAWKES resigned to accept a professorship in the Division of Mineral Exploration, University of California (Berkeley).

WILLIAM S. VON ARX and J. BRACKETT HERSEY, physical oceanographers at Woods Hole Oceanographic Institution, have been appointed associate professors.

HARRY HUGHES, scientific officer, United Kingdom Atomic Energy Authority, is visiting lecturer in geophysics during the present school year.

In the department of meteorology, NORMAN A. PHILLIPS has been appointed associate professor.

PHILIP S. HOPKINS, professor of aviation and head of the department of aviation at Norwich University, Northfield, Vt., has been appointed director of the Smithsonian Institution's National Air Museum.

WILLIAM H. FELDMAN, a member of the staff of the Mayo Foundation and Mayo Clinic since 1927, has accepted a post as chief of laboratory research in pulmonary diseases in the department of medicine and surgery of the Central Office Staff, Veterans Administration, Washington, D.C.

C. D. W. THORNTON has been named director of research and development at Farnsworth Electronics Company, Fort Wayne, Ind. Before he joined the company as assistant to the president for atomic energy in 1956, Thornton had been chief of the Office of Operations Analysis and Planning for the U.S. Atomic Energy Commission in Washington, D.C.

The following awards will be presented in New York next March during the annual meeting of the Institute of Radio Engineers.

ALBERT W. HULL, a consultant to the General Electric Research Labora-