and the dose rates (measured in roentgens per hour) that can be expected on the surface at various distances from ground zero, Rand has published a *Catalog of Fallout Patterns* (RM-1676-AEC) by Greenfield, Rapp, and Patricia A. Walters. This catalog portrays fallout patterns covering four levels of bomb yield and some 20-odd typical wind situations.

The civil defense expert may construct, on coordinate paper, a wind "structure" indicating wind direction and force at various altitudes, from conventional and readily available observations of radiosonde balloons. Matching this structure by eye against an index of wind structures in the catalog, he selects the one that fits and is able to depict the fallout patterns associated with that wind situation. These patterns —most of them cigar-shaped, stretching downwind from ground zero—provide him with estimates of the dose-rates to be expected from an atomic explosion. For example, it would show that a 1 megaton bomb falling on a U.S. city under typical June winds condition would deposit a lethal doze of radioactive debris 20 miles downwind; people would be made ill as far as 100 miles downwind.

Marlborough Man

Reconstruction of the skull of the "Marlborough man," whose fossilized skeleton was discovered at Salisbury, Rhodesia, in 1956, has been completed by E. Trevor Jones. In an article in the *Central African Journal of Medicine,* he comments that the skull is that of a man "not resembling any existing race living in Africa today." Some features of the bone structure, he points out, differ from those of both the European and the Bantu. The Marlborough man had a large head and heavy jaw similar to that of the Boscop man discovered in South Africa.

Oldest Hospital and Medical School Unite

An agreement of affiliation between the Pennsylvania Hospital's Department for Sick and Injured, Philadelphia, and the University of Pennsylvania School of Medicine has been announced. It will be effective in September. This joint action is an agreement of professional affiliation between the staffs of the two institutions. The affiliation unites in a close working relationship Pennsylvania Hospital, the nation's first hospital, founded in 1751 by Benjamin Franklin, and the nation's first school of medicine, established in 1765 at the University of Pennsylvania. which also had been founded by Franklin.

The first teaching of medicine in the United States was done on the wards of the Pennsylvania Hospital, and the students from the University of Pennsylvania School of Medicine have been taught there ever since the school was founded. The new agreement, discussions of which were first held about 1800, now places official seal upon a mutually cooperative educational effort that has been in effect for almost two centuries.

Dentistry Survey

A 2-year survey of dentistry in the United States will begin this year under the direction of a commission headed by Arthur S. Flemming, president of Ohio Wesleyan University and until recently director of the Office of Defense Mobilization in Washington. The announcement of Flemming's appointment was made by the American Council on Education, which is conducting the $400,000 survey at the request of the American Dental Association. The first four members of the commission that will serve with Flemming are as follows: Lawrence A. Kimpton, chancellor, University of Chicago; W. Howard Chase, president, Communications Counselors, Inc., New York; Willard C. Fleming, dean, School of Dentistry, University of Pennsylvania; and Charles P. McCormick, chairman, McCormick and Company, Baltimore.

The commission membership will reflect not only the broad interests of the dental profession but also the interests of those whom the profession serves. The commission will select a director of the survey. His staff, at headquarters in Chicago, will include an assistant director, five or six technical and editorial staff associates, and a secretarial and clerical staff of six to eight persons.

The commission will be assisted in specific areas of the work by four committees: dental education, dental research, dental health, and dental practice. The survey is financed by grants as follows: the Kellogg Foundation, $250,000; Americal Dental Association, $120,000; Rockefeller Brothers Fund, $25,000; and the Louis W. and Maud Hill Family Foundation, $5000.

Radioactive Minerals in India

The Atomic Energy Department, Bombay, India, has announced discovery of large radioactive mineral deposits "somewhere in northern India." The announcement said that the deposits are even richer than those of the Travancore sands in southern India, and that investigations so far show that 3.3 million tons of ore contain 300,000 tons of thorium and 10,000 tons of uranium of 10 percent and 0.4 percent concentration, respectively.

Mathematics Camp

The University of Kansas will hold its second annual Science and Mathematics Camp on the campus, 16–28 June. This is one of a very few such camps. At Kansas attendance is limited to 80 high-school sophomores, juniors, and seniors.

The purpose of the camp is to acquaint the participants with the various scientific areas, with the aim of interesting able high-school students in a career in science. Fifteen different sciences are represented on the program.

Some scholarship aid is available. The camp staff is derived from the university's faculty. For 1957, the camp director is D. Paretsky of the department of bacteriology, and the associate director is C. H. Phoenix of the psychology department.

U.S. Invitation to U.N. Nuclear Conference

The United States has invited the United Nations to hold its second atoms for peace conference, scheduled for 1958, in Chicago. The tentative plan has been to meet again in Geneva, as in 1955. However, in a letter to U.N. Secretary General Dag Hammarskjold, United States Ambassador James J. Wadsworth, who has been in charge of American policy at the U.N. on peaceful uses of the atom, said that Chicago "would consider it a great honor to be permitted to play host to this great international event."

International Zoonoses Center

The first international center for studying animal-borne diseases affecting man was recently dedicated in Azul, Argentina. The Pan American Zoonoses Center, which is planned as a clearinghouse for scientific knowledge from many lands, will be concerned with testing vaccines and other biologicals, training personnel, and furnishing consultation services by pooling the talents of physicians, veterinarians, and public health officials.

There are approximately 100 zoonoses, and in this country some of them present a problem that is coming to the forefront as a public health hazard. In recent years, more than 80 zoonotic diseases, including brucellosis and toxoplasmosis, have been detected in the

United States. In Texas, for example, not long ago 143 cases of psittacosis were reported in a single week. At the same time, a serologic survey in Colorado disclosed that nearly one-fifth of all persons under 30 were likely to have a positive reaction for Western equine encephalitis.

Nuclear Tests to Start

The Atomic Energy Commission has announced that the 1957 series of low-yield nuclear detonations at the Nevada Test Site is scheduled to begin on about 15 May. No termination date can be established at present, but it is expected the test site will be used intermittently throughout the summer.

The site will also be used for experiments related to the safety of nuclear weapons during handling and storage. Since there will be no nuclear detonation for these tests, there are not expected to be any effects outside the immediate area.

The operations at the test site will be conducted by the Nevada Test Organization, of which James E. Reeves of the commission's Albuquerque Operations Office is test manager. Most of the staff of the Las Vegas Branch Office has moved to the site, and a majority of the test organization personnel from other offices and units are scheduled to be at the site by about 1 May. Tests during the 1957 series, known as Operation Plumbbob, will be scheduled at greater intervals than during the 1955 series to make allowance for delays that may result from weather conditions, to avoid overcrowding in housing available at Camp Mercury, and to permit a greater length of time for completing construction work.

Research Facilities Grants

The U.S. Public Health Service has announced approval of 35 grants totaling $3,974,943 to help 27 research institutions in 18 states build additional facilities for research in cancer, heart disease, mental illness, and other major illnesses. The grants were recommended by the National Advisory Council on Health Research Facilities, which reviewed 165 applications amounting to about $66,384,500. Applications for grants will again be considered by the council 27–29 May.

Congress last year authorized $30 million a year for 3 years in grants to research institutions on an equal matching basis for the construction and extension of research facilities. The law also established the advisory council, which now has approved 109 grants totaling approximately $30 million.

Atomic Power in Northern Ireland

An announcement has been made that an atomic power station of 150 megawatts will be established in Northern Ireland, a country with a population of only about 1,400,000. The station should be in operation by 1963 or 1964. It will cost about £25 million ($70 million). Relating cost to resources—the revenues of the government in the current financial year total £93 million ($260.4 million)—it is easy to see that this investment by Northern Ireland is on a scale that is probably unparalleled by any other country.

Augmentation of electricity services has been made necessary by the tremendous increase in demand that has resulted from Northern Ireland's industrial development program. This program includes the establishment of factories by such firms as Du Pont and Chemstrand.

Wayne Offers Master's Data Processing

Wayne State University will be the second school in this country to offer a master's degree in automatic data processing. Harvard University is the other school. The new program, which begins in September 1957, will incorporate the management sciences—economics, mathematics, accounting, and computing.

Registry of Pediatric Pathology

Under the auspices of the American Academy of Pediatrics, a special registry devoted to pediatric pathology is to be established as one of the components of the American Registry of Pathology of the Armed Forces Institute of Pathology. The success of other component registries in collecting source material for the study of rare and unusual diseases in several branches of medicine has prompted the Armed Forces Institute to devote a special section to the pathology of diseases of children.

The Registry of Pediatric Pathology will limit its material only with respect to the age group involved. Adequate cataloging, maintenance of records, and availability of material are primary objectives. In addition, a consultation service will be provided for all pathologists similar to that offered by the other component registries. Specialists in pediatric pathology in this country and abroad will thus be on call for questions in their particular fields of interest. The material will also be made available for teaching purposes, and it is hoped that in the future the registry may provide a position for training in pediatric pathology.

The support of all pathologists and pediatricians is needed to insure the success of this new division. All inquiries should be addressed to the Registry of Pathology, Armed Forces Institute of Pathology, Walter Reed Medical Center, Washington 25, D.C.

Louisiana Veterinary Center

The $600,000 Veterinary Medical Research Center at Louisiana State University was dedicated recently. It consists of six animal laboratory buildings and a large two-story addition to the Dalrymple Memorial Laboratory. Research has already begun on anaplasmosis, leptospirosis in cattle and swine, gastrointestinal parasites of cattle, and bibriosis, a disease of the reproductive system. Anaplasmosis, which results in death for 40 percent of the infected animals and causes an estimated $10 million annual loss in southern states, will be one of the major research projects. The disease is characterized by a rapid reduction of red blood cells.

In addition, respiratory diseases of poultry as they affect the blood-cell system will be studied from the standpoint of developing a diagnostic test. The research will be conducted in a separate building which contains four isolation units. One of the other buildings will be used for the study of animal diseases that are highly contagious. Its construction will permit 11 separate studies to be conducted simultaneously in individual isolation units. Nine investigators are now working at the laboratory and several more are to be added to the staff in the near future.

New Westinghouse Unit

The Westinghouse Research Laboratories has announced formation of a new scientific group to expedite the development of electronic and related devices. The group is already operating in what is to be known as the physics project laboratory. The function of the new unit is to bring into final practical form at an accelerated rate the variety of devices that are being conceived as a result of the company's regular program of research.

Among the projects assigned to the group is the continued development of the image multiplier tube, a new type of electronic tube recently announced by the laboratories. The laboratory will also be concerned with the immediate development of certain classified electronic projects for the Government.

The head of the new laboratory is A. E. Anderson, formerly executive staff assistant to J. A. Hutcheson, Westing-