the Palomar group photographed each section of the sky twice, once in blue light and again in red light. More may thus be learned about the novae and supernovae. In contrast, dark clouds of gas and dust in space, first seen clearly on the survey's plates, may show stars in process of being born.

Years of study will bring many more discoveries. DuBridge predicts that the new atlas will be "an astronomical bible for 100 years." By analysis of light from the distant clusters of galaxies discovered on the survey's photographs, additional evidence is being obtained on the question of whether or not the entire universe is expanding, with objects racing outward like fragments from a bomb.

The late Edwin P. Hubble of Mount Wilson and Palomar found, 30 years ago, that this apparent recession obeyed a simple law—speed seemed to increase in direct proportion to distance. To test the law, galaxies farther and farther away must be measured. Milton L. Humason, working from the survey plates, has found clusters of galaxies receding at about 38,000 mi/sec—one-fifth of the speed of light. The ages of the stars, and of the universe itself, will someday be better understood because of the new atlas.

## News Briefs

■ Otto A. Kuhl, W. Ralph Singleton, and Bernard Manowitz of the Brookhaven National Laboratory have developed a portable radiation unit for use in the field to induce mutations in plants. When not in use, the radioactive cobalt source is housed in a 1-ton steel and lead shield. The unit can be produced for approximately $5000.

■ Operations carried on in the east wing of the U.S. Department of Agriculture's administration building involving certain livestock diseases transmissible to man were suspended on 1 July because of hazards to the health of those engaged in the work. The work included research on tuberculosis, anthrax, and other diseases that can affect human beings. The action was taken by research administrator Byron T. Shaw on recommendation of three research scientists who recently made an inspection, at Shaw's request, of the east-wing laboratories.

The men who made the recommendation were LeRoy Fothergill, U.S. Army, Camp Detrick, Md.; William H. Feldman, Mayo Foundation, Rochester, Minn.; and Byron J. Olson, National Institutes of Health, Washington, D.C. The action was taken as a precautionary measure, since the health record in the laboratories has been very good. In the 50 years that research on anthrax has been going on, no case of this disease has been reported among workers in the east wing. In the more than 60 years since the USDA began making tuberculin there have been four cases of tuberculosis among laboratory employees. Only one of these cases was found to have resulted from official work. The suspension order involves only animal disease work that has been carried out in the administration building in Washington.

■ The University of California's Los Alamos Scientific Laboratory announced 16 July the completion of a scintillation detector large enough to accommodate a human body and to measure its accumulated amount of radioactivity. The project has been carried out under direction of the biomedical research group of the laboratory's health division and was shown in operation for the first time during the laboratory's open house 16–17 July.

By use of the scintillation detector, or "human counter," it is possible to measure radioactivity naturally present in the body. Study of this natural level of radioactivity is useful in determining how much radiation exposure is permissible. Measurements have been made at the Los Alamos laboratory of the natural potassium radioactivity of a number of subjects.

It is also necessary to guard against the possible ingestion and inhalation of radioactivity for the protection of personnel working with radioactive materials. The new instrument can be used to determine the amount of radioactivity that might have accumulated in the bodies of exposed personnel by direct measurement of gamma rays from the human body.

The scintillation detector is a cylindrical tank 6 ft long and 28 in. in diameter. Through it runs a cavity large enough to contain the human subject to be measured. The walls of the tank contain a liquid that gives off minute flashes of light when gamma rays from the person pass through it. This light is detected and amplified by 108 photomultiplier tubes installed in the outer wall of the tank. Electronic instruments record the number of gamma rays registered. The entire tank is surrounded by a 10-ton lead shield to reduce interference by external radioactivities.

The first human counter at the Los Alamos laboratory was a modification of a counter designed for a current laboratory experiment to detect the neutrino. Measurements of human radioactivity made with this apparatus in January 1953 proved that the device was feasible for this purpose. The present improved version was designed during 1953, and construction was begun in the spring of 1954.

■ The Atomic Energy Commission issued the following statement on 4 Aug.: "Within the past few days the Soviets have resumed testing of nuclear weapons. This may mean the beginning of a new test series."

■ V. D. Hopper, senior lecturer of Melbourne University's physics department, stated at a recent news conference that radioactive clouds were circling the earth at altitudes as low as 20,000 ft.

He said that four different consignments of special photographic film that is sensitive to radioactivity had been ruined when flown through the clouds en route from London to Melbourne.

■ Three British professors are to lecture at Moscow University this fall: Paul Dirac of Cambridge University, physicist and Nobel prize winner; William Astbury of Leeds University, an expert on textile physics; and Peter Medawar of London University, biologist. The lectures are part of an exchange arrangement. A Soviet natural scientist, Vladimir Engelhardt, lectured at London University this past spring.

■ The United Nations has announced that 13 Asian experts are to visit the Soviet Union soon to study mining and geology. Specialists in those fields from Afghanistan, Burma, Hong Kong, India, Indonesia, and Japan left New Delhi 2 Aug. on a 13-wk tour of the Soviet Union, Britain, France, and West and East Germany.

The UN technical assistance fund is paying all their expenses except when countries along the way are sharing the cost. The Technical Assistance Administration in New York and the UN Economic Commission for Asia and the Far East in Bangkok, Thailand, organized the project and are sending three representatives.

The group's itinerary includes Kabul, Afghanistan; Moscow; Sverdlovsk, Chelyabinsk, and Kustanai in the Urals; Samarkand and Tashkent, Uzbekistan; Dnepropetrovsk, Krivoi Rog, Zaporozhe, Kremenchug, and Kiev in the Ukraine; and Leningrad.

■ East Germany has agreed to allow a University of Pennsylvania scientist to spend "a couple of months" studying ancient Mesopotamian tablets at the University of Jena. Samuel Noah Kramer, cuneiformist, who is Clark research professor of Assyriology at Pennsylvania and curator of the tablet collection of the University Museum, has applied for a passport and hopes to reach Jena late in September.

Sanction for Kramer's trip into East Germany came from the Secretariat for Institutions of Higher Learning of the

Government of the German Democratic Republic. Last March Kramer wrote directly to Johannes Becker, East German Minister of Culture at East Berlin, whose name he had learned from a newspaper story. A reply came 3 mo later from the director of the Section for Relations of Institutions of Higher Learning with Foreign Lands.

Kramer has devoted some 25 years to fitting together and translating the Sumerian tablets, thus bringing to light some of mankind's earliest myths, epics, hymns, proverbs, laws, and even medical prescriptions. But most of the tablets are fragments, and Kramer hopes to find some of the missing pieces at Jena.

■ Selection of a site for a new headquarters building for the U.S. Atomic Energy Commission near Germantown, Md., 23 mi from Washington, and ½ mi west of the new U.S. Highway 240 on state Route 118, has been announced by Kenneth E. Fields, AEC general manager. The exact boundaries of the site will be determined after completion of detailed engineering surveys.

The major criteria used in making the selection included availability of an adequate water supply, extent of supporting community facilities, accessibility to Washington for business and commuting purposes, availability of a labor market, and factors affecting the economy of construction and operation.

At least 50 acres of land will be required for the $10 million project. Final design of the building has not been determined, but it probably will be a three-story reinforced concrete structure. Construction is scheduled to be completed in the fall of 1957.

■ Experimental cytologists have long wished to know whether any sort of change takes place in the nuclei of cells undergoing differentiation, change that would make such nuclei no longer equivalent to those of the fertilized egg cell and the very young embryo. To study this problem, two investigators have developed an ingenious series of techniques. By first separating layers of cells from differentiated tissues of frog embryos in the late gastrula stage by means of digestion with the enzyme trypsin, and then separating these cells with the detergent versene, T. J. King and R. Briggs of the Institute for Cancer Research and the Lankenau Hospital Research Institute in Philadelphia have gained a notable insight into the processes of animal development. [*Proc. Nat. Acad. Sci. U.S.* **41**, 321 (May 1955)].

Having isolated the specialized cells from such tisues as the chorda-mesoderm or the belly endoderm, the invesigators implant the nuclei singly into eggs from each of which the original nucleus has been removed. Such eggs seem to be able to develop quite normally through the blastula stage, a many-celled hollow sphere. When the implanted nuclei are taken out of the tissue cells of an early gastrula, these blastulae go on to develop normally into young larvae. When, on the other hand, the implanted nuclei come from older and more differentiated gastrulae, development is arrested, either in the blastula or gastrula stage, or somewhat later.

The nuclei that come from the endoderm of a late gastrula seem to be able to control the development of the internal parts well enough, but the ectodermal derivatives, including the presumptive skin and the nervous system, are grossly disorganized. Here, then, is evidence that in the course of development nuclei lose some of their original capacities and become specialized. How this takes place is still a mystery. Does it involve an actual modification of the genes and chromosomes themselves? Are certain genes put out of action, so to speak, because they stayed too long in the wrong sort of cellular environment?—B.G.

■ George R. Harrison, dean of the School of Science at Massachusetts Institute of Technology, is preparing a full-length biography of Karl T. Compton, long president of the institute and later chairman of its corporation, who died last year. This biography, which is being sponsored by M.I.T. and the McGraw-Hill Book Co., of which Dr. Compton was a director, is "official" in the sense that the Compton family is making Dr. Compton's letters and files available to Harrison.

Harrison plans the book not only as a presentation of the life of a very remarkable man whose influence on American science was extremely broad, but as an opportunity to discuss in layman's terms many of the problems faced today by the scientist, the teacher, the college administrator, and the conscientious and unselfish public servant. The book is expected to appear early in 1958.

## Scientists in the News

Few scientists reach the age of 85 years and still fewer can boast of continued scientific productivity at that age. On 6 Apr. OSKAR VOGT, director of the Institute of the German Brain Research Society located at Neustadt in the Schwarzwald, passed that birthday with no indication of a relaxation of his scientific efforts. His wife, also a noted scientist and his collaborator for many years, had a few weeks earlier passed her 80th birthday.

Vogt, who founded the Kaiser-Wilhelm Institute for Brain Research (Hirnforschung) in Berlin-Buch, was dispossessed by the Nazis in 1937, after he had brought the institute from its humble beginning in 1902, as the Neurobiological Laboratory of the University of Berlin, to its later world-wide fame. Here Vogt not only founded the architectonic study of the brain but, with a breadth of vision possessed by few, insisted on the inclusion in the institute of many varied studies which might eventually, he hoped, contribute to a better understanding of the human brain.

Here, for example, Tönnies and Kornmüller began their studies of the relationships of the electric brain-waves to the architectonics of the cerebrum; here too Timoféeff-Ressovsky built up the fine department of genetics which was one of the foremost centers of German biology in the years before World War II. To the Institut für Hirnforschung came guests and students from all over the world, including the present writer, who worked there for 6 interesting months in 1934.

Beginning anew at the age of 67, Oskar Vogt built the laboratory in the Schwarzwald where he still labors. Since that age, when most men retire, he has contributed no less than 33 papers to his field, in 21 of which his wife collaborated, among them the significant report of the pathoanatomical findings in the brains of schizophrenics, which Vogt has interpreted as the premature aging of certain nerve-cell regions. These contributions cap a career that began with Vogt's first publication in 1895—a career that has always included interesting side excursions, such as the published studies of the geographic variation and evolution of the bumblebees of Europe. It is not surprising that, with parents such as Oskar and Cécile Vogt, both of their daughters have likewise become well-known scientists, Marthe in chemistry and pharmacology, Marguerite in genetics.

If few have labored so hard and so incessantly to advance human knowledge, far fewer have so fully earned the fond admiration and esteem of those who have worked with them.—B. G.

The following appointments to assistant professor have been announced: University of Oklahoma: IRENE MACKINTOSH, psychology. University of Oregon, HARRY EASTERDAY, physics.