

the cyclotron was conceived. As an alternative to the need for shielding cylinders of increasing length to achieve higher energies with linear accelerators, Lawrence proposed the use of a magnetic field to channel accelerated particles in a spiral path of increasing radius. The idea was first reported at a meeting of the National Academy of Sciences held in Berkeley in September 1930, and during the following year Lawrence, together with M. Stanley Livingston, constructed the first experimental model of such a device and successfully accelerated protons to an energy of 80 kev. The new machine was quickly dubbed the "cyclotron" and, although Lawrence and his Berkeley colleagues subsequently objected to such laboratory slang and formally proposed the more dignified term "magnetic resonance accelerator", the device and its successors remained cyclotrons.

In 1939, Dr. Lawrence was awarded the Nobel Prize in physics for having developed the cyclotron, which was recognized to be a research tool of immeasurable importance not only in physics but in chemistry and the biological and medical sciences as well. He was the recipient of many other awards, including the Comstock Prize of the National Academy of Sciences and the Hughes Medal of the Royal Society. He received innumerable honorary degrees from educational institutions in the US and abroad, and was elected to honorary membership by the Soviet Academy of Science and by the Royal Swedish and the Royal Irish Academies. A fellow of the American Physical Society, he served as a member of the APS Council during the period 1934-37. Last fall he received the Atomic Energy Commission's \$50 000 Enrico Fermi Award.

George B. Pegram, who played an important part in the creation of the American Institute of Physics 27 years ago and who served through most of the intervening period as an officer of the Institute, died on August 12th at his home in Swarthmore, Pa. He was 81 years of age.

Born in Trinity, N. C., he graduated from Trinity College (now Duke University) in 1895 and five years later came to Columbia University as an assistant in physics. He stayed at Columbia for 58 years and after 1950, the year of his formal retirement, served as special adviser to the president of the University. He received his PhD in physics at Columbia in 1903, became an instructor in 1905, a Tyndall Fellow in 1907, assistant professor in 1909, associate professor in 1912, and full professor in 1918. During two subsequent 12-year periods he served as dean of the Columbia School of Mines, Engineering, and Chemistry and as dean of the Graduate Faculties. He was named vice president of the University in 1949.

He became a member of the American Physical Society shortly after it was organized, and in 1916 was elected a member of the Council. Two years later he became treasurer of the Society and served continuously in that post thereafter until his retirement in

1957. He was also elected as the Society's president for the year 1941. He was then heavily involved in the administration of defense-related research at Columbia and in the work of the Uranium (S-1) Section of the National Defense Research Committee which was responsible for initiating and coordinating the nation-wide program of nuclear research that was later to become the Manhattan Project. Owing to the burden of these duties, Dean Pegram resigned as president of the Physical Society after having completed only half of his term of office.

As dean of Columbia's Graduate Faculties in the period before and during World War II, he was influential in making the University's research facilities and talents available for the study of problems vital to the national defense. The first attempt by an American scientist to interest the federal government in the military potentialities of nuclear fission was made by Dean Pegram in March 1939, shortly after the fission hypothesis had been experimentally confirmed at Columbia, when he contacted the Navy Department and arranged for a conference between Enrico Fermi and Navy representatives. Through the war years Dean Pegram headed the University's Committee on War Research, which administered Columbia's defense contracts in both nuclear and undersea-warfare research.

During the discussions that took place in 1930 and earlier with regard to the formation of the American Institute of Physics, Dean Pegram was not only active, but instrumental, in the task of defining the kind of organization that was needed. Together with the late Karl T. Compton, Dean Pegram accepted the responsibility for raising funds and getting the new Institute started. He became the author of the By-Laws and served as the Institute's first secretary—remaining in that post from 1931 until 1945. In 1938 he was also elected treasurer of the Institute and he continued to serve in that capacity until his retirement in March 1956.

His last public appearance before a gathering of scientists took place one year ago at AIP headquarters in New York City, when he was the recipient of the Institute's first Karl Taylor Compton Award. He was chosen by the Institute's Governing Board to be the first Compton Medalist in recognition of "His high statesmanship in the field of physics; his devotion to the American Physical Society as a member for fifty-eight years and an officer for thirty-eight years; his principal role in founding and developing the American Institute of Physics and serving as its secretary and its treasurer; his wise counsel and guidance in the administration of the affairs of these organizations; his development of teaching and research at Columbia University; his administrative guidance of defense research in physics; his pioneer initiative in the development of atomic energy; and, in general, his kindness, wisdom, fidelity, vigor, and foresight in the performance of all those tasks, for which he has earned the unanimous regard, respect, and gratitude of physicists."