

OBITUARIES

Alvin E. Graves

Alvin E. Graves, head of the Test Division at Los Alamos Scientific Laboratory, died of a heart attack on July 29 while vacationing near Del Norte, Colo. Dr. Graves, one of the group of scientists who constructed the first chainreacting pile under the west stands of the University of Chicago's Stagg Field in 1942, had been a member of the scientific staff at Los Alamos since 1943.

He was born in Washington, D. C., on November 9, 1909. He received his BS degree from the University of Virginia in 1931 and his PhD in physics from the University of Chicago in 1939. He joined the faculty of the University of Texas in 1939 as an instructor and was promoted to assistant professor in 1941. From 1942 to 1960, he held the title of associate professor (on leave). In 1942, he joined Chicago's Metallurgical Laboratory and a year later came to Los Alamos as a staff member. He was promoted to group leader in 1945, to associate division leader in 1947 and to division leader in 1948.

As a group leader at Los Alamos, he was part of the staff that conducted the first atomic bomb test at Trinity in 1945. In 1947, he was appointed deputy scientific director of the Atomic Energy Commission's Pacific Proving Grounds operations, and, from 1948 until 1955, served as scientific director. He was test director of the Nevada Proving Grounds operations from 1951 to 1954 and scientific advisor to the Nevada Test Site and Eniwetok Proving Grounds operations since 1955. In 1948, he was one of eight men involved in a laboratory accident in which fissionable material was accidentally brought to a critical state. The resulting nuclear fission caused the death of Dr. Louis Slotin. Dr. Graves suffered a severe heart attack in December 1955, but recovered after several months of convalescence to resume his duties as division leader.

Dr. Graves was chairman of a committee of senior reviewers for the

AEC, and served as a representative of the Commission at the 1959 Geneva conference on the discontinuance of nuclear weapons tests. The US Air Force awarded him an exceptional civilian service award in 1951, the US Army gave him a certificate of achievement in 1954, and the Federal Civil Defense Administration honored him with a distinguished service award in 1955.

Dr. Graves was a fellow of the American Physical Society.

Sir Edward Appleton

Sir Edward Appleton, winner of the Nobel Prize for physics in 1947, died on April 21 at his home in Edinburgh, Scotland.

Sir Edward was born in Bradford, Yorkshire, in 1892. Through the acquisition of scholarships, he was able to study at St. John's College at Cambridge University, where he worked at the Cavendish Laboratory under Sir J. J. Thomson and Lord Rutherford. He received his BA in natural science in 1914. In World War I, while serving in the Royal Engineers Corps, he became interested in the propagation and fading of radio signals. After the armistice, he returned to Cambridge and began experimental studies on the subject. A few years later, with the advent of sufficiently powerful transmitters in England, he was able to verify the existence of the postulated Heaviside ionized layer in the upper atmosphere. Sir Edward's subsequent studies of the ionization density of the various reflecting layers of the atmosphere with respect to various radio frequencies have found application to astronomy, atmospheric physics, geophysics, and meteorology, as well as radio-wave propagation techniques.

In 1949, Sir Edward accepted the posts of principal and vice chancellor of the University of Edinburgh. He took an active part in the planning and administration of the International Geophysical Year and in the

interpretation of the data obtained under the IGY program.

Among Sir Edward's many honors were the United States Medal of Merit, the Royal Medal of the Royal Society, the French Legion of Honor, and the Medal of Honor of the American Institute of Radio Engineers. He was knighted in 1941.

Antonín Bečvář

Czechoslovak astronomer Antonín Bečvář, founder and first director of the Czechoslovak High-Altitude Observatory at Skalnaté Pleso in the Czechoslovakian High Tatra mountains, died in Brandýs nad Labem, outside of Prague, on January 10. He was 64 years old.

Dr. Bečvář was born in Brandýs and educated at the Charles University, where he received his degree in meteorology. His first post was that of a government climatologist. In 1941, as an aftermath of the Munich agreement, the Czechoslovak Astrophysical Observatory at Stará Dala had to be evacuated. Dr. Bečvář then persuaded the Slovak government to move the Observatory's 24-inch Zeiss reflector to Skalnaté Pleso. From that time until 1950, Dr. Bečvář served as director of Czechoslovakia's only high-altitude observatory. During this period, the Observatory was responsible for the discovery of more than twenty comets.

After retiring from an active professional career in 1950, he was engaged in working on several astronomical atlases. He was the author of *Atlas of the Heavens*, first published in 1948 and later distributed in English by the Sky Publishing Corporation in Cambridge, Mass., the *Atlas Eclipticalis*, published in 1958 with the support of the Czechoslovak Academy of Sciences, the *Atlas Borealis*, published in 1960, and a complementary volume, *Atlas Australis*, published in 1964. At the time of his death he was involved in writing another book to be called *Galacticus*, a catalog of all the stars down to the 10th magnitude, clusters, and nebulae, in galactic, rather than equatorial coordinates. A group of Czechoslovakian astronomers plan to complete the project.