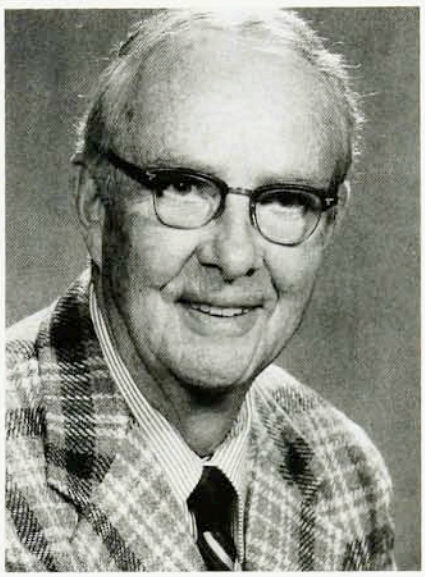
DEPARTMENT OF ENERGY PRESENTS FERMI AWARDS TO ALVAREZ AND TAPE

The US Department of Energy has presented the 1987 Enrico Fermi Awards to Luis W. Alvarez (University of California at Berkeley and Lawrence Berkeley Laboratory) and Gerald F. Tape (former president of Associated Universities Inc). The awards, each of which consists of a Presidential citation, a gold medal and a $100 000 prize, are the highest scientific honor bestowed by DOE.

Alvarez was cited for "the importance and breadth of his pioneering contributions in the physical sciences and their application to high-energy physics, nuclear accelerators, instrumentation, paleontology, archaeology and astronomy." He has done pioneering studies of neutrons and elementary particles. During World War II he worked on a variety of topics—at the MIT Radiation Lab (1940–43) on radar and aviation projects, at the University of Chicago (1943–44) with Enrico Fermi, and at Los Alamos (1944–45) on detonators for the plutonium bomb. At Berkeley after the war his research interests turned to high-energy physics. He was responsible for the design and construction of the first proton linear accelerator, which started operation in 1947. In addition, he proposed using charge exchange to accelerate particles, an idea that led to the development of tandem electrostatic accelerators. In the 1950s Alvarez began a program to develop a large liquid hydrogen bubble chamber for high-energy physics studies, which culminated in a 72-inch chamber and in his receiving the 1968 Nobel Prize for Physics.

Alvarez has made contributions in other fields as well; for instance, he used cosmic rays to search for hidden chambers in an Egyptian pyramid. Recently he and his son Walter, along with collaborators at Berkeley, have proposed that a thin, iridium-rich layer in sedimentary rocks separating layers from the Cretaceous and Tertiary periods of geological history implies that a rather large meteoroid struck the Earth at that time, causing a mass extinction of existing species. (See Alvarez's article in PHYSICS TODAY, July 1987, page 24.)



Luis W. Alvarez

Gerald F. Tape

Alvarez received his BS (1932) and PhD (1936) from the University of Chicago. He went to the University of California in 1936 as an assistant professor in physics, advancing to full professor in 1945. He served as associate director of Lawrence Berkeley in 1954–59 and 1976–78. In 1978 he became professor emeritus. Alvarez was a member of the President's Science Advisory Committee in 1971–72, and a member of the National Commission on Space in 1985–86.

Tape was cited for "a distinguished career in the administration, development and advancement of US and international atomic energy, as well as contributions to the nonproliferation of nuclear weapons, with special recognition for his integrity." Tape received his BA (1935) from Eastern Michigan University, and his MS (1936) and PhD (1940) in physics from the University of Michigan. During World War II he was a staff member of the MIT Radiation Lab (1942–46). He taught physics and carried out research with the cyclotron group at the University of Illinois from 1946 until 1950, when he joined Brookhaven National Laboratory as an assistant to director Leland J. Haworth. Tape has served Brookhaven as deputy director (1951–62) and as president of Associated Universities Inc (the organization that oversees Brookhaven) in 1962–63 and 1969–80. He was a commissioner of the Atomic Energy Commission from 1963 to 1969. Tape has made major contributions to US science policy through his service on several national advisory groups. He was a member of the President's Science Advisory Committee (1969–73), a member of the general advisory committee of the Energy Research and Development Administration (1975–77) and a science adviser to the Office of Science and Technology Policy (1976–81). As US representative to the International Atomic Energy Agency (1973–77), he was a strong advocate of international nuclear cooperation under appropriate controls. He provided US leadership in strengthening the IAEA program for technical cooperation, and assistance for both advanced and developing