in Bridgeport, Conn. in 1924, Coté received his education in physics at Columbia University, where he earned a BA degree in 1947 and a PhD degree in 1953. He had been associated with Argonne National Laboratory since 1954. He was one of the early participants in the development of the fast-chopper neutron spectrometer at the research reactor CP-5 and he is well known for numerous studies of neutron resonances with this experimental system. Recently, he devoted himself to the study of muonic x rays in collaboration with a group at Carnegie Institute of Technology.

Particle Physicist Jack Leitner Dies

Jack Leitner, age 36, professor of physics at Syracuse University, died on 21 Nov. 1967 after having suffered a massive heart attack fourteen days before. Born in Brooklyn, he was educated in the New York City school system and received his AB (1952) and PhD (1957) at Columbia University. During his time as a graduate student, the bubble chamber was invented and this greatly influenced his experimental career in physics.

Leitner's early work at Columbia, under the supervision of Jack Steinberger, involved the construction and utilization of propane bubble chambers in a detailed study of the newly discovered strange particles. From 1957 to 1958 he was a research associate at Duke University, where he joined Martin Block and Erich Harth in the construction of the world's first helium bubble chamber. Experiments were performed a year later with the Bevatron at Berkeley that involved the study of hyperfragments as well as the determination of the K-A relative parity. In 1959 he moved on to Syracuse as assistant professor of physics, rising to the rank of full professor in 1964. During this period he began his close and fruitful collaboration with the physicists at Brookhaven National Laboratory. This collaboration resulted in numerous major contributions to weak- and strong-interaction physics, the best known of which was the discovery of the Ω- hyperon. Throughout the years, Leitner augmented his experimental work with several forays into the theoretical realm dealing with detailed calculations useful for spin determination of particles as well as parity nonconservation.

His interest was wide, concentration deep, and energy inexhaustible. He imparted his style, his drive and love of physics to his students and colleagues. He was concerned with the future of physics and as such was a member of numerous committees, the latest of which was concerned with the lab-user relationship for the new accelerator to be built at Weston, Ill. In the field of elementary particles, Leitner was an acknowledged expert, being an active participant in many international conferences, including the one in Heidelberg, Germany this last September. He was about to spend the next year at CERN exploring new techniques and ideas in the field of boson resonances.

> N. P. Samios Brookhaven National Laboratory

Morris E. Rose, Physicist At University of Virginia

Morris Erich Rose, Robert C. Taylor Distinguished Professor of physics at the University of Virginia, died on November 10, 1967, after a heart attack. He was 56 years old.

Rose, who was born in New York, did his undergraduate work at Wayne State University. After graduate studies in the University of Michigan from 1931 to 1935, he spent a year at the Institute for Advanced Study at Princeton University and three years at Cornell University. He subsequently held fellowships at Yale University, the Bartol Research Foundation, and Princeton University. Before coming to the University of Virginia in 1961, Rose spent fifteen years at Oak Ridge National Laboratory, where he was chief physicist.

Rose had a wide range of interests in theoretical nuclear physics. His work at Cornell, partly in collaboration with Hans Bethe, gave the first extensive theory of the cyclotron as well as a number of the earliest explorations of nuclear structure models. During his years at Oak Ridge, he suggested a method for orienting nuclei based on the exploitation of the large

internal magnetic fields arising from hyperfine coupling. This idea was an important part of the well-known experiment on the beta-decay of Co60 which helped to overthrow the principle of parity conservation in weak interactions. In the same period, Rose made major contributions to clarifying theories of angular momentum in quantum mechanics and of angular correlations in nuclear radiations. His books and publications in these areas have become standard works and give material that is a prerequisite for work in nuclear structure physics.

One of Rose's continuing research interests was established while he



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was a graduate student at Michigan working under the direction of George Uhlenbeck. He wrote his thesis on internal pair formation in nuclei, and this subject, together with internal conversion, continued to be one of his lifelong interests. He was responsible for publishing an extensive tabulation of internal conversion coefficients which was a great spur to further experimental work in this area. Ultimately, his interest in the electromagnetic interactions of nuclei led him to the studies of inelastic electron scattering which occupied much of his time during his six years at the University of Virginia.

Rose had a profound commitment to building up nuclear theoretical research at the University of Virginia. Through his excellent lecturing and his enthusiasm when engaged in research, he communicated his great devotion to physics. His students and his colleagues will remember him with deep gratitude.

J. M. EISENBERG H. P. KELLY University of Virginia □