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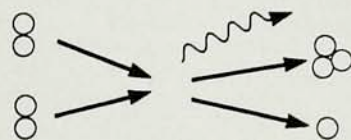
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subatomic particles. His early work was mostly on current algebra and chiral symmetry, and culminated in an influential review article, "Departures from Chiral Symmetry," published in *Physics Reports* in 1975.

In the early 1980s Heinz, along with many other particle theorists, turned his attention to cosmology. In 1982 he published two important papers in that field. One, written with David Atkatz, pioneered the study of how the Robertson-Walker universe might have originated by quantum tunneling from a previous state. The other, written with Joel Primack, was one of the first discussions of the possible role of (still undiscovered) supersymmetric particles in determining the total energy density of the universe.

Beginning in 1983, while he continued his active research in theoretical physics, Heinz extended the scope of his activities. Maintaining a position as an adjunct professor at Rockefeller University, he took on the job of executive director of the New York Academy of Sciences. In this position he demonstrated a great ability for scientific administration. He reinvigorated the academy as a whole and soon brought it into a leadership position in several areas, among them the communication of science to the public. He enthusiastically supported the academy's popular science magazine, *The Sciences*, and eventually became its publisher. In recent years *The Sciences* has won several awards, including the National Magazine Award for General Excellence. Under Heinz's leadership the academy also expanded its already active program of organizing scientific conferences, and he helped direct their focus to novel areas. For example, in 1986 the academy sponsored an influential conference on the foundations of quantum mechanics, which was attended by many prominent physicists.

In 1983 Simon & Schuster published *The Cosmic Code*, Heinz's first book on science for the general public. It included both an authoritative description of recent developments in particle physics and a thorough discussion of some of the perplexing problems involved in the interpretation of quantum mechanics. The style was informal and highly individual. The book was extremely successful, going through several hardcover and paperback printings and many foreign translations, and winning an AIP science writing award. It also influenced the thinking of several literary figures about modern science.

In 1985 Heinz's second book for the

general public, *Perfect Symmetry*, was published. It discussed the history of astronomy and some recent developments in cosmology, such as the idea of phase transitions in the early universe. Not long before his death a third book, *The Dreams of Reason*, was published. It discusses some of his most recent scientific interests, among them the emerging sciences that deal with complexity and the role that the computer plays in them.

Heinz had many interests outside physics. For example, he was president of the International League for Human Rights and a trustee of the Helsinki Watch, which monitors compliance with the Helsinki treaty. In these roles he was active in assisting Soviet scientists who emigrated to the US. He was also president of the Reality Club, a discussion group of scientists, artists and philosophers.

Like many physicists Heinz loved the mountains. Despite a childhood bout with polio, which permanently weakened his ankles, he became a skilled climber. He enjoyed the sense of adventure, and above all the sense of freedom, in climbing. If there is any consolation in the face of Heinz's death, which cut off such a fruitful career, it is that he died doing something he truly loved.

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Georg A. Leander

Georg A. Leander, a theoretical nuclear physicist at the University Isotope Separator at Oak Ridge, died on 17 May 1988 following a lengthy fight with cancer.

Born in Norrköping, Sweden, in 1948, Leander received the degree of Higher Engineer from the Royal Institute of Technology in Stockholm in 1971. He received his PhD in 1977 from the department of mathematical physics of Lund University, Sweden, where he worked in the nuclear theory group of Sven Gosta Nilsson. Leander spent much of his early career at the Niels Bohr Institute and at NORDITA in Copenhagen, while continuing to work with the Lund group. After a short appointment as acting professor of physics at Lund, Leander accepted a position in 1981 with UNISOR. He remained at Oak Ridge until his death.

Leander was a highly productive researcher, publishing more than 100 articles in his brief career. Through-

out that career he worked at the frontier of theoretical nuclear structure physics. In the 1970s a microscopic model for describing nuclear shapes was evolving, following the advent of the macroscopic-microscopic (Strutinsky) theory. Leander made many significant contributions to the development of ideas about geometrical aspects of nuclei, in particular the evolution of nuclear shapes preceding fission and the exotic shapes found in light nuclei. In the late 1970s, when the modes of nuclear coupling between an odd nucleon and the rotating nuclear bulk were being closely investigated, he contributed to the microscopic description and understanding of related phenomena. In the 1980s, with the development of heavy-ion physics, detailed data became available on the properties of nuclei with large angular momenta and at very high temperatures. Leander began studying the quantum theories of high-spin phenomena. Here he made pioneering contributions to the understanding of electromagnetic nuclear decay in high level-density regimes, known also as the "continuum" quantal radiation from highly excited nuclear systems.

Throughout his career Leander was strongly influenced by the Copenhagen school of philosophy and interpretation of nuclear phenomena. That influence is most evident in his last major paper, a detailed treatise on the ideas of spontaneous symmetry breaking in the nuclear intrinsic frame in the context of mirror asymmetry. The paper discusses the profound consequences of symmetry breaking for numerous nucleon-nucleus interaction effects; it should remain a standard in the field for a number of years.

During his career at Oak Ridge, there was a constant stream of nuclear theorists who visited the UNISOR facility to discuss physics with Leander and to collaborate with him on many topics.

We remember his incredible strength as he battled his illness during the last three years of his life. He remained a highly productive scientist and a devoted father and husband throughout this period, during most of which he was hospitalized. His supreme courage was an example that we will not forget.

JERRY DUDEK

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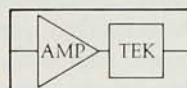
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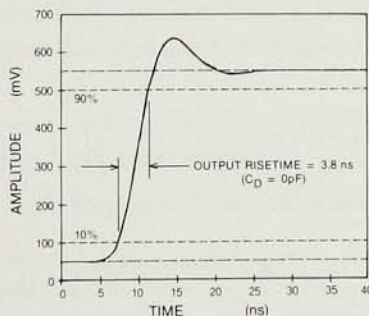
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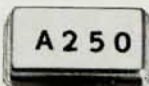
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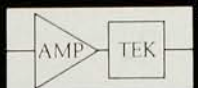
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