OBITUARIES

Simon Peter Rosen 1933–2006

Simon Peter Rosen, 73, died on 13 October 2006 at his home in Rockville, MD, after a battle with pancreatic cancer.

Peter had been senior advisor to the director of the Office of Science in the Department of Energy (DOE) since 2003. From 1997 to 2003, he was associate director of the Office of Science, with responsibility for high-energy and nuclear physics. Highlights of his tenure include the discoveries of neutrino oscillations and dark energy, construction of the B-Factor and the Relativistic Heavy Ion Collider, and the signing of a US–CERN agreement for US participation in the LHC.

An authority on neutrino oscillations and neutrinoless double beta decay, Peter was also a gifted spokesman for particle and nuclear physics. Even while undergoing three years of intensive cancer therapy, he continued his efforts, writing and speaking about the importance of physics and finding DOE support for two NOVA programmes. In September 2006, one month before his death, CERN Courier published Peter’s eloquent tribute to Ray Davis, whom he called “discoverer and grand pioneer of the solar-neutrino problem” (CERN Courier September 2006 p32).

Peter was born in August 1933 in London, UK, and became a US citizen in 1972. Earning a PhD in physics at Oxford in 1957, he began his career at Washington University in St Louis, MO, where he became well known for his work with Henry Primakoff on the theory of double beta decay. Peter then moved to Midwestern Universities Research and spent a year as a NATO Fellow at Oxford.

In 1962, he joined Purdue University as an assistant professor and rose rapidly, promoted to associate professor in 1963 and to professor in 1966. His research focused heavily on implications of various symmetry principles for the weak interactions. These included the application of unitary symmetries to non-leptonic hyperon decays and tests of lepton number conservation in semi-leptonic decays. Following the discovery of neutral weak currents in the mid-1970s, Peter co-authored a series of papers with Boris Kayser, Gerry Garvey, Ephraim Fischbach and others on tests to determine the space–time structure of the neutral current using data from reactions such as elastic neutrino–proton scattering.

At Purdue and throughout his career, Peter returned many times to the theory of double beta decay, a problem that became increasingly important as the evidence for massive neutrinos grew. Peter’s work helped connect experimental bounds to physics beyond the Standard Model: constraints placed on the neutrino mass matrix, on right-handed couplings of Majorana neutrinos, and on exotic processes such as Majoron emission.

Peter also found time to serve on both the university and the School of Science promotion committees and as president of the Purdue chapter of the American Association of University Professors. He enjoyed tennis and squash and was a tenacious competitor – a trait also apparent in his physics, where he relished debate with friends and colleagues.

On leave from Purdue, Peter served as a theoretical physicist at two federal agencies: ERDA (1975–77) and the National Science Foundation (1981–83). He moved from Purdue to the Theoretical Division of Los Alamos National Laboratory (1983–90), where he helped to organize an unsuccessful proposal to mount a US gallium solar-neutrino experiment. He also collaborated with James Gelb on the implications of the newly discovered Mihkeyev–Smirnov–Wolfenstein mechanism for matter-enhanced neutrino oscillations. In anticipation of the Superconducting Supercollider, Peter left Los Alamos to become dean of science at the University of Texas at Arlington (1990–96), establishing a high-energy-physics group in the physics department.

Peter was a fellow in the American Physical Society and the American Association for the Advancement of Science. In 2000 he became professor emeritus of the University of Texas at Arlington and in 2004 received an honorary degree from Purdue University.

Peter is survived by his wife Adrienne, his son Daniel and his daughter Sarah.

Ephraim Fischbach, Sandip Pakvasa, and Wick Haxton.