

VANCE SAILOR

experiments at the graphite reactor, which later became the Brookhaven High Flux Beam Reactor.

In the course of his research, Sailor took on numerous young physicists, as temporary assistants, from countries all over the globe. In that way, he made an exceptional contribution to the training of an international cadre of neutron physicists. In the cases of Greece and Turkey, he assisted scientists at their nuclear research centers to help start and maintain effective programs of research in neutron physics.

In his later years at Brookhaven, he became active in programs in support of the peaceful uses of atomic energy, both those conducted by his laboratory and by others.

Sailor was also a musician and an avid sailor. His purely intellectual approach to problems, his precision and impeccable honesty made him a fine scientist. His ready wit and unfailing loyalty to his friends are among the traits that make him deeply missed by many fortunate enough to have known him.

HERBERT KOUTS
Brookhaven, New York

# Siegfried A. Wouthuysen

Siegfried A. Wouthuysen, whom we lost on 9 July 1996, made a key contribution to Werner Heisenberg's S-matrix theory very early in his career.

Born in Amsterdam on 17 August 1916, Wouthuysen entered the University of Ghent in September 1934 to study chemical engineering. At Ghent, his professor of physical chemistry arranged for him to study physics with Hendrik Kramers at the University of Leiden. There, Wouthuvsen took his doctoral exam in 1939 and became the assistant of Kramers. In early 1942, Wouthuysen found a representation of the Schrödinger dispersion amplitude as an analytic function of the energy with the bound states as poles on the negative energy axis. But he had to go into hiding shortly thereafter to escape the Nazis' wartime persecution of the Jews in The Netherlands. He finally sought refuge in Belgium, where he managed to find employment under a false name. In the meantime. Heisenberg, on visiting Kramers in Leiden later in 1942, learned about Wouthuysen's analytic construction.

In 1946, Kramers arranged for Wouthuysen to receive one of the few US scholarships available for Dutch students, so that he could work with Robert Oppenheimer—both at the University of California in Berkeley (1946–47) and at the Institute for Advanced Study in Princeton (1947–48). Wouthuysen obtained a PhD at Berkeley in 1948 and then accepted a postdoctoral fellowship at the University of Rochester, where, in the summer of 1949, he developed the Foldy–Wouthuysen transformation of spinor mechanics.

Returning to Europe, he became an associate professor at the University of Amsterdam in 1949 and a full professor in 1955. In 1960, he went for a year to CERN, to which he later became the Dutch delegate. In 1962–63, he held the Franqui Chair at the University of Brussels. He also spent periods at Brookhaven National Laboratory and the Weizmann Institute in Rehovoth, Israel.

Wouthuysen was strongly concerned with world peace, became a member of the Pugwash Committee and contributed actively to the Pugwash Statement of 1962.

Until the end of his life, Wouthuysen was the spotless example of a true physicist, publishing only after he was sure he had reached results of value, always open to discussion and criticism and ready to help anybody in search of deeper understanding. His last paper, in 1994, proposed the new idea of a spinor spacetime lattice. This hopeful development came to an end with a prolonged sickness and his death at the age of nearly 80.

Wouthuysen was never very interested in publicity. He was the more appreciated by those of his colleagues who recognized the great values of his knowledge and thoughts.

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