

Dutch underground. His emigration to the United States followed in 1941. Prior to settling in the Washington area he held teaching and research positions at Harvard, the Franklin Institute, the Institute for Advanced Study in Princeton, the University of Pennsylvania, and the University of Nebraska.

A passionate interest in the peaceful resolution of conflict led him to participate in many groups working for peace and disarmament. In 1949, Albert Einstein voiced his support for a paper Jehle wrote for the *Bulletin of the Atomic Scientists*, in which he argued against scientists developing weapons.

Jehle will be remembered by his friends and colleagues as a man of boundless energy, compassion and dedication to humanity. Both his teaching and research were conducted with infectious intensity. He thrived on the discussion of new ideas. Richard Feynman recalled in his Nobel lecture that conversations with Jehle revitalized his interest in alternative formulations of quantum field theory.

After his retirement in 1972, he continued his wide-ranging research at the University of Maryland, at the National Cancer Institute, at the Universities of Uppsala and Amsterdam, and at the Max Planck Institute for Physics and Astrophysics. He was also a guest professor at the University of Munich from 1977 until his death.

WILLIAM C. PARKE
George Washington University

John D. Trimmer

John D. Trimmer, retired professor of physics at Washington College in Chestertown, Maryland, died 24 January at the age of 75.

Trimmer received an AB from Elizabethtown College (1926), MS from Pennsylvania State University (1933), and a PhD in physics from the University of Michigan (1936). After graduation he worked in industrial acoustics for a year before moving to MIT, where he served as an assistant professor in the aeronautical engineering department. There, he worked on instrumentation and vibration measurements and underwater-sound research.

From 1943 to 1946, Trimmer worked on electromagnetic isotope separation in Oak Ridge, Tennessee. Afterwards he was professor of physics at the University of Tennessee (1946-1957). He then moved to the University of Massachusetts at Amherst, where he started the graduate program and served as the head of the physics department from 1957 to 1963 and as physics professor until 1966. From then until his retirement in 1973 he was professor and head of the depart-

ment of physics at Washington College, Chestertown, Maryland. He also served as the director (1968-1971) of a project on digital computing and interdisciplinary studies.

He held various consulting positions to industry and government in acoustics, instrumentation and automatic control, and nuclear fission and fusion reactors. He published widely in acoustics, electronics, instrumentation and cybernetics, and nucleonics. His book *Reponse of Physical Systems* is widely known.

V. ARUNASALAM
Plasma Physics Laboratory
Princeton University

Milton Furst

Milton Furst died 4 March, at 62, of a heart attack. A native New Yorker, he received his bachelor's degree from City College in 1942. During World War II he taught electricity in the US Army Air Force; afterwards, he worked as a physicist in the New York Naval Shipyard. Furst received his doctorate from New York University in 1952. His thesis adviser was Hartmut Kallmann, the inventor of the scintillation counter, under whose supervision Furst conducted some of the earliest experiments on liquid scintillators. Their long and fruitful collaboration lasted until Kallmann's retirement in 1968. They studied the basic processes in liquid scintillators—the migration and transfer of excitation energy, radiationless transitions, quenching, decay times and fluorescence efficiencies—and published some 40 papers on the subject. The broad reach of these studies was acknowledged by a recent remark by Frederick Reines that without the liquid scintillator the neutrino would not have been detected. Furst's research efforts in recent years were in biophysics.

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Centre d'Etude Nucléaire at Saclay and Oakland University in Michigan, Furst performed most of his research at New York University as a research associate, then as a research scientist. Meanwhile he taught at Hunter College, where he began as a lecturer in 1953 and became full professor in 1967. He was a dedicated teacher. It is believed that he did not miss a single class in his 29 years at Hunter.

Furst's relentless honesty and devotion to principle were coupled to great warmth and sincere interest in others. His pointed questions, therefore, were not resented, and they often resonated in the consciences of the people he addressed. His retirement, which took place only a month before his sudden death, was the result of his concluding that it was not right to occupy a position and amass more wealth than he had need for—his needs were quite modest—while young physicists could not find jobs. He planned to pursue his interests in physics in some nonremunerative capacity.

GRACE MARMOR SPRUCH
Rutgers University
Newark

Peter Axel

Peter Axel, noted experimental nuclear physicist and professor at the University of Illinois at Urbana-Champaign, died on 3 February 1983. He was 59 years old.

Axel was born in Brooklyn, New York, and attended Brooklyn College, where he earned a bachelor's degree in chemistry and physics in 1943. From 1943 to 1945, as a staff member of the Radiation Laboratory at MIT, he participated in wartime research that contributed to the development of radar. In 1946 he entered graduate school at the University of Illinois. He earned his PhD in 1949 under the direction of Maurice Goldhaber. Afterwards, he joined the faculty at Illinois, where he remained for the next 34 years.

Axel's research interests included nuclear physics, radioactivity, photon-induced reactions, electronics, and nuclear instrumentation. He conducted his experiments with innovative technique, careful analysis and an individual theoretical interpretation of the data. His early research concentrated on the properties of nuclear isomeric states, an important testing ground for the then-new shell model theory. He was one of the first physicists to recognize the potential of beams of electrons and photons to explore the properties of nuclei and to apply photon-tagging techniques to nuclear-structure problems. His studies set a standard for all future work in the field. They elucidat-



AXEL

ed the nature of the multipole strength functions in nuclei, intermediate structure in the strength functions, and the couplings between the giant resonances and other modes of nuclear excitation. Axel's leadership in the field was confirmed by his invitation to organize the first Gordon Research Conference on Photonuclear Reactions in 1958.

Axel was an active proponent of high-duty-factor electron accelerators. From the late 1960s, he was co-director, with Alfred O. Hanson, of a project to build a series of such accelerators at Illinois and to develop new experimental techniques appropriate for exploiting the unique beams from these accelerators.

Axel maintained a keen interest in teaching and the development of new course materials in physics. From 1957 to 1959, he was an active participant in the Physical Science Study Committee, which developed a revised curriculum for high-school physics courses.

His career also included important public service. From 1953 to 1966 he served on the board of directors and as secretary for the Education Foundation for Nuclear Science, which publishes the *Bulletin of Atomic Scientists*. From 1975 to 1980 he was a member of the evaluation panel for the Center for Radiation Research of the National Bureau of Standards and from 1976 to 1978, its chairman. Axel's many contributions to nuclear physics were recognized when he was elected chairman of the Division of Nuclear Physics of the American Physical Society in 1978.

To perpetuate Axel's contributions to physics, a memorial lecture fund is now being established at the University of Illinois.

LAWRENCE CARDMAN
EDWIN GOLDWASSER
DAVID LAZARUS
DAVID PINES
University of Illinois at
Urbana-Champaign □