critical research areas such as environment, energy, safety, and new materials demanded long-term support from Ford.

Ken was equally at home in the academic and corporate worlds. He had a lifelong interest in science education. While leading a strong materials-modeling effort at Ford, he simultaneously served on the American Physical Society's committee on education (1998–2000), including one year as its chair. Ken worked tirelessly to promote and expand the activities of the APS forum on industrial and applied physics during his tenure as vice chair, chair, and past chair (2001–04). He wrote and spoke eloquently of the need for new approaches and attitudes in industrial research and academia. Ken was elected an APS fellow in 2004 in recognition of his significant applications of atomic-level modeling to technological materials and his outstanding leadership in the promotion of industrially relevant research and education.

A yearlong sabbatical (1999–2000) in the physics department at the University of Michigan, Ann Arbor, enabled Ken to explore ideas from the emerging field of complexity. On returning to Ford, he applied the new ideas to technical management and other complex problems. Working closely with the Center for Complex Systems at Michigan, he encouraged applications of this discipline to practical problems such as sustainable mobility.

An avid reader, Ken appreciated the complementary approaches of scientific reductionism and the view that fundamental laws exist at all levels of the physical world. He thought seriously about the roles of science and religion. His personal interests included travel, food and wine, chess, tennis, and music.

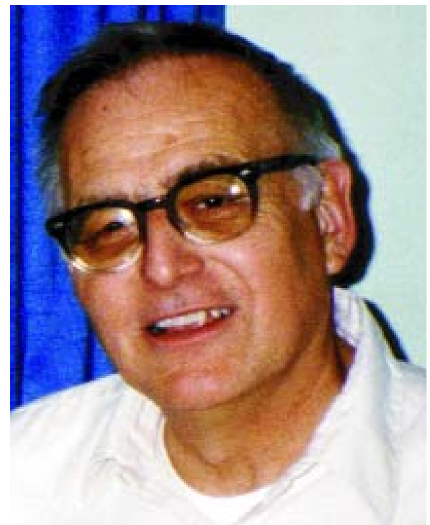
Those in the physics community who read Ken's papers or heard him speak will remember him as a first-rate scientist. Those at Ford can also attest that he was a leader who possessed outstanding vision and integrity. He was a terrific colleague and friend, and we all miss him.

L. Craig Davis
Plymouth, Michigan
John M. Ginder
Ford Motor Company
Dearborn, Michigan
Willes H. Weber
Santa Barbara, California

Lyman Mower

Lyman Mower, known for his theoretical work on the interactions of microwaves with plasmas and on transitions between closely coupled atomic states, died of cancer at his home in Durham, New Hampshire, on 20 December 2004.

Lyman was born on 15 June 1927 in Berkeley, California. After service



Lyman Mower

in the US Navy during World War II, he attended the University of California, Berkeley, and graduated with a BS in chemistry in 1949. He attended graduate school at MIT, beginning in chemistry but soon switching to physics. He received his PhD under Philip Morse in 1953 for his thesis "A Variational Calculation of Electron Scattering from a Static Potential."

That year, he joined the GTE Sylvania Electronic Defense Laboratory in Mountain View, California, as a theoretician in the microwave physics division. For the next four years, he studied the propagation of microwaves in plasmas.

Lyman joined the physics department faculty at the University of New Hampshire in 1957; he became a full professor in 1964. He was the thesis adviser for one of the first students in that department to receive a doctorate.

After arriving at UNH, Lyman carried out his first project with the microwave gas discharge group, headed by Sanborn C. Brown and William P. Allis, in MIT's Research Laboratory of Electronics. In collaboration with Brown and Solomon J. Buchsbaum of AT&T Bell Laboratories, Lyman developed a method of using a microwave cavity as a plasma diagnostic tool. The technique was suitable for both high- and low-density magnetized plasmas.

During a sabbatical in 1964, Lyman was one of 11 visiting fellows in the newly formed Joint Institute of Laboratory Astrophysics at the University of Colorado at Boulder. At JILA he worked on the development of a practical method to calculate the spontaneous and stimulated transition and decay probabilities between several closely coupled unstable states. The technique involves a Green function formulation, with states selected by suitable projection operators, and produces accurate results in a variety of situations. As was characteristic of his work, Lyman emphasized practicality, simplicity, and the inclusion of many useful examples. His technique has been applied to studies of sequential atomic transitions produced by one or multiple bands of intense electromagnetic radiation.

Lyman taught many of the more demanding graduate courses during his years at UNH. His ability to provide elegant, clearly organized solutions to a variety of problems was widely recognized. He chaired the physics department from 1969 to 1972.

After retiring in 1990, Lyman carried out genealogical research in the US and Scandinavia and published five books on his results, two of which were coauthored with his wife, Karen Hoiriis Mower. A sixth book will be published posthumously. In the course of his research, he taught himself Danish.

He also made several startling discoveries. The first was that by moving to Durham, he had by chance settled two miles from lands that his ancestors owned in the 1600s. Second, he learned that his Norwegian ancestry crossed paths with his wife's Danish history; his ancestors had owned properties that were later farmed by hers. Finally, he unearthed the tidbit that he was a descendant of Margrethe Ottesdatter Brahe, sister of the astronomer Tycho (Tyge). As Lyman noted, if you go back far enough, we're all related.

John F. Dawson
Richard L. Kaufmann
University of New Hampshire
Durham

George T. Reynolds

George T. Reynolds, whose insights led to developments in elementary particle physics, environmental science, and biological physics, died of cancer on 19 April 2005 at his Skillman, New Jersey, home.

Born on 27 May 1917 in Trenton, New Jersey, George never strayed far from his central New Jersey roots. He received his bachelor's degree in physics from Rutgers University in 1939 and his physics PhD, under Walker Bleakney, from Princeton University in 1943.

George's thesis work was on shock waves, so he was quickly sought out for the Manhattan Project, which he refused to join. Instead, he tried to enlist in the US Navy but was turned down because he wore eyeglasses. Not one to take "no" for an answer, George succeeded in having that policy waived. After he enlisted, he married, and then awaited orders. To his dismay, he was immediately assigned to Los Alamos, where he worked with George Kistiakowsky on the Fat Man plutonium bomb. He was among the first sent to Hiroshima and Nagasaki to assess damage. He received the Army–Navy Certificate of Appreciation for his contributions.


George T. Reynolds

In 1946 George accepted a faculty position at Princeton, where he remained until the end of his life. Influenced there by John A. Wheeler, he formed a group to study the high-energy-particle aspect of cosmic rays. By 1949 he had begun staffing the group with cloud-chamber experts Ronald Rau from Caltech and Joseph Ballam from the University of California, Berkeley, for a major effort in high-altitude experiments at Echo Lake, Mount Evans, Colorado. George had a knack for identifying young talent. In 1952 he hired a promising young PhD from the University of Chicago, Sam Treiman, as an instructor. He also brought Jack Keuffel, Georgio Salvini, Riccardo Giacconi, Val Fitch, and Jim Cronin on board as members of the cosmic-ray group.

George tried to grow large organic scintillation crystals—because of the low cosmic-ray flux—-as ionizing particle detectors. To get around cracks in the crystals, he tried dissolving the organic scintillator in a liquid. Contrary to the prevailing theory of scintillation, the solution's scintillation efficiency was comparable to that of crystals. George and his collaborators, Salvini and Francis B. Harrison, reported their results in 1950 in a letter to the editor of the *Physical Review*. Liquid scintillators soon became pervasive across the sciences.

By the 1960s, the group's activities centered on particle experiments at Brookhaven National Laboratory's Cosmotron, Berkeley's Bevatron, and the Princeton-Penn Accelerator. George, while pursuing his own studies in luminescence, continued as director of the cosmic-ray lab (later the elementary-particles lab). He created a wonderful place to do physics, where professors, postdocs, and graduate students mixed in a friendly and productive atmosphere.

Protein crystallography was becoming important in the late 1960s, but it involved slow, cumbersome filming of diffraction patterns. George