followed a grueling schedule, giving talks in a new place almost every day. For work in Mexico, Buechner was given the title Professor Extraordinario for Life at the University of Mexico and, later, an honorary PhD from the same institution. In academic processions at MIT he proudly wore his Mexican attire.

When the High Voltage Engineering Corporation was formed, originally for the purpose of developing tools for radiation therapy, Buechner was involved from the beginning as an adviser. As it turned out, other tools for radiation therapy became popular, but the further development of the Van de Graaff generator at High Voltage had an enormous impact on nuclear physics. Buechner was a director of High Voltage from 1954 until his death.

When I think of Buechner the group leader, one characteristic stands out: enthusiasm. Many times I have walked into his office to discuss some idea, sound or not, and have always been received with enthusiasm. I think I speak for all who worked for him when I say that Buechner gave us room to run. When we produced a piece of work, it was ours; he only wanted to share the honor or the authorship if he had contributed directly.

Buechner was a superb teacher and will be remembered as such by a large number of readers of PHYSICS TODAY. There were no frills about his teaching. He was direct and concise and knew exactly how to present the matter to make it as easy as possible for the students to absorb it. He hated sloppiness, and his own work was a model in neatness.

Buechner was a member of the Committee on Nuclear Masses of the Union of Pure and Applied Physics. He was chairman of the physics department at MIT from 1961 to 1967. He retired from MIT in 1978.

HARALD A. ENGE

Massachusetts Institute of Technology

James Welles Shearer

James W. Shearer, senior physicist of the Magnetic Fusion Energy Program of Lawrence Livermore National Laboratory, died on 9 October 1984, in Livermore, California. He was 60 years old.

Before coming to Livermore, Shearer was a senior physicist at Tracer Lab Inc in Waltham, Massachusetts, from 1951–57, and a teaching fellow in physics at MIT from 1945–49. He received his PhD in physics from MIT in 1950.

Shearer began his employment at Lawrence Livermore Lab in October 1957 in the experimental-physics department. From the start, he demonstrated an unusual blend of theoretical

SHEARER

and experimental ability and took the lead in doing advanced experiments, including planning and interpretation. Serving as researcher and project leader, he performed innovative work in weapons physics and laser-produced plasmas, and began his intense interest in the generation of megagauss magnetic fields, which continued throughout the rest of his career.

He joined the Magnetic Fusion Energy Program in 1976, where his first assignments included carrying out experiments for the *Z*-Pinch and intense-ion-beam projects. He later became a member of the physics team working on MFTF-B tandem-mirror design issues. His contributions included ECRH studies in MFTF-B, the design for the ECRH system, and the analysis of hot-electron physics.

Shearer served on several laboratory-wide and DOE committees dealing with a variety of technical and administrative issues. Characteristically, he was particularly proud of the 50 basic physics lectures he delivered while serving on the laboratory's continuing education committee.

One of Shearer's technical papers was included as a major presentation at the third international conference on megagauss field generation and related topics, held in Novosibirsk, USSR, in June 1983. At the time of his death, Shearer, as a permanent member of the steering committee, was helping plan the next conference, Megagauss IV, which will be held in 1986. The committee unanimously agreed to dedicate the Megagauss IV proceedings to Shearer's memory, in recognition of his many contributions to the field and to the past conferences.

Throughout his scientific career, Shearer made significant, permanent contributions to many major projects at Livermore, in both their early and mature stages of development. In addition, his sensitivity for the talents and needs of others will long live in the recollections of his colleagues. He belonged to a very exclusive group of people who were not only profoundly admired for their scientific contributions, but also universally liked.

WILLIAM A. LOKKE
GILBERT W. LEPPELMEIER
GARY D. PORTER
SARA G. SANDERS
Lawrence Livermore National Laboratory

Harold Frederic Stimson

Science lost one of its better thermodynamicists this year with the death on 25 February 1985 of Harold Frederic Stimson. Most scientists will remember Stimson best for his lasting contributions to three major pieces of work: the thermodynamic properties of water and ammonia; the International Practical Temperature Scale of 1948; and a new approach to gas thermometry.

Born in Leicester, Massachusetts on 1 April 1890, Stimson came to the National Bureau of Standards in 1916 after receiving his PhD from Clark University. Immediately he began to study the thermal properties of water and ammonia. In a series of papers published during the late 1930s Stimson and his colleagues, N. S. Osborne and D. C. Ginnings, provided the basic thermodynamic data for the engineering uses of water, steam and ammonia. Today their measurements stand as the most accurate ever obtained on these important substances.

During the extended period of time when the International Temperature Scale of 1948 and its successor, the International Practical Temperature Scale of 1948 (revision of 1960), were in preparation, Stimson ably represented the United States in the work of the Consultative Committee for Thermometry. The deep understanding of thermometry and related fields that Stimson displayed during the long deliberations on the new scale and its amendment increased his international renown as an expert in thermal physics, in particular the thermodynamic properties of water and steam.

Following the adoption of the 1948 temperature scale, Stimson conceived a new approach to gas thermometry based upon a new level of accuracy in mercury manometry. Long after his retirement on 30 April 1960, Stimson continued to work with his colleagues Leslie Guildner, Robert Edsinger and Richard Anderson on this project. Brought to fruition by Stimson's successors, the NBS gas thermometry project has demonstrated the existence of unexpectedly large deviations of the 1968 practical temperature scale from Kelvin thermodynamic temperatures