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
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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 obtained in gas-thermometry temperature determinations above room temperature.

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Calvin Wong

Calvin Wong, experimental physicist at the Lawrence Livermore National Laboratory, died unexpectedly on 3 June 1985, at the age of 59. Wong was born in Davenport, Iowa on 6 February 1926. He served in the US Navy before getting his BS from the Massachusetts Institute of Technology in 1948. In 1953 he received his PhD from the California Institute of Technology for thesis research conducted at the Kellogg Radiation Laboratory under William A. Fowler. Wong joined the Lawrence Livermore National Laboratory shortly thereafter as a research physicist in the experimental nuclear-physics division and continued his work in experimental nuclear physics until his untimely death.

Early in his career Wong pioneered the use of time-to-amplitude converters as coincident circuits for the suppression of large time-dependent backgrounds. This development permitted measurements of neutron elastic scattering to extremely large angles. This first encounter with time-of-flight techniques led to a lifetime of contributions to fast-neutron physics. Wong authored almost a hundred publications on fast-neutron scattering, polarization phenomena, spectroscopic studies using the (p,n) charge-exchange reaction and neutron transport studies. He is best known for his codiscovery of analogue states in medium-*A* nuclei in 1961.

Wong is remembered by his colleagues and students as a meticulously careful researcher and as a man of infinite patience.

JOHN D. ANDERSON
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