

# Thomas Lauritsen

## 1915-1973

On October 16 death ended the 41-year association with Caltech that began when Thomas Lauritsen entered the Institute as a freshman in 1932. Even during those undergraduate years he began the close research collaboration with his father, C. C. Lauritsen, and W. A. Fowler that eventually established the W. K. Kellogg Radiation Laboratory as a center for research in nuclear physics, astrophysics, and geophysics.

As a graduate student, Tommy built the first of the pressurized Van de Graaff accelerators at Caltech. This machine is still used for research and is the oldest accelerator of its type in active use. After receiving his PhD in 1939, he held a postdoctoral appointment in what is now the Niels Bohr Institute in Copenhagen. There he built an identical copy of the Kellogg accelerator, and was thus instrumental in starting the program that led to another international center in nuclear physics. The close relationship that has always characterized the association of these two research groups dates from this period.

During the war years Tommy and the Kellogg group were first involved in the development of the proximity fuse, and later in the design and construction of solid-fueled rockets for the Navy. Virtually all of the rockets used on the South Pacific beachheads came from this project. Tommy was also actively engaged in the work at Los Alamos during the last years of the war. In recognition of his wartime contributions, he received a Presidential citation.

In the postwar period more accelerators were built in Kellogg, and high-precision techniques for the study of nuclear energy levels were invented. The group became the center for the spectroscopy of the light nuclei. Tommy remained interested in this field until his death; his critical reviews (in collaboration with Fay Ajzenberg-Selove) of work in light-element nuclear spectroscopy became world famous, and Caltech became a clearing house for information on the energy levels and systematics of the elements up to neon in the periodic table.

Some of the preoccupation with this range

of nuclei was a consequence of the laboratory's expanding interest in the role played by nuclear reactions in stellar energy generation and element formation. This research has become a major specialty of the Kellogg group. Their success in this new field of nuclear astrophysics is directly attributable to the foundation that Tommy Lauritsen provided—an enormous store of knowledge of the systematics of the light nuclei and their reactions in addition to his collaboration in measurements of the rates of nuclear processes thought to be important under astrophysical circumstances.

In the last few years Tommy devoted much of his time to service to the whole physics community. This consisted of membership on many national committees, the chairmanship of the Division of Nuclear Physics of the American Physical Society (1972-73), and a major role in writing the report of the Physics Survey Committee. This report, *Physics in Perspective*, has just appeared and promises to have a substantial impact not only in listing accomplishments in physics for those outside the field but also in giving the physics community a chance to examine its rather diverse goals and try to arrive at a set of priorities for the future development of its sub-fields.

His Caltech colleagues will remember Tommy's contributions to a wide variety of faculty, ad hoc, and departmental committees. He had the unique gift of being able to look at a situation as if from outside, and thus always had a clearer understanding of the implications of a decision. His membership was prized not only because of his wisdom, but also because of his intrinsic humanity.

Over the years he taught many physics courses; all were distinguished by his careful preparation, his thoughtfulness toward his students, and his remarkable sense of humor. Most recently he helped ease the trauma of partially abandoning *The Feynman Lectures on Physics* in Ph 2 by taking over the job of lecturer in the non-Feynman track (track A) of the course. Though everyone had his own idea of what should be done about Ph 2, Tommy managed to keep the show running despite the over-



abundance of divergent viewpoints.

To those of us at Caltech who knew him well, we have lost a loyal friend and a unique source of solutions to the problems we did not hesitate to share with him. We'll deeply miss his wise council and the sense of humor that helped tie us together as a real community.

—Tom Tombrello  
Professor of Physics

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A Thomas Lauritsen Memorial Fund has been established. Tax deductible contributions may be made to the California Institute of Technology with the notation that they are for this fund.