JOHN TORRENCE TATE
1889-1950

John Torrence Tate, Professor of Physics in the University of Minnesota, died of a cerebral hemorrhage on May 27. An earlier attack in December, 1949, had kept him away from work for some time, but he had recovered to the point of working several hours daily, and he attended the Washington meeting of the American Physical Society, to the great pleasure of his fellow members.

Professor Tate, or Dean Tate, as he had come to be called, or Jack Tate to his closer friends, was one of the physicists who took a large part in the initiation and organization of the American Institute of Physics. No one saw more clearly than he the need of, and the possibilities of, a central organization through which physicists and the several societies representing physics could cooperate for the advancement of physics. He quite naturally was one of the initial members of the Governing Board of the Institute and through successive renominations by the American Physical Society remained a member until his death. At the beginning it was seen that the Institute would need experienced counsel on matters relating to scientific publications. Tate was so obviously qualified that he was asked to become the Adviser on

Publications of the Institute and served in that office until his death. When Dr. Karl T. Compton in 1936 declined re-election to the chairmanship of the Institute, Dr. Tate was the obvious choice of the Board for the chairmanship. As the second Chairman of the Institute he served with distinction from 1936 to 1939.

Born in Lenox, Adams County, Iowa, on July 28, 1889, John Tate spent many of his early school years in New York living with relatives. Taking an interest in chemistry, he was graduated from the Dewitt Clinton High School and then went to the University of Nebraska where, majoring in physics, he attained the BS degree in 1910, MA in 1912. For the PhD degree he studied at the University of Berlin, receiving the degree in 1914. He returned to the University of Nebraska as an Instructor in Physics, 1914–15, and was made an Assistant Professor the next year. In the following year he went to the University of Minnesota as an Instructor, becoming an Assistant Professor, 1917–18; Associate Professor, 1919–21; Professor, 1921–37; then Dean of the College of Science, Literature and Arts, 1937–43 (though he was on war leave 1941–43). Since it was his desire to return after the war to his scientific work rather than to administration, he resigned the deanship in 1943 and became research Professor of Physics.

Dean Tate was a fellow of the American Physical Society, the Optical Society of America, and the Acoustical Society of America, and was a member of the American Association of Physics Teachers and the Society of Rheology, thus holding membership in all five of the member societies of the Institute of Physics. He was a member of Sigma Xi, Phi Beta Kappa, and of other scientific and scholarly organizations and of the Cosmos Club in Washington and the Century in New York.

His own scientific work was mainly on electron impact phenomena in gases and electron interactions with matter, though he was a scholar of wide knowledge and interests in physics, theoretical and experimental. In the guidance of students in research, he was stimulating and tireless. His influence in the advancement of physics, through his own researches and through the students trained under his tutelage, has been notable. While he was successful in educational administration, he loved physics better and was gratified to be able, after his distinguished war service, to go back to research. His personal devotion contributed much to the development of the Department of Physics at Minnesota.

One of Dr. Tate's greatest services to physics was his accomplishment as Managing Editor of the American Physical Society. He edited *The Physical Review* from 1926. It was then a journal of 2250 comparatively small pages a year. By 1949, with its larger pages and more compact type-setting it had grown to four times that volume with three times the number of subscribers thanks to the great increase in the number and activity of American physicists, and is now the leading research journal of physics in the world. As Editor, Tate has had to be concerned with the rising cost of publication and how to meet it, as well as with responsibility for the more scientific aspects of editing, in which he has been open-minded, impartial, and helpful to contributors. In 1929 Tate launched *The Reviews of Modern Physics* for the Physical Society, a quarterly journal, the conception and editing of which have been such that it has an almost unique record for a scientific periodical in that the subscriptions rather more than meet the whole cost of the publication. In 1931 Professor Tate sensed the need of an additional periodical for the publication of research papers relating to applied physics, and gained the support of the American Physical Society for the publication of a new journel, *Physics*, which later, in 1936, was taken over by the Institute of Physics to become the *Journal of Applied Physics*.

Professor Tate's academic life was interrupted by his national service through two wars. In the first world war he was engaged in war research as a 1st Lieutenant in the Signal Corps, U. S. Army. In the second world war, he served in the very responsible post of Chief, Division 6 of the National Defense Research Committee, in charge of research and development of anti-submarine and sub-surface warfare devices, equipment, and methods. His headquarters were in the Empire State Building in New York and his duties involved responsibility for scientific supervision of the activities of numerous contractors with the Office of Scientific Research and Development for work on anti-submarine and sub-surface warfare. Among the larger contractors employing thousands of scientists and engineers were Harvard, Columbia, and California universities, Bell Telephone Laboratories, and Submarine Signalling Corporation.

After the war, from 1946 to 1949, he served as Chairman of the Board of Governors of the Argonne National Laboratory, one of the regional laboratories of the Atomic Energy Commission.

Professor Tate married Lois Beatrice Fossler of Lincoln, Nebraska in 1917 who died in 1939. Their son, John Torrence, Junior, has just been appointed to the Fine Instructorship at Princeton. On June 30, 1945, Professor Tate married Madeline M. Mitchell, who as Manager of Publications of the American Institute of Physics from its start until 1945, had a large part in organizing the work of the Institute and in the successful efforts to acquire and equip the present home of the Institute.

Professor Tate did not fail to receive high honors in his lifetime. To cite some, he was made president of the American Physical Society for 1939, elected to membership in the National Academy of Sciences and the American Philosophical Society, and received honorary degrees of Doctor of Science from the University of Nebraska in 1938 and from Case Institute of Technology in 1945. He was awarded the Medal of Merit by President Truman, the citation reviewing the war services already referred to, and also King George's Medal for Service in the Cause of Freedom in recognition "of the valuable services rendered . . . to the Allied Cause".

John Tate had the respect and affection of physicists everywhere, and of many other colleagues and friends, as a man of learning and wisdom, and of unfailing good will. The loss of his counsel, which was widely sought and always modestly and helpfully given, will long be felt.

GEORGE B. PEGRAM