THE
PHYSICAL REVIEW
A Journal of Experimental and Theoretical Physics Established by E. L. Nichols in 1893
VOL. 57, NO. 1 JANUARY 1, 1940 SECOND SERIES

Floyd Karker Richtmyer

ON Tuesday, November 7, 1939 death came quietly and unexpectedly to Floyd Karker Richtmyer at the floodtide of an unusually active and fruitful life.

Mr. Richtmyer was born in Cobleskill, New York, on October 12, 1881. As student, teacher, research physicist, and educational administrator he was associated with Cornell University during all but two years of his professional life. He had been Dean of the Graduate School of that institution for the past eight years.

The great breadth of his interests and sympathies, the unflagging zeal and devotion with which he applied himself to them were Richtmyer's outstanding characteristics. Although a gifted research man, he was also profoundly interested in the place of science in the modern world and these interests led him to devote a vast amount of time to organizational and administrative work, particularly in the later years of his life. His competence in these matters and the confidence which his associates placed in his wisdom and judgment is attested by his having held at various times the Presidency of the Optical Society of America, of the American Physical Society, the American Association of Physics Teachers, the National Organization of Sigma Xi, the Vice Presidency of the American Association of University Professors, and the Chairmanship of the Division of Physical Science of the National Research Council. He was connected with the editorial staff of the *Journal of the Optical Society* and the *Review of Scientific Instruments* since the inception of those journals and for many years had been their Editor-in-Chief. At various times he had served as Associate Editor of *The Physical Review* and of the *American Physics Teacher*. He played an important role in the organization of the American Institute of Physics, Inc. and served on the Governing Board of that organization from its beginning.

Without minimizing the importance of these and of many other similar activities, it may fairly be said that the supervision and direction of his program of x-ray research at Cornell University was Richtmyer's most cherished professional activity. This program was initiated in 1919 and followed the interruption in his purely scientific work created by the World War in which he served as radio engineer in the Signal Corps. Prior to this time Richtmyer had contributed significantly to the general fields of photoelectricity and illumination through the publication of a score or more papers on these subjects.

Richtmyer's classic work on absorption of x-rays consisted of a long series of precise measurements which led to the formulation of the famous $\lambda^3 Z^4$ law. Also, of noteworthy significance at the time was his careful study of the controversial "J" radiation in his search for "J" absorption discontinuities with negative results.

While working in the x-ray laboratory in Uppsala, Sweden, Richtmyer became interested in 1927 in the phenomena associated with x-ray satellite lines, and subsequently this interest became a major part of the x-ray program at

Cornell. In 1928 Richtmyer proposed the "double-jump" hypothesis to account for the origin of satellite emission and in 1929–30 as a beautiful conclusion of the last extensive laboratory work he personally carried out, published several papers in support of his proposal. This work shares honors with the absorption work in perpetuating his memory in x-ray annals. In 1929 he was awarded the Levy Medal of the Franklin Institute in recognition of these accomplishments.

Richtmyer was among the first to point out in 1935 that the satellite problem was much more complex than was realized earlier and he immediately integrated the Cornell x-ray program in the study of the broader problem of multiple inner ionization of atoms. This problem includes, as component studies, widths and shapes of x-ray lines and absorption limits, Auger transitions and their probabilities, as well as wave-lengths and relative intensities of satellite lines. The fact that penetrating progress was constantly being made in this complex program during the years that administrative work was consuming almost all of his attention attests to his inspiring scientific leadership.

As a member of the scientific corps on the solar eclipse expedition to Canton Island in 1937 Richtmyer took intensity measurements and polarization photographs of the radiation from the sun's corona. These data were in the process of interpretation at the time of his death.

From one point of view it is unfortunate that Richtmyer, a man of superlative research capabilities, should be drawn out of the laboratory by administrative duties; but from a broader point of view, one that recognizes the far-reaching benefits to research that have come and shall continue to come from his extraordinary administrative talents, it may be said that his many and varied activities have expressed fortunately and adequately his life-devotion to scientific research.

The Council of the American Physical Society at its meeting in Chicago, December 1, 1939, passed the following resolution:

RESOLVED: That in sorrow the Council of the American Physical Society records in its Minutes the great loss to this Society, as to many other scientific bodies, in the death on November 7, 1939 of Floyd Karker Richtmyer, Professor of Physics in Cornell University for many years and Dean of the Graduate School since 1931. The official position that Mr. Richtmyer held in this Society, as a member of its Council, 1934–1936, as one of its Board of Editors, 1929–1931, as its Vice President in 1935 and as its President in 1936 were used by him as opportunities for wise and forward looking service to the Society. But to record only his services in these offices would fall far short of revealing the extent to which his wisdom, his skill in planning and negotiation, his unfailing zeal and devotion to high standards have been availed of by the Society through many years. Officially and unofficially he has been a representative of the American Physical Society on many committees and in many Scientific enterprises among which especial mention may be made of The National Research Council and The American Institute of Physics.

As a member and a fellow of this Society, a contributor of papers at its meetings and in its journals, a physicist of broad outlook and sympathies, interested in research, in the applications of physics to useful ends, and in the teaching of physics, and as a friend of each of us, no less than as a distinguished former president of this Society, the members of this Council honor the life of our colleague which at its prime has been so suddenly ended.