

OBITUARIES

Horace M. Trent

Horace M. Trent, head of the US Naval Research Laboratory's Applied Mathematics Department and a member of the Board of Governors of the American Institute of Physics, died on December 16 at the age of 56.

He was born in Chattanooga, Tenn., and educated at Berea College, where he received his BA degree in 1928 and an MA degree in 1929. He was awarded his doctoral degree in 1934 at Indiana University. While studying for his advanced degrees, he served at various times on the faculties of Indiana, Mississippi Agricultural and Mechanical College, and Mississippi State College. After receiving his PhD at Indiana, he returned to Mississippi State as an instructor and was promoted to assistant professor in 1935, and to associate professor two years later.

He joined the physics staff of the US Naval Research Laboratory in 1940, and in 1948 was appointed to head

rope, he was a member of a US Navy technical mission assigned to investigate sound devices developed in Germany during the war. In 1963, while on leave of absence from NRL, he served as a consultant to Dartmouth College with regard to the reorganization of Dartmouth's engineering curriculum.

In addition to his activities on the AIP Governing Board, he was chairman of the Institute's Advisory Committee on Public Relations. Dr. Trent was a fellow of the Acoustical Society of America and an associate editor of the Society's journal. He also belonged to the American Physical Society and various other scientific organizations.

John D. Williams

John D. Williams, an astronomer and mathematician who was a member of the research council of the Rand Corporation, died on November 20 in Santa Monica, Calif., at the age of 55.

Mr. Williams was born in Scranton, Pa. He studied at the University of Arizona, where he received his BS degree in 1937, and at Princeton University, where he also served as an instructor in mathematics. In 1940 he joined the staff of the Steward Observatory at the University of Arizona as a consultant in astronomy. He returned to Princeton in 1941 and spent the next several years there and at Columbia University while engaged in defense work for the Office of Scientific Research and Development and the National Defense Research Committee. He was also a consultant to the 20th Air Force.

He became a section chief for Douglas Aircraft's Rand project in 1946, and in 1948, was named head of the Mathematics Department of the Rand Corporation. He became a member of the Corporation's Research Council when it was formed in 1960.

Mr. Williams, whose research interests included mathematical statistics and the theory of games, was the author of *The Compleat Strategyst: Being a Primer of the Theory of Games of*

Strategy, a book published in 1954. He was a member of the American Physical Society, the American Astronomical Society, and the British Royal Astronomical Society.

Diran H. Tomboulian

Diran H. Tomboulian, professor of physics at Cornell University, died suddenly of a heart attack on December 7, 1964, at the age of 62.

Professor Tomboulian was born in Constantinople, Turkey, and attended Robert College in Constantinople for two years before coming to the United States in 1924. He studied at the University of Rochester, where he received his AB degree in 1927 and his AM degree in 1929. He spent the next two years as an instructor in physics at Rochester. In 1931, he resumed his graduate study at Cornell and was awarded his doctoral degree in physics in 1935. He then joined Cornell's physics faculty as an instructor, and was promoted to the rank of assistant professor in 1940, to associate professor in 1944, and to professor in 1951.

As professor in charge of the sophomore-level physics course for engineering students at Cornell, he taught physics to more than nine thousand students. He had successfully initiated several significant revisions of the physics curriculum for engineering students, and he had just completed work on a sophomore-level textbook, *Electric and Magnetic Fields*, to be published this year by Harcourt, Brace, and World.

His early research was in the fields of atomic spectra, piezoelectricity, hyperfine structure, and nuclear quadrupole moments. More recently, his research had centered on experimental studies of electronic energy levels in solids particularly at energies in the soft x-ray region. He served as a consultant to the Smithsonian Astrophysical Observatory and to the National Aeronautics and Space Administration in connection with spectroscopic studies in outer space, particularly the collection and interpretation of data in the soft x-ray region of the spectrum.



Horace M. Trent

NRL's Applied Mathematics Branch. Since 1961, he had been superintendent of the Laboratory's applied mathematics staff. He also served as an associate professor of electrical engineering at the University of Maryland.

Dr. Trent's research interests also included electromechanical analogies and mathematical theories of mechanics. In 1945, at the close of hostilities in Eu-