

OBITUARIES

Howard C. Hardy, an acoustical consultant in Chicago, died in an automobile accident that occurred on December 20, 1962, some forty miles north of his home in Northlake, Ill. He was 51 years old. A native of Martinsburg, W. Va., he studied at West Virginia University, where he received his bachelor's degree in 1936 and his MS in 1938. He earned his PhD in 1941 at Pennsylvania State University.

After teaching for a year at the University of New Hampshire, Dr. Hardy became involved in the wartime programs in underwater sound at Harvard and at the University of Pennsylvania. He joined the Armour Research Foundation of Illinois Institute of Technology in 1945, serving as supervisor of the Acoustics Section and later as assistant manager of Armour's Physics Department. He left ARF in 1956 to form his own consulting firm, Howard C. Hardy and Associates, which he operated until the time of his death.

Dr. Hardy, who was known for his many contributions in the fields of noise control and architectural acoustics, was instrumental in bringing about the formation of the recently organized National Council of Acoustical Consultants, Inc. Shortly before his death, he was elected to serve as the Council's first president. He was a fellow of the Acoustical Society of America and was active in several ASA committees. Dr. Hardy was also a member of the American Physical Society.

H. B. Brooks, who retired from the National Bureau of Standards in 1939 after having served for more than three decades as a physicist on the Bureau staff, died on October 1 in Washington, D. C. He was 93 years old.

Born in New Bremen, Ohio, he was forced to interrupt his education at the age of 16. In 1903, after several years spent working in the newly developing electrical industry and after having received an engineering degree from Ohio State University, he joined the Bureau of Standards. Three years later he became the first chief of the Bureau's Electrical Instrument Section. In 1926 Johns Hopkins University awarded him the PhD degree, for which he prepared a thesis on an experimental study of the corona voltmeter. Dr. Brooks retired in 1939, but continued his association with NBS as a consulting specialist on electrical measurements. During the period of United States involvement in World War II, he came out of retirement and again served as a physicist on the Bureau staff.

Dr. Brooks is remembered for having designed the widely used Brooks potentiometer and the Brooks inductometer, as well as many other instruments for the precise measurement of voltage, current, and power. He was a fellow of the American Physical Society.



Howard C. Hardy



Theodore H. Berlin

Theodore H. Berlin, professor of physics at the Rockefeller Institute in New York, died in Baltimore on November 16, after having suffered a heart attack. He was born in New York City in 1917. He graduated from the Cooper Union Institute of Technology in 1939 and received his PhD from the University of Michigan in 1944.

After two years as a research physicist at Michigan, he joined the faculty of Johns Hopkins University, becoming an assistant professor in 1947. In 1948 he was named associate professor at Northwestern University, and he remained there for a year, after which he returned to Johns Hopkins. He was named full professor in 1955. In 1961 he joined the Rockefeller Institute, where he worked with George E. Uhlenbeck and Mark Kac in developing a school of physics and mathematics. While at Michigan he had studied under Prof. Uhlenbeck, and at the time of his death the two were collaborating on a book on statistical physics.

A fellow of the American Physical Society, Prof. Berlin served as associate editor of both the *Journal of Chemical Physics* and *The Physical Review*.

Frederick S. Minshall, research associate at the Los Alamos Scientific Laboratory, died on July 4 at his home in Los Alamos following a long illness. He was 56. Mr. Minshall was born in Philomath, Ore., and received his master's degree in physics from the University of Oregon in 1945. He began his association with the Los Alamos Laboratory in the following year. A member of the American Physical Society, he was active in that organization's Division of Fluid Dynamics.