liant gift for generating ideas, which he shared lavishly with his colleagues. He was able to persuade people, charge them with his energy and assure them of success. He will be sorely missed by all those who came into contact with him.

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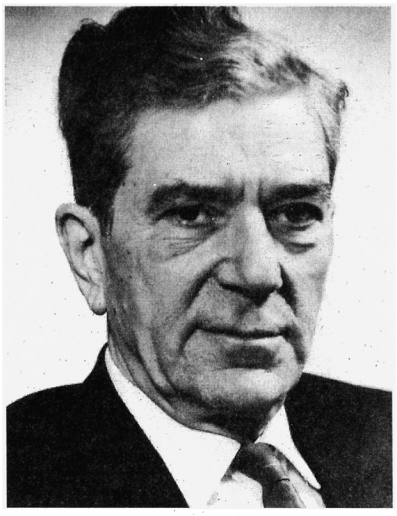
Zoltan Bay

Zoltan Bay, one of the lesser known of the great Hungarian physicists, died painlessly on 4 October 1992 at his home in Chevy Chase, Maryland, while working on a paper on experimental checks of special relativity. He was 92.

Bay had a remarkable career in both fundamental and applied research, in Hungary as well as in the US. In 1926 he earned his PhD in physics from the University of Budapest, after which he worked at the German Bureau of Standards in Berlin. Bay taught from 1930 to 1936 at Szeged University (where he befriended Albert Szent-Györgyi) and was a professor of atomic physics at the Budapest Technical University from 1938 to 1948. Concurrently he directed research at the Tungsram and United Incandescent Lamp companies in Budapest. In that position he built electron multipliers, and in 1938 he was the first to propose their use in particle physics. During the war he developed radar, independently of Allied and German efforts. In January 1946, after the siege of Budapest, he managed under the most difficult circumstances to record radar echoes from the Moon—a feat accomplished just weeks before in the US.

Threatened personally by the Communist regime, which deprived him of his citizenship, he escaped from Hungary in 1948. He settled in Washington, DC, where he worked at George Washington University (1948–55), the National Bureau of Standards (1955–72) and American University (from 1972 onward). At GWU he and his collaborators developed simple but ultrafast coincidence techniques, and they used them to establish simultaneity in the Compton effect to extraordinary accuracy. With the advent of lasers, he focused his attention on the direct measurement of the absolute frequency of an optical transition. Using an ingenious idea that he and Harold S. Boyne had advanced in 1963, Bay, Gabriel G. Luther and John A. White succeeded in making the first such measurement in 1972. This, plus Bay's long-term effort that proved that the velocity of light in a vacuum is independent of frequency, led to his proposal for the unified standardization of time, length and frequency, wherein c, the velocity of light, is a defined quantity. This proposal, now internationally adopted, constituted the greatest advance in metrology since Albert Michelson replaced the physical meter stick with an optical wavelength.



Zoltan Bay

Zoltan Bay was a deep and original thinker, one who could identify important questions and provide elegant experimental solutions for them. Though he was never duly appreciated in his lifetime, he will be long remembered.

VALENTINE L. TELEGDI
California Institute of Technology
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Hillard B. Huntington

Hillard B. Huntingon, a physicist whose early research on electromigration of atoms ultimately hastened the development of reliable integrated circuits and computer chips, died at his home on 17 July 1992, after a long bout with cancer. He was 81.

Born in Wilkes Barre, Pennsylvania, Huntington received his bachelor's (1932), master's (1933) and doctoral (1941) degrees from Princeton University. He then taught at Culver Military Academy, the University of Pennsylvania and Washington University in St. Louis. During World War II Huntington was a research associate in the Radiation Lab at MIT, where he worked on refinements of radar.

Huntington joined the faculty at Rensselaer Polytechnic Institute in 1946. He served as chair of the RPI physics department from 1961 to 1968. He continued his work at Rensselaer for 12 years after his formal retirement in 1976.

One of the world's first solid-state physicists, Huntington worked on a variety of important problems. He is perhaps best known for his pioneering work in electromigration. This work was undertaken long before anyone recognized the impact it would have on integrated circuit technology.

Huntington's early research also classified the electric constants of crystals, and his measurements became very important in geological research. He was also a specialist in problems dealing with diffusion and the conductivity of metals.

Huntington was always sympathetic to the needs of his graduate students, and it was a pleasure to interact with him. He was a gentle and humble man, always interested in the physics of the problems. When things did not work out he took the blame, and when things did work out the students got the praise.

An accomplished painter, Huntington was active in the Rensselaer County Council for the Arts and served as a member and officer of the Friends of Chamber Music.

Those of us fortunate enough to have been his students are trying to emulate him the best we can.

IVAR GIAEVER
Rensselaer Polytechnic Institute
Troy, New York
ALEXANDER R. GRONE
Hudson Valley Community College
Troy, New York

Herbert Pomerance

Herbert Pomerance, a physicist at the Oak Ridge National Laboratory since 1943, died of heart failure on 9 September 1992. He was 75.

Pomerance began his career in 1942 as an analytical spectroscopist with the Manhattan Project's metallurgical laboratory at the University of Chicago. Upon coming to Oak Ridge in 1944, Pomerance, together with Ernest O. Wollan, developed the pile oscillator for measuring the thermal neutron cross sections of the elements.

Pomerance used this method in 1947 to identify hafnium as a strongly neutron-absorbing trace element in commercial zirconium. Pomerance realized that zirconium, if purified of the contaminating hafnium, would be ideal as a structural material