

contracting and consulting; he continued in this activity to the end of his life. Responsible for the acoustic design of many buildings, Erf was, for many years, acoustical consultant for the Lutheran Church of America and special advisor on acoustics for Case Institute of Technology.

Erf's interests were not confined to the details of acoustical engineering. He made an outstanding collection of



ERF

rare books on acoustics as well as early acoustical instruments.

After becoming treasurer of the Acoustical Society of America, Erf devoted much time and energy to the business affairs of the society. His tenure was longer than that of any preceding treasurer. He took an active part in the proceedings of the executive council of the society and for several years served as an Acoustical Society representative on the governing board of the American Institute of Physics.

Erf's general interests in educational and industrial administration were reflected in his service as a trustee of the Cleveland Hearing and Speech Center and of Case Institute, as a director of the Northern Ohio Telephone Co and as president of the Case Alumni Association. He was a member of Sigma Xi and the American Physical Society. During World War II he served as administrative officer for an Office of Scientific Research and Development laboratory working on antisubmarine warfare.

R. BRUCE LINDSAY
Brown University

Elbe H. Johnson Was Science Historian at Kenyon College

Emeritus Henry G. Dalton Professor of Physics at Kenyon College, Gambier, Ohio, Elbe H. Johnson, died on 15

Dec. After 41 years at Kenyon, 37 of which were spent as department chairman, he retired in 1955. He was writing a "History of Science" at the time of his death. A former vice-president of the History of Science Society, Johnson contributed to a commemorative volume on Johannes Kepler. He was also the author of a work on laboratory physics.

Johnson, who was born in Traverse City, Mich., received his BS at Olivet College in 1909 and his PhD from the University of Chicago in 1926. He was 80 years old.

Cavid Erginsoy, Theorist At Brookhaven Laboratory

A Brookhaven National Laboratory physicist, Cavid Erginsoy, 43, died of a heart attack in Ankara, Turkey, on 7 Dec. He was on leave from BNL to the Middle East Technical University in Ankara.

Erginsoy, who was born in Ankara, received his BS in 1946 and his PhD in 1952 from the University of London. After serving with the military in Turkey, he became chief engineer at Etibank in 1954 and later was in charge of the research-reactor project of the Turkish AEC. He joined the International Atomic Energy Agency in Vienna upon completing two years of teaching and research at the Middle East Technical University in 1958.

In 1962 he joined the Brookhaven staff and worked primarily in solid-state theory and radiation effects. Together with scientists from Bell Laboratories and Rutgers, he was recently involved in an experimental program concerning lattice-structure influence on charged-particle motion in crystals.

Former Brandeis Chairman, David L. Falkoff, Is Dead

David L. Falkoff, former department chairman at Brandeis University, died on 14 Dec. at the age of 46. He was born in Rochester, N.Y., received his BA degree from the University of Rochester in 1942 and his PhD from the University of Michigan, where he was a National Research Council fellow, in 1948.

In 1948 he joined the staff at Notre Dame as an associate professor, and in 1951 he became associated with both the Lincoln Laboratory at MIT, and Brookhaven National Laboratory. In 1955, as a National Science Foundation senior research fellow, Falkoff

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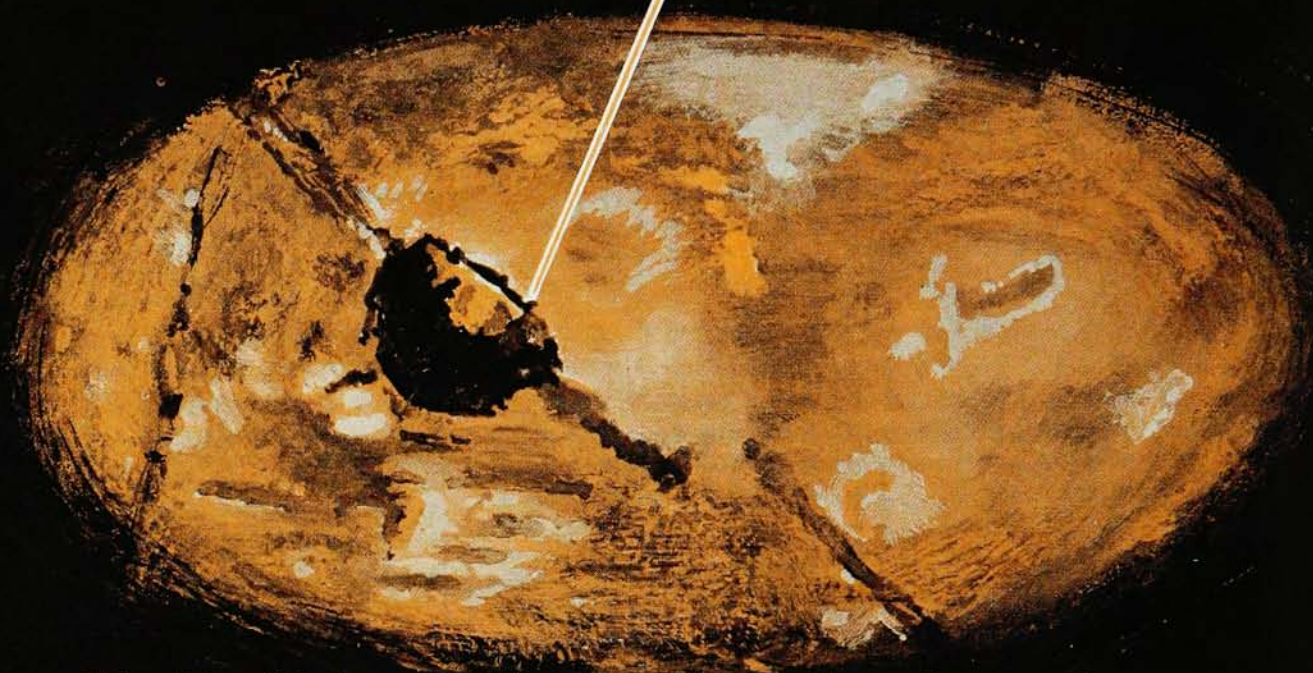
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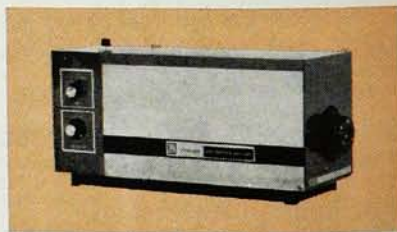


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studied at Harvard and at CERN. The State Department also granted him a Fulbright Fellowship for study in Florence, Italy, during 1962.

He was a former associate editor of the *American Journal of Physics* and a staff member of *Mathematical Reviews*.

Leopold Infeld, Authority on Field Theory and Relativity

Leopold Infeld, member of the Polish Academy of Sciences, died on 15 Jan. in Warsaw. My last meeting with him had taken place in June on the occasion of a colloquium on relativistic fluid dynamics at the Collège de France at Paris. Despite poor health, Infeld was able to chair one of the sessions.

A native of Poland, Leopold Infeld received his doctorate from the Jagellonian University of Cracow in 1921. In 1933 he went to the University of Cambridge where together with Max Born he constructed a nonlinear theory of the electromagnetic field, which is still considered one of the major speculative models of a nonlinear field theory. His next trip abroad was to Princeton, N.J., in 1936, where I, myself a recent arrival from Europe, first met him in Albert Einstein's office. At the Institute for Advanced Study, together with Einstein and Banesh Hoffmann, he worked out the first satisfactory theory of motion of ponderable bodies in a gravitational field, now universally known as the "EIH" theory (Einstein-Infeld-Hoffmann); this was to remain his major research interest the rest of his life. From 1938 to 1949 Infeld was a professor at the University of Toronto; he then returned to the country of his birth to occupy the senior chair in theoretical physics until his death.

The ponderomotive laws of general relativity undoubtedly have been Infeld's dominant research interest. In electromagnetic theory Maxwell's field equations and Lorentz's law for point-charge motion are independent of each other. In direct analogy Einstein had, in his original formulation of general relativity, postulated separately the metric field equations and the law of motion of mass points; the latter were to travel on geodesics. This formulation is conceptually defective if the mass point's own contribution to the total geometry cannot be neglected.

covered that motion of even a large mass is determined by the requirement that in its vicinity the gravitational field equations be satisfied.

Fixation of the trajectories of the sources by field laws alone, peculiar to general-relativistic theories, is destined, I believe, to have an impact on the whole of theoretical physics. Infeld, first with Einstein and later with his students in Canada and Poland, kept improving the techniques of EIH theory, which at first were cumbersome; by 1960 he was ready to present the state of the art in a book written with Jerzy Plebanski, *Motion and Relativity*. Most recently he extended



INFELD

EIH theory to gravitational bremsstrahlung. These last results, obtained in collaboration with Roza Michalska-Trautmanova, will be published posthumously.

Many of Infeld's former research students, at Toronto and at Warsaw, now hold academic positions of their own. In 1962 Infeld and the members of his group were the hosts of the Fourth International Conference on Relativistic Theories of Gravitation, at Warsaw, which was attended by over 200 physicists and mathematicians from all over the world.

Infeld was the author of several books explaining physics and physical theories to the general reader. Probably the best known among these works is *The Evolution of Physics*, which he and Einstein wrote together.

He was one of the original signers of the so-called Einstein-Russell Manifesto of 1955, which eventually led to the Pugwash Movement on Science and World Affairs. At the time of his death Infeld was a member of the Pugwash Continuing Committee.

With his death all of us lose a distinguished colleague, and many, a wise friend.

PETER G. BERGMANN
Syracuse University □

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