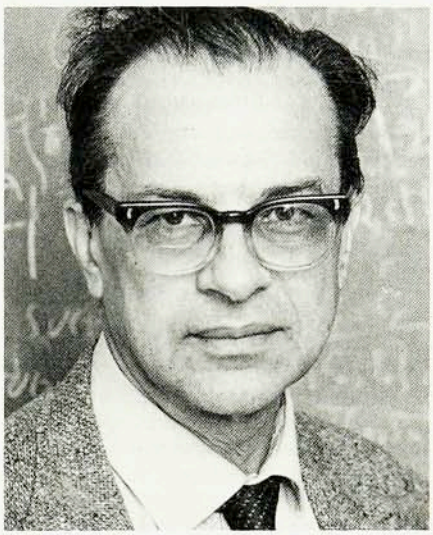
Gürsey receives Wigner Medal for symmetry work

The Group Theory Foundation presented its Wigner Medal to Feza Gürsey (Yale University) "in recognition of his essential role in the discovery of symmetries in particle physics" at the 15th International Colloquium on Group Theoretical Methods in Physics, held in Philadelphia last October.

Gürsey's research concerns the symmetries underlying the fundamental laws of physics. He introduced chiral symmetry in 1960 and did pioneering work on the extension of space–time symmetry from the Poincaré group to the conformal group. Gürsey was cited as "one of the driving forces" in the extension of the internal symmetry groups from SU(3) to other Lie groups, and he encouraged the idea that the space–time and internal symmetries should be unified. In 1964 he and Luigi Radicati suggested that the nucleon and low-lying baryon resonance states could be represented by the group SU(6), combining the ordinary spin groups and the flavor SU(3) group. In its citation the foundation noted that this paper "started an enormous development aimed at an understanding of space–time and charge degrees of freedom in some unified manner." In the early 1980s Gürsey suggested that the exceptional Lie groups E(6), E(7) and E(8) would be useful in physics. He is now studying group theoretical methods in scattering, various aspects of supersymmetry and the role of division algebras in unified theories of interactions.

Gürsey received his BSc in physics and mathematics from Istanbul University in 1944 and his PhD from Imperial College, University of London, in 1950. He remained in England as a postdoc at Cambridge University in 1950–51, and then returned to Turkey as a teaching assistant at Istanbul University. He completed his *Habilitation* in 1953, and was *Docent* from 1954 to 1961. At that time he became a professor of physics at the Middle East Technical University in Ankara. Gürsey held visiting positions at Brookhaven National Laboratory (1957–58), the Institute for Advanced Study (1958–60) and Columbia University (1960–61). He came to the United States permanently in 1968 as a professor of physics at Yale University; he was named Josiah Willard Gibbs Professor of Physics there in 1977.

The Wigner Medal is awarded biennially for "outstanding contributions to the understanding of physics through group theory." The foundation considers work such as the creation and development of mathematical tools that have become important in the description of physical phenomena, the application of group theoretical methods in chemistry and other sciences, the calculation of experimental numbers and the formulation of general laws of nature using group and representation theoretical methods.



GÜRSEY

in brief

John S. Laughlin, professor of radiology at the Cornell University Medical College, received the Gold Medal of the American Radium Society "in recognition of his contributions in nuclear physics to the treatment of cancer" earlier this year at the society's 68th annual meeting. Laughlin also presented the society's annual Janeway Lecture at the meeting, speaking on physical aspects of radiation treatment.

Roger L. Hagengruber has been named to the newly created position of vice president of exploratory systems at Sandia National Laboratories (Albuquerque, New Mexico). He has been with the company since 1972, and prior to this appointment had served as director of systems studies since January 1984.

Herbert Friedman, former chairman of the National Research Council's Commission on Physical Sciences, Mathematics and Resources (1980–86), who pioneered the fields of rocket astronomy and high-energy astrophysics during his 40 years at the Naval Research Laboratory, has been named to the one-year Martin Marietta Chair of Space History at the Smithsonian Institution's Air and Space Museum.

Allen M. Hermann, formerly a member of the technical staff at the Jet Propulsion Laboratory, has become the new chairman of the physics department at the University of Arkansas.

Theodor W. Hänsch, professor of physics at Stanford University, has become director at the Max Planck Institute for Quantum Optics in Munich and professor at the University of Munich.

Roland W. Schmitt, who has served as director of General Electric's research and development center in Schenectady, New York, since 1978, has been named senior vice president and chief scientist for the company.

Orval E. Jones, formerly vice president for defense programs at Sandia National Laboratories, has been named executive vice president of the company. He

replaces Thomas B. Cook Jr, who retired in October.

Frank Di Salvo, formerly head of the solid-state and physics-of-materials research department at Bell Labs (Murray Hill, New Jersey), is now professor of chemistry at Cornell University. His research is in solid-state chemistry and the physics of novel materials.

obituaries

Wallace C. Koehler

Wallace C. Koehler died at his home in Oak Ridge, Tennessee, on 1 April 1986 after a brief bout with cancer; he was 65 years old. Koehler was a distinguished scientist and corporate fellow at the Oak Ridge National Laboratory, a longtime member of the solid-state division and director of the National Center for Small Angle Scattering Research.

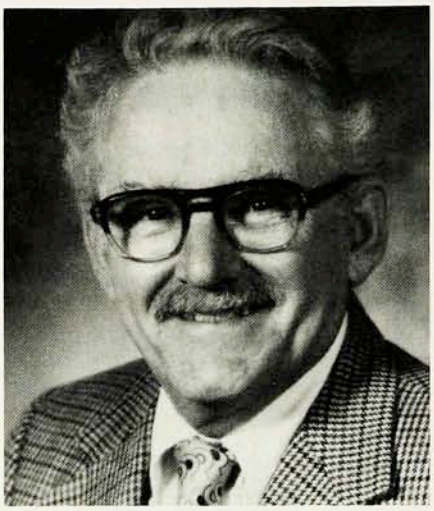
Born in Chicago, Koehler received his BS in physics from the University of Chicago in 1943, an MS from the same institution in 1948 and a PhD in physics from the University of Tennessee in 1953.

In 1949 Koehler came to Oak Ridge, where he, Clifford G. Shull and Ernest O. Wollan pioneered neutron scattering techniques for the study of condensed matter. He was innovative and energetic and, in spite of his youth, he was soon recognized as a leader in the field. Many neutron scattering programs in the world today were built on the foundations laid at Oak Ridge in those early days.

Koehler's research utilizing neutron scattering techniques spanned many areas of the solid-state sciences. He was concerned with such diverse topics as neutron–nucleus scattering amplitudes, crystallography of materials with light atoms, magnetic crystallography, magnetic interactions in condensed systems and superconductivity. He was also involved in developing new neutron scattering techniques; one of his most important contributions was the technique of polarization analysis, which he and his associates developed at Oak Ridge.

Early in his career, Koehler's interests turned to magnetism, and he made many significant contributions to the understanding of magnetic phenomena. Of special importance was his work on three-dimensional transition metal compounds, and particularly his detailed investigation with Wollan of the perovskite-type compounds $La_{1-x}Ca_xMnO_3$. This research was instrumental in explaining the magnetic superexchange mechanisms that exist in such materials.

Koehler's most profound and influential neutron scattering research dealt with rare earth metals, alloys and



KOEHLER

compounds. He was immensely interested in these materials, and he became one of the leading authorities on rare earth magnetism. Koehler and his Oak Ridge associates explained the very unusual magnetic properties of the heavy rare earth metals by unraveling the complicated long-range sinusoidally modulated magnetic structures that exist in these metals at low temperatures.

In 1978 Koehler embarked on a second career. With funding from the National Science Foundation he built the country's most powerful user-oriented small-angle neutron scattering facility at the Oak Ridge High Flux Reactor. The National Center for Small Angle Scattering Research, which includes this 30-m neutron scattering instrument and a 10-m x-ray scattering machine, soon became a hotbed for polymer research and for investigations in other areas of condensed matter science. Several hundred scientists have taken advantage of this superb national facility, and it was largely Koehler's untiring effort that made the center so successful. He cared deeply for the science, and he cared equally that his users succeed: Many were the times that he came out to the laboratory at night or on weekends to rescue a user who had run into trouble. "When will they ever learn to read the user's manual?" he would complain. But he was always there to help, and always encouraging and supportive.

Koehler was a man of many parts. Not only an outstanding scientist, he was a talented actor and a lover of music and the arts. Professionally, he was stubborn when he thought he was right, and he never lost his determination to excel as a physicist.

RALPH M. MOON JR
MICHAEL K. WILKINSON
ALEXANDER ZUCKER
Oak Ridge National Laboratory
Oak Ridge, Tennessee

Herbert A. Pohl

Herbert A. Pohl, visiting scientist at the National Magnet Laboratory and professor emeritus at Oklahoma State University, Stillwater, died on 21 June 1986.

Pohl was born in Lisbon, Portugal, of American parents in 1916. He had his undergraduate as well as graduate education at Duke University, earning a PhD in physical chemistry in 1939. After spending a year at John Hopkins Medical School as a National Defense Research Fellow, he served during World War II as a senior chemist at the US Naval Research Lab. His academic life included faculty positions at Princeton, Brooklyn Polytechnic and Oklahoma State University, where he served from 1964 until his retirement in 1981. Before his research work in academic laboratories Pohl carried out his scientific investigations for 12 years in industry as a senior research associate at E. I. Du Pont de Nemours and Company. Pohl was editor of the *Journal of Biological Physics*, coeditor of *Digest on Dielectrics* and on the editorial board of the *Journal of Electrostatics*. He wrote a monograph on dielectrophoresis, a textbook on quantum mechanics for science and engineering, which was translated into French, Italian and Japanese, and over 200 research papers, besides editing other books and conference proceedings.

Although best known for his research in dielectrophoresis and polymer physics, Pohl's almost half-century scientific career spanned several areas in chemical and biological physics. His research, both theoretical and experimental, bears the stamp of originality and versatility. His paper on the possibility of an organic magnet and his more recent involvement in possible electromagnetic radiation from growing cells typify the boldness of his approach. Furthermore, Pohl had a vision of science being used to benefit mankind; this humanitarian spirit, so evident in his dealings with colleagues and associates, also motivated the direction of his research efforts. In