

he is now chairman of the department of physics.

The Academy's Presidential Award was conferred on Morrison, who was cited for his "outstanding accomplishments as a distinguished scientist and interpreter of the relationship of science to society." He received a \$1500 award and delivered an address, "The Two Dials: Heartbeat and Earthspin."



MORRISON

Morrison received a BS from Carnegie Institute of Technology in 1936 and a PhD in theoretical physics from Berkeley in 1940. After teaching at Cornell as associate, then professor, of physics from 1946 to 1965, he became professor of physics at MIT, where he was appointed University Professor in 1973.

Morrison has investigated superno-

vae, cosmic x rays, disturbed galaxies, quasars and other phenomena in cosmology. Since 1959, he has worked at promoting scientific interest in the systematic search for extraterrestrial signals. He is also an expert and advocate of strategic nuclear arms control.

John C. Wheatley, professor of physics at the University of California at San Diego, was elected in 1980 to the Academy of Finland for "outstanding achievements in the field of ultralow-temperature physics, particularly for his research on normal and superfluid He^3 , and for his fruitful contacts with Finnish science." Urho Kekkonen, President of Finland, awarded the honor to Wheatley.

The Department of Physics and Astronomy of the University of Maryland at College Park has appointed as assistant professors **Bei-Loc Hu** from Harvard University and **John A. Skard** from the University of Bergen in Norway.

Mihir Parikh, formerly a senior scientist at IBM Research Labs, has become the manager of computer-aided design engineering for electron-beam systems at the Extron Division of Varian Associates.

Ralph R. Jacobs, formerly employed in the laser-fusion program of Lawrence Livermore Laboratory, has been appointed senior program manager for research and advanced development in the Laser Instruments Division of Spectra-Physics, Inc.

obituaries

Wolfgang Gentner

The German physicist Wolfgang Gentner died in September 1980. With his death the international community of physicists has lost one of its few great exemplars. He should be remembered not only because of his contributions to physics but also because of his moral character, which enabled him to live through the most tragic period of his country without ever compromising with the evil forces of those days. On the contrary, his actions during the Nazi era and afterwards will forever remain a great testimony to human courage and decency.

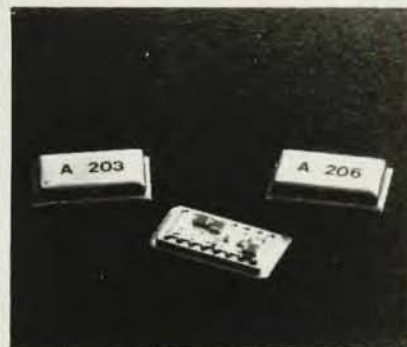
Gentner began his career in physics by working in Frankfurt with Friedrich J. Dessauer on problems of biological radiation physics. He received his PhD degree in 1933, and, in 1936, he joined Walter Bothe at the medical-

physical section of the then Kaiser Wilhelm Institute at Heidelberg, where he stayed until the war years. Before joining that Institute he had already formed close contacts with the growing international circle of nuclear physicists; he spent a year in Paris and later one (1938-39) in Berkeley.

Bothe and Gentner soon turned to fundamental problems of nuclear physics. They constructed a Van de Graaff accelerator of 700-keV protons and performed a number of decisive experiments. The best known among them are their studies of nuclear photo effects with the 17-MeV gamma rays from the proton-lithium reaction. Gentner helped construct the first German cyclotron at Heidelberg. Many among us remember his long-time famous *Atlas of Typical Expansion Chamber Photographs*, which he published together with Bothe and Heinz Maier-Leibnitz in 1940, and which was re-

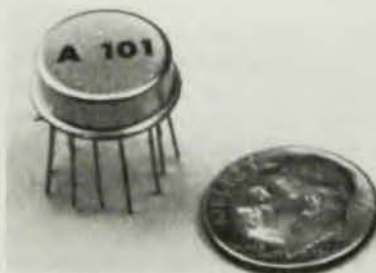
NEW PRODUCT

CHARGE SENSITIVE PREAMPLIFIERS



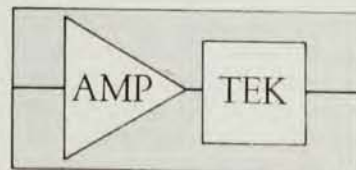
Models A-203 and A-206 are a Charge Sensitive Preamplifier/Pulse Shaper and a matching Voltage Amplifier/Discriminator developed especially for instrumentation employing solid state detectors, proportional counters, photomultipliers, channel electron multipliers or any charge producing detectors in the pulse height analysis or pulse counting mode of operation.

These hybrid integrated circuits feature single supply voltage, low power dissipation (16mW), low noise, pole zero cancellation, unipolar and bipolar outputs and adjustable discrimination level.



Model A-101 is a Charge Sensitive Preamplifier-Discriminator and Pulse Shaper developed especially for instrumentation employing photomultipliers, channel electron multipliers, and other charge producing detectors in the pulse counting mode. Its small size (TO-8 package) allows mounting close to the collector of the multiplier. Power is typically 15 milliwatts and output interfaces directly with C-MOS and TTL logic. Input threshold and output pulse width are externally adjustable.

All Amptek, Inc., products have a one year warranty.



AMPTTEK INC.

6 DeAngelo Drive, Bedford, Mass 01730
Tel: (617) 275-2242

Circle No. 50 on Reader Service Card

obituaries

printed in English in 1954.

In the last decade of his life Gentner's research activities turned toward geochemistry and cosmochemistry. As director of a section of the Max Planck Institute in Heidelberg, he devoted much of his own efforts and those of his institute to the chronology of our planetary system and to the origin of meteorites and of cosmic dust. Later he also became interested in the application of nuclear and atomic physics to archeological questions, such as the dating and geographic origin of ceramic objects and coins.

After the Nazis occupied Paris in World War II Gentner was assigned the job of supervising nuclear research in France. Fortunately, the Nazi authorities did not know of his fervent opposition to their ideas. The leading figure of French nuclear physics of that time was Frederic Joliot, a man deeply committed to the fight against German Nazism. Joliot participated actively in the efforts of the French underground. Gentner and Joliot had a close personal friendship that dated from their earlier association in Paris. Gentner's position as Nazi representative and secret sympathizer with the resistance movement was delicate, to say the least. It required tact, prudence and an unusual amount of personal courage. At great risk to the life and safety of himself and his family, he supported and protected Joliot and his co-workers in their resistance activities on the very premises of the laboratory. The French Republic later bestowed upon Gentner the rank of Officer of the Legion of Honor. Rarely was this title awarded with comparable justification. Due to Gentner's modesty, his deeds of courage never became widely known.

After the war, Gentner's deep humanity and historical sense led him to perform another important task: to reestablish the relations between the scientists of postwar Germany and those of the rest of the world. He recognized the importance of international scientific enterprises as first steps toward a peaceful world. He was a most active participant in the creation and development of CERN, the well-known European international laboratory for particle physics. Furthermore, and closest to his heart, he wanted to do his utmost to create a bridge between the scientists of the young state of Israel and those of the new Germany. He initiated joint projects between German laboratories and Israeli institutions that resulted in a lively exchange of young scientists between the two countries. He also used his influence to enable Israeli physicists to participate effectively in the research at CERN. The Weizmann

Institute awarded him an honorary degree in 1965 and made him a member of its board of directors.

His influence and reputation in postwar Germany brought him into a number of responsible positions in the management of German science and of CERN. He was most effective in these jobs because of his moral convictions, his sense of humor and his knowledge of human weaknesses.

For all of us, his life constitutes an example of how one should act as a scientist and as a human being under trying circumstances. We may not be spared such trials in the future. It will be hard to emulate him, but we should try to come as close as possible.

V.L. TELEGI

Eidgenössische Technische Hochschule

V.F. WEISSKOPF

Massachusetts Institute of Technology

Willard Frank Libby

Willard Frank Libby, Nobel Prize winner in chemistry in 1960, died on 8 September 1980. During his scientific career Libby was associated with the chemistry departments of three universities—the University of California, Berkeley, the University of Chicago and the University of California, Los Angeles. He was a painstaking, patient and effective teacher of undergraduate and graduate students. His scientific and professional career was characterized by an extraordinary versatility and breadth of interest, a consequence of his wide-ranging curiosity. He was director of the statewide University of California Institute of Geophysics and Planetary Physics at the time of his retirement in 1976 and remained active in his numerous professional activities until the time of his death.

Bill Libby, a tall, robust, powerfully built man, was born 17 December 1908 in Grand Valley, Colorado, where his parents had a farm. He went on to the University of California, Berkeley, where he obtained his BS degree in 1931 and his PhD degree in 1933.

Libby's contributions began while he was a graduate student at Berkeley. Here he developed his screen-walled counter, which could be used to detect radioactive isotopes emitting low-energy radiation, and it was his expertise in this area of investigation that laid the basis for some of his later significant discoveries. Using this technique while still a graduate student, he discovered, independently of the work of G. Hevesy and M. Pahl, the natural alpha-particle radioactivity of samarium. His continuing investigation in natural and induced radioactivity, isotopic-tracer techniques and "hot atom"

chemistry during the years immediately following, was among the earliest work in the field of nuclear chemistry in the US.

In 1941 the young assistant professor took a sabbatical leave from Berkeley to go to Princeton University on a Guggenheim Memorial Foundation Fellowship. As fate would have it, he never returned to his faculty position



LIBBY

at Berkeley. Upon the American entry into the war in December of that year Libby immediately moved to Columbia University to work in the Manhattan District Project. Here his laboratory contributions helped create the gaseous diffusion process for the enrichment of the uranium isotope—uranium-235—a key step in the development of the atomic bomb.

At the end of the war, Libby accepted a position as full professor at the University of Chicago, in the department of chemistry and the Institute for Nuclear Studies (now the Enrico Fermi Institute for Nuclear Studies). It was here that he made what is perhaps his most important discovery—his radioactive carbon-14 dating method for determining the age of archeological artifacts up to 50 000 (and more recently, nearly 100 000) years old. He received the Nobel Prize in chemistry for this work, which was based on his exceptional insight and his long-developed expertise in the detection of small intensities of low-energy radiation.

He took a leave of absence from the University of Chicago in 1954 when President Eisenhower appointed him to the five-member Atomic Energy Commission. Until 1959 Libby served in this position, in which he played a leading role in launching the worldwide "Atoms for Peace" program and the Geneva Conferences on the Peaceful Uses of Atomic Energy in 1955 and 1958. He became involved in the controversy over "fall-out" by holding the