OBITUARIES

Vladimir Iosifovich Veksler

High energy particle accelerator pioneer Vladimir Iosifovich Veksler, until recently director of the high-energy laboratory of the Joint Institute for Nuclear Research at Dubna, USSR, died at Dubna on 22 Sept. of a heart attack. He was born in Zhitomir on 4 March 1907 (19 February according to the Julian calendar then in use in Russia) and was educated in Moscow, receiving the Diploma in Electrical Engineering in 1931, the degree of Candidate of Physico-Mathematical Sciences in 1934 and the degree of Doctor of Physico-Mathematical Sciences in 1940. He became a corresponding member of the Academy of sciences of the USSR in 1946, a full member in 1958 and was elected Secretary of the department of nuclear physics of the Academy in 1963. From 1957 to 1963 he was a member of the Commission on High Energy Physics of the International Union of Pure and Applied Physics, and was its chairman for the last three years of this term. He received the Lenin Prize in 1959 and the Atoms for Peace Award (jointly with the writer) in 1963, for his contributions in the field of high-energy accelerators.

VEKSLER

Veksler's scientific career is associated with three institutions: the All-Union Institute of Electrical Engineering (1930-1936) where he worked in the field of x rays; the Lebedev Institute of Physics in Moscow (1936-1956) where he studied cosmic rays, participating in expeditions to the Pamir Mountains of Central Asia, and where he started his work with particle accelerators; and the Joint Institute for Nuclear Research in Dubna, to which he went in 1956, becoming director of its high-energy laboratory. He continued his association with the Lebedev Institute, in addition to teaching at the State University of Moscow. In 1965 he suffered a heart attack that forced him to give up all administrative duties, and he devoted himself to research up to the time of the fatal attack.

Veksler's great contribution to science is his recognition and development of the principle of phase stability of particle orbits in resonance accelerators, whose application has made possible the acceleration of particles to energies of many billions of electron volts, and has led to the emergence of high-energy physics as a laboratory science. This principle was put forth in three papers, submitted on 25 April and 19 July, 1944 to the *Comptes Rendus (URSS)*, and on 1 March, 1945 to the *Journal of Physics of the USSR*. It was also put into practice: in 1946 a 30-MeV electron synchrotron was completed at the Lebedev Institute; other larger electron synchrotrons and a synchrocyclotron were later built in the Soviet Union, and in 1957 the 10-BeV proton synchrotron of the Dubna high-energy laboratory came into operation. This machine, called a "synchrophasotron" in the USSR, was for a few years the highest energy accelerator in operation anywhere. In a remarkable case of scientific parallelism, a very similar development took place in the United States, starting with my independent discovery and publication of the principle in 1945 at the University of California at Berkeley.

Veksler first visited the United States in 1956, and made several subsequent visits. He was a quiet, modest

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Physicist

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Physicist

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Physicist

To conduct experiments involving explosive phenomenon, plasma guns, shock tubes, and other high energy fluid dynamic research, especially as applied to defense problems. Advanced degree in related discipline desirable plus several years' experience with framing camera, streak camera, laser diagnostics, or other high-speed instrumentation.

Physicist

Will formulate and perform calculations of radiative properties of heated molecular and atomic systems, and equilibrium and non-equilibrium thermodynamic properties of molecular and atomic systems at high temperatures over a wide density range. Requires PhD or equivalent in theoretical or experimental physics or physical chemistry.

Physicist

Will correlate information from experiments, from hydrodynamic code calculations and from analysis. Requires PhD degree with courses in fluid and solid mechanics and a knowledge of classical physics. Should have good knowledge of fundamentals of continuum mechanics and some experience in digital computer programming.

Physicist (Semiconductor Devices)

To perform research and development in semiconductor device physics. Requires PhD in solid state physics or equivalent, good general electronics background and experience with fabrication and testing. Experience in radiation effects desirable but not mandatory.

Physicist

To direct the theoretical work on nuclear test field problems. Requires PhD or equivalent plus 5-10 years' experience in computational methods in hydrodynamics, radiation flow and heat transfer. Underground nuclear test experience desirable.

Physicist

To direct analysis of radiation interaction effects in materials media. Requires advanced degree in physics plus experience (or education) in computational methods, hydrodynamics, heat transfer and computers.

Physicist

To direct analysis of high energy plasma interactions. Requires same education and experience as physicist listed above.

Physicist

To formulate and perform calculations of radiative properties of heated molecular and atomic systems, and equilibrium and non-equilibrium thermodynamic properties of molecular and atomic systems at high temperature over a wide density range. Requires PhD or equivalent in theoretical or experimental physics or physical chemistry.

Accelerator Physicist

Perform R&D on linear accelerator programs such as neutron thermalization and shielding studies. PhD physics and analytical and experimental experience required.

Physicist

To assist principal investigator on new instrumentation development program (detectors). Requires degree in physics and 2-3 years' experience in advanced detector development work.

Research Assistant

For Special Nuclear Effects studies. Will set up laboratory and conduct experiments. BS in physics with strong background in electronics.

Physicist

To perform thermionic energy conversion experimentation involving performance, work function and heat transfer measurements. Requires degree in physics or engineering. Desirable to have experience in ultra high vacuum technology and in the use of laboratory instrumentation, ability to devise and assemble test set up, and some knowledge of high temperature technology.

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man with a gentle sense of humor, and was known as a strong proponent of international amity among scientists. Those who knew him feel the loss of a personal friend, as great as the loss of his service to science.

Edwin M. McMillan

Lawrence Radiation Laboratory, Berkeley

Roswell Clifton Gibbs

A past president of both the Optical Society of America and the American Association of Physics Teachers, Roswell Clifton Gibbs, died on 4 Oct. in Dunn Loring, Va. Gibbs, who was 88, had also represented the two societies on the Governing Board of the American Institute of Physics.

Born in Hume, N.Y., Gibbs attended the public schools there and in Pike, N.Y. He received three degrees in physics from Cornell University—his PhD was awarded in 1910—and then joined its physics faculty. He retired in 1946 as chairman of the department. For the year 1927 he served as acting dean of Cornell's College of Arts and Sciences.

Gibbs' retirement was an active one. That same year he moved to Washington, D.C., where he had been appointed chairman of the division of mathematical and physical sciences of the National Research Council. A few years later he assumed an additional position as chairman of the advisory committee to the Army Office of Ordnance Research. From the mid-fifties until 1961 he was consultant to the NRC's Nuclear Data Project and supervisor of its exchange-visitor program. For several years he coedited the *Directory of Nuclear Data Tabulations.*

Gibbs was a fellow of the American Physical Society, the Optical Society of America and the American Association of Physics Teachers. A vice president (1935-37) and president (1937-39) of the OSA, he held the same positions with the AAPT in 1942 and from 1944-46. He represented the OSA on the American Institute of Physics Governing Board from 1940 to 1946 and then the AAPT until 1949. In 1945 he was vice president of the American Association for the Advancement of Science.

A spectroscopist, Gibbs had special interests in luminescence, absorption spectra of organic compounds in solution, extreme ultraviolet spectra of isoelectronic sequences, multiple and hyperfine structure of spectra, fine structure of lines in spectra of hydrogen and deuterium, and determination of the charge-to-mass ratio of the electron from the interval between the hydrogen and deuterium alpha lines.

Thomas A. Read

A physicist long associated with metal science and metallurgical education, Thomas A. Read, died of a heart ailment on 11 Sept. at the age of 53. He had been Professor and Head of the Department of Mining, Metallurgy and Petroleum Engineering at the University of Illinois, Urbana, since 1954.

Read was born in Montclair, N.J. and received his undergraduate education at Columbia University, with a year in Munich at the Technische Hochschule. His doctorate in physics was from Columbia in 1940. He was a Westinghouse Research Fellow from 1939-41 in the group of promising young men assembled by E. U. Condon, at Frankford Arsenal (1941-47) in charge of the metal physics section and physicist at Oak Ridge National Laboratory (1947-48) before joining the metallurgy faculty at the Columbia School of Mines, where his father, a noted mining educator, had earlier been a faculty member and executive officer.

Read was well known for his earliest work, internal-friction studies of dislocation behavior, which opened a field of investigation now widely exploited. His major interest after 1948 was the crystallography of phase transformations in solids, in which he was a leading authority and made extensive theoretical and experimental contributions. He also contributed to a variety of problems dealing with deformation and defects and held several patents concerned with vibration measurements. At Illinois, he devoted much effort to the affairs of the department, while it underwent an order-of-magnitude growth in graduate study and research under his leadership. Active in the Institute of Metals Division of the American Institute of Mining and