

tures and temperatures. With Andrew Lawson he conceived a technique to obtain x-ray diffraction patterns of materials compressed between two tungsten-carbide anvils. Using this technique, they were the first to identify the crystal structure of iron in its transformed state above 130 kilobars. Throughout his career, Jamieson continued to use the technique to identify the structures of other metals and minerals that are stable only at high pressures. In addition, he introduced the use of diamond anvils to produce very high pressures while simultaneously recording x-ray diffraction patterns. During the summers of 1959 to 1963, he worked with Paul De Carli at the Stanford Research Institute on techniques to recover materials after shock compression by high explosive detonations. They were the first to recover diamond from shock-compressed graphite.

From 1963 Jamieson served as a consultant with the Los Alamos National Laboratory, mainly with the shock-wave physics group. His work there encompassed shock recovery, elastic moduli measurements at very high pressures, and x-ray diffraction under shock compression. Most recently, he had joined with Laboratory personnel in using the Stanford Synchrotron x-ray source to develop the first simultaneous high-pressure, high-temperature standards for x-ray diffraction.

BART OLINGER
Los Alamos National Laboratory

Kirk Alfred Shinsky

Kirk Alfred Shinsky, assistant professor of physics at the University of California at Berkeley, died of cancer 6 September 1983. He was 31 years old.

In high school he became interested in particle physics and won a National Westinghouse prize for his study of proton-proton interactions with an apparatus he had built. His undergraduate studies were at Cornell; he did research both at the Cornell Laboratory of Plasma Studies and at Brookhaven National Laboratory. His graduate studies were at Princeton University, where he specialized in high-energy experimental physics. His thesis experiment, carried out at the electron-positron storage ring at the Stanford Linear Accelerator Center, was the inclusive production of hadrons emitted from electron-positron annihilations. He received his PhD in 1978.

From 1978 to 1980 Shinsky was a member of the staff at Cornell University and participated in the construction of the CESR electron-positron

storage ring. He supervised the construction of the dipole magnetic coils for the storage ring and the design of its ultra-high vacuum system.

He joined the faculty at the department of physics at Berkeley and the staff at the Lawrence Berkeley Laboratory in 1980. He was involved in a search for the effects of right-handed weak currents at TRIUMF, the Canadian accelerator in British Columbia, and also participated in the development and initial tests of a hadron calorimeter segment for the detector to be installed at the 2-TeV $\bar{p}p$ collider at Fermilab. At the same time and until his death, he was working on a design for a vertex detector for CLEO.

Shinsky made important contributions to experimental particle physics. His untimely death leaves his Berkeley colleagues with a great sense of loss.

L. M. FALICOV
W. CHINOWSKY
University of California
Berkeley

Richard D. Present

Richard D. Present, professor of physics at the University of Tennessee at Knoxville, died on 2 July 1983 at the age of 70. He had retired this year after 37 years on the faculty.

A native of New York City, Present received his BS degree from the City College of New York in 1931. From there he went to Harvard University, where he received his PhD in physics in 1935 at the age of 21, working under John Van Vleck. His graduation was followed by an instructorship at Purdue (1935-40), a fellowship at the Joliot-Curie Institute in Paris (1937-38), a research position at Harvard (1940-41) and an assistant professorship at New York University (1941-43). Like the careers of many physicists of his generation, his was interrupted by research related to the war: He joined the Manhattan Project in Oak Ridge in 1943 and made important contributions to the theory of the gaseous diffusion process for the separation of uranium isotopes.

He joined the University of Tennessee at Knoxville physics department in 1946 as associate professor and became a full professor in 1948. He served as a consultant to the Clinton National Laboratory (which later became the Oak Ridge National Laboratory) from 1946 to 1948. Afterwards he devoted his time to teaching and research at UTK. He was instrumental in developing the PhD program in physics, which began operation in 1947. In the early years of this program many of our graduate students were employed at Oak Ridge. Present played an impor-

tant role in establishing a branch of our graduate program there in conjunction with the Oak Ridge Institute of Nuclear studies. He was also chairman of the APS Southeastern Section 1964-65.

His early interest was the electronic structure of molecules. He later worked in nuclear physics, preparing fundamental papers on proton-proton scattering, nuclear fission, nuclear forces and the magnetic moments and electrical quadrupole moments of nuclei. His war-time work on the gaseous diffusion process led to his interest in kinetic theory, his graduate course on this subject, and his popular textbook, *Kinetic Theory of Gases*. More recently his work concentrated on the theory of molecular interactions and statistical mechanics. His real love was for the kind of calculation whose results can be compared with experiments, instead of abstract theories with few theoretical predictions. He was a versatile theorist with a sound physical intuition. His critical comments about their work were greatly valued by his colleagues as well as by students.

Over the years, Present taught a wide variety of theoretical physics courses. He was renowned for his well organized and clearly presented lectures.

WILLIAM M. BUGG
EDWARD G. HARRIS
University of Tennessee, Knoxville

George W. Brindley

George W. Brindley, professor emeritus of mineral sciences at Penn State, died 23 October 1983. Born 19 June 1905 in Stoke-on-Trent, England, he received a bachelor's degree in physics in 1926 and a master's degree in 1928 from Manchester University, England. He received a doctorate in physics from Leeds University in 1933. Brindley came to Penn State in 1953, working as a research professor of mineral sciences until 1955, when he was named professor of solid-state technology and head of the department of ceramic technology. In 1962, he was named professor of mineral sciences, serving in that capacity until his retirement in 1973. He was also one of the founders of Penn State's Materials Research Laboratory.

Brindley was internationally recognized for his work as a clay mineralogist and crystallographer. He was president of the Clay Minerals Society, editor of *X-Ray Powder Data File* and associate editor of *Clay and Clay Minerals* and *American Mineralogist*. The excellence of his teaching was recognized by the establishment of an award for undergraduates in his name at Penn State. □