

Princeton, Ernest M. Henley of the University of Washington, Arthur V. Phelps of Westinghouse Research Laboratories and Louis Rosen of Los Alamos. Voting will take place during the winter; the society's annual meeting is scheduled for 3-6 Feb. in New York.

Brickwedde Retires from Penn State; Helped Find Deuterium

On his retirement as Evan Pugh Research Professor Emeritus from the Pennsylvania State University, F. G. Brickwedde received a gold tie clasp. Set into its center is a tiny vial of colorless fluid. On its back is the inscription: "A sample of the first deuterium oxide sold in the US, prepared by D. H. Rank and G. M. Fleming Jr in 1934." His colleagues at the university considered this a suitable and symbolic gift for Brickwedde, who in 1932 first concentrated deuterium and is counted as a codiscoverer of this heavy isotope of hydrogen.

Brickwedde, although he will continue to work in his laboratory and office on the Penn State campus, relinquished in July the chair he held since 1963. He had come to Penn State in 1956 as dean of the College of Chemistry and Physics and held that post until 1963 when the college and departments from the colleges of agriculture and the liberal arts were merged.

After receiving his BA, MA and PhD from Johns Hopkins University, Brickwedde joined the National Bureau of Standards in 1925, spending his first year there working on physiological optics. In 1926 he was named head of the low-temperature laboratory, a position he occupied for the next two decades. In 1946 he became head of the heat and power division, the post he held when he moved to Penn State. He was also chief of the thermodynamics section from 1946 to 1952.

While head of the low-temperature laboratory, Brickwedde first concentrated deuterium by distillation of liquid hydrogen, making possible the spectroscopic identification of the isotope by Harold C. Urey and George M. Murphy at Columbia University. He also headed the group that was the first to liquify helium in the US and established the NBS cryogenic

engineering laboratory at Boulder.

While at NBS he was a part-time professor of physics at the University of Maryland, headed the university's extension program in physics at NBS and taught physics at the NBS graduate school and the Department of Agriculture graduate school. He is a consultant to the Livermore laboratory, where he spent the 1952-53 school year, the inaugural year for the laboratory, on leave from NBS. He is also a consultant to the cryogenics laboratory at Los Alamos.

Brickwedde was a member of the Commission on Very-Low-Temperature Physics of the International Union of Pure and Applied Physics, of the Council of the American Physical So-

ciety and of the board of editors of *The Physical Review*. Currently he is president of the advisory committee on thermometry of the International Committee on Weights and Measures, a member of the subcommittee on retrieval and secondary services of the Information Advisory Committee of the American Institute of Physics, a member of Commission I in Cryophysics and Cryoengineering of the International Institute on Refrigeration, a fellow of the American Physical Society and the American Association for the Advancement of Science and a member of the American Chemical Society, the Washington Academy of Sciences, the Washington Philosophical Society and Sigma Xi.

Alexander Allen of Sciafe Radiation Laboratory Dies

Alexander J. Allen, professor of physics and former director of the Sarah Mellon Sciafe Radiation Laboratory, University of Pittsburgh, died on 7 June.

Allen, who was born in 1900 in Glenwood Springs, Colo., received his AB from the University of Colorado in 1923 and his PhD from New York University in 1928. From 1929 to 1939 he was associated with the Bartol Foundation and the Biochemical Research Foundation of the Franklin Institute in Philadelphia, where he designed and constructed one of the earliest cyclotrons.

In 1939 he joined the faculty of the University of Pittsburgh and began construction of a second major cyclotron. This activity was interrupted by the second world war, during which he was group leader at the Massachusetts Institute of Technology Radiation Laboratory. Shortly after the war he returned to Pittsburgh as Westinghouse Professor of engineering and physics and director of the newly founded Sciafe Laboratory (now the Sarah Mellon Sciafe Nuclear Physics Laboratory). He completed construction of the University of Pittsburgh cyclotron and started a major program of nuclear research. He played a central role in the growth of the Pittsburgh physics department, helping to secure funds and space for solid-state physics and crystallography as well as for nuclear physics.

Allen's publications included sev-

eral early studies of the biological effects of ultraviolet, x-rays and alpha rays. He himself became a victim of radiation before it was appreciated how seriously neutrons could damage eyesight. In the early 1950's radiation cataracts formed on both his eyes. These were removed and he enjoyed adequate, if limited vision for several years. The cataracts reformed, however, and several corneal transplants proved unsuccessful. Allen was essentially totally blind for the last five or six years of his life.

FREDERIC KEFFER
University of Pittsburgh

Department Head at Alabama University, Earl A. Long, Dies

Earl A. Long, department chairman at the University of Alabama died suddenly of a heart attack on 15 May at the age of 58. A physical chemist by training, he took his PhD at Ohio State in 1934 and taught at the University of Missouri and the University of Chicago. His technical interests were low-temperature phenomena, thermodynamics and nuclear physics. He was director of the institute for the study of metals at the University of Chicago 1957-1960. During World War II he was a group leader at the SAM Laboratories of Columbia University, 1942-1943, and at the Los Alamos Scientific Laboratory, 1943-1945, becoming the assistant director there in 1954. From 1960 to 1966 he was with the General Atomic Division of General Dynamics Corp. in La Jolla, California. □