

OBITUARIES

Giulio Racah

Giulio Racah, leading Israeli theoretical physicist and rector of the Hebrew University of Jerusalem, was asphyxiated by gas from a faulty heater on August 29 in Florence, Italy. He was 56 at the time of his death.

Professor Racah, a native of Florence, had been visiting there while enroute to Amsterdam, where he was to have participated in the Zeeman centennial conference on atomic spectroscopy in early September. He had headed the Hebrew University's Department of Theoretical Physics since 1939.

Professor Racah was educated at the University of Florence, where he received his PhD, and pursued further graduate work at the University of Rome, studying under Enrico Fermi, and at the Federal Polytechnic Institute in Zürich, under Wolfgang Pauli. In 1932, at the age of 23, Professor Racah was appointed to a full professorship at the University of Florence, where he remained for six years. He spent the next year at the University of Pisa, but was forced to leave Italy when the Italian Fascist government adopted its anti-Semitic policies. He went to Israel the following year and was immediately named professor of theoretical physics and head of the Department at Hebrew University.

In the years just prior to the establishment of Israel as a state, Professor Racah, who traced his ancestry to a family that had settled in Italy during the Hebrew dispersal from Palestine in the first century, was actively engaged in underground work. In 1947 and 1948, the Hebrew University's campus on Mount Scopus became separated from the rest of the Hebrew sector in Jerusalem, and he served as deputy commander of a section of the Haganah, the Jewish underground, in the fighting that took place there.

Professor Racah had a world-wide reputation as a theorist. Among his contributions to physics was his development of the Racah coefficient in the quantum-mechanical theory of angular momentum. In 1950, he came

to the United States to spend a year at the Institute for Advanced Study at Princeton and at the National Bureau of Standards in Washington. He was chairman of the Science Section of the Israeli Academy of Sciences and Humanities from 1960 to 1963 and was elected rector of the Hebrew University in 1961. He was a member of the American Physical Society.

Cornelius Bol

Cornelius Bol, retired Stanford University research physicist and the inventor of the mercury-vapor lamp, died at his home near Palo Alto, Calif., on July 30.

A native of Tienhoven, Holland, he was born on March 8, 1885. He was educated in the United States, where he received a bachelor of science degree in 1914 from the University of Montana and pursued graduate studies at Stanford University from 1914 to 1916. He then returned to Holland and joined the physics laboratory of Philips Gloeilampenfabriek, in Eindhoven, where he began his work on miniaturized high-pressure mercury lamps.

He remained at Philips until 1936, when he transferred his research to Stanford. In the first years after returning to Stanford, while working as a research associate, he endeavored to decrease the size of the mercury-vapor lamp while continuing to make it brighter. By 1939, he had perfected a midget lamp which was three inches long and the width of a kitchen match. He was named a research professor at Stanford in 1940 and research physicist in 1947. He retired three years later.

Professor Bol was formerly a member of the American Physical Society.

H. W. Russell

H. W. Russell, a physicist at the Battelle Memorial Institute's Columbus Laboratories and one of the original staff members of the Institute, died on July 13 in Columbus, Ohio.

Dr. Russell was born in Denver, Colo., 64 years ago. He was educated at the University of Denver, where he received his AB degree in 1921, and at Cornell University, where he received his PhD in physics in 1927. He served as an assistant professor at the Carnegie Institute of Technology from 1927 to 1929, when he joined Battelle as a chief physicist. In 1947 he was promoted to technical director at the Columbus Laboratories.

A specialist in nuclear and metallurgical research, Dr. Russell served as the Institute's consultant to the US Atomic Energy Commission. In 1948, he was the recipient of the US Armed Forces certificate of appreciation for contributions to the country's war-time program of metallurgical research. He was a fellow of the American Physical Society and a member of the Optical Society of America and the Institute of Aerospace Science.

Three LASL scientists

Robert B. Day, Frank E. Pretzel, and Herbert E. Ungnade, senior scientists at the Los Alamos Scientific Laboratory, died in a mountain-climbing accident on August 15 in southern Colorado.

Dr. Day, who was 42 years old, was born in Cleveland, Ohio. He received his AB degree from Haverford College in 1943 and an MS degree in 1947 and a PhD degree in physics in 1951 from the California Institute of Technology. During World War II, he served as a physicist with the Naval Research Laboratories. He joined Los Alamos in 1952 where he worked on reactions in light nuclei and neutron reactions. He was a member of the American Physical Society.

Dr. Pretzel was born 44 years ago in Chicago and educated at the University of Chicago, where he received his BS in 1942, his MS in 1948, and his PhD in 1951. Prior to joining Los Alamos in 1952, he served as an instructor in general analytical chemistry with the Chicago Board of Education. His research interests included