

Pioneering California physicist dies; built important tool (Update)

September 22 2016, by Kristin J. Bender

A pioneering physicist at the Lawrence Berkeley National Laboratory who helped build a key tool for studying the universe and played a role in the project that created the first atomic bomb has died, a lab official said Thursday.

Edward Joseph Lofgren led the development, construction and operation of the Bevatron, an early particle accelerator at the lab. A giant machine that smashes atoms, it was used to find the antiproton, a discovery which led to a Nobel Prize. This research helped scientists study how today's universe was created and grew.

Lofgren also was involved in the Manhattan project, the federal government's successful effort to build an atomic bomb.

Lofgren died in Oakland, California, on Sept. 6, lab spokesman Glenn Roberts Jr. said. He was 102.

Before his retirement in 1979, he also served as associate laboratory director, and he was the first director of the newly formed accelerator division.

Born Jan. 18, 1914, and the youngest of seven in a family of Swedish immigrants, he moved to Los Angeles at age 13 and finished high school. He later enrolled at UC Berkeley, arriving by bus with two suitcases and \$200. He had read about and become increasingly interested in its Radiation Laboratory and the cyclotron developments

there.

He earned an undergraduate degree in 1938 and then enrolled as a graduate student. In 1940 he joined the Radiation Laboratory's staff as a research assistant. One of his duties was assisting in the development of techniques for medical isotope production.

Lofgren left his graduate studies to become a full-time employee of the Radiation Lab and led development of the ion sources for the Calutron. He spent much of the early war years in Oak Ridge, Tennessee, assisting in the development of the Calutron farm there to enrich uranium-235 for the Manhattan Project, which built the first atomic bomb, according to friend and former colleague Jose Alonso.

Lofgren moved in fall 1944 to Los Alamos, New Mexico, where he joined a group working on detonators for the atomic bomb, the Lawrence Berkeley National Laboratory website says. He eventually became the group's leader, the website says. Lofgren was at the Trinity atomic bomb test in New Mexico, manning a radiation-monitoring station six miles from ground zero, according to the website.

He earned his doctorate from UC Berkeley in June 1946.

Alonso, who worked for Lofgren for five years, but knew him for more than 40 years, said that even a week before his death his innate interest in the world hadn't faltered. Alonso recalled how Lofgren was explaining how San Francisco fog was generated and why it was there.

"He was always wanting to teach," Alonso said.

His daughter, Claire Lofgren, agreed. "As kids, he had a big love of the natural world and throughout his adult life he was a supporter of (the environment) and he would take us to all these wild places," she said.

He would explain the phases of the moon to his children among other things, she recalled. She said she once asked him what led him to become a physicist. He explained to her that as a child of 5 or 6 he was laying under a tree watching the branches blow.

"He was watching the tree move and wondering if the tree was making the wind or the wind was making the tree move," she said. "Those types of questions never left him."

He is preceded in death by Lenore Lofgren, his first wife and the mother of his three children; and Selma Lofgren, his second wife. Lofgren is survived by his three daughters: Helen Lofgren, Laurel Phillipson and Claire Lofgren; four grandchildren; and two great-grandchildren.

© 2016 The Associated Press. All rights reserved.

Citation: Pioneering California physicist dies; built important tool (Update) (2016, September 22) retrieved 26 April 2024 from <https://phys.org/news/2016-09-california-physicist-dies-built-important.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.