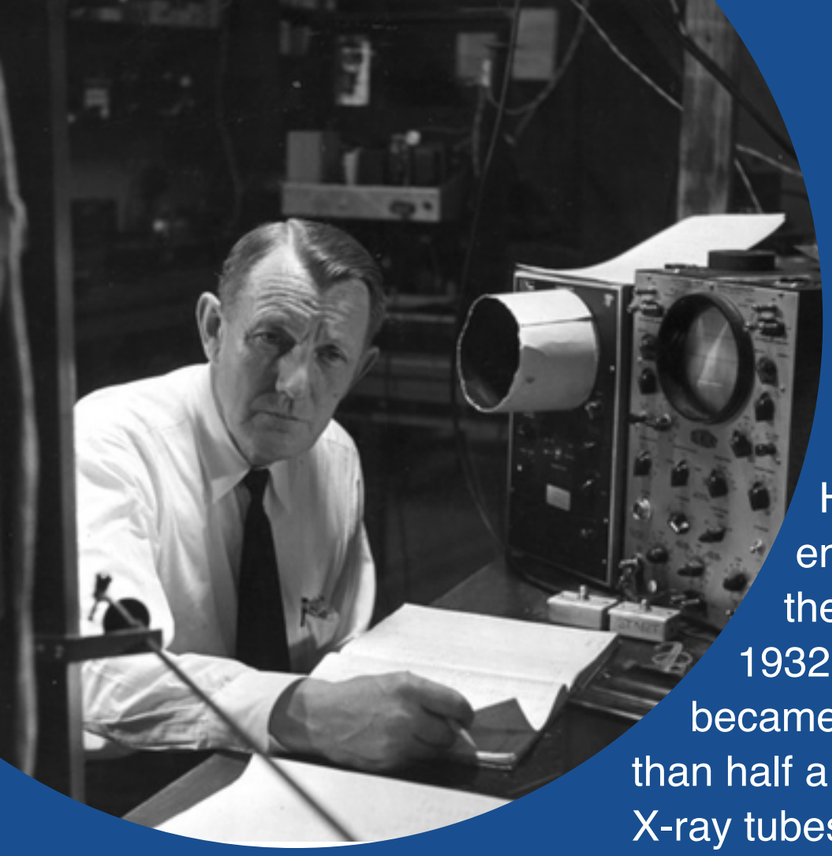
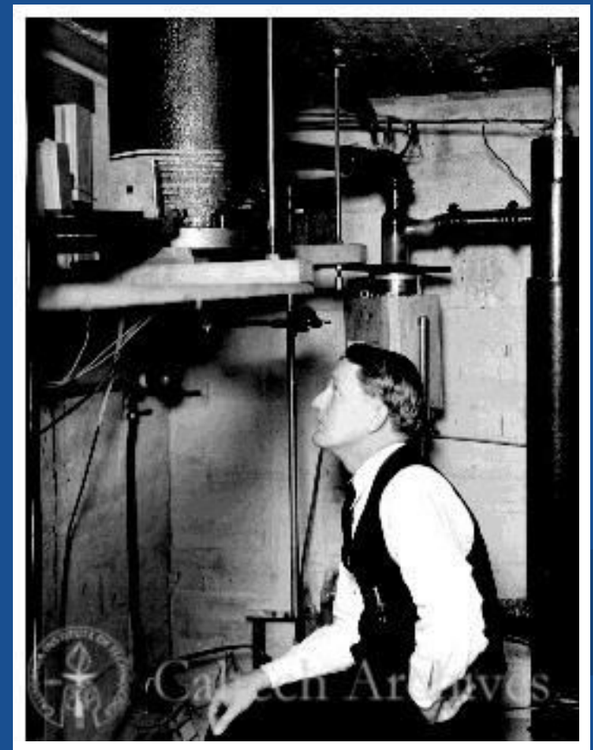


Charles Lauritsen *(1892-1968)*

Danish-American physicist Charles Lauritsen spent most of his academic career as a professor of physics at California Institute of Technology (Caltech).

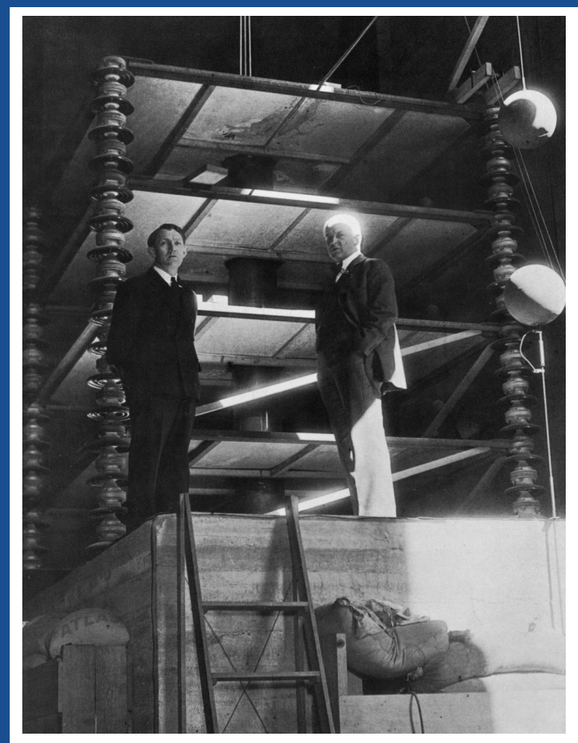
His early research at Caltech involved the use of high energy X-rays to treat cancer. A particular interest of his was the measurement of radiation dose. This interest led to his 1932 invention of the quartz fiber pocket dosimeter, a device that became a mainstay in the nuclear and civil defense fields for more than half a century. The same year, he converted one of his medical X-ray tubes into a positive ion linear accelerator that he used to produce high energy gamma rays, neutrons and radioactivity. He had become a nuclear physicist who would go on to make contributions to astrophysics, solid state physics, atomic spectroscopy and charge symmetry among other things.



Lauritsen in a concrete hut below x-ray tube in high volts lab at Caltech

In 1937, Lauritsen described what came to be known as the Lauritsen electroscope. Extremely reliable, rugged, inexpensive and sensitive, it became what was probably the most widely used type of electroscope in the country.

Our collection includes a pocket dosimeter hand-built by Lauritsen in 1932 and a Lauritsen electroscope.



Lauritsen and Robert Millikan stand atop the million volt x-ray tube at Caltech

ORAU Museum *of* Radiation *and* Radioactivity