Alfred Kastler

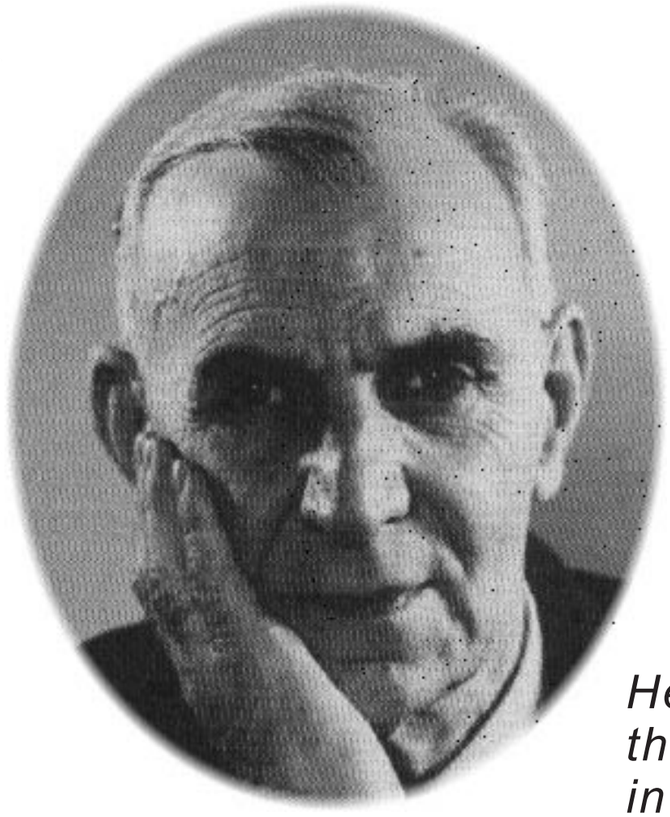
1902 - 1984

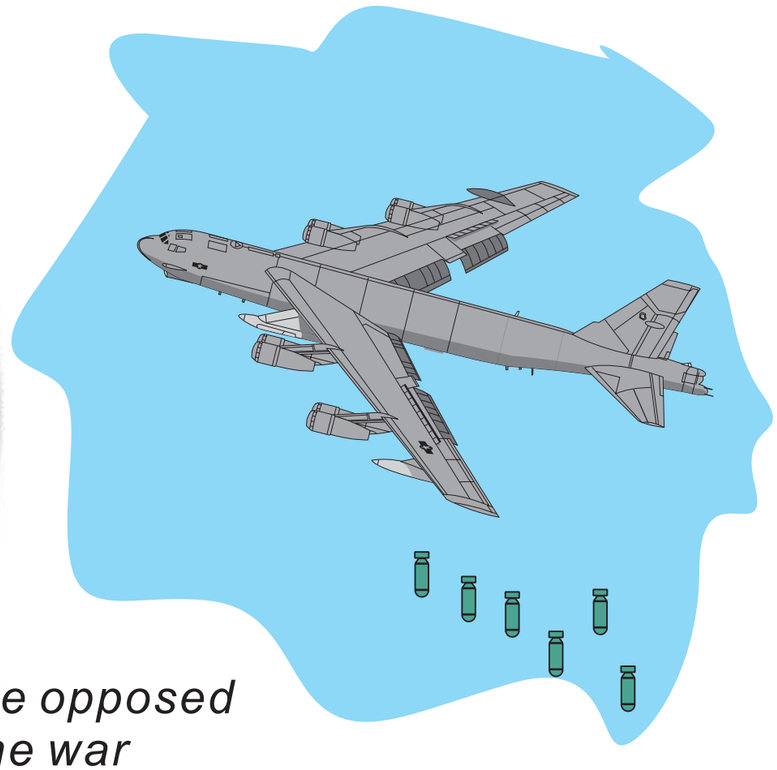
Awarded the Nobel Prize for Physics in 1966

Scientists were always interested in just how the atom is built. According to Bohr's theory of atomic structure, electrons in atoms were allowed to occupy certain specific energy levels. Later studies showed that sub-levels exist within any given energy level. Electrons could occupy any one of the sub-levels, their position often being dependent upon the presence of external magnetic fields or beams of light. The famous physicist Alfred Kastler discovered and developed the so called '***double resonances***' method , using both a light beam and a radio-frequency electromagnetic (Hertzian) wave to identify the sub-levels associated with the main energy levels in atoms. For this work he was awarded the Nobel Prize for physics in 1966.

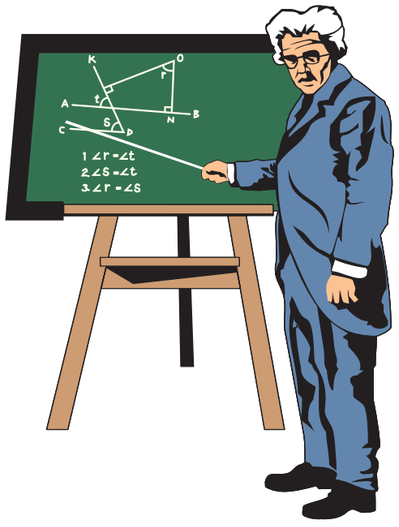
Alfred Kastler was born in 1902 in the town Guebwiller in Alsace, at that time part of Germany (later to revert to France).

While at school, Kastler was interested in mathematics and science. After graduating from the prestigious École Normale Supérieure with a teaching certificate, Kastler held a series of teaching jobs. He then received an appointment in 1931 as a research assistant at the University of Bordeaux with permission to began his graduate studies. There he prepared his thesis on the step-wise excitation of mercury atoms.





He opposed the war in Vietnam



He was a school teacher for several years

In 1938 , Kastler accepted the post of professor of physics at the University of Bordeaux, where he remained until 1941. He returned to the École Normale Supérieure in 1941 and became there the director of a research group in Hertzian spectroscopy.

Kastler was known as a modest and self-effacing man. Nevertheless, he was active in political life. He expressed his political views in writing and speaking. He supported the foundation of the state of Israel and he opposed the use of the atomic bomb and the war in Vietnam. He also lent his support to the Algerian independence movement.

In 1924, while he was still a schoolteacher, he married a fellow teacher, Elise Cosset. The couple had two sons and a daughter. His sons became teachers, and his daughter a physician.

He was elected to the French Academy of Sciences and was an honorary member of other scientific societies.

S.E.