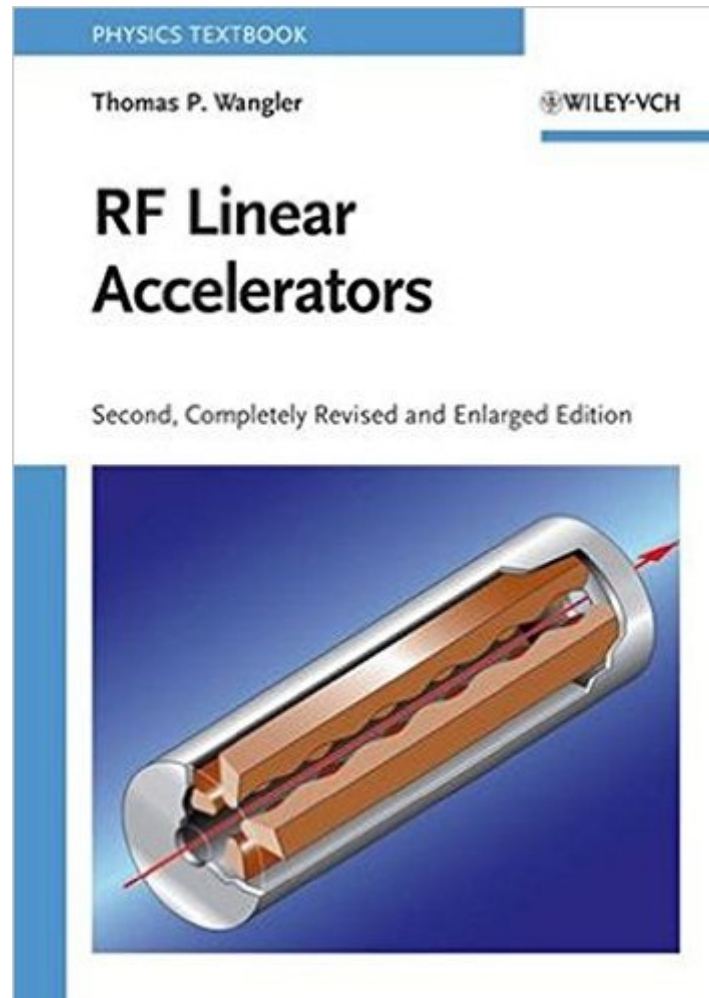# The book was found

# RF Linear Accelerators

# Synopsis

Borne out of twentieth-century science and technology, the field of RF (radio frequency) linear accelerators has made significant contributions to basic research, energy, medicine, and national defense. As we advance into the twenty-first century, the linac field has been undergoing rapid development as the demand for its many applications, emphasizing high-energy, high-intensity, and high-brightness output beams, continues to grow. RF Linear Accelerators is a textbook that is based on a US Particle Accelerator School graduate-level course that fills the need for a single introductory source on linear accelerators. The text provides the scientific principles and up-to-date technological aspects for both electron and ion linacs. This second edition has been completely revised and expanded to include examples of modern RF linacs, special linacs and special techniques as well as superconducting linacs. In addition, problem sets at the end of each chapter supplement the material covered. The book serves as a must-have reference for professionals interested in beam physics and accelerator technology.

# Book Information

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# Customer Reviews

Particle accelerators can be grouped into various types. Of these, perhaps the simplest to understand are linacs - linear accelerators. In a fairly concise book, Wangler offers a clear elucidation of the main principles underlying most linacs, which use radio frequency techniques to accelerate the charged particles.He discusses how the pulses of particles can drift, either transversely (that is, orthogonal to the beam direction), or longitudinally (in the beam direction). Both effects are bad, as they lead to a spreading out and dimunition of the luminosity, in area or time. He

devotes separate chapters to these effects, as the countermeasures are somewhat different.When two beams collide, or when a beam collides with a fixed target, the space charge effect can also be significant. He covers the various dynamics of this effect.Overall, a good graduate text, aimed squarely at experimentalists.

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