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Linear Accelerators - Principles, History, and Applications
THOMAS WANGLER, Los Alamos National Laboratory and Michigan State University

An overview of the principles, history, and technology of linear accelerators is presented. Topics include accelerating structures, beam dynamics, superconducting linacs, linac applications, and some major linac facilities. Linear accelerators have made major contributions to physics research including neutron sources, colliding electron-positron beams, X-ray FELs, and heavy-ion rare-isotope beams. In addition electron linacs are used in hospitals around the world generating X-rays for radiation therapy, an application that represents one of the most significant spins-offs of high-energy and nuclear physics research.