1. Record Nr. UNINA9910257405003321

Titolo	Frontiers of Particle Beams: Factories with e+ e- Rings [[electronic resource]] : Proceedings of a Topical Course Held by the Joint US-CERN School on Particle Accelerators at Benalmádena, Spain, 29 October – 4 November 1992 / / edited by M. Dienes, M. Month, B. Strasser, S. Turner
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1994
ISBN	3-662-13972-3
Descrizione fisica	1 online resource (IX, 414 p. 156 illus.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 425
Disciplina	539.7092
Soggetti	Physics Nuclear physics Heavy ions Hadrons Nuclear fusion Nuclear Physics, Heavy Ions, Hadrons Nuclear Fusion
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Basic e+e?collider physics -- How to reach high luminosity? -- ?-Factory design -- General B factory design considerations -- Lattice and interaction region design for Tau-Charm factories -- Lattice and interaction region design for Z-factories -- Lattice and interaction region design for B factories -- Linear Colliders as Factories for Z0 and Heavier Particles -- Injection -- Vacuum systems for e+e? storage rings -- Ion trapping and clearing -- Backgrounds at e+e- B Factories -- to impedance for short relativistic bunches -- Coherent-instability-induced radiation -- Multibunch instabilities -- Fundamental-mode rf design in e + e ? storage ring factories -- RF Design (higher-order modes) -- The beam-beam interaction in e+e? storage rings -- The B-Factory project at KEK -- Detectors for ?, ?-charm and B Factories -- The role of a B factory in the U.S. program.

Sommario/riassunto

This is presently the best available source on design and optimization of particle factories using e e - circular accelerators at the same time givingthe physical background for their construction. It addresses scientists and graduate students which is clearly reflected in its pedagogical style. The book aims at summarizing all the currently available knowledge on the motivation to construct particle factories, the design considerations of each of the different machine options including their lattices and interaction regions, practical details of the major systems constituting the machines, as well as a wide view of possible factories worldwide. It is the most up-to-date and unique collection of information of particle factories presently available.