

1. Record Nr.	UNINA9910502687003321
Autore	Berz Martin
Titolo	An introduction to beam physics / / by Martin Berz, Kyoko Makino and Weishi Wan
Pubbl/distr/stampa	Taylor & Francis, 2015 Boca Raton, FL : , : CRC Press, , 2014
ISBN	1-138-19890-0 0-429-14813-5 1-4200-1182-0
Edizione	[First edition.]
Descrizione fisica	1 online resource (316 p.)
Collana	Series in High Energy Physics, Cosmology and Gravitation
Classificazione	SCI051000SCI040000
Disciplina	539.7/3
Soggetti	Particles (Nuclear physics) - Mathematics Particle beams Particle accelerators
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Front Cover; Contents; List of Figures; Preface; Chapter 1: Beams and Beam Physics; Chapter 2: Linear Beam Optics; Chapter 3: Fields, Potentials and Equations of Motion; Chapter 4: The Linearization of the Equations of Motion; Chapter 5: Computation and Properties of Maps; Chapter 6: Linear Phase Space Motion; Chapter 7: Imaging Devices; Chapter 8: The Periodic Transport; Chapter 9: Lattice Modules; Chapter 10: Synchrotron Motion; Chapter 11: *Resonances in Repetitive Systems; References; Back Cover
Sommario/riassunto	The field of beam physics touches many areas of physics, engineering, and the sciences. In general terms, beams describe ensembles of particles with initial conditions similar enough to be treated together as a group so that the motion is a weakly nonlinear perturbation of a chosen reference particle. Particle beams are used in a variety of areas, ranging from electron microscopes, particle spectrometers, medical radiation facilities, powerful light sources, and astrophysics to large synchrotrons and storage rings such as the LHC at CERN.