1. Record Nr. UNISALENTO991002401349707536

Autore	Istat
Titolo	Dati generali riassuntivi / ISTAT
Pubbl/distr/stampa	Roma : ISTAT, 1976
Descrizione fisica	1 v. ; 30 cm
Collana	2. Censimento generale dell'agricoltura, 25 ottobre 1970 ; 6
Disciplina	314.45
Soggetti	Agricoltura - Italia - Censimenti
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910678244603321

Autore	Allison Wade
Titolo	The Flight of a Relativistic Charge in Matter : Insights, Calculations and Practical Applications of Classical Electromagnetism / / Wade Allison
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, Springer Nature Switzerland AG, , [2023] ©2023
ISBN	9783031234460 9783031234453
Edizione	[First edition.]
Descrizione fisica	1 online resource (133 pages)
Collana	Lecture Notes in Physics Series ; ; Volume 1014
Disciplina	537.6
Soggetti	Electrodynamics Electromagnetism
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I: Building on Simple Ideas -- Chapter 1 Waves and Sources -- Part II Calculations in Classical Electromagnetism -- Chapter 2 The

Influence of a Passing Charge -- Chapter 3 The Field of a Moving Charge -- Chapter 4 Radiation by the Apparent Angular Acceleration of Charge -- Chapter 5 The Dispersion and Absorption of Electromagnetic Waves -- Chapter 6 Energy Loss of a Charge Moving in a Medium -- Chapter 7 Scattering of a Charge Moving in a Medium -- Part III Two Practical Applications -- Chapter 8 Relativistic Particle Identification -- Chapter 9 Ionisation Beam Cooling -- List of Symbols -- Bibliography -- Index.

Sommario/riassunto

This book is about the energy loss and the coherent radiation emitted by a relativistic charge in matter. These phenomena – locally deposited energy, Cherenkov radiation and transition radiation – are the basis of any charged particle detector able to discriminate charges by their velocity. This book describes these phenomena and how they are related. The fundamental field equations and first principles are used to derive the spectrum of energy-loss signals and thence the velocity resolution that can be achieved. Two specific applications are then followed: the first shows that this resolution has been achieved in practice with a multi-particle detector in the course of an experiment at CERN, and the second shows how, by including scattering, the technique of ionisation cooling of accelerator beams may be reliably simulated. The book is based on a series of lectures given at the University of Oxford to graduate students in experimental particle physics. Some knowledge of mathematical physics at an undergraduate level is assumed, specifically Maxwell’s equations and classical optics.