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Descrizione fisica	1 online resource (x, 339 pages) : digital, PDF file(s)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Introduction: basics of QCD perturbation theory -- 2. Deep inelastic scattering -- 3. Energy evolution and leading logarithm-1/x approximation in QCD -- 4. Dipole approach to high parton density QCD -- 5. Classical gluon fields and the color glass condensate -- 6. Corrections to non-linear evolution equations -- 7. Diffraction at high energy -- 8. Particle production in high energy QCD -- 9. Instead of conclusions -- Appendix A. Reference formulas -- Appendix B. Dispersion relations, analyticity, and unitarity of the scattering amplitude.
Sommario/riassunto	Filling a gap in the current literature, this book is the first entirely dedicated to high energy quantum chromodynamics (QCD) including parton saturation and the color glass condensate (CGC). It presents

groundbreaking progress on the subject and describes many problems at the forefront of research, bringing postgraduate students, theorists and interested experimentalists up to date with the current state of research in this field. The material is presented in a pedagogical way, with numerous examples and exercises. Discussion ranges from the quasi-classical McLerran-Venugopalan model to the linear BFKL and nonlinear BK/JIMWLK small- x evolution equations. The authors adopt both a theoretical and an experimental outlook, and present the physics of strong interactions in a universal way, making it useful for physicists from various subcommunities of high energy and nuclear physics, and applicable to processes studied at all high energy accelerators around the world. A selection of color figures is available online at www.cambridge.org/9780521112574.
