1.	Record Nr.	UNINA9910774740803321
	Autore	Forshaw J. R (Jeffrey Robert), <1968->
	Titolo	Quantum Chromodynamics and the Pomeron / / J. R. Forshaw, D. A. Ross
	Pubbl/distr/stampa	Cambridge, United Kingdom : , : Cambridge University Press, , 2022
	ISBN	9781009290111
	Edizione	[First edition.]
	Descrizione fisica	1 online resource (xv, 248 pages) : illustrations
	Collana	Cambridge lecture notes in physics
	Disciplina	539.721
	Soggetti	Regge theory Pomerons Quantum chromodynamics Perturbation (Quantum dynamics)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Preface; 1. What is a Pomeron?; 2. A simple example; 3. The reggeized gluon; 4. The QCD Pomeron; 5. From cuts to poles; 6. Applications in deep inelastic scattering; 7. Diffraction; 8. Taming the growth; Appendices; References; Index.
	Sommario/riassunto	This volume describes the Pomeron, an object of crucial importance in very high energy particle physics. Starting with a general description of the Pomeron within the framework of Regge theory, the emergence of the Pomeron within scalar field theory is discussed, providing a natural foundation on which to develop the more realistic case of QCD. The reggeization of the gluon is demonstrated and used to build the Pomeron of perturbative QCD. The dynamical nature of the Pomeron and its role in small-x deep inelastic scattering and in diffractive scattering is also examined in detail. The volume concludes with a study of the colour dipole approach to high energy scattering and the explicit role of unitarity corrections. This book will be of interest to theoretical and experimental particle physicists, and applied mathematicians. First published in 1997, this title has been reissued as an Open Access publication on Cambridge Core.