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Autore	Donnachie Sandy <1936->
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Nota di contenuto	Properties of the S-matrix -- Regge poles -- Introduction to soft hadronic processes -- Duality -- Photon-induced processes -- QCD: perturbative and nonperturbative -- Hard processes -- Soft diffraction and vacuum structure -- Dipole approach -- Questions for the future -- ; Appendix A: Sommerfeld-Watson transform -- ; Appendix B: The Group SU(3) -- ; Appendix C: Feynman rules of QCD -- ; Appendix D: Pion-nucleon amplitudes -- ; Appendix E: The density matrix of vector mesons.
Sommario/riassunto	This book describes the underlying ideas and modern developments of Regge theory, confronting the theory with quantum chromodynamics

and a huge variety of experimental data. It covers forty years of research and provides a unique insight into the theory and its phenomenological development. The authors review experiments that suggest the existence of a soft pomeron, and give a detailed discussion of attempts at describing this through nonperturbative quantum chromodynamics. They suggest that a second, hard pomeron is responsible for the dramatic rise in energy observed in deep inelastic lepton scattering. The two-pomeron hypothesis is applied to a variety of interactions and is compared and contrasted with perturbative quantum chromodynamics, as well as with the dipole approach. This book will provide a valuable reference for experimental particle physicists all over the world. It is also suitable for graduate courses in particle physics, high-energy scattering, QCD and the standard model.