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Nota di contenuto	Relativistic hadrons near accreting compact objects: Dynamical and radiative signatures -- Can ultrarelativistic neutrons from the central engine drive the outflow in broad absorption line QSOS? -- Inflation of stars by TeV neutrinos -- Electron-positron pair production in compact sources with energetic protons -- Limit cycles in electromagnetic cascades in compact objects -- Nuclear interactions near accreting black holes -- A new approach to hot accretion disks -- X-ray continuum emission caused by relativistic protons -- Pair cascade model constraints on energetic particle emission from active galactic nuclei -- Jets and hotspots in extragalactic radio sources -- Pion production in strong magnetic fields: A model for gamma-ray emission from accreting X-ray pulsars -- Particle acceleration at shock fronts in AGNs and jets -- Fermi particle acceleration in relativistic shocks: Preliminary nonlinear results -- Cosmic ray transport in AGNs and jets -- Particle Acceleration in Relativistic Shock waves with Oblique

Magnetic Fields in the presence of Finite Amplitude Field perturbations
-- Collisional Acceleration of Electrons in Central Regions of Active Galactic Nuclei -- Influence of Second-Order Fermi acceleration and Relativistic Shock Waves on Nonthermal Continuum Emission in Hot Spots -- Collimated Relativistic Winds Driven by Electromagnetic Forces -- Ultra-relativistic pulsar wind -- A model of pulsed gamma-radiation from the X-ray binary Hercules X-1/HZ Herculis -- Gamma-ray astronomy above 100 GeV -- High energy and very high energy gamma-rays from electromagnetic cascade induced by relativistic neutrons in AGN -- Near simultaneous optical and TeV observations of AE Aquarii.

Sommario/riassunto

The articles in this book deal with energetic hadron processes near astrophysical compact objects, including compact binary systems and active galactic nuclei. A variety of observational results suggest that relativistic hadrons can be produced in the vicinity of these objects. Among the topics treated in detail are the question whether a large fraction of the energy produced by active galactic nuclei is channeled into a population of relativistic protons and the problem of the origin of very high and ultra-high energy gamma rays from galactic compact sources.
