1. Record Nr. UNINA9910257429803321

Titolo	Relativistic Hadrons in Cosmic Compact Objects [[electronic resource]] : Proceedings of a Workshop Held in Koninki/Suhora, Poland 9–11 October 1990 / / edited by Andrzej A. Zdziarski, Marek Sikora
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1991
ISBN	3-540-46448-4
Edizione	[1st ed. 1991.]
Descrizione fisica	1 online resource (XII, 183 p. 9 illus.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 391
Disciplina	523.01/97216
Soggetti	Observations, Astronomical Astronomy—Observations Astrophysics Geophysics Astronomy, Observations and Techniques Astrophysics and Astroparticles Geophysics/Geodesy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
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. Amongthe 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.