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Autore	Aharonian F. A
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Nota di contenuto	Title Page -- Contents -- Felix A. Aharonian, Elena Amato, Pasquale Blasi and Carmelo Evoli - Preface -- Course group shot -- Pasquale Dario Serpico - Cosmic ray interactions with matter and radiation -- P. Blasi - Charged particles in magnetic fields and cosmic ray transport -- A. Marcowith - Cosmic-ray-modified and -driven instabilities -- D. Caprioli - Particle acceleration at shocks: An introduction -- Elena Amato - Particle acceleration in pulsars and pulsar wind nebulae -- S. Gabici - Cosmic rays from star clusters -- Carmelo Evoli and Ulyana Dupletsa - Phenomenological models of cosmic ray transport in galaxies -- D. Boncioli - Cosmic-ray propagation in extragalactic space and secondary messengers -- Ellen G. Zweibel - The basics of cosmic ray feedback -- F. A. Aharonian - High-energy cosmic rays and gamma radiation -- List of participants
Sommario/riassunto	This book, 'Foundations of Cosmic Ray Astrophysics,' is a comprehensive collection of lectures and research findings from the 208th course of the International School of Physics 'Enrico Fermi.' Edited by F. A. Aharonian, E. Amato, P. Blasi, and C. Evoli, it delves into the fundamental aspects of cosmic ray astrophysics. The book covers topics such as the interactions of cosmic rays with matter and

electromagnetic fields, particle acceleration in pulsars, and cosmic ray transport in the galaxy. It also addresses cosmic ray interactions, instabilities, and their implications for cosmic ray propagation. The material is intended for researchers, astrophysicists, and advanced students interested in the detailed mechanisms and theoretical frameworks of cosmic ray physics.
