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Nota di contenuto	What is radiation? -- Radiation interaction -- Early radiation detectors -- Geiger counters -- Geiger counters for teaching and science amateurs. .
Sommario/riassunto	This book offers a comprehensive collection of introductory experiments in nuclear and cosmic ray physics utilizing Geiger counters. It features over 50 experiments with brief explanations of the physics involved, guidance on setting up educational and amateur experiments, and showcases actual results. The experiments cover the fundamentals of Geiger counters for detecting alpha, beta, gamma, and cosmic radiation, assessing detector performance, monitoring radiation in various environments and sources, conducting coincidence experiments, and applying counting statistics and analysis algorithms. Additionally, introductory chapters delve into radiation principles, interactions with matter, and the history of particle detectors, particularly Geiger counters. With the widespread availability of modern, affordable Geiger detectors and DIY devices, many experiments are suitable for high school and university students, aligning with modern physics curricula. The author has conducted

some of these experiments himself over the past 20 years with third-year physics students. The book is also addressed to amateur scientists and a broad audience interested in exploring radiation phenomena. It features around 250 original illustrations and references to historical experiments and contemporary findings.