

GASEOUS RADIATION DETECTORS

Widely used in high-energy and particle physics, gaseous radiation detectors are undergoing continuous development. The first part of this book provides a solid background for understanding the basic processes leading to the detection and tracking of charged particles, photons, and neutrons.

Continuing then with the development of the multi-wire proportional chamber, the book describes the design and operation of successive generations of gas-based radiation detectors, as well as their use in experimental physics and other fields. Examples are provided of applications for complex event tracking, particle identification, and neutral radiation imaging. Limitations of the devices are discussed in detail.

Including an extensive collection of data and references, this book is ideal for researchers and experimentalists in nuclear and particle physics.

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Fundamentals and Applications

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