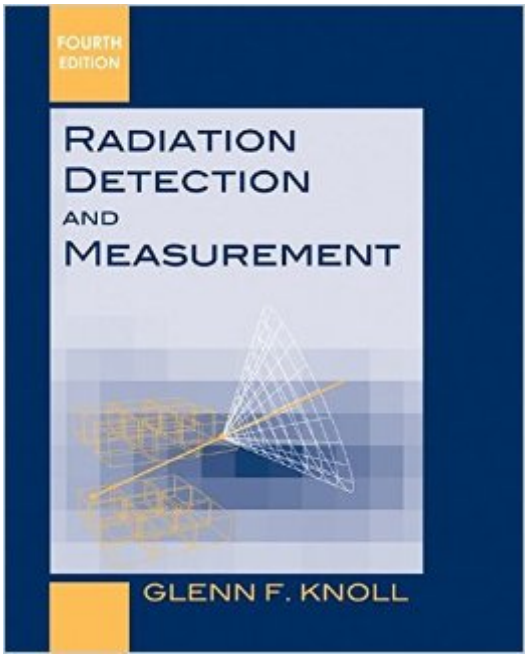
Radiation Detection And Measurement



Synopsis

This is the resource that engineers turn to in the study of radiation detection. The fourth edition takes into account the technical developments that continue to enhance the instruments and techniques available for the detection and spectroscopy of ionizing radiation. New coverage is presented on ROC curves, micropattern gas detectors, new sensors for scintillation light, and the excess noise factor. Revised discussions are also included on TLDs and cryogenic spectrometers, radiation backgrounds, and the VME standard. Engineers will gain a strong understanding of the field with this updated book.

Book Information

Hardcover: 860 pages

Publisher: Wiley; 4 edition (August 16, 2010)

Language: English

ISBN-10: 0470131489

ISBN-13: 978-0470131480

Product Dimensions: 8.2 x 1.2 x 10 inches

Shipping Weight: 3.3 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 starsÂ Â See all reviewsÂ (32 customer reviews)

Best Sellers Rank: #321,610 in Books (See Top 100 in Books) #28 inÂ Books > Science & Math > Physics > Nuclear Physics > Atomic & Nuclear Physics #34 inÂ Books > Science & Math > Experiments, Instruments & Measurement > Scientific Instruments #40 inÂ Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Nuclear

Customer Reviews

This Tome contains so much useful information on the art and science of radiation detection that I hardly can believe I got along without it. Don’t let the steep price discourage you. This book is a must-have for any high energy experimental physics graduate student or even undergraduate. It fills many of the gaps between traditional course books and real-world experience and has a series of encyclopedic bibliographies to boot

A great book but with many, many, and not all corrected in the extensive, yet not definitive, errata list. Make sure you contact the editor for it. I mean, a table of content with page references that don’t match, whole chunk of text missing at the very beginning of chapter 14, and then missing words (easy to spot, they left a blank! And I have not read it from cover to cover yet as this turned me off,

so who knows what else got missed. And if you are a student, wait until you try to use a formula that has not been printed correctly. Great author, great text, lousy editing and printing. Maybe wait for the fourth edition?

Quite simply, this book is indispensable for nuclear engineers, health physicists, plasma and high energy physicists, and anyone else that works with ionizing radiation detectors on a regular basis.I have taught a lab course for junior undergraduate and beginning graduate students at a university using the 3rd edition of this book, and found its explanations comprehensive and technically sound. When students didn't understand the concepts presented in class, I found later that more often than not they hadn't read the book thoroughly or attempted the end-of-chapter problems. If I get the opportunity to teach a similar class, I look forward to using the 4th edition.The book has also been a handy resource for my research, mostly chapter 3, which explains counting statistics in a succinct, understandable way that pure mathematics textbooks typically lack.The 4th edition fixes a lot of the errata from the 3rd edition, but otherwise is largely unchanged. That's not a bad thing, as the 3rd edition was still excellent. There is some new and updated material as well.I bought the 3rd edition used and later wished I hadn't, as I got a lot of use out of the book and it became damaged rather easily. I got the 4th edition new, and I expect it to be on my shelf for decades to come.

This book is a must for anyone working in the field ofradiation detection, and contains a clear, readable descriptionof the working principles of quite a lot of detector types.The weaker point is the description of the associated frontend (analogue) electronics that goes with those detectors: itis a bit concise.

The book is thorough. Need to have a basic understanding of physics and radiation before diving into it, however, as they don't spend a lot of time on the background information. I suggest ordering the solution manual as well...the questions at the ends of the chapters are deep and solutions are not readily available online.

This is a great book. It is simple enough for the layman or hobbyist yet it is packed with concise information. It is helpful for lifting the fog of SI units and classical units that cloud the understanding of nuclear physics. I have not finished the book. I read and re-read the first three chapters, each time gaining new information. This is not liberal arts this is real science. You just have to repeat and re-read. What I have read has made the price worthwhile. As I advance more with scintillators and

gamma spectroscopy the remaining chapters look to be very helpful.

When I told my dad I was going to grad school for nuclear engineering, he gifted me his first edition copy of Knoll from the 70s/80s. I had to order the 4th edition due to several updates, and they both sit happily next to each other on my shelf.As other reviewers said, this book is indispensable. I spend more time with it than I do with my boyfriend. If you're in physics, health physics, or nuclear engineering and contemplating renting this or borrowing from a friend, strongly consider just buying your own copy, you'll come back to it for reference time and time again.

Its a book you put on your shelf so people know you know instruments. It gets pedantic and it doesn't have any of the best techniques for field detection, but it is a solid work. I haven't had the patience to read much of it, but it has been helpful. Not what I would call a handy reference.