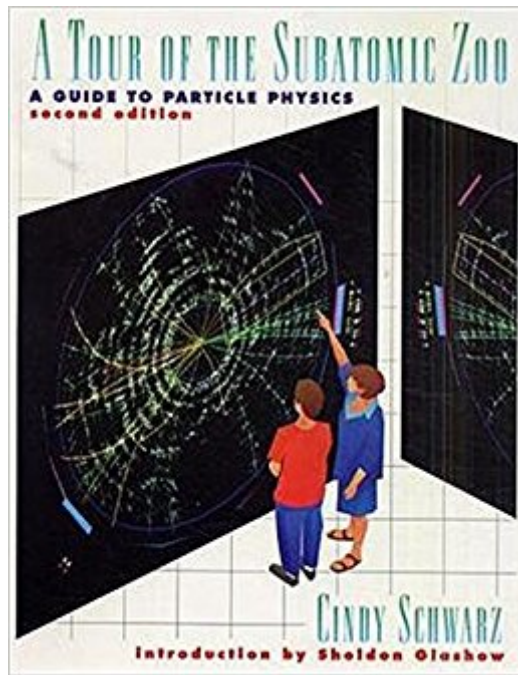




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# A Tour Of The Subatomic Zoo: A Guide To Particle Physics



## Synopsis

This popular book introduces the ideas, terminology, and techniques of high-energy physics. Insights into the structure of matter from the atom down to the quark are made accessible to readers who have no physics background."With hardly a mathematical formula, Ms. Schwarz clearly explains the language and much of the substance of elementary particle physics." -FROM THE INTRODUCTION BY STANLEY GLASHOW, HARVARD UNIVERSITY, NOBEL LAUREATE

## Book Information

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## Customer Reviews

If Your Understanding of the fundamental particles of matter is confined to the electron, proton, and neutron, take heart. Here is a book that takes you on a tour through the world of the "subatomic zoo", populated by some of the most dramatic discoveries of modern science - notably, quarks, leptons, and the basic forces that govern their interactions. You'll also encounter the accelerators and detectors that are used to find these exotic particles. Most important, your tour is conducted in terms that are easily understood - even if you have no prior physics background. Each chapter begins with an overview of concepts and terms, and ends with a summary section and self-tests to help you gauge just how much you have learned. This second edition has been revised to reflect recent developments in high-energy physics, including new particle accelerators, advances in detector technology, and the discovery of the top quark. The author has also added a list of World Wide Web sites where the reader can find more information on particle physics. Even if you've never been exposed to high-energy physics, have forgotten what you once knew, or have simply

not kept current, A Tour of the Subatomic Zoo will bring you right up to date on developments that are continually refining our picture of matter and science.

Cindy Schwarz is a Professor of Physics at Vassar College. She earned a BSc in Mathematical Physics at the State University of New York at Binghamton and a PhD in experimental particle physics from Yale University. She remained active in the research field of particle physics from her arrival at Vassar in 1985 through 1992, working on experiments in high-energy physics at Brookhaven. She changed her line of scholarship in the mid-nineties to focus on pedagogy and curriculum design, with a focus on teaching and learning with technology and producing materials appropriate for those students not planning to major in physics (or even science). Cindy is the sole author of three books, co-author on another book, author of one interactive CD-ROM, five articles, articles in Microsoft Encarta 2000, an interactive tutorial on the internet, and editor and publisher of Tales from the Subatomic Zoo. She has also published along with Jill Linz a children's book Adventures in Atomville: The Macroscopic, which is available in print in English and Spanish and on nook, kindle and ibooks. Cindy's first book A Tour of the Subatomic Zoo, published by Springer-Verlag was reviewed in Physics Today, The Physics Teacher, Choice and Scitech Book News. Scitech said 'A great little book, and if every physics textbook were like this, physics classrooms would be crowded'. The book also won the 1993 American Library Association Award for Outstanding Academic Book. Cindy is considered an expert on teaching particle physics to non-physicists as she has given numerous talks, workshops and keynotes and her book is used at other Universities. Her second book, Interactive Physics Workbook, was the first of its kind. Now out in a second edition, the book is a compilation of 40 computer simulations specifically designed to make use of the technology for effective pedagogy and therefore improved student learning (and interest). Reviewers have said of the workbook: 'they are about the best of their type' and 'they are excellent tutorial software programs that stand apart from many of the current offerings'. --This text refers to an alternate Paperback edition.

These reviews are for a previous edition

This book has some value, hence 2 stars not one. But slogging through student essays on how quarks date (really!) is insufferable. Get Gordan Kane's "The Particle Garden" and get more.

As a physicist and educator I can really appreciate Prof. Schwarz's text. My own children read "A

Tour of the Subatomic Zoo" and enjoyed it a great deal. The biggest issue with putting particle physics into perspective is the lack of intuition and the overwhelming mathematics. This book puts particles into perspective while building an intuition about particle physics and quantum mechanics. This text is appropriate for the novice or scientist looking for light reading and a deeper comprehensive understanding of the topic.

If you're unfamiliar with the world of particle physics I think this book is a good read. Despite some reviewers distaste with the student essays, I find the story telling aspect of the book helps the reader gain a more clear and concise perspective of what they are explaining. It seems easier to take in information when it is in story form over just straight facts layed out. Maybe I'm just childish, but oh well. This book will give you a basic understanding of basic particles, without overwhelming you with information that will in most cases just confuse the beginner. My only qualms is it's short and slightly dated (pre CERNs Large Hadron Collider).

I have found this book simple and straightforward. It is a great introduction that cuts out unnecessary detail and introduces students to the basic facts they need to know. I give this book to both undergraduate and graduate students who join my High Energy Physics research group. Though it is aimed at a more general audience, I find that it is a nice focused introduction and confidence builder for my research students.

The book was in mint condition. It's a great GRE review for general particle physics knowledge.- short read- simple examples and problems at the end of each chapter (with solutions)- recommended for the novice and undergrad physics major for test prep

A clear and concise introduction to particle physics. High school students who are interested in knowing more about particle physics will find this book very useful. Good to have one in a school library.

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