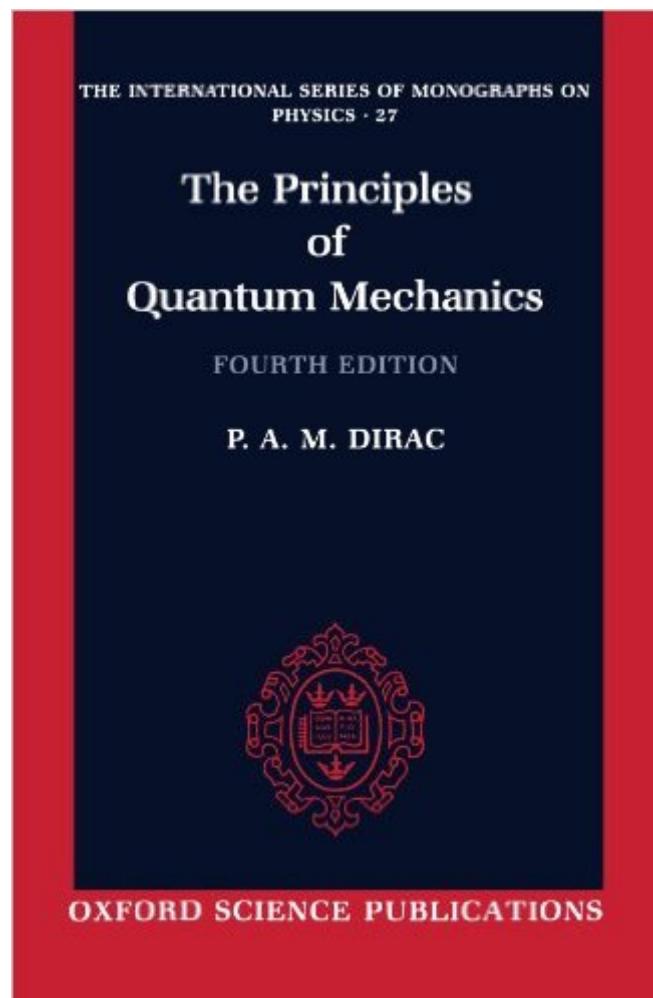


The book was found

The Principles Of Quantum Mechanics (International Series Of Monographs On Physics)



Synopsis

The first edition of this work appeared in 1930, and its originality won it immediate recognition as a classic of modern physical theory. The fourth edition has been brought out to meet a continued demand. Some improvements have been made, the main one being the complete rewriting of the chapter on quantum electrodynamics, to bring in electron-pair creation. This makes it suitable as an introduction to recent works on quantum field theories.

Book Information

Series: International Series of Monographs on Physics (Book 27)

Paperback: 314 pages

Publisher: Clarendon Press; 4th edition (February 4, 1982)

Language: English

ISBN-10: 0198520115

ISBN-13: 978-0198520115

Product Dimensions: 9.2 x 0.7 x 6.1 inches

Shipping Weight: 1.3 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 starsÂ See all reviewsÂ (25 customer reviews)

Best Sellers Rank: #423,077 in Books (See Top 100 in Books) #270 inÂ Books > Science & Math

> Physics > Mechanics #349 inÂ Books > Textbooks > Science & Mathematics > Mechanics

#431 inÂ Books > Science & Math > Physics > Quantum Theory

Customer Reviews

This book goes all the way back to 1930, the year it was first published, and a time when quantum physics was undergoing rapid development, both in terms of applications and theory. The author was one of the major contributors to these developments, and in this book has outlined his idiosyncratic approach to quantum physics, including relativistic quantum mechanics and quantum electrodynamics. The author's insight into quantum physics is extraordinary and that makes this book unique among the books on the subject. The author introduces immediately the principle of superposition as the tour-de-force of quantum theory in chapter 1 after discussing the inadequacy of classical mechanics in explaining the data on specific heat and atomic spectra. The polarization and interference of photons is used to motivate the principle of superposition, and then the concept of a quantum state. The famous Dirac bra-ket formalism is brought in to give the state concept a mathematical formulation. This is followed in chapter 2 by a mathematical formulation of observables, these being operators that act on the kets, with their adjoints operating on the bras.

The eigenvalues of these operators are then the physically realizable results of experiments. The author's discussion on the physical interpretation of this formalism is fascinating and should be read by anyone desiring an in-depth understanding of quantum physics. The formalism up to this point has been purely algebraic, so to apply it to physical problems one needs a representation. This is done in chapter 3, wherein the author also introduces the famous "Dirac delta function". The commutation relations between observables, not of course arising at all in the classical theory, are discussed in chapter 4.

[Download to continue reading...](#)

The Principles of Quantum Mechanics (International Series of Monographs on Physics) Quantum Mechanics and Quantum Field Theory: A Mathematical Primer Thermodynamics With Quantum Statistical Illustrations. Monographs in Statistical Physics and Thermodynamics, Volume 2 Fundamentals of Physics II: Electromagnetism, Optics, and Quantum Mechanics: 2 (The Open Yale Courses Series) The Physics and Mathematics of Adiabatic Shear Bands (Cambridge Monographs on Mechanics) Quantum Runes: How to Create Your Perfect Reality Using Quantum Physics and Teutonic Rune Magic (Creating Magick with The Universal Laws of Attraction Book 1) Quantum Thermodynamics: Emergence of Thermodynamic Behavior Within Composite Quantum Systems (Lecture Notes in Physics) The Friction and Lubrication of Solids (The International Series of Monographs on Physics) (v. 1) Entropy and the Time Evolution of Macroscopic Systems (International Series of Monographs on Physics) The Chemical Physics of Ice (Cambridge Monographs on Physics) The Physics and Philosophy of the Bible: How Relativity, Quantum Physics, Plato, and History Meld with Biblical Theology to Show That God Exists and That ... Live Forever (The Inevitable Truth Book 1) Principles of Quantum Mechanics, 2nd Edition The Solid State: An Introduction to the Physics of Crystals for Students of Physics, Materials Science, and Engineering (Oxford Physics Series) The Physics And Modeling of Mosfets (International Series on Advances in Solid State Electronics) (International Series on Advances in Solid State Electronics and Technology (Unnumbered)) The Fair and Equitable Treatment Standard in International Foreign Investment Law (Oxford Monographs in International Law) Introduction to Chemical Physics (International Series In Pure And Applied Physics) The Principles of Statistical Mechanics (Dover Books on Physics) Cell Biology of Tooth Enamel Formation: Functional Electron Microscopic Monographs (Monographs in Oral Science, Vol. 14) Towards Solid-State Quantum Repeaters: Ultrafast, Coherent Optical Control and Spin-Photon Entanglement in Charged InAs Quantum Dots (Springer Theses) Quantum Nanoelectronics: An introduction to electronic nanotechnology and quantum computing

[Dmca](#)