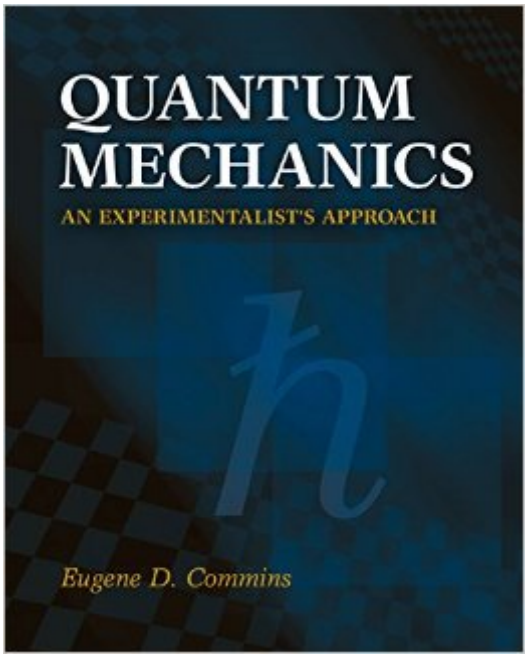
Quantum Mechanics: An Experimentalist's Approach



Synopsis

Eugene D. Commins takes an experimentalist's approach to quantum mechanics, preferring to use concrete physical explanations over formal, abstract descriptions to address the needs and interests of a diverse group of students. Keeping physics at the foreground and explaining difficult concepts in straightforward language, Commins examines the many modern developments in quantum physics, including Bell's inequalities, locality, photon polarization correlations, the stability of matter, Casimir forces, geometric phases, Aharonov-Bohm and Aharonov-Casher effects, magnetic monopoles, neutrino oscillations, neutron interferometry, the Higgs mechanism, and the electroweak standard model. The text is self-contained, covering the necessary background on atomic and molecular structure in addition to the traditional topics. Developed from the author's well-regarded course notes for his popular first-year graduate course at UC Berkeley, instruction is supported by over 160 challenging problems to illustrate concepts and provide students with ample opportunity to test their knowledge and understanding.

Book Information

Hardcover: 720 pages

Publisher: Cambridge University Press; 1 edition (September 8, 2014)

Language: English

ISBN-10: 110706399X

ISBN-13: 978-1107063990

Product Dimensions: 8 x 1.2 x 10 inches

Shipping Weight: 4 pounds (View shipping rates and policies)

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Unusually clear and interesting to read. Covers a lot of ground.

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