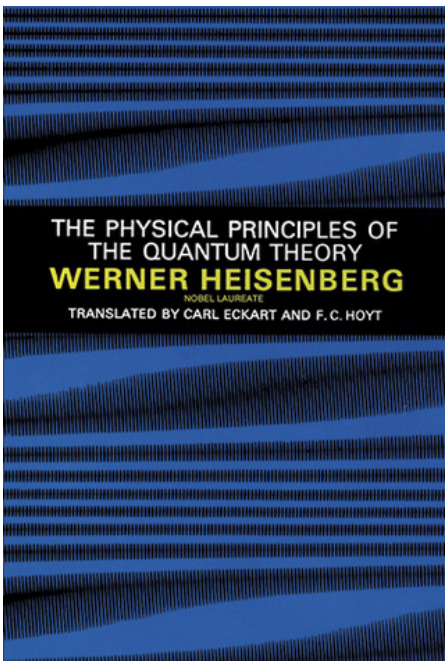

The Physical Principles of the Quantum Theory

Werner Heisenberg , Carl Eckart (translator) , F.C. Hoyt (translator)

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The Physical Principles of the Quantum Theory Werner Heisenberg , Carl Eckart (translator) , F.C. Hoyt (translator)
The contributions of few contemporary scientists have been as far reaching in their effects as those of Nobel Laureate Werner Heisenberg. His matrix theory is one of the bases of modern quantum mechanics, while his "uncertainty principle" has altered our whole philosophy of science.
In this classic, based on lectures delivered at the University of Chicago, Heisenberg presents a complete physical picture of quantum theory. He covers not only his own contributions, but also those of Bohr, Dirac, Bose, de Broglie, Fermi, Einstein, Pauli, Schrodinger, Somerfield, Rupp, ·Wilson, Germer, and others in a text written for the physical scientist who is not a specialist in quantum theory or in modern mathematics.
Partial contents: introduction (theory and experiment, fundamental concepts); critique of physical concepts of the corpuscular theory (uncertainty relations and their illustration); critique of the physical concepts of the wave theory (uncertainty relations for waves, discussion of an actual measurement of the electromagnetic field); statistical interpretation of quantum theory (mathematical considerations, interference of probabilities, Bohr's complementarity); discussion of important experiments (C. T. R. Wilson, diffraction , Einstein-Rupp, emission, absorption and dispersion of radiation, interference and conservation laws, Compton effect, radiation fluctuation phenomena, relativistic formulation of the quantum theory).
An 80-page appendix on the mathematical apparatus of the quantum theory is provided for the specialist.

The Physical Principles of the Quantum Theory Details

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From Reader Review The Physical Principles of the Quantum Theory for online ebook

Eric Amidi says

Today, there are many books that explain Quantum Theory in a more refined and axiomatic manner, but there's a great advantage in hearing it from the horse's mouth. You can see throughout the book that Heisenberg compares Quantum Physics with Einstein's Relativity. They are very similar indeed in the sense that they both point to a new way of thinking; a thinking based on Logical Positivism. In a nutshell, it means, you shouldn't assume something exists or has a meaning, unless you can show a practical way to measure it. If you cannot devise a way to measure the position and momentum of an electron at the same time and definitely, then definite values for them don't exist before the measurement.

Eric says

This book is advanced, I had a hard time following the book and understanding what is happening when I am around noise. Since this book is advance if you want to learn about Quantum theory this is the book to read first. I read this book on the kindle because it was cheap, the problem with the kindle for this book is there's always an equation he is showing you in the book and the problem with this is because on the kindle they made the equations very small that you can't read, I sooner later found out that I can enlarge the equation. In conclusion this book is very hard to understand if you want to learn about Quantum theory, and the equations are very small unless you enlarge it.

Yasser says

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Madiha HouRi says

Translation of the first three chapters
