

<<费恩曼图>>

图书基本信息

书名：<<费恩曼图>>

13位ISBN编号：9787510029653

10位ISBN编号：7510029651

出版时间：2011-1

出版时间：韦特曼(Martinus Veltman) 世界图书出版公司 (2011-01出版)

作者：韦特曼

页数：284

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<费恩曼图>>

内容概要

this book provides an easily accessible introduction to quantum field theory via feynman rules and calculations in particle physics.the aim is to make clear what the physical foundations of present day field theory are , to clarify the physical content of feynman rules , and to outline their domain of applicability. the book begins with a brief review of some aspects of einsteins theory of relativity that are of particular importance for field theory , before going on to consider the relativistic quantum mechan-ics of free particles , interacting fields , and particles with spin.the techniques learnt in these chapters are then demonstrated in examples that might be encountered in real accelerator physics.further chapters contain discussions on renormalization , massive and massless vector fields and unitarity. a final chapter presents concluding arguments concerning quantum electrodynamics. the book includes valuable appendices that review some essential mathematics , including complex spaces , matrices , the cbh equa-tion , traces and dimensional regularization. an appendix contain-ing a comprehensive summary of the rules and conventions used is followed by an appendix specifying the full langranian of the standard model and the corresponding feynman rules. to make the book useful for a wide audience a final appendix provides a discussion on the metric used , and an easy-to-use dictionary con-necting equations written with a different metric. written as a textbook , many diagrams and examples are included.

this book will be used by beginning graduate students taking courses in particle physics or quantum field theory , as well as by researchers as a source and reference book on feynman diagrams and rules.

<<费恩曼图>>

作者简介

作者：（荷兰）韦特曼（Martinus Veltman）

书籍目录

Introduction1 Lorentz and Poincare Invariance1.1 Lorentz Invariance1.2 Structure of the Lorentz Group1.3 Poincare Invariance1.4 Maxwell Equations1.5 Notations and Conventions2 Relativistic Quantum Mechanics of FreeParticles2.1 Hilbert Space2.2 Matrices in Hilbert Space2.3 Fields2.4 Structure of Hilbert Space3 Interacting Fields3.1 Physical System3.2 Hilbert Space3.3 Magnitude of Hilbert Space3.4 U-matrix, S-matrix3.5 Interpolating Fields3.6 Feynman Rules3.7 Feynman Propagator3.8 Scattering Cross Section3.9 Lifetime3.10 Numerical Evaluation3.11 SchrSdinger Equation, Bound States4 Particles with Spin4.1 Representations of the Lorentz Group4.2 The Dirac Equation4.3 Fermion Fields4.4 The E.M. Field4.5 Quantum Electrodynamics4.6 Charged Vector Boson Fields4.7 Electron-Proton Scattering. The Rutherford Formula5 Explorations5.1 Scattering Cross Section for5.2 Pion Decay. Two Body Phase Space. Cabibbo Angle5.3 Vector Boson Decay5.4 Muon Decay. Fiertz Transformation5.5 Hyperon Leptonic Decay5.6 Pion Decay and PCAC5.7 Neutral Pion Decay and PCAC6 Renormalization6.1 Introduction6.2 Loop Integrals6.3 Self Energy6.4 Power Counting6.5 Quantum Electrodynamics6.6 Renormalizable Theories6.7 Radiative Corrections: Lamb Shift6.8 Radiative Corrections: Top Correction to p-Parameter6.9 Neutral Pion Decay and the Anomaly7 Massive and Massless Vector Fields7.1 Subsidiary Condition Massive Vector Fields7.2 Subsidiary Condition Massless Vector Fields7.3 Photon Helicities7.4 Propagator and Polarization Vectors of MassiveVector Particles7.5 Photon Propagator7.6 Left Handed Photons8 Unitarity8.1 U-matrix8.2 Largest Time Equation8.3 Cutting Equations8.4 Unitarity and Cutting Equation8.5 Unitarity: General Case Uontents8 . 6 KlIdn-Lehmann Representation . Dispersion Relation8 . 7 Momenta in Propagators9 Quantum Electrodynamics : Finally9 . 1 Unitarity9 . 2 ward IdentitiesAppendix A Complex Spaces , Matrices , CBHEquationA . 1 BasicsA . 2 Difrerentiation of MatricesA . 3 Functions of MatricesA . 4 The CBH EquationAppendix B TracesB . 1 GeneralB . 2 Multi-Dimensional 1-MatricesB . 3 Frequently Used EquationsAppendix C Dimensional RegularizationAppendix D Summary . Combinatorial FactorsD . 1 SummaryD . 2 External Lines , Spin Sums , PropagatorsD . 3 Combinatorial FactorsAppendix E Standard ModelE . 1 LagrangianE . 2 Feynman RulesAppendix F Metric and ConventionsF . 1 General ConsiderationsF . 2 Translation ExamplesF . 3 Translation DictionaryIndex

<<费恩曼图>>

章节摘录

版权页：插图：

<<费恩曼图>>

编辑推荐

《费恩曼图(英文版)》是由世界图书出版公司出版的。

<<费恩曼图>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>