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<<规范理论和现代粒子物理学导论（ >

图书基本信息

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前言

for a book of its genre, our previous book, An introduction to gauoetheories and the"new physic"（1982）was a great success.It was not.alas, sold in airport lounges, but it did run to two additional printings（1983, 198s）, and to extensively revised editions in Russian（1990）.and oin-Polish（1991）.More importantly, it seemed to achieve the principal goal which we had set ourselves, namely, to present a pedagogical account ofmodern particle physics with a balance of theory and experiment, whichwould be intelligible and stimulating for both theoretical and experimental raduate students.We did not try to write a profound book on fieldtheory, nor a treatise on sophisticated experimental techniques.But wedid wish to stress the deep, intimate and fruitful interaction betweentheoretical ideas and experimental results.Indeed, for US, it iS just thisaspect of physics which makes it seem so much more exciting than say puremathematics our greatest pleasure came from the favourable reaction ofstudents who were working through the book and from those reviewerswho caught what we hoped was its essential flaV0ur——the writing createsthe reeling of an active progression of ideas arising from the repeatedinteraction of theoretical prejudice with experimental observation unlikemost textbooks, it is highly readable, and makes everything appear simpleand obviousWeII, the last comment iS surely an exaggeration but that was our aim.

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内容概要

本书分为两册，详细地介绍了粒子物理学的现代理论和实验。
条理分明，表述连贯。
作者以简明直观的方式，阐释隐藏在实验现象背后的深刻的物理原理，同时循序渐进地讲解从事粒子物理研究用到的现代方法。
本书收入了许多粒子物理领域的新成果，还有若干很有特色的议题，例如高阶弱电效应，夸克混合，喷流，深度非弹性轻子—强子散射，简单部分子模型的量子色动力学修正，以及量子色动力学的非微扰理论等。
本书可以作为现代粒子物理学方向的研究生教材，对该领域的科研人员也有很好的参考价值。
本书第一册主要包括电弱相互作用，新的基本粒子的探索及其物理性质的研究，部分子的发现，以及简单部分子模型的构建和预测等。
第二册在介绍了CP破坏之后，主要讲解量子色动力学及其在“硬”过程中的应用，同时也介绍了“软”强子物理和非微扰量子色动力学。
读者对象：理论物理、高能物理和场论等专业的高年级本科生、研究生和相关专业的科研人员。

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