INTRODUCTION

1. Overview

The *Review of Particle Properties* and the abbreviated version, the *Particle Physics Booklet,* are reviews of the field of Particle Physics. This complete *Review* includes a compilation/evaluation of data on particle properties, called the "Full Listings." These Listings include 2300 new measurements from 700 papers, in addition to the 12,000 measurements from 3500 papers that first appeared in previous editions. Both books include Summary Tables with our best values and limits for particle properties such as masses, widths or lifetimes, and branching fractions, as well as reviews, tables, and figures on a variety of topics. We also give an extensive summary of searches for hypothetical particles.

The *Review* and the *Booklet* are published in even-numbered years. This edition is an updating through December 1993 (and, in some areas, well into 1994). As described in the section "Using Particle Physics Databases" following this introduction, the content of this *Review* is available on the World-Wide Web, and there is a public access database allowing user-designed searches.

The Summary Tables give our best values of the properties of the particles we consider to be well established, a summary of search limits for hypothetical particles, and a summary of experimental tests of conservation laws.

The Full Listings contain all the data used to get the values given in the Summary Tables. Other measurements considered recent enough or important enough to mention, but which for one reason or another are not used to get the best values, appear separately just beneath the data we do use for the Summary Tables. The Full Listings also give information on unconfirmed particles and on particle searches, as well as short "minireviews" on subjects of particular interest or controversy.

The Full Listings were once an archive of all published data on particle properties. This is no longer possible because of the large quantity of data. We refer interested readers to earlier editions for data now considered to be obsolete.

We organize the particles into five categories:

- Gauge and Higgs bosons
- Leptons and quarks
- Mesons
- Baryons
- Searches for free quarks, monopoles, supersymmetry, compositeness, *etc.*

The last category is for searches for particles that do not belong to the previous groups; searches for heavy charged leptons and massive neutrinos, for example, are with the leptons.

In addition to the compilations of measurements and best values, we give a long section of "Reviews, Tables, and Plots," a quick reference for the practicing particle physicist.

In Sec. 2 of this Introduction, we list the main areas of responsibility of the authors, and also list our large number of consultants, without whom we would not have been able to produce this *Review.* In Sec. 3, we mention briefly the naming scheme for hadrons. In Sec. 4, we discuss our procedures for choosing among measurements of particle properties and for obtaining best values of the properties from the measurements.

The accuracy and usefulness of this *Review* depend in large part on interaction between its users and the authors. We appreciate comments, criticisms, and suggestions for improvements of any kind. Please send them to the appropriate author, according to the list of responsibilities in Sec. 2 below, or to

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Or send them via computer mail to

PDG@LBL.GOV on INTERNET or
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To order a copy of the *Review* or the *Particle Physics Booklet* from North and South America, Australia, and the Far East, write to

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2. Authors and consultants

The authors' main areas of responsibility are as follows (an asterisk indicates the person to contact with questions or comments):

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Leptons and quarks

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