

## Review of Particle Physics

This article has been downloaded from IOPscience. Please scroll down to see the full text article.

2010 J. Phys. G: Nucl. Part. Phys. 37 075021

(<http://iopscience.iop.org/0954-3899/37/7A/075021>)

View [the table of contents for this issue](#), or go to the [journal homepage](#) for more

Download details:

IP Address: 131.215.220.185

The article was downloaded on 21/10/2010 at 16:36

Please note that [terms and conditions apply](#).

# Review of Particle Physics

K Nakamura *et al* (Particle Data Group)

Online at [stacks.iop.org/JPhysG/37/075021](http://stacks.iop.org/JPhysG/37/075021)

## Abstract

This biennial *Review* summarizes much of particle physics. Using data from previous editions, plus 2158 new measurements from 551 papers, we list, evaluate, and average measured properties of gauge bosons, leptons, quarks, mesons, and baryons. We also summarize searches for hypothetical particles such as Higgs bosons, heavy neutrinos, and supersymmetric particles. All the particle properties and search limits are listed in Summary Tables. We also give numerous tables, figures, formulae, and reviews of topics such as the Standard Model, particle detectors, probability, and statistics. Among the 108 reviews are many that are new or heavily revised including those on neutrino mass, mixing, and oscillations, QCD, top quark, CKM quark-mixing matrix,  $V_{ud}$  &  $V_{us}$ ,  $V_{cb}$  &  $V_{ub}$ , fragmentation functions, particle detectors for accelerator and non-accelerator physics, magnetic monopoles, cosmological parameters, and big bang cosmology.

A booklet is available containing the Summary Tables and abbreviated versions of some of the other sections of this full *Review*. All tables, listings, and reviews (and errata) are also available on the Particle Data Group website: [pdg.lbl.gov](http://pdg.lbl.gov).

**The 2010 edition of *Review of Particle Physics* is published for the Particle Data Group as article 075021 in volume 37 of *Journal of Physics G: Nuclear and Particle Physics*.**

This edition should be cited as:

K Nakamura *et al* (Particle Data Group) 2010 *J. Phys. G: Nucl. Part. Phys.* **37** 075021

## ACCESS TO FULL TEXT PDF

[PDF \(168 KB\)](#)

**Abstract, Contributors, Highlights and Table of Contents**

[PDF \(482 KB\)](#)

**Introduction**

[PDF \(189 KB\)](#)

**Particle Physics Summary Tables**

[PDF \(171 KB\)](#)

Gauge and Higgs Bosons

[PDF \(102 KB\)](#)

Leptons

[PDF \(893 KB\)](#)

Quarks

[PDF \(379 KB\)](#)

Mesons

[PDF \(112 KB\)](#)

Baryons

[PDF \(381 KB\)](#)

Searches (Supersymmetry, Compositeness, etc)

Tests of Conservation Laws

<a href="#">PDF (55 KB)</a>	<b>Reviews, Tables and Plots</b>
<a href="#">PDF (396 KB)</a>	Detailed contents for this section
<a href="#">PDF (5.58 MB)</a>	Constants, Units, Atomic and Nuclear Properties
<a href="#">PDF (1.71 MB)</a>	Standard Model and Related Topics
<a href="#">PDF (4.04 MB)</a>	Astrophysics and Cosmology
<a href="#">PDF (711 KB)</a>	Experimental Methods and Colliders
<a href="#">PDF (957 KB)</a>	Mathematical Tools or Statistics, Monte Carlo, Group Theory
	Kinematics, Cross-Section Formulae, and Plots
	<b>Particle Listings</b>
<a href="#">PDF (297 KB)</a>	Introduction: Illustrative Key and Abbreviations
<a href="#">PDF (2.31 MB)</a>	Gauge and Higgs Bosons
<a href="#">PDF (1.80 MB)</a>	Leptons
<a href="#">PDF (948 KB)</a>	Quarks
<a href="#">PDF (4.44 MB)</a>	Mesons: Light unflavored and strange
<a href="#">PDF (7.02 MB)</a>	Mesons: Charmed and bottom
<a href="#">PDF (9.46 MB)</a>	Mesons: Other
<a href="#">PDF (5.72 MB)</a>	Baryons
<a href="#">PDF (5.41 MB)</a>	Miscellaneous Searches
<a href="#">PDF (194 KB)</a>	<b>Index</b>
<a href="#">PDF (4.24 MB)</a>	<b>Color Figures</b>