Review of Particle Physics

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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.

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*.

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