

Doc Dave

MPHYS NOTES

Particle Physics

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Contents

1	Ingredients of the Standard Model	3
1.1	Quarks and Leptons	3
1.2	Mesons and Baryons	3
1.3	Exchange of Virtual Particles	3
1.4	Strong, Electromagnetic and Weak Interactions	3
2	Relativistic Kinematics	4
2.1	Invariant Mass	4
2.2	Threshold and Decays	4
3	Conservation Laws	5
3.1	Angular Momentum	5
3.2	Baryon and Lepton Numbers	5
3.3	Strangness	5
3.4	Isospin	5
3.5	Parity, Charge Conjugation and CP	5
4	The Quark Model	6
4.1	Supermultiplets	7
4.2	Resonances	7
4.2.1	Formation	7
4.2.2	Production	7
4.2.3	Decay	7
4.3	Heavy Quarks	7
4.3.1	Charm	7
4.3.2	Bottom	7
4.3.3	Top	7

4.4	Experimental Evidence for Quarks	7
4.5	Colour	7
4.5.1	Confinement	7
4.5.2	Experimental Value	7
5	Weak Interactions	8
5.1	Parity Violation	8
5.2	Helicity	8
5.3	CP Violation	8
5.3.1	B^0 Systems	8
5.3.2	K^0 Systems	8
6	The Standard Model and Beyond	9
6.1	Quark-Lepton Generations	9
6.2	Neutrino Oscillations	9
6.3	The Higgs Boson	9
6.4	Grand Unified Theories	9
6.5	Supersymmetry	9

Chapter 1

Ingredients of the Standard Model

1.1 Quarks and Leptons

1.2 Mesons and Baryons

1.3 Exchange of Virtual Particles

1.4 Strong, Electromagnetic and Weak Interactions

Chapter 2

Relativistic Kinematics

2.1 Invariant Mass

2.2 Threshold and Decays

Chapter 3

Conservation Laws

3.1 Angular Momentum

3.2 Baryon and Lepton Numbers

3.3 Strangness

3.4 Isospin

3.5 Parity, Charge Conjugation and CP

Chapter 4

The Quark Model

4.1 Supermultiplets

4.2 Resonances

4.2.1 Formation

4.2.2 Production

4.2.3 Decay

4.3 Heavy Quarks

4.3.1 Charm

4.3.2 Bottom

4.3.3 Top

4.4 Experimental Evidence for Quarks

4.5 Colour

8

4.5.1 Confinement

4.5.2 Experimental Value

Chapter 5

Weak Interactions

5.1 Parity Violation

5.2 Helicity

5.3 CP Violation

5.3.1 B^0 Systems

5.3.2 K^0 Systems

Chapter 6

The Standard Model and Beyond

6.1 Quark-Lepton Generations

6.2 Neutrino Oscillations

6.3 The Higgs Boson

6.4 Grand Unified Theories

6.5 Supersymmetry