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2.1.6 Difficulties in the Fermi Theory ;
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Model ; Chapter 3 SYMMETRIES AND THE
GAUGE THEORIES
3.1 Global Symmetries and Noether's Theorem
3.2 Local Gauge Symmetries and Gauge Fields
; 3.2.1 Quantum Electrodynamics - U(1) model-
; 3.2.2 Yang-Mills Gauge Theory - SU(2) model-
; 3.3 Spontaneous Symmetry Breaking and Goldstone Bosons
; 3.4 Higgs Mechanism
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4.1 Fermions in the GWS Model ; 4.2 SU(2)L x U
(1)Y Invariant Lagrangian ; 4.3
Spontaneous Breaking of SU(2)L X U(1)Y Symmetry
; 4.4 Charged and Neutral Currents Comparison with Effective Fermi
Theory ; 4.5 Addition
of More Leptons
4.6 Extension to Quarks

Sommario/riassunto

This book provides a unified description of elementary particle interactions and the underlying theories, namely the Standard Model and beyond. The authors have aimed at a concise presentation but have taken care that all the basic concepts are clearly described. Written primarily for graduate students in theoretical and experimental particle physics, The Physics of the Standard Model and Beyond conveys the excitement of particle physics, centering upon experimental observations (new and old) and a variety of ideas for their interpretation.
Contents:
Weak Interaction<