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$U_L(2) \bigotimes U_R(2)$ Model of Electro-Weak Interaction Model of Electro-Weak Interaction

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The $U_L(2) \bigotimes U_R(2)$ gauge model for the unified theory of the electromagnetic and weak interactions which is free from the auxiliary self-interaction scalar field is developed. Due to breaking the initial symmetry, the $SU_L(2) \bigotimes U_R(1)$ Lagrangian is derived. The obtained $SU_L(2) \bigotimes U_R(1)$ Lagrangian contains all the terms corresponding to the free boson and fermion fields as well as to interactions between them, as they take place in the Standard Model consideration. All boson fields, including the Higgs one, directly arise due to breaking the initial symmetry, and are generated by the initial gauge fields. The Higgs fields are studied in detail. We show that there is a wide spectrum of states of the Higgs bosons. The Higgs particle masses in such derivd states are calculated.

Presentation type

Section talk (10+5 min)

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