

About the quantization of electric charge in gauge theories

Friday 24 June 2011 15:40 (20 minutes)

The electric charge quantization and fixing conditions of particles are found using a number of gauge theories, and it is shown that the presence of Higgs fields is a necessary condition for the electric charge quantization in the considered models. The dependence of the electric charge quantization conditions from the hypercharge of the Higgs fields, the identity of electric charge quantization conditions, resulting from Lagrangians generating particle masses and from the P invariance of the electromagnetic interaction and the fact of the fixing of fermionic field hypercharges by the Higgs fields can be interpreted as new properties of Higgs fields.

Author: Mr KHALIL-ZADA, Farhad (Azerbaijan Nat. Acad. of Sciences (ANAS))

Co-author: Mr ABDINOV, Ovsat (Azerbaijan Nat. Acad. of Sciences (ANAS))

Presenter: Mr KHALIL-ZADA, Farhad (Azerbaijan Nat. Acad. of Sciences (ANAS))

Session Classification: Contributed Talks

Track Classification: LHC Physics and Tevatron Results