



Contribution ID : 22

Type : Talk

The physical spectrum of a partially Higgsed gauge theory

Thursday, 28 July 2016 15:20 (20)

The description of electroweak physics using perturbation theory is highly successful. Though not obvious, this is due to a subtle field-theoretical effect, the Fröhlich-Morchio-Strocchi mechanism, which links the physical spectrum to that of the elementary particles. This works because of the special structure of the standard model, and it is not a priori clear whether it works for structurally different theories.

Candidates for conflicts are, e.g., partially Higgsed gauge theories. We study this situation in an $SU(3)$ gauge theory with one fundamental Higgs field and a breaking pattern $SU(3) \rightarrow SU(2)$. We determine the leading order predictions for the gauge invariant spectrum in this theory and discuss the results from lattice simulations.

Primary author(s) : Mr TOEREK, Pascal (University of Graz)

Co-author(s) : Prof. MAAS, Axel (University of Graz)

Presenter(s) : Mr TOEREK, Pascal (University of Graz)

Session Classification : Physics Beyond the Standard Model

Track Classification : Physics Beyond the Standard Model