Contribution ID: **8** Type: **not specified**

Unitarity bound in the composite two Higgs doublet model

Friday, 15 January 2016 10:15 (25 minutes)

We discuss a composite two Higgs doublet model based on a symmetry breaking SO(6) × U (1)_x → SO(4) ×SO(2) × U (1)_x at a scale f, and explain how the effective kinetic terms and Yukawa interactions are obtained. The coupling of the Higgs boson as a pseudo Nambu-Goldstone boson to the standard model fields can deviate from that of the standard model Higgs boson due to the non-linear feature. These deviations cause to unitarity violation at high energies because the cancellation of the quadratic energy terms does not happen. We will examine the constrains on parameter space from perturbative unitarity with a fixed energy scale in the composite two Higgs doublet model.

Primary authors: Ms YILDIRIM, Emine (University of Southampton); Dr YAGYU, Kei (University of Southampton); Dr DE CURTIS, Stefania (INFN, University of Florida); Prof. MORETTI, Stefano (University of Southampton)

Presenter: Ms YILDIRIM, Emine (University of Southampton)

Session Classification: Parallel session