Contribution ID: **16**   Type: **not specified**

Effective Lagrangians for Higgs Physics

Tuesday 4 August 2015 14:00 (30 minutes)

After the discovery of the Higgs at the LHC, and as the data continues to converge to the Standard Model predictions, it becomes important to try and classify possible small deviations from the expected behavior. A manner of doing so, consistent with the symmetries of the Standard Model, is the use of effective field theories. They are valid both for scenarios with new ultraviolet decoupling physics, with an elementary Higgs-like particle in the spectrum, as well as new strongly interacting scenarios where the degrees of freedom may present as pseudo Goldstone bosons of some new global symmetry such as composite Higgs models.

In this talk we will work in the effective field theory framework and using the available experimental data as well as unitarity considerations we show the present status on the determination of the coefficients of the relevant effective operators for Higgs physics.

The talk will follow the publications: arXiv:1411.5026, 1311.1823, 1304.1151, 1211.4580, and 1207.1344

Oral or Poster Presentation

Oral

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Session Classification: EWK and Higgs Sector

Track Classification: Electroweak and Higgs Theory