

Precise prediction for Higgs production via gluon fusion in BSM scenarios

Friday 17 September 2010 11:45 (30 minutes)

The search for the Higgs boson is a primary objective at the Tevatron and the LHC. The dominant production mechanism is gluon fusion, for which new physics effects can lead to significant deviations from the standard model predictions. We consider an extension of the Standard Model in which an arbitrary number of heavy quarks is introduced, and their coupling to the Higgs boson is arbitrary. We present the construction of an effective Lagrangian where the heavy particles are integrated out and the computation of the corresponding Wilson coefficient at three-loops. We analyze the deviations of the Higgs production cross-section from the Standard Model predictions.

Primary author: FURLAN, Elisabetta (ETH Zurich)

Presenter: FURLAN, Elisabetta (ETH Zurich)

Session Classification: Morning II