

Top Quark Physics with D-Dimensional Generalized Unitarity

Tuesday 14 September 2010 16:45 (30 minutes)

I will talk about results of a NLO QCD calculation to top quark pair production and decay at the LHC. The inclusion of top quark decays in the prediction allows for a fully realistic description of the final state at NLO QCD. In particular, I will point out the importance of spin correlations and corrections to the decay. I will also focus on results for top quark pair production in association with a hard jet. This process constitutes the major background to Higgs production in vector boson fusion. I will present distributions that are important for this search, corrected through NLO QCD. Another interesting topic that I would like to talk about is the forward-backward asymmetry in top quark production. All results for the virtual corrections have been obtained with the method of D-dimensional generalized unitarity.

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