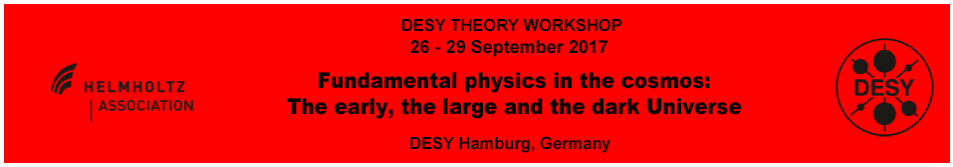

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Resummed differential cross sections for top-quark pairs at the LHC

Wednesday 27 September 2017 16:05 (17 minutes)

Top quark physics has now entered the precision era with billions of top pairs expected to be produced over the lifetime of the LHC. As such, the need for ever more accurate theory predictions continues to grow. Using a formalism derived from Soft Collienar Effective Theory (SCET), we present predictions for differential cross sections which incorporate the simultaneous resummation of soft and small mass logarithms matched to standard threshold resummation. Building on previous work, results given to NNLO+NNLL′ accuracy for the top pair invariant mass and top quark p_T distributions. We will examine the effects the resummation has compared to fixed order as well as assess the impact of the choice of factorisation scale.

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