

Angular correlations in t-channel single top production at the LHC

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When a top quark decays there is a large amount of angular correlation, in its rest frame, between its spin orientation and the direction of flight of the charged lepton from its decay. In this letter we investigate the prospects of measuring this angular correlation using the MC@NLO framework. The strength of the correlation is investigated for different spin bases. The robustness against variations of PDF sets and uncertainties, factorization scale dependence, center-of-mass energy, and the jet R-parameter, is also examined.

Presenter: Dr MOTYLINSKI, Patrick (Universität Freiburg)

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