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Scalar Leptoquark Pair Production at Hadron Colliders

Tuesday 25 May 2021 15:00 (15 minutes)

I will present precision predictions for scalar leptoquark pair production at hadron colliders. Apart from QCD contributions, included are the lepton t-channel exchange diagrams relevant in the light of the recent B-flavor anomalies. All contributions are evaluated at next-to-leading order in QCD and improved by resummation corrections, in the threshold regime, from soft-gluon radiation at next-to-next-to-leading-logarithmic accuracy. All corrections are found equally relevant. Furthermore, the impact of different sets of parton distribution functions will be discussed. These predictions consist of the most precise leptoquark cross section calculations available to date and are necessary for the best exploitation of leptoquark LHC searches.

Summary

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