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Precise predictions for massive charm production with a W boson

Monday 9 May 2022 17:30 (15 minutes)

In my talk I would like to cover our recent phenomenology study of massive charm production in association with a W boson with NLO accuracy in QCD at the hadron level. By matching our NLO calculation to parton shower programs using the POWHEG matching method we were able to create predictions at the hadron level directly comparable to experiments. At the LHC this process is extensively studied by both ATLAS and CMS at 7 and 13 TeV. Our results were compared to experimental data. The talk would cover the detailed comparison of data to predictions with emphasis on the associated charm-pair production with a W boson which also gives a non-vanishing contribution to the yields.

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