

Charmed meson production at LHCb

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Collaboration

LHCb

Abstract content

The start of LHC Run 2, with proton-proton collisions at $\sqrt{s} = 13$ TeV, opens a new regime in which QCD predictions for charm meson production may be precisely tested. LHCb is uniquely suited to make these measurements in the forward region and obtained results can be used to further constrain parton distribution functions. In addition to measuring absolute production cross-sections, ratios of cross-sections at different centre-of-mass energies benefit of cancellation of both experimental and theoretical uncertainties, providing a new sensitive test of the QCD calculations. This talk aims to give an overview on charm meson production measurements by LHCb in Run 1 and Run 2 with a focus on the recent results for J/ψ and D meson production at $\sqrt{s} = 13$ TeV.

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