

Measurement of Υ production in pp collisions at $\sqrt{s} = 13\text{TeV}$

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The production cross-sections of $\Upsilon(1S)$, $\Upsilon(2S)$ and $\Upsilon(3S)$ mesons in proton-proton collisions at $\sqrt{s} = 13\text{ TeV}$ are measured with a data sample corresponding to an integrated luminosity of $277 \pm 11\text{ pb}^{-1}$ recorded by the LHCb experiment in 2015. The Υ mesons are reconstructed in the decay mode $\Upsilon \rightarrow \mu^+ \mu^-$. The differential production cross-sections times the dimuon branching fractions are measured as a function of the Υ transverse momentum, p_T , and rapidity, y , over the range $0 < p_T < 30\text{ GeV}/c$ and $2.0 < y < 4.5$. The ratios of the cross-sections with respect to the LHCb measurement at $\sqrt{s} = 8\text{ TeV}$ are also determined. The measurements are compared with theoretical predictions based on NRQCD.

Type

Parallel talk

Sessions (parallel only)

Heavy Flavor

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