

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

*Thursday, 20 December 2018 15:00 (15 minutes)*

The production cross-sections of  $\Upsilon(1S)$ ,  $\Upsilon(2S)$  and  $\Upsilon(3S)$  mesons in proton-proton collisions at  $\sqrt{s} = 13$  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  $\Upsilon$  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  $\Upsilon$  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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**Session Classification:** Heavy Flavor

**Track Classification:** Heavy Flavor