

# Open bottom production at hadron colliders at NNLO+NNLL

*Saturday 20 July 2024 09:06 (18 minutes)*

In this talk, I will present the results of the first calculation of open bottom production at hadron colliders at NNLO+NNLL, i.e. a next-to-next-to-leading-order calculation that resums collinear logarithms at next-to-next-to-leading-logarithmic accuracy. This new computation achieves significantly reduced theory errors compared to previous calculations, with errors of just a few percent at high transverse momenta. These results are compared to data from several measurements performed at the Tevatron, where lower-order predictions have previously been found to underestimate the cross section. To perform such comparisons, the hadronisation and decay of the b-quark is included in the theory calculation where needed, yielding predictions for a wide range of final states.

## Alternate track

1. Strong Interactions and Hadron Physics

## I read the instructions above

Yes

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**Session Classification:** Top Quark and Electroweak Physics

**Track Classification:** 04. Top Quark and Electroweak Physics