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bbH: subgroup report and NNLO+PS generators in the massless and massive schemes (15'+3')

Wednesday 4 December 2024 16:18 (18 minutes)

We provide an update on the status of Higgs production in association with a bottom-quark pair, highlighting recent developments by the bbH subgroup. We discuss the differences between the two flavour schemes and their state-of-the-art predictions, including cross-section interpolations for 13.6 TeV. Additionally, we report on novel event generators developed in the massless and massive scheme at NNLO QCD accuracy matched to parton showers. We show that NNLO corrections in the 4FS solve the long-standing issue of discrepancies between 4FS and 5FS predictions. Future directions can involve developing consistent combinations of 4FS and 5FS NNLO+PS predictions and extending these calculations to lighter quark flavours.

Presenter: BIELLO, Christian (Max-Planck Institute for Physics)

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