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Effects of Beyond Standard Model physics on Higgs' p_T spectra in Effective Field Theory approach

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The first run of the LHC has successfully discovered a Higgs boson, however no signs of New Physics were found. This may suggest that the New Physics is beyond reach of current experiments, and may be accessed just by measuring small deviations from SM predictions. Effective Field Theory (EFT) offers a consistent bottom-up approach to parametrise such deviations. In our work we apply the EFT to shed light on the effects of high-scale BSM physics on the Higgs' p_T spectrum, which will become important for the experimental measurements. The SM predictions for Higgs boson production were augmented by three new dimension 6 operators, leading to the modification of the top and bottom Yukawa coupling, and the ggH point-like coupling. We present p_T spectra including these operators at NLO+NLL level and show how BSM effective operators affect them.

additional information

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