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Heavy quark pair production in proton-proton collisions including subdominant terms.

Up to now, we have calculated the inclusive cross sections for heavy quarks production at hadron colliders. These calculations were performed using approach based on the unintegrated parton distributions functions. I have tested some of the models in photoproduction and in hadroproduction. For the $c\bar{c}$ and $b\bar{b}$ production at high-energies the gluon-gluon fusion is assumed to be the dominant mechanism. This process was calculated in the NLO collinear as well as in the k_t -factorisation approaches. Now, I study production of the charm and bottom quarks for following subprocesses: $gg \rightarrow Q \text{ anti-}Q$, $\gamma g \rightarrow Q \text{ anti-}Q$, $g\gamma \rightarrow Q \text{ anti-}Q$, $\gamma\gamma \rightarrow Q \text{ anti-}Q$. I used MRST_QED (Martin, Roberts, Stirling, Thorne) parton distributions. I would like to show detail analyzed that other processes ignored so far should be carefully evaluated. The number of potential contributions is not small.

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