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Multi-parton scattering effects in heavy flavour production at the LHC

In this talk I will summarize results of our studies of hard MPI effects in heavy flavour sector in pp-collisions at the LHC. During last two years we extend our previous studies of double-parton scattering (DPS) in double charm production to simultaneous production of charm and bottom as well as to double bottom production. We have also analyzed in this context associated production of charm and dijets. The calculations are performed within a factorized ansatz. Each parton scattering is calculated within the kT-factorization approach. The hadronization is done with the help of fragmentation functions. For completeness, we compare results for double- and single-parton scattering (SPS). We identify the regions of phase-space where the DPS dominates over the SPS, using realistic cuts for the LHCb and ATLAS and suggesting future experimental studies at the LHC. Finally, I will also present results of our studies of triple-parton scattering (TPS) effects in the case of triple charm meson production for the LHCb kinematics.

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