

Overview of DPS theory

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Double parton scattering (DPS) is a nucleon-nucleon scattering where two partons from each nucleon undergo two independent hard scattering processes. It is usually suppressed with respect to the traditional single parton scattering (SPS). However, under some conditions (like for quarkonia production), DPS contributions can be comparable or even dominate with respect to the SPS. The study of DPS can also give insight into the 3D structure of nucleons.

In this talk we review the current status of the theoretical description of DPS in perturbative QCD. We focus on the DPS cross section formula and its factorization, and on the double parton distributions (DPDs), which are the DPS analog of PDFs.

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