Contribution ID: **30** Type: **seminar I**

MPIs: Double parton distributions and how to constrain them using sum rules

Monday 19 February 2018 17:00 (30 minutes)

In my talk, I will first present a short overview of the basics of multiple partonic interactions (MPIs), with the main focus on double parton scattering (DPS), and discuss factorization for double parton scattering. One of the building blocks of factorised DPS cross sections are the DPS counterpart of
regular parton distributions, the double parton distributions (DPDs), which, as of now, could not be extracted from experimental data. In order to still be able to calculate DPS cross sections a possible solution is to try and model
realistic DPDs using the requirement that DPDs should fulfil certain physical constraints. One particularly useful constraint is provided by DPD momentum and valence number sum rules which sensible DPDs should fulfil, in close analogy to
the well known PDF sum rules. I will discuss how these sum rules can be used to constrain the parameters in a DPD model ansatz.

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