



Contribution ID: 57

Type: **Oral Presentation**

The 3D structure of QCD

Wednesday 9 September 2015 13:45 (25 minutes)

For many phenomenological applications involving hadrons in high energy processes the hadronic structure can be taken care of by parton distribution functions (PDFs), in which only the collinear momenta of quarks and gluons are important. In principle the transverse structure, however, provides interesting new phenomenology. Taking into account transverse momenta of partons one works with transverse momentum dependent PDFs (TMDs), which go beyond spin-spin correlations, allowing also spin-orbit correlations, which have a time reversal odd character and lead to new observables. The embedding of the transverse structure in the field theoretical framework of QCD, needed among others for the study of universality and for investigating the evolution of TMDs, is quite cumbersome. Besides looking at some recent developments of the universality aspects, I also will speculate on a novel view of the 3-dimensional structure of QCD, which fits in a broader study looking at the roots of the Standard Model of particle physics.

Author: MULDER, Piet (VU/Nikhef)**Presenter:** MULDER, Piet (VU/Nikhef)**Session Classification:** Spin-3D**Track Classification:** Spin and 3-d structure