

Spin Physics with a fixed-target experiment at the LHC

Thursday, 13 September 2018 16:40 (25 minutes)

A fixed-target experiment using the LHC beams with a polarized target would offer a unique opportunity to study the internal structure of the nucleon. Recent studies have shown that a number of spin and azimuthal asymmetries are large enough to be precisely measured, allowing to constrain several non-perturbative functions which encode the three-dimensional spin structure of the nucleon, as the quark and gluon Sivers functions.

In this talk I will review the ambitious spin physics program developed by the AFTER@LHC study group. I will confront the state-of-the-art theoretical predictions with the potential of a fixed-target experiment at the LHC to unravel the nucleon structure through different high-energy processes, using LHCb-like and ALICE-like detectors.

Primary author: Dr ECHEVARRIA, Miguel (INFN Pavia)

Presenter: Dr ECHEVARRIA, Miguel (INFN Pavia)

Session Classification: 3D Structure of the Nucleon: TMDs

Track Classification: 3D Structure of the Nucleon: TMDs