Contribution ID: **369** Type: **not specified**

Unraveling the 3D/spin structure of the nucleons with a fixed-target experiment at the LHC

Tuesday 9 April 2019 10:50 (20 minutes)

A fixed-target experiment using the LHC beams with an (un)polarized target would offer a unique opportunity to study the 3-dimensional (3D) and spin 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 internal structure of the nucleon, as the quark and gluon Sivers functions.
In this talk I will review the ground-breaking 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.

Presenter: LANSBERG, Jean-Philippe (Centre National de la Recherche Scientifique (FR))

Session Classification: WG7: Future of DIS

Track Classification: WG7: Future of DIS