Contribution ID: **83** Type: **not specified**

Non-boost-invariant description of polarization within hydrodynamics with spin

Friday 14 January 2022 15:20 (10 minutes)

Abstract: Space-time evolution of spin polarization within the framework of hydrodynamics with spin based on de Groot - van Leeuwen - van Weert forms of energy-momentum and spin tensors is studied. Due to the non-boost invariant flow in the system the spin polarization components couple to each other implying some effects on the spin polarization observables. We study transverse-momentum and rapidity dependence of mean spin polarization vector for Lambda hyperons. Our results show qualitative agreement for rapidity dependence of the global spin polarization with the experiments and other models. The quadrupole structure of the longitudinal component at midrapidity is not found, however, as compared to the results for Bjorken expansion, some non-trivial signal at forward rapidities is observed. (Based on https://arxiv.org/abs/2112.01856)

Author: SINGH, Rajeev (Institute of Nuclear Physics Polish Academy of Sciences)

Presenter: SINGH, Rajeev (Institute of Nuclear Physics Polish Academy of Sciences)

Session Classification: Young Scientists' Session