Dipartimento di Fisica
Università di Cagliari
INFN, Sezione di Cagliari

High Energy Physics Colloquia

16 Novembre 2017 · ore 15:00 · aula C

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Probing the Gluon Sivers Function in $p^{\uparrow}p \to J/\psi, D + X$

Abstract

In this talk, I will discuss transverse single spin asymmetries in $p^{\uparrow}p \to J/\psi, D + X$ processes within the framework of the generalized parton model (GPM), showing how they can provide useful information on the gluon Sivers distribution function (GSF). Adopting a color gauge invariant (CGI) extension of the GPM approach, with the inclusion of initial and final state interactions, I will show that in this case these processes are sensitive to different combinations of two distinct, universal gluon Sivers distributions. I will consider proper observables that could allow for a separate extraction of these two independent GSFs and help in discriminating between the GPM and its CGI extension. I will then present estimates for the SSAs and compare them with experimental results at RHIC. I will finally discuss the potential role of these results for studies of the GSF at a future Electron Ion Collider (EIC).

Contatti:

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