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Gluon TMDs from quarkonium production

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Extraction of observables sensible to gluon TMDs is one of the main goals of many proposed high-energy experiments. In this talk, I will present results for the production of C-even quarkonium states in proton-proton collisions. The quarkonium formation mechanism is described within the framework of Non-Relativistic QCD (NRQCD). Our computation for the cross sections incorporates the polarization of both the incoming protons and we also show the results for the maximal values of the transverse single-spin asymmetries, demonstrating that these observables could, in principle, be measure at LHCSpin, a fixed target experiment planned at the LHC.

Primary author: KATO, Nanako (Istituto Nazionale di Fisica Nucleare)

Co-authors: PISANO, Cristian (Istituto Nazionale di Fisica Nucleare); MAXIA, Luca (University of Groningen)

Presenter: KATO, Nanako (Istituto Nazionale di Fisica Nucleare)

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