

# Quarkonium spin asymmetry measurements in p+p collisions by the PHENIX Experiment at RHIC

*Wednesday 24 March 2021 16:00 (15 minutes)*

Measurements of heavy quark bound states, like J/psi meson, provide a unique opportunity to study QCD properties. General features of quarkonia production such as cross-sections and transverse momentum distributions are well described by many existing models. In order to differentiate between various models one has to study quarkonia production in more details. One of the observables which can be used for this purpose is angular distribution of leptons produced in quarkonium decays, usually called polarization or spin asymmetry.

The PHENIX experiment at RHIC has measured inclusive J/psi polar and azimuthal angular decay coefficients at the mid ( $|y| < 0.35$ ) and forward ( $1.2 < |y| < 2.2$ ) rapidity in p+p collisions at 200 GeV and 510 GeV. In this talk the analysis details as well as the results in different polarization frames will be presented and compared to theory.

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**Session Classification:** Day 3 (mostly Spin/TMDs)

**Track Classification:** Reactions with polarisation & tools for TMD functions, spin asymmetries,...