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Measurements of J/ψ polarization in p+p collisions at STAR SIWEI LUO, Univ of Illinois - Chicago, STAR COLLABORATION — Measurements of J/ψ production cross section and polarization can help understand J/ψ production mechanism in hadron collisions and distinguish among different models. J/ψ polarization could be characterized by the λ_θ, $\lambda_\varphi$and λ_{inv} polarization parameters, where λ_θ and λ_φ are coefficients of positron polar and azimuthal angle distribution in the J/ψ rest frame with respect to a chosen polarization axis, while λ_{inv} is a frame-independent variable calculable from λ_θ and λ_φ. J/ψ polarization parameters λ_θ, $\lambda_\varphi$and λ_{inv} in both helicity and Collins-Soper frames have been extracted from the STAR 2011 data in p+p collisions at $\sqrt{s} = 500$ GeV, while only λ_θ in the helicity frame has been extracted from the STAR 2009 data in p+p collisions at $\sqrt{s} = 200$ GeV. In this talk, we will present a new analysis to study J/ψ polarization using the STAR 2012 data to extract λ_θ, $\lambda_\varphi$and λ_{inv} in both the helicity and Collins-Soper frames in p+p collisions at $\sqrt{s} = 200$ GeV.

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