

Quarkonium production at a future electron-ion collider

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Abstract

We discuss results for exclusive quarkonium photo- and electro-production off the nucleon using the framework of generalized parton distributions (GPDs). A particular emphasis is on the gluon GPD E^g , which is related to the total angular momentum of gluons inside the nucleon. At present, E^g is basically unconstrained. On the basis of different models for E^g we estimate the transverse target spin asymmetry for typical kinematics of a future electron ion collider. We also explore the potential of measuring the polarization of the recoil nucleon.