

Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Gluon Generalized Parton Distributions in Nucleons and Nuclei¹

SIMONETTA LIUTI, BRANDON KRIESTEN, Univ of Virginia, ABHA RAJAN, Brookhaven National Lab — We study the behavior of gluon generalized parton distributions (GPDs) in nucleons and nuclei using a parametrization based on a reggeized spectator model. Constraints on the parametrization are obtained from recent form factor lattice QCD calculations, as well as from deep inelastic parton distribution functions. NLO QCD evolution in the kinematic range of $10^{-4} \leq x_{Bj} \leq 0.1$, $1 \text{ GeV}^2 \leq Q^2 \leq 100 \text{ GeV}^2$, and $-t \leq 1 \text{ GeV}^2$, accessible at the electron ion collider, is studied as a means to extract gluon GPDs from experimental data on both Deeply Virtual Compton Scattering (DVCS) and Timelike Compton Scattering (TCS) observables.

¹DE-SC0016286 (S.L.), DE-SC0012704 (A.R.)

Simonetta Liuti
Univ of Virginia

Date submitted: 29 Jun 2020

Electronic form version 1.4