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Imaging the Nucleon Glue and Sea[1] PHILIP VELIE, Univ of Virginia, SIMONETTA LIUTI, BRANDON KRIESTEN , EMMA YEATS, FERNANDA YEPEZ-LOPEZ, University of Virginia — Imaging the 3D structure of the nucleon is a fundamental goal of every major nuclear physics program. With the rapid development of deeply virtual Compton scattering experiments spanning unprecedented kinematic regimes, there is a need for flexible models of generalized parton distribution functions (GPDs) to place constraints on experimental observables. The proposed low-x electron-ion collider (EIC) kinematic settings are dominated by gluon dynamics; therefore, modelling sea quark and gluon GPDs is crucial. We are developing flexible GPD models of the nucleon glue and sea using a spectator diquark model where we fit the momentum transfer dependence to lattice QCD calculations of the gravitational form factors. Through Fourier transform of the momentum transfer variable t, we can develop femtographic images of the transverse spatial dependence of the glue and sea in the nucleon as it would appear at an EIC.

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