

# 2022 Meeting on Lattice Parton Physics from Large Momentum Effective Theory (LaMET2022)



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## Updates on gluon distributions from HadStruc

*Friday, December 2, 2022 2:00 PM (25 minutes)*

I will present the recent calculations of gluonic matrix elements related to the nucleon's unpolarized and helicity gluon PDF. Gluon matrix elements are notoriously noisy. By leveraging the tools of distillation and summed GEVP, HadStruc has reached a necessary precision to compare results to phenomenological determinations of gluon structure. Recently, doubt has been given to the applicability of PDF positivity constraints in phenomenological global analyses. Removal of constraints leads to two distinct bands of helicity gluon PDFs which are consistent with experiments. Lattice calculations, on the other hand, favor only one of these solutions.

**Presenter:** KARPIE, Joseph (Jefferson Lab)

**Session Classification:** Session III