Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Valence Structure of Pion from Lattice QCD: Physical Mass, Chiral Quarks XIANG GAO, Brookhaven National Laboratory — We study pion valence structure from lattice QCD using three mixed action ensambles including a physical pion mass with fine lattice spacings of a = 0.04, 0.06 and 0.076 fm. Our analysis use ratio-based schemes to renormalize the equal-time bilocal quark-bilinear matrix elements. We extract first few moments and reconstruct the x-dependent PDF using NNLO leading-twist perturbative matching formula, and investigate the mass dependence as well as approaching continuum limit. Two Domain-Wall ensambles are used to cross check our estimate.

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Date submitted: 11 Jan 2021 Electronic form version 1.4