

Name: Jian Liang

Institution: Department of Physics and Astronomy, University of Kentucky

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E-mail: Jian.liang@uky.edu

ABSTRACT:

We report the status of our lattice QCD calculation of the quark flavor decomposition of the proton spin. The quark spin calculation is recently carried out from the anomalous Ward identity (AWI) with chiral fermions and is found to be small mainly due to the large negative pseudoscalar coupling in the AWI which may help to solve the proton spin crisis. We also report a scheme of constructing improved currents on the lattice to reduce the finite lattice spacing artifact of axial charge g_A .