Abstract for an Invited Paper for the DNP07 Meeting of The American Physical Society

An update on the Next-to-Leading Order perturbative QCD analysis of the spin structure function data¹ JECHIEL LICHTENSTADT, Tel Aviv University, Israel

We present a next-to-leading order (α_S^2) perturbative QCD analysis of the nucleon spin structure function data available from the fixed target deep inelastic scattering experiments. In the analysis we include the most recent available data sets available from CERN, SLAC and DESY. The polarized gluon distribution obtained from this analysis is then compared to the now available direct measurements of polarized gluons from COMPASS and RHIC data on inclusive neutral pions and jets. We also comment on the impact of possible future data from RHIC and the Electron Ion Collider (EIC).

¹In collaboration with Abhay Deshpande, SUNY at Stony Brook & RBRC.