

**EXTRACTING THE GLUON PIECE OF THE SPIN PUZZLE
NEW INCLUSIVE JET RESULTS FROM STAR**

RENEE FATEMI
UNIVERSITY OF KENTUCKY

Unraveling the nucleon spin puzzle has been the focus of experimental and theoretical efforts since polarized deep-inelastic scattering (DIS) experiments found that the quark contribution to the nucleon spin is small. Subsequently, measurements sensitive to the gluon contribution (ΔG) to the total spin of the nucleon have been widely pursued and is a flagship effort within the STAR Spin program. This talk will focus on results from the mid-rapidity inclusive jet channel $\vec{p} + \vec{p} \rightarrow jet + X$ at $\sqrt{s} = 200$ GeV, and the substantial new constraints placed on ΔG when compared to those from a next-to-leading order analysis of DIS data. Future STAR plans for continued progress on ΔG measurements will be discussed.