

Abstract Submitted  
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**Recent Results on  $W$  Boson Production in Polarized  $p + p$  Collisions at STAR** JUSTIN STEVENS, Massachusetts Institute of Technology, STAR COLLABORATION — The production of  $W$  bosons in polarized  $p + p$  collisions at RHIC provides an excellent tool to probe the proton's sea quark distributions. At leading order  $W^{-(+)}$  bosons are produced in  $\bar{u} + d$  ( $\bar{d} + u$ ) collisions, and parity-violating single-spin asymmetries measured in longitudinally polarized  $p+p$  collisions give access to the flavor-separated light quark and antiquark helicity distributions. In 2012 the STAR experiment collected an integrated luminosity of  $\sim 80 \text{ pb}^{-1}$  at  $\sqrt{s} = 510 \text{ GeV}$  with an average beam polarization of  $\sim 55\%$ . Preliminary results from this dataset for the single-spin asymmetry,  $A_L$ , will be presented as well as future projections for the STAR  $W$  program.

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