Longitudinal Double Spin Asymmetry for inclusive back-to-back dimuons in polarized $p+p$ collisions at $\sqrt{s} = 200$ GeV CARLOS MUNOZ CAMACHO, Los Alamos National Laboratory, PHENIX COLLABORATION — Longitudinal double spin asymmetries, $A_{LL}$, measured for hard inclusive processes (open charm, open beauty) in polarized proton-proton collisions at high energies are sensitive to the gluon polarization, $\Delta g/g$. By measuring large invariant mass muon pairs, $\Delta g/g$ is probed in the interesting region of momentum fraction $0.02 \lesssim x \lesssim 0.1$, where $\Delta g/g$ is expected to be significant. The PHENIX forward spectrometers have been used to measure back-to-back muon pairs. The status of the analysis of $A_{LL}$ in polarized $p+p$ collisions at $\sqrt{s} = 200$ GeV at RHIC will be presented.

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