Study of cold-nuclear-matter effects on B-meson production at forward and backward rapidity with the PHENIX FVTX

SANGHOON LIM, Los Alamos National Laboratory, PHENIX COLLABORATION — PHENIX forward silicon vertex detector (FVTX) was installed in 2012. The FVTX provides precise tracking to distinguish between prompt $J/\psi$ and $J/\psi$ from $B$ decays by measuring the displacement of single muons from primary vertex position. This measurement is a clean probe to access $B$ production down to low $p_T$. PHENIX has collected a large statistics of $p + p$ and $p + Au$ collision data at $\sqrt{s_{NN}} = 200$ GeV in 2015. The $B \rightarrow J/\psi$ measurements at forward and backward rapidity with these data sets will be used to study cold-nuclear-matter effects on $B$ production. The performance of the FVTX in the 2015 run and the current status of $B \rightarrow J/\psi$ analysis will be presented.