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Open charm hadron production via hadronic decays at STAR

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Heavy quarks are a unique probe to study the medium produced in ultra-relativistic heavy ion collisions. The dominant process of charm quark production at RHIC is believed to be initial gluon fusion which can be calculated in the perturbative QCD. The upper limit of FONLL calculation seems to be in good agreement with charm cross section measurements at mid-rapidity in p+p collisions at $\sqrt{s_{NN}} = 200 GeV provided by STAR. The same measurement i$
$Au collisions at equal energy reveals the number-of-binary-collisions scaling of charm cross section indicating that charm pro$

This talk will present the measurements of $D\hat{}\{0\}$, $D\hat{}\{\}$ in p+p and $D\hat{}0$ in $Au + Au collisions at 0.6 GeV/c <$ p_T $< 6 GeV/c v$
$\rightarrow K\hat{} - \pi\hat{} + \pi\hat{} +$ in $\sqrt{s_{NN}}\} = 200$ GeV $p + p$ collisions at mid-rapidity $|y| < 1. Furthermore, we will present the analysis status on open charm measurement in \sqrt{s_{NN}} =$ 500 GeV $p + p$ collisions.

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