# Measurements of Baryon-to-Meson Ratios Inside Jets in Au+Au and $p$+$p$ Collisions at $\sqrt{s_{NN}} = 200$ GeV at STAR

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Measurements at RHIC and the LHC show strongly enhanced baryon-to-meson yield ratios at intermediate transverse momenta ($p_T$) in high-energy nuclear collisions compared to $p$+$p$ baseline. This enhancement is usually attributed to the following effects due to the presence of the Quark-Gluon Plasma (QGP): strong hydrodynamic flow and parton recombination. To gain more insights into QGP properties, jets have been used extensively, with substantial modifications to jet yields and internal structures seen across multiple measurements. An enhancement of the baryon-to-meson ratio inside jets in heavy-ion collisions compared to the p+p baseline is predicted due to medium response, opening a new avenue to study jet-medium interactions. Results from the LHC indicate that in-jet particle production is significantly different from that of the QGP bulk. To explore this behavior at RHIC, we present the first in-cone baryon-to-meson yield ratios associated with fully reconstructed jets from 200 GeV Au+Au and $p$+$p$ collisions using the STAR detector. We employ particle identification through time of flight and $dE/dx$ information alongside jet-track correlations to measure in-jet particle production for $p_T < 5.0$ GeV/c. We study jet radius, jet $p_T$, and constituent $p_T$ dependence of in-jet baryon-to-meson ratios to investigate the impacts of jet-medium interactions.