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 inclusive measurements from high-energy nuclear collisions compared to p+p baseline. This enhancement is attributed to strong hydrodynamic flow and parton recombination in the Quark-Gluon Plasma (QGP). Jet probes have been used extensively to gain insights into QGP properties, with substantial modifications to jet yields and internal structures seen across multiple measurements. Despite apparent medium-induced changes to jet fragmentation patterns, modification of in-jet hadro-chemistry has not yet been found. To search for such effects with the STAR detector at RHIC, we couple the jet-hadron correlation technique with particle identification to measure in-cone baryon-to-meson yield ratios associated with fully reconstructed jets from Au+Au and p+p collisions at $\sqrt{s_{\mathrm{NN}}} = 200$ GeV. These in-jet ratios are studied with jet selections of jet radius, $\mathrm{R} = 0.2, 0.3, 0.4$, and jet constituent p_{T}, $p_{\mathrm{T}}^{\mathrm{cons}} > 2.0$, 3.0 GeV/$c$, to probe jets with different levels of QGP interaction. We present in-jet p/π ratios as a function of p_T as well as ΔR, alongside jet shapes for identified hadrons, and compare Au+Au and p+p measurements to examine QGP effects on hadronization.