# Measurement of inclusive jet production in Au+Au collisions at $\sqrt{s_{\mathrm{NN}}} = 200$ GeV by the STAR experiment

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The STAR Collaboration reports the first measurement of the inclusive distribution of fully-reconstructed jets in peripheral (60-80%) and central (0-10%) Au+Au collisions at $\sqrt{s_{\mathrm{NN}}} = 200$ GeV at RHIC, using a dataset with an integrated luminosity of 5.2 nb$^{-1}$. The data were recorded in 2014 with an online High Tower trigger which requires at least $\sim 4$ GeV energy deposited in one Barrel Electromagnetic Calorimeter (BEMC) tower. Jets are reconstructed from charged-particle tracks in the Time Projection Chamber and neutral energy measured by the BEMC using the anti-$k_{\mathrm{T}}$ algorithm, with resolution parameters $R = 0.2$, 0.3, and 0.4. The combinatorial jets in heavy-ion collisions are suppressed by requiring a high-transverse-momentum ($p_{\mathrm{T}}$) leading charged or neutral constituent in accepted jet candidates. The bias imposed by this requirement is measured, and the unbiased region is identified. Inclusive jet distributions are corrected for background fluctuations and detector effects using unfolding techniques, and reported up to jet $p_{\mathrm{T}} \sim 50$ GeV/$c$, extending significantly the kinematic reach of existing measurements with charged-particle jets. These distributions are compared to those in $p + p$ collisions, and the medium-induced modification to the inclusive jet yield is discussed.