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## Measurement of photon-jet correlations in p+p and central Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV by STAR

We report the semi-inclusive distribution of fully-reconstructed jets recoiling from a direct photon trigger in p+p and central Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. This observable provides an incisive probe of the Quark-Gluon Plasma generated in high-energy nuclear collisions. Direct photons are measured using the STAR Barrel Electromagnetic Calorimeter (BEMC). Jet reconstruction is carried out by the anti-kT algorithm with jet resolution parameters  $R=0.2$  and  $R=0.5$ , utilizing neutral energy measured in the BEMC and charged-particle tracks. Uncorrelated jet background is mitigated using event mixing. This measurement extends a recently reported STAR measurement of the same observable, which used charged-particle jets, to fully-reconstructed recoil jets. The status of the analysis will be reported, and its physics prospects will be discussed.

### Category

Experiment

### Collaboration (if applicable)

STAR

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