

## High Energy Physics - Experiment

# Jet properties from direct $\gamma$ - hadron correlation in PHENIX at RHIC

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Two-particle correlations of direct photon triggers with associated hadrons are obtained by isolation method in p+p collisions at  $\sqrt{s} = 200$  GeV in PHENIX at RHIC. The initial momentum of the away-side parton is tightly constrained, because the parton-photon pair is balanced in momentum at the leading order in perturbative quantum chromodynamics (pQCD). Therefore making such correlations can be used as a tool to measure the away-side parton fragmentation function. The direct photon associated yields in p+p collisions are compared with PYTHIA and the effect of the  $k_{\perp}$  smearing in the spectra is discussed.

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