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## Study of direct photon production with internal conversion method in Cu+Cu collisions at $\sqrt{s_{NN}} = 200$ GeV at PHENIX

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Photons and dileptons in high-energy heavy-ion collisions are good probes to understand space-time evolution of the produced system. The PHENIX experiment has measured low-pT direct photons with internal conversion method in p+p, d+Au, and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. PHENIX has recently reported low-pT direct photon in Au+Au collisions with external conversion method. But the results on direct photon in Cu+Cu collisions have not been published yet.

Direct photons via internal conversion are measured with  $e^+e^-$  pairs as an excess compared to hadronic cocktail after subtracting uncorrelated and correlated backgrounds. Since the PHENIX detector has an excellent electron-identification capability, dielectron are focused on as the probe for direct photon measurement.

In this poster, we report the current status of direct photon measurement with internal conversion method in Cu+Cu collisions at  $\sqrt{s_{NN}} = 200$  GeV.

### On behalf of collaboration:

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