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Performance for anisotropic flow measurement of inclusive photons and neutral pions in Bi+Bi collisions at 9.2 GeV with the MPD experiment

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Direct photons produced in electromagnetic processes in heavy ion collisions do not interact with other particles in the collision zone. Analysis of direct photon anisotropic flow could provide additional information on the conditions at the production time and on the development of collective flow. Direct photon flow is extracted based on flow and spectra of inclusive photons and of neutral pions, the main source of decay photons. Moreover, results for neutral pion spectra and flow are interesting themselves as they allow to constrain properties of hot and dense nuclear matter thanks to the robust particle identification and wide coverage in transverse momentum.

We present the performance for measurement of anisotropic flow for inclusive photon and neutral pion with the MPD experiment.

Primary author(s) : GOLOSOV, Oleg (NRC "Kurchatov Institute", NRNU MEPhI); PERESUNKO, Dmitri (Kurchatov Institute); BLAU, Dmitry (NRC "Kurchatov Institute")

Presenter(s) : GOLOSOV, Oleg (NRC "Kurchatov Institute", NRNU MEPhI)

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