

## Low pT direct photon production in 200GeV d+Au collisions measured by the PHENIX detector

Direct photons in low pT region have been of great interest for a long time since thermal photons from Quark Gluon Plasma (QGP) are considered to contribute predominantly.

Attempts to measure low pT direct photons using EMCals could not succeed since a finite energy resolution of the EMCal prevents us from separating direct photon signal from a large amount of background of hadron decay photons, particularly  $\pi^0$ .

Recently, the PHENIX experiment demonstrated that direct photon yield can be obtained even in low pT region via the di-electron measurement since direct photon internal conversions make enhanced yield of di-electrons over the known hadron decay contributions.

Comparing direct photon yields in  $\sqrt{s_{NN}} = 200$  GeV p+p and Au+Au collisions, a significant excess over the binary scaled p+p result is seen in Au+Au for  $pT < 3$  GeV/c.

However, it should be confirmed that the observed excess of direct photons is not due to nuclear effects such as Cronin effect, nuclear anti-shadowing and so on, since nuclear effects are involved in Au+Au collisions but not in p+p collisions.

d+Au collision data can contribute to quantify nuclear effects on direct photon production.

The latest results of low pT direct photons from d+Au data taken in the Year-2008 RHIC Run will be shown.

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