



Contribution ID: 8

Type: **not specified**

QCD back-scattering photons in relativistic heavy ion collisions

Thursday 16 January 2014 12:20 (15 minutes)

We have investigated the correlations of photons produced by back scattering of fast partons in quark gluon plasma with their away-side jets. Back-scattering photons or the jet-conversion photons was first proposed as a unique source of photons in PRL 90,132301(2003). Attempts to identify this source in experiment through inclusive direct photon spectra or direct photon v_2 at intermediate p_T at RHIC have been inconclusive so far. We have shown that there is a possibility to separate back-scattering photons from other photon sources using trigger jets. We have calculated the back-scattering photon spectra in coincidence with trigger jet at the RHIC and LHC energy and shown the distinct behaviour of nuclear modification of photon production around the trigger jet E_T window.

Summary

A new method has been proposed to separate the back-scattering photons from the inclusive direct photon spectrum obtained in heavy ion collisions at the RHIC and LHC energies.

Author: Mr DE, Somnath (VECC, Kolkata)

Co-authors: Dr SRIVASTAVA, Dinesh K. (VECC, Kolkata); Dr FRIES, Rainer J (Texas A & M University, USA)

Presenter: Mr DE, Somnath (VECC, Kolkata)