

Abstract Submitted
for the APR06 Meeting of
The American Physical Society

A method for directly measuring bremsstrahlung photons from jets JANETTE HANKS, Columbia University, PHENIX COLLABORATION — Understanding the phenomenon of jet quenching is important to the study of heavy ion collisions and the medium they produce. Because of their lack of interaction with this medium, photons can provide information about the properties of the medium at the time of their production. In particular, Bremsstrahlung photons released by jets as they interact with the medium can be used for studying the evolution of the jets. \pardof the many sources of photons, the useful Bremsstrahlung photons make up a very small part of the total photon cross section, and so far indirect measurements made by looking for differences in photon spectra have not produced statistically significant results. Photons associated with a jet can be selected for through photon-jet correlations; however, most of the photons correlated with jets come from pi0 decays and other background sources. These backgrounds can be measured by reconstructing the invariant mass of gamma pairs. Given the higher statistics of the most recent PHENIX datasets, it may be possible to use this method to directly measure Bremsstrahlung photon spectra.

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Date submitted: 14 Jan 2006

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