乞掲示

理化学研究所原子核グループコロキウム　*2002. 10. 16*

講師：　Dr. Ian Johnson

(Lawrence Berkeley National Laboratory, USA)

題目：　Photon Production and Detection Techniques in Heavy Ion Collisions

∗ The seminar will be given in *English.*

日時：　2002年　10月　16日 (Wed.)　14:00 –

場所：　RIKEN Main Bldg. 1F Seminar Room

Abstract

Relativistic heavy ion collisions provide the opportunity to excite matter into extreme conditions in the Laboratory. Properties of the colliding system are probed through the detection of emitted particles. The photon's long mean free path and low probability of secondary interaction make it one of the most valuable particle probes. Photons have been detected through the reconstruction of electron-positron pair conversions from charged tracks measured with the central Time Projection Chamber of the STAR experiment at RHIC. Details of this detection technique and the analysis results will be discussed. Results include measurements of the inclusive transverse momentum spectra of photons and neutral pions about mid-rapidity for Au + Au collisions at $\sqrt{s_{NN}} = 130$. These measurements have been used to investigate the contributions of photon production from the neutral pion decays in inclusive photon spectra. This study will also be presented.

∗ Host researcher : I. Tanihata (RIKEN)

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