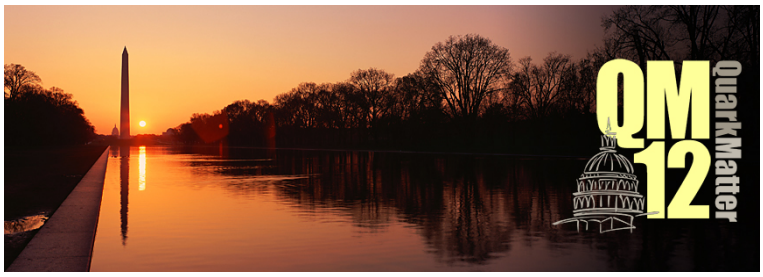

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Prompt Photon Production and Photon-Jet Hadron Correlations in PHENIX at RHIC

Tuesday 14 August 2012 14:55 (20 minutes)

A variety of heavy-ion data from RHIC and recently also from the LHC on hard direct photon production testifies that this "white" probe of the densely colored QGP continues to lend new insights to understanding jet suppression and energy loss. It also allows first comparisons between RHIC and LHC energies for the behavior of energy loss, for example whether jet fragmentation function is indeed modified by the energy loss process at any jet energy. Additionally, direct photon measurements in A+A since they are not affected by the final state QGP, offer an excellent way to test for non-trivial initial state effects, complementing recent PHENIX d+Au collision jet and single electron spectra data. To this end, we will report in this talk on new results of high pT single direct photon production in both p+p and Heavy Ion systems.
For the hot final state QGP studies, PHENIX results on direct photon-jet "photon-hadron"
correlations for QGP studies will also be presented. This will include a report on analyses of new datasets, which should be able to directly address the question of fragmentation function modification, along with the status of new analysis directions in PHENIX for this channel, such as event by event photon identification techniques in high multiplicity.

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