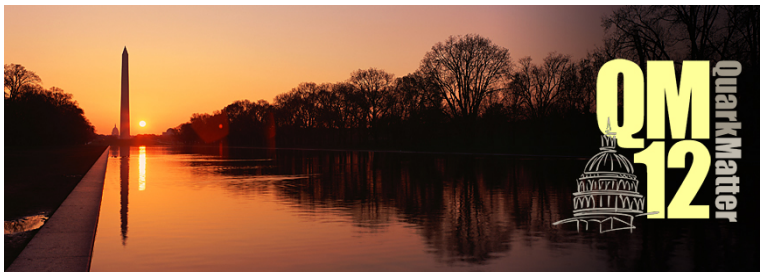

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Multigluon correlations in the color glass condensate

Wednesday, August 15, 2012 11:00 AM (20 minutes)

Multiparticle correlations, such as the "ridge" effect in pp and AA collisions and forward dihadron correlations in pA collisions, are an important probe of the strong color fields that dominate the initial stages of a heavy ion collision. We argue that the Color Glass Condensate framework provides the most natural way to understand them.

We describe recent progress in understanding two-particle correlations in the dilute-dense system, e.g. in forward dihadron production in deuteron-gold collisions. This requires computing the energy dependence of higher point Wilson line correlators from the JIMWLK renormalization group equation. We find that the large Nc approximation used so far in the phenomenological literature is not very accurate. On the other hand a Gaussian finite Nc approximation is a surprisingly close to the full result.

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