Update from *LBL-CCNU* and *Duke* Groups

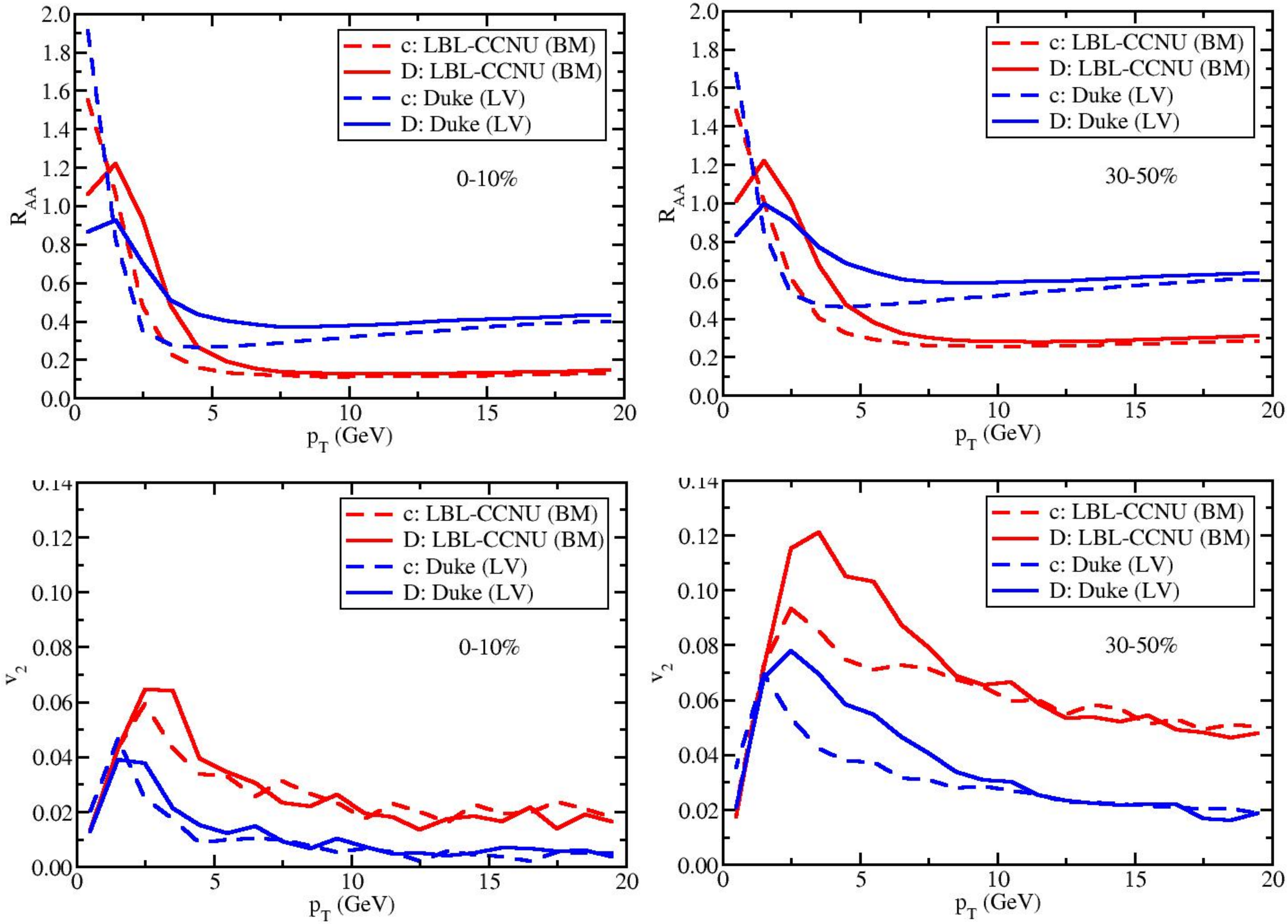
Shanshan Cao

Wayne State University

Update in calculation

Requests: the pQCD Born cross sections with the specifications underlying the calculation of the transport coefficient, i.e. K=5, g=2.24 (alpha_s=0.4), Debye mass m_D=gT, m_c=1.5GeV, and non-zero thermal mass gT.

- *LBL-CCNU Group*: Boltzmann approach with cross sections based on the above request except 0 thermal mass is used for light partons inside QGP
- *Duke Group*: Langevin approach with transport coefficients provided by Rapp and Liu (non-zero thermal mass)
- Use the same initial condition, hydro background and fragmentation + coalescence hadronization model



Major difference is expected from the effect of thermal mass of light partons in QGP on scattering rate, other difference may be from LV vs. BM.

Outlook

- Within the same Langevin approach, test zero vs. finite thermal mass in calculating FP coefficient.
- Or compare zero vs. finite thermal mass of light partons within the same BM approach.
- Find common baseline for the simplest Langevin framework (TAMU, Catania, Duke with the same FP coefficient and in the same hydro), and then explore effects of each additional ingredient (LV vs. BM, different charm or thermal masses)