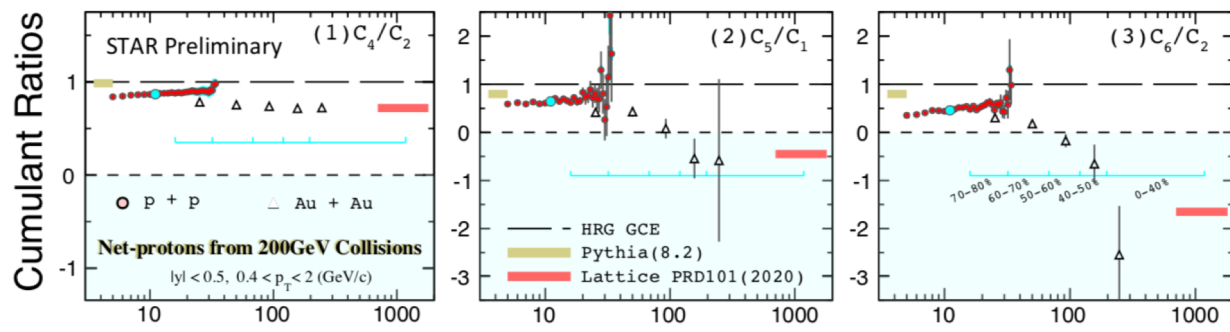


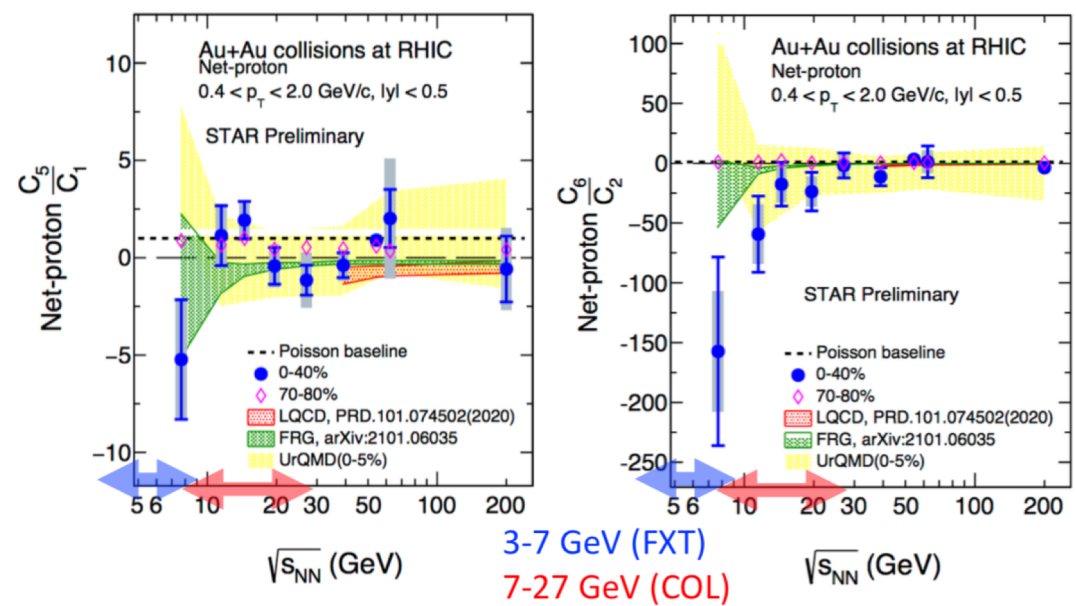
The 5th, 6th order fluctuation of net-proton including pp collisions

New data of net-p cumulants at 200 GeV pp collisions will be shown by Risa N.



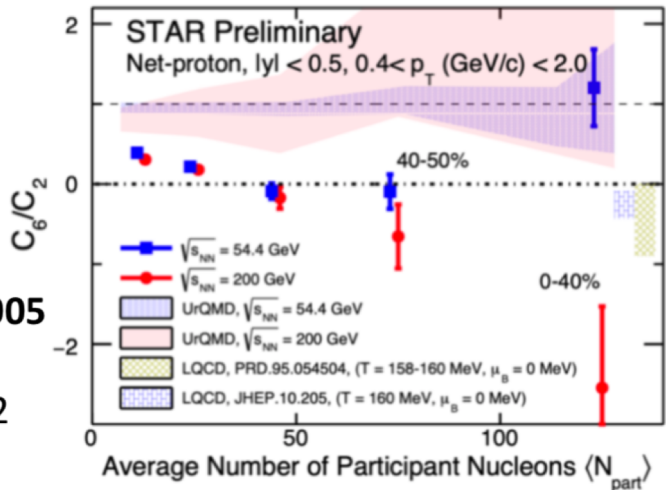
arXiv:2101.12413 (STAR) Charged Particle Multiplicity

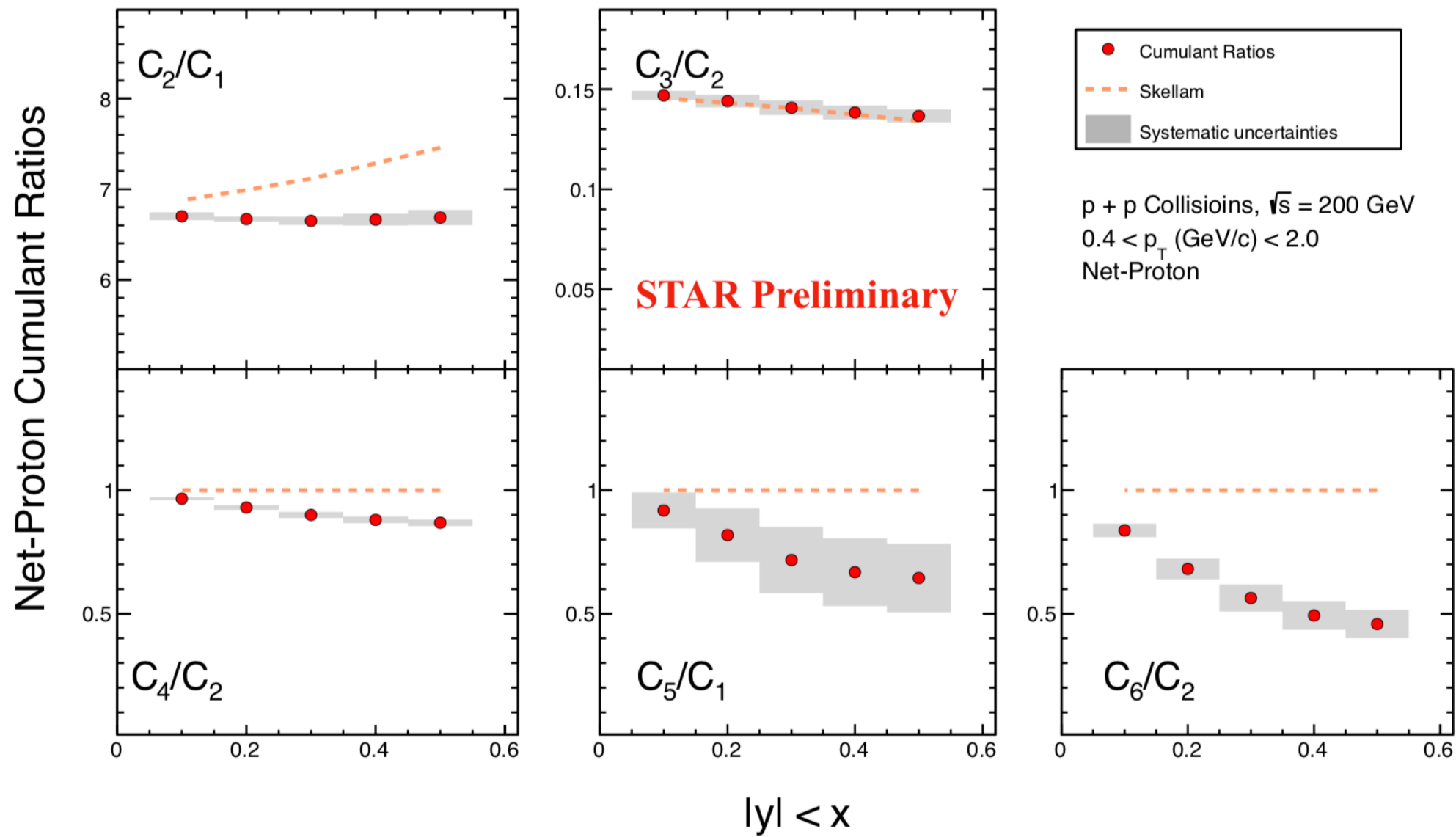
New data of net-proton C_5 , C_6 at BES-I will be shown by Ashish P.

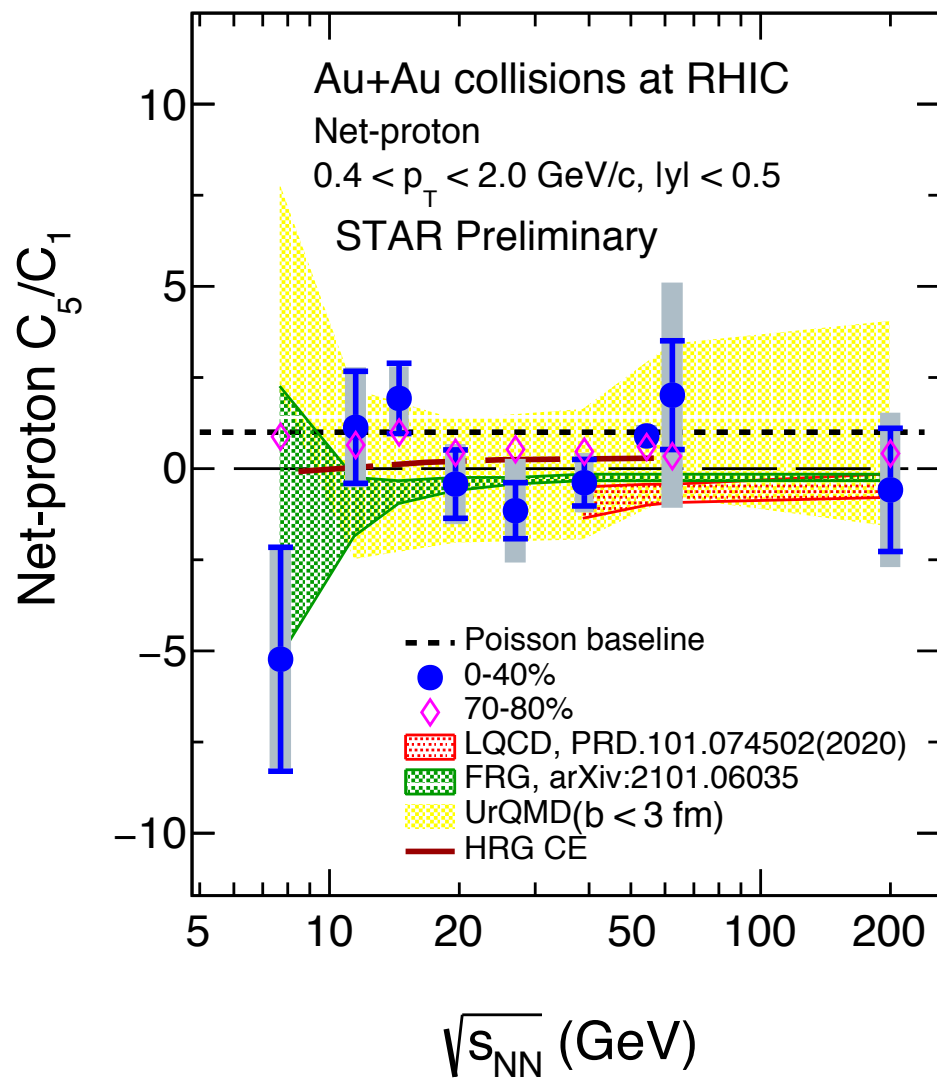


negative c_6 could be taken as an indication of cross-over transition at small μ_B

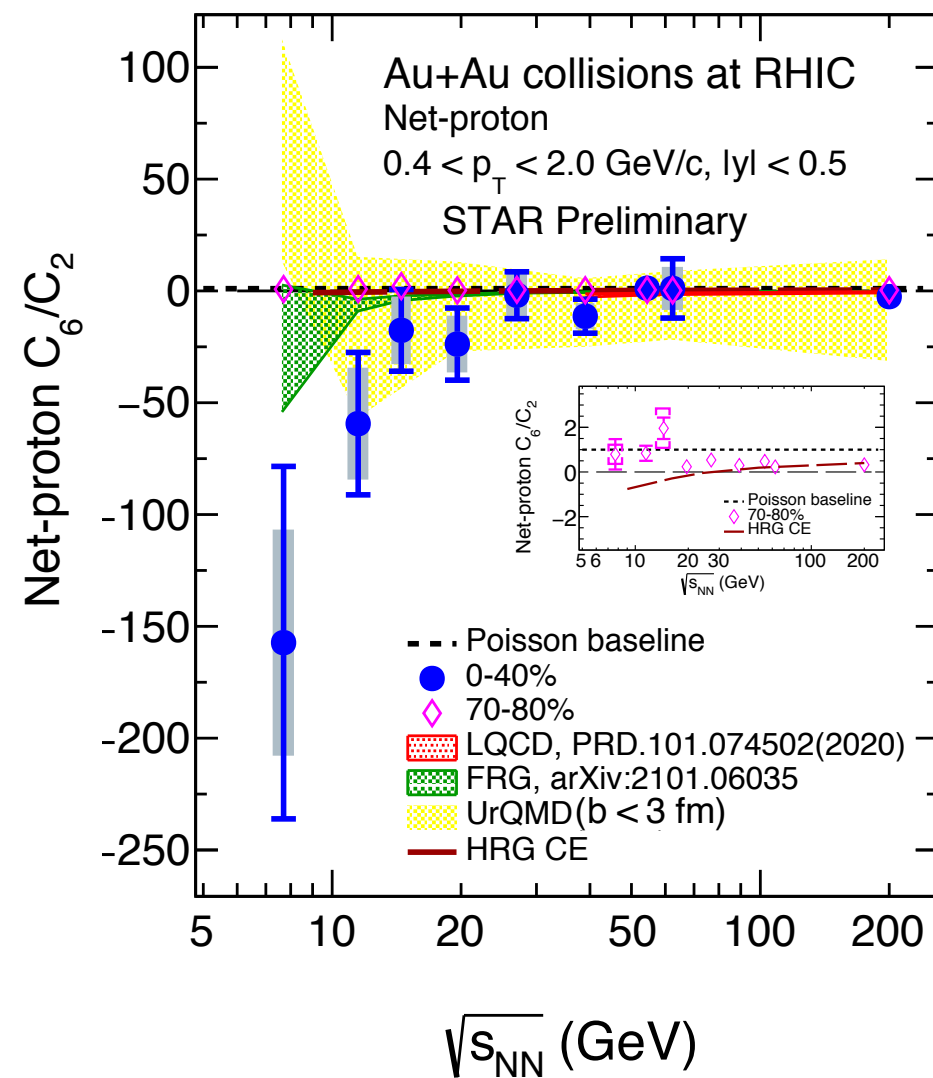
NPA 1005 (2021) 121882 (STAR)



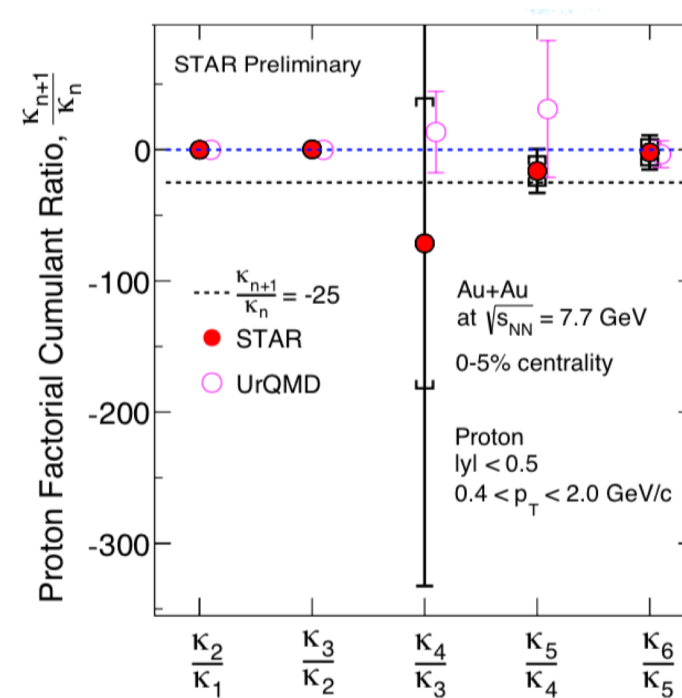
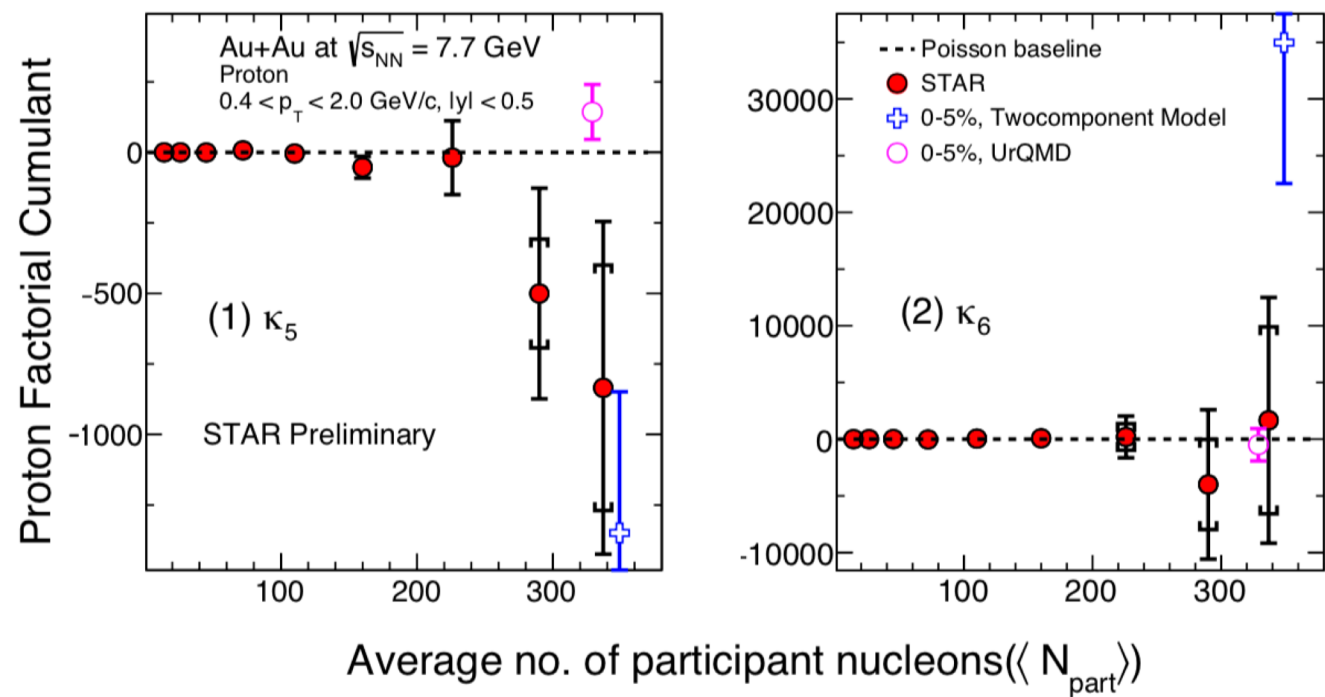


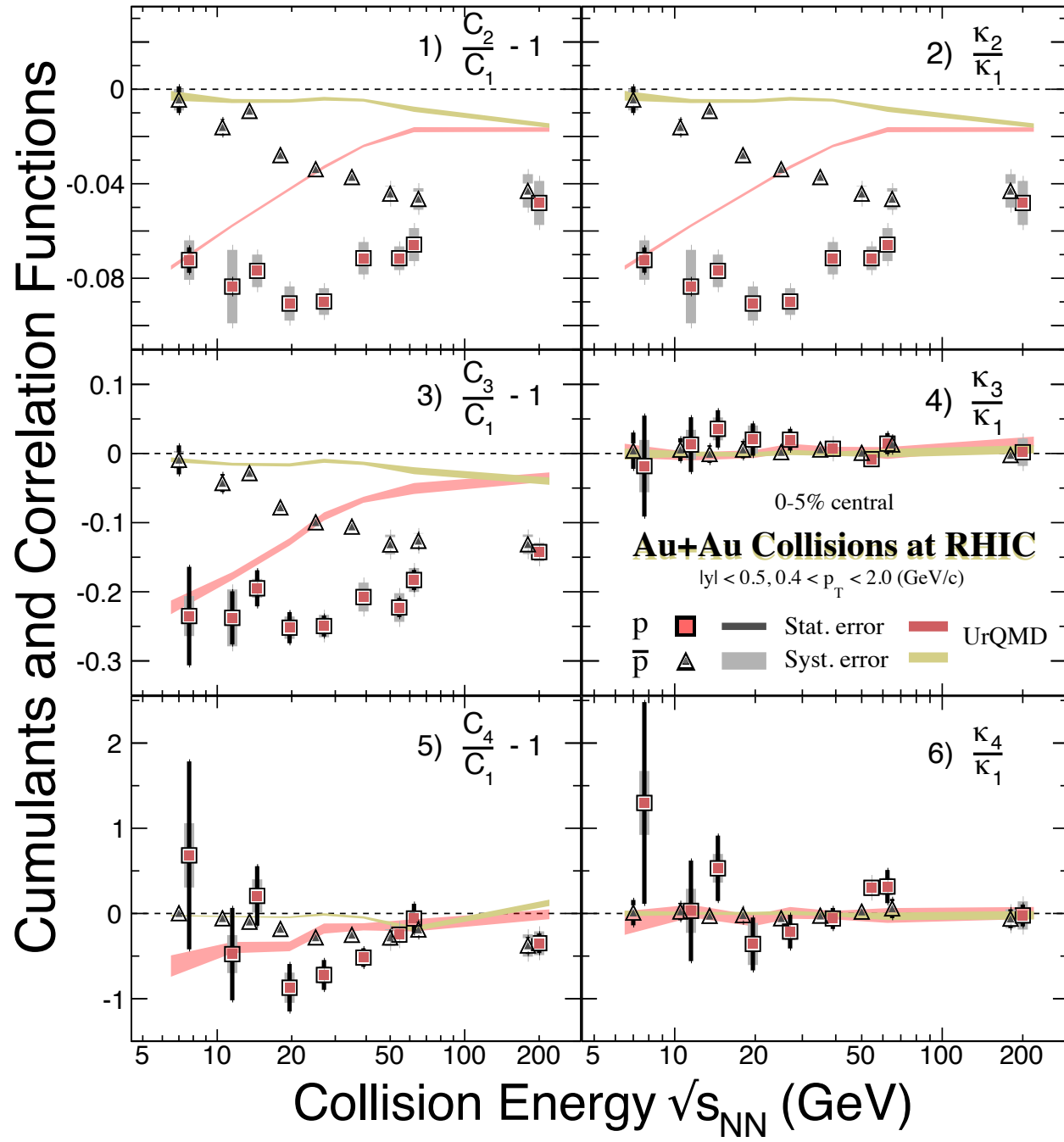


HRG CE: PBM et al, NPA 1008, 122141 (2021)

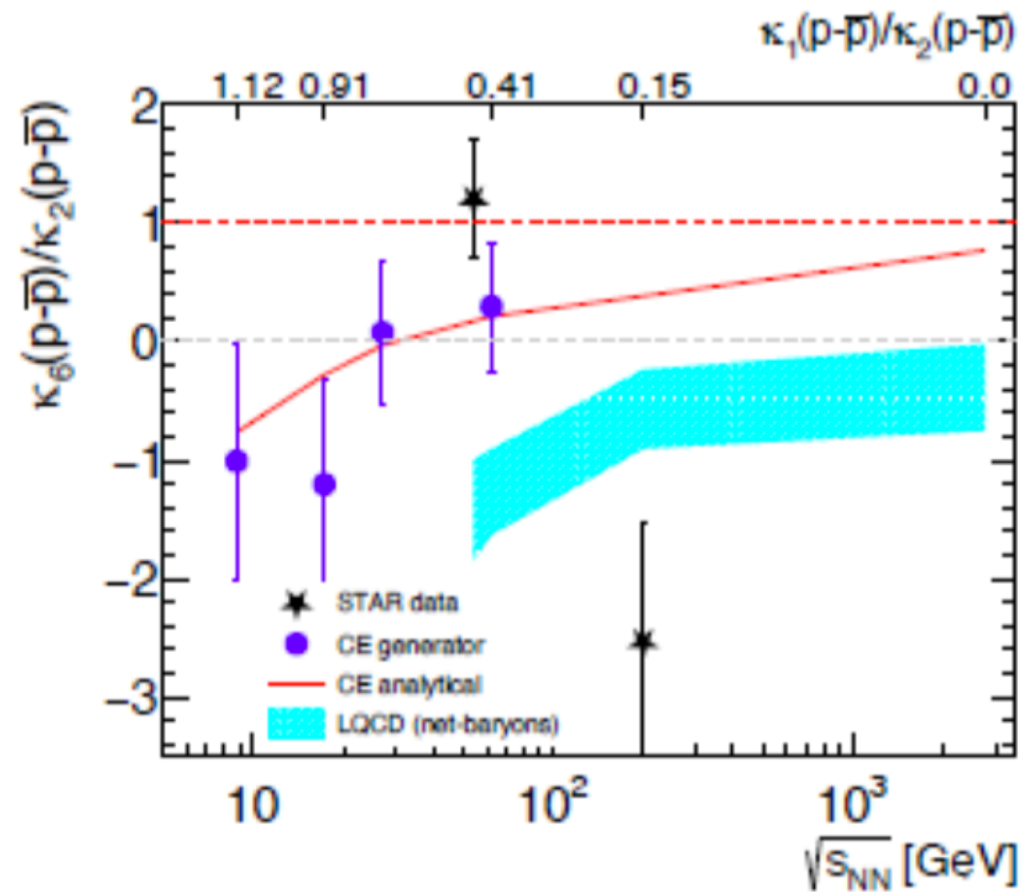
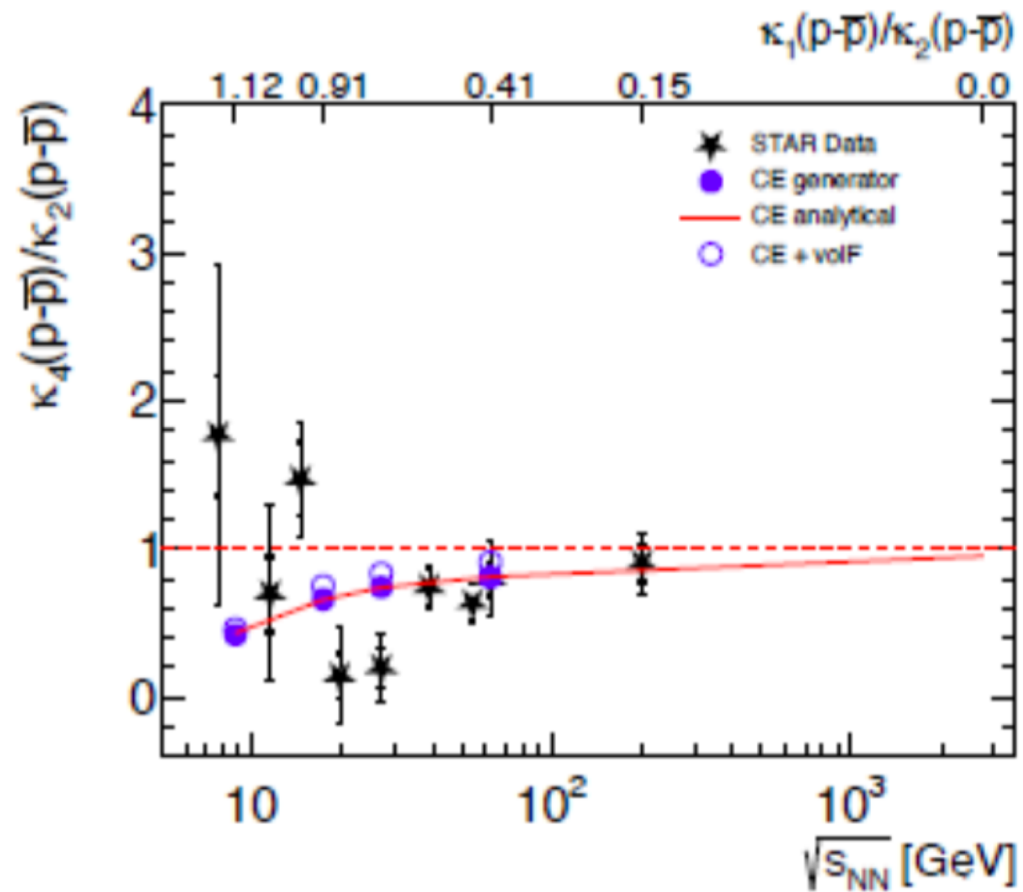


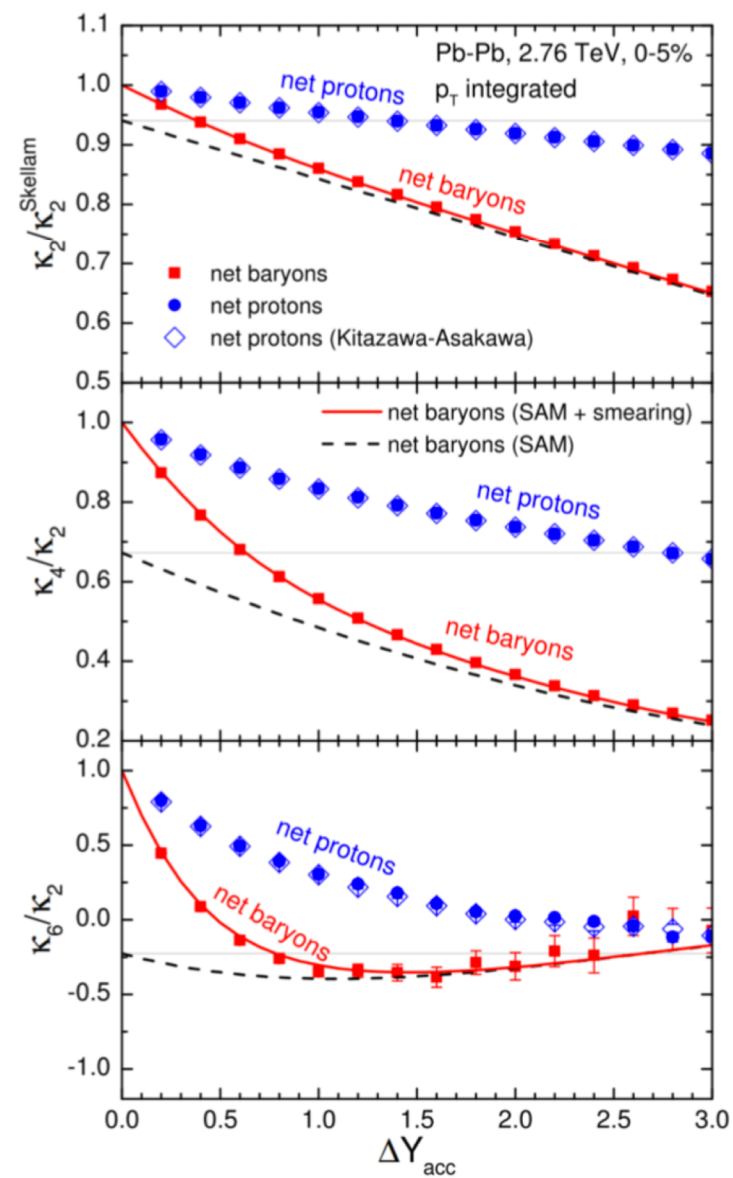
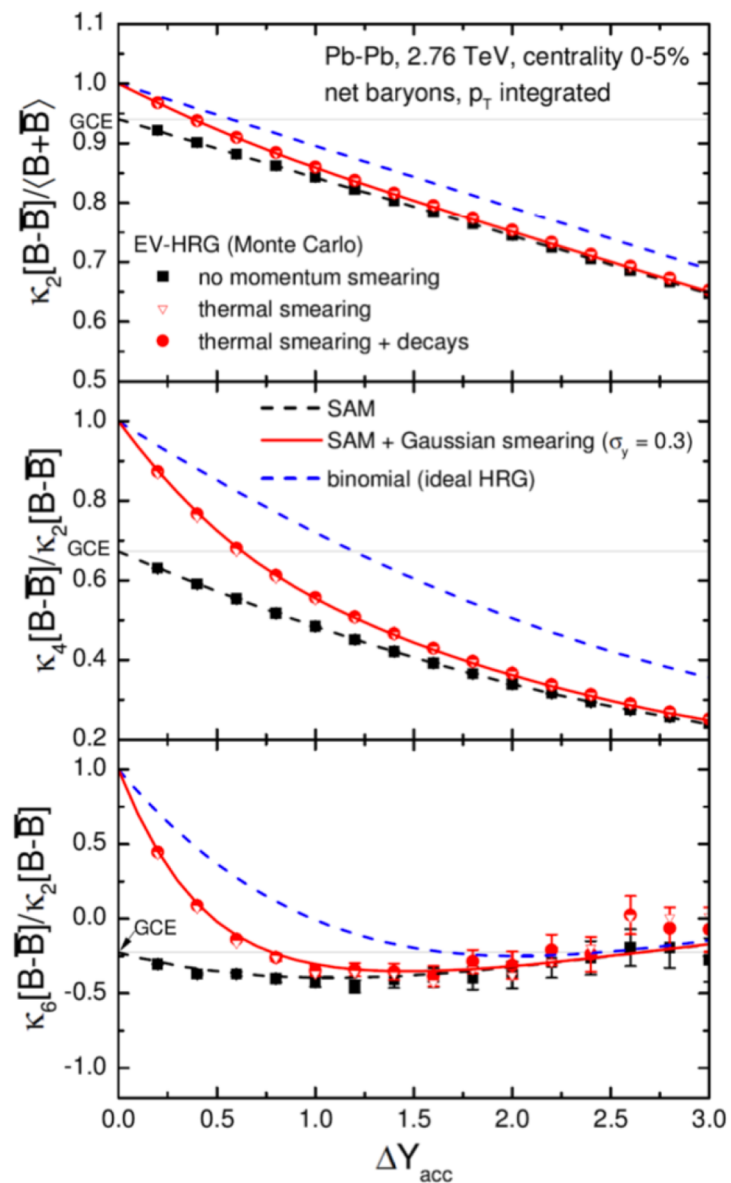
HRG CE: PBM et al, NPA 1008, 122141 (2021)

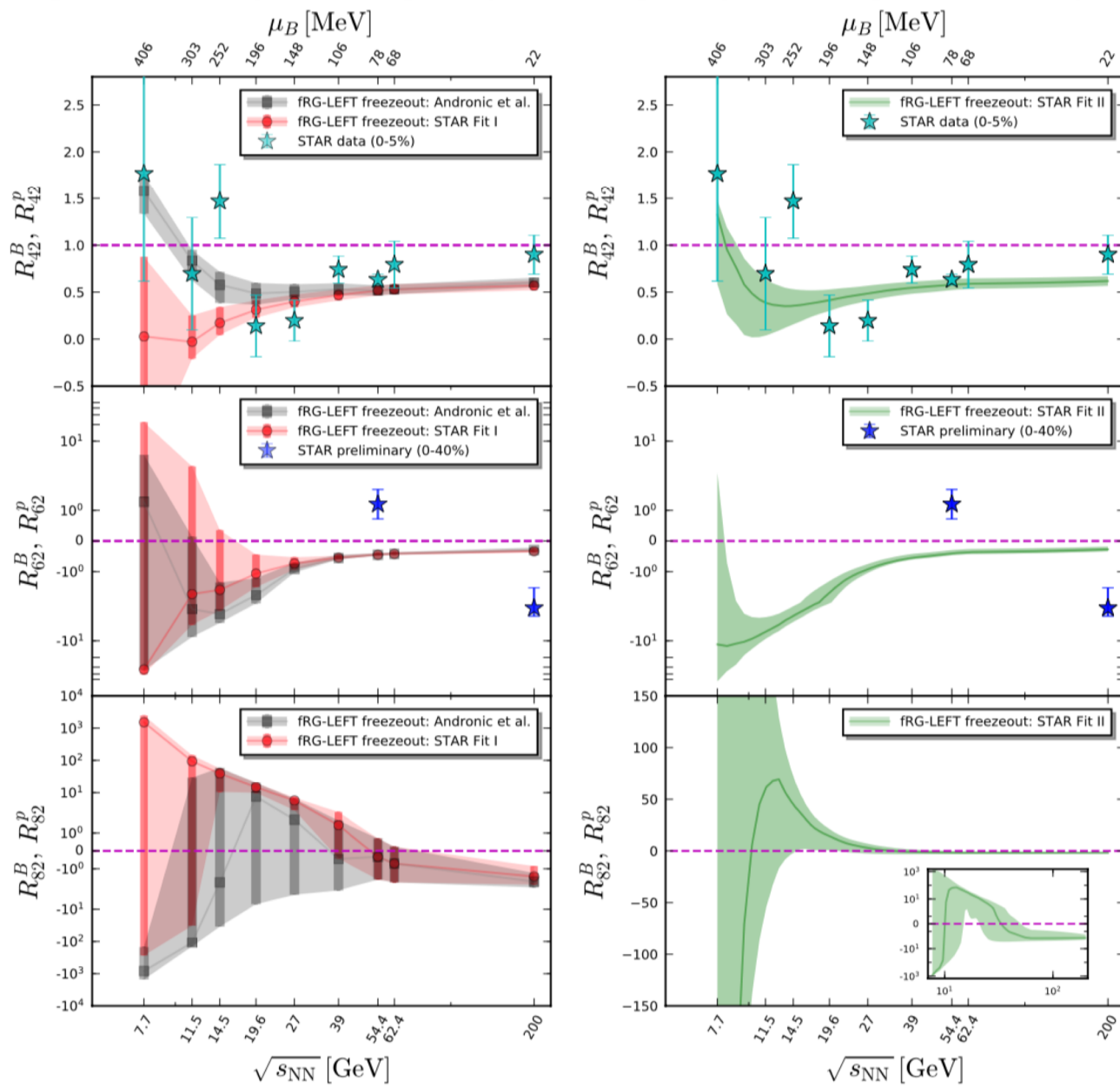


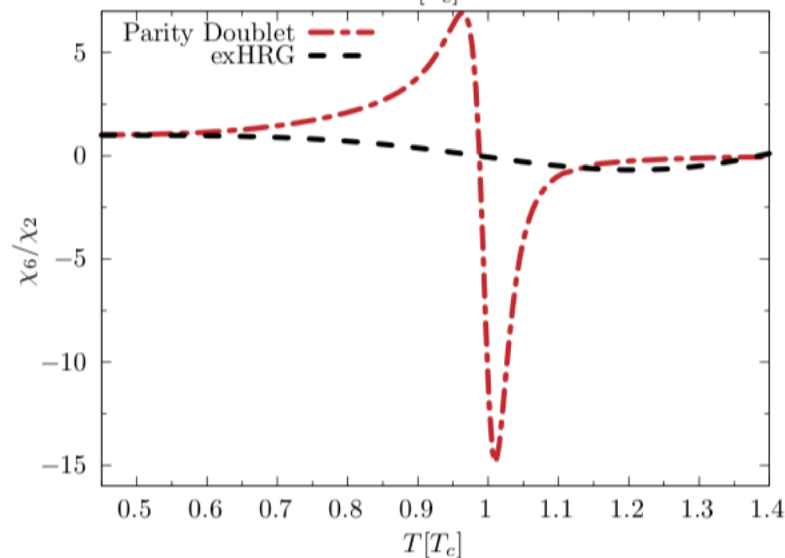
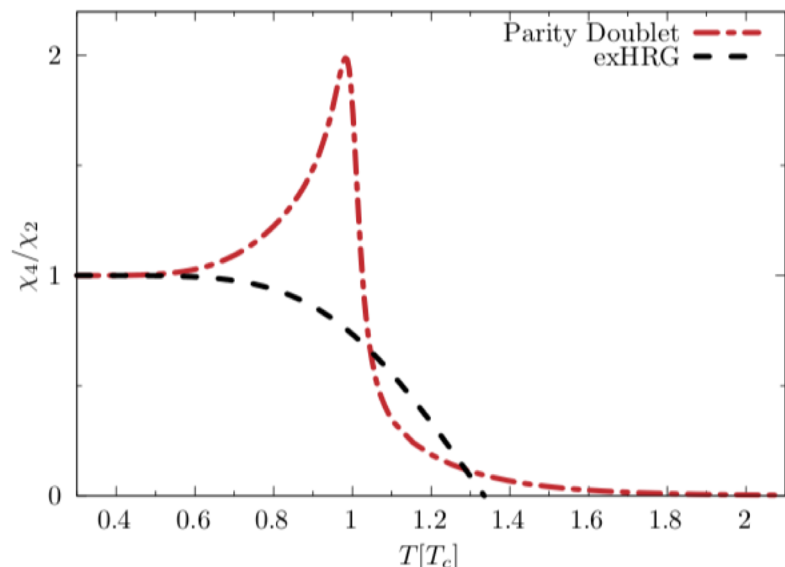


Volker K.
 (STAR long paper)









$$P^{\text{ev}}(T, \mu) = P^{\text{id}}(T, \mu - v_0 P^{\text{ev}}(T, \mu))$$

- qualitatively different structure of the ratios
- excluded Volume HRG - strong suppression due to hadronic interactions
 - χ_4/χ_2 - reduced from Skellam as seen in LQCD
 - χ_6/χ_2 - fails to capture the characteristic properties
- structure of χ_6/χ_2 persists when mesonic fluctuations included, e.g., in FRG and in LQCD

Friman et al (2011); Borsanyi et al (2018); Bazavov et al (2020)

