

Data-Theory Comparison

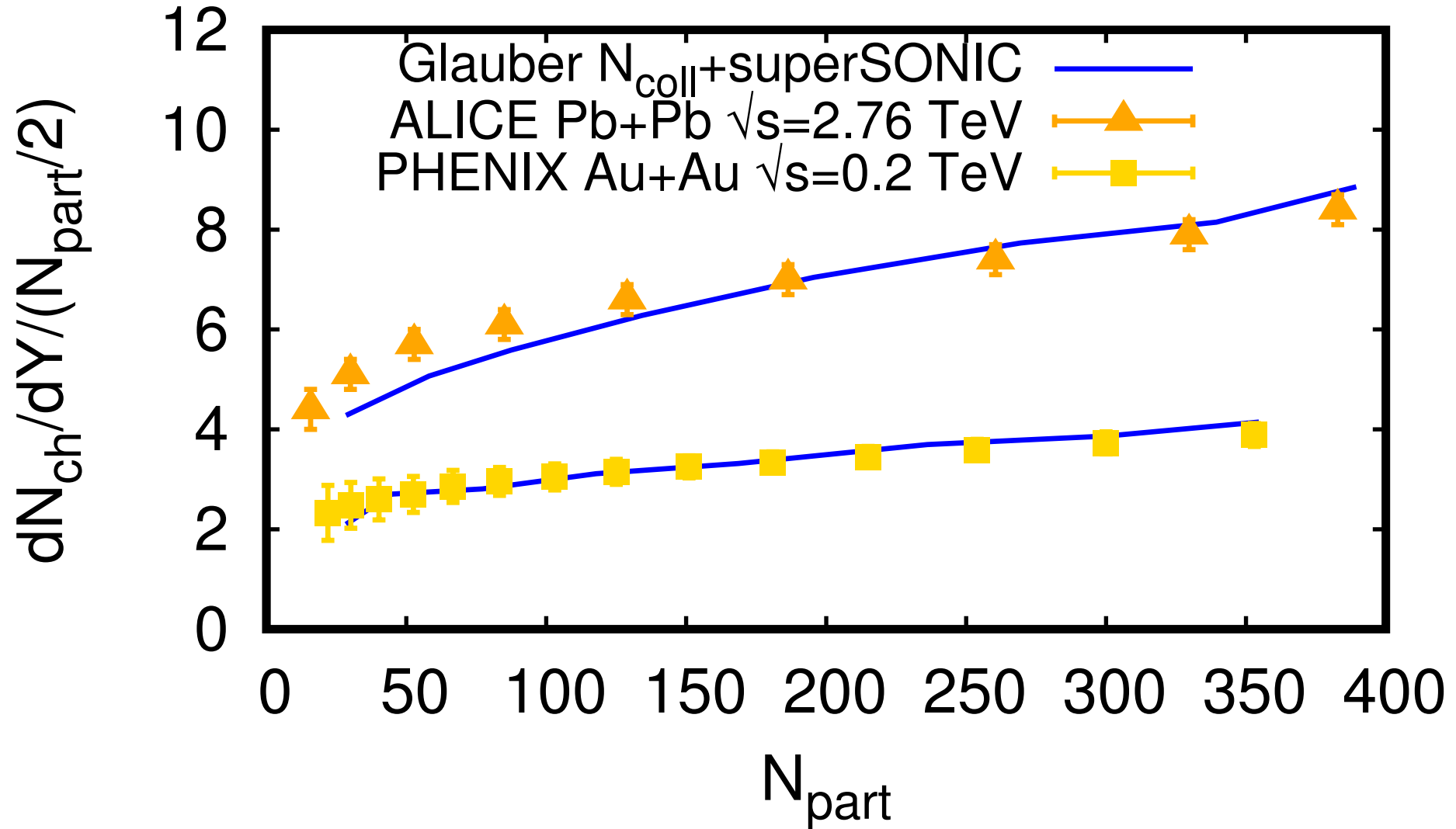
mostly 1712.05815, others indicated

Strategy

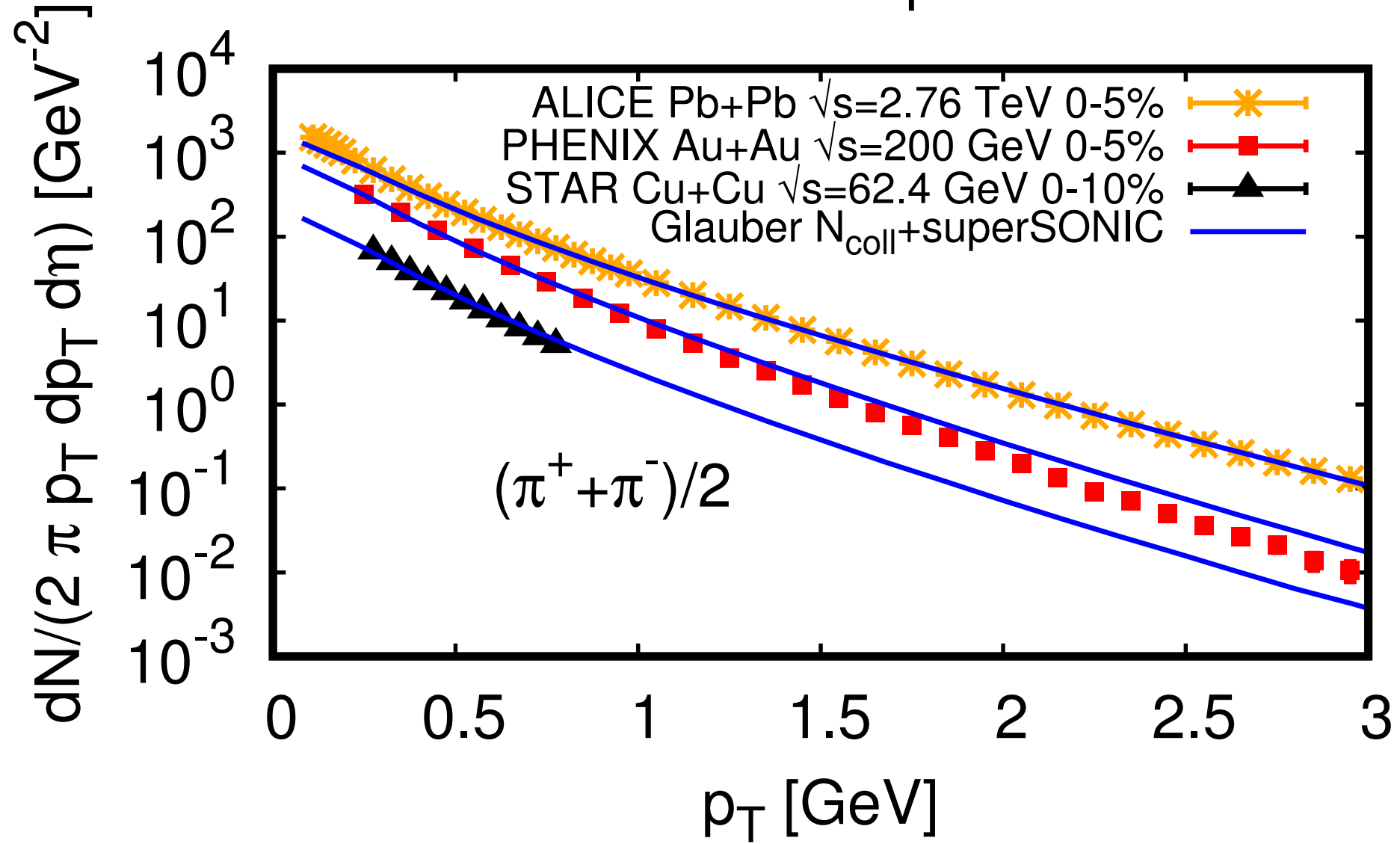
- Reminder: we don't change any fluid simulation parameters (pre-hydro flow, EoS, viscosity, freeze-out, extraction & analysis of observables); also, no exp-dependent p_T -cuts
- Compare to *all* available data
- Expect some discrepancies
- Let's see how bad we do...

Heavy-Ion Collisions (AA)

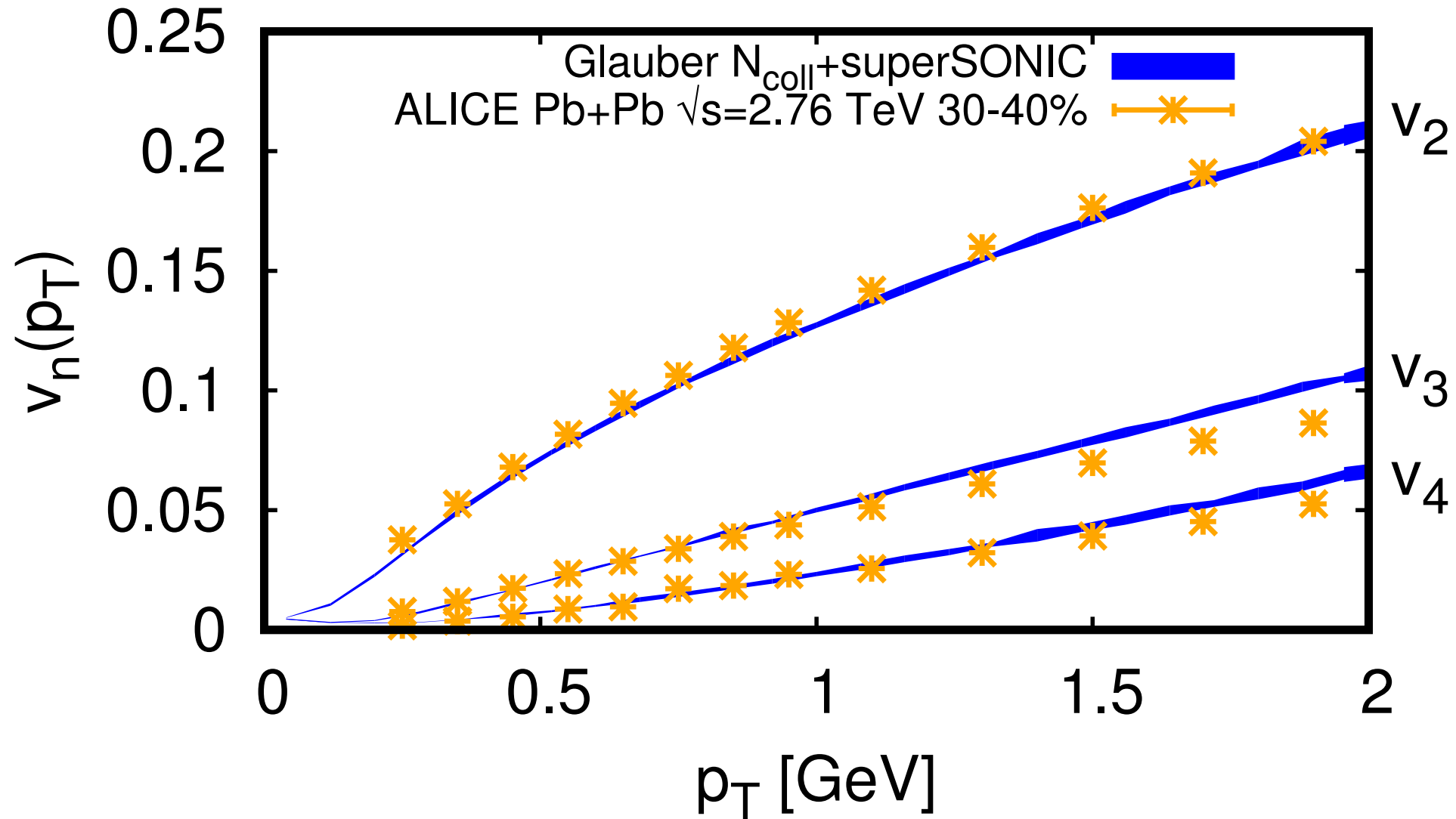
Charged Particle Multiplicity in AA



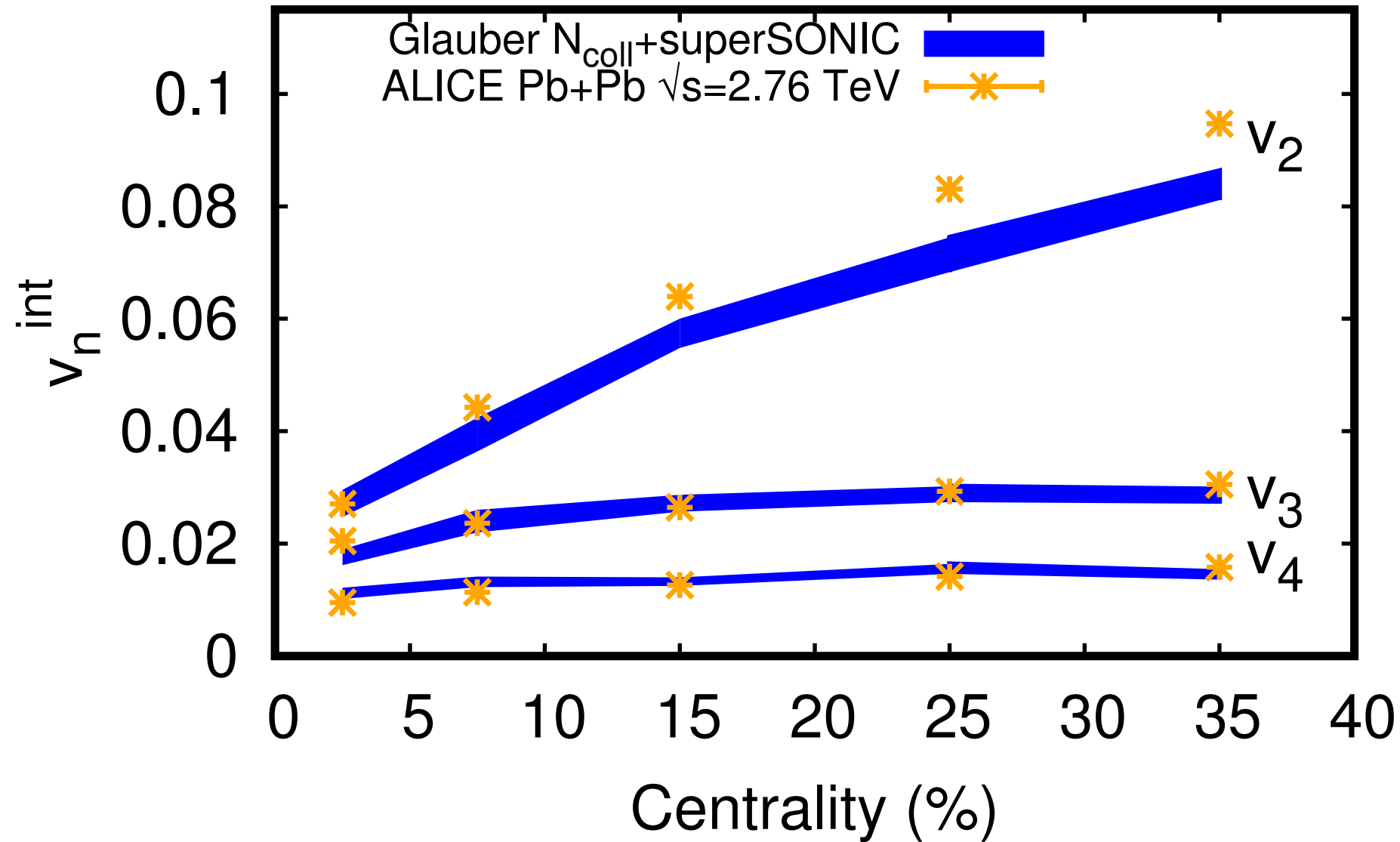
Pion Momentum Spectra in AA



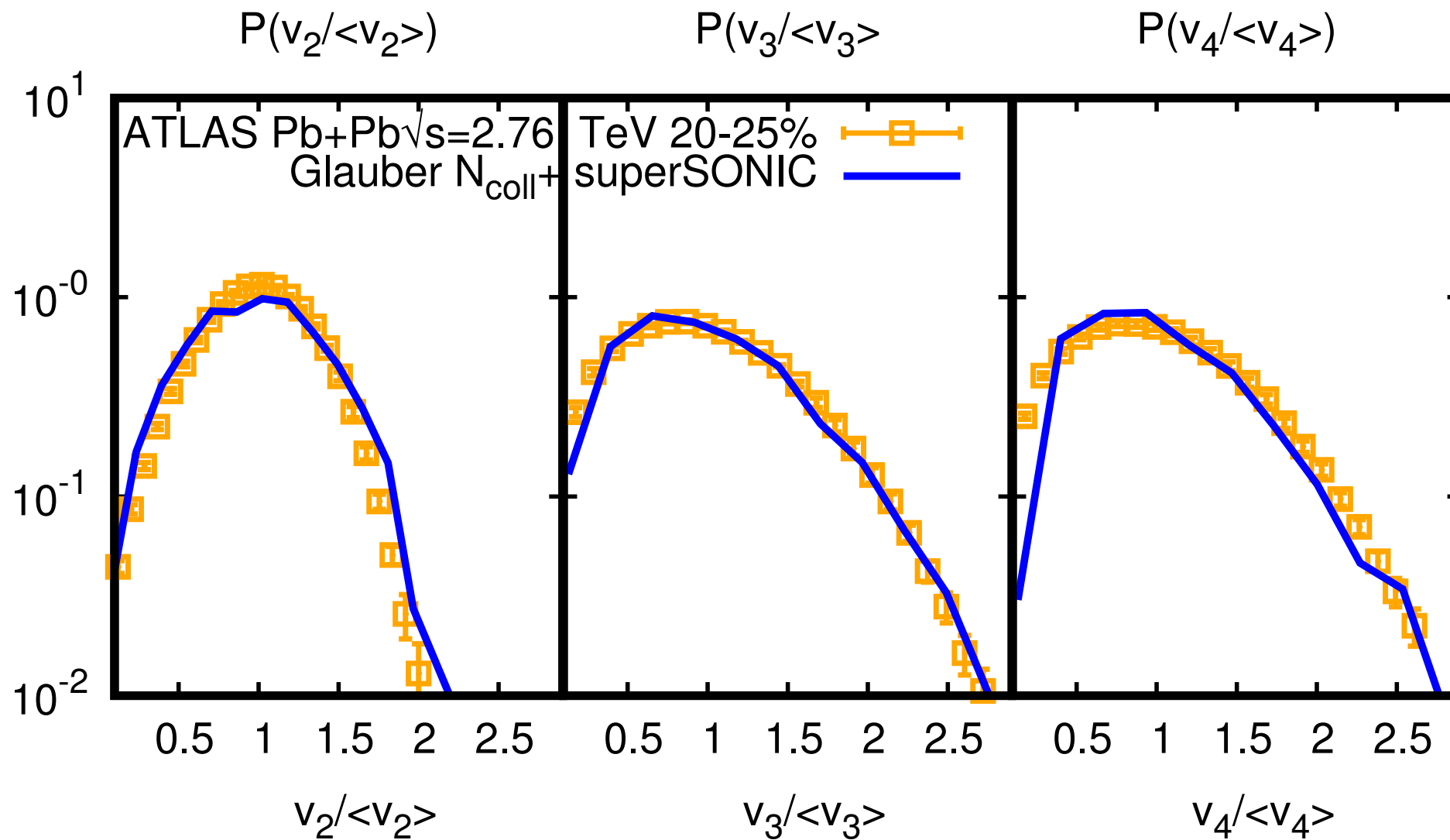
Differential Anisotropic Flow in AA



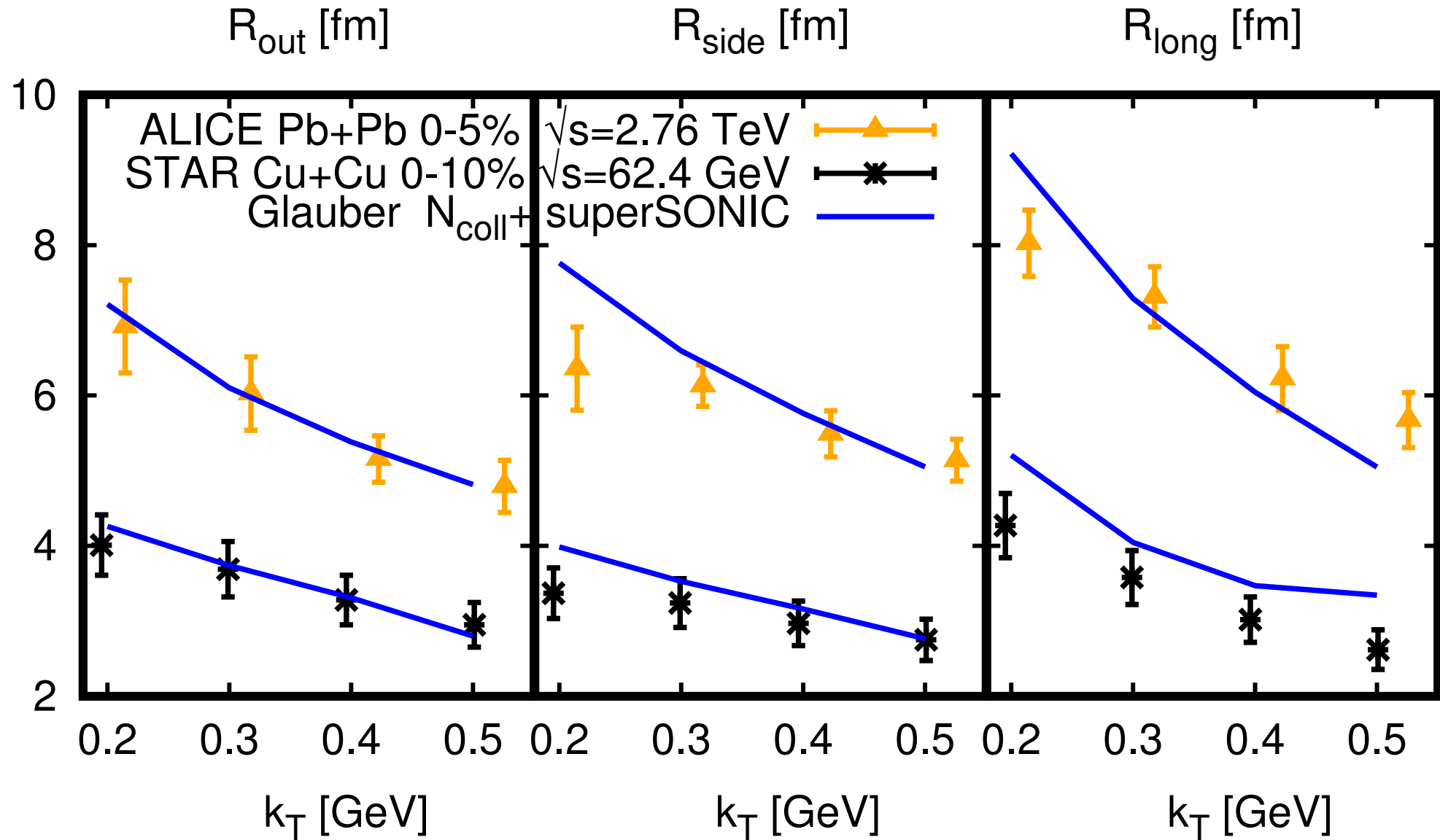
Integrated Anisotropic Flow in AA



v_n Distributions in AA

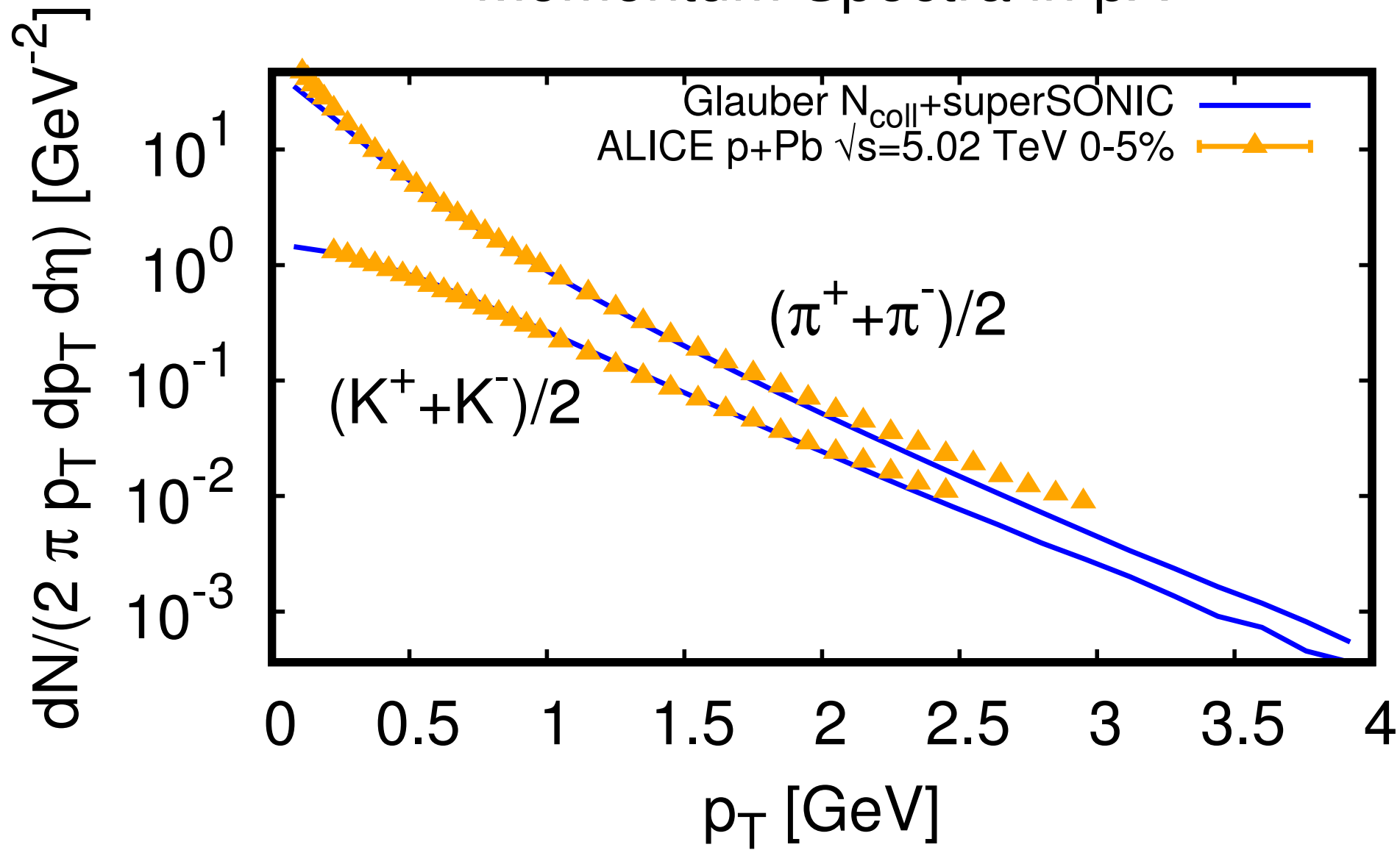


HBT Radii in AA

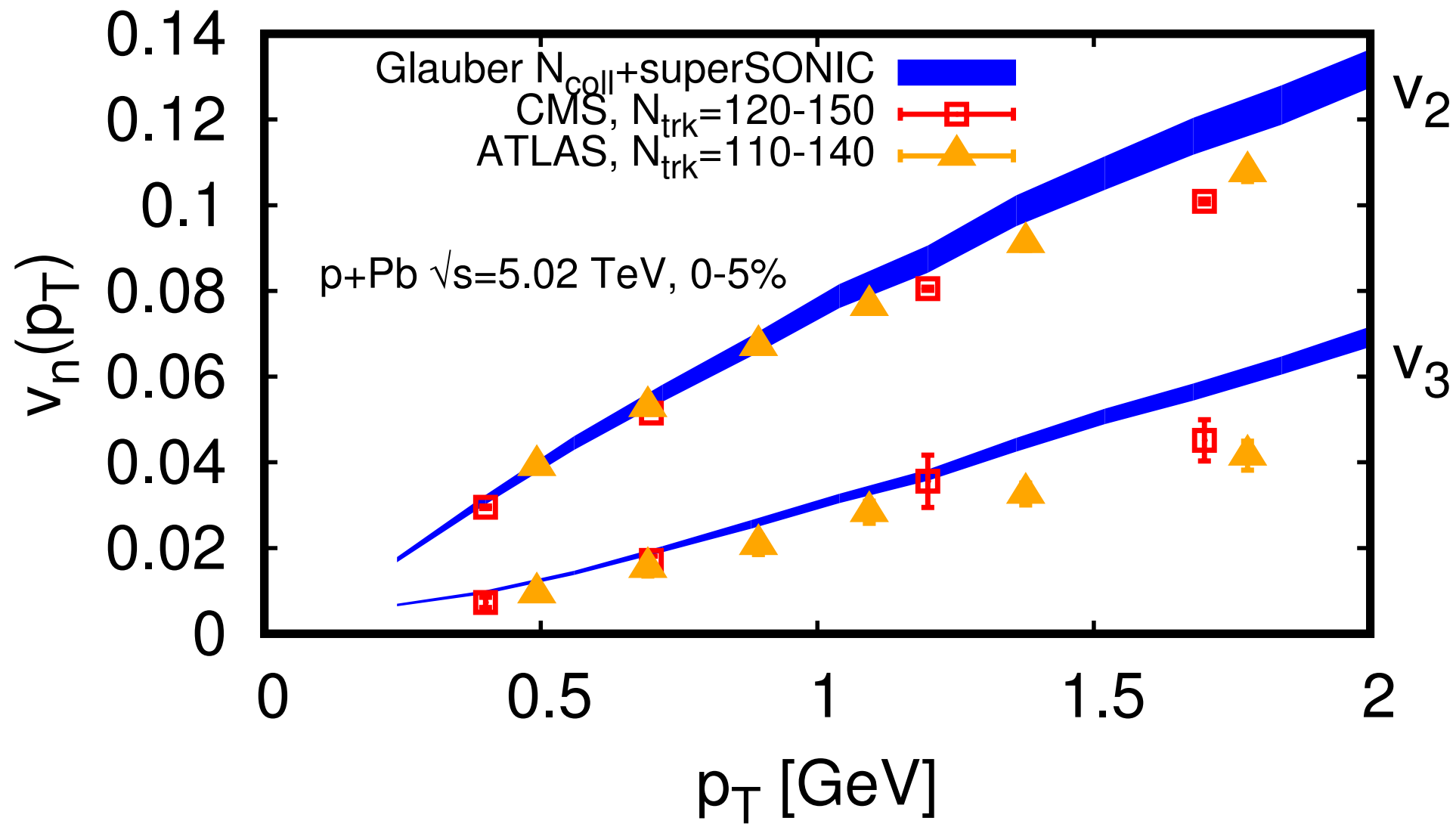


Proton-Lead collisions (pA)

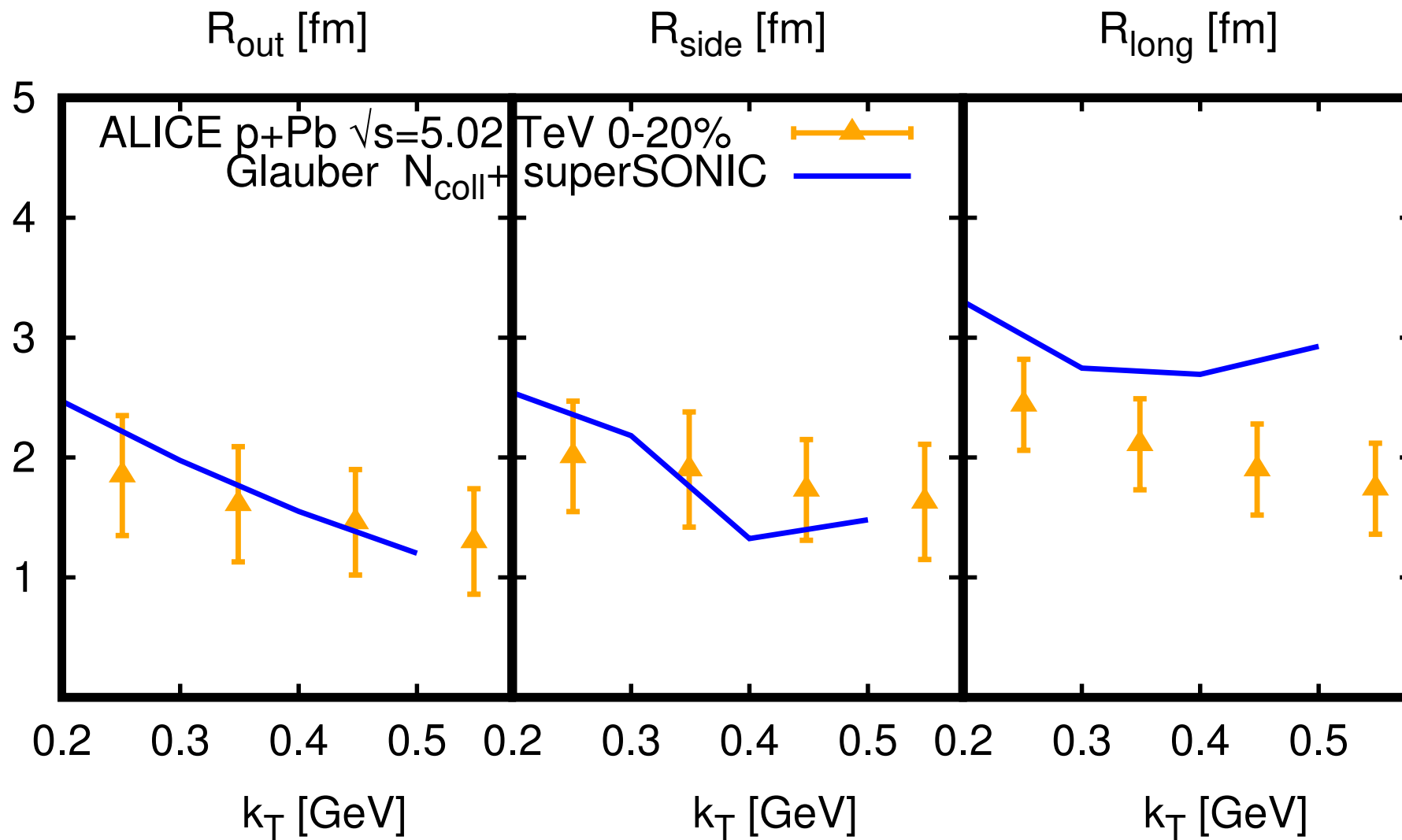
Momentum Spectra in pA



Differential Anisotropic Flow in pA

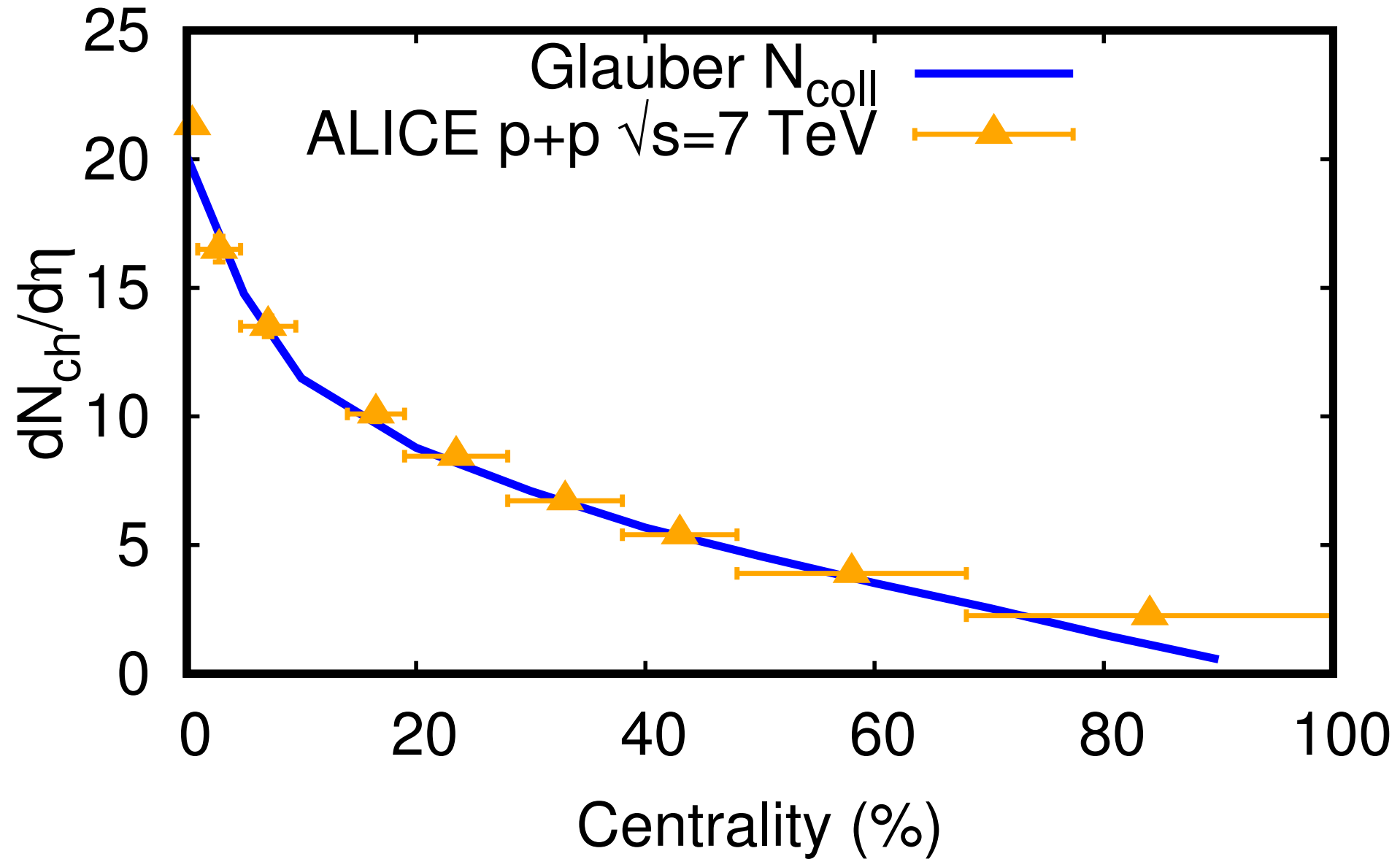


HBT Radii in pA

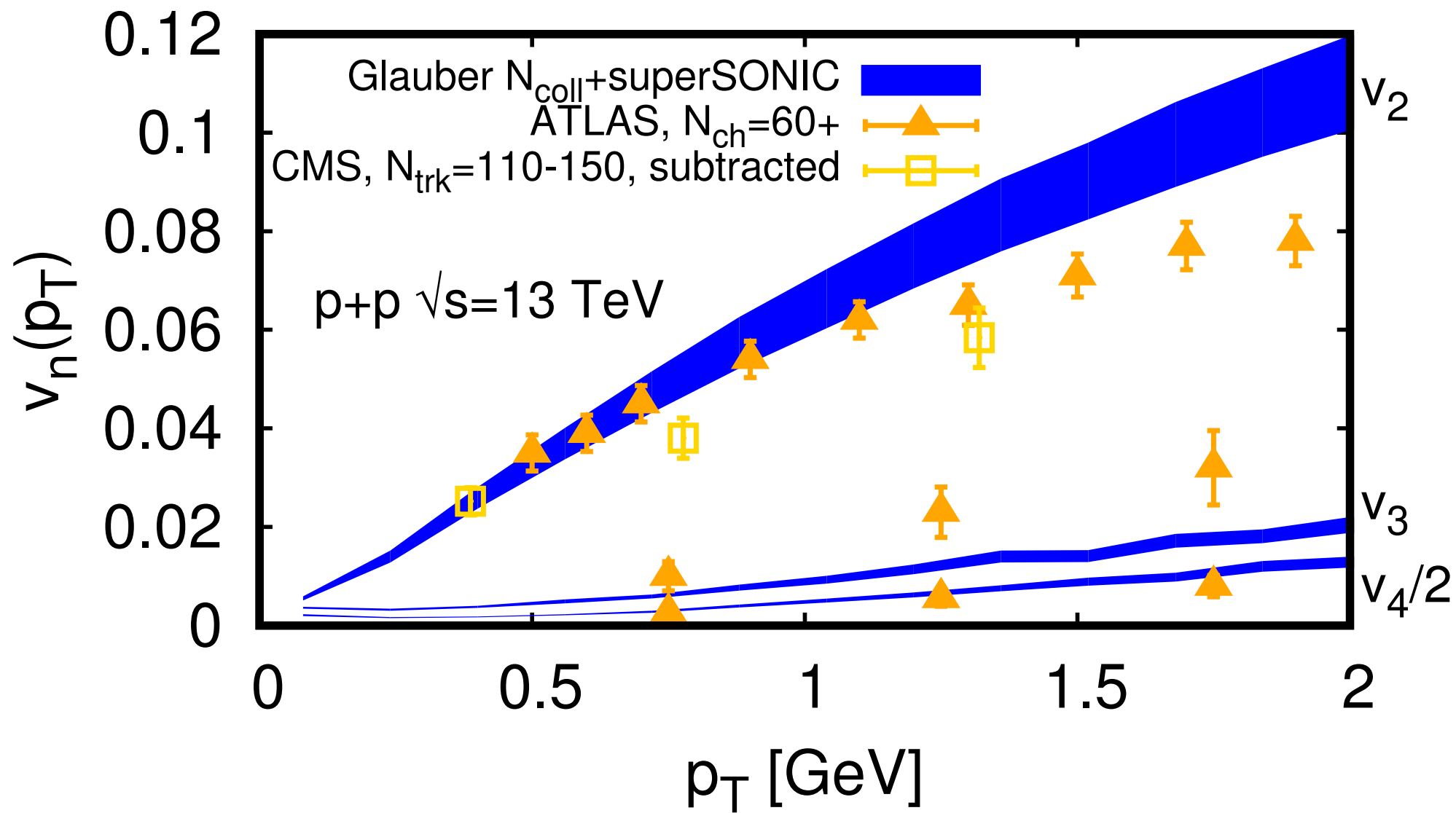


Proton-Proton collisions (pp)

Charged Particle Multiplicity in pp



Anisotropic Flow in pp





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One fluid to rule them all: Viscous hydrodynamic description of event-by-event central p+p, p+Pb and Pb+Pb collisions at $\sqrt{s} = 5.02$ TeV



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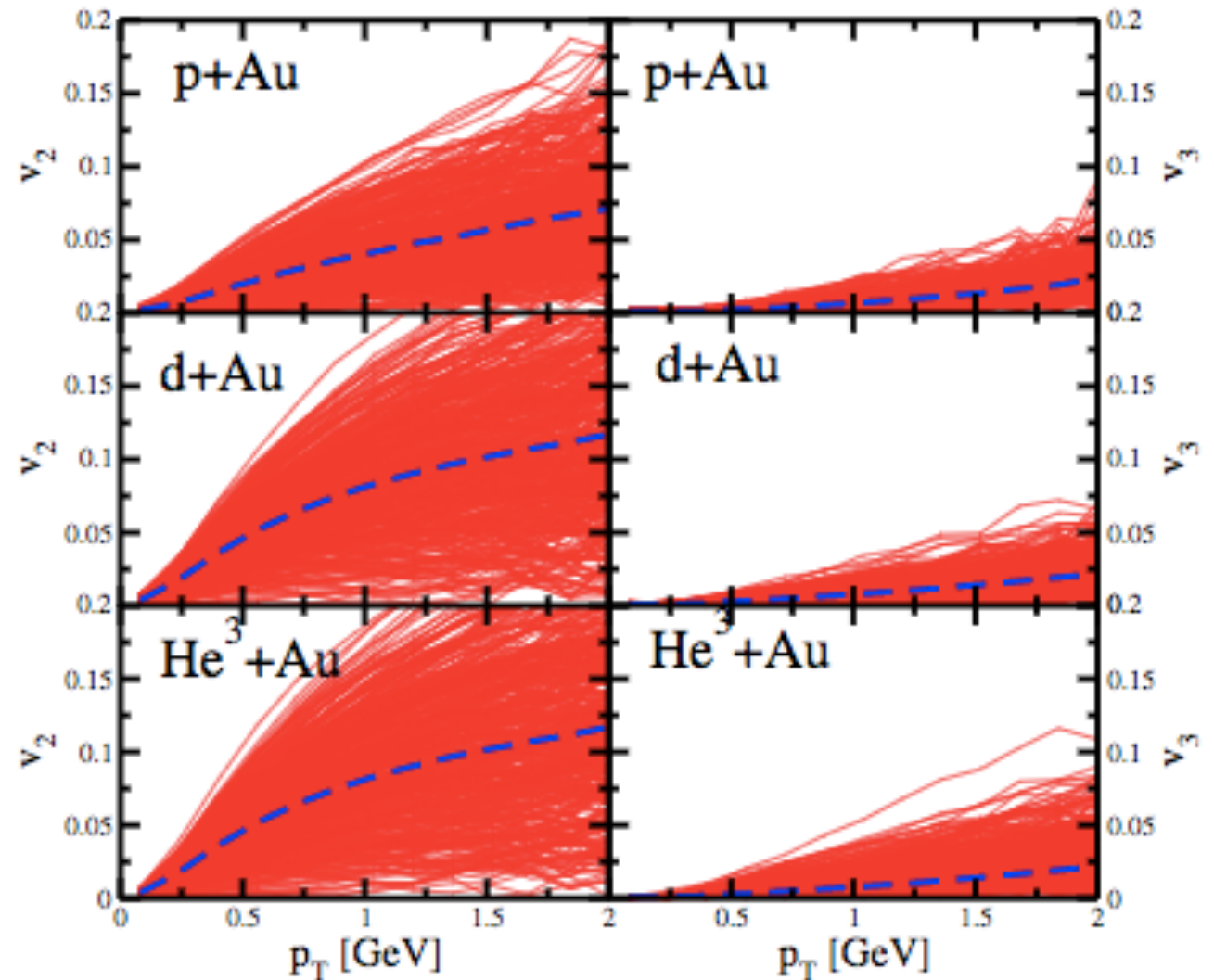
ARTICLE INFO

ABSTRACT

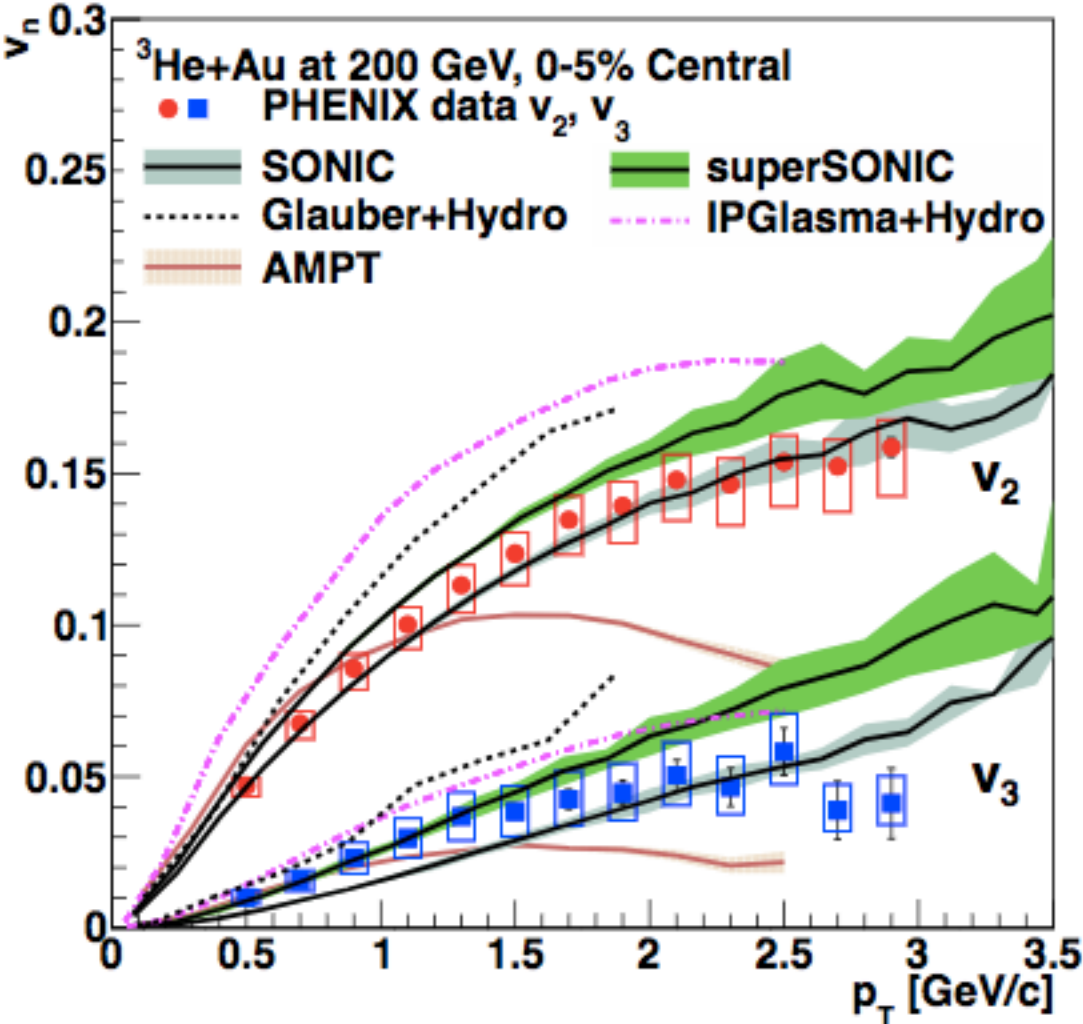
Importance of a good model is not to describe the present, but predict the future

Hydro predictions for p+Au, d+Au and $^3\text{He}+\text{Au}$

- Pre-2013: Multiplicity and v_2 in d+Au measured @ RHIC, v_3 in d+Au not thought to be observable
- 2013: Hydro simulations for p+Au, d+Au, $^3\text{He}+\text{Au}$ for 200 GeV in 1312.4565, 1407.7557 predicting v_2 in p+Au, $^3\text{He}+\text{Au}$ and v_3 in d+Au

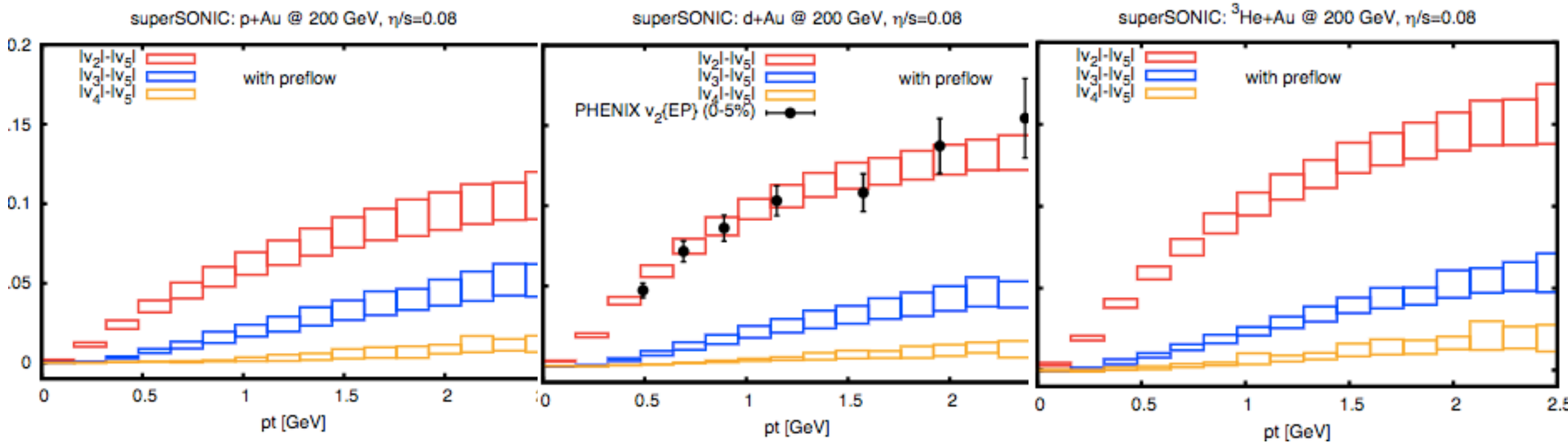


2015: RHIC measurements for $^3\text{He}+\text{Au}$ @ 200 GeV



Hydro predictions for p+Au, d+Au and $^3\text{He}+\text{Au}$

- 2015: Hydro simulations for p+Au, d+Au, $^3\text{He}+\text{Au}$, p+Pb, d+Pb, $^3\text{He}+\text{Pb}$, p+Al for 7.7-5000 GeV in 1502.04745, 1512.06949 for v_2, v_3, v_4 , HBT



2017: RHIC results for p+Au, d+Au and $^3\text{He}+\text{Au}$

