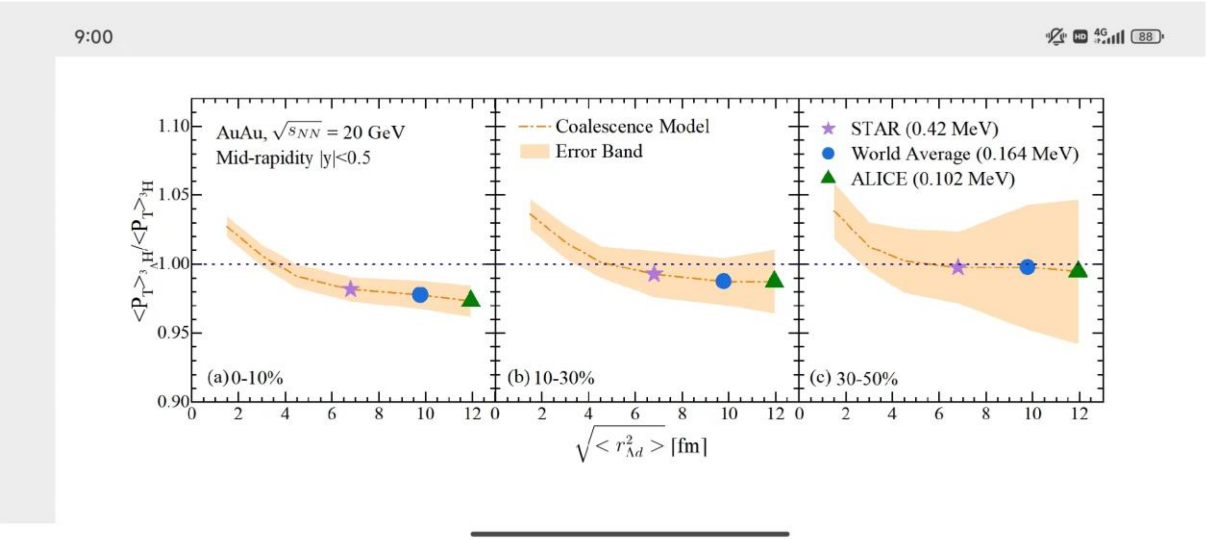
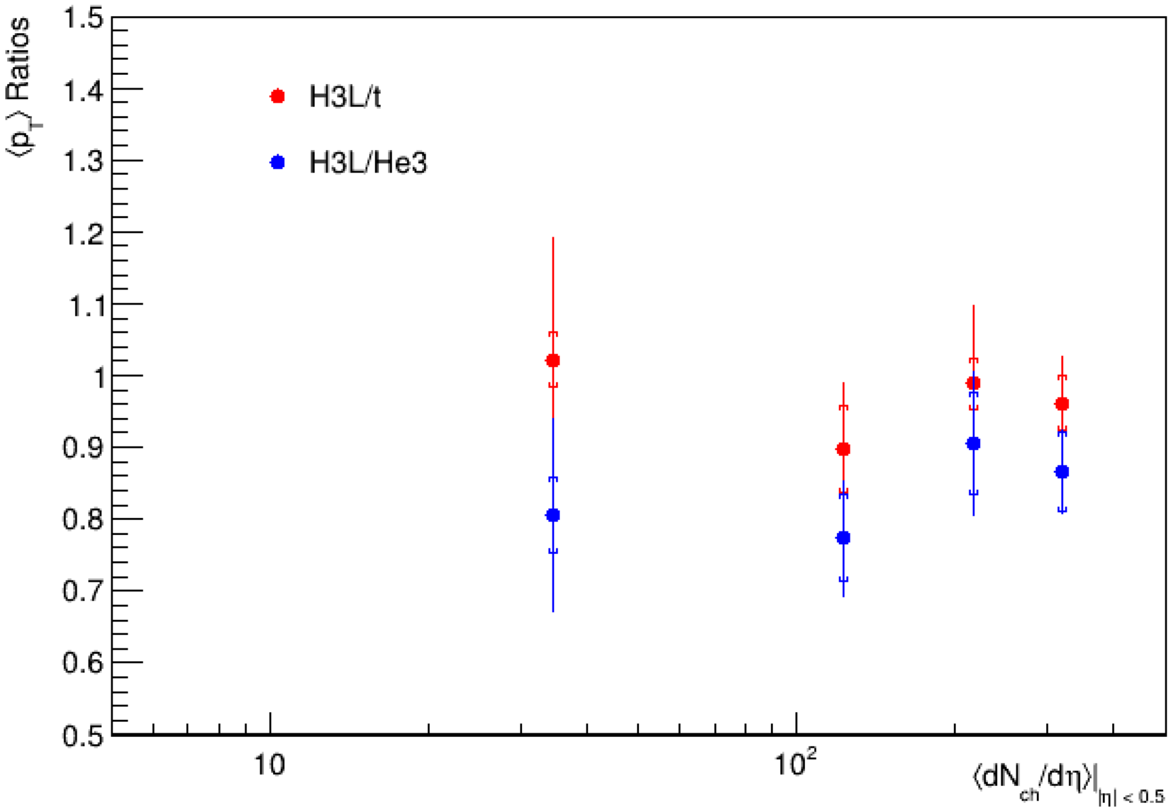
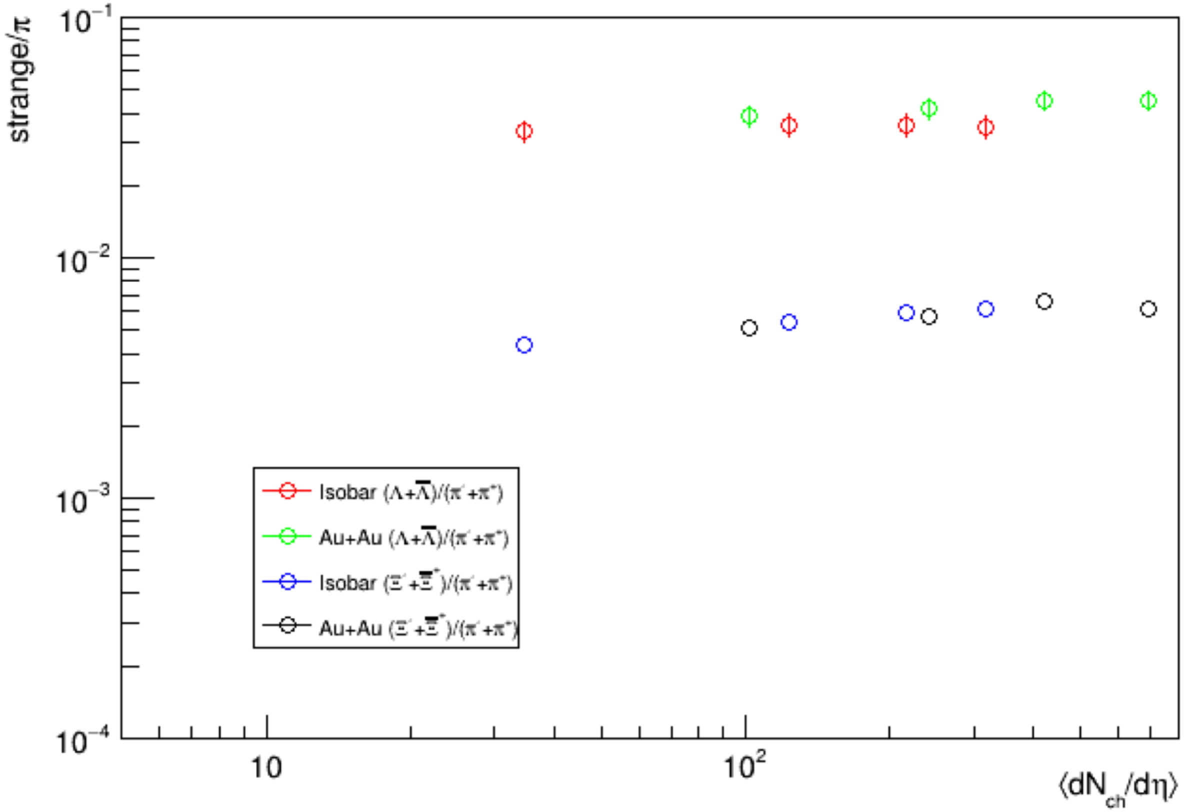

9:00
AuAu, $\sqrt{s_{NN}}$ = 20 GeV
Mid-rapidity |y|<0.5
Coalescence Model
Error Band
STAR (0.42 MeV)
World Average (0.164 MeV)
ALICE (0.102 MeV)
$<P_T>_{^3_\Lambda H}/<P_T>_H$
(a) 0-10%
(b) 10-30%
(c) 30-50%
$\sqrt{< r^2_{\Lambda d} >}$ [fm]


⟨p_T⟩ Ratios
H3L/t
H3L/He3
⟨dN_ch/dη⟩|_|η| < 0.5


strange/π
Isobar (Λ+Λ̄)/(π⁻+π⁺)
Au+Au (Λ+Λ̄)/(π⁻+π⁺)
Isobar (Ξ⁻+Ξ̄⁺)/(π⁻+π⁺)
Au+Au (Ξ⁻+Ξ̄⁺)/(π⁻+π⁺)
⟨dN_ch/dη⟩

The parameter σ in Eq.(3) is related to the root-mean-square matter radius $r_d = 1.96$ fm of deuteron [62] by $\sigma = \sqrt{8/3}\, r_d \approx 3.2$ fm. For the kinetic freeze-out temperature T_K of nucleons, it is typically of the order of 100 MeV. We therefore have $mT_K \gg 1/\sigma^2$, and the yield ratio d/p is then approximately given by

$$\frac{N_d}{N_p} \approx \frac{3N_n}{4(mT_K R^2)^{3/2}} \frac{1}{\left[1 + (\frac{1.6\text{ fm}}{R})^2\right]^{3/2}}. \quad (6)$$

The factor $C_1 = \frac{3N_n}{4(mT_K R^2)^{3/2}}$ in Eq. (6) corresponds to the d/p ratio in the limit of large nucleon emission source when the suppression effect due to finite deuteron size is negligible, and it is directly related to the entropy per nucleon in a nuclear collision, which remains essentially unchanged after chemical freeze-out [63]. Therefore, the value of C_1 is expected to be similar in p+p, p+Pb and Pb+Pb collisions at the LHC. From the d/p ratio measured in central Pb+Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV, a value of about 4.0×10^{-3} is obtained from Eq.(6) for C_1. Using this value, Eq. (6) can be rewritten as

$$\frac{N_d}{N_p} \approx \frac{4.0 \times 10^{-3}}{\left[1 + (\frac{1.6\text{ fm}}{R})^2\right]^{3/2}}, \quad (7)$$

where the value of R can be calculated from

$$R = \frac{(3N_n)^{1/3}}{[4C_1 (mT_K)^{3/2}]^{1/3}}. \quad (8)$$

using the neutron number N_n, which is the same as the proton number in collisions at the LHC energies because of the vanishing isospin chemical potential, and the kinetic freeze-out temperature T_K extracted from measured charged particle spectra.

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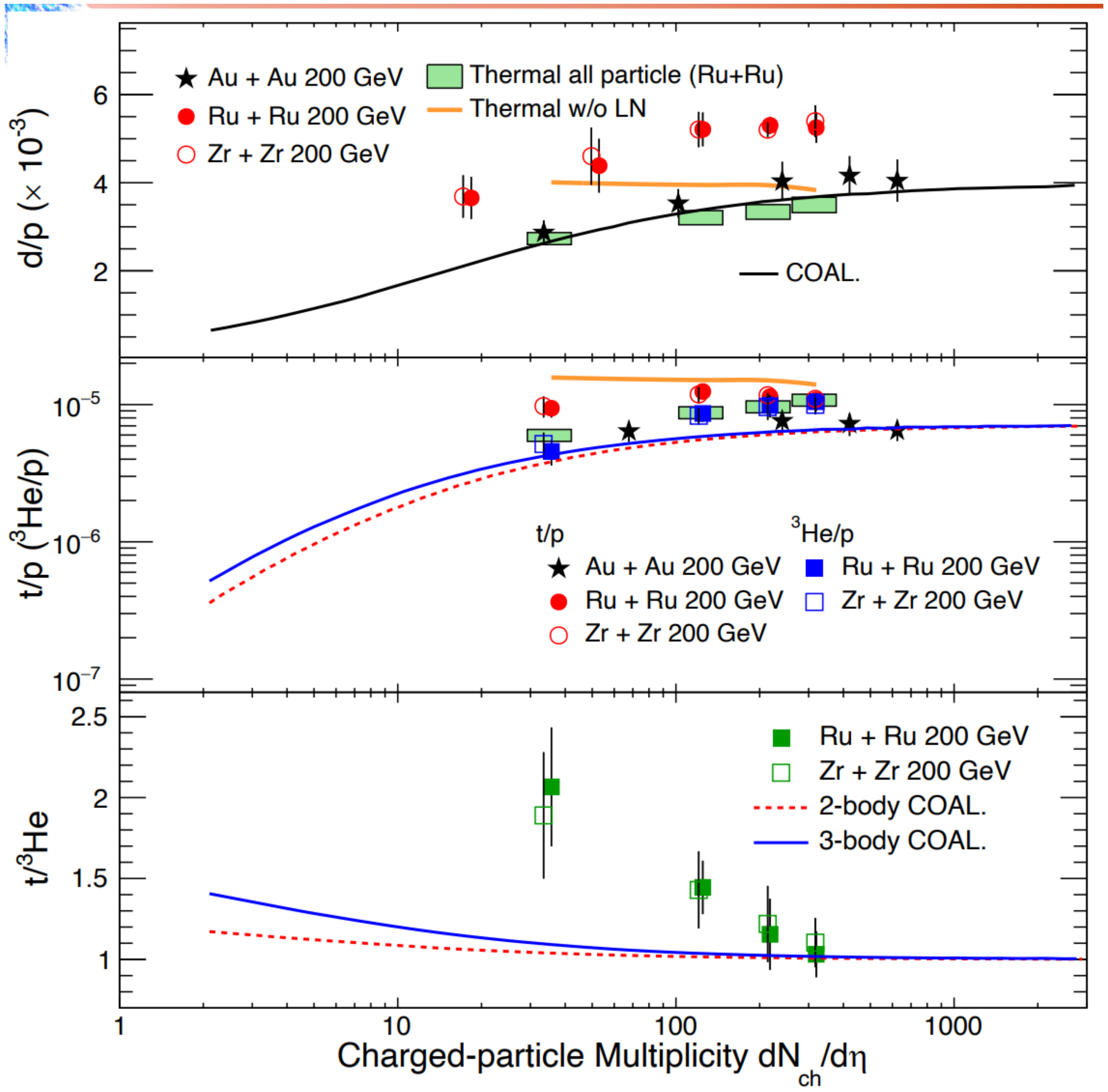

Why do we have large d/p in Isobar central collision?
Kaijia's calculation for LHC suitable for Isobar or not?