

Critical Point and Onset of Deconfinement

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NICA Round Table Discussion

Optimal energy for exploring the mixed phase

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Collision energy \Leftrightarrow Phase region explored

Thresholds in collision energy:

E_C : critical point

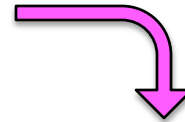
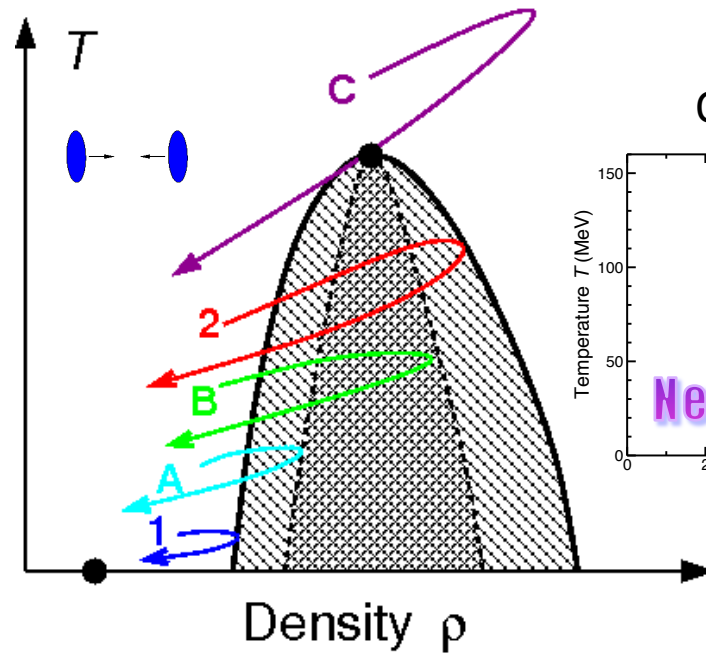
E_2 : higher boundary

E_B : higher spinodal

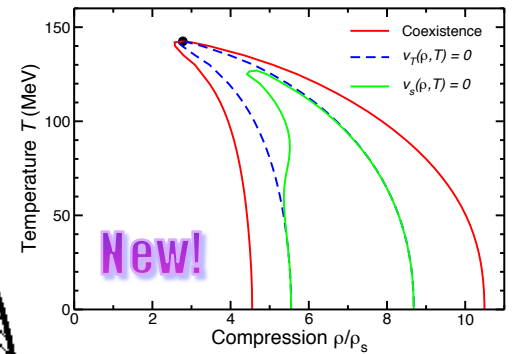
E_A : lower spinodal

E_1 : lower boundary

Schematic phase diagram:

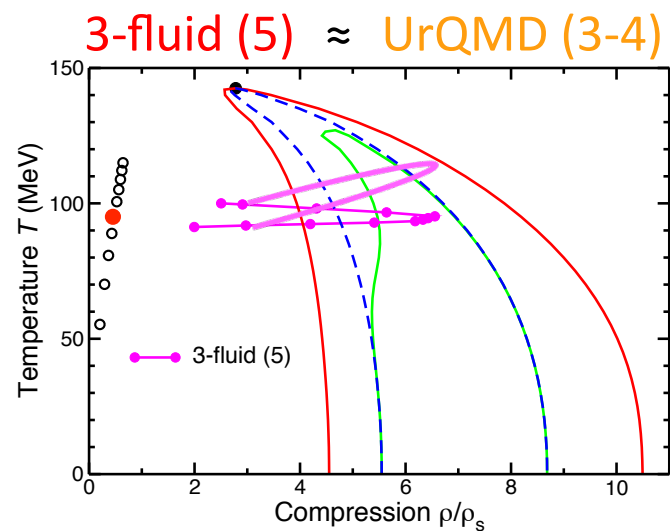
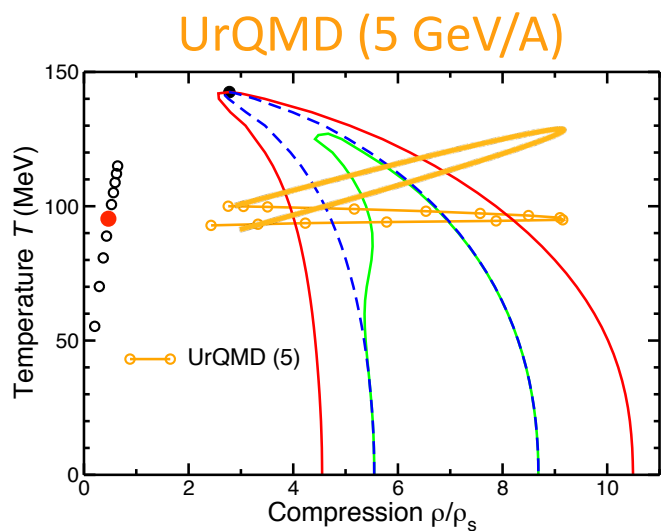
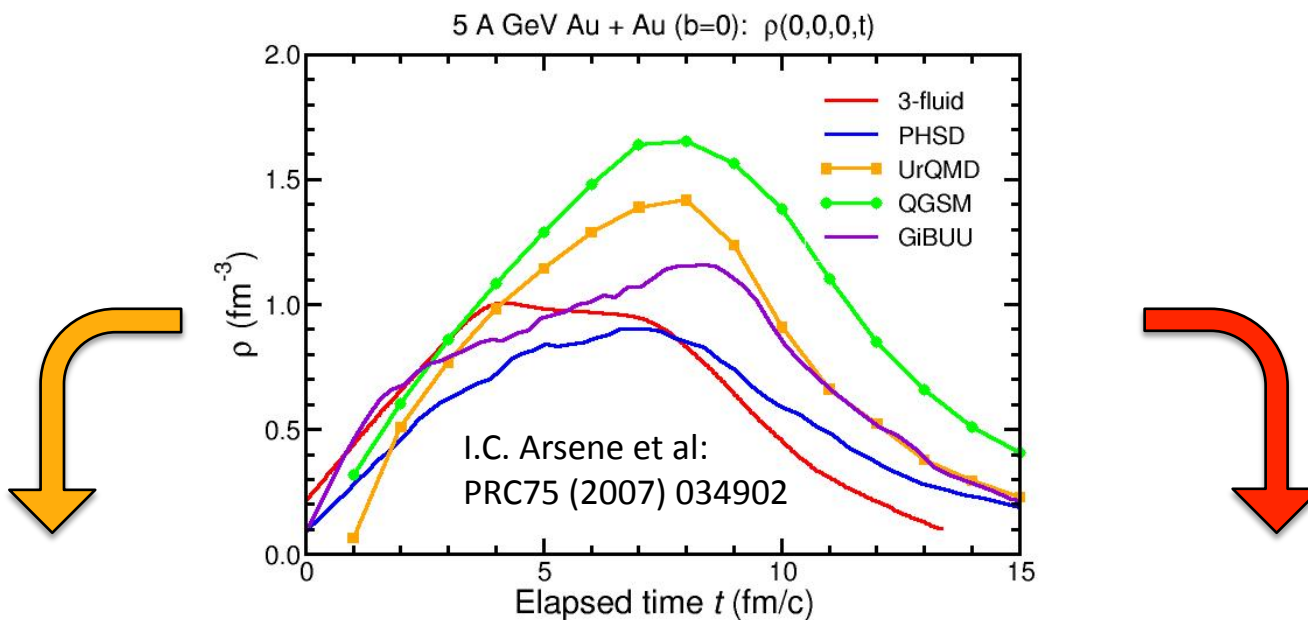


Quasi-realistic:

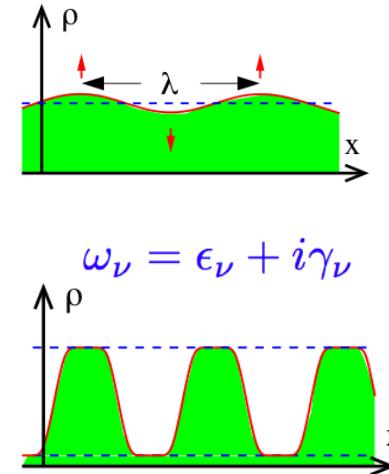
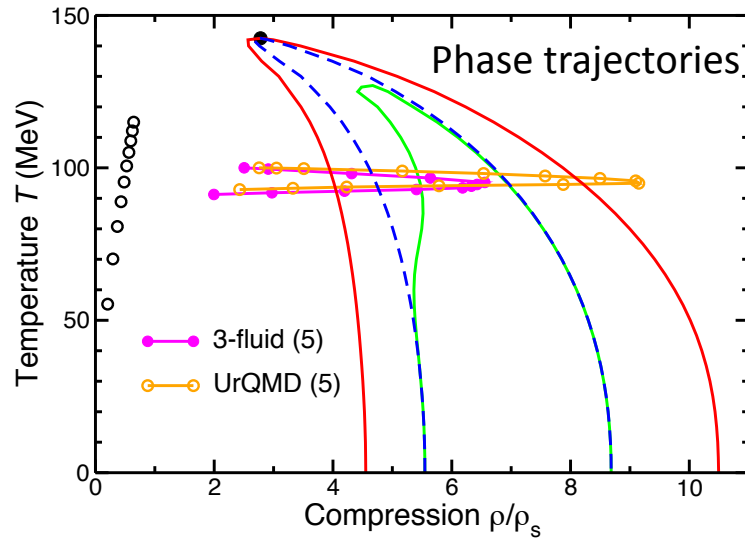


Optimal collision energy range: $E_B < E < E_2$

Dynamical phase trajectories



Spinodal phase separation



Irregularities are amplified

Dispersion relation

$$\omega^2 \doteq v_T^2 k^2 + C \frac{\rho_0^2}{h_0} k^4 - i\xi \frac{\omega}{h_0} k^2 + \frac{v_s^2 - v_T^2}{1 + i\kappa k^2 / \omega c_v} k^2$$

$$\Gamma_\nu(t) \equiv \int_0^t \gamma_\nu(t') dt'$$

Amplification coefficient

