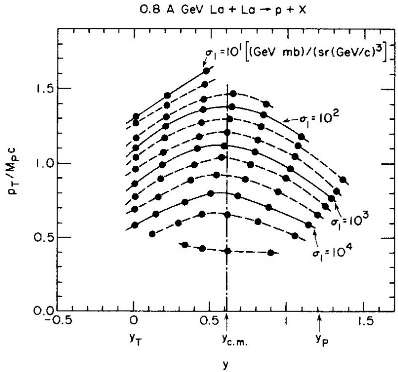
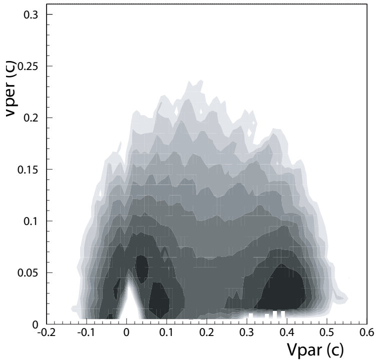
Central Collisions

- Truly many-body dynamics.
- Initial state destroyed, matter compressed and excited, change in density tied to temperature increase.
- System approaches thermal equilibrium over time.
- Different time scales play a role: fast population of central rapidities & slower population of target/projectile regions.
- Strong collective motion develops ($\sim$ 50% of transverse energy may appear in collective form).
- Large yields of intermediate-mass-fragments.

y-$p^{\perp}/m$ Distributions



Early emission from midrapidity source

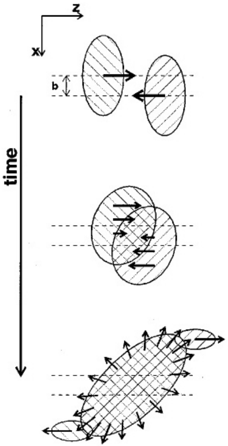


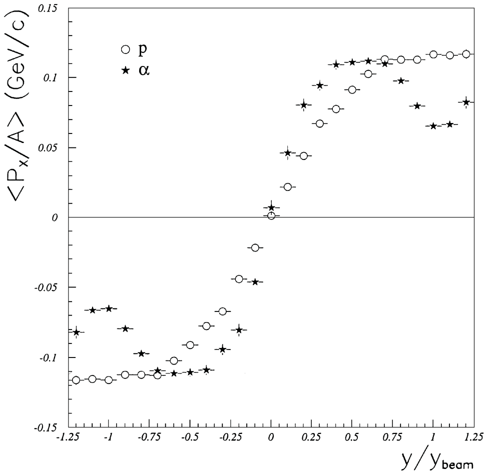
Late emission from projectile/target sources

Central Collisions

- Truly many-body dynamics.
- Initial state destroyed, matter compressed and excited, change in density tied to temperature increase.
- System approaches thermal equilibrium over time.
- Different time scales play a role: fast population of central rapidities & slower population of target/projectile regions.
- Strong collective motion develops ($\sim$ 50% of transverse energy may appear in collective form).
- Large yields of intermediate-mass-fragments.

Generation of Directed Collective Motion





Central Collisions

- Truly many-body dynamics.
- Initial state destroyed, matter compressed and excited, change in density tied to temperature increase.
- System approaches thermal equilibrium over time.
- Different time scales play a role: fast population of central rapidities & slower population of target/projectile regions.
- Strong collective motion develops ($\sim$ 50% of transverse energy may appear in collective form).
- Large yields of intermediate-mass-fragments.

Theoretical Approaches

- Boltzmann equation (B.-A. Li)
  Limitations: lack of fluctuations &
  intermediate-mass-fragments (IMF)
  Advantages: intrinsic consistency,
  reduction to Thomas-Fermi f/ground state
- Molecular dynamics (A. Ono)
  Limitations: uncontrolled magnitude of fluctuations,
  light-fragment production
  Advantages: fluctuations, IMF production,
  reduction to a cluster model f/ground state
- Statistical models
  Limitation: no dynamics
  Advantage: relatively simple

Bulk Nuclear Properties

- EOS of symmetric matter away from ρ_0
- Symmetry energy
- Liquid-gas phase-transition
- Nucleonic potentials away from ρ_0
- Transport coefficients