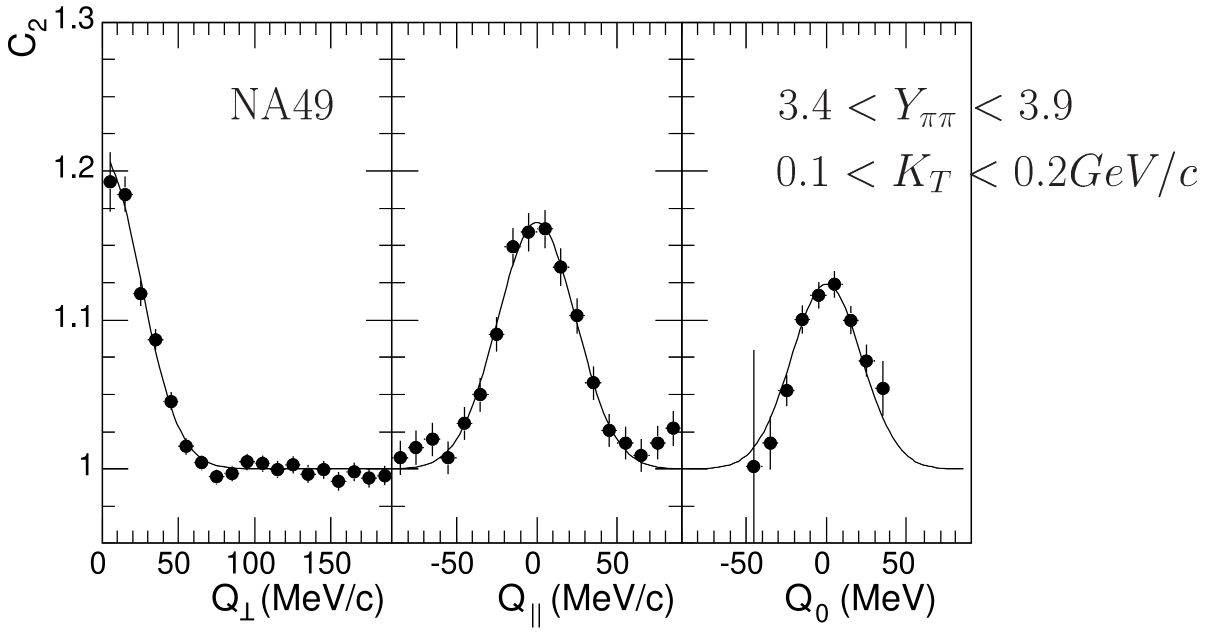
identical π-pair BE-correlations: Space-Time Evolution

quantum-statistics enhancement of $\pi^{\mp}\pi^{\mp}$ pairs at small $Q = p_1 - p_2$
yield information on: $T_{fo}, \beta_{\perp}, R_G, \tau_0, \Delta\tau$



Gaussian parameterisation (Yano,Koonin,Podgoretski)

$$C_2(\vec{Q}, \vec{K}) = 1 + \lambda \cdot exp[-\gamma^2(Q_0 - v_{YKP} \cdot Q_{||})^2 R_0^2 \\ -Q_{\perp}^2 R_{\perp}^2 - \gamma^2(Q_{||} - v_{YKP} \cdot Q_0)^2 R_{||}^2]$$

differential correlations measure homogeneity lengths $R(\vec{K})$
variances of space-time source density for π with $K = \frac{1}{2}(p_1 + p_2)$
interpretation via approximate analytical formulae for
expanding source model (Chapman,Heinz,Nix)

$T_{fo} \sim 120 MeV$ $\qquad\beta_{\perp} \sim 0.55$
$R_G = 7.5$ fm $\Rightarrow$ factor 2 radial expansion
fireball lifetime $\tau_0 = 8$ fm/c
duration of π emission $\Delta\tau \sim 3.5 fm/c$