

### Heavy-Ion Collisions & Equation of State: Homework Set 3

1. The figure below shows the  $\pi^-$ - $\pi^-$  correlation function, as a function of relative momentum  $q = |\mathbf{p}_1 - \mathbf{p}_2|$ , determined in Ar + KCl collisions at 1.8 GeV/nucleon. From the displayed correlation function, assuming instantaneous emission of the pions, determine the r.m.s. radius of the pion source in these collisions.

