Triple ratio experiment vs theory

We already presented the theoretical calculation for the triple ratio (np/pp) for He4. This calculations were done by Wiringa for two cases: 1) Q||q 2) Q distributed isotropically around q.
In each condition we have calculated ratio for fixed Q value but our data is not.
From the analysis we found that the CM motion can be simulated by Gaussian distribution with sigma $\sigma_x=\sigma_y=\sigma_z=100\pm20$ MeV/c, where Q defined as:

$$Q=\sqrt{(p_x^2+p_y^2+p_z^2)}$$

Q distribution is shown in Fig 1:

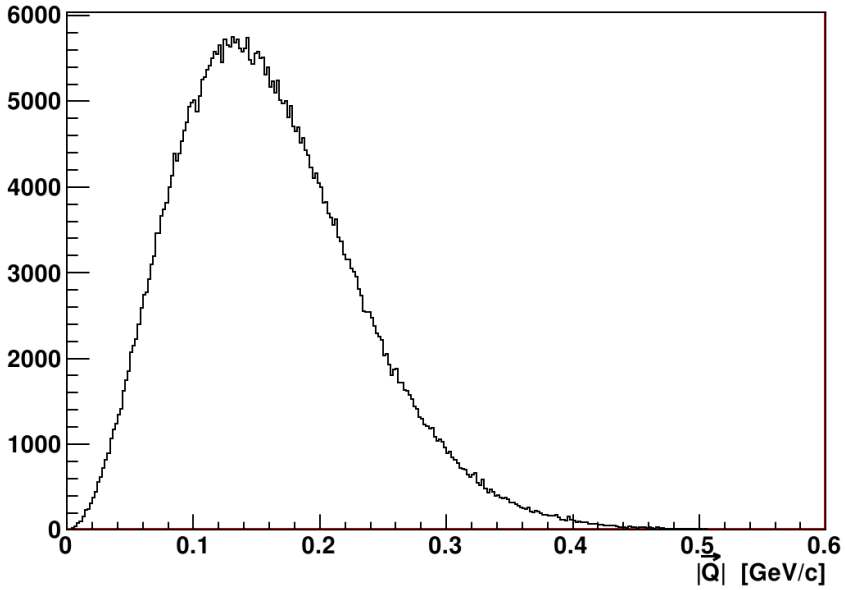

Fig 1: Q distribution based on simulation.

The theoretical values for Q that we have are:

1) 0, 0.25, 0.5, 0.75, 1, 1.5, 2 fm^{-1}
2) 0 – 0.75 fm^{-1} with 0.05 fm^{-1} step and 1, 1.25, 1.5, 1.75, 2, 2.25, 2.5

In order to compare the experimental results with the theory we must compare to theoretical quantity that much experimental condition as much as possible. In order to do so, we calculated the average result for the np/pp ratio by taking into account it's weight.

The result for this weighted average is shown on figs 2-3. We had some ambiguity in the X axis definition. Theoretical calculations are done as a function of q relative. However we don't truly know the q relative. What we are measuring is a Pmiss. Nevertheless for the Q||q case we can convert the theoretical q to the experimental P miss.
In the fig 2 and 3 the X axis for the experimental data point and for the parallel case is Pmiss and for isotropic case it is q relative.

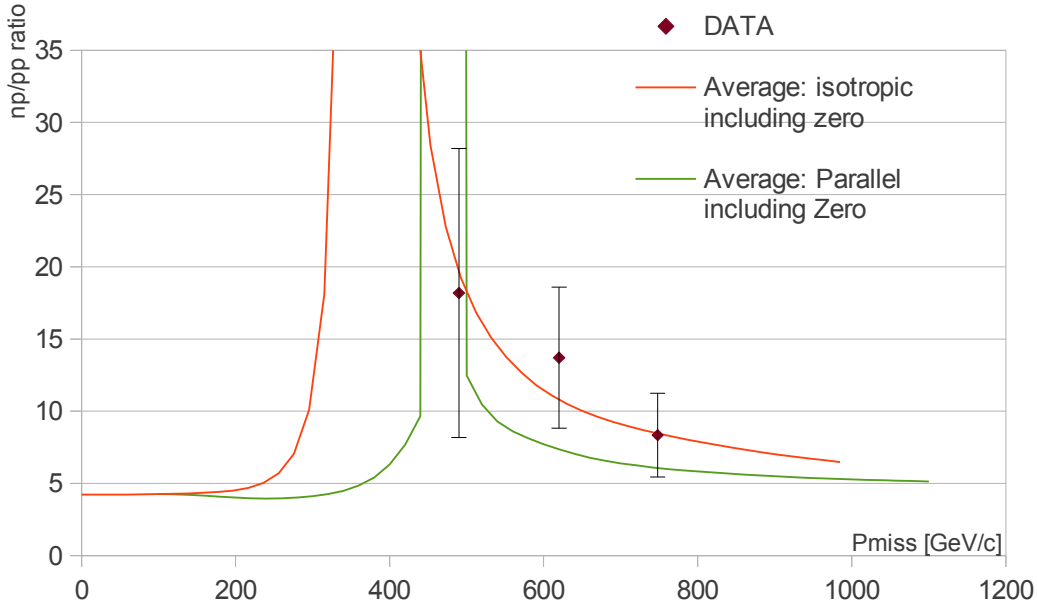

Fig 2: Averaged np/pp ratio for parallel and isotropic cases

If we exclude from the averaging the singular point, we get Fig 3:

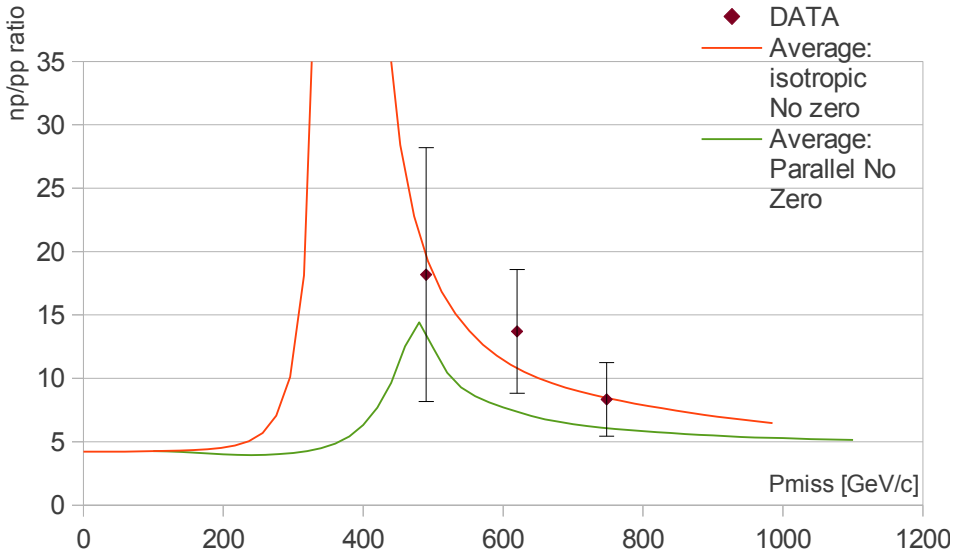

Fig 3: same as fig 2 without Q=0 component