

QCD fit

Malte Wilfert

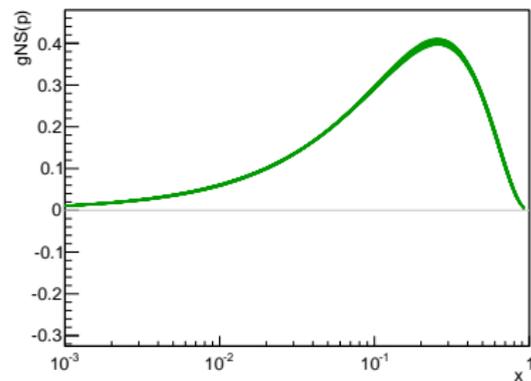
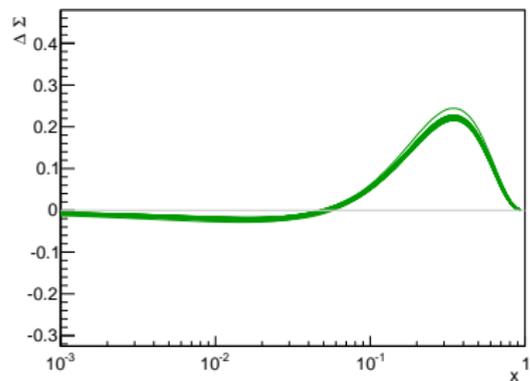
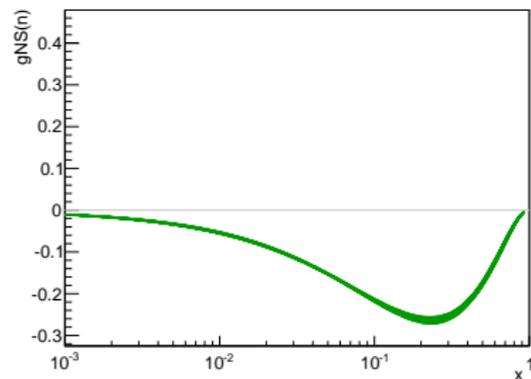
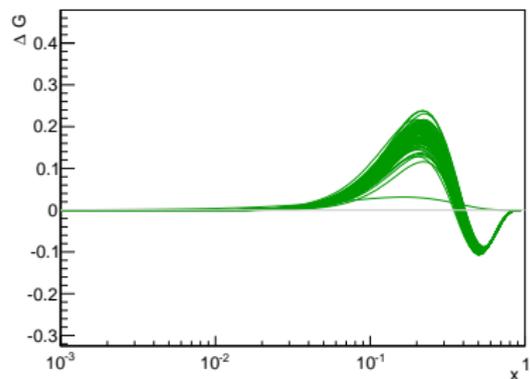
Institut für Kernphysik - Johannes Gutenberg-Universität Mainz

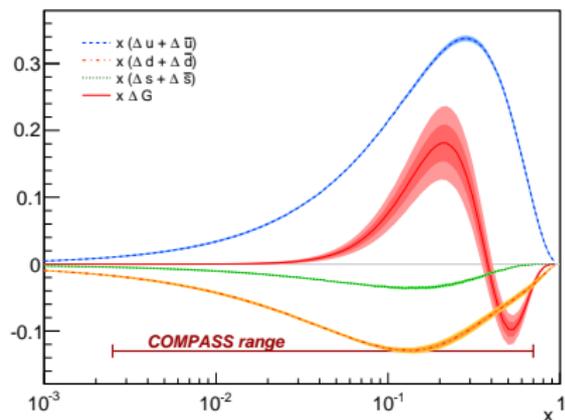
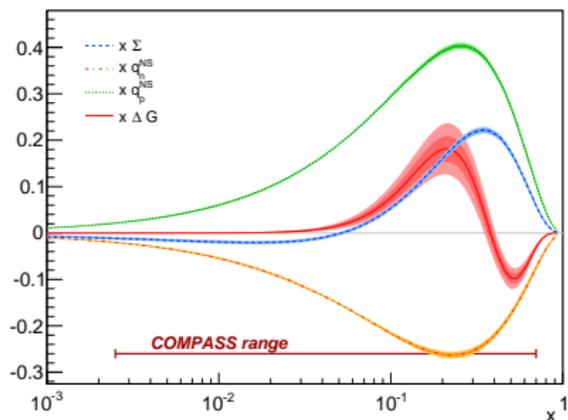
7. October 2013

Determination of the error band

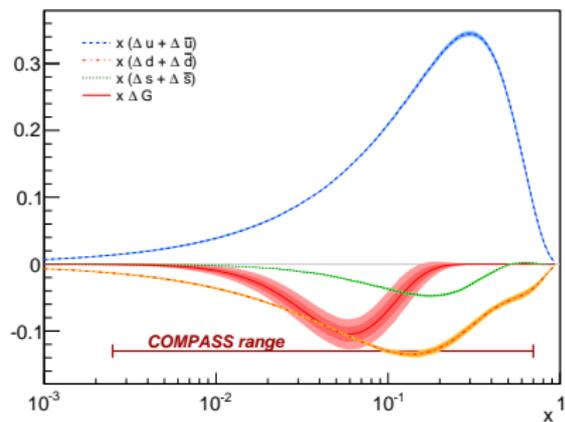
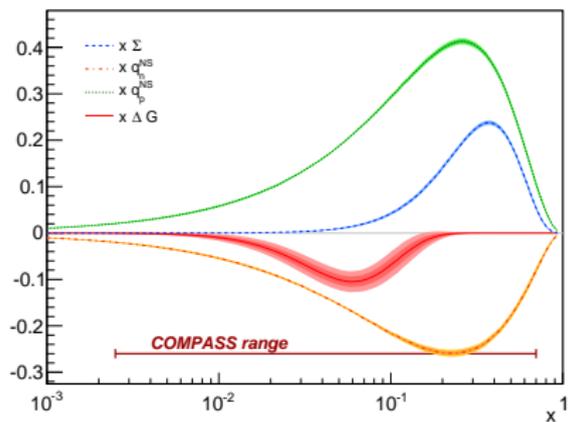
- 1 Normal Fit to the data
- 2 Creating 100 new data tables
 - Randomise each value inside of its statistical error
- 3 Do the fit for each of these new tables
- 4 Determine the σ of this distribution
- 5 Draw the first fit (correct table) with the σ of the distribution

Fit to the randomised tables

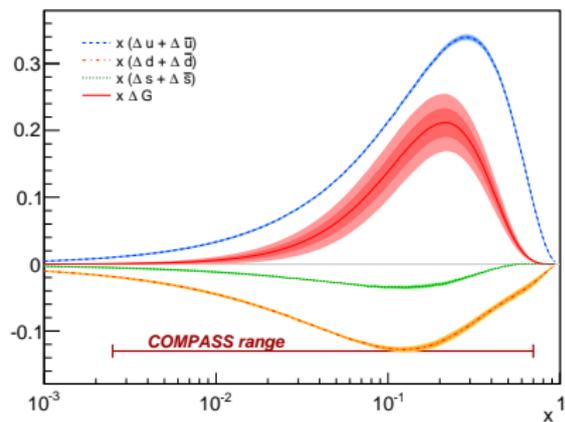
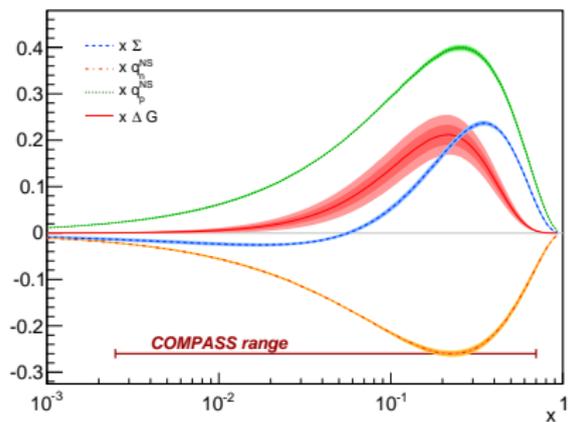


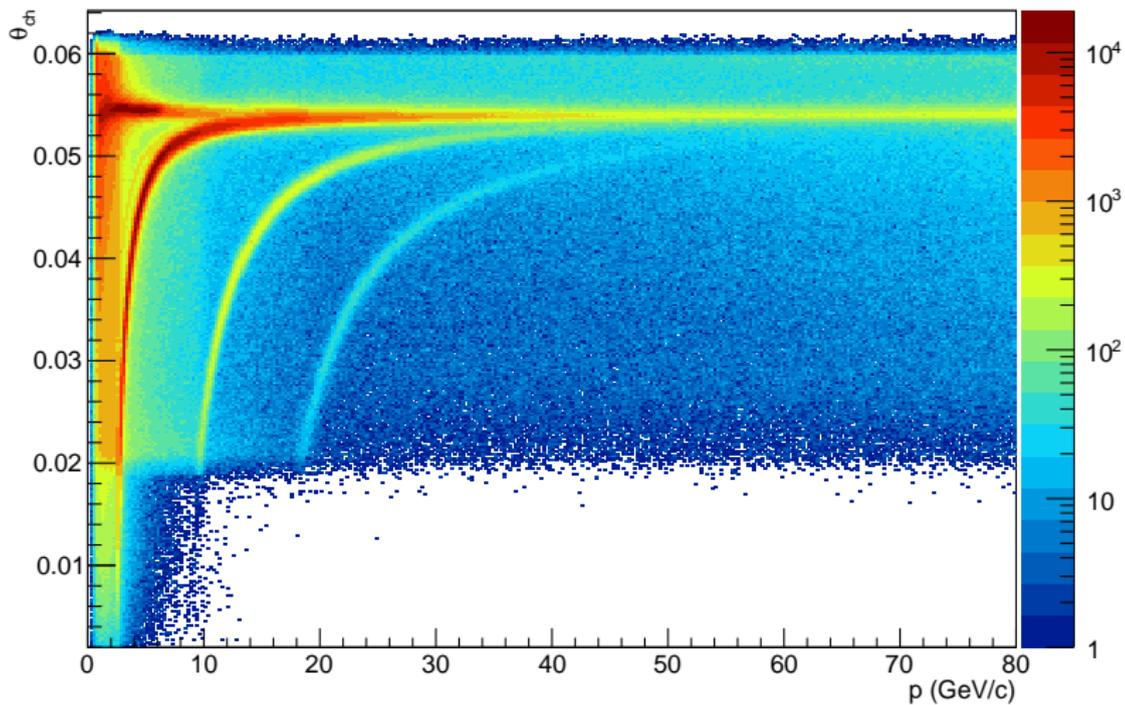


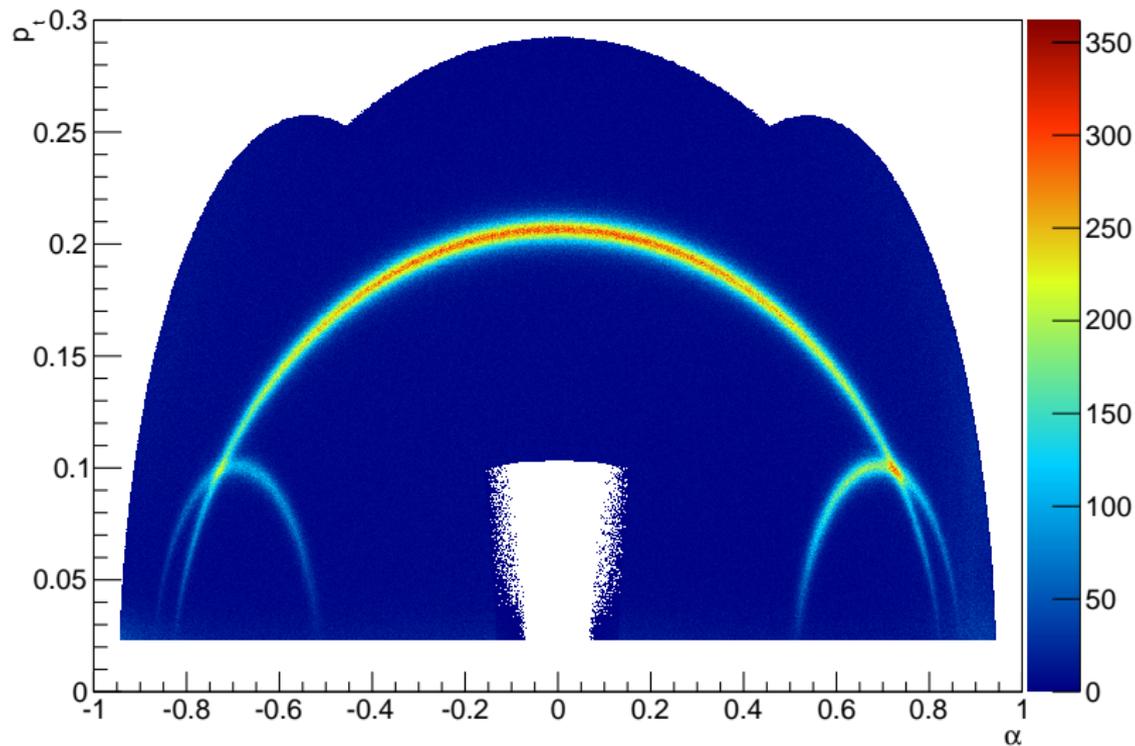
Results

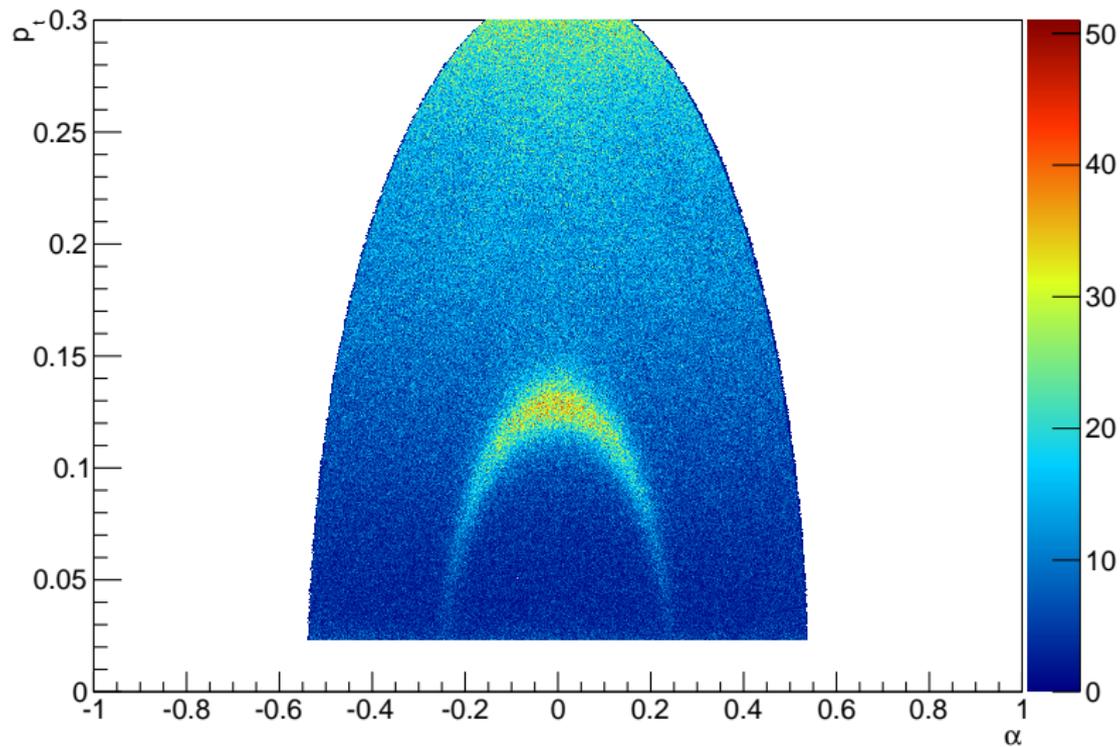


Results



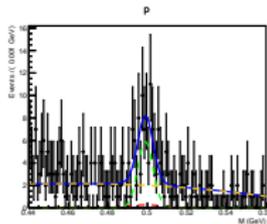
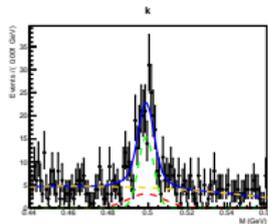
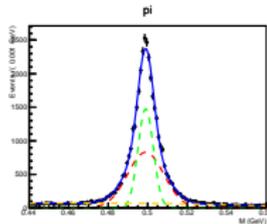
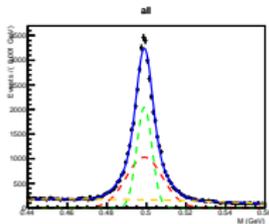
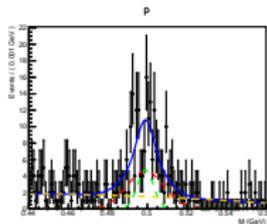
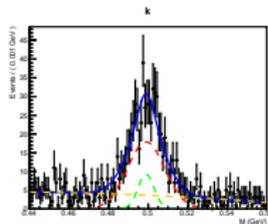
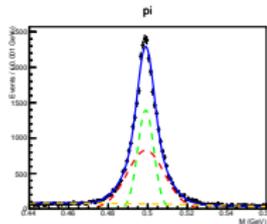
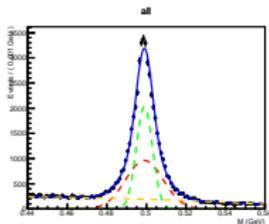






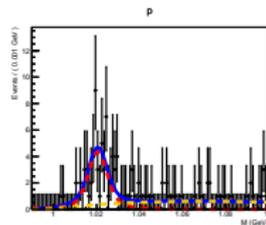
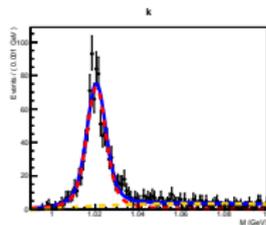
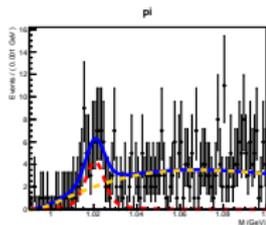
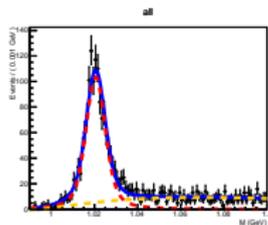
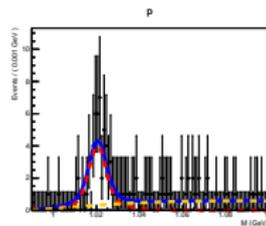
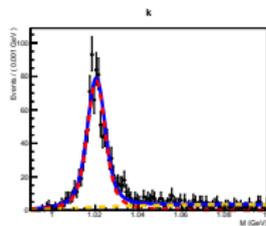
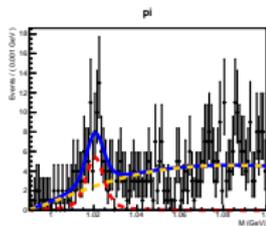
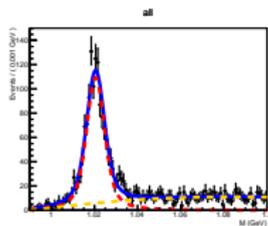
RICH table (K^0)

- Signal: 2 Gaussian
- Background: Polynomial



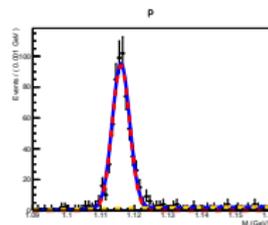
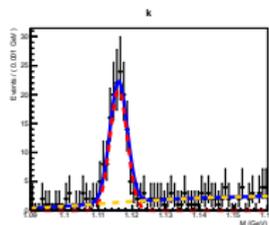
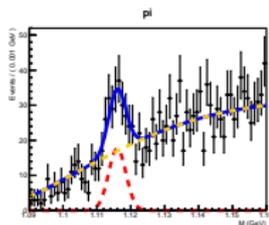
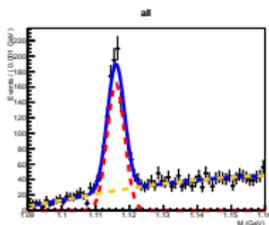
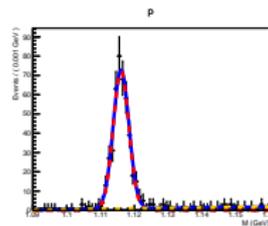
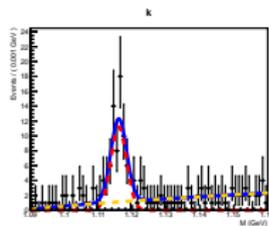
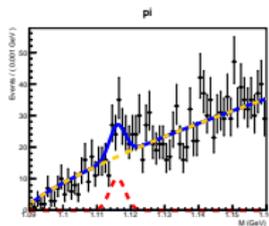
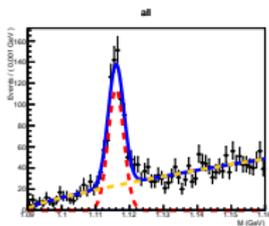
RICH table (ϕ)

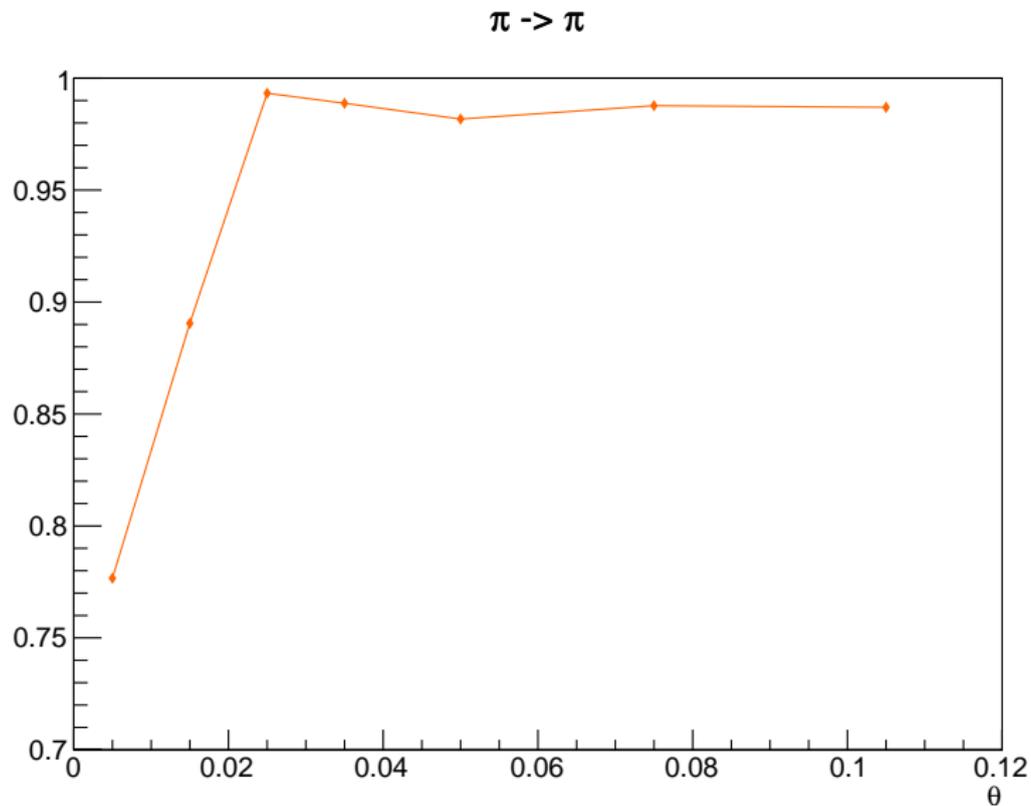
- Signal: Convolution of Breit-Wigner and Gaussian
- Background: $(x - thr)^n \cdot \exp(-a(x - thr))$



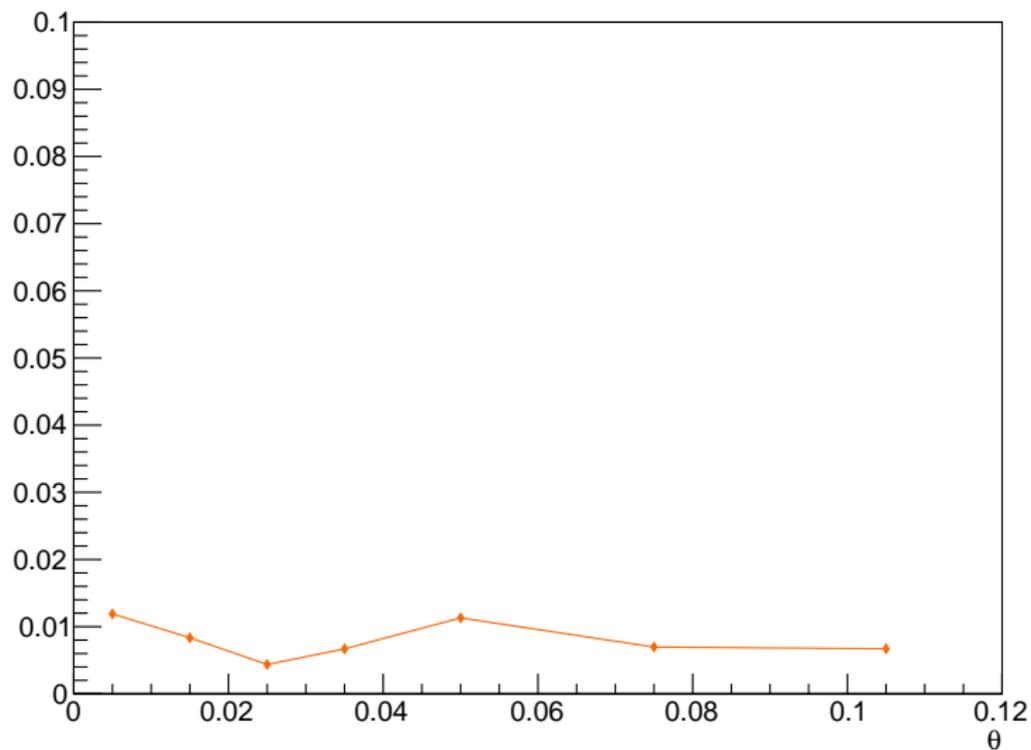
RICH table (Λ)

- Signal: Gaussian
- Background: $(x - thr)^n \cdot \exp(-a(x - thr))$





$\pi \rightarrow k$



$\pi \rightarrow \rho$

