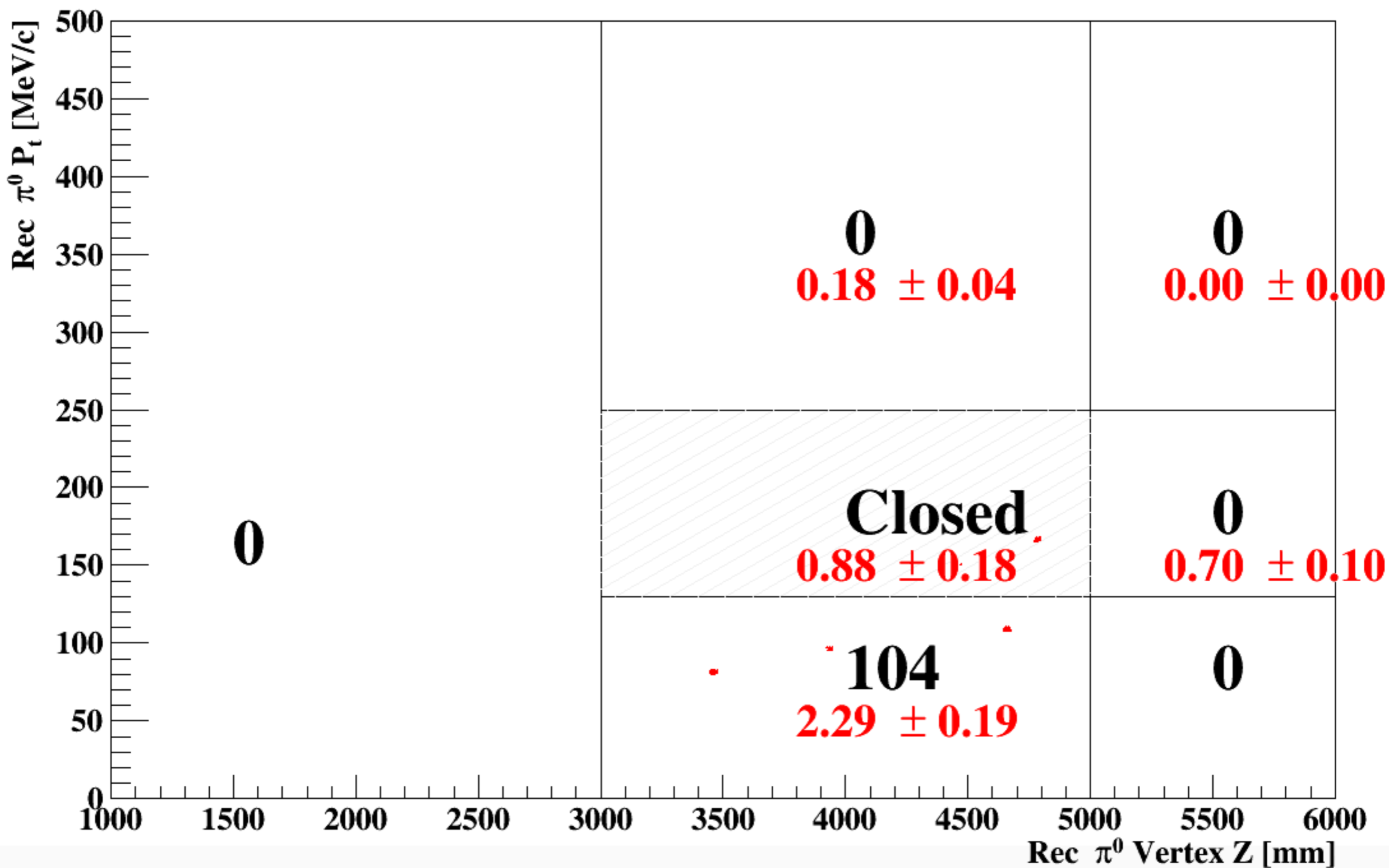


# Background Estimation 2

10 May, 2018

hdum



# Normalization

$$\textit{Normalization Factor} = \frac{P.O.T \times \textit{flux}}{\frac{\# \textit{ of } K_L^0 \rightarrow \pi^+ \pi^- \pi^0 \textit{ in MC}}{\textit{Branchratio}}} \times \textit{Recycle}$$

**for matching the real data and simulation data**

- $P.O.T \times \textit{flux} = \# \textit{ of K in Data}$
- $\textit{Run65\_42\_P.O.T} = 9.83741e+18$
- $\textit{Run65\_42\_flux} = 3.79 * 1e7 / 2e14$
- $\textit{Branch ratio}( K_L^0 \rightarrow \pi^+ \pi^- \pi^0 ) = 12.54\%$
- $\# \textit{ of } K_L^0 \rightarrow \pi^+ \pi^- \pi^0 \textit{ in MC} = 2,000,000$
- $\textit{Recycle} = 500$