KOPIO TN0XX draft

More on the beam aspect ratio and FastMC acceptance

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Abstract

This document is a supplement to TN053. See TN053 for definitions of terms and variables.

1 Introduction

Figures 1, 2, 3, 4 and 5 shows the fraction of the $M(\gamma\gamma)$, $P^*(\pi^0)$, $Z(K)$, $E(\gamma)$ and $E^*(\gamma)$ distributions outside three σ where σ = core resolution from the resolution fits described in TN053. Technically, the fraction is defined as the contents of all bins with centers greater than 3σ from the fitted mean divided by the total contents of the each histogram, thus there may be binning effects when σ is comparable to the bin size. The error bars show the binomial error.

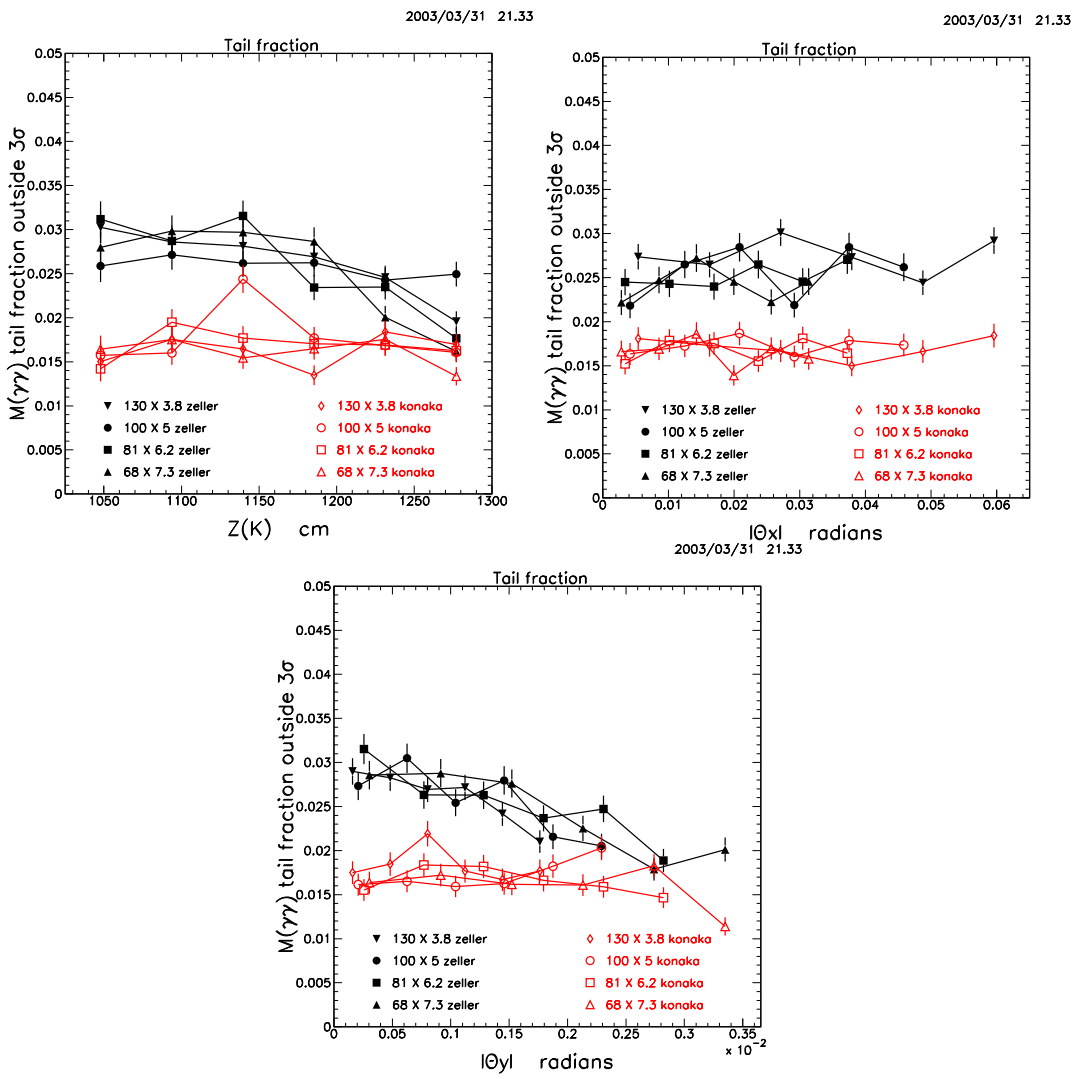

Figure 1: Fraction of $M(\gamma\gamma)$ distribution outside three σ where σ = core resolution as a function of $Z(K)$, $|\Theta_X|$ and $|\Theta_Y|$ for the Konaka and Zeller PR models for the four different beam aspect ratios after application of basic cuts.

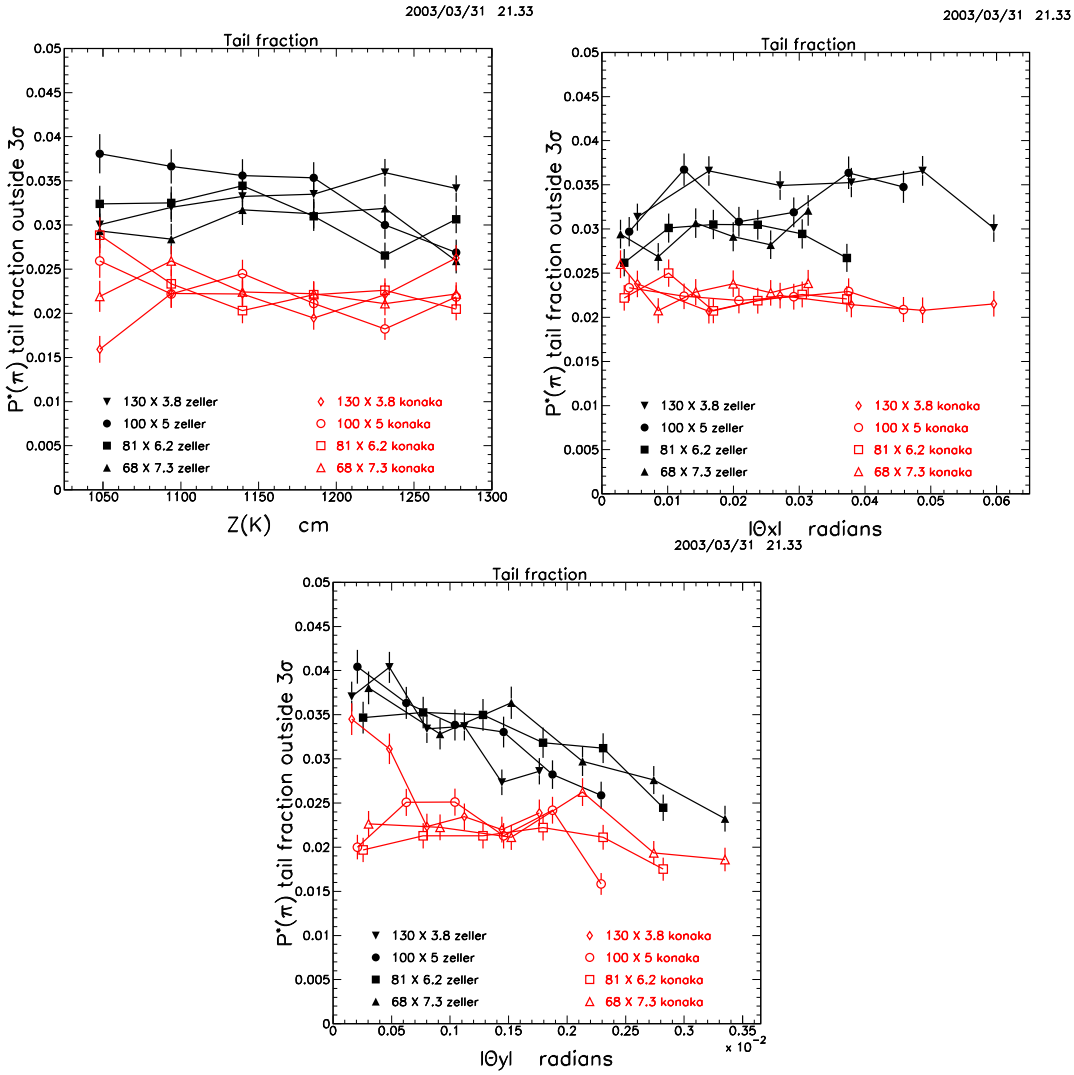

Figure 2: Fraction of $P^*(\pi^0)$ distribution outside three σ where σ = core resolution as a function of $Z(K)$, $|\Theta_X|$ and $|\Theta_Y|$ for the Konaka and Zeller PR models for the four different beam aspect ratios after application of basic cuts.

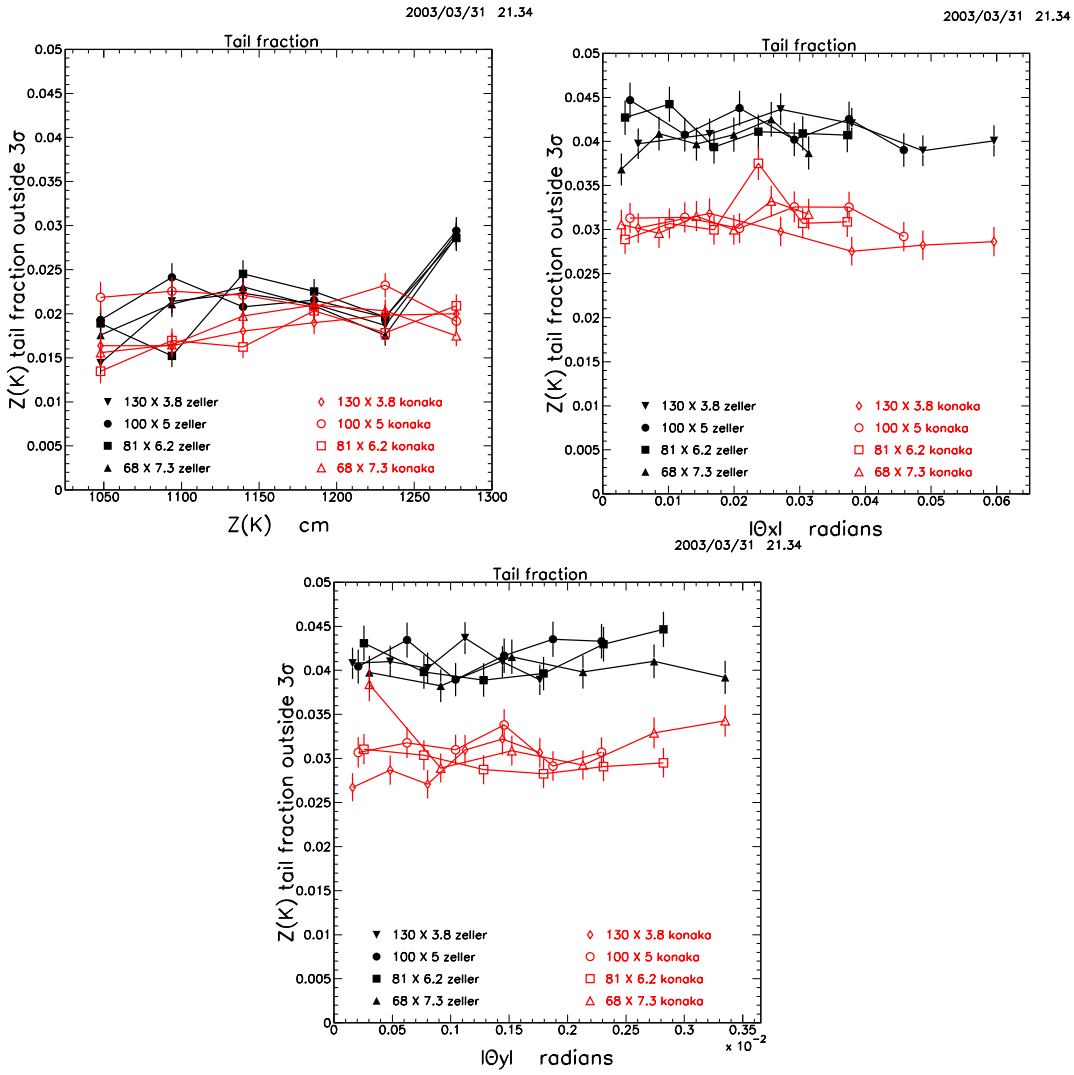

Figure 3: Fraction of $Z(K)$ distribution outside three σ where σ = core resolution as a function of $Z(K)$, $|\Theta_X|$ and $|\Theta_Y|$ for the Konaka and Zeller PR models for the four different beam aspect ratios after application of basic cuts.

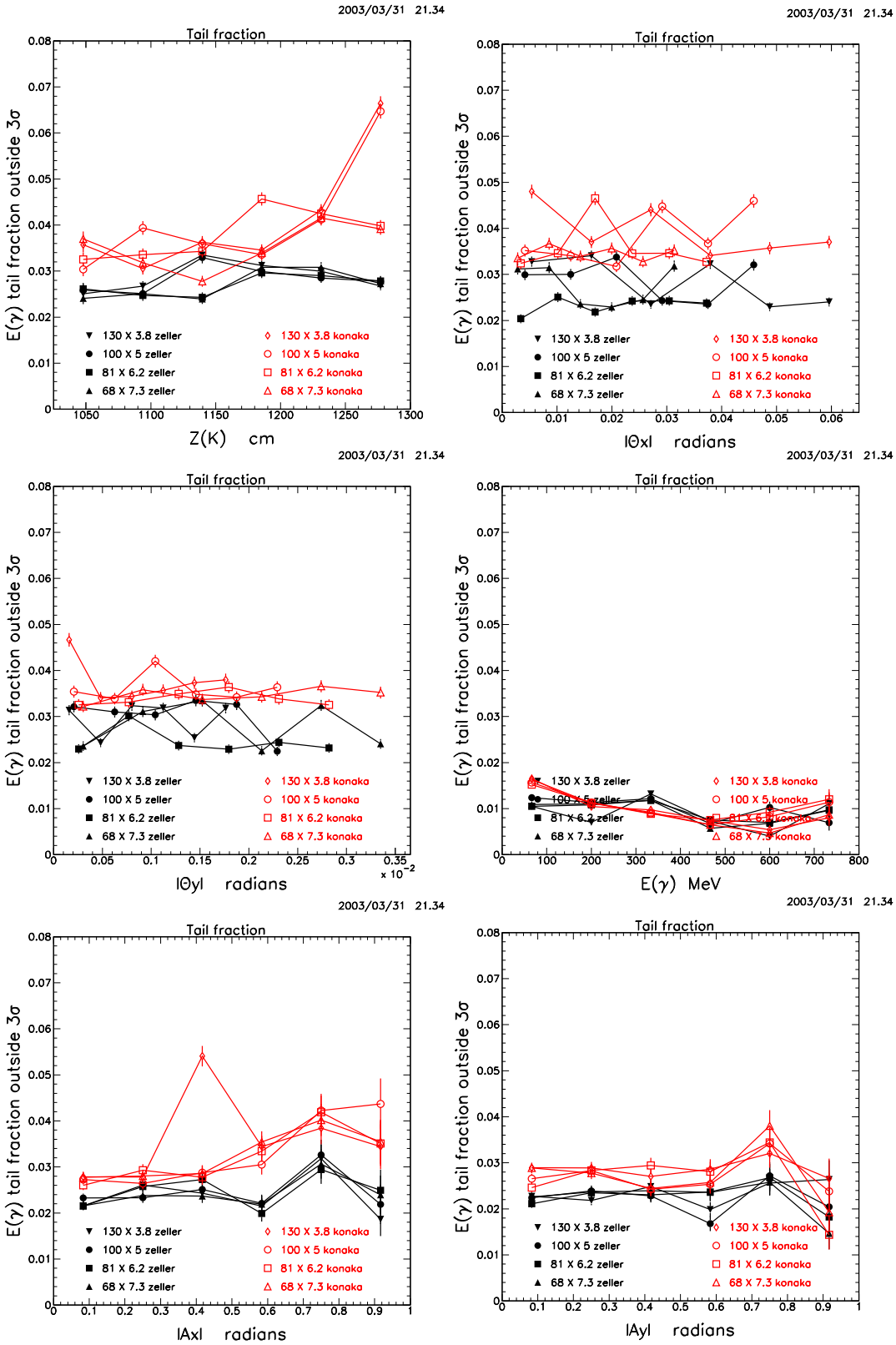

Figure 4: Fraction of $E(\gamma)$ distribution outside three σ where σ = core resolution as a function of $Z(K)$, $|\Theta_X|$, $|\Theta_Y|$ $E(\gamma)$, $|A_X|$ and $|A_Y|$ for the Konaka and Zeller PR models for the four different beam aspect ratios after application of basic cuts.

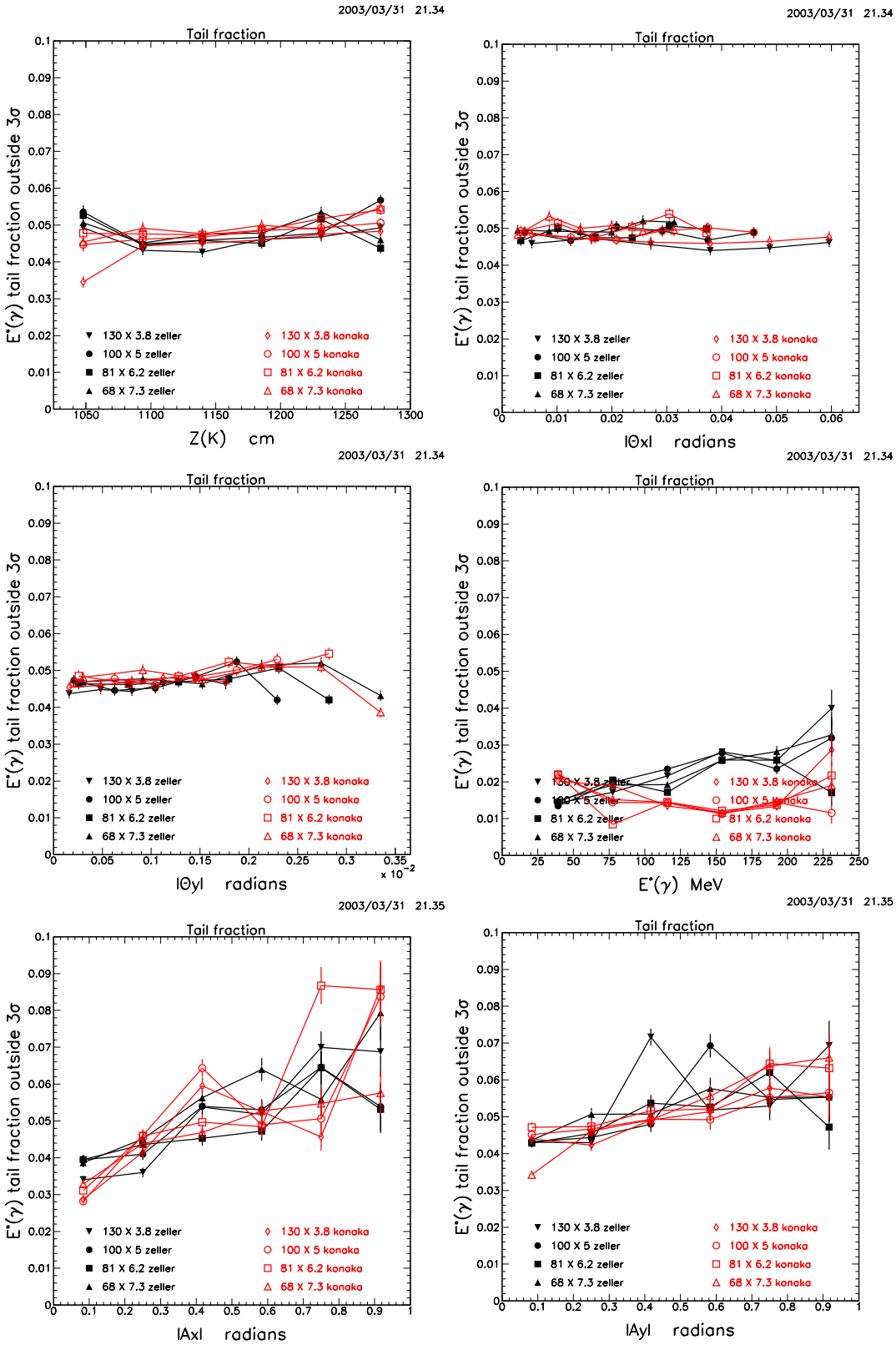

Figure 5: Fraction of $E^*(\gamma)$ distribution outside three σ where σ = core resolution as a function of $Z(K)$, $|\Theta_X|$, $|\Theta_Y|$ $E^*(\gamma)$, $|A_X|$ and $|A_Y|$ for the Konaka and Zeller PR models for the four different beam aspect ratios after application of basic cuts.