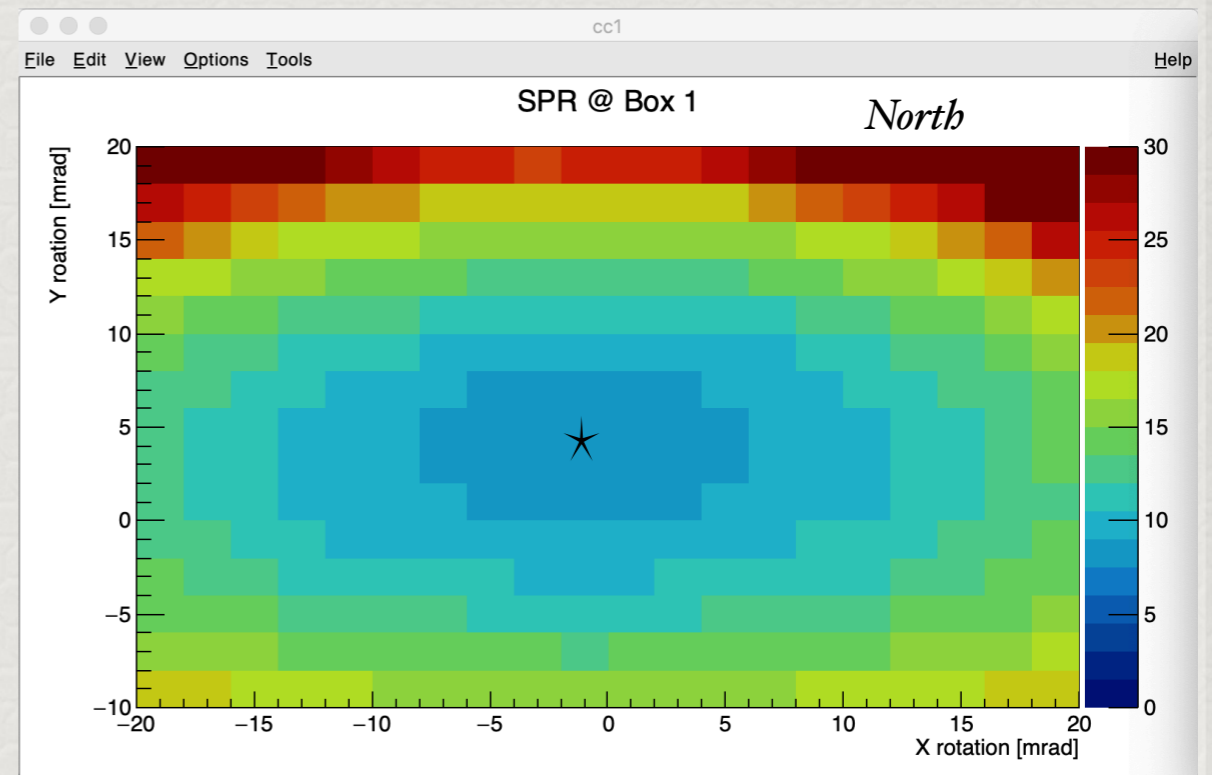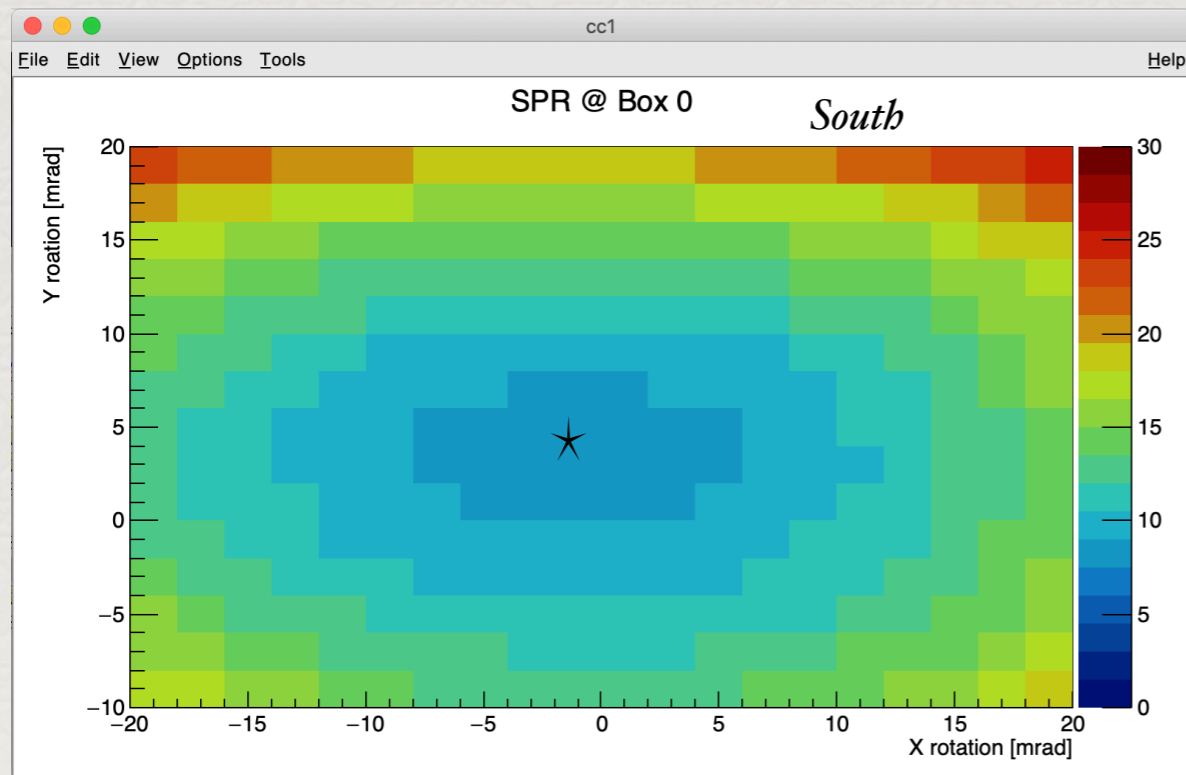# GlueX DIRC Beam Data Momentum Correction
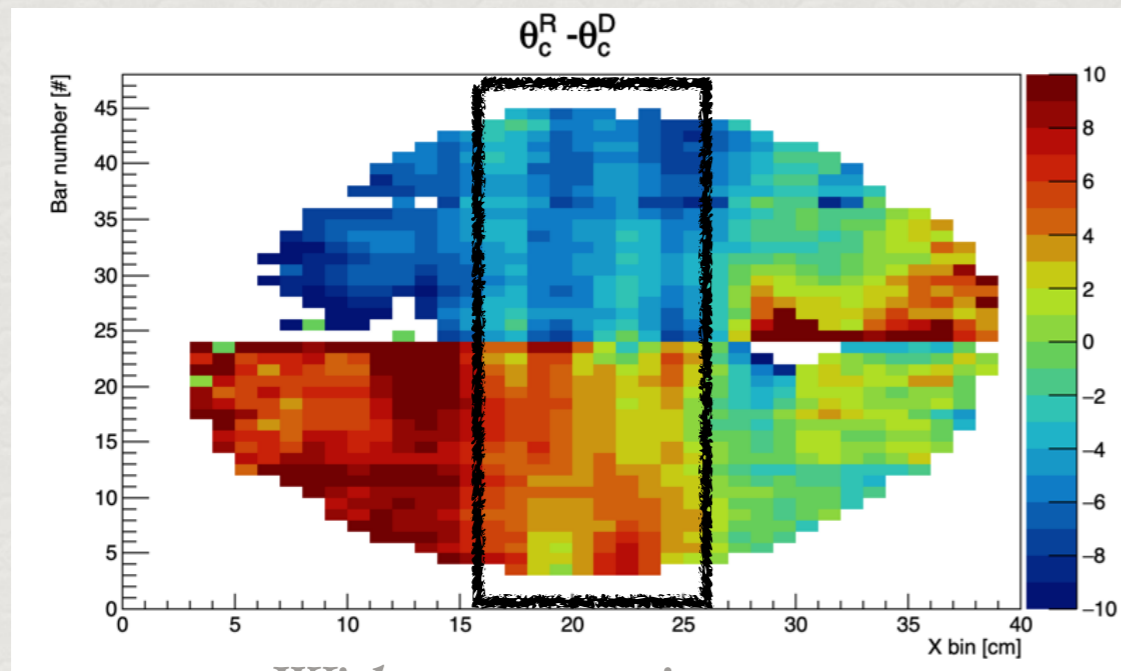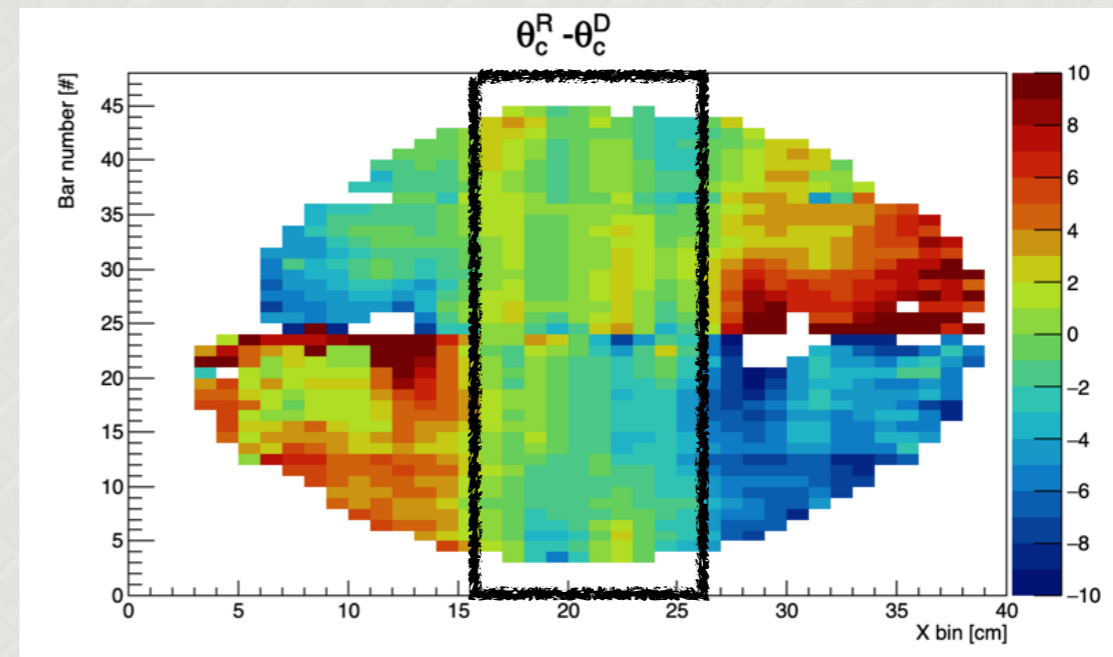
A.Ali

3 Aug 2020

Momentum Correction

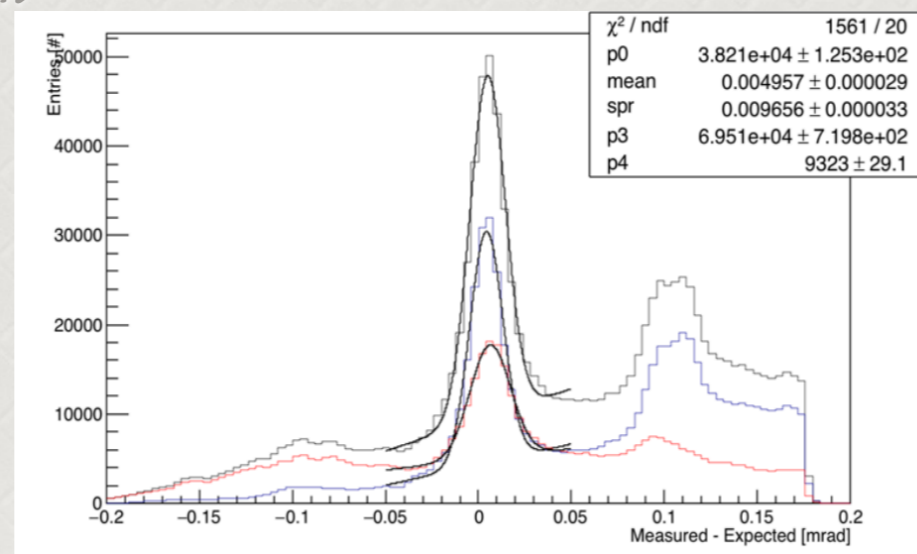# Reflected / Direct Cherenkov angle difference
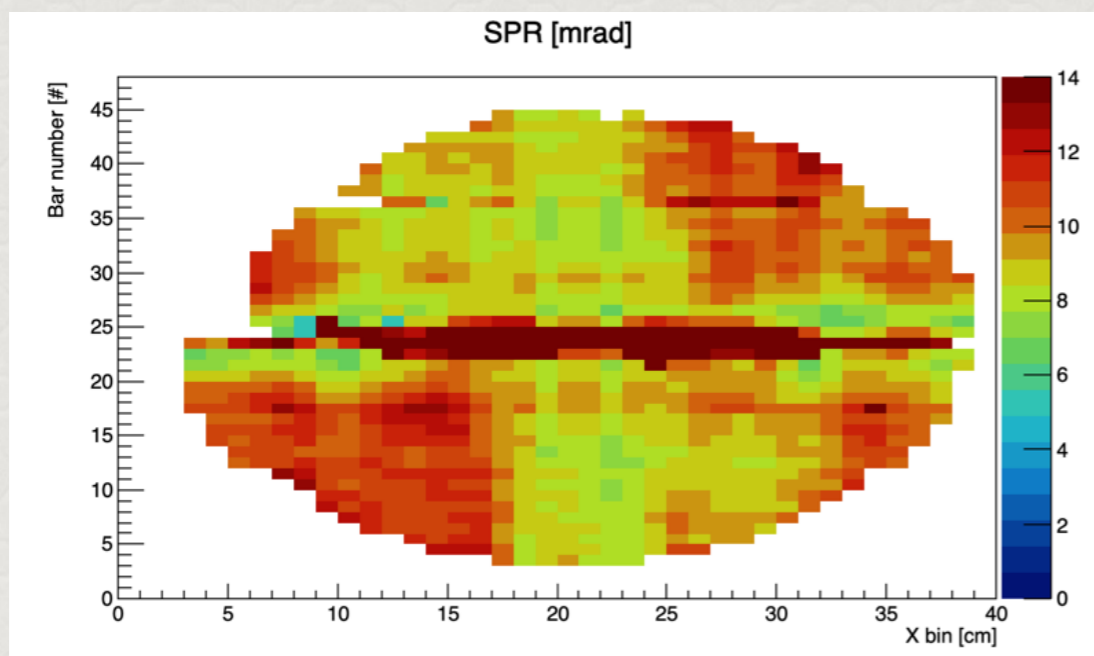

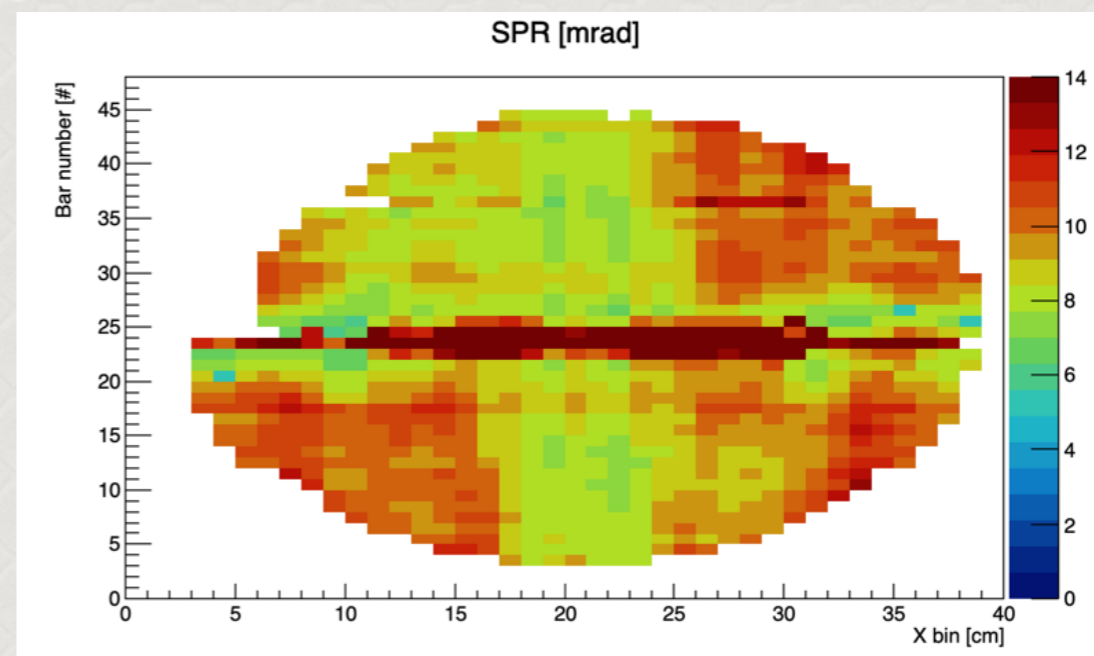*Without correction*

Momentum correction
Without per PMT correction
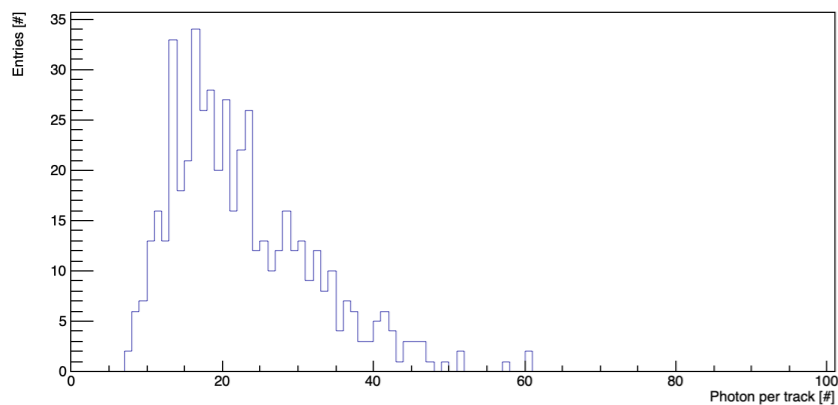
SPR

Without correction

Momentum correction
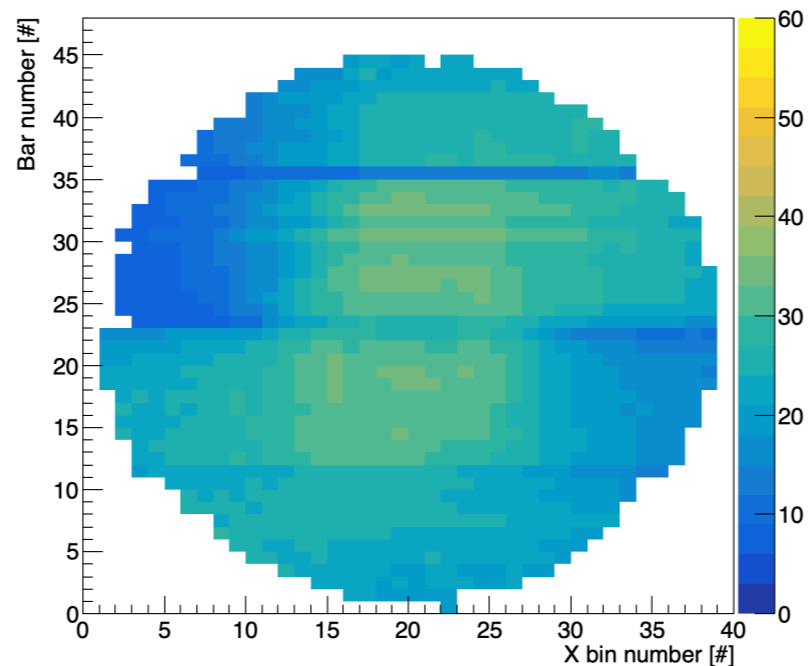*Without per PMT correction*

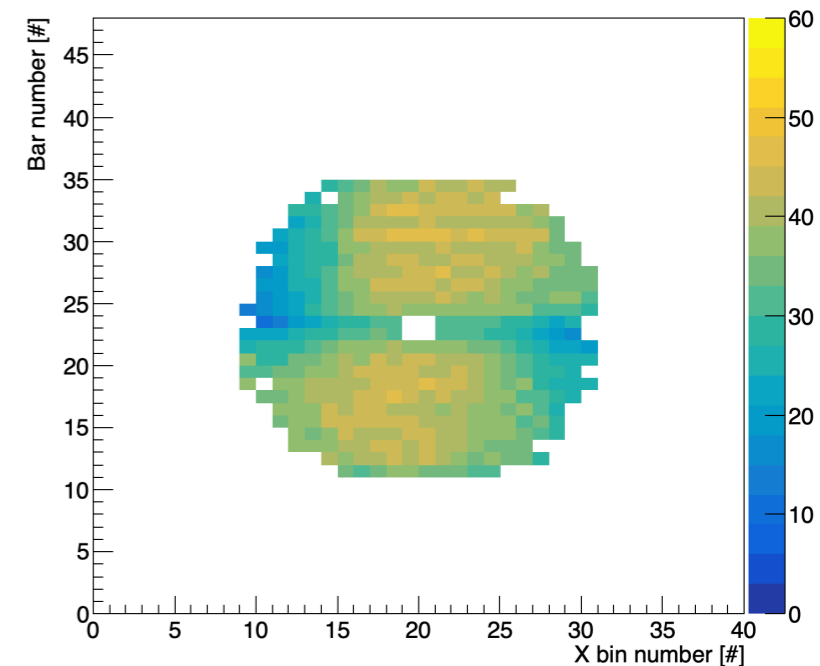*No important difference*

Photon Yield Map Beam Data

π yield @ Momentum [3.5 - 4.0] GeV/c

K yield @ Momentum [3.5 - 4.0] GeV/c

Single Track Events
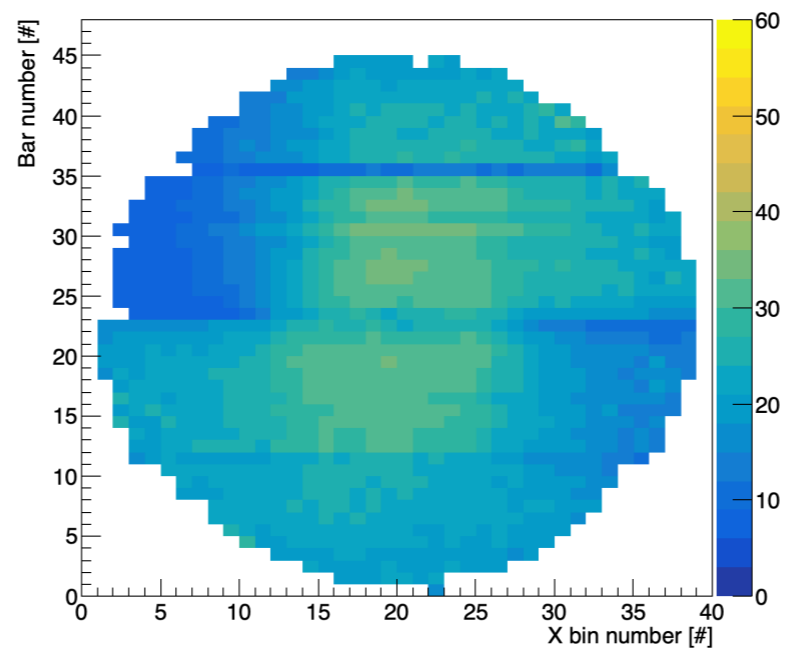
π yield single @ Momentum [3.5 - 4.0] GeV/c
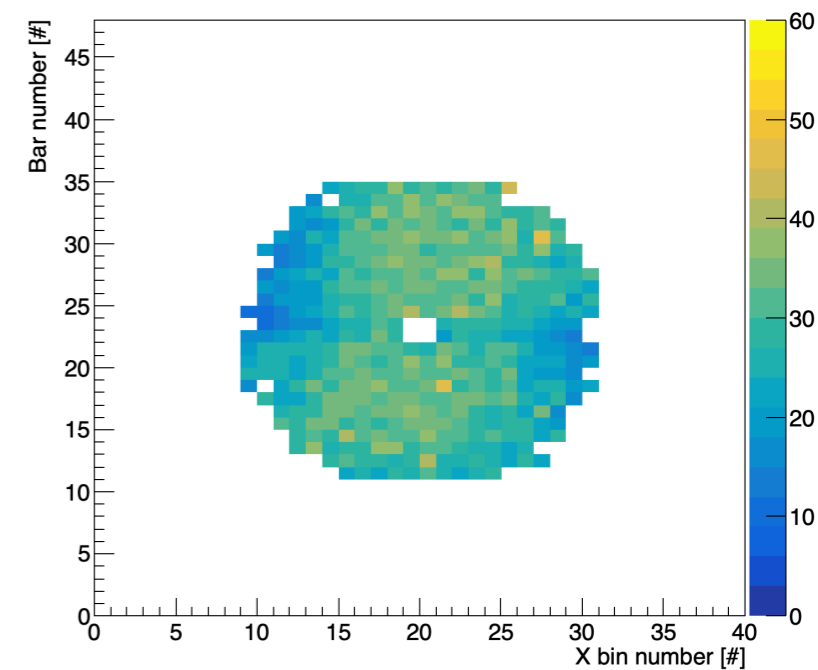
K yield single @ Momentum [3.5 - 4.0] GeV/c

Photon Yield Map Simulation
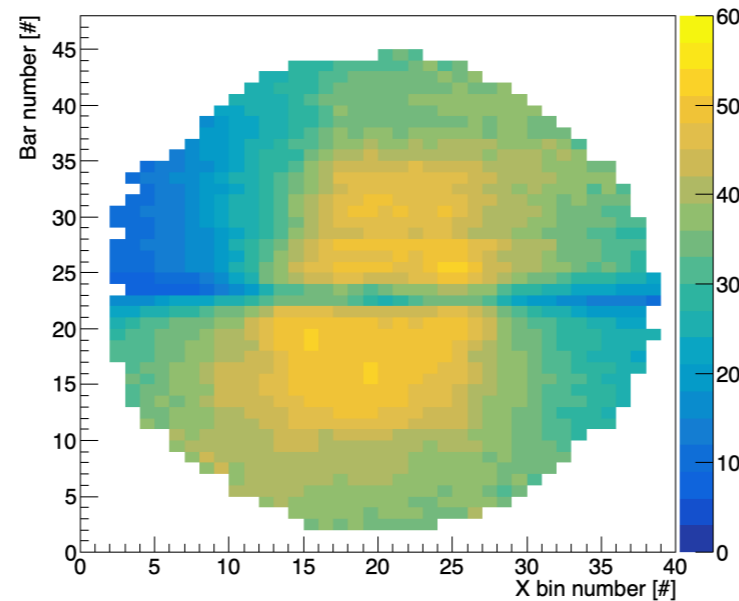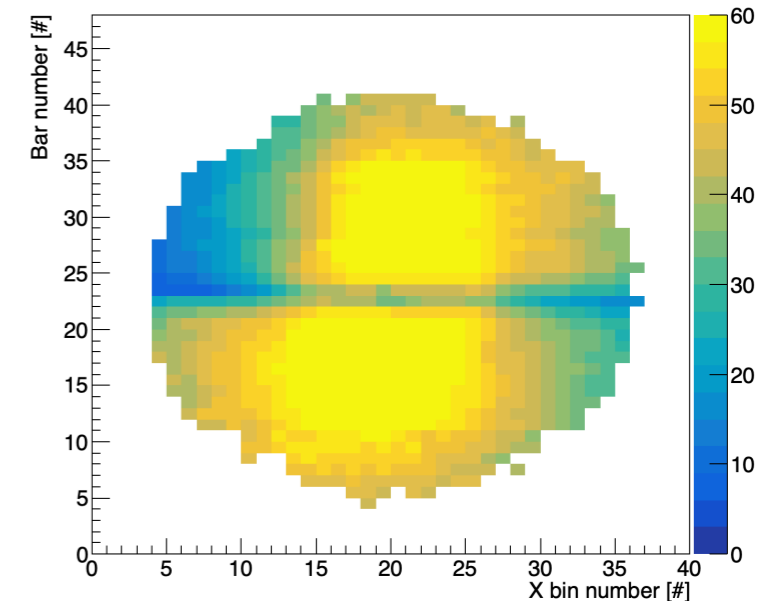

π yield @ Momentum [3.5 - 4.0] GeV/c
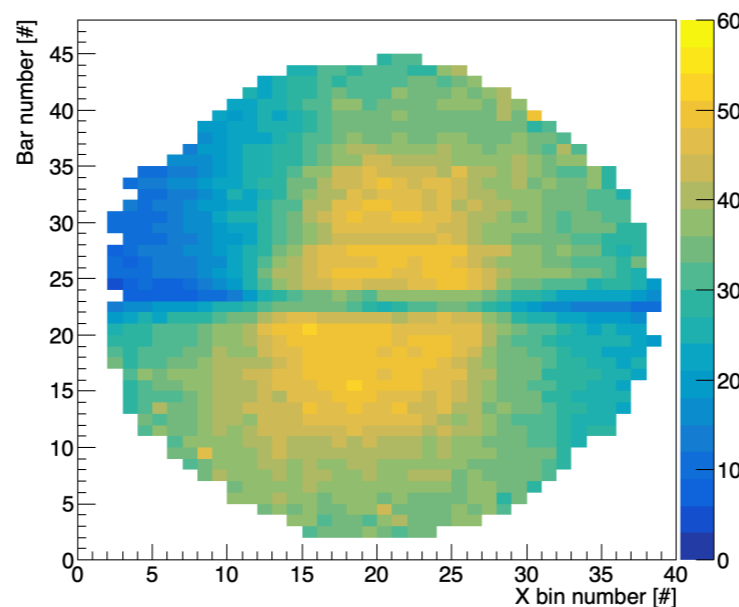
K yield @ Momentum [3.5 - 4.0] GeV/c

Single Track Events

π yield single @ Momentum [3.5 - 4.0] GeV/c
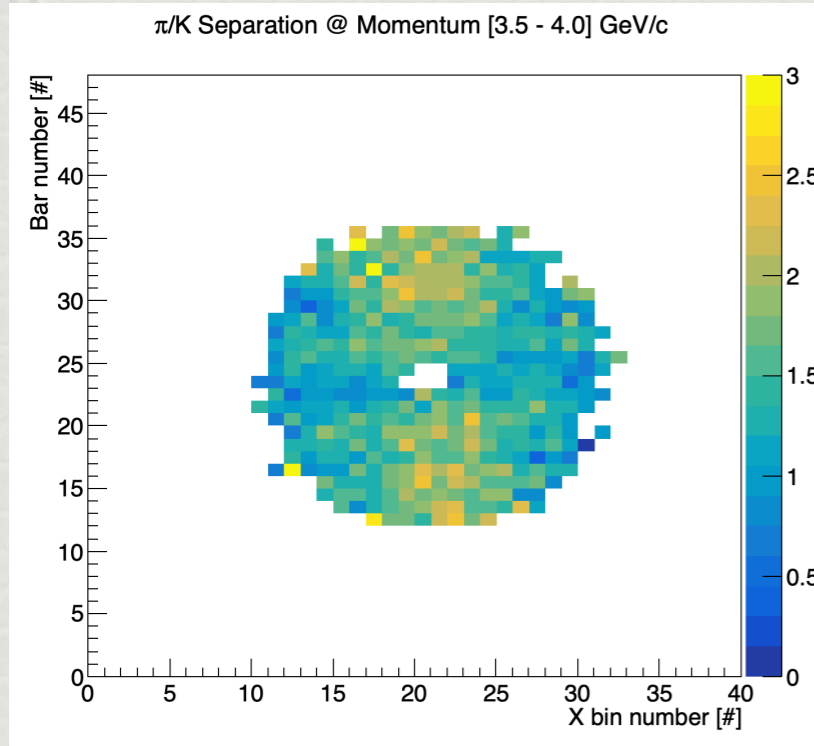
K yield single @ Momentum [3.5 - 4.0] GeV/c
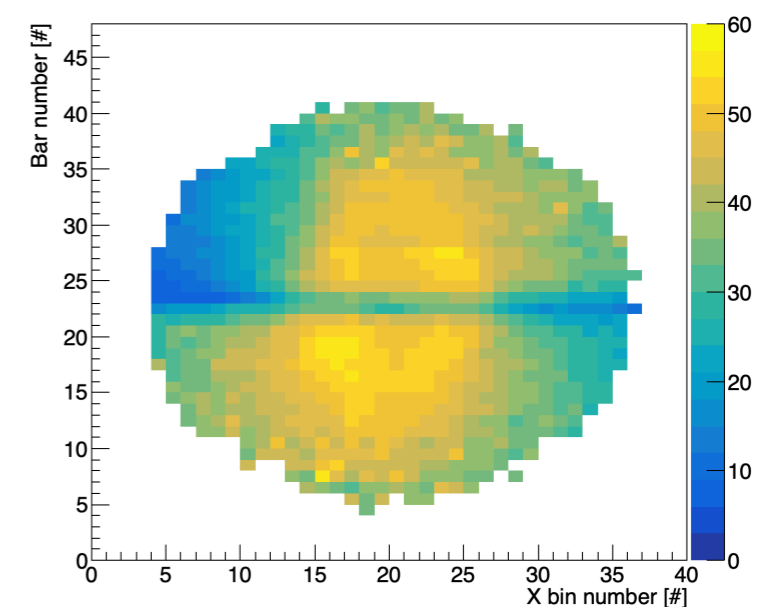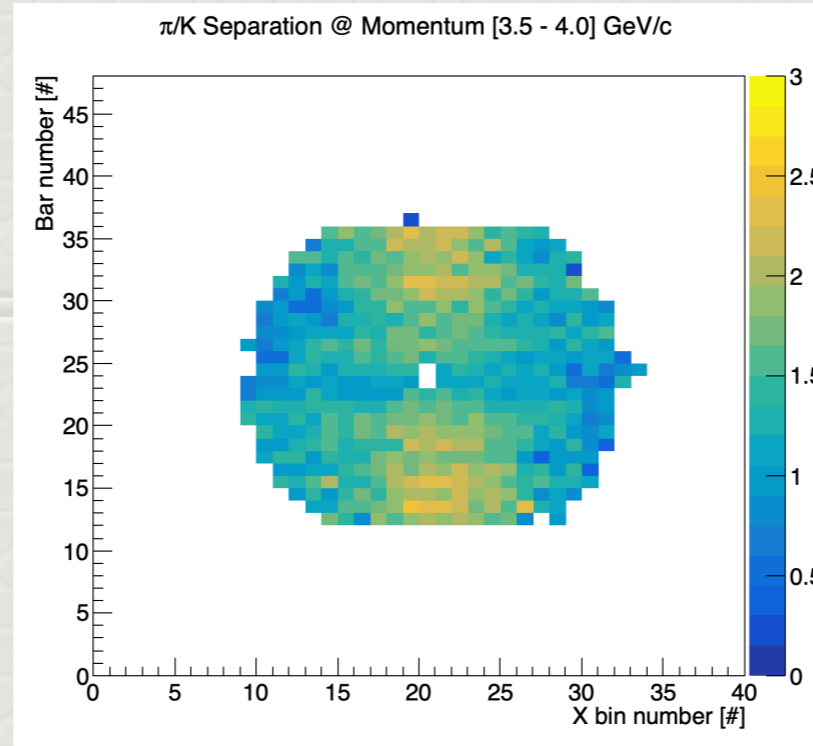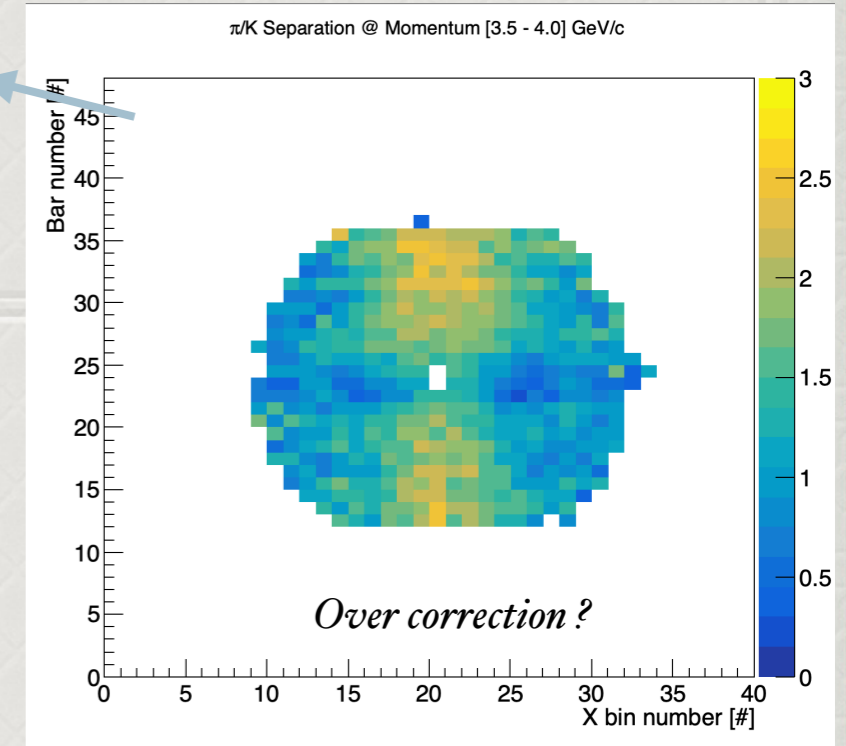
Separation Power Sim

Without correction

Momentum correction Without per PMT correction

After Per PMT and Momentum correction

Over correction ?

Simulation preliminary