

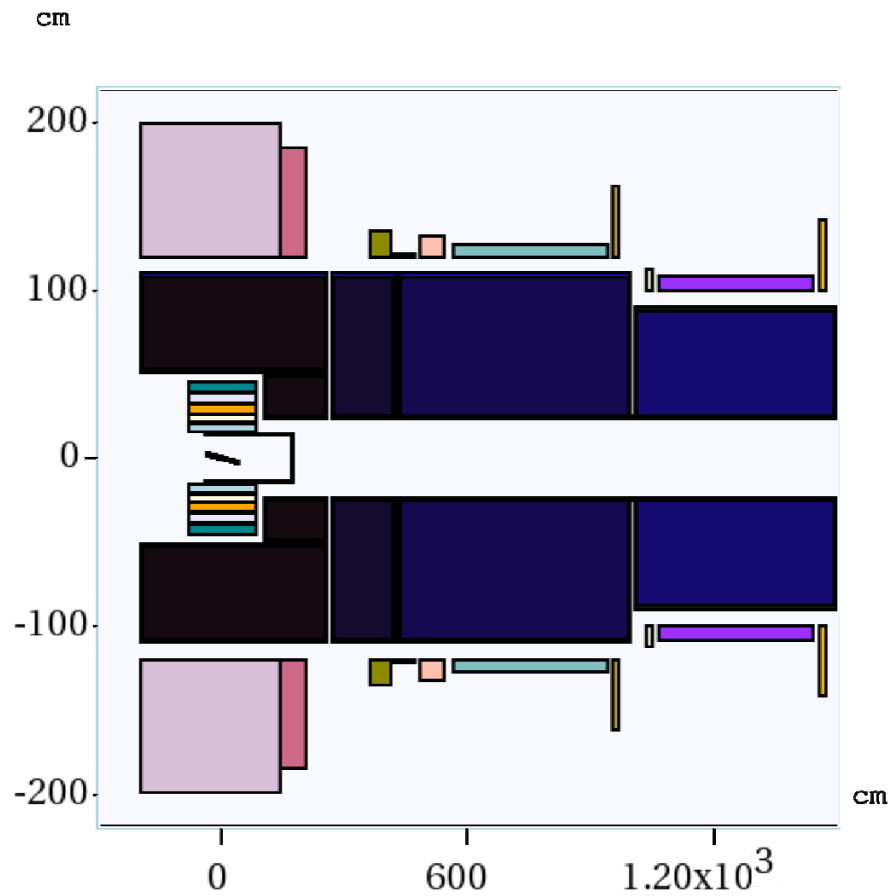
# Test of Muon Beam in 20to4T5m Transport Channel

X. Ding

AAG meeting, BNL

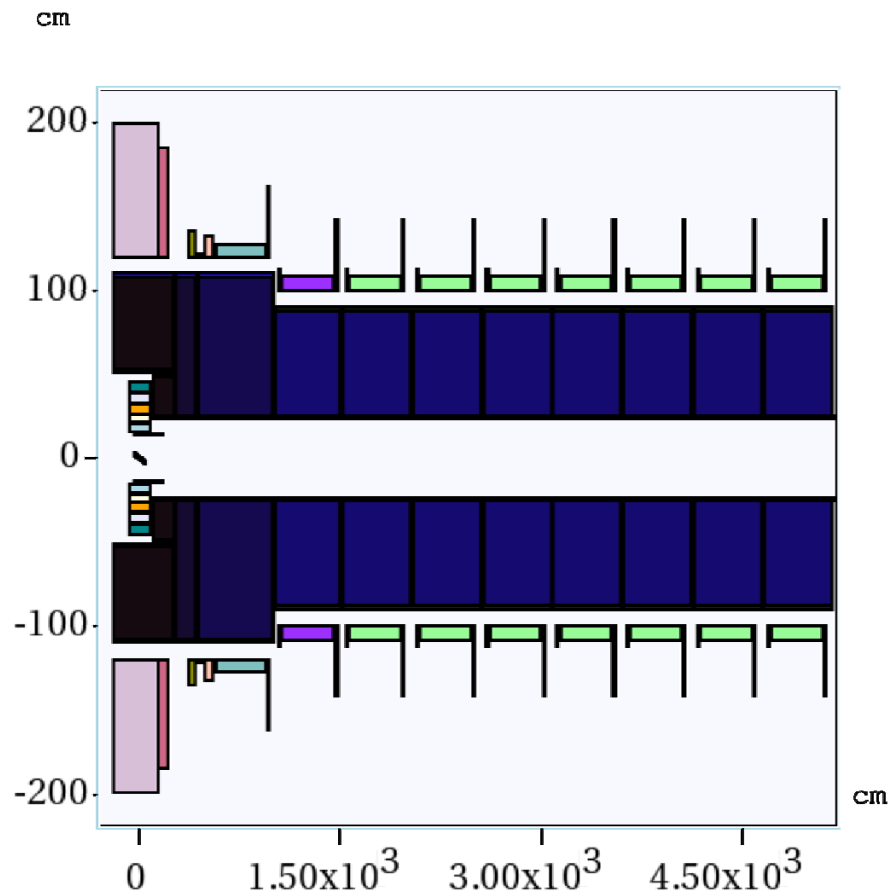
June 25, 2015

# 20to4T5m Configuration ( $z_{\max} = 15 \text{ m}$ )



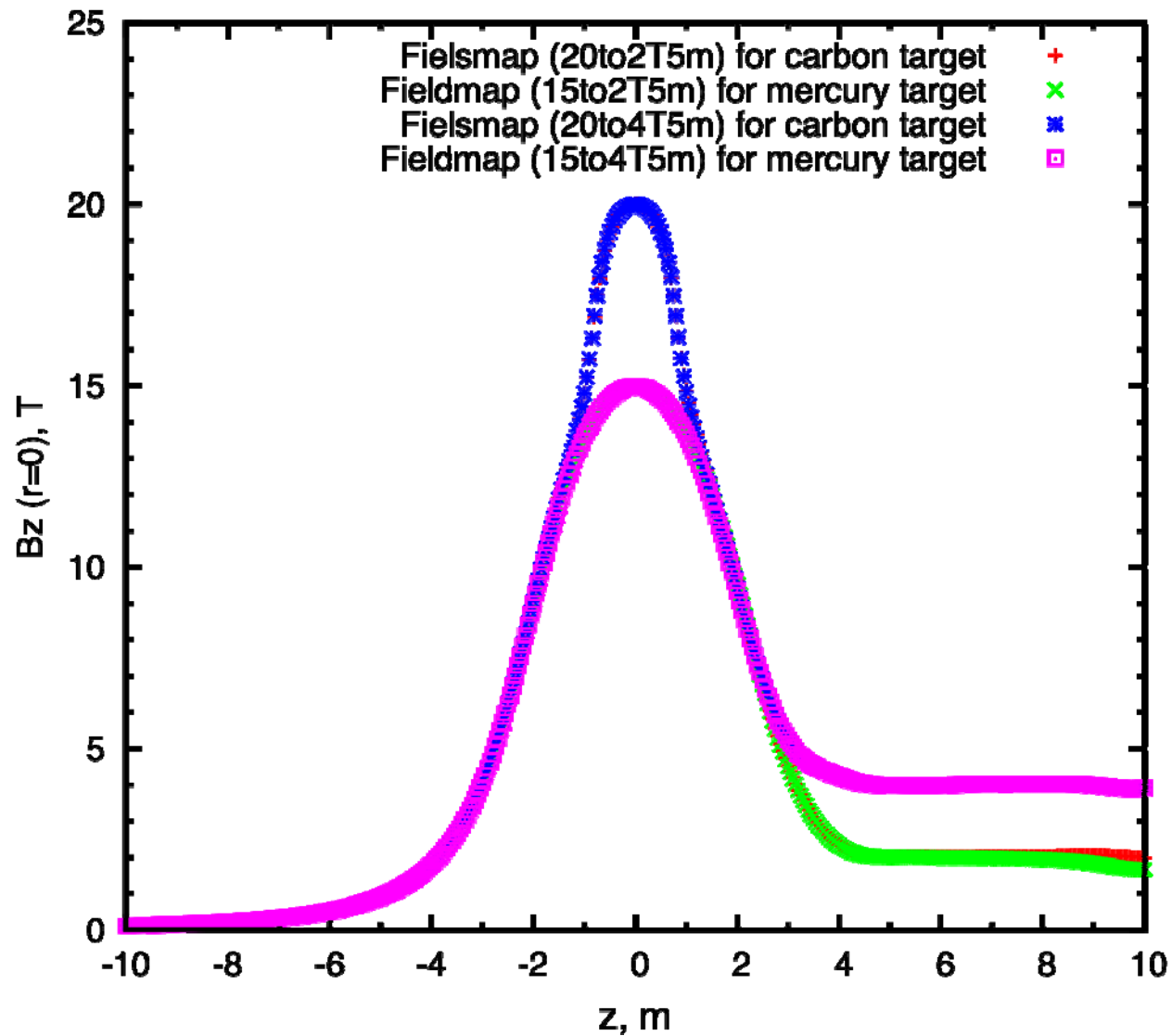
y  
↑  
z  
y:z = 1:4.091e+00

# 20to4T5m Configuration ( $z_{\max} = 52 \text{ m}$ )



y  
↑  
z  
y:z = 1:1.250e+01

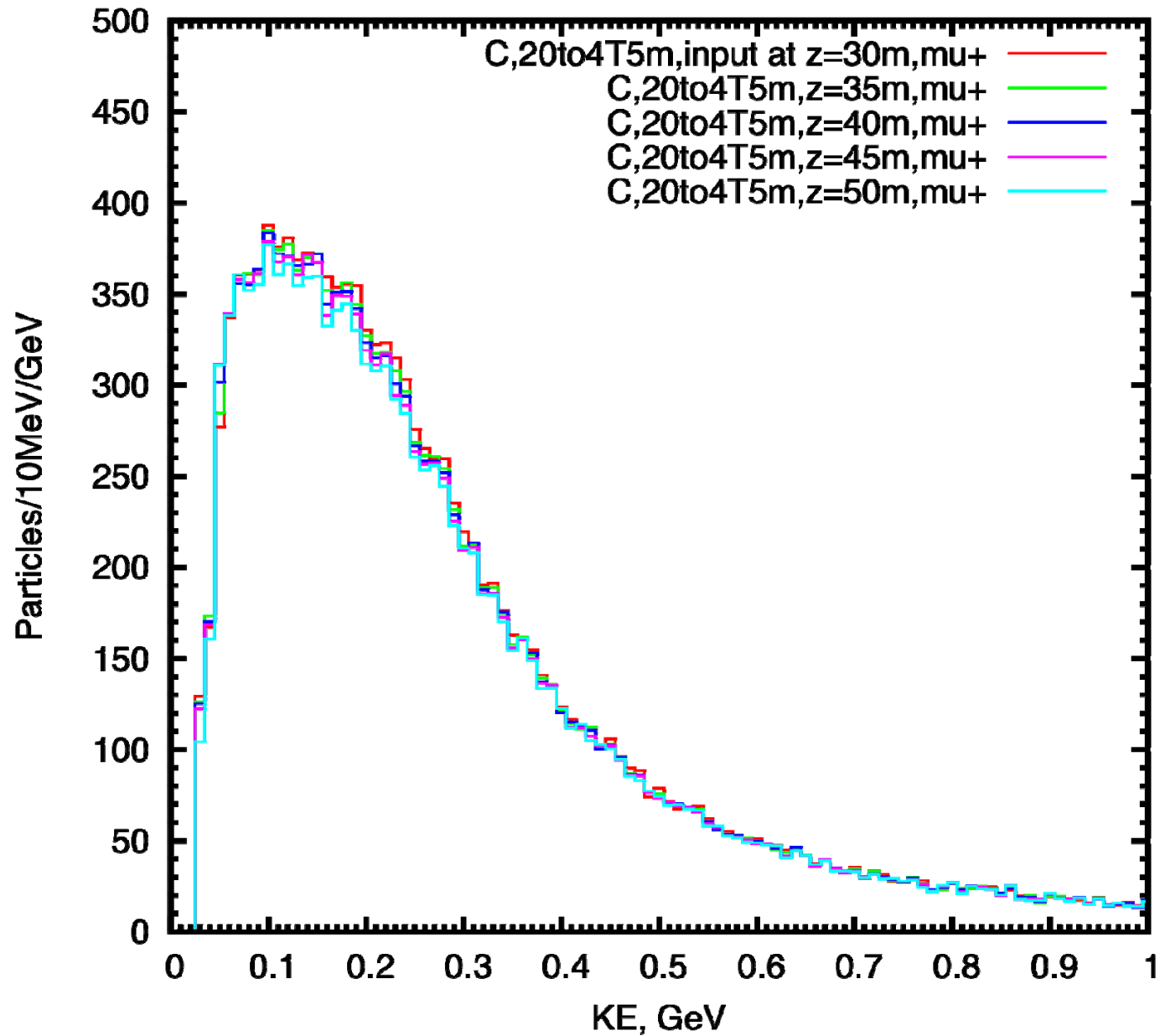
# Fieldmap on SC axis



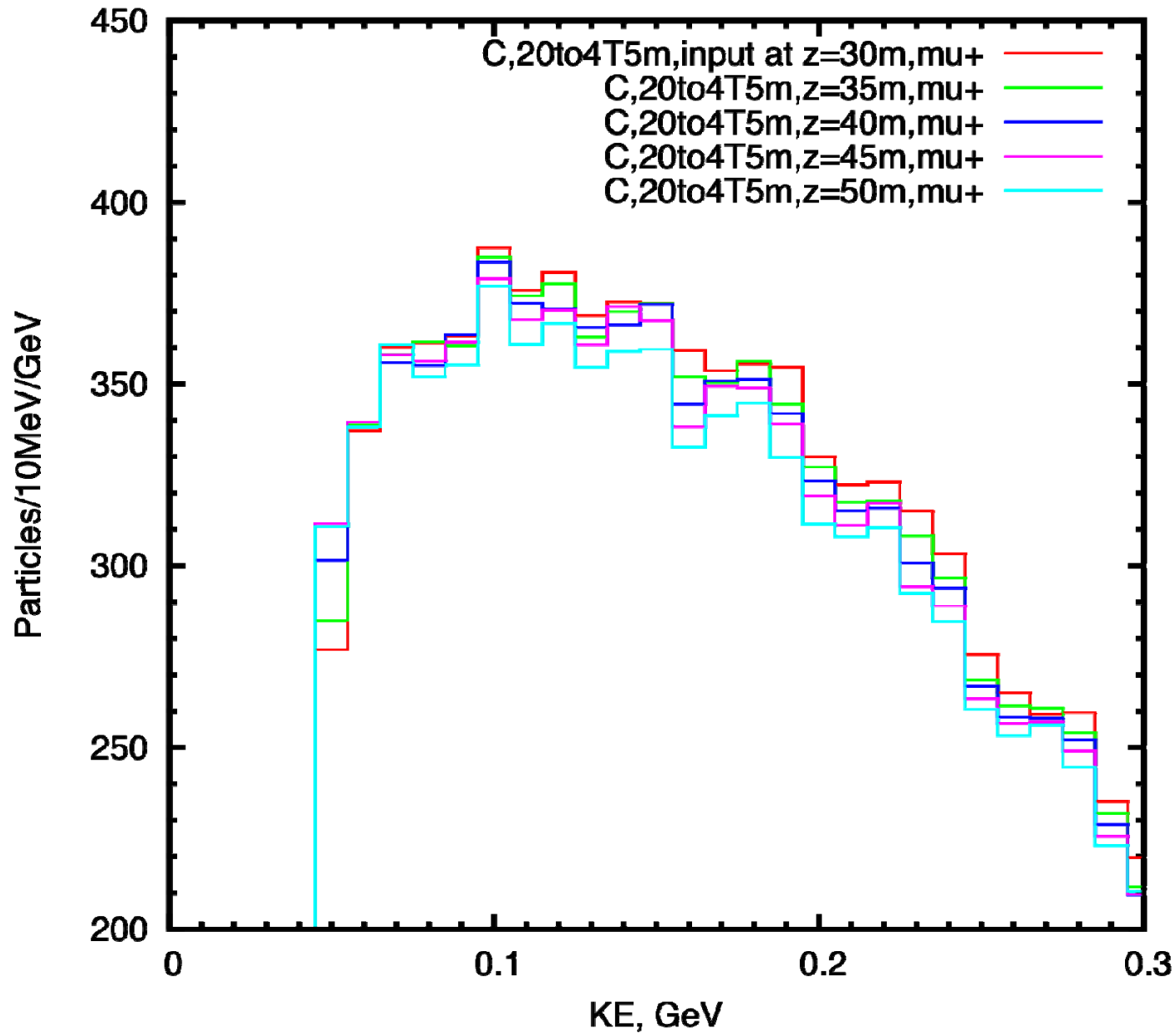
# Method

- Launch beam at  $z = -100$  cm in the 20to4T5m configuration and transport channel;
- Collect beam at  $z = 30$  m and extract the positive muon;
- Launch beam with extracted positive muon above at  $z = 30$  m in the same 20to4T5m configuration and transport channel;
- Collect positive muon beam at  $z = 35, 40, 45, 50$  m and plot.

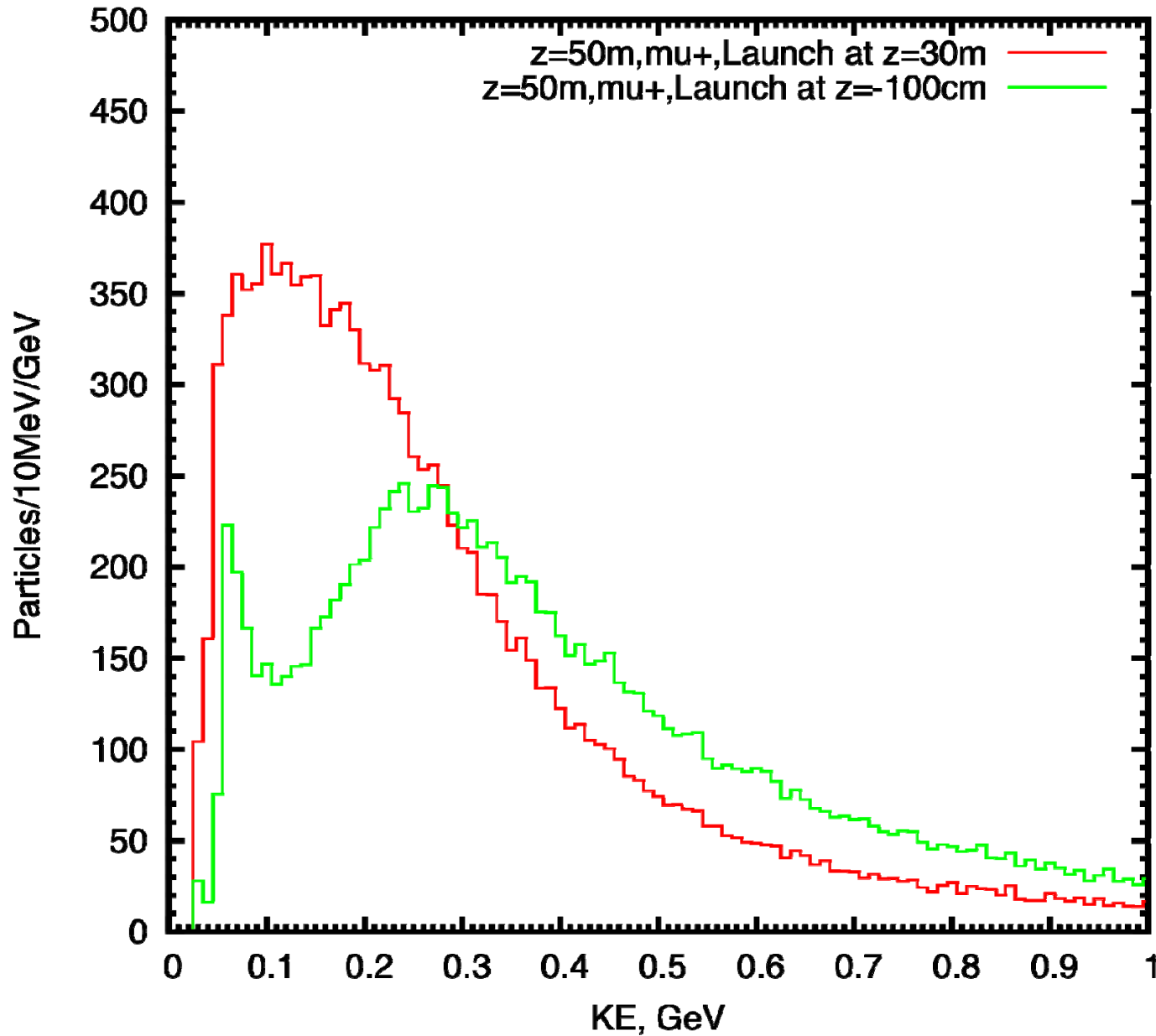
# Energy Spectra ( $\mu^+$ )



# Zoom of Energy Spectra ( $\mu^+$ )



# Energy Spectra Comparison for Launching ( $z = 50$ m)





# Effect of Be Window Thickness

