

# Energy Deposition in Gauss

James Mylroie-Smith

David Hutchcroft



UNIVERSITY OF  
LIVERPOOL

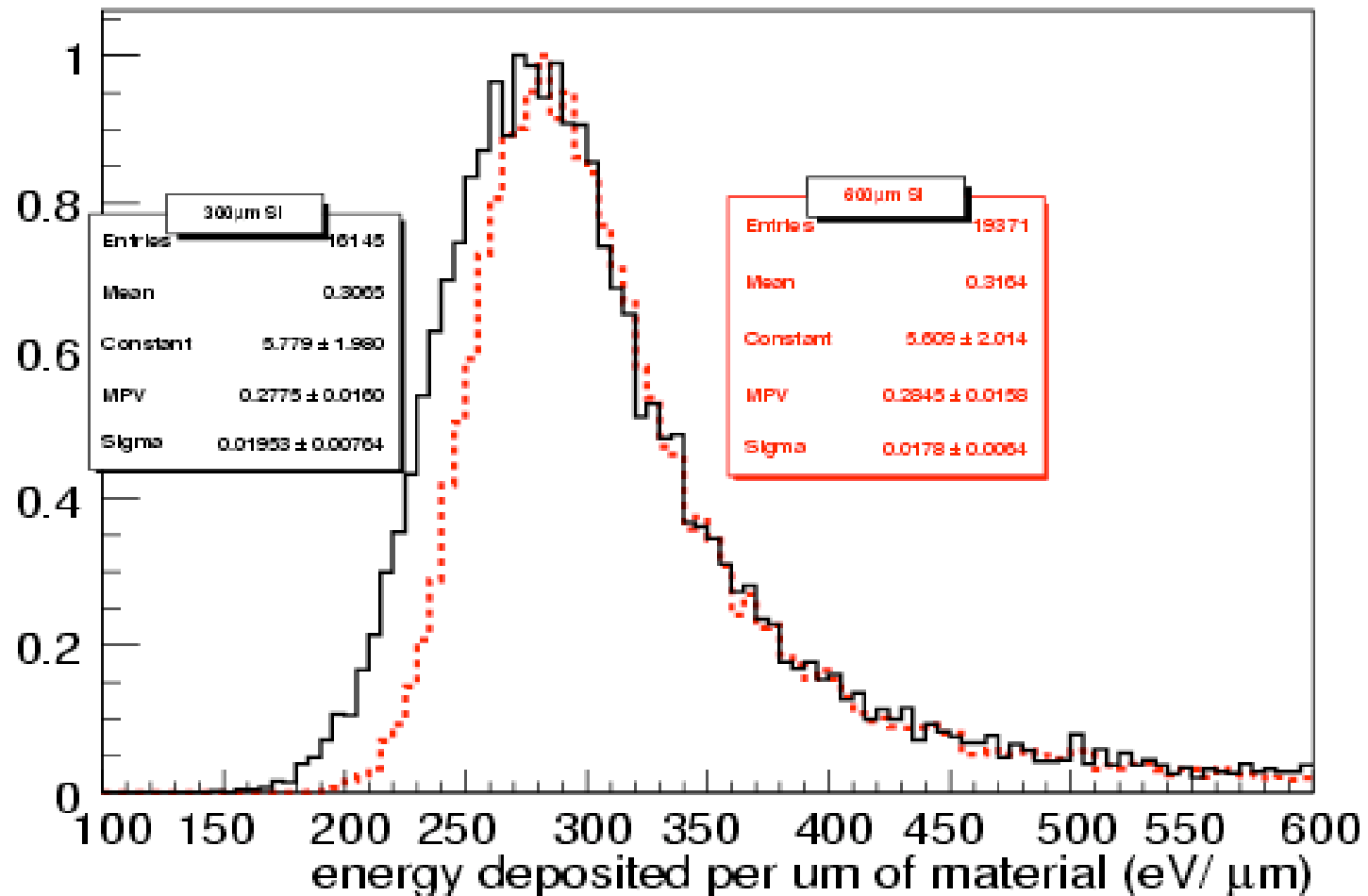
# Introduction

- Comparison of different versions of Gauss (v25r9 and v30r5 with ST corrections)
- Simulated in just Velo using a particle gun
- Comparison of MPV and FWHM at different  $\beta\gamma$
- Comparison of v30r5 for different thickness of Si 300 $\mu\text{m}$  and 600 $\mu\text{m}$
- Thicknesses of 600 $\mu\text{m}$  obtained by theta values of 1.03-1.07

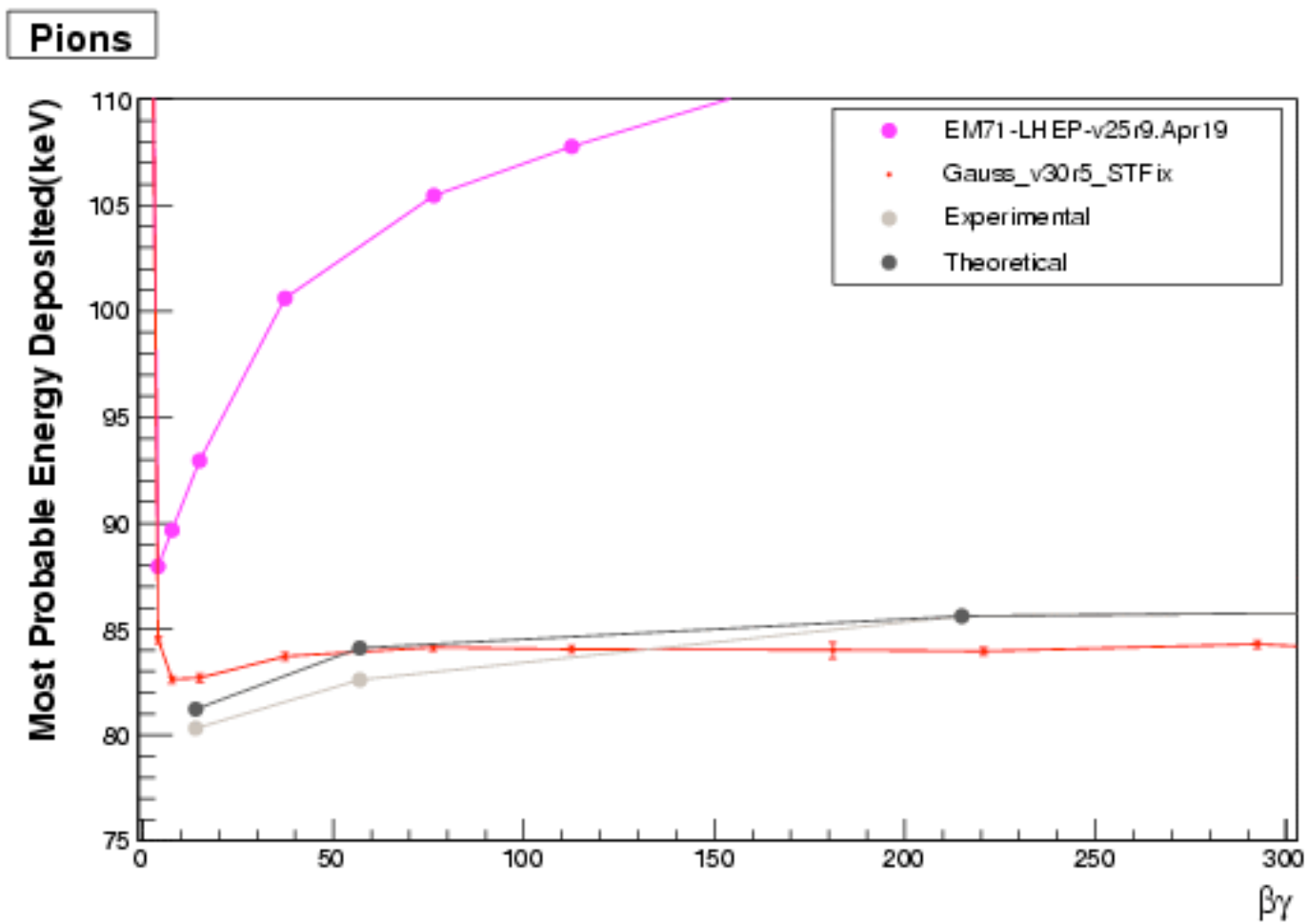
# Difference between 300um and 600um Si (v30r5)

Energy Deposited per  $\mu\text{m}$  of material

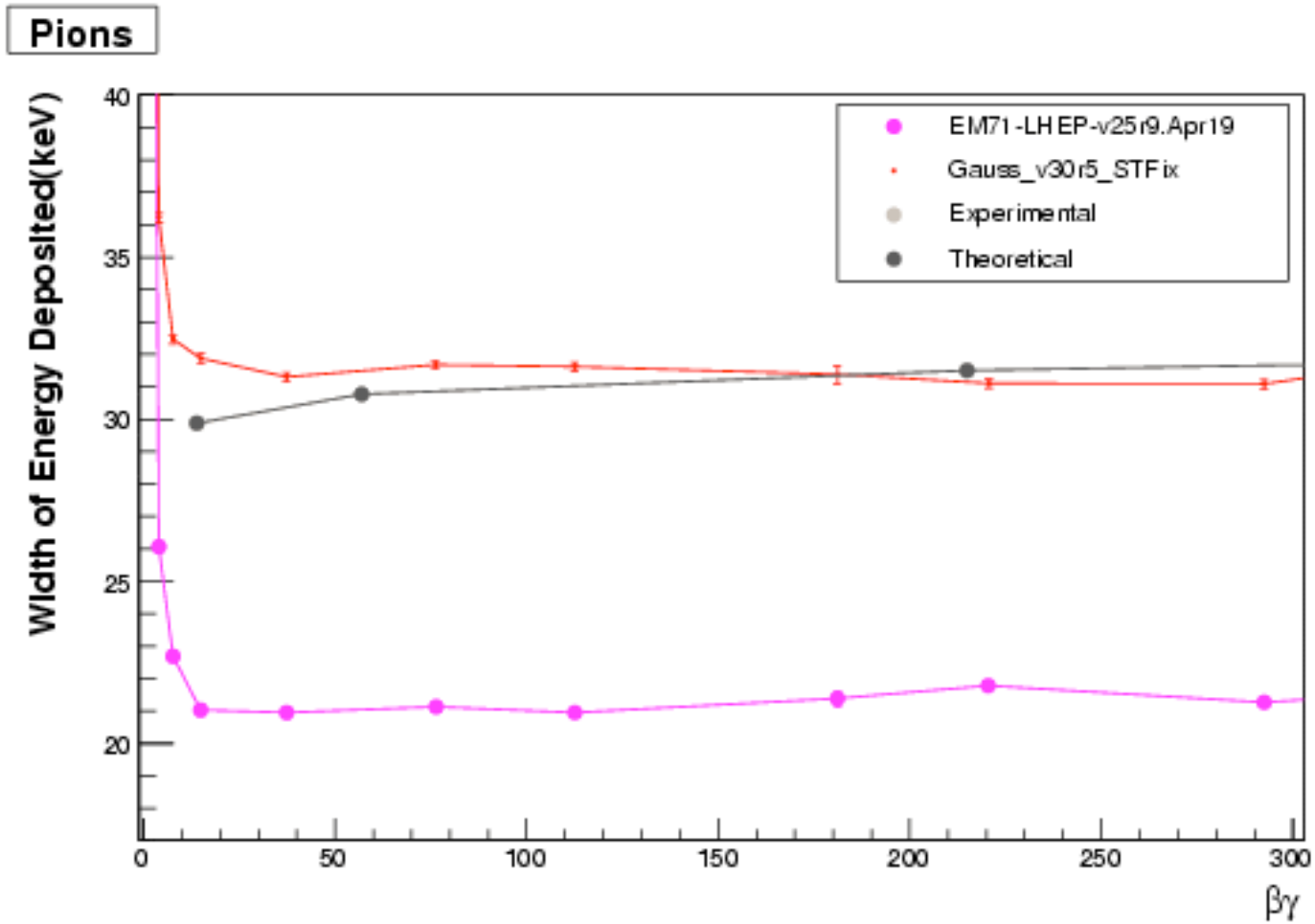
- 300um Si has lower MPV and higher FWHM as expected
- The tails of both agree



# Pions MPV

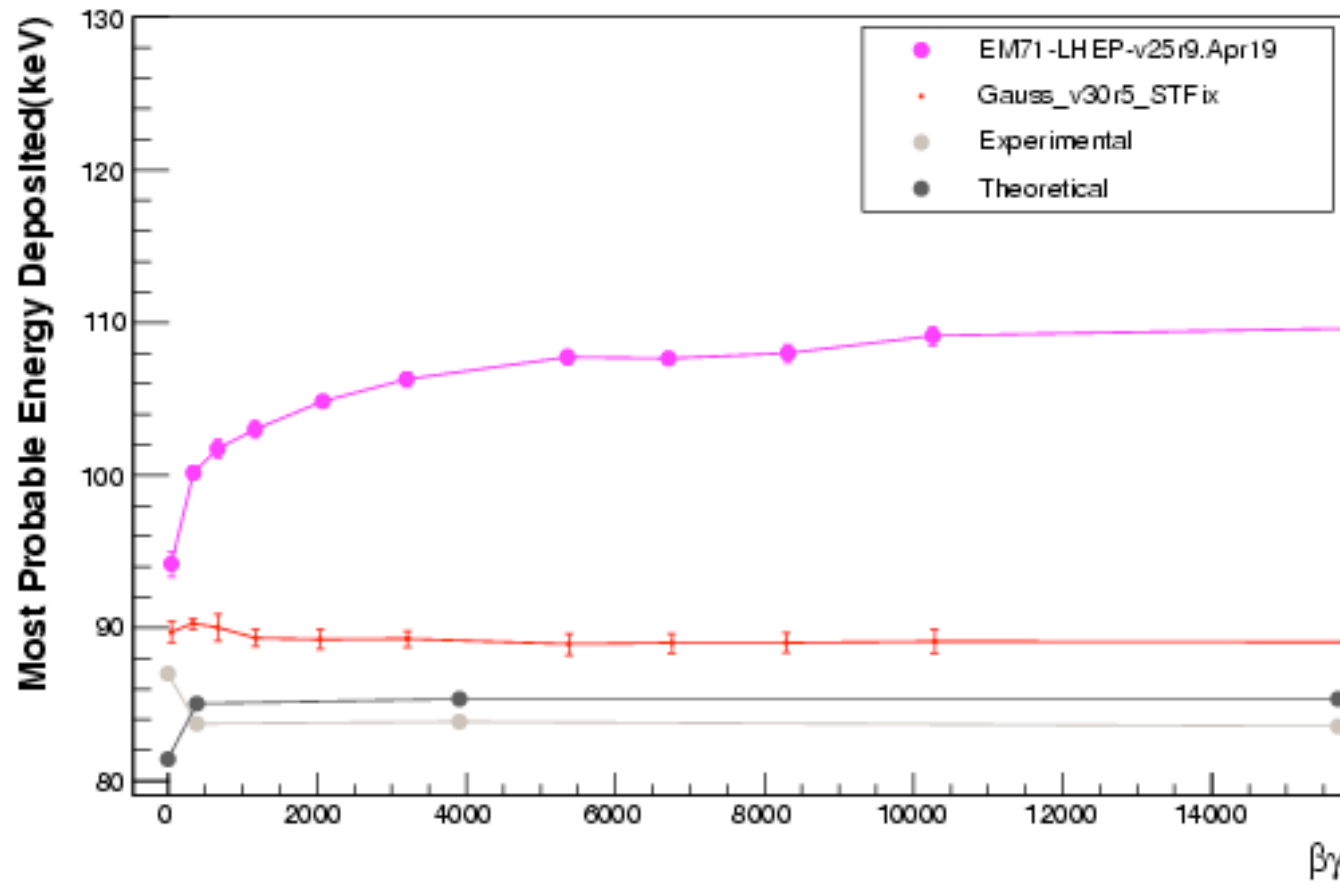


# Pions FWHM



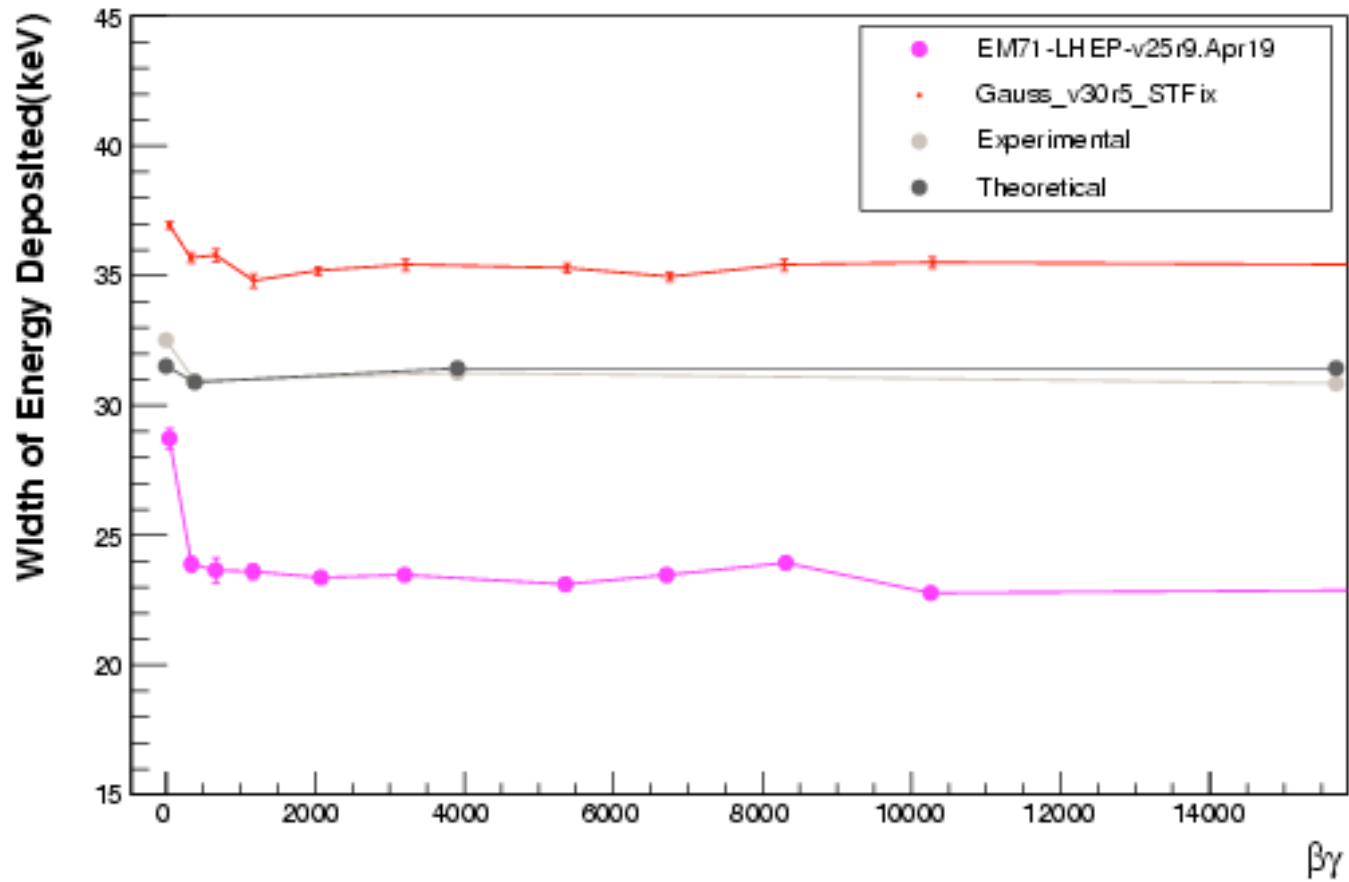
# Electron MPV

Electrons



# Electron FWHM

Electrons



# Summary

- The latest version has a better agreement with theoretical expectations
- Electrons still have slightly larger widths and MPVs