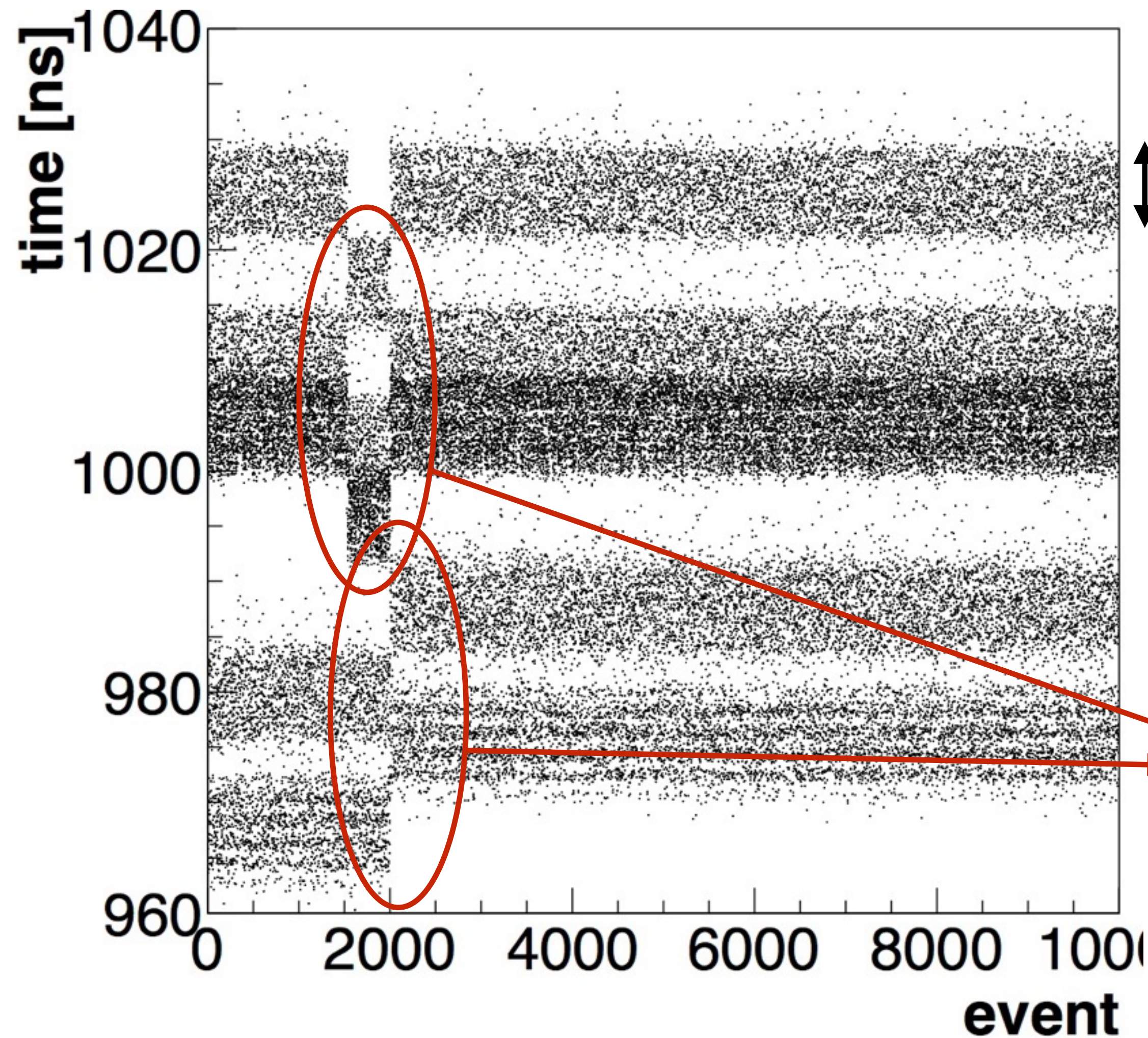


Status report (24 Aug. 2016)

Jongwon Hwang

DAQ: Trigger Timing



↕ ~ 10 ns (for all ch.)

6 channels

- 4 ch. from plastic
- 2 ch. from PWO

Timing Shift

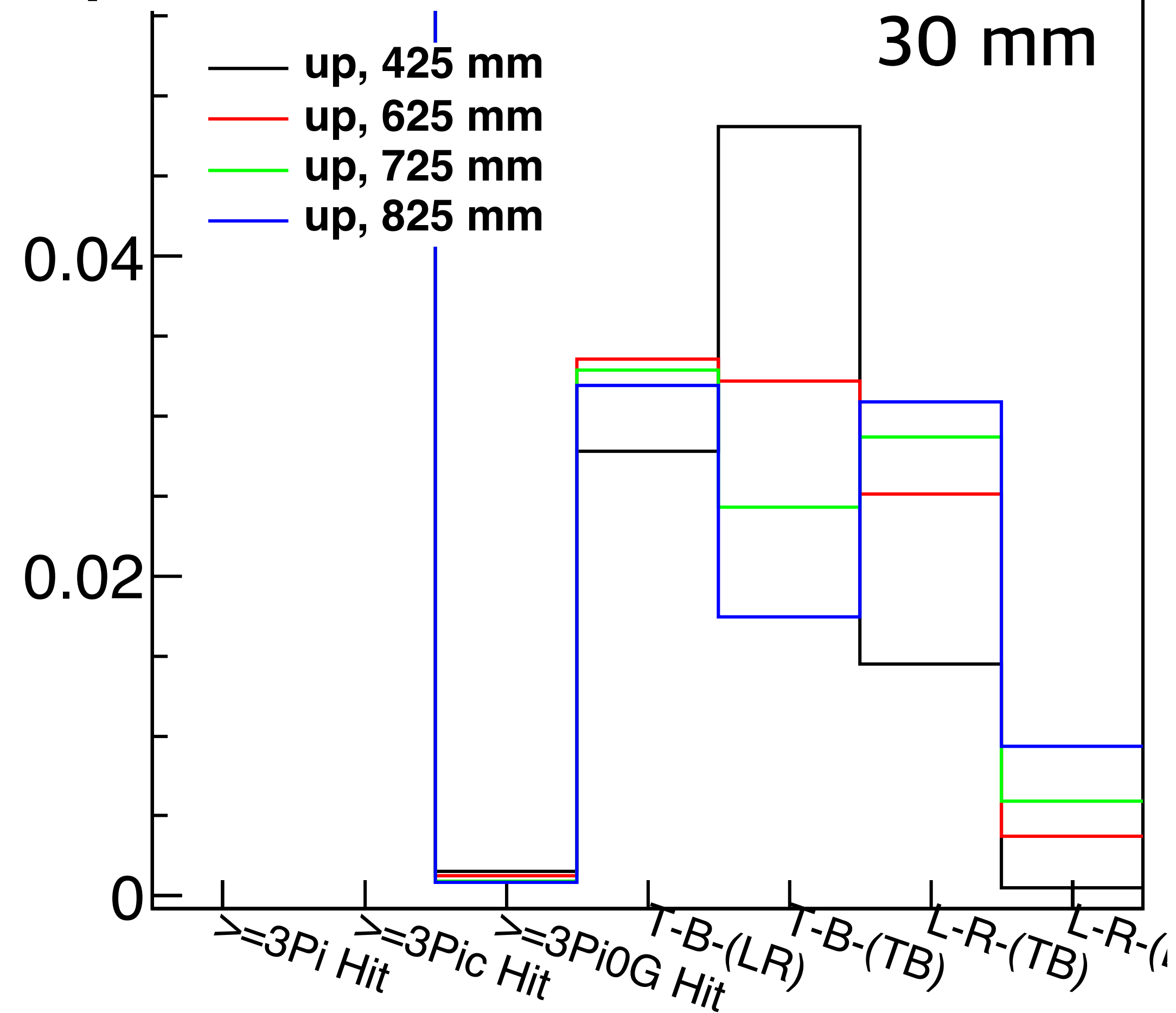
- all channels (all modules)
- some channels (some modules?)

DAQ: Trigger Timing

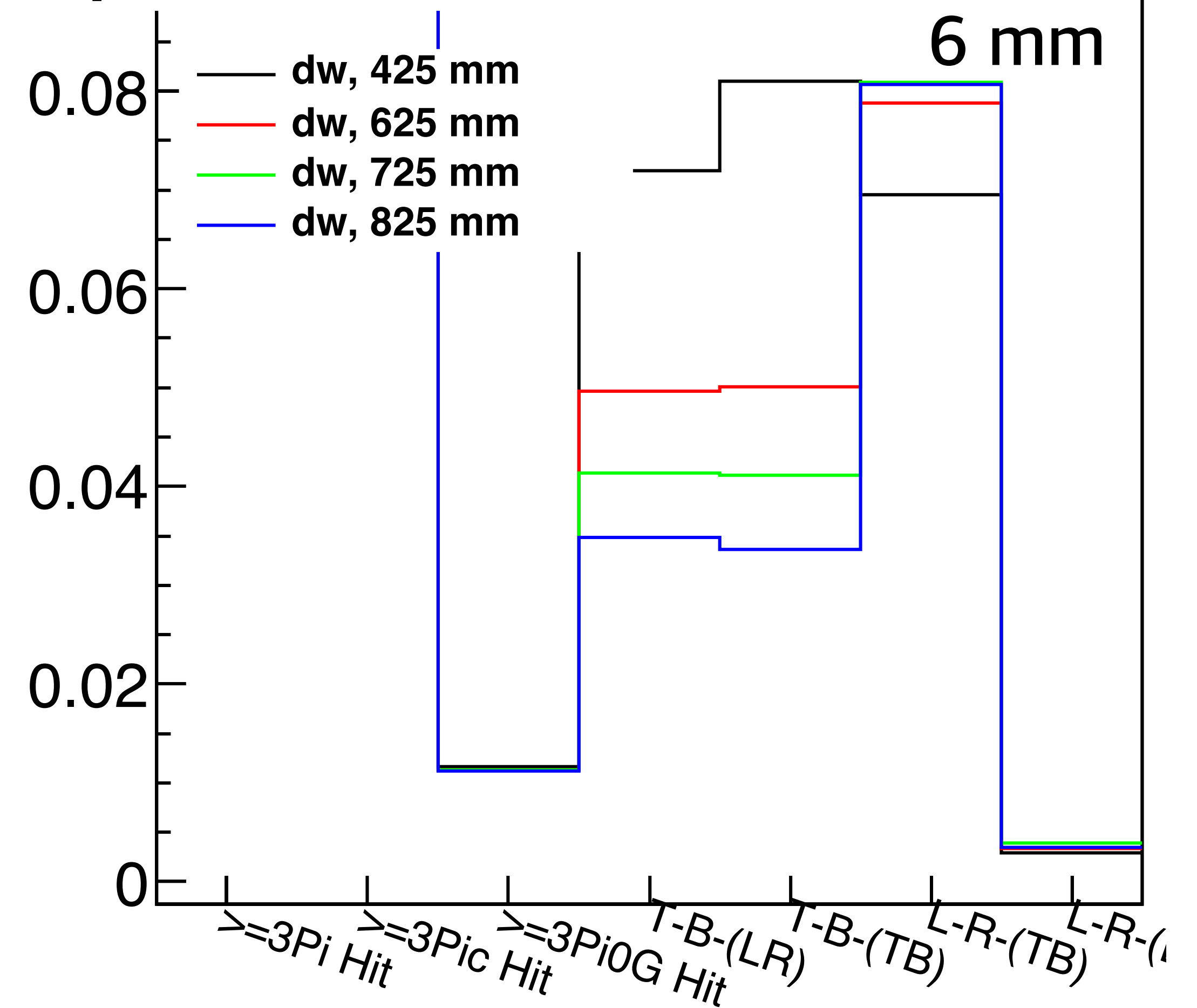
- Checked the trigger timing
 - Using only ONE channel (only signal = trigger)
 - Trigger timing still has width of ~ 10 ns.
 - Could not find any data about EXACT trigger timing
- Summary
 - $\Delta(\text{Trigger timing}) \sim 10$ ns / (trigger) timing shift
 - Did not find the reason

Simulation: Hit Ratio (Different thickness)

Important Hit. Patt.

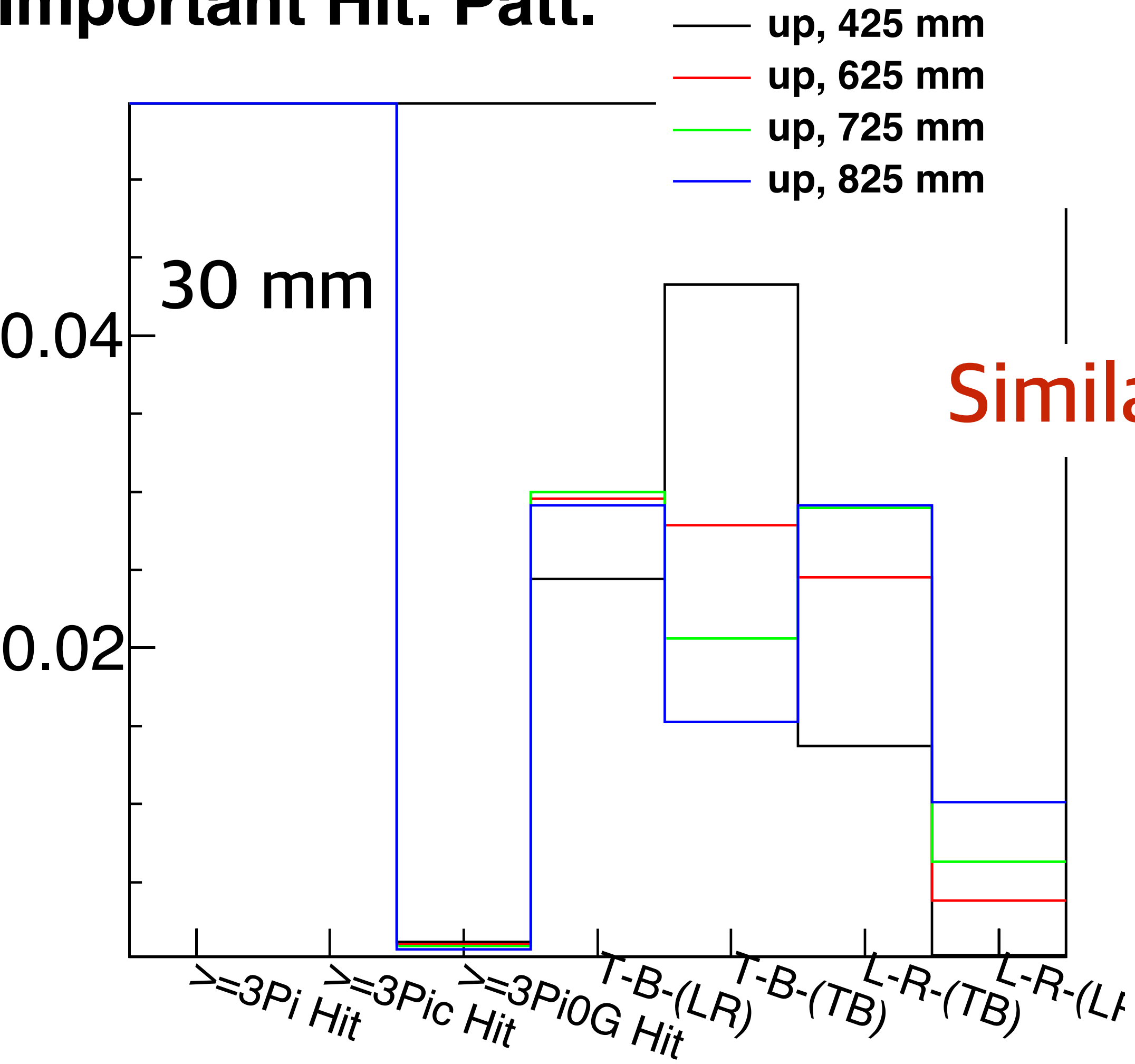


Important Hit. Patt.

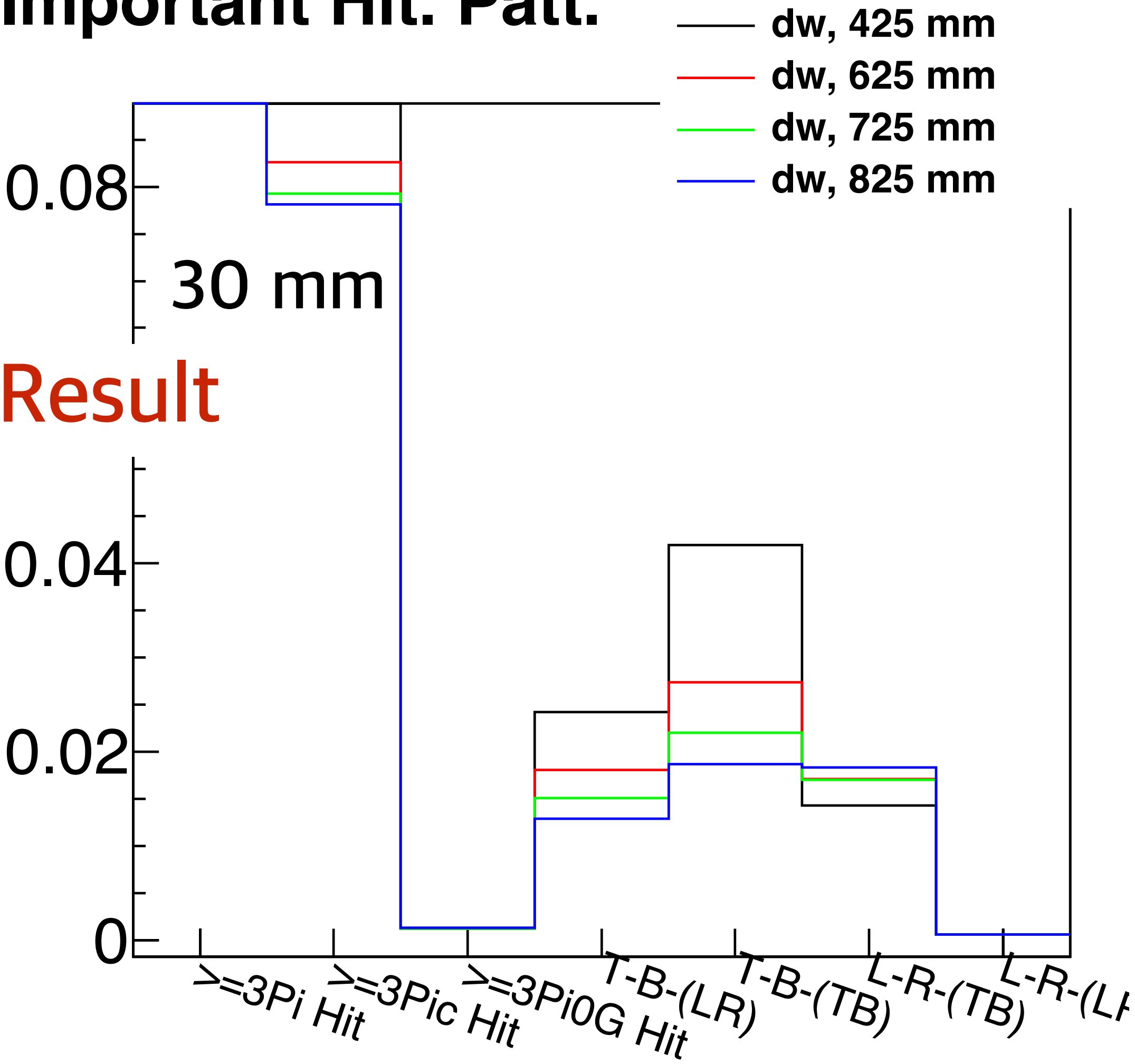


Simulation: Hit Ratio (Same thickness)

Important Hit. Patt.



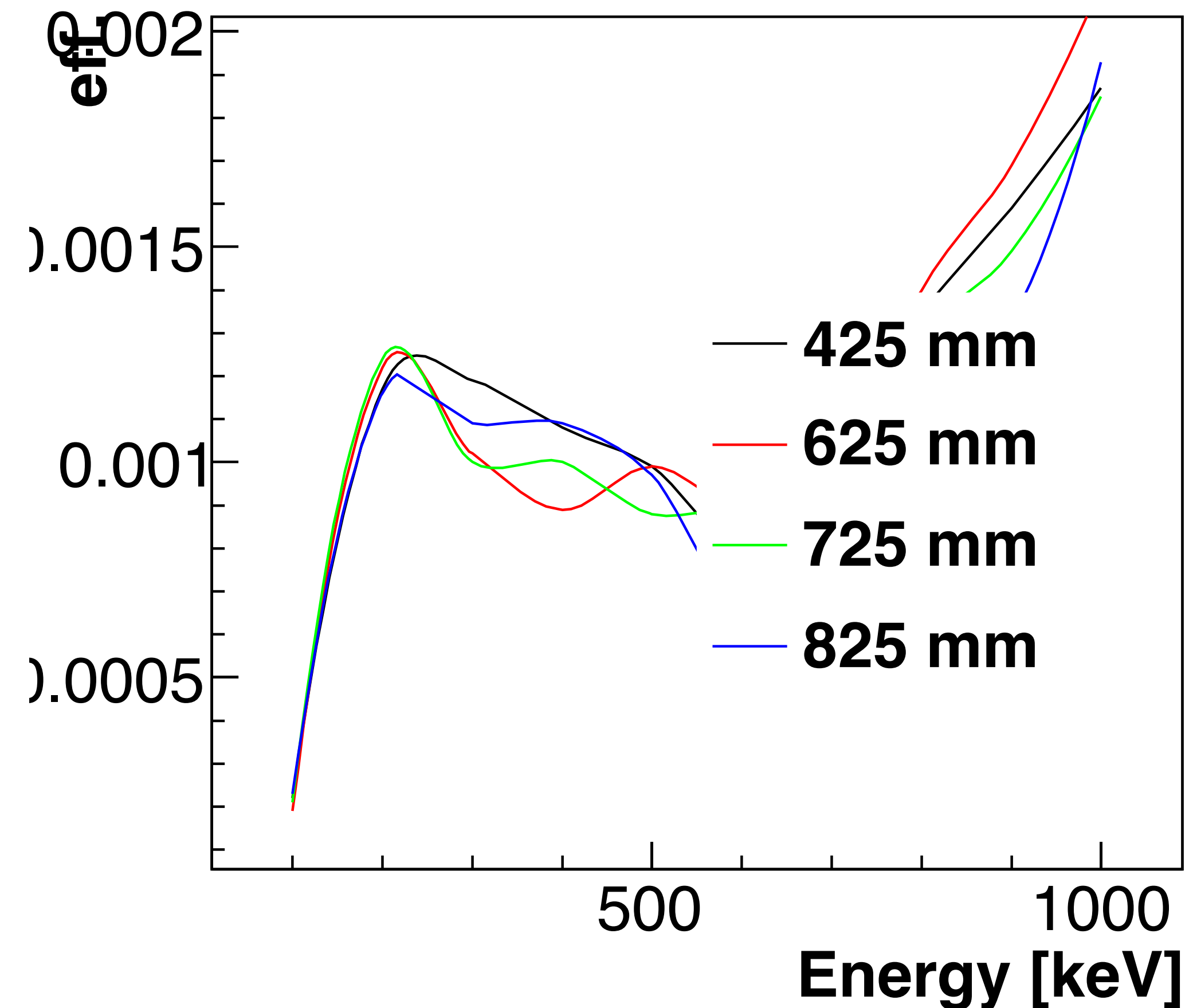
Important Hit. Patt.



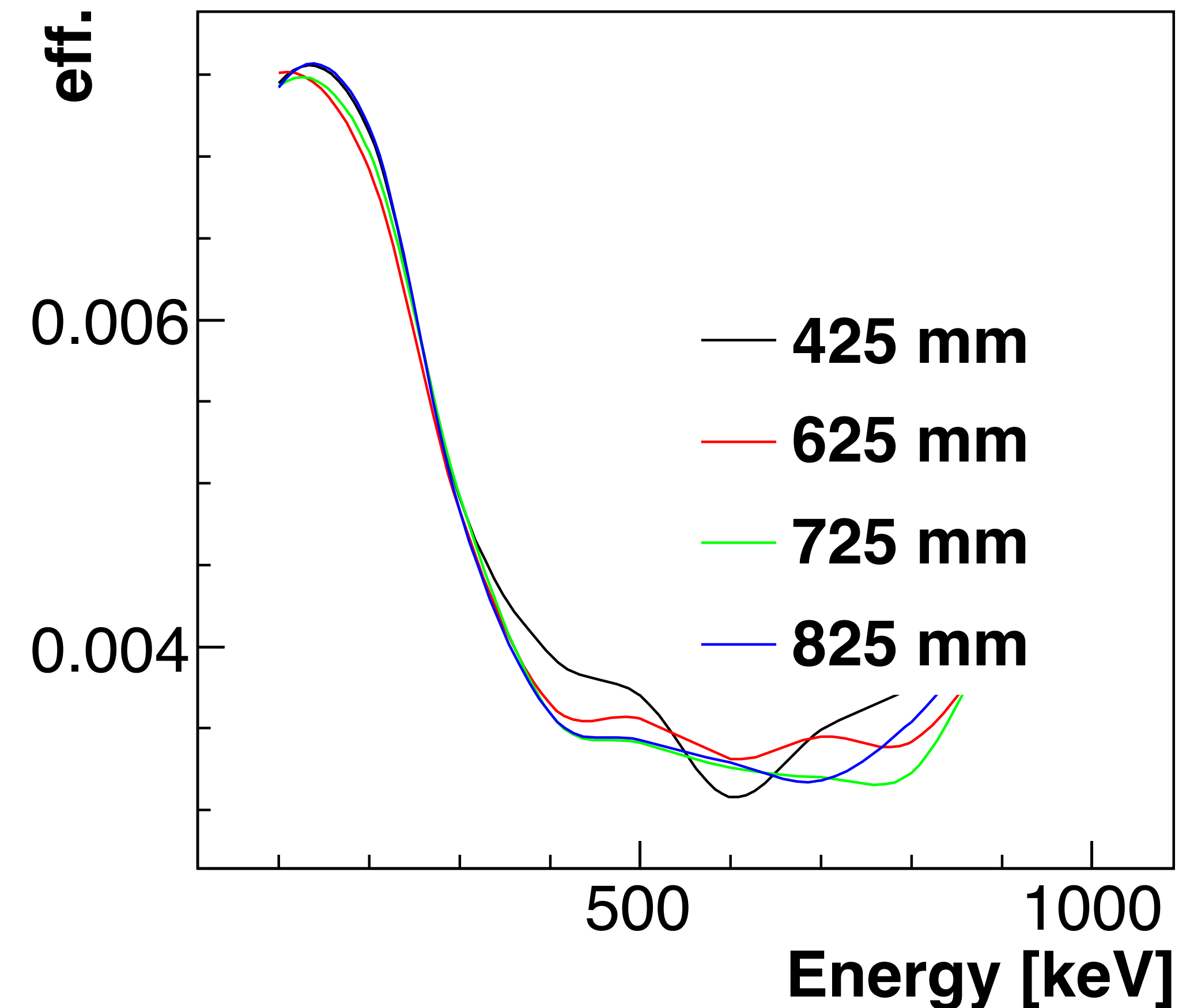
Similar Result

Simulation: γ -ray photo-efficiency

Gamma Photo Eff. (up)



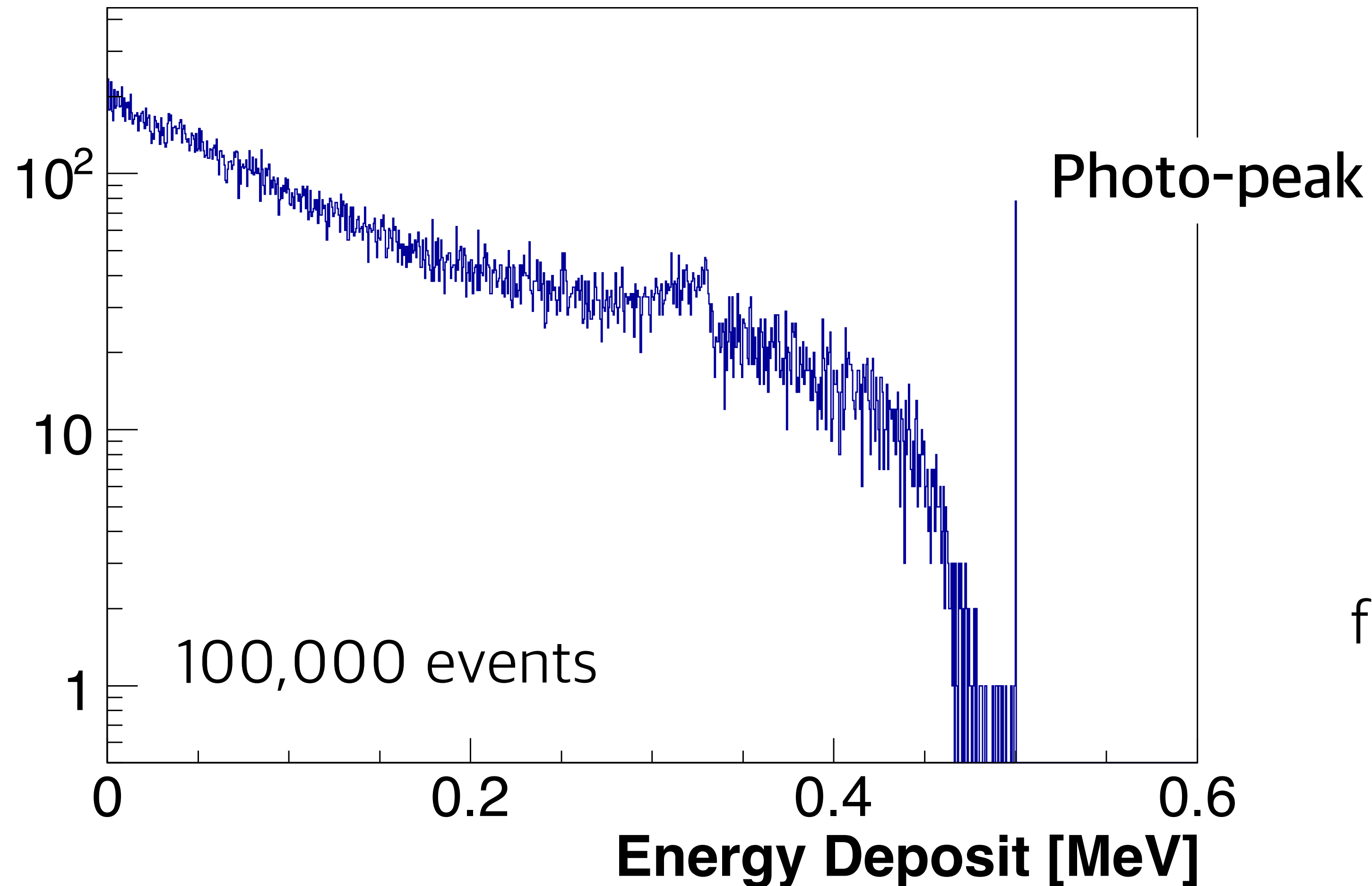
Gamma Photo Eff. (dw)



too small (sub %)

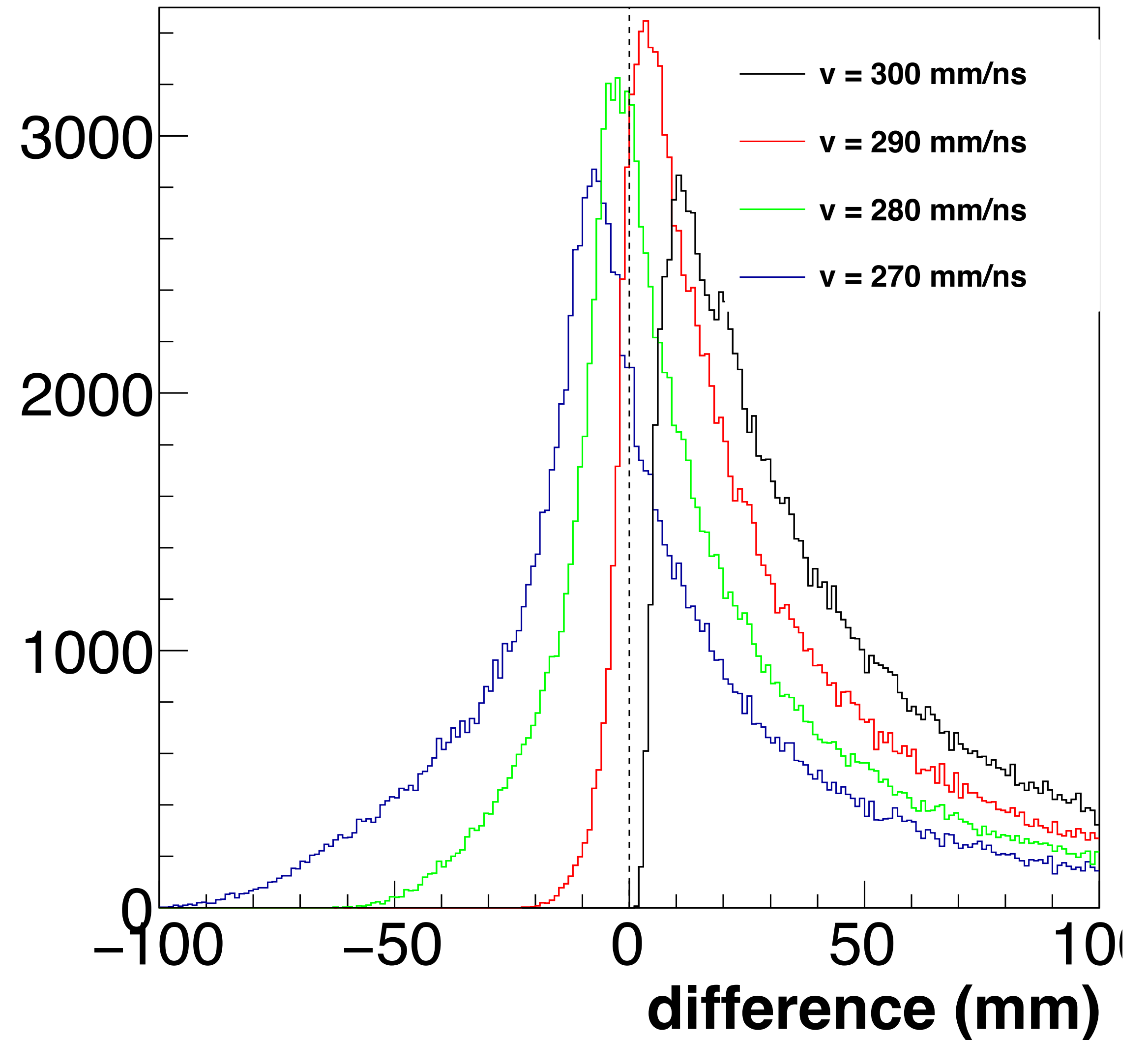
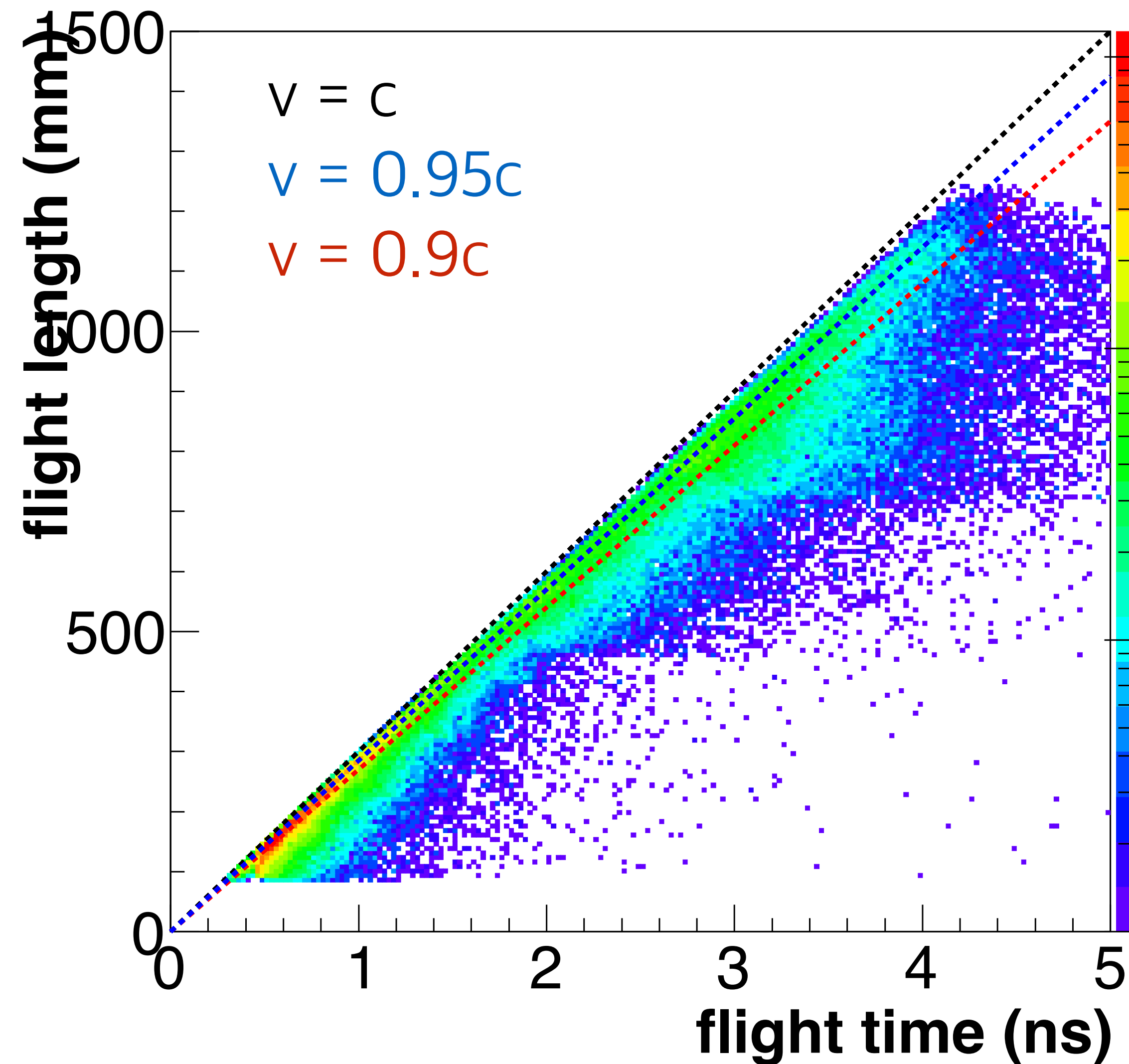
Simulation: γ -ray energy distribution

500-keV γ ray



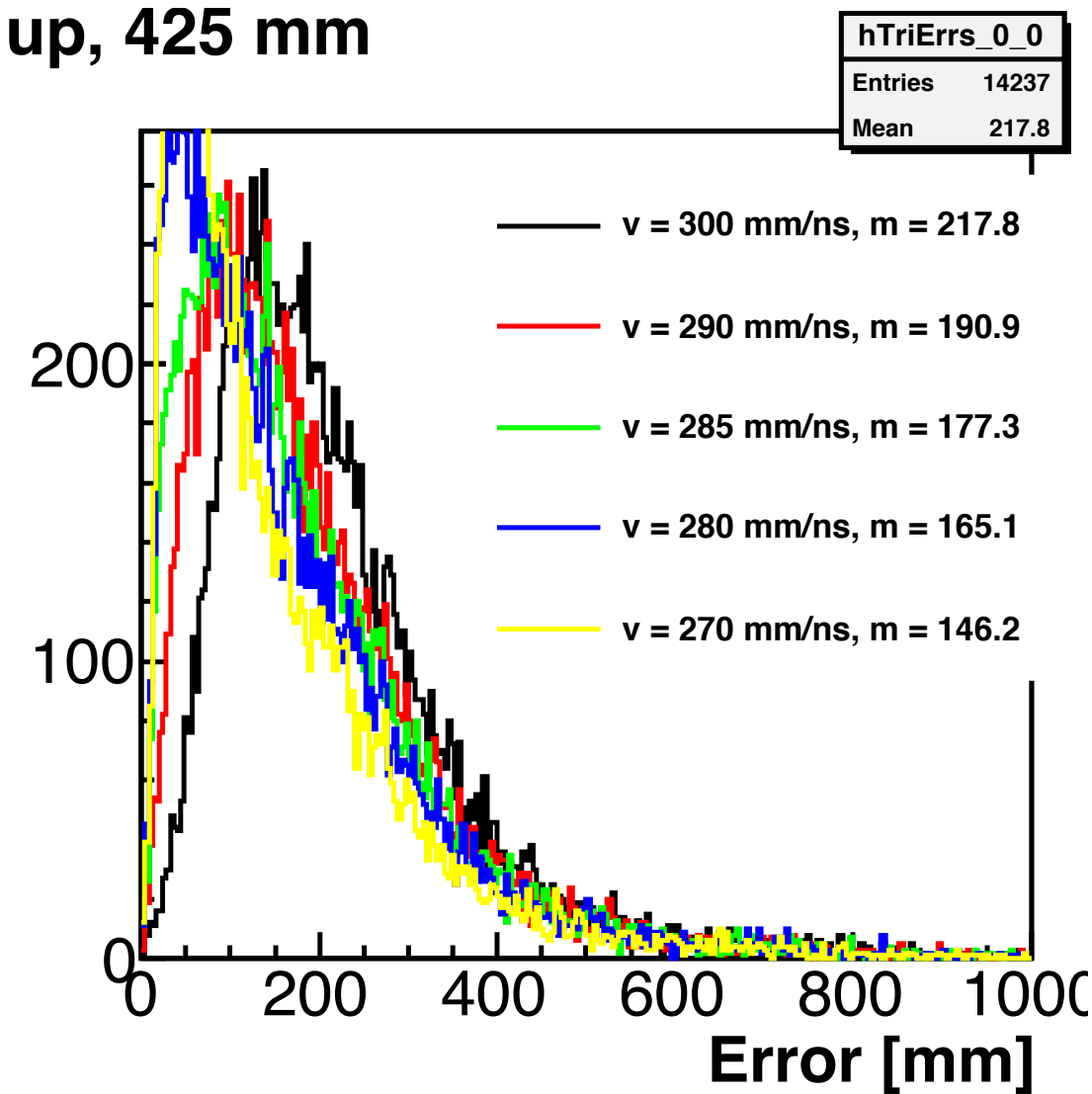
Plastic is not good
for detection of γ rays.

Simulation: Flight Length vs Flight Time

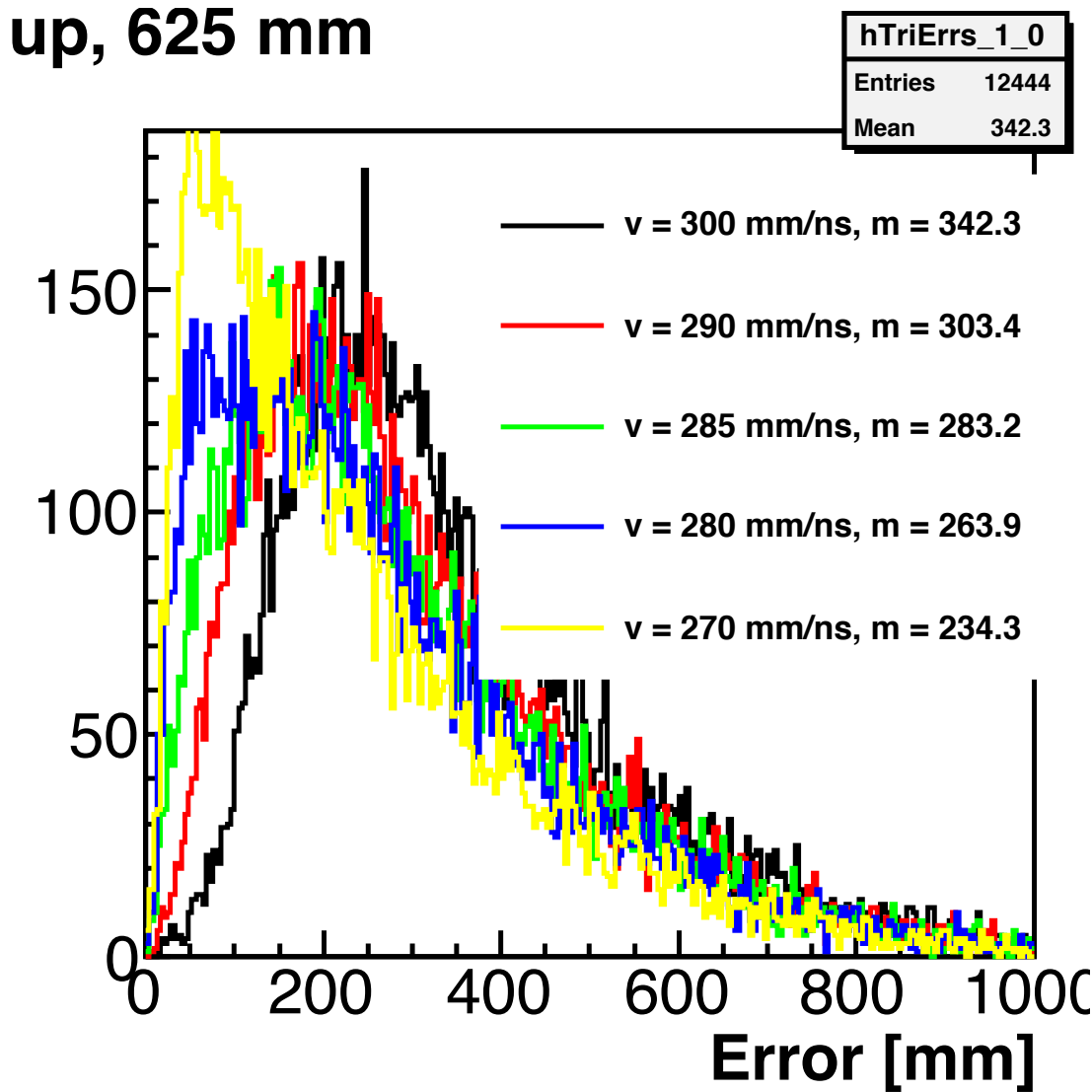


Simulation: Test the trilateration algorithm (using estimated length, all tracks)

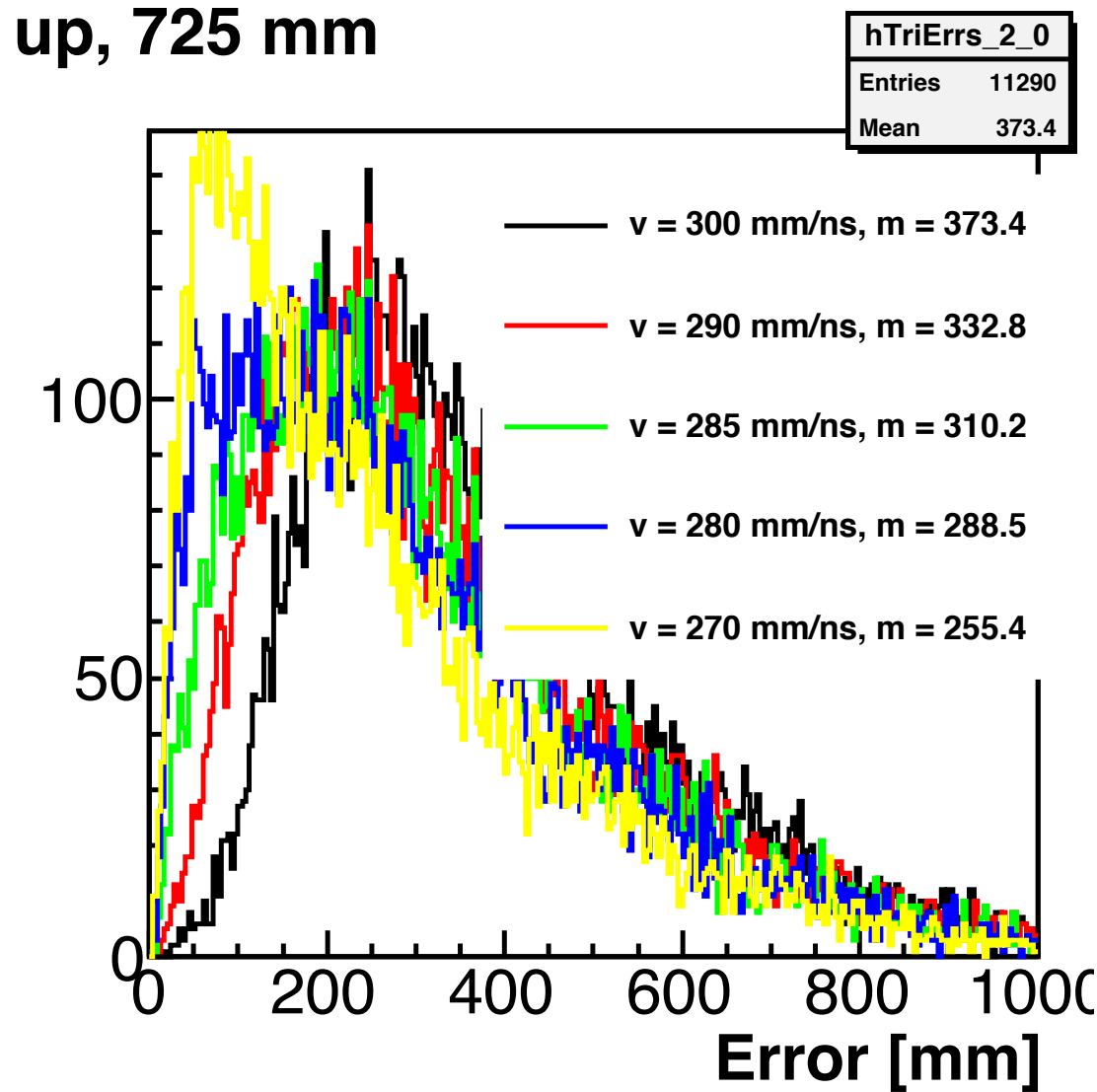
up, 425 mm



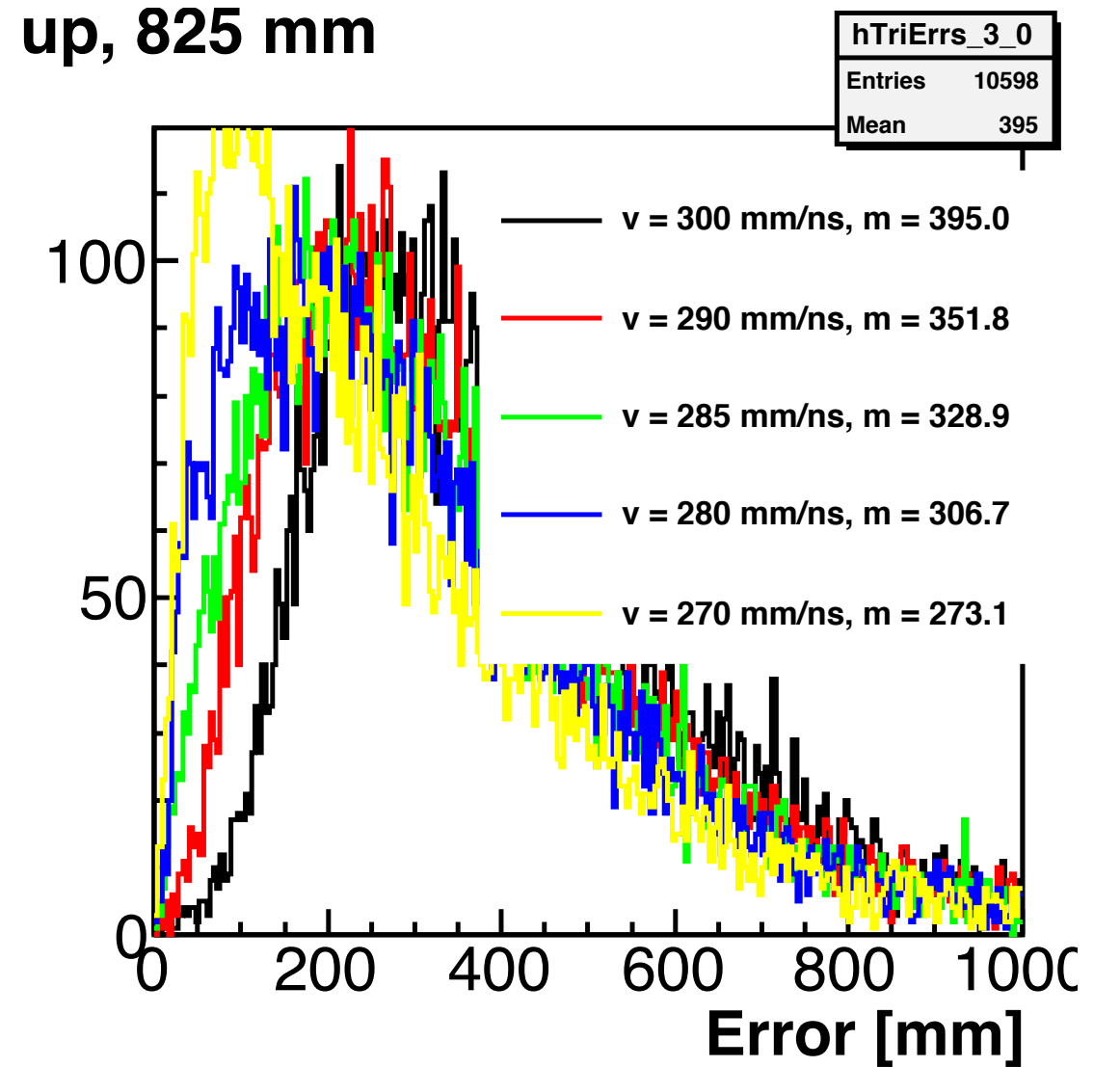
up, 625 mm



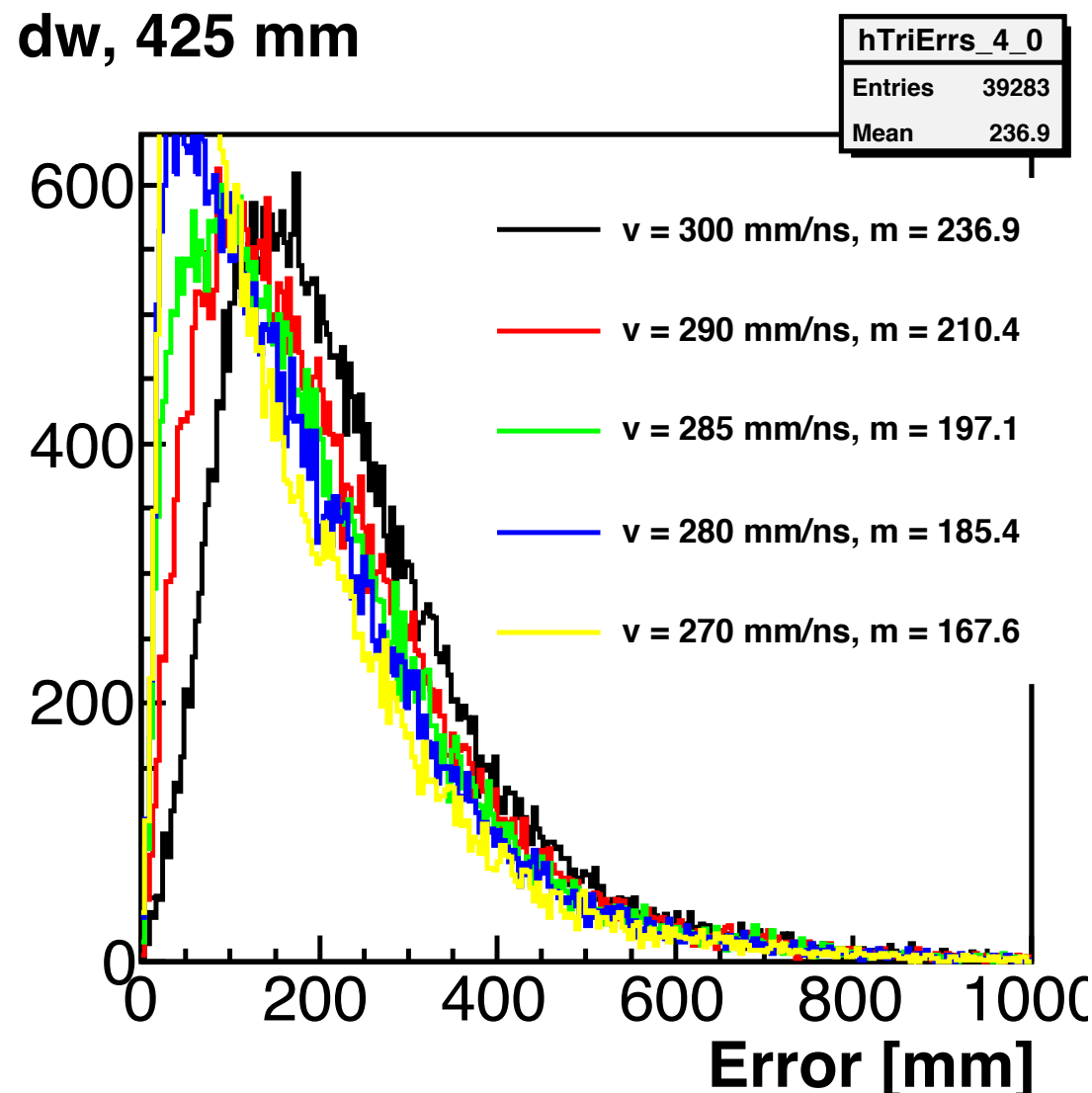
up, 725 mm



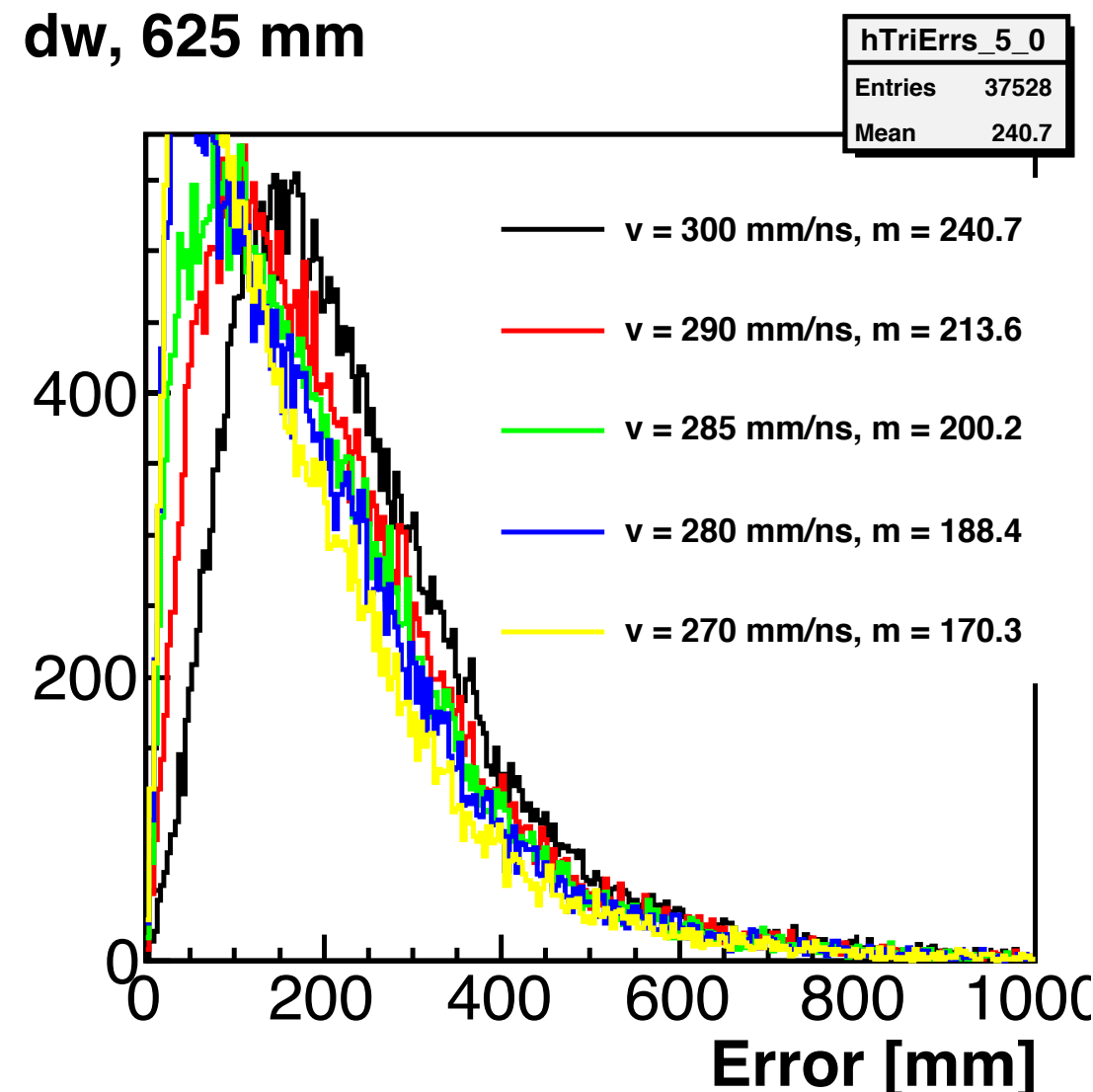
up, 825 mm



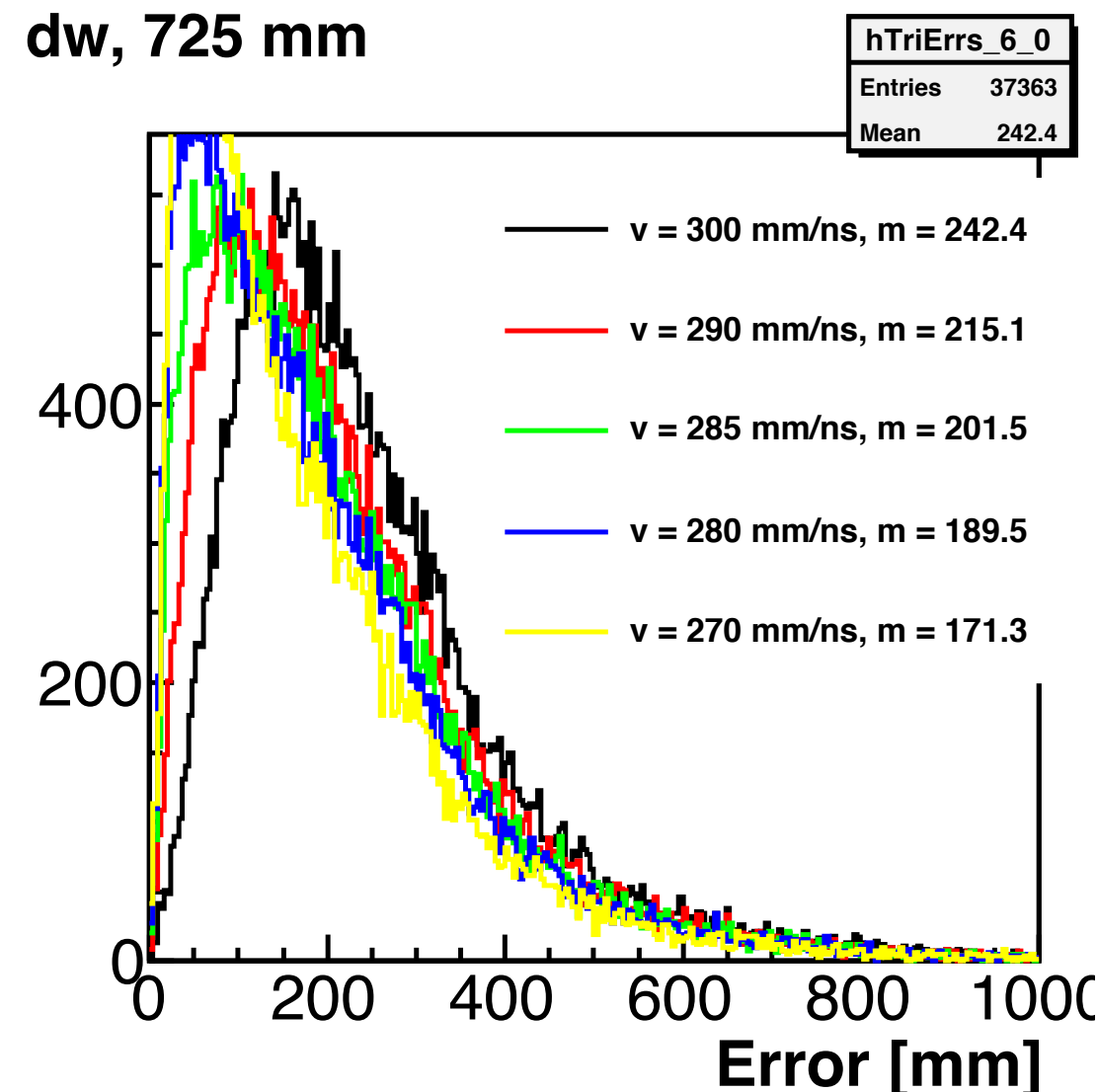
dw, 425 mm



dw, 625 mm



dw, 725 mm



dw, 825 mm

