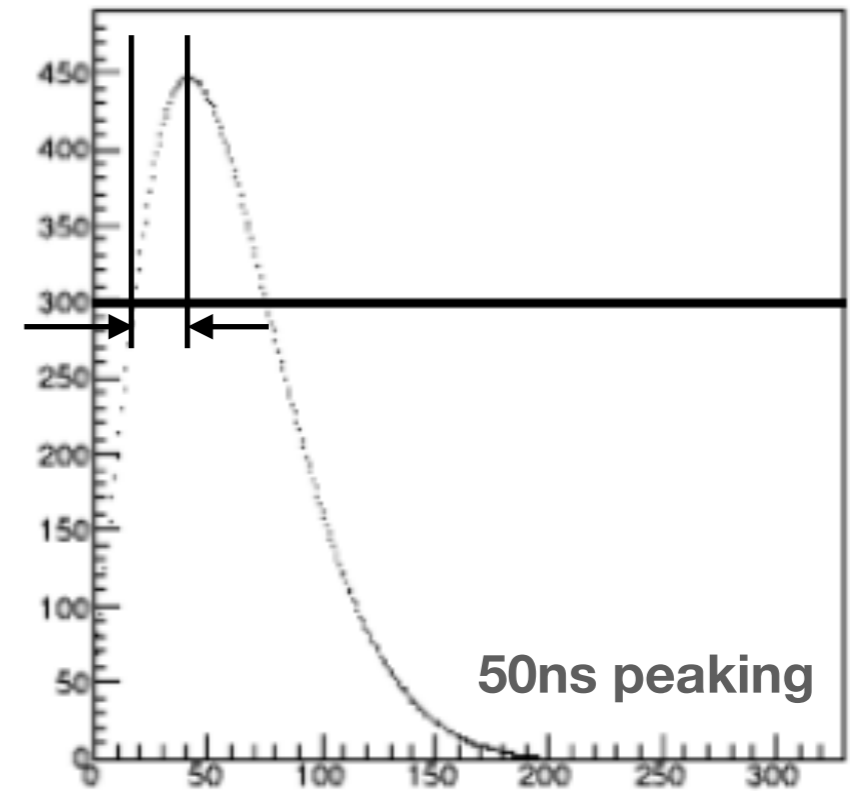
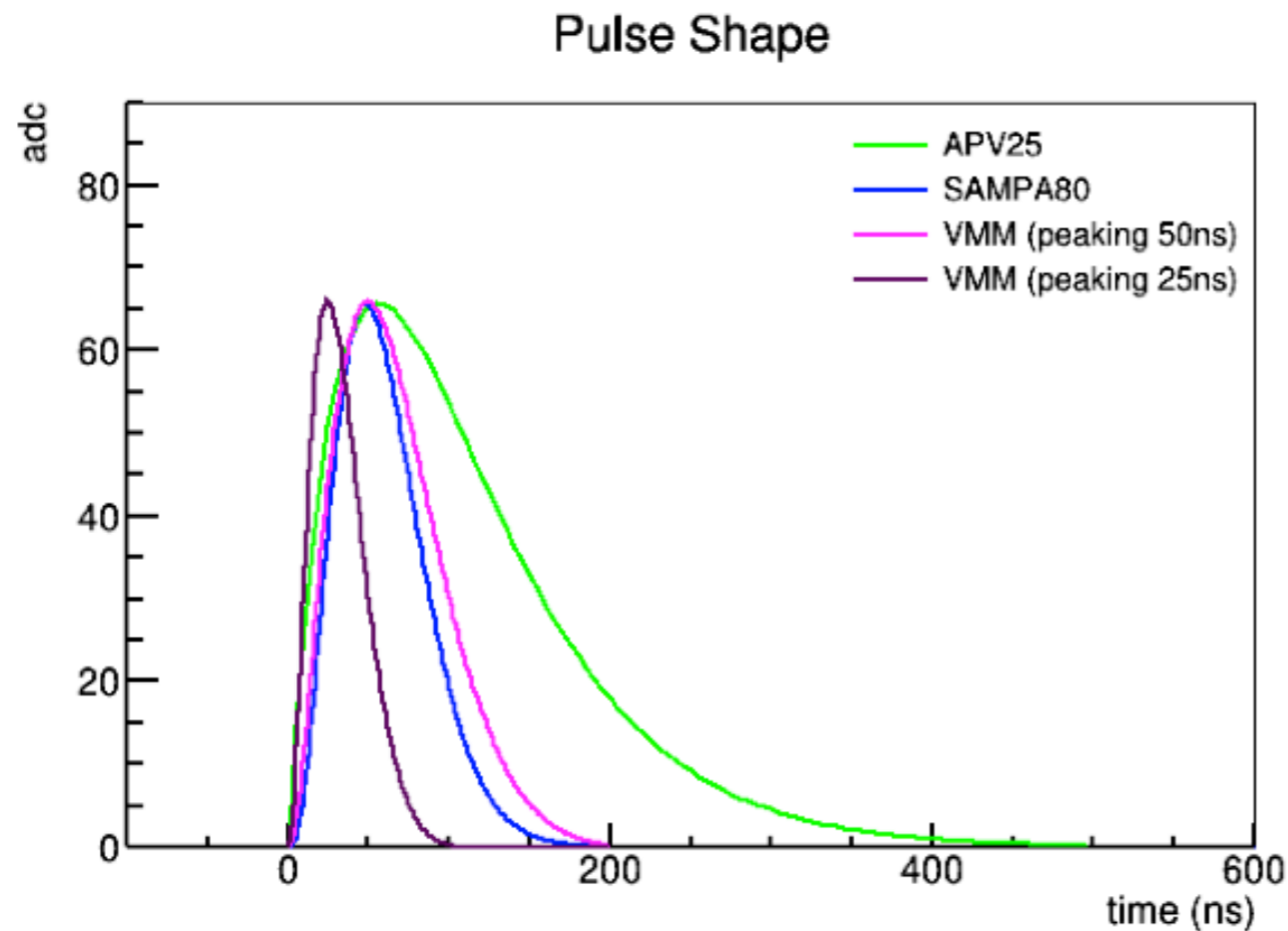


VMM3 simulation update

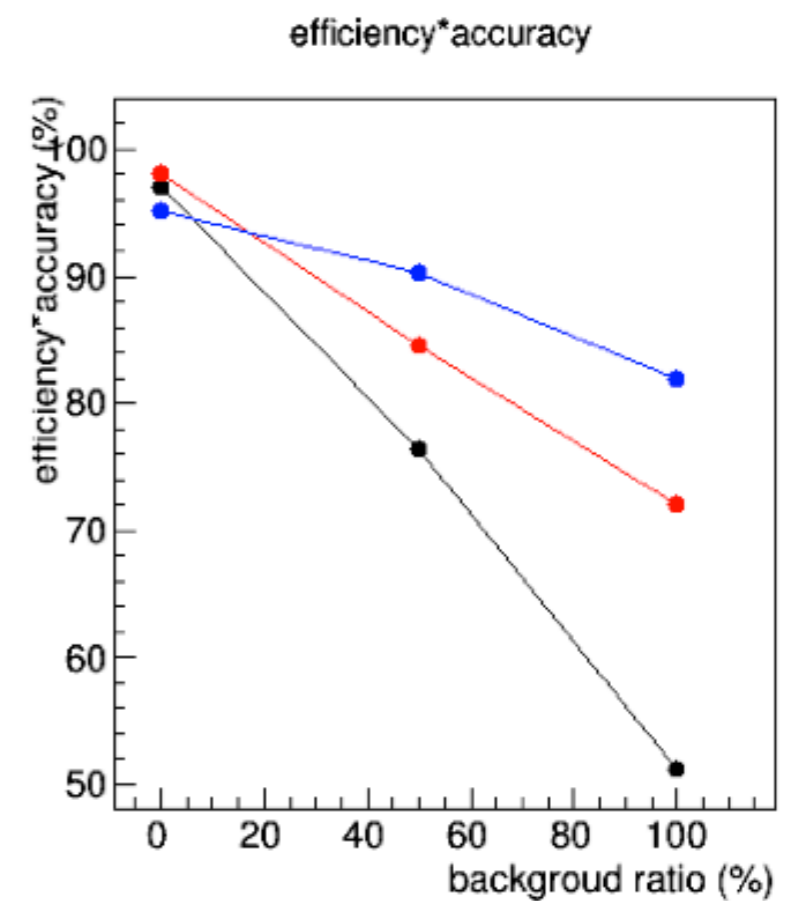
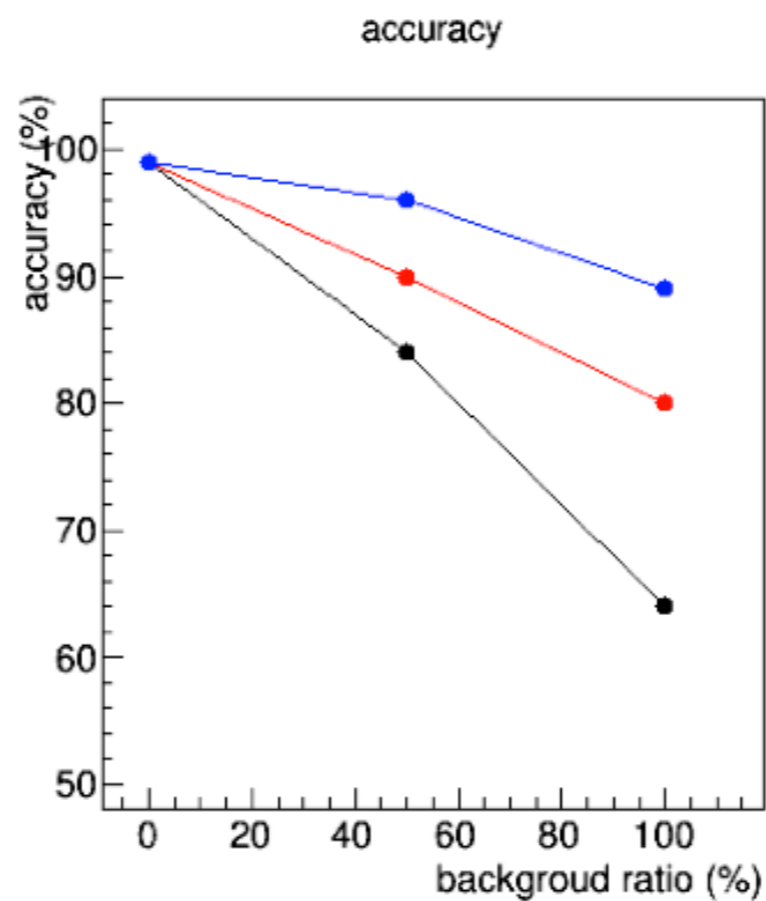
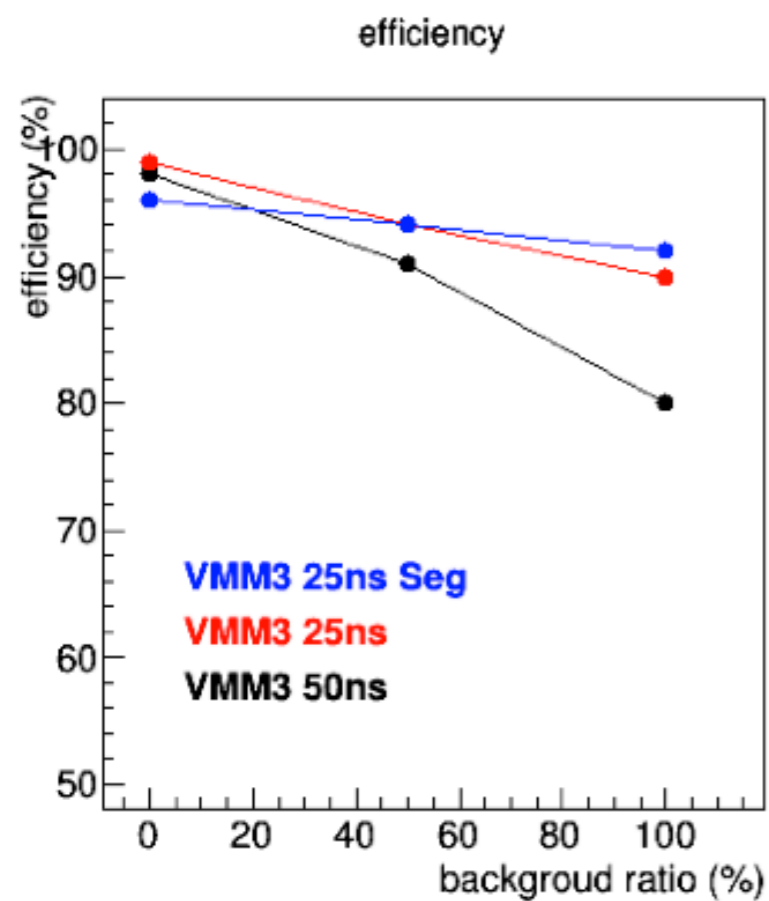
Jinlong Zhang (SBU)
July 14, 2020

20ns Integration vs Two Time-over-threshold

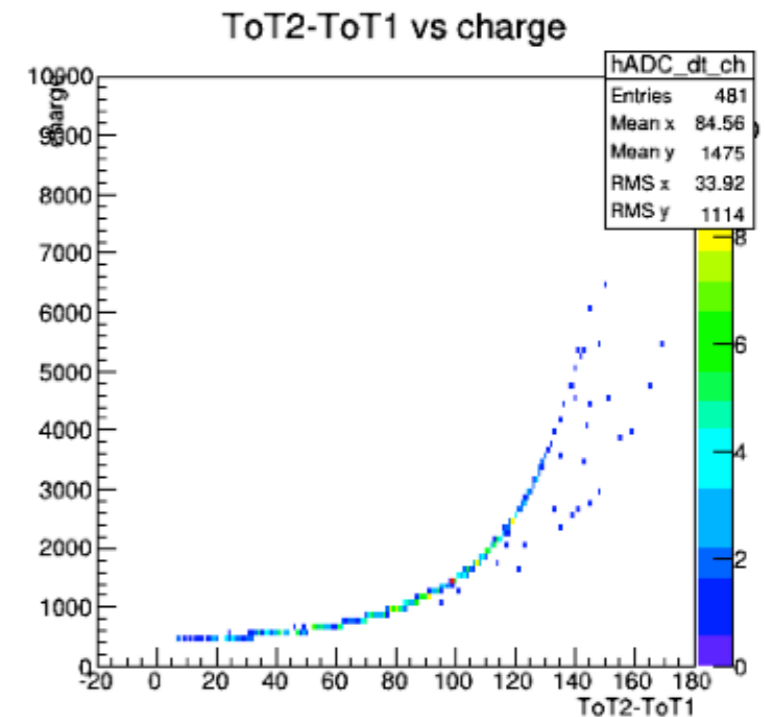
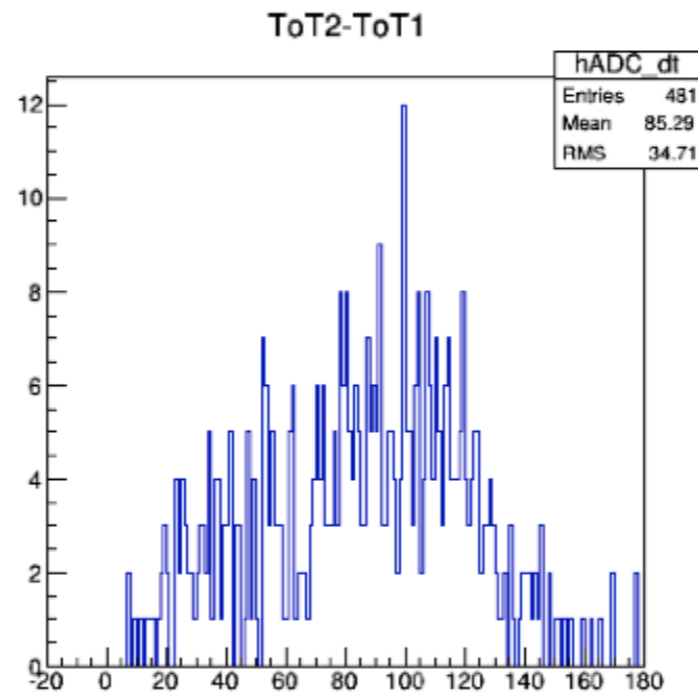
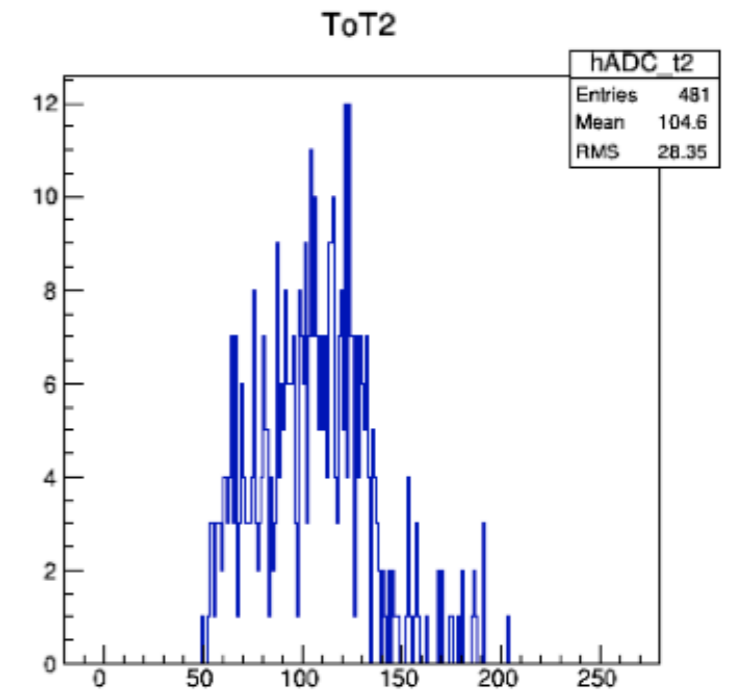
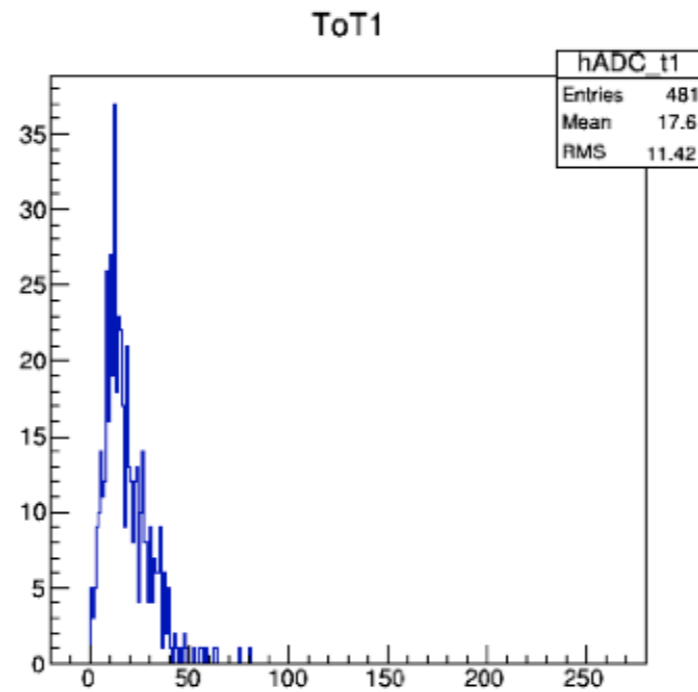
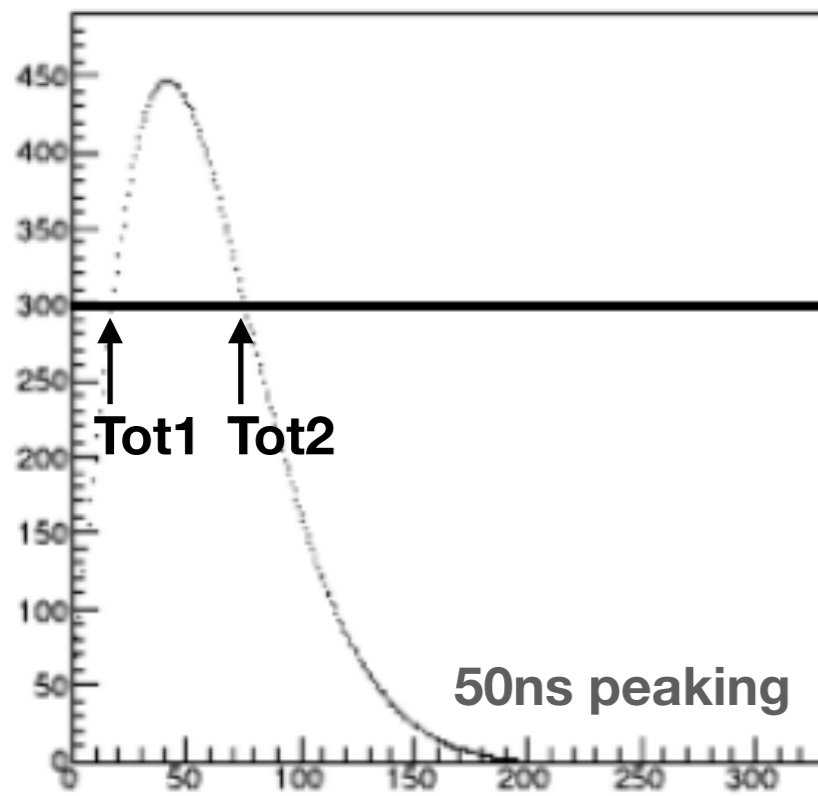


- Peaking time: 50 ns vs 25 ns
- Segmented strip
- Two TDC readout mode

VMM3 Comparison

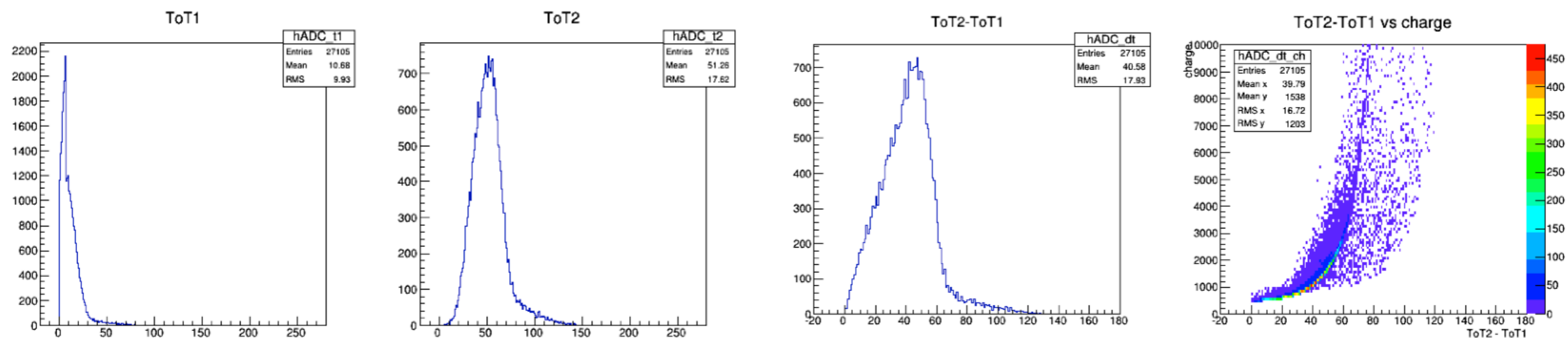


Without trigger jitter and smearing

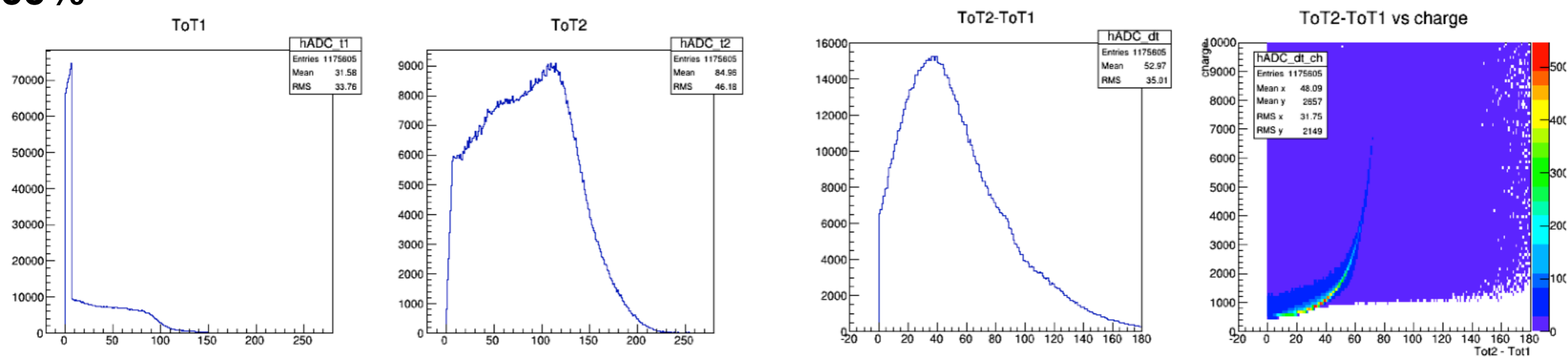


With 7ns jitter

0%

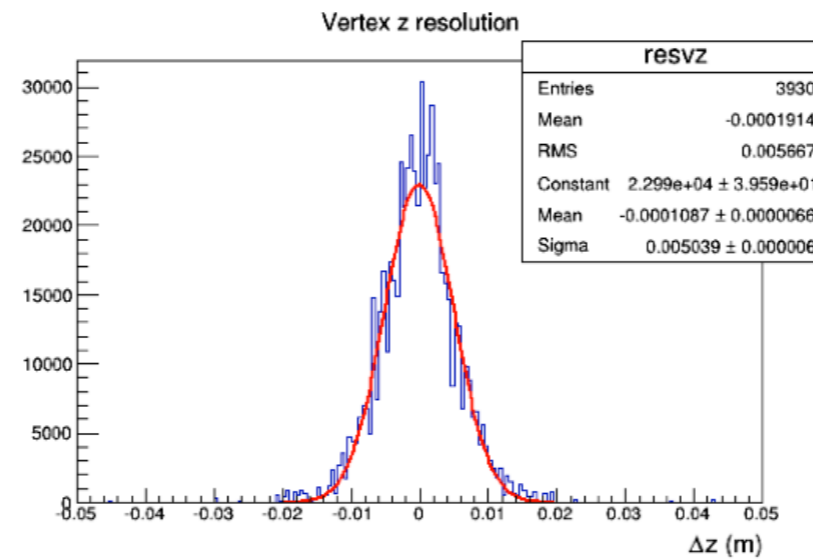
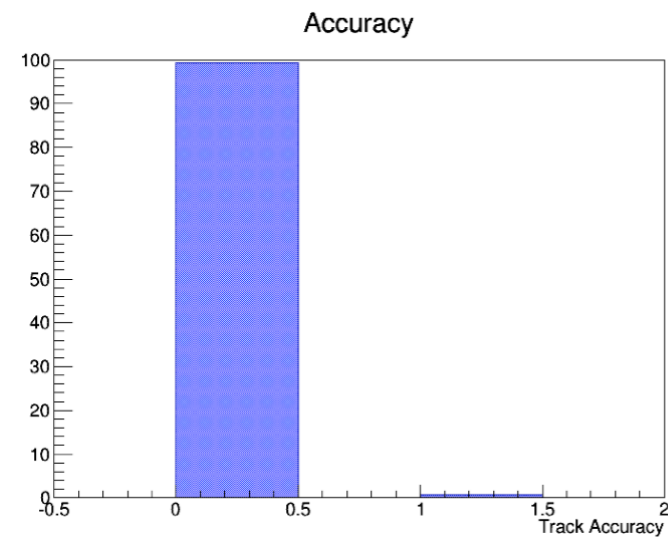
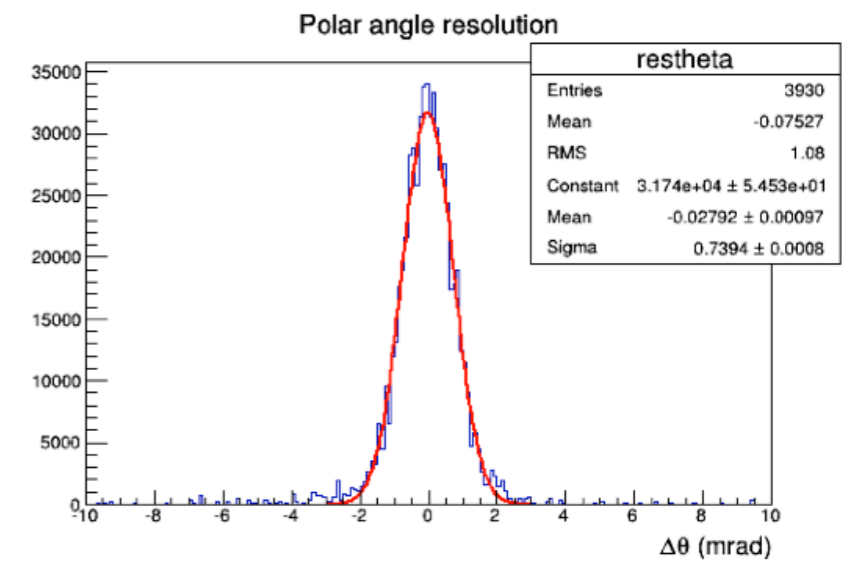
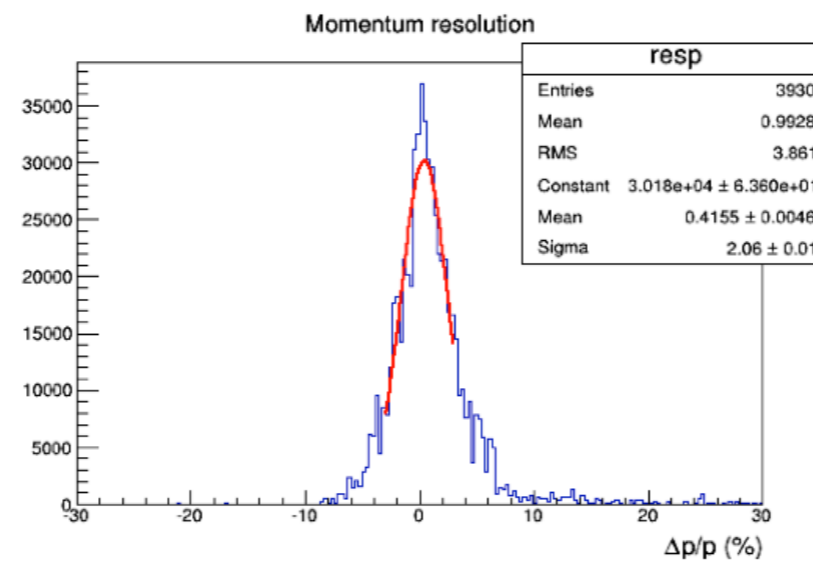
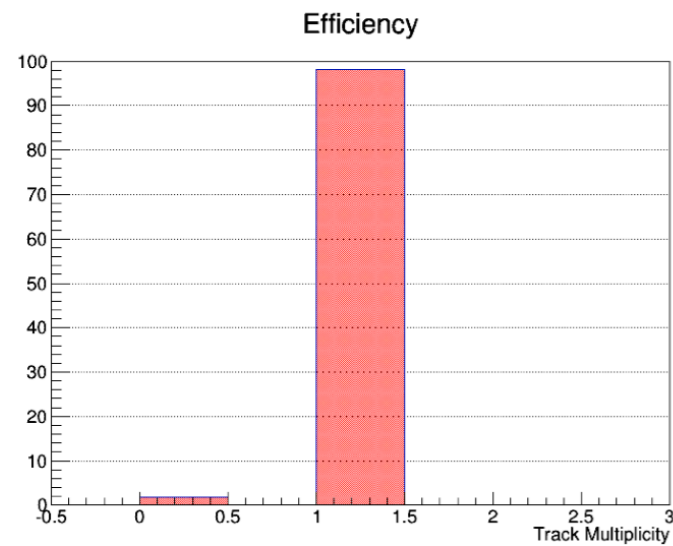


100%

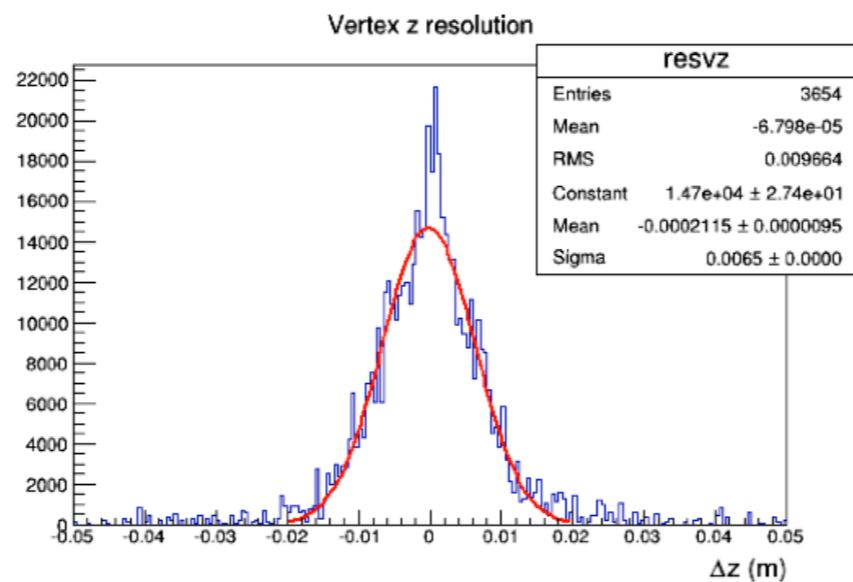
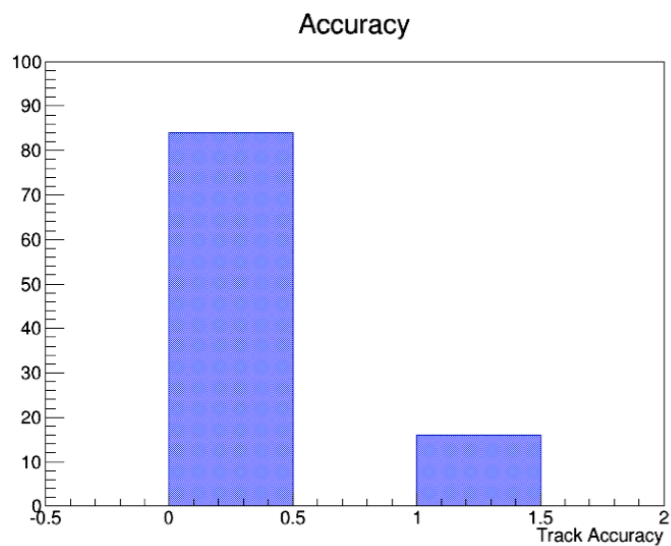
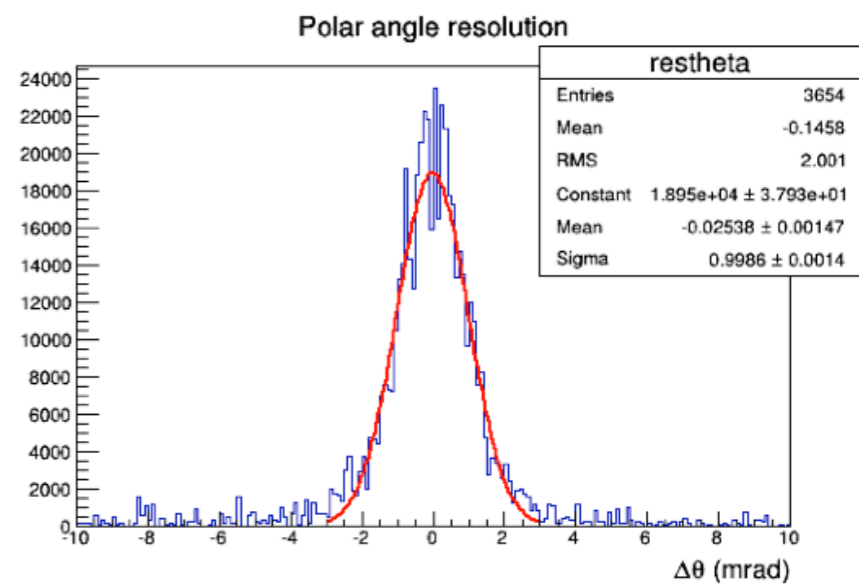
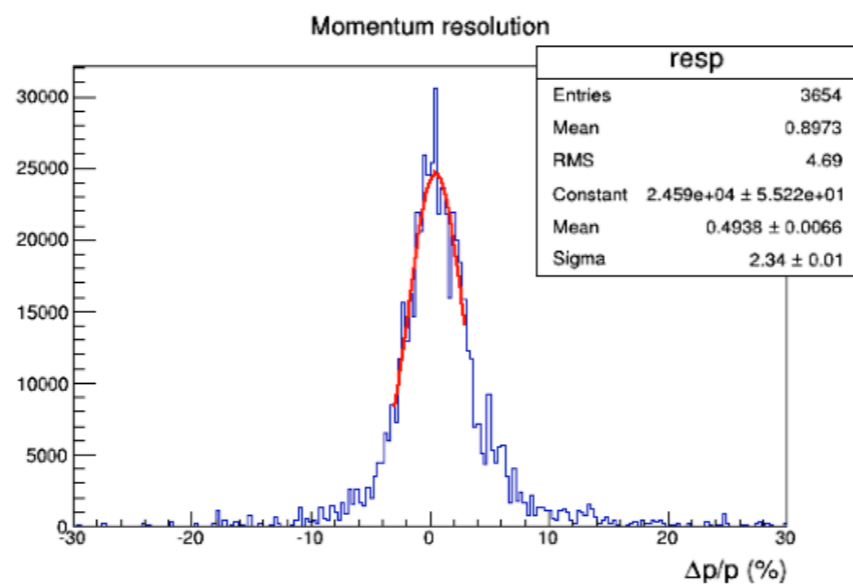
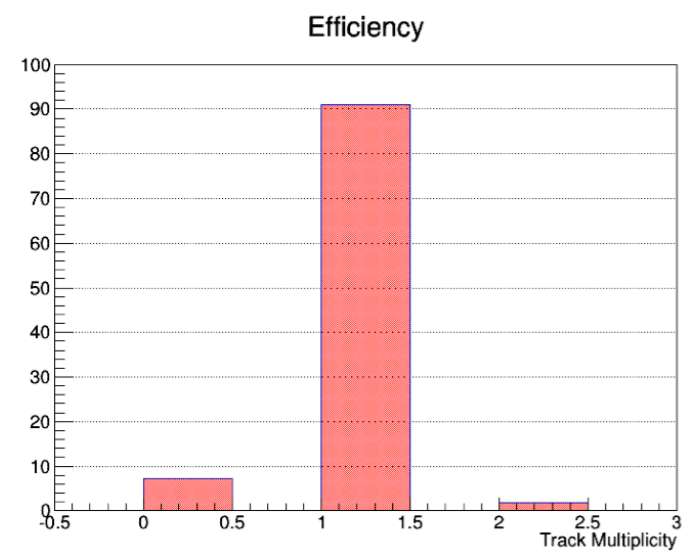


Backup:
**VMM3 efficiency, accuracy, and
resolutions**

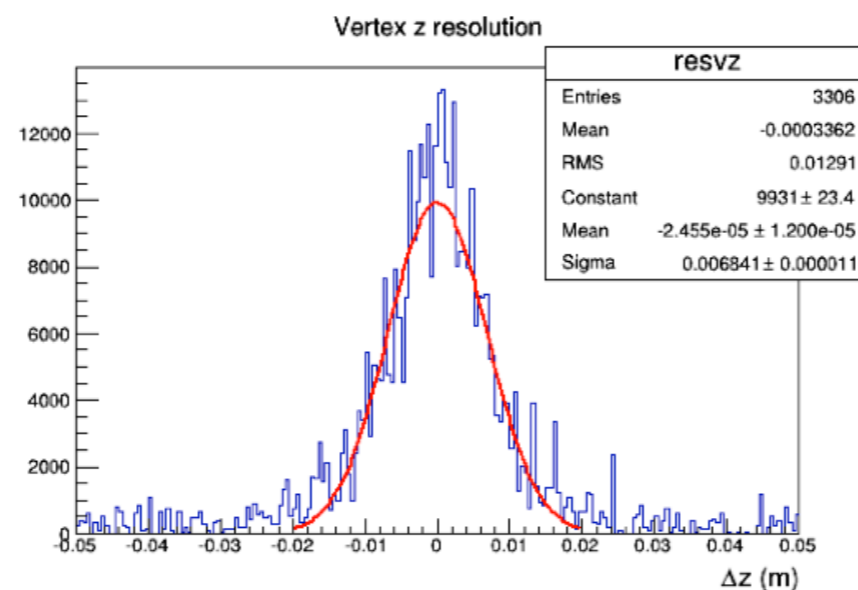
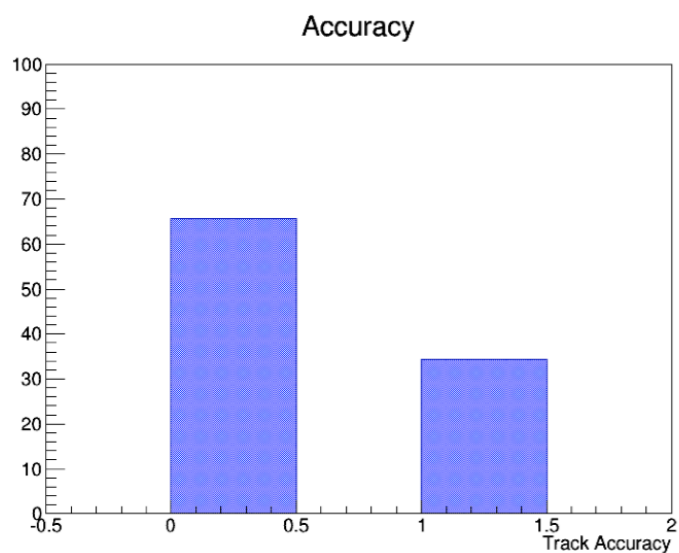
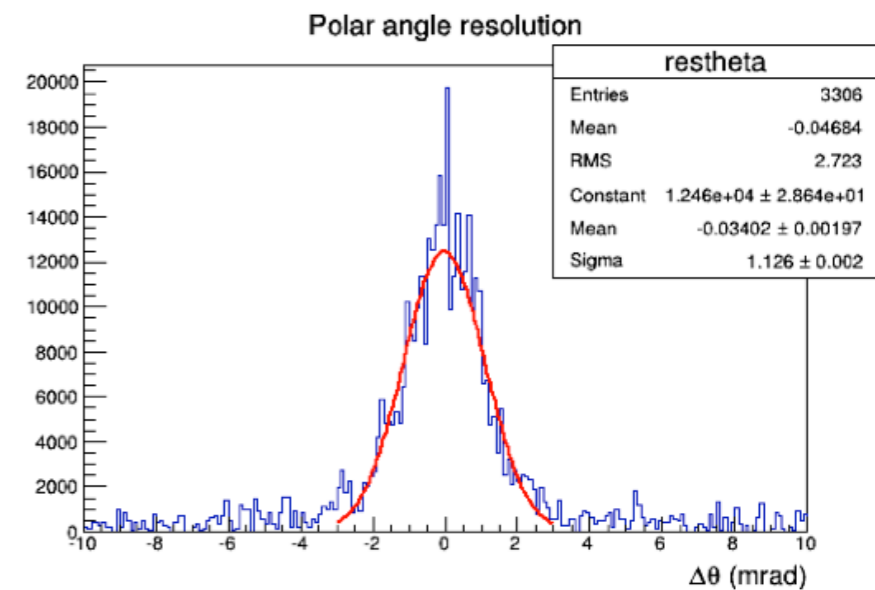
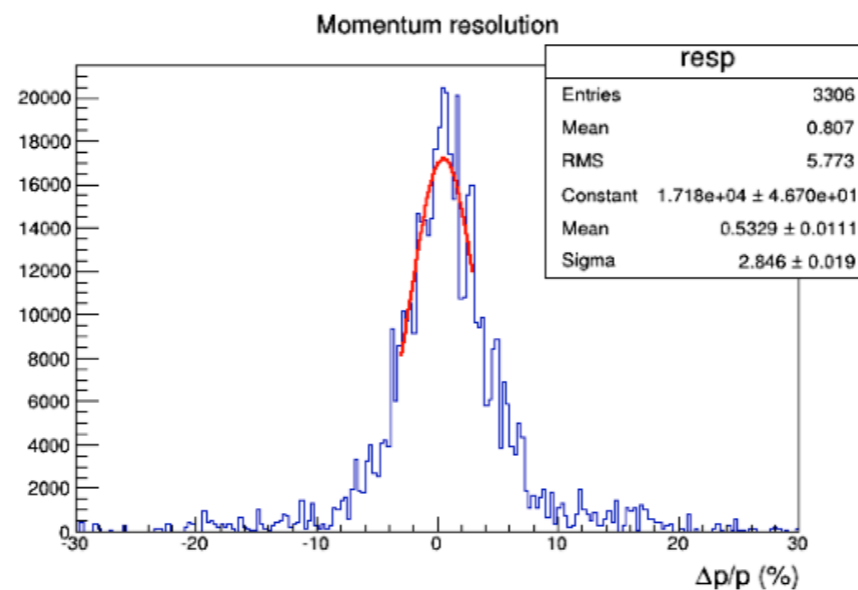
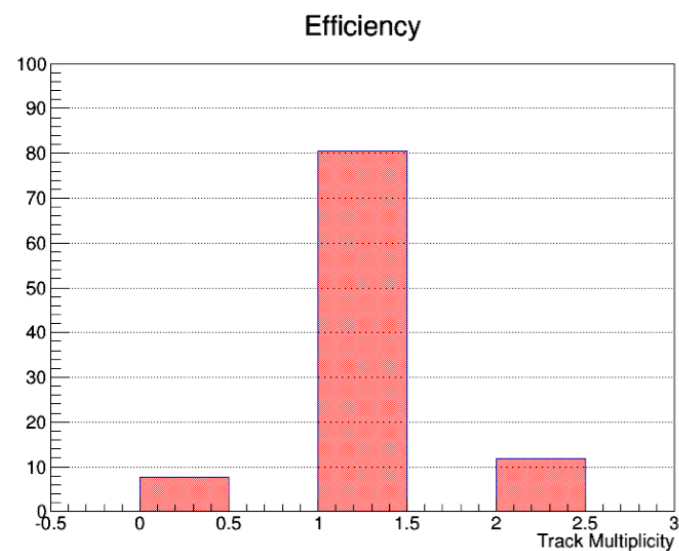
50ns peaking time 0% background



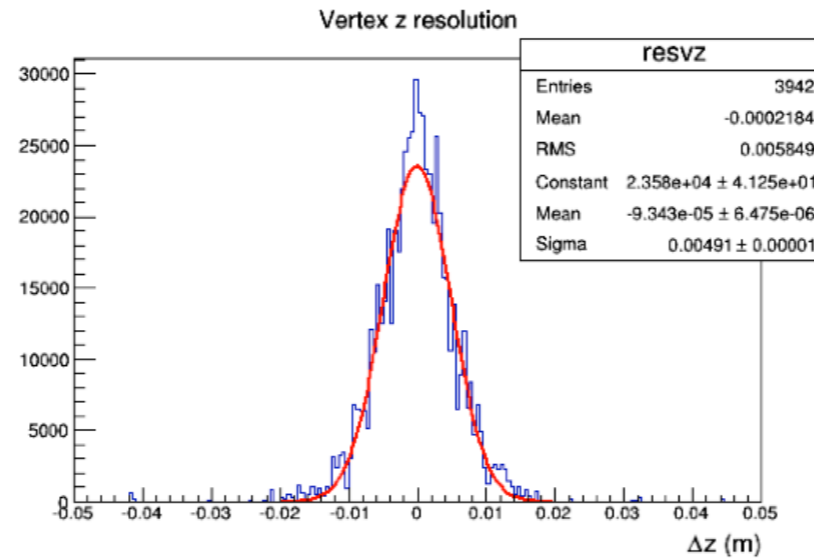
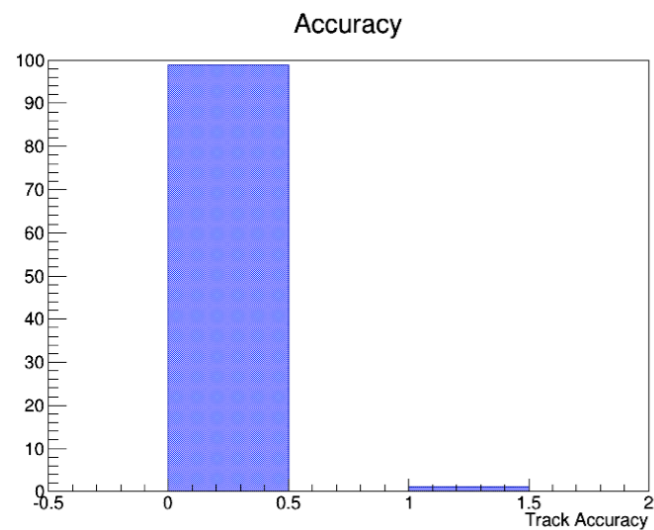
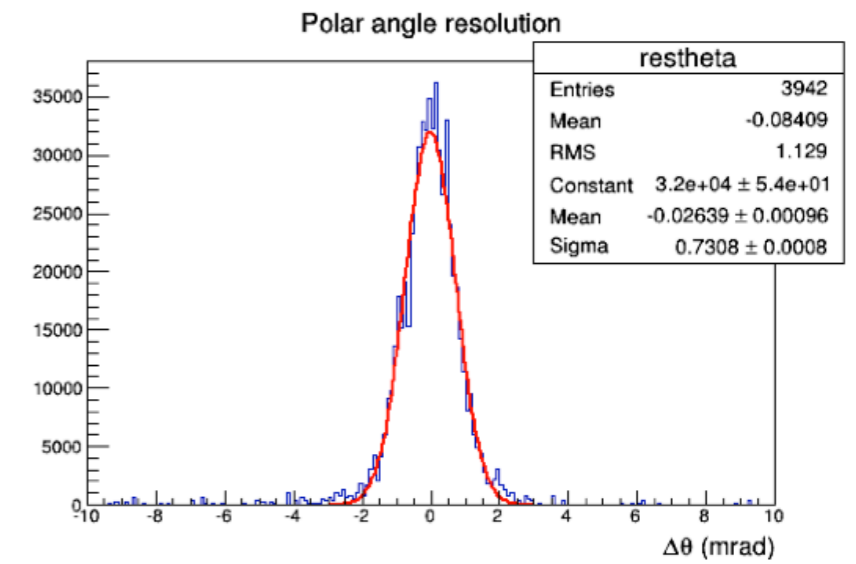
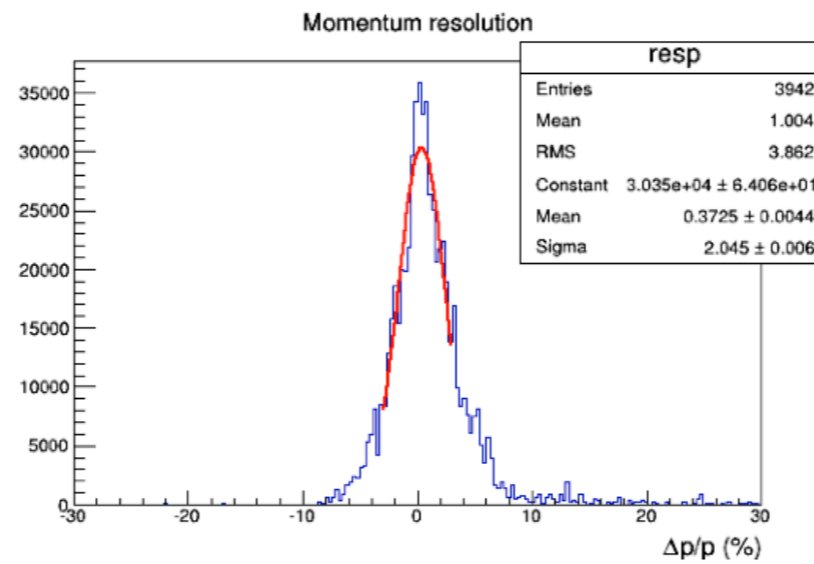
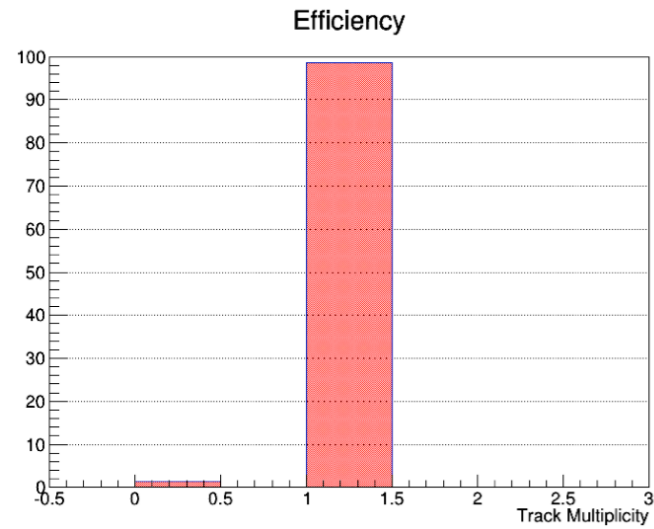
50ns peaking time 50% background



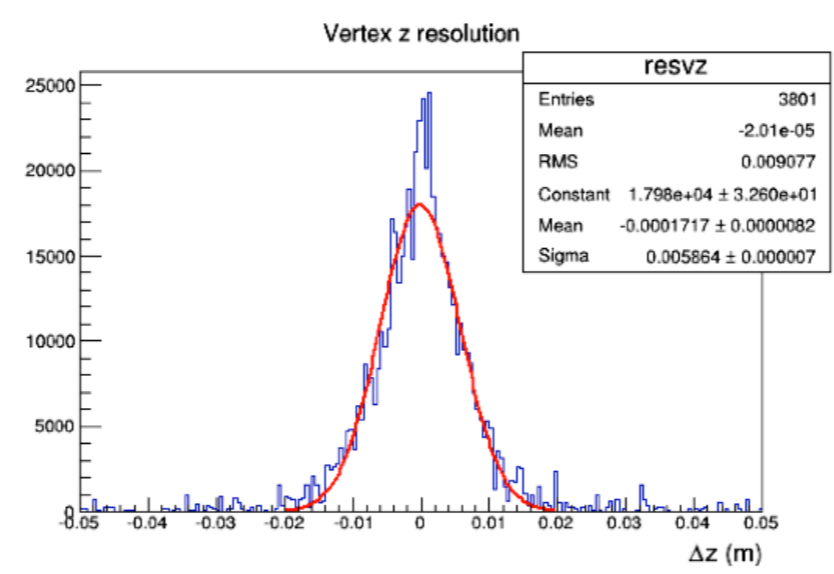
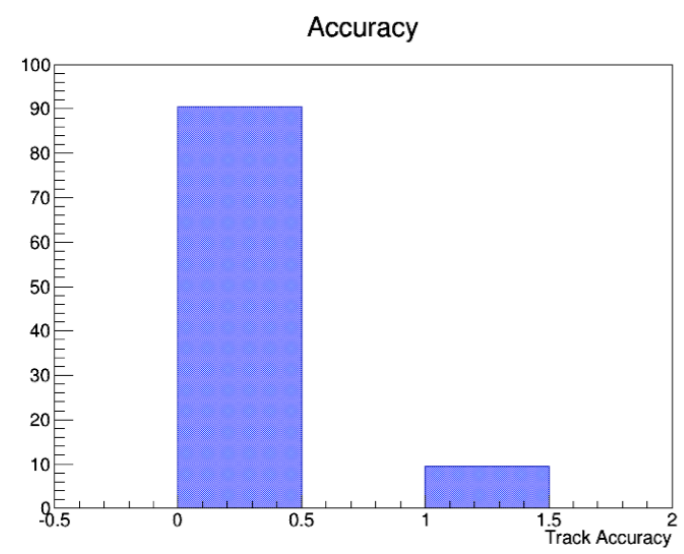
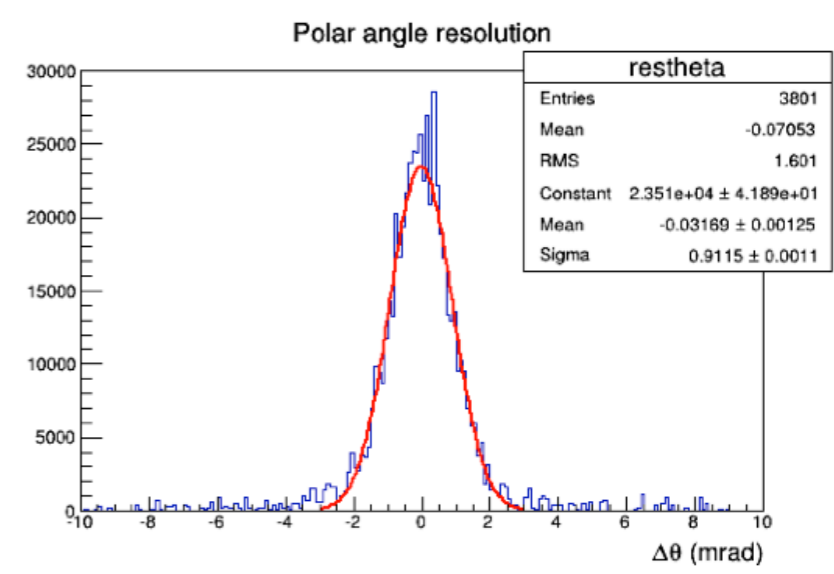
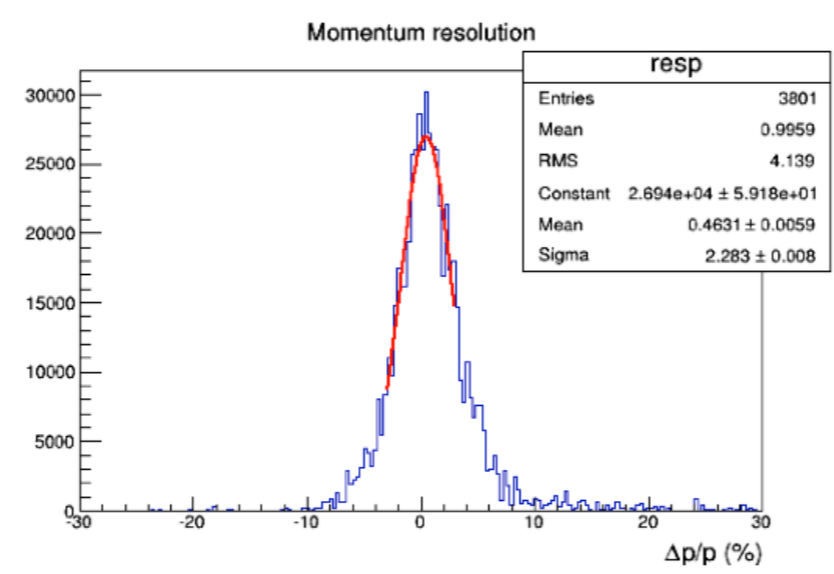
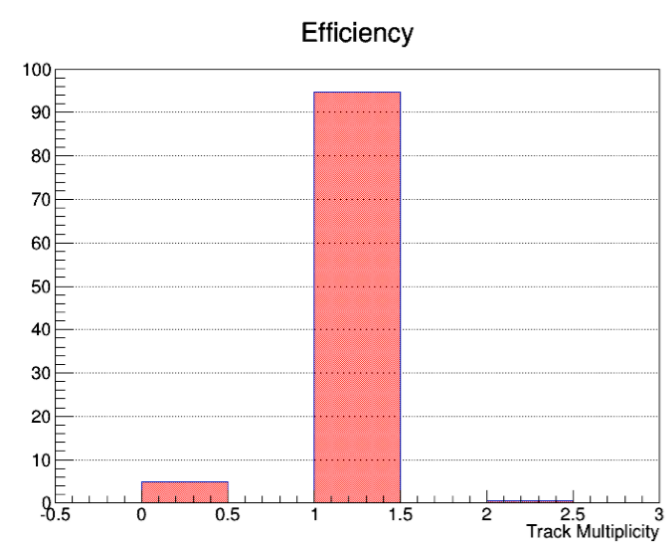
50ns peaking time 100% background



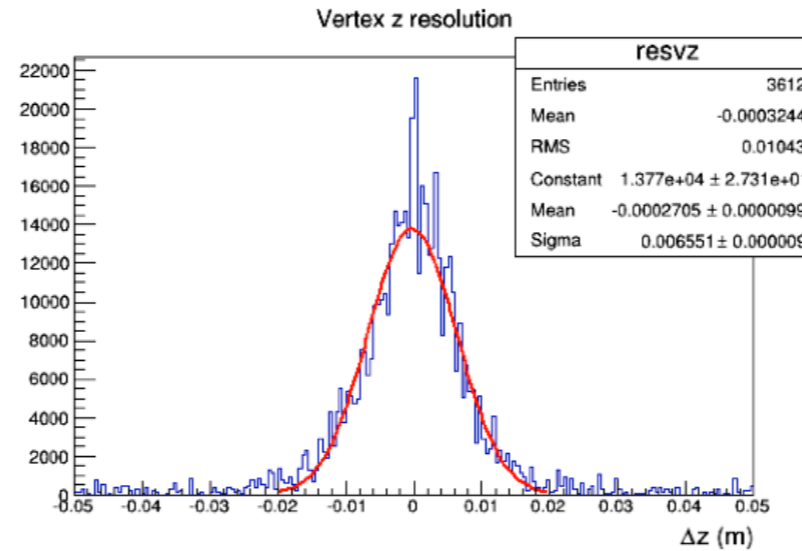
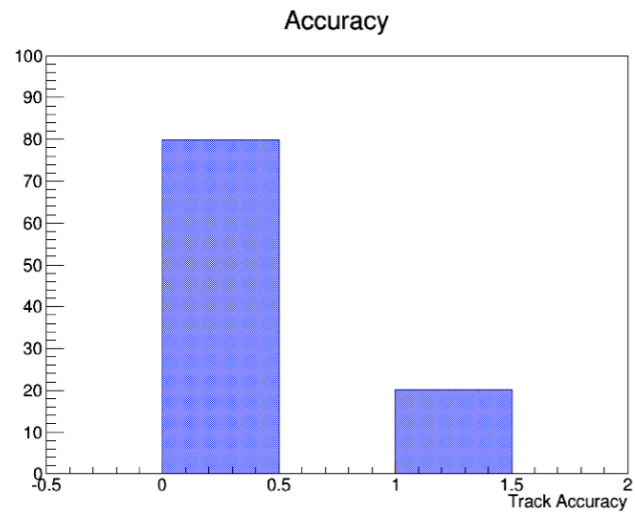
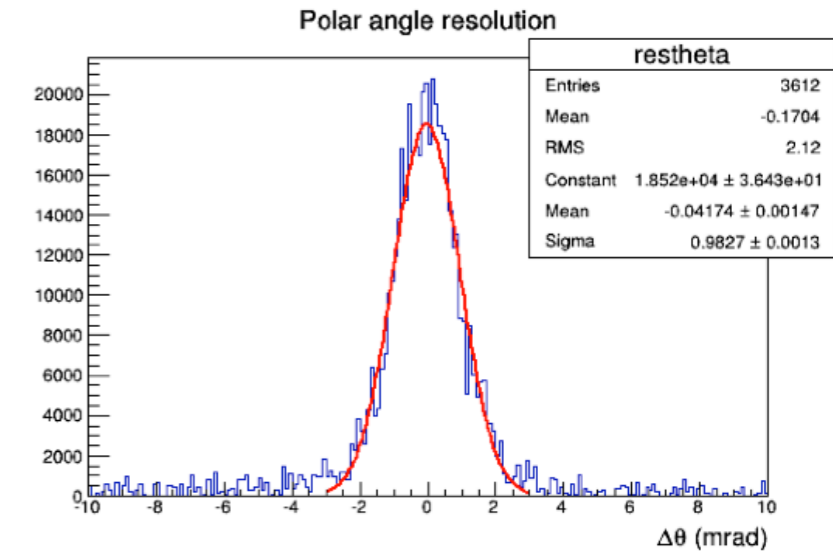
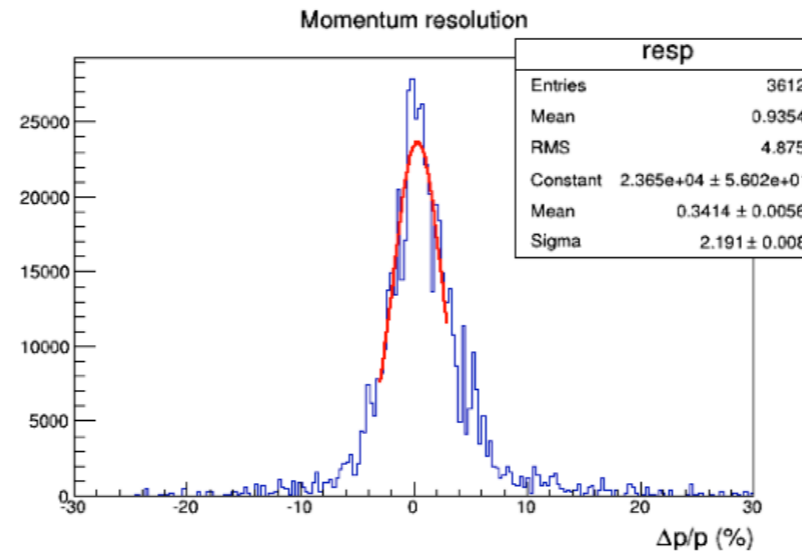
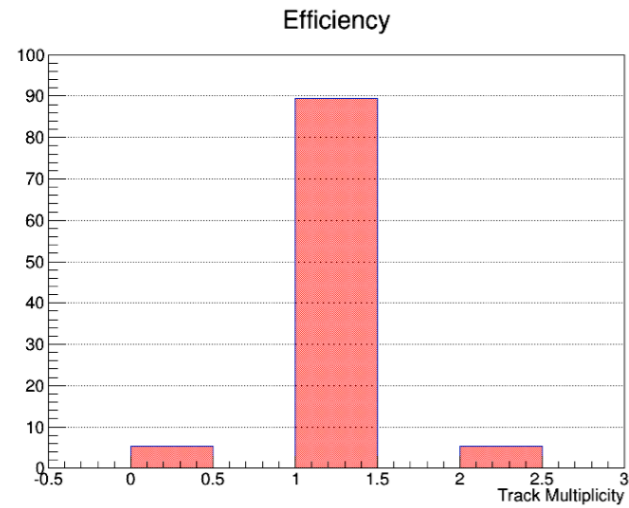
25ns peaking time 0% background



25ns peaking time 50% background

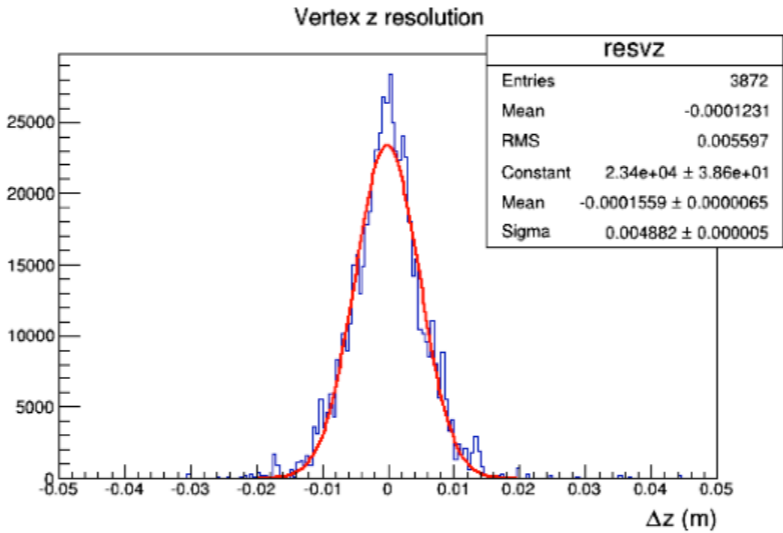
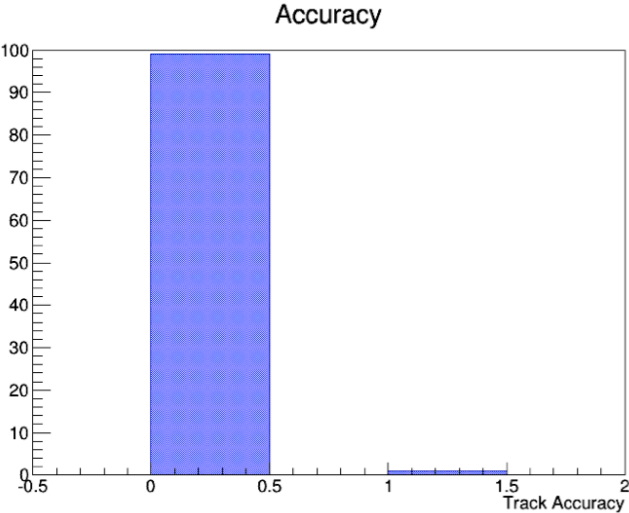
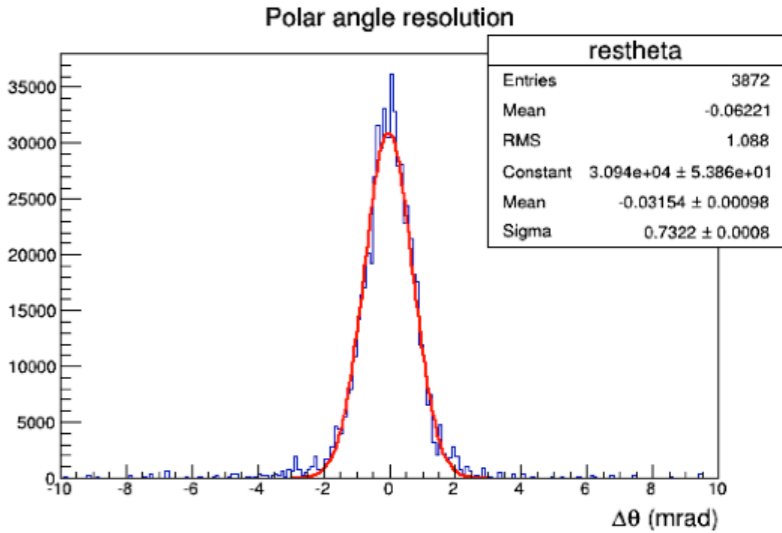
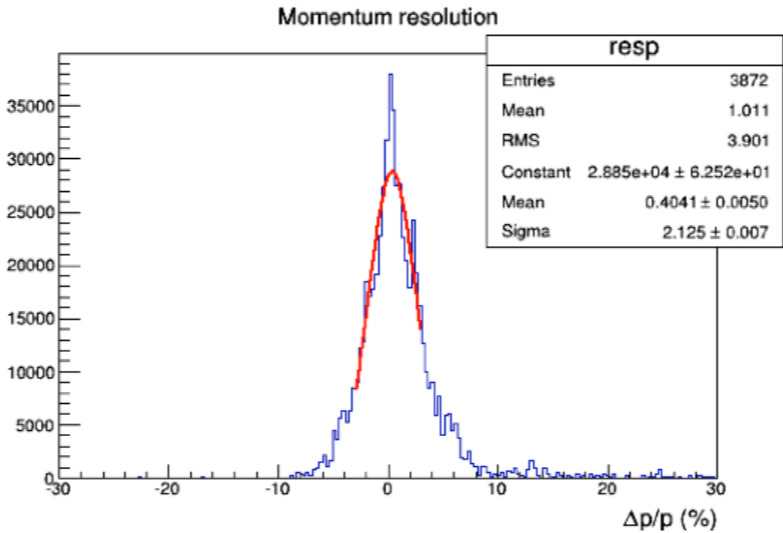
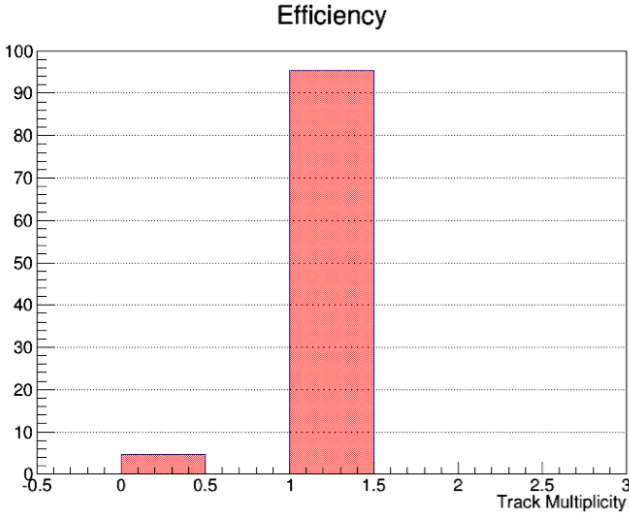


25ns peaking time 100% background



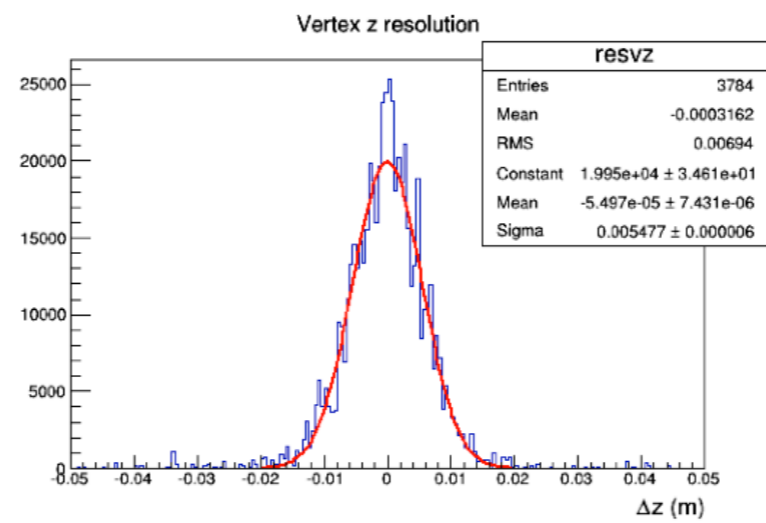
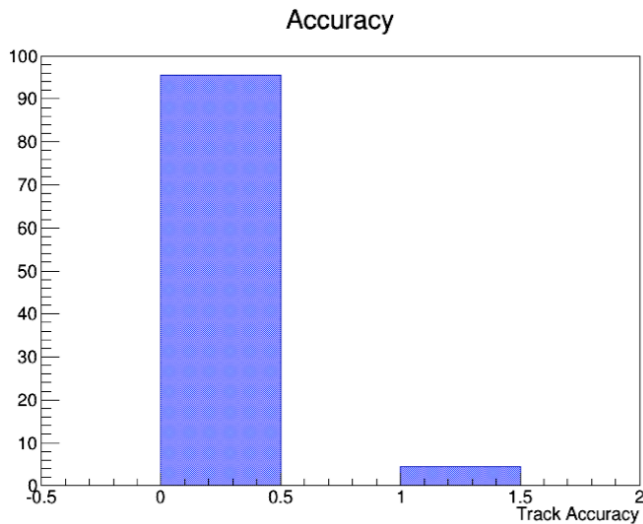
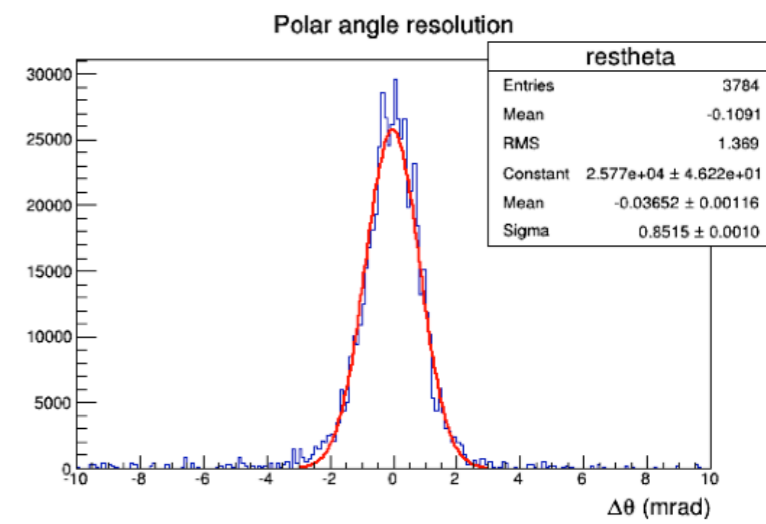
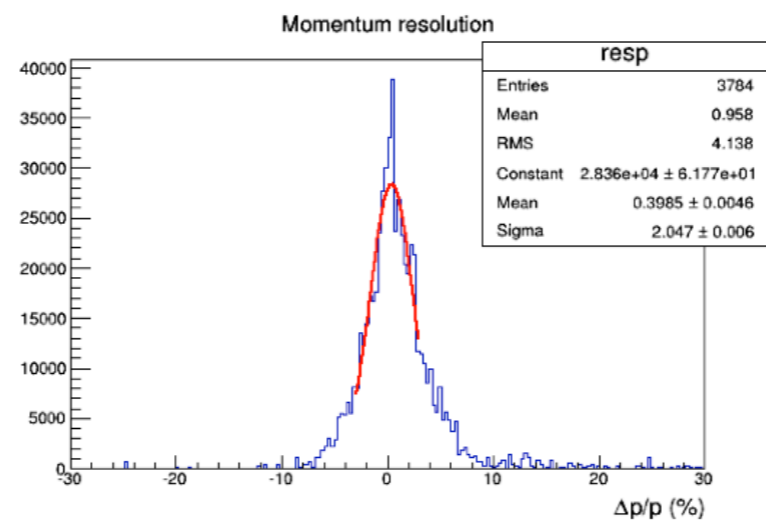
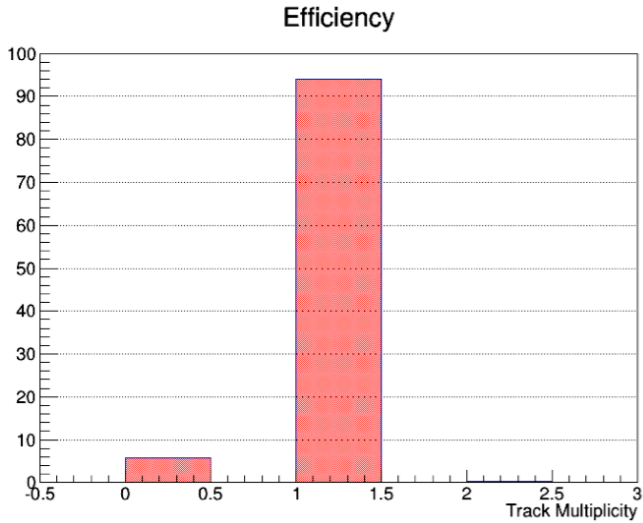
25ns peaking time 0% background

Segmented



25ns peaking time 50% background

Segmented



25ns peaking time 100% background

Segmented

