

Pass0 Analysis: SVT Wire Target Analysis III

Norman Graf (SLAC)

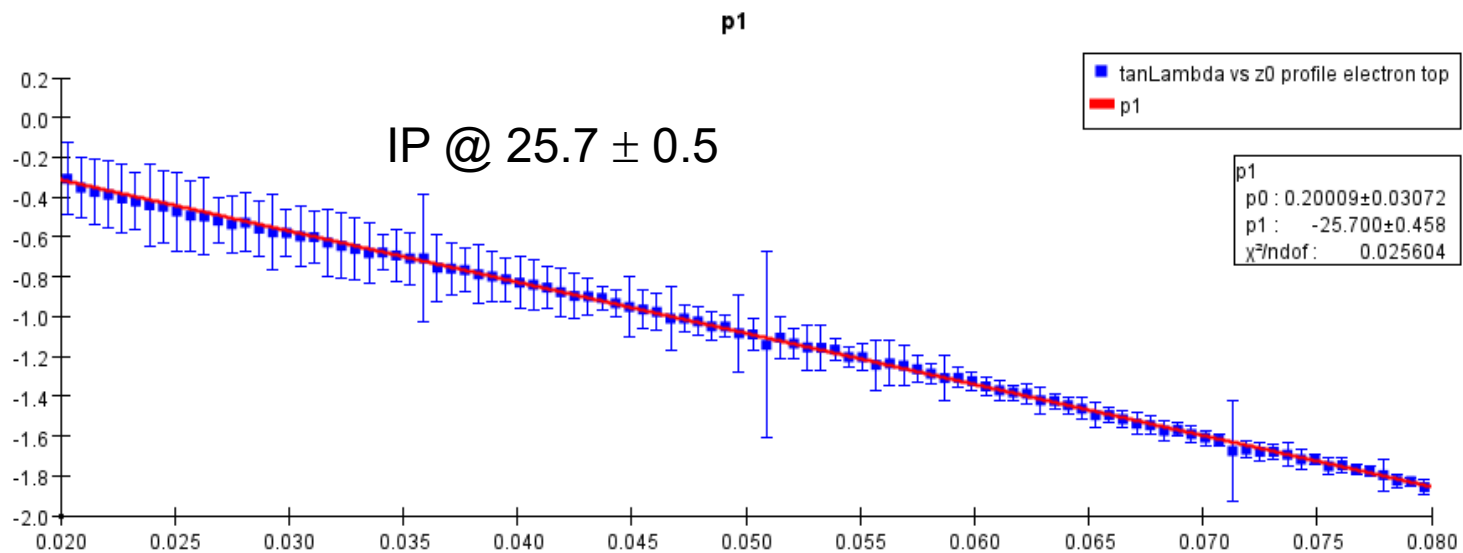
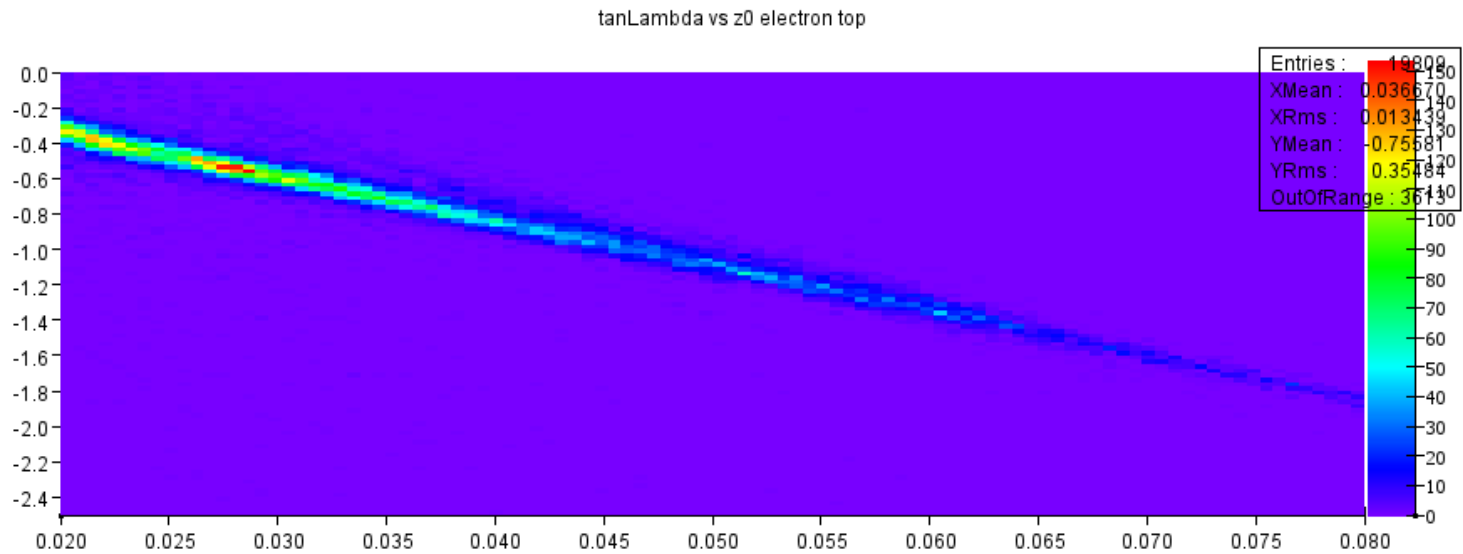
Reconstruction / Analysis Meeting

March 21, 2023

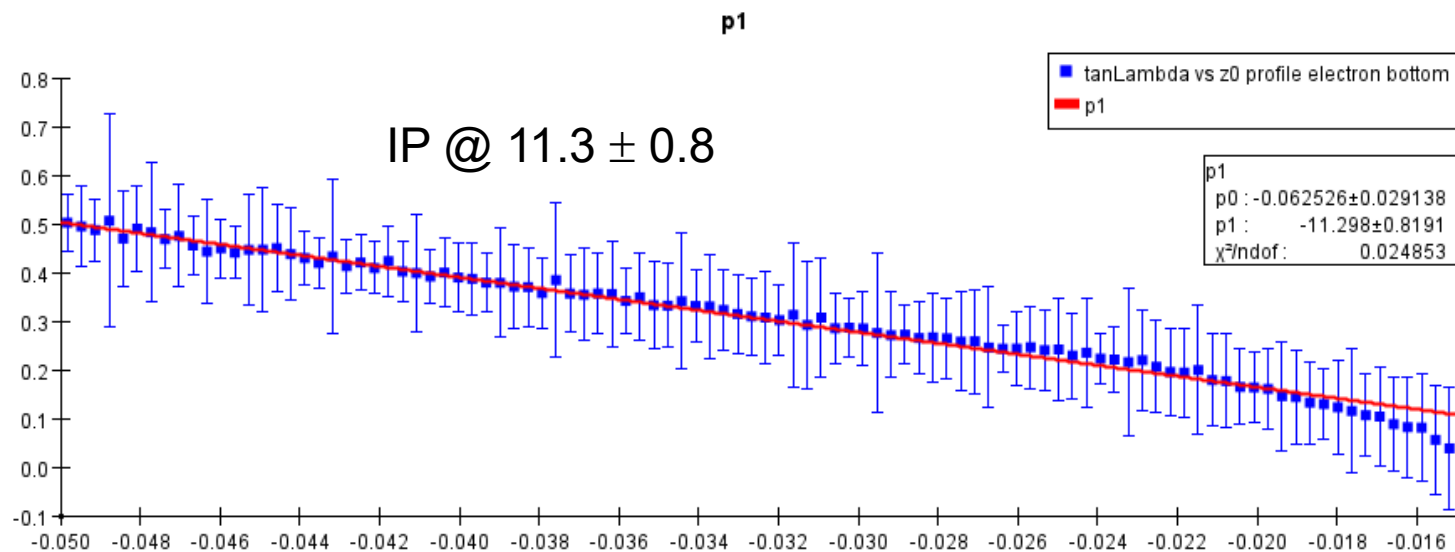
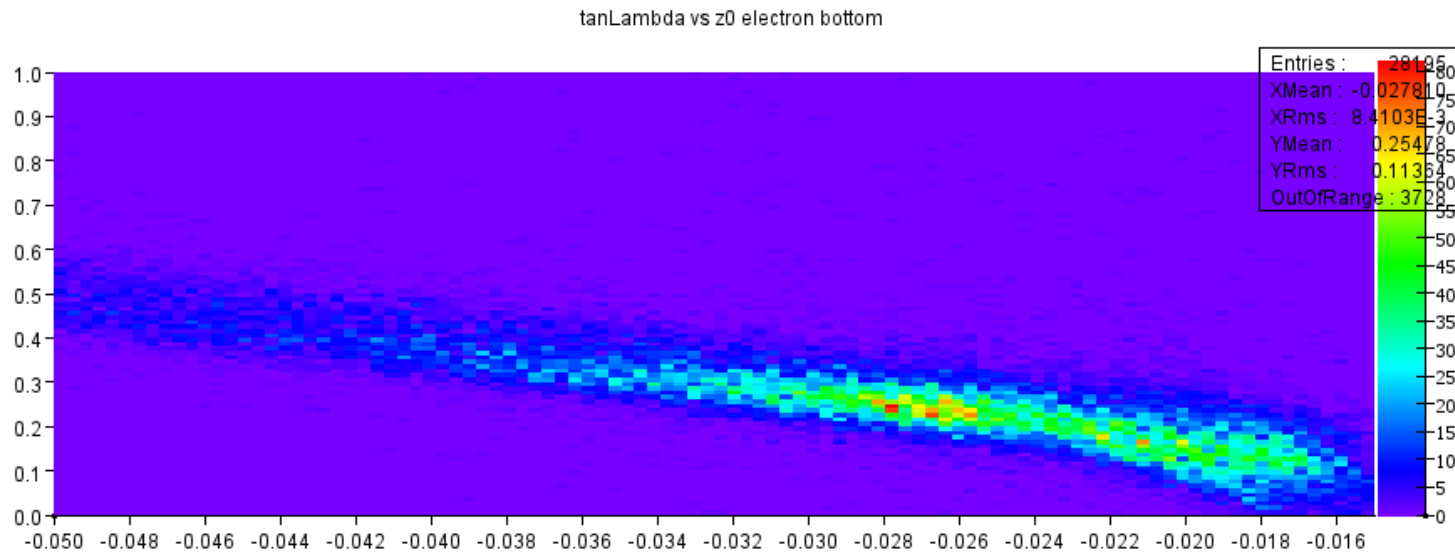
SVT Wire Target Data

- Have reconstructed the two runs which used the SVT positioning wires as targets
 - 014753 SVT bottom wire at $z=34.544$ mm
 - gives events in the top
 - 014754 SVT top wire at $z=20.600$ mm
 - gives events in the bottom
- HPS_Run2021Pass0_v1
- Require charged particles with tracks containing 10 or more hits with an associated Ecal cluster.
- Plot $\tan\Lambda$ vs z_0 for top/bottom electron/positron

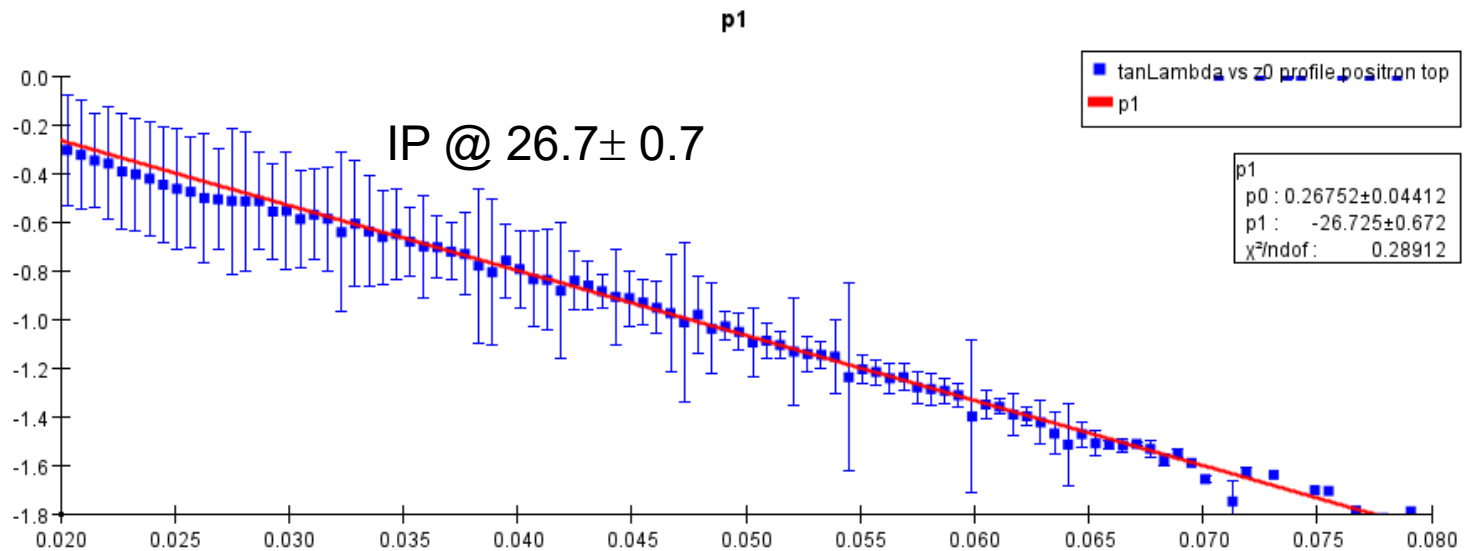
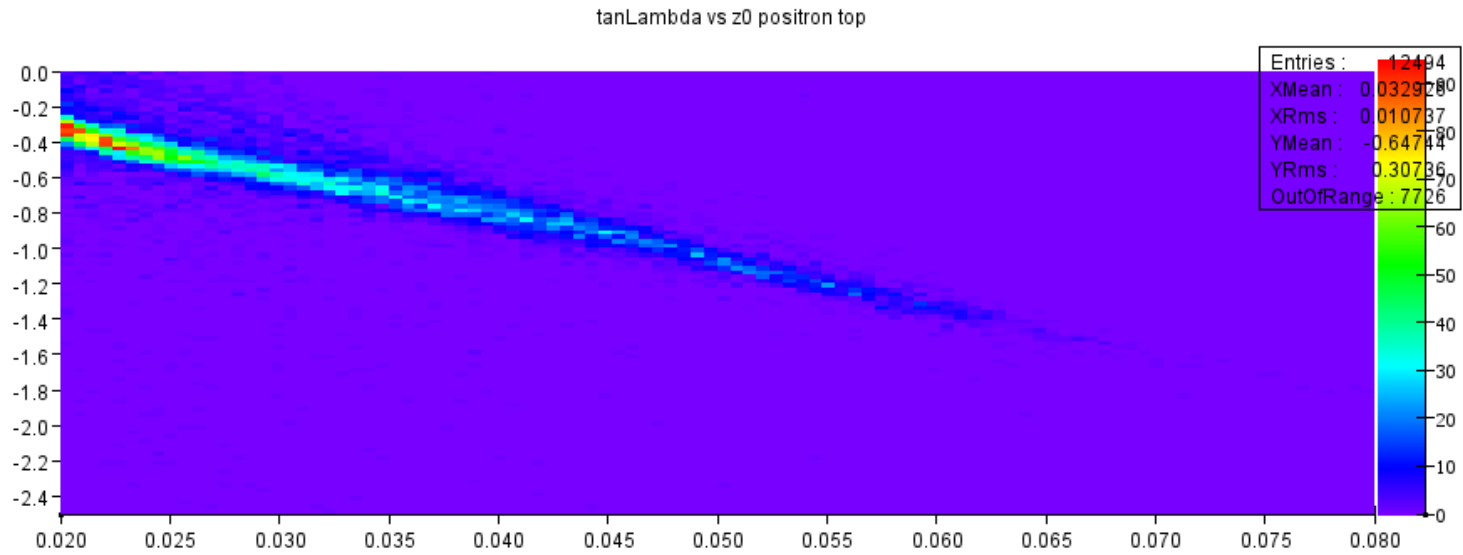
Top Electron



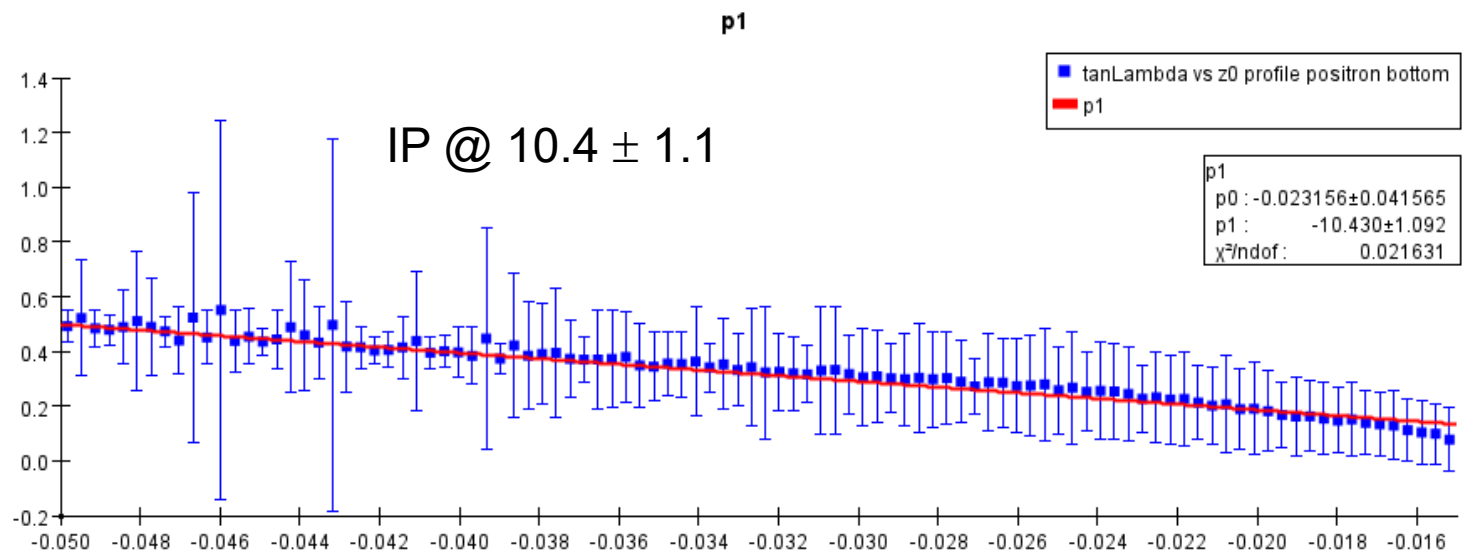
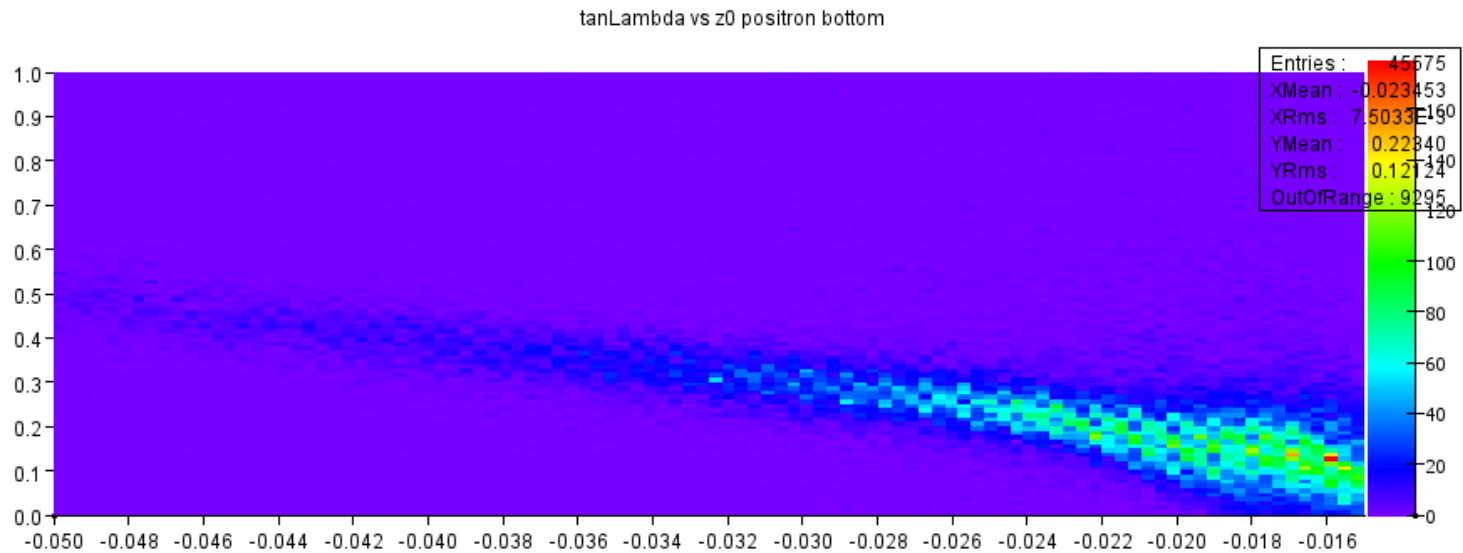
Bottom Electron



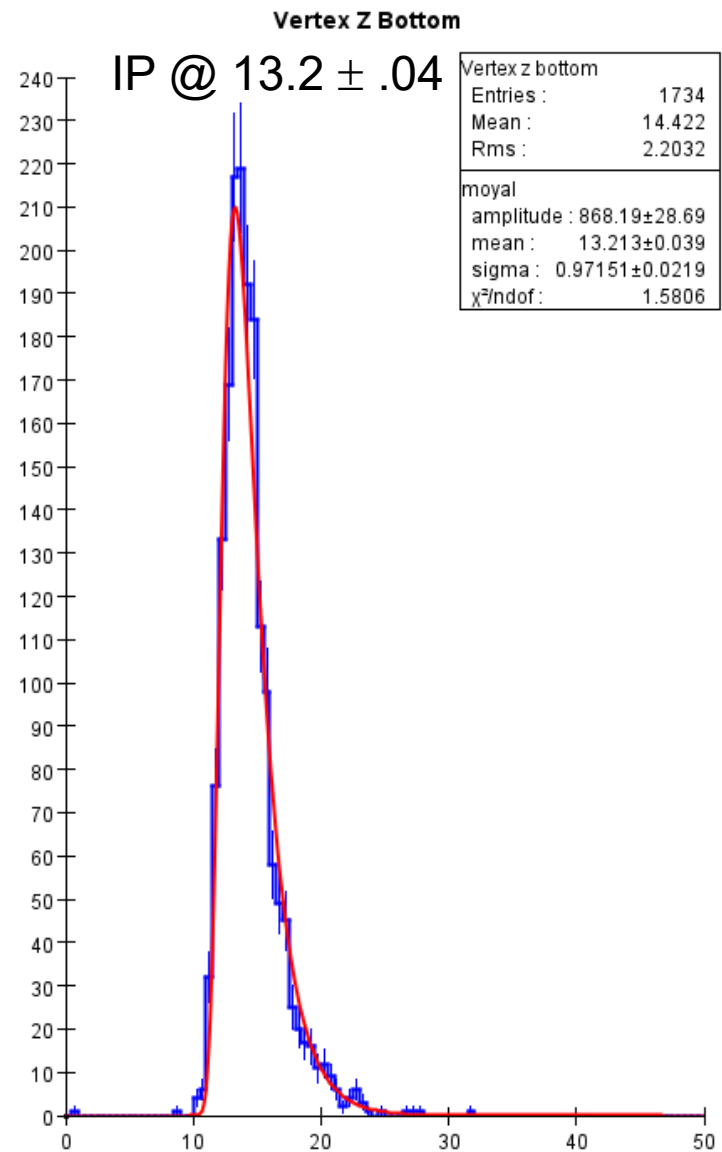
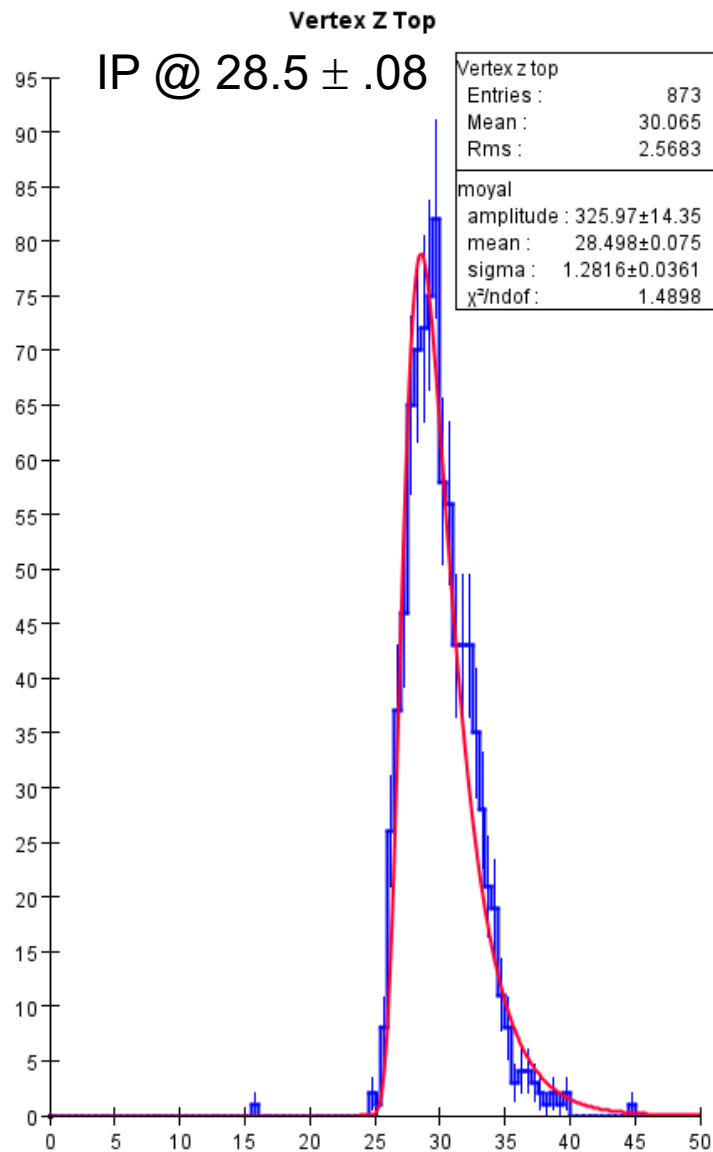
Top Positron



Bottom Positron



MultiVertex



Summary

- 014753 SVT bottom wire at $z=34.544$ mm
- 014754 SVT top wire at $z=20.600$ mm

- Top
 - Fitting $\tan\Lambda$ vs z_0
 - electron 25.7 ± 0.5
 - positron 26.7 ± 0.7
 - MultiVertex
 - $28.5 \pm .08$

- Bottom
 - Fitting $\tan\Lambda$ vs z_0
 - electron 11.3 ± 0.8
 - positron 10.4 ± 1.1
 - MultiVertex
 - $13.2 \pm .04$