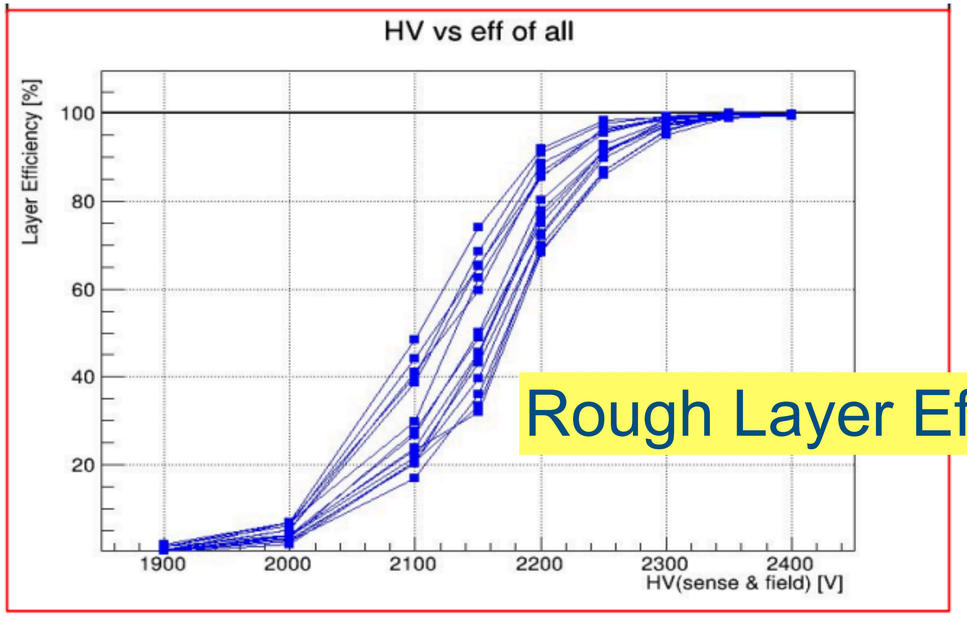
Status

- 熱縮作業ほぼ完了。あとは両側をくっつけるだけ。数は３回チェック済み
- ArCO2 (90:10) study with E15 CDC (Tracking effとresidualのHV依存を知りたい)
  - XT parameter tune完了
  - Tracking Eff vs HV, Residual vs HV plotを作ってみた。(2250 V~2400 V)



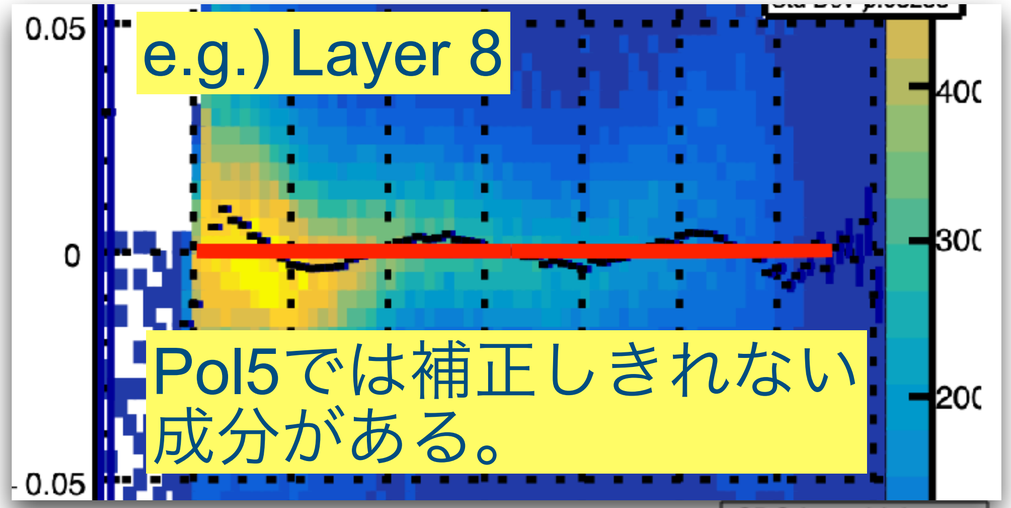
Rough Layer Efficiency

CDC ArCO2 Study in Aug. 2024 to check its feasibility 3

Iterating the XT parameters Tracking Efficiency (ver.1) (to plot "eff vs HV and resid vs HV")

Drift Time vs Rresidual, 2350 V (Run 44)

- How to iterate; $pol5_{n+1} = pol5_n - 0.9 \times pol5_n^{corr}$
- 50,000 events
- Sauli textbook



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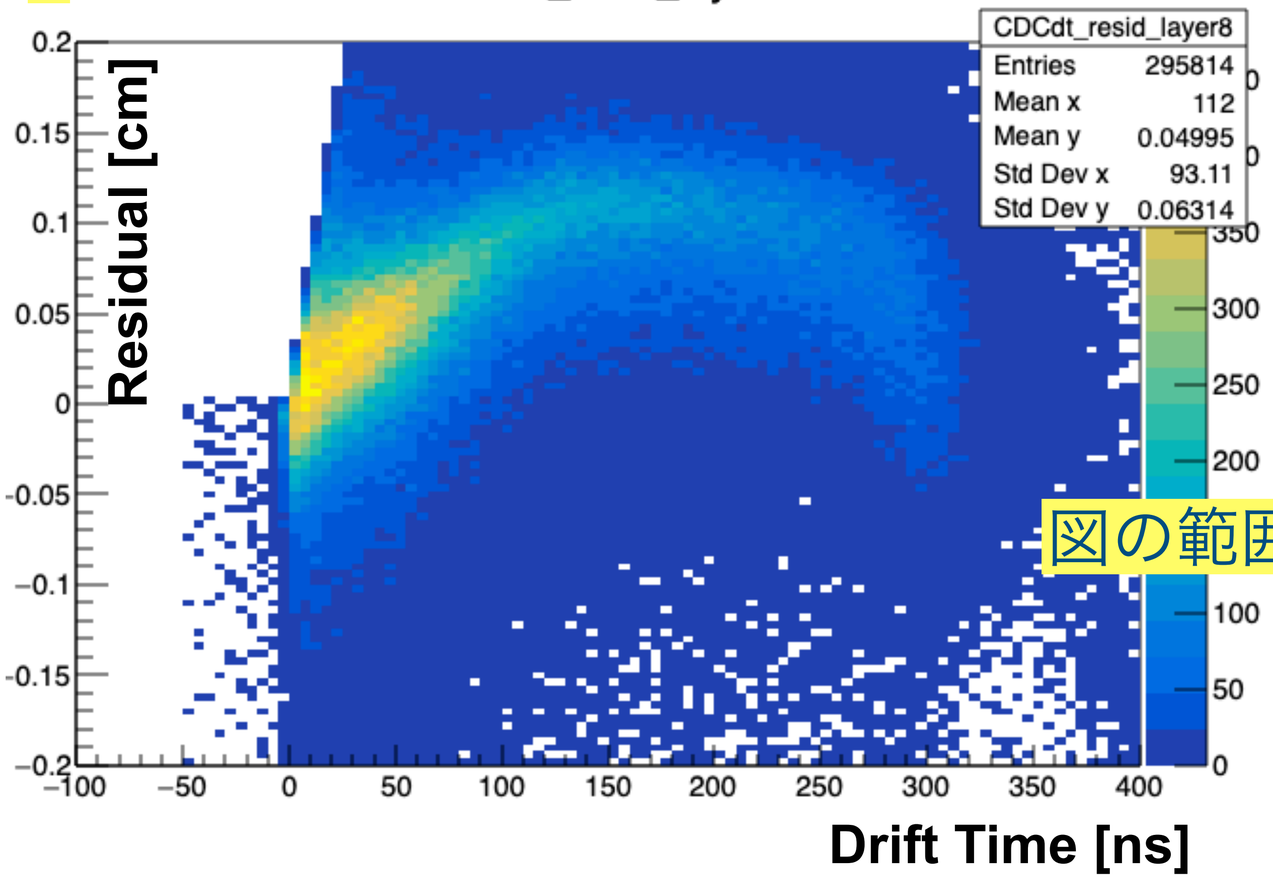

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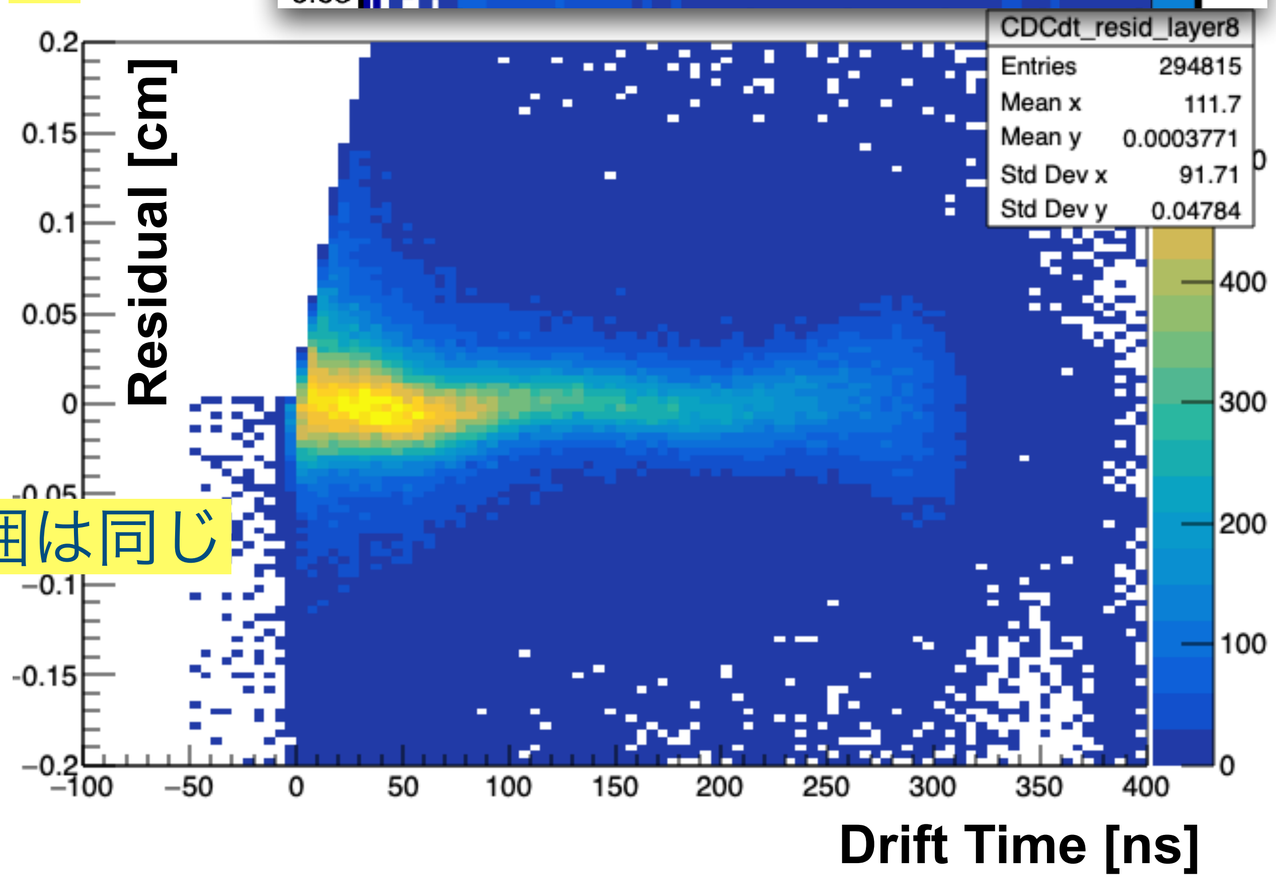
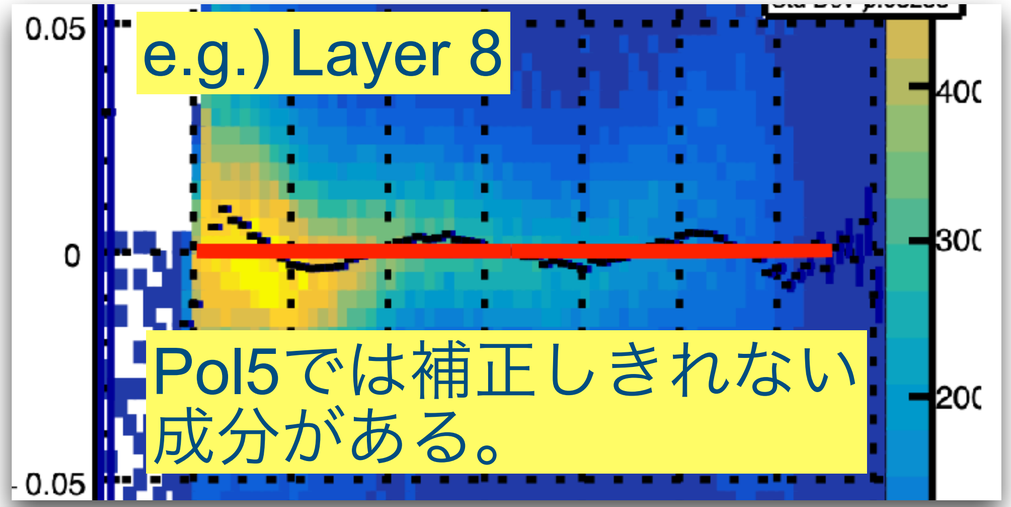


図の範囲は同じ

Drift Time vs Rresidual, 2350 V (Run 44)

- How to iterate; $pol5_{n+1} = pol5_n - 0.9 \times pol5_n^{corr}$
- 50,000 events



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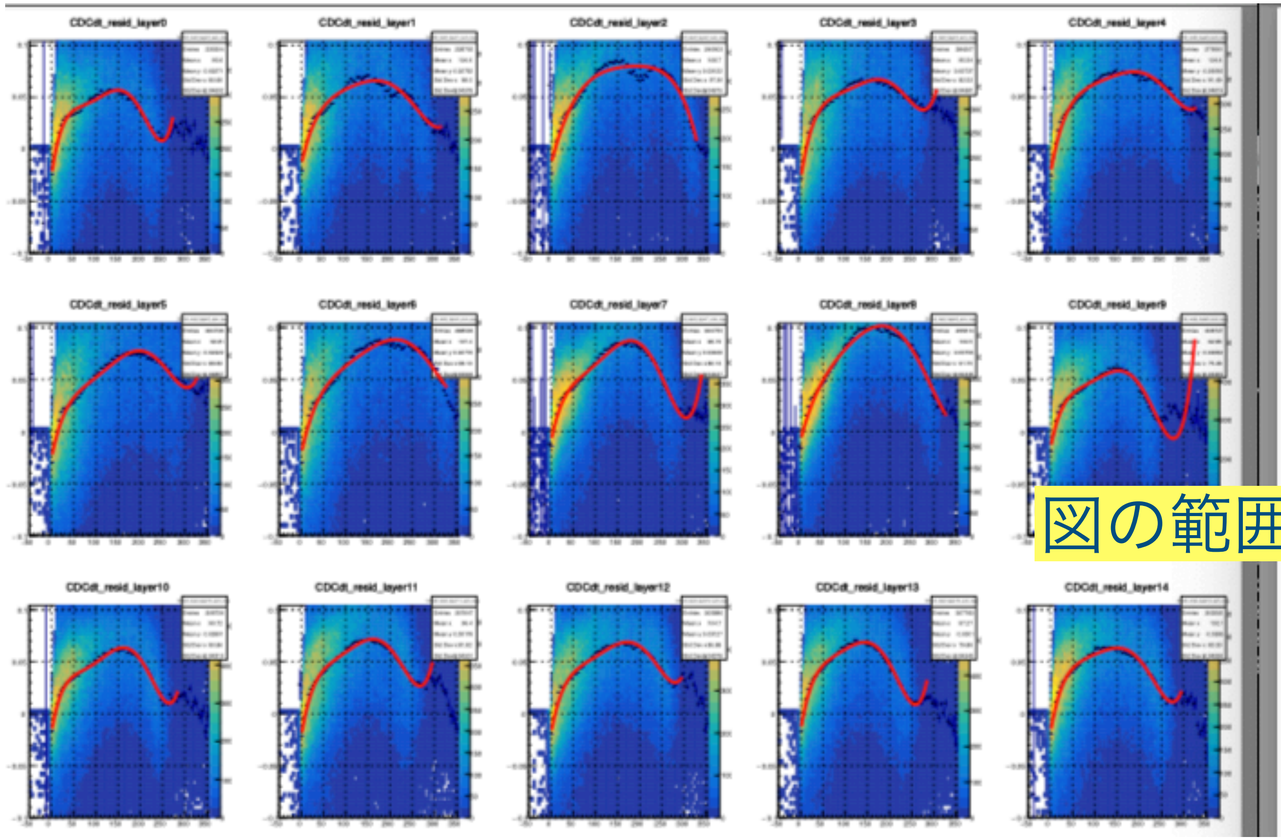
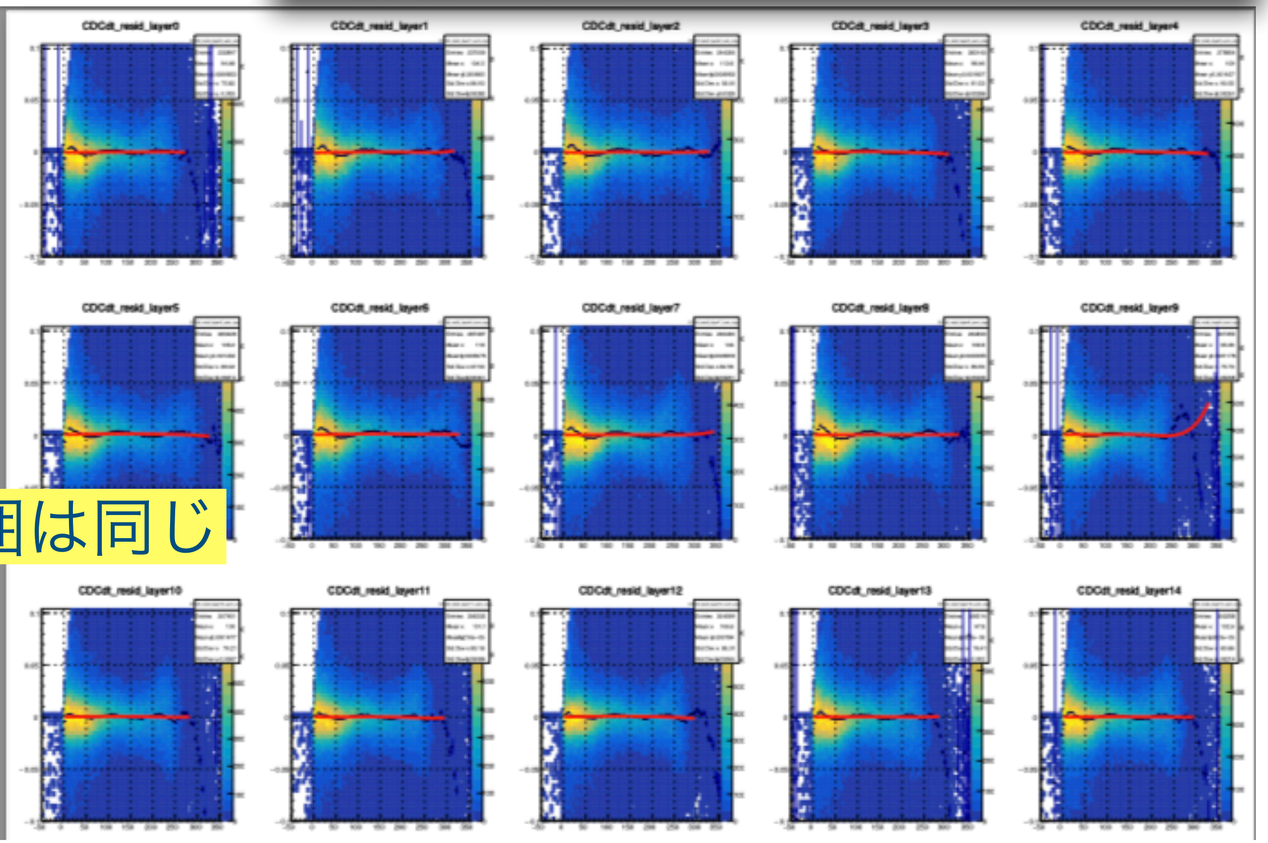
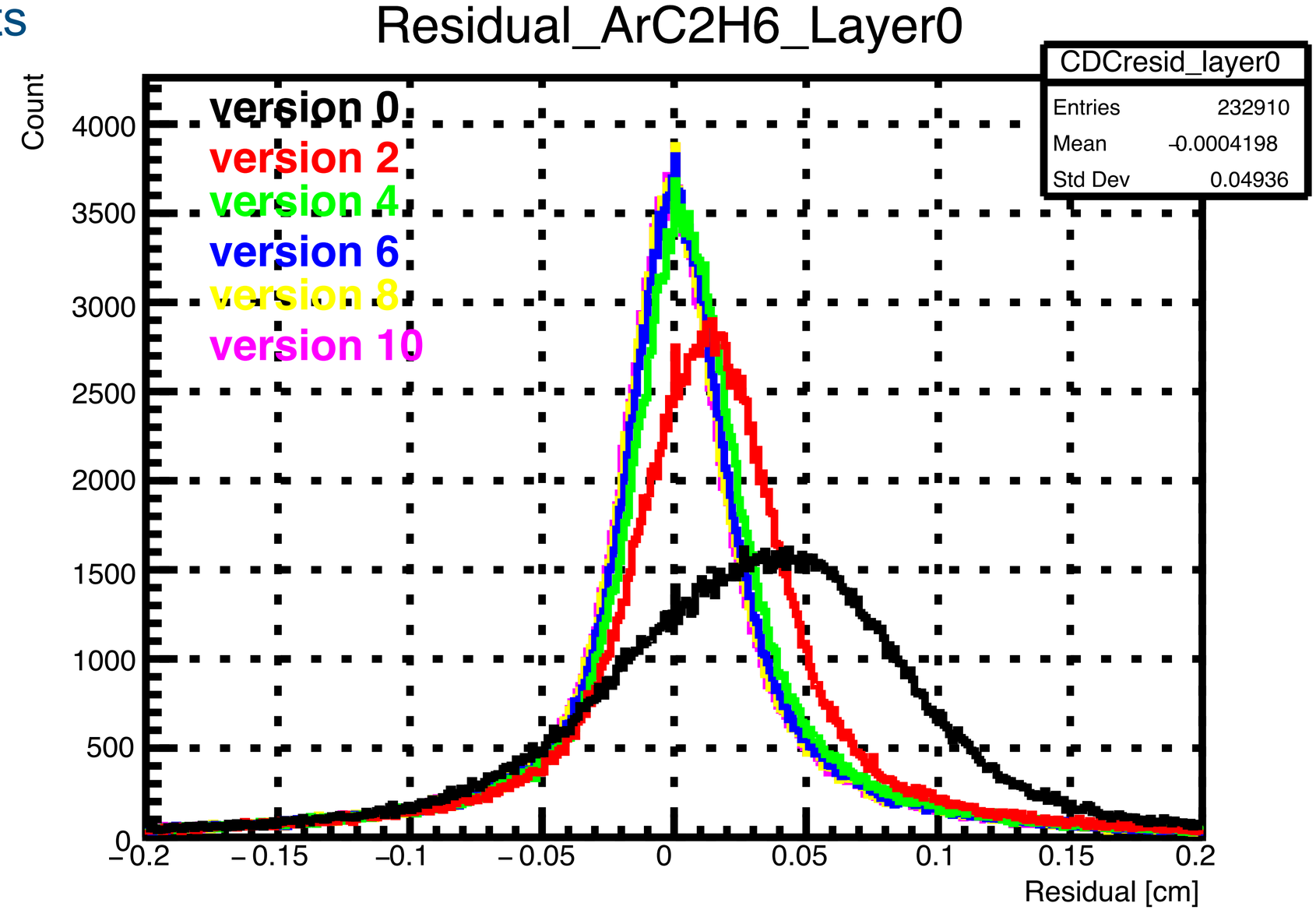




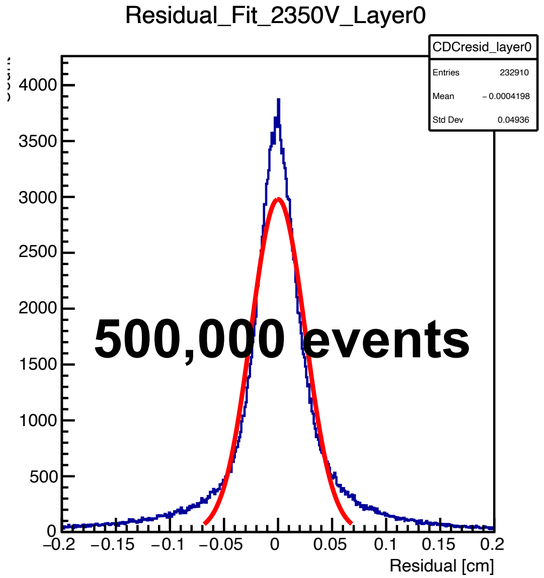
図の範囲は同じ

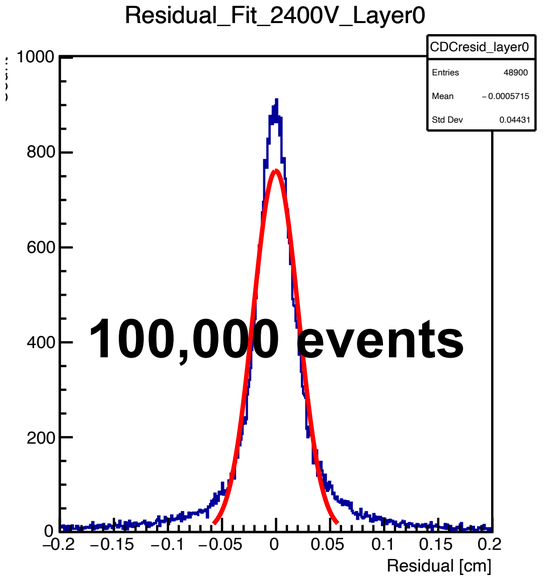
Residual; Before After interating, 2350 V(Run 44)

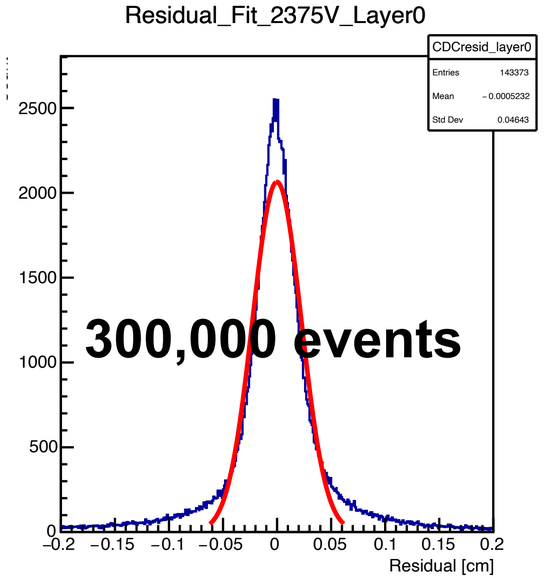
- 50,000 events

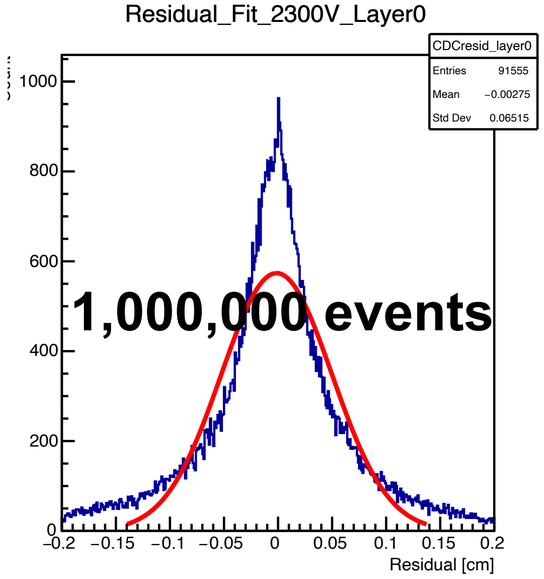


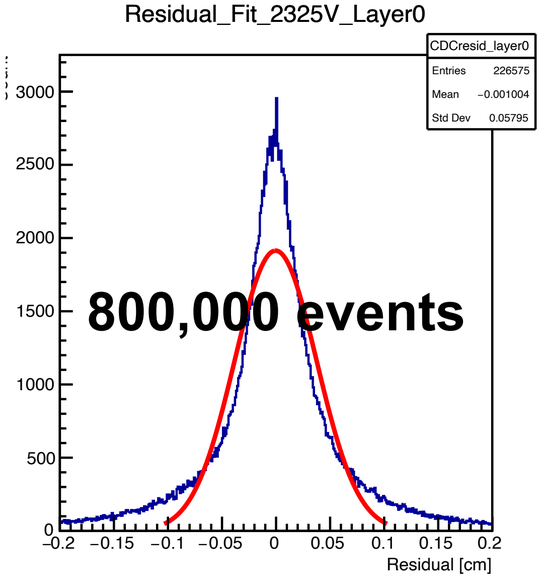
Gauss Fit; After iterating, 2300~ 2400 V







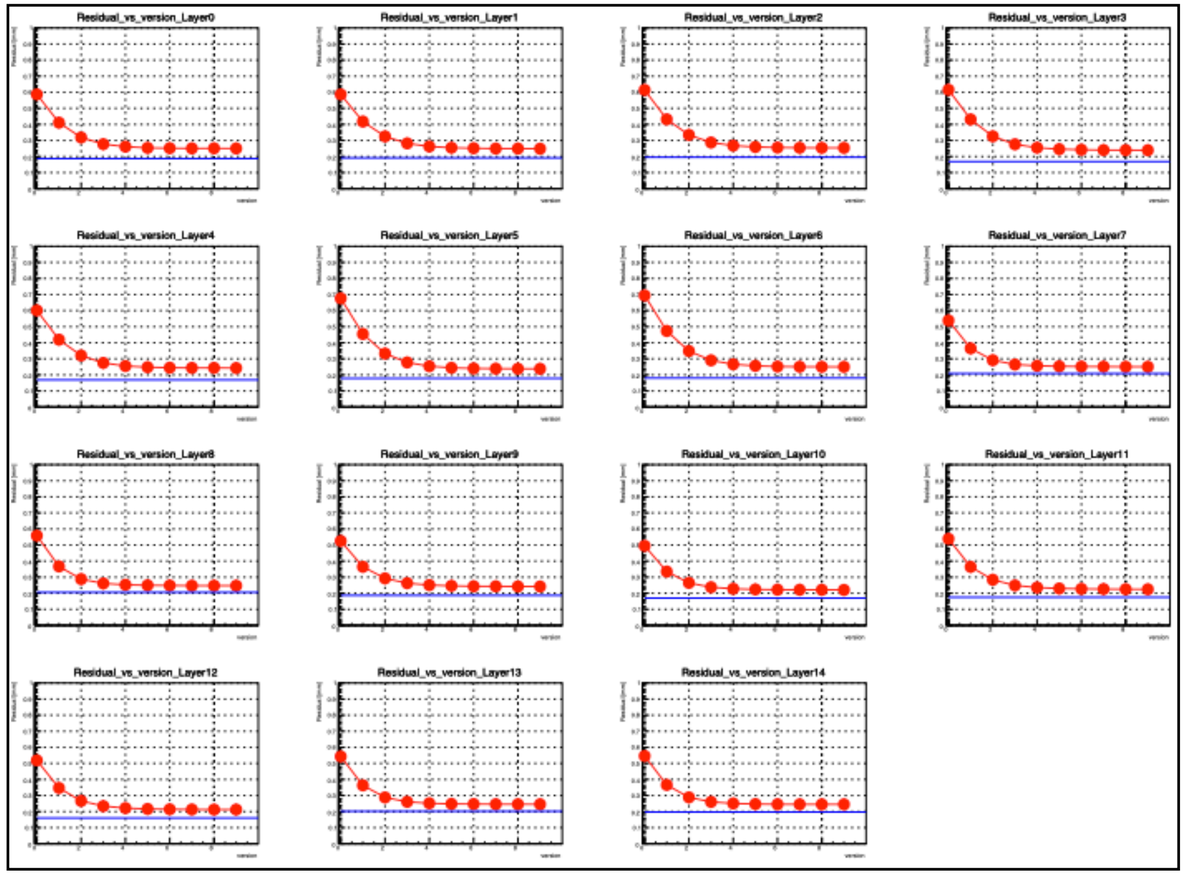




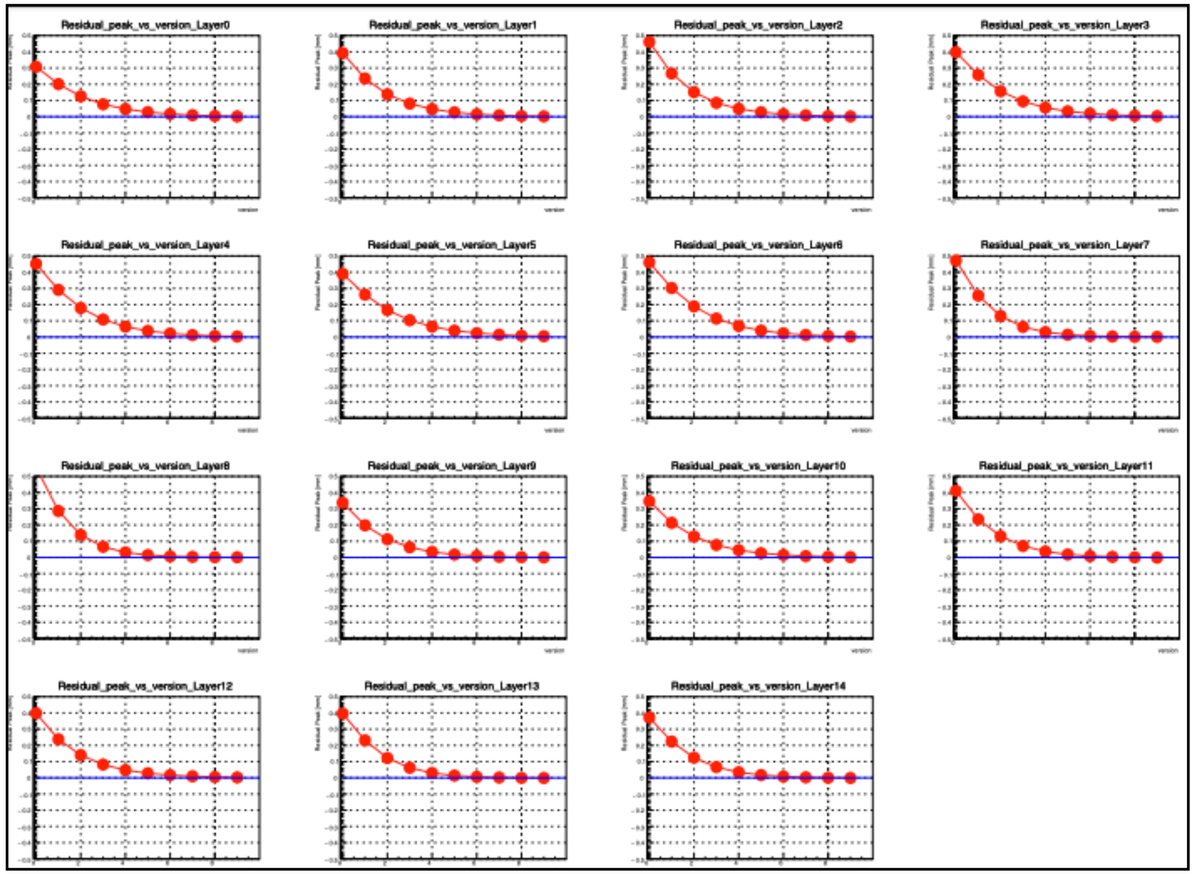
Fit result of Residual; Before After iterating, 2350 V(Run 44)

—— ArC2H6 after iterating

Sigma vs Version



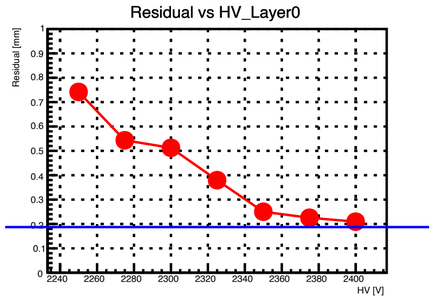
Peak vs Version

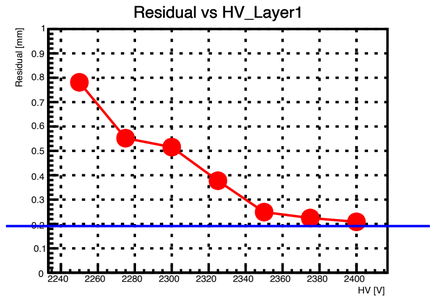


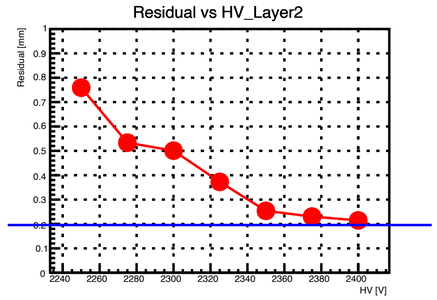
Residual vs HV After iterating

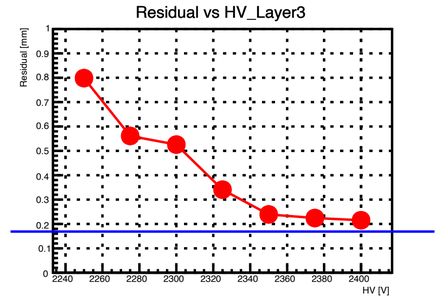
2250~2400 V

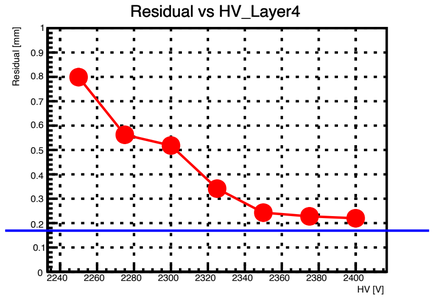
—— ArC2H6

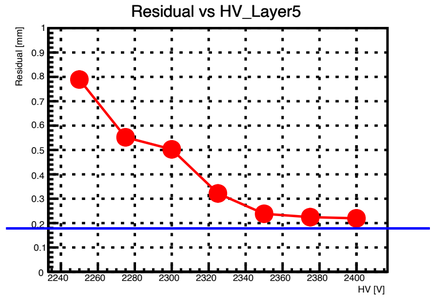


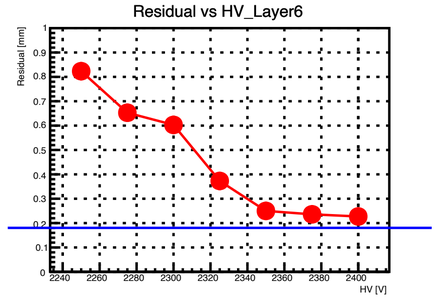


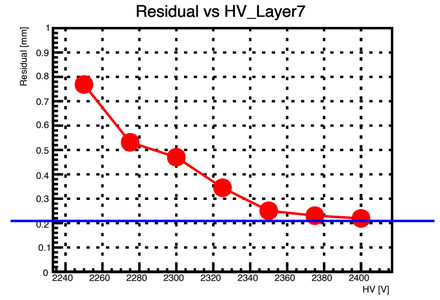


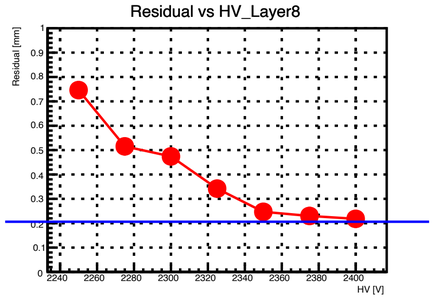


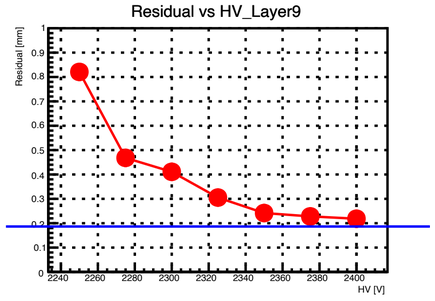


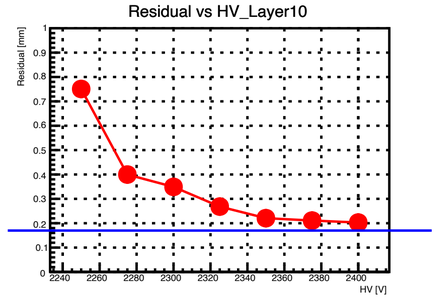


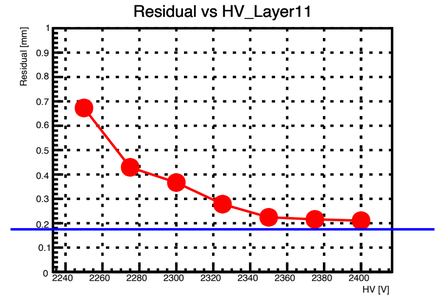


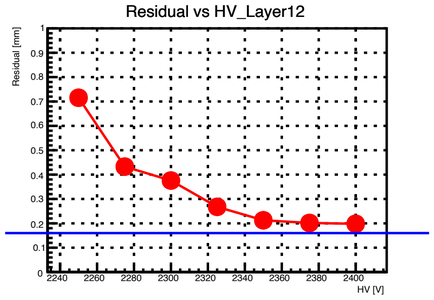


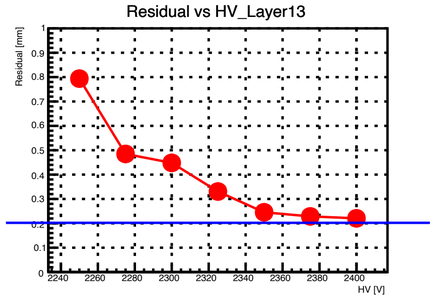


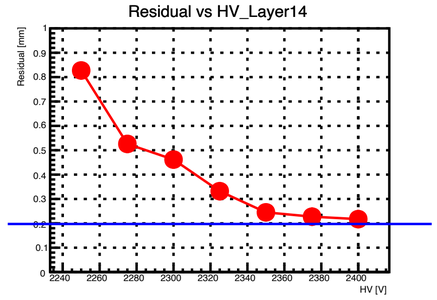












Layer Efficiency

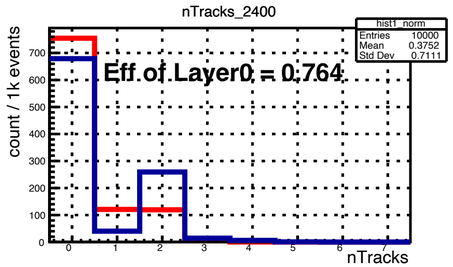
Lay Eff = (track近くにそのlayerにhitがある)/ (そのlayer抜きでのtrack数)

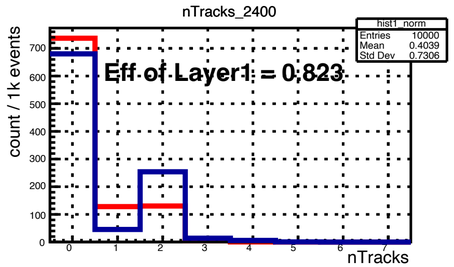
手順

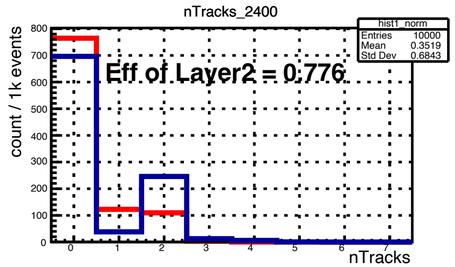
1. CDCAnalyzer.cc内のMakeClusterで注目layerを処す
2. その後は元々のcode通りに進める
3. CDCTree.ccでCDCana -> raw (?, 細かい表記は忘れた)でwire posを持ってくる。
4. trackとwire posがCDCAnalyzer.ccで定義されているcell size* cell factorと同じ距離内ならOK
5. これを15 layer 繰り返す。

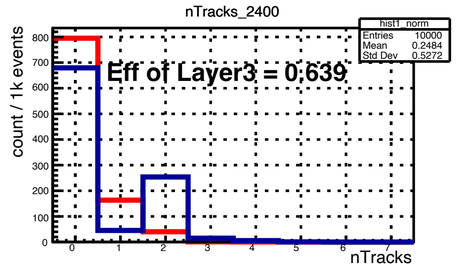
Tracking Efficiency (layer by layer)

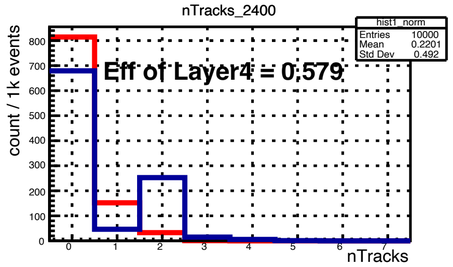
Tra Eff = (track近くにそのlayerにhitがある)/ (そのlayer抜きでのtrack数)

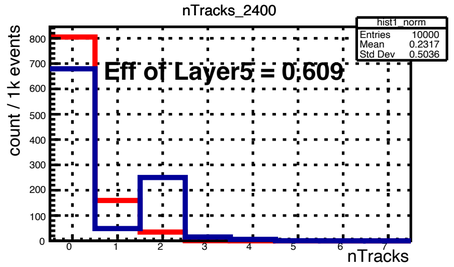


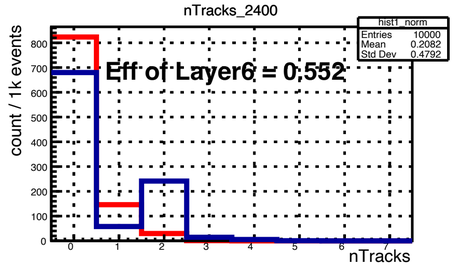


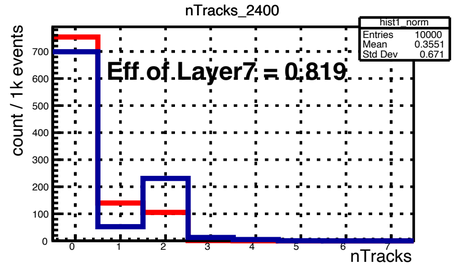


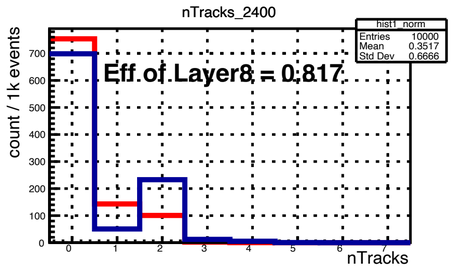


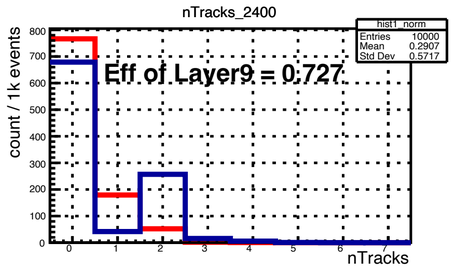


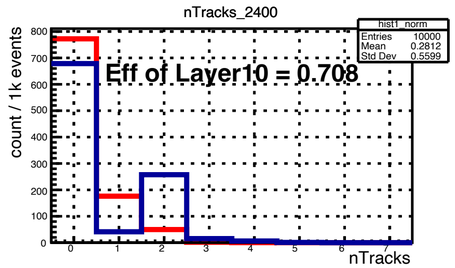


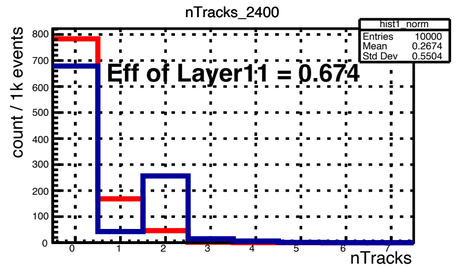


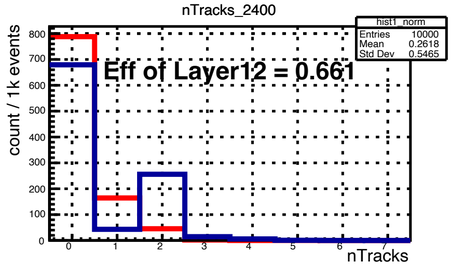


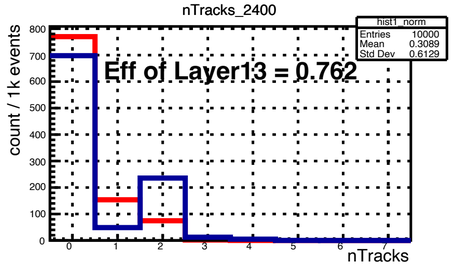


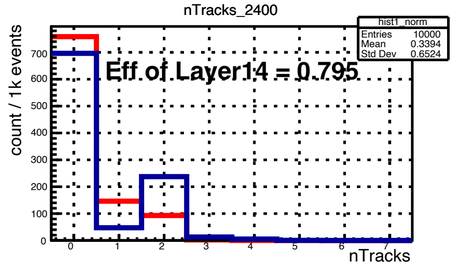








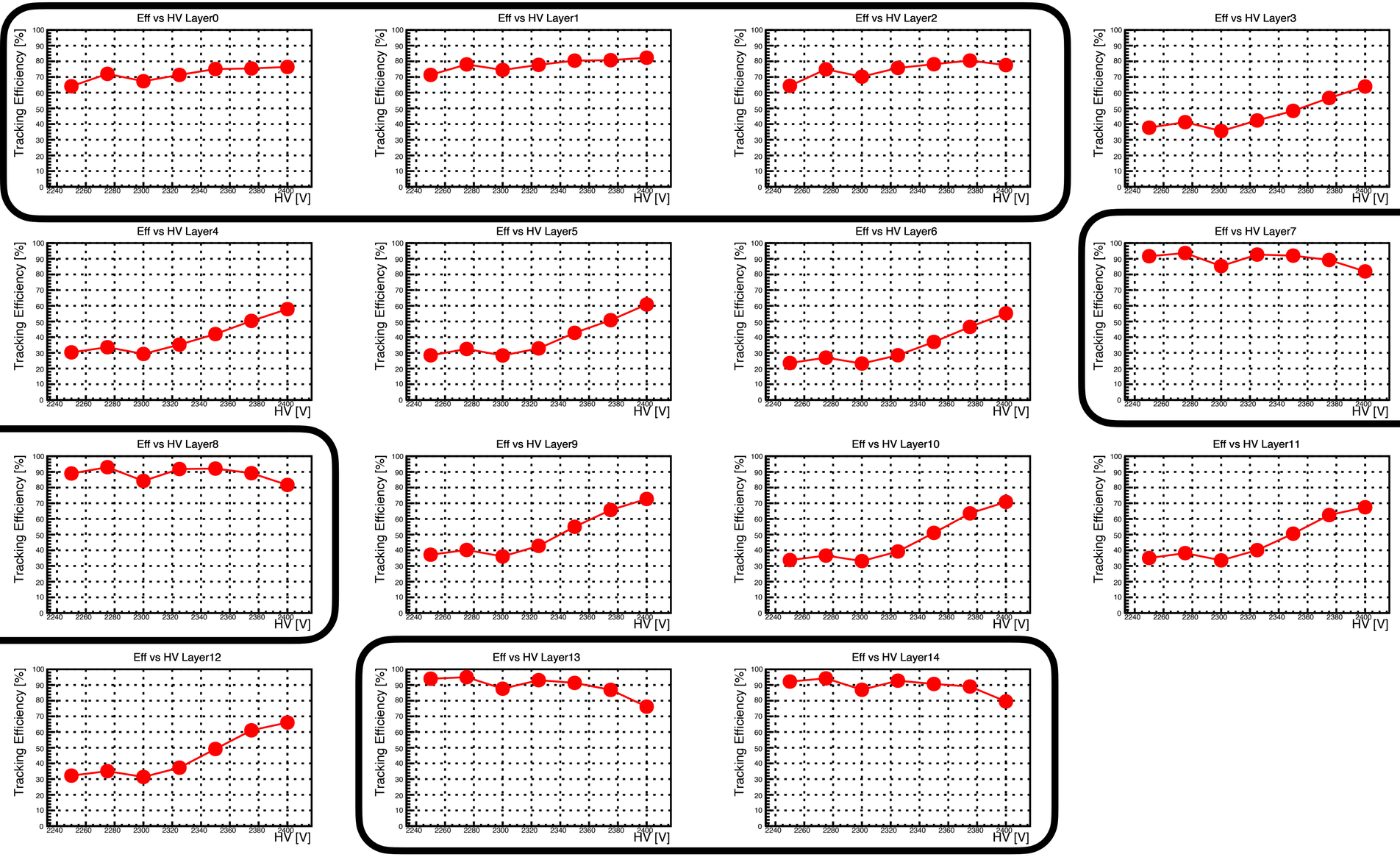




Layer Efficiency

Lay Eff = (track近くにそのlayerにhitがある)/ (そのlayer抜きでのtrack数)

Axial



Schedule

- Tracking Eff vs HV (まずはanalyzerそのまま使ってtracking effもどきをみてみる)
- Event Dispで解析の結果と矛盾していないか確認する。
- ArC2H6(50:50)とArCO2の比較をまとめる。
- 学会トークの骨格考える。（迅速に）(スライド作りつつ) (今日やる)
- (Vth 依存性についても考えたい。Fine Tuneだから、、、、時間に余裕があれば)
- 明日にはデイジーチェーン装着を終わらせたい。

Back Up

Figures of all runs and layers are in Kimura's Google Drive "Back Up in Slide"