

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

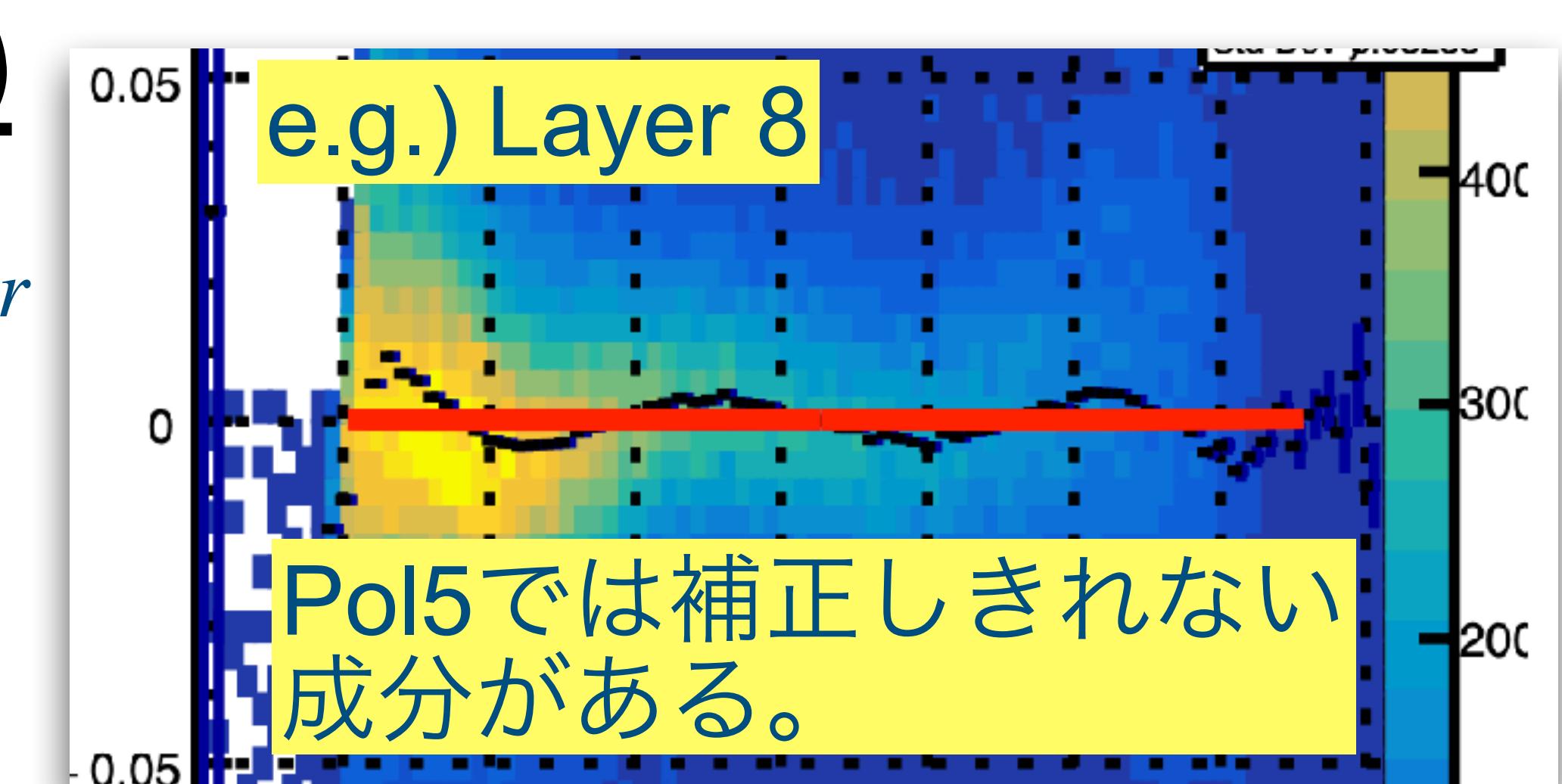
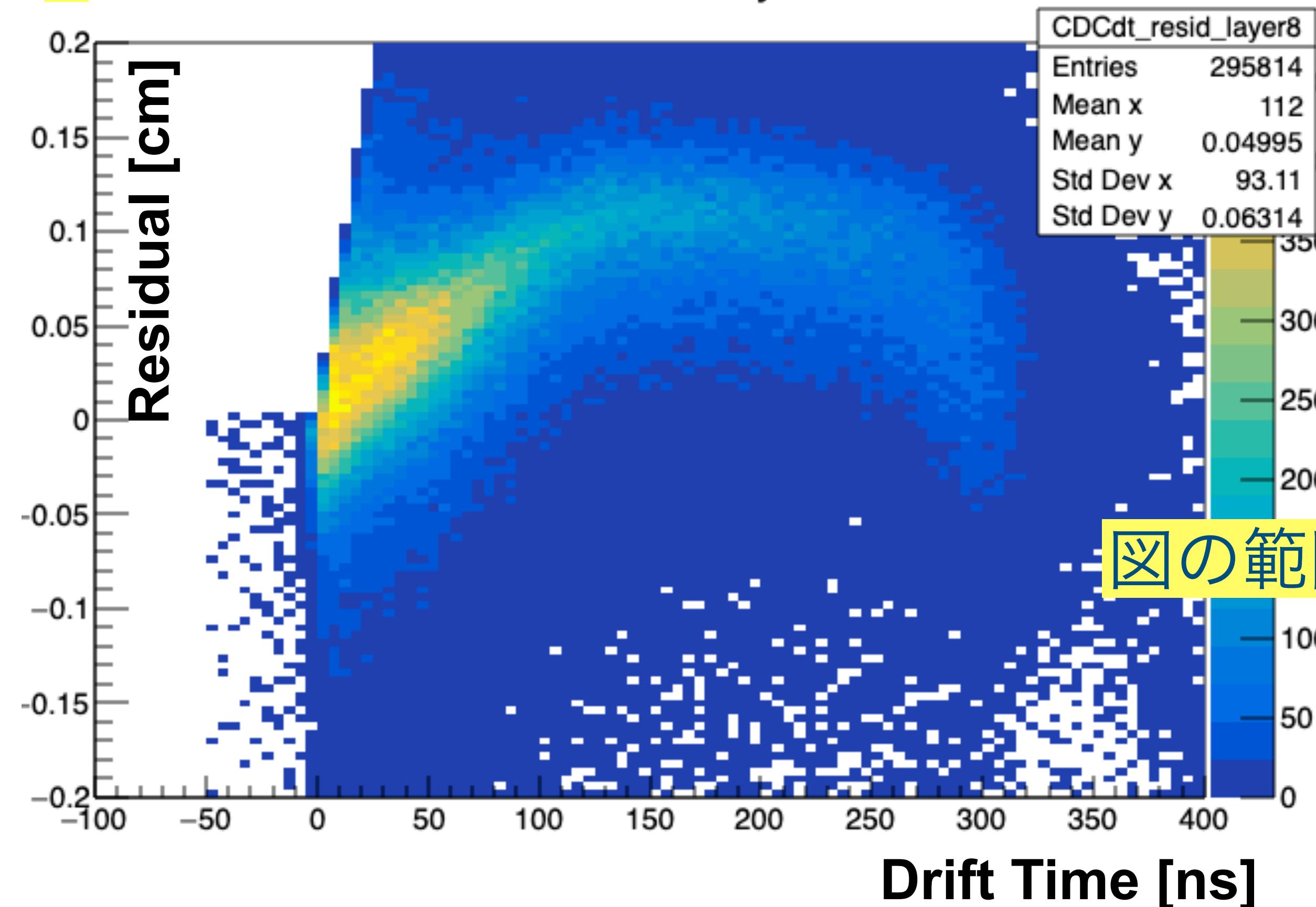
3

Iterating the XT parameters
(to plot “eff vs HV and resid vs HV”)

Drift Time vs Residual, 2350 V (Run 44)

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

0
CDCdt_resid_layer8



Drift Time vs Residual, 2350 V (Run 44)

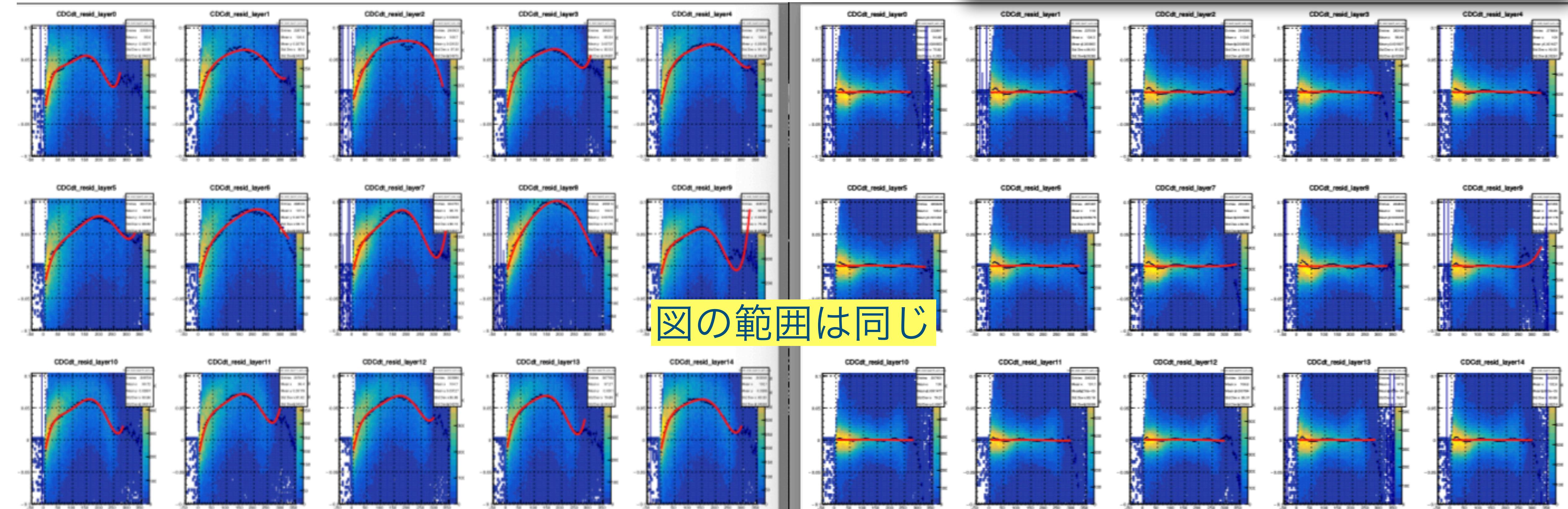
- How to iterate; $pol5_{n+1} = pol5_n - 0.9 \times pol5_n^{corr}$
- 50,000 events

0

10

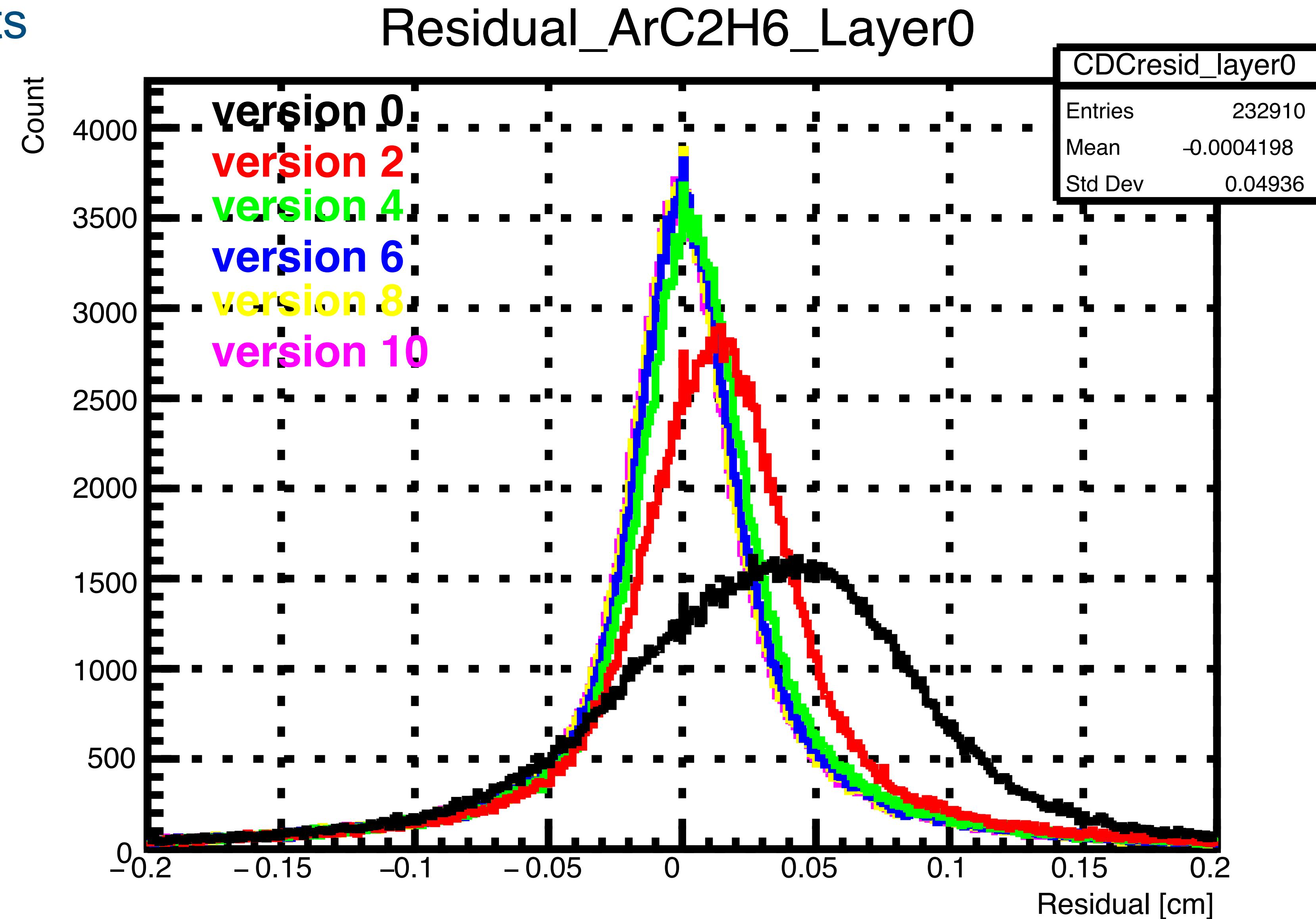
e.g.) Layer 8

Pol5では補正しきれない
成分がある。

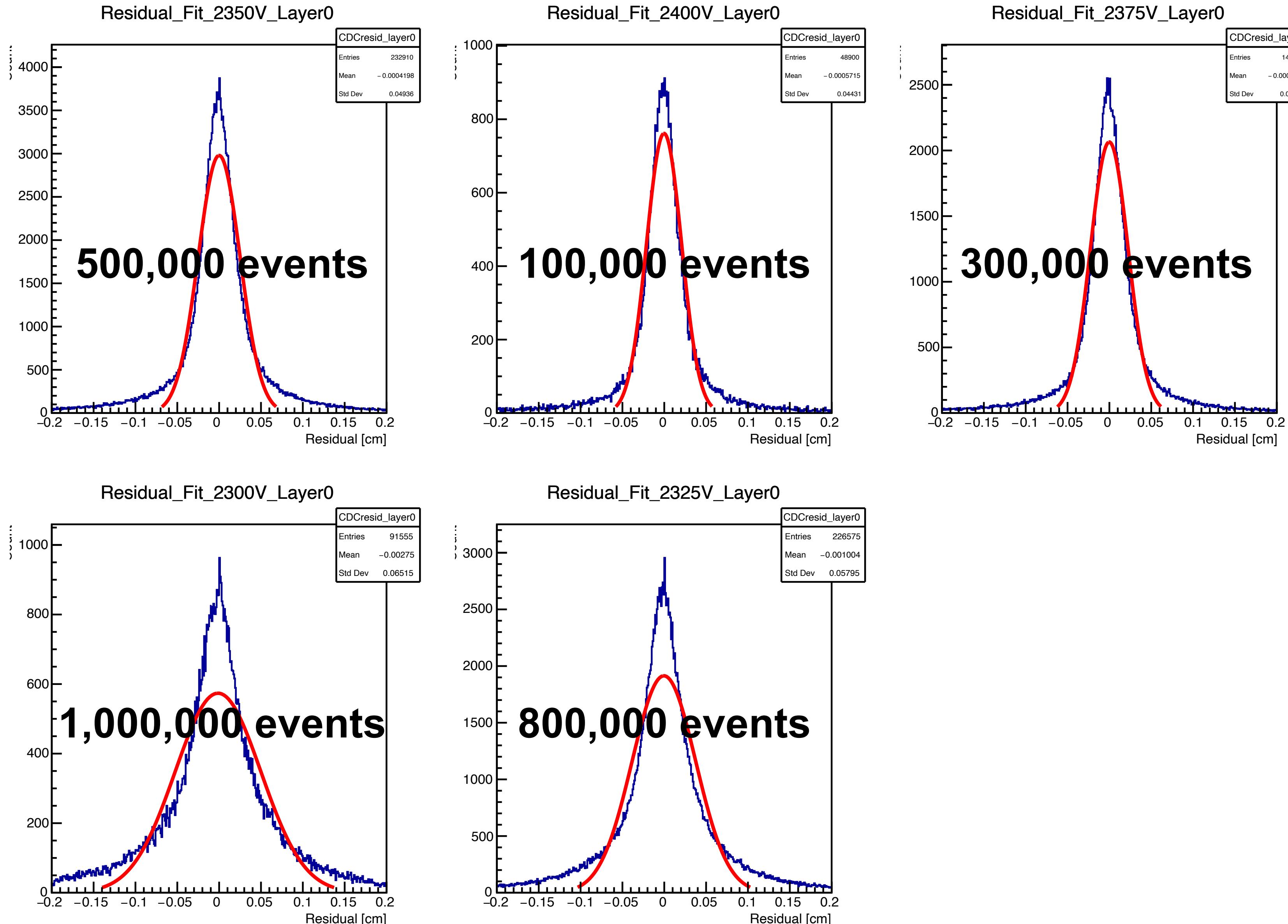


Residual; Before After interacting, 2350 V(Run 44)

- 50,000 events



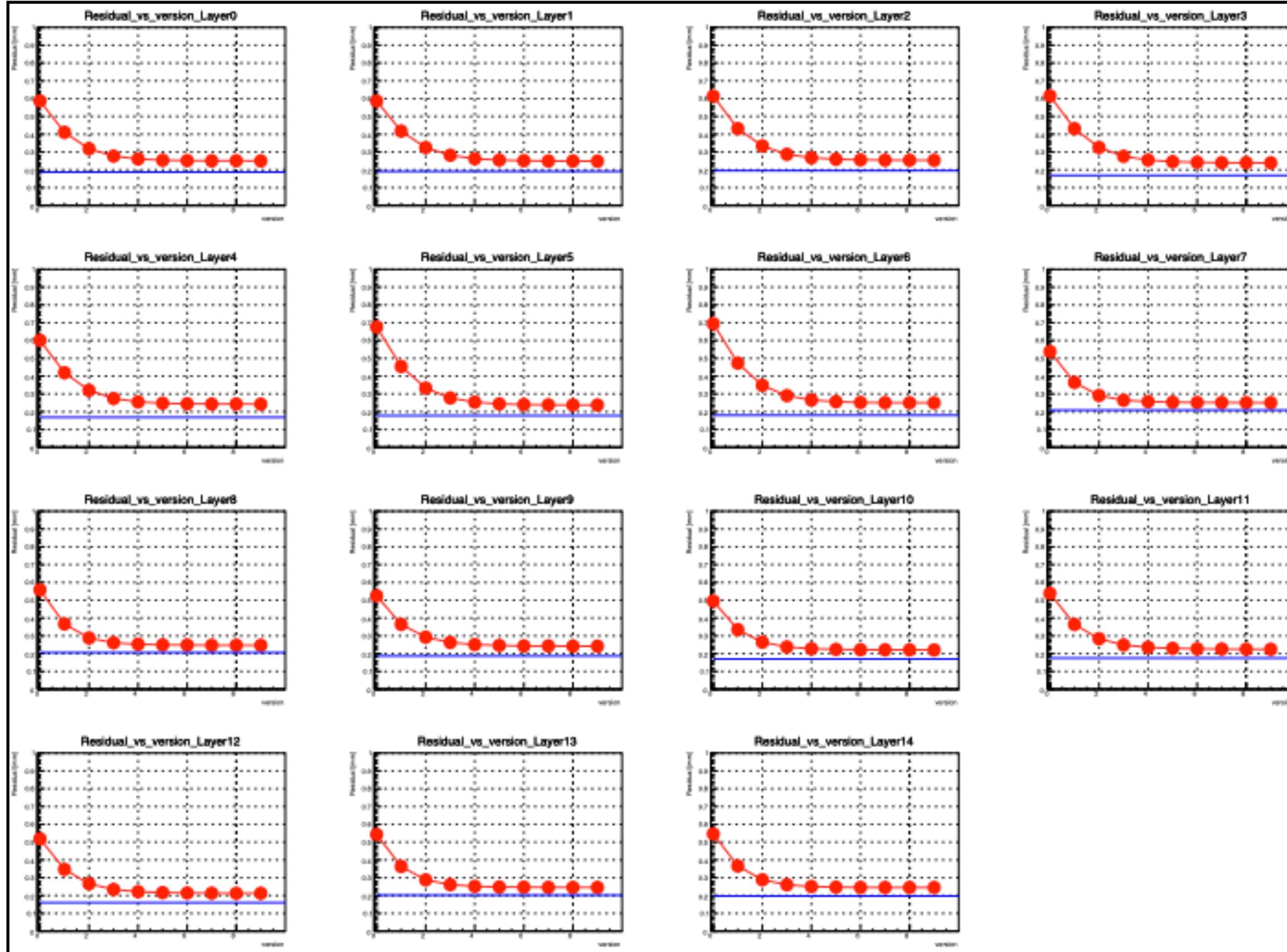
Gauss Fit; After iterating, 2300~ 2400 V



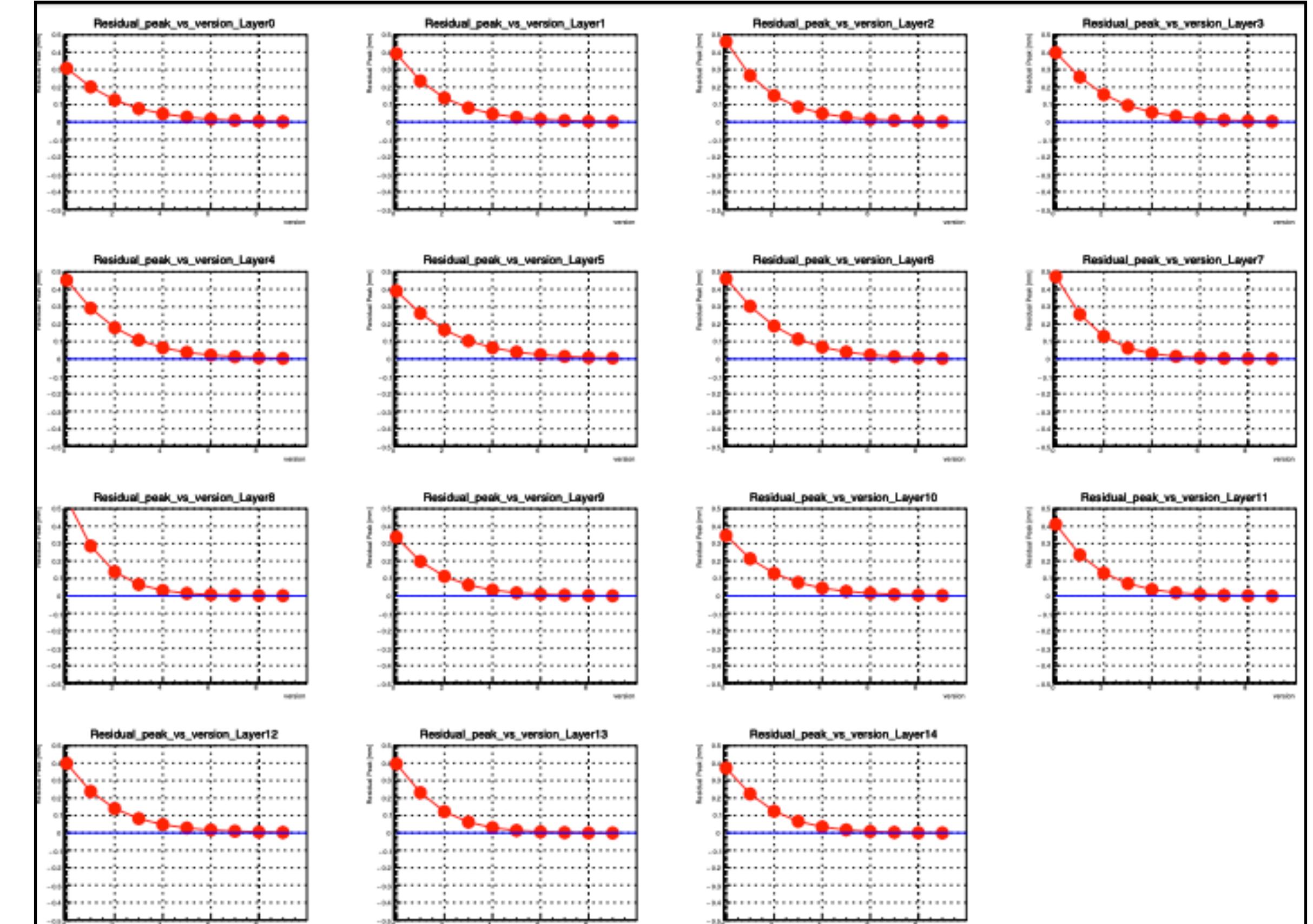
Fit result of Residual; Before After iterating, 2350 V(Run 44)

— ArC2H6 after iterating

Sigma vs Version



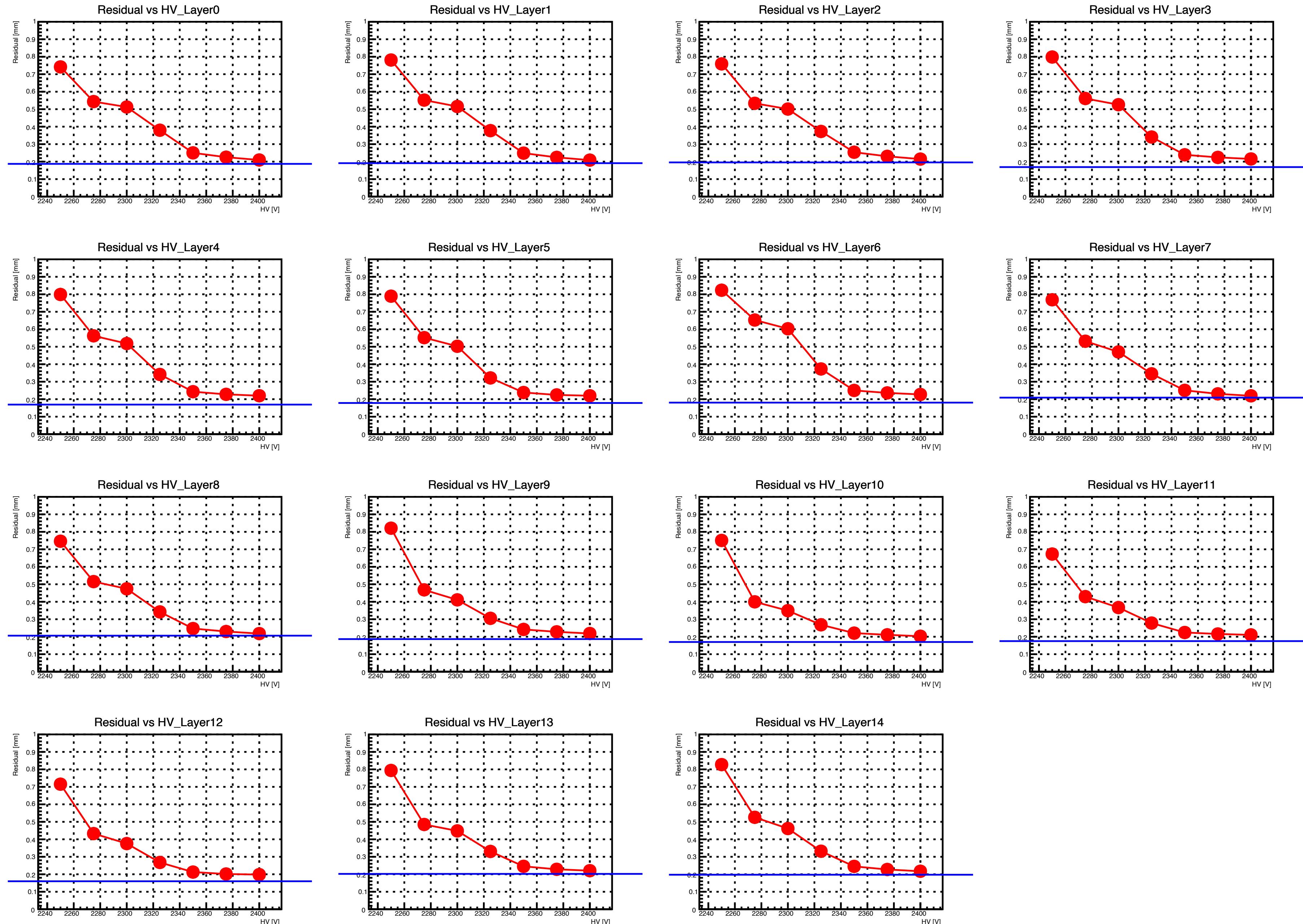
Peak vs Version



Residual vs HV After iterating

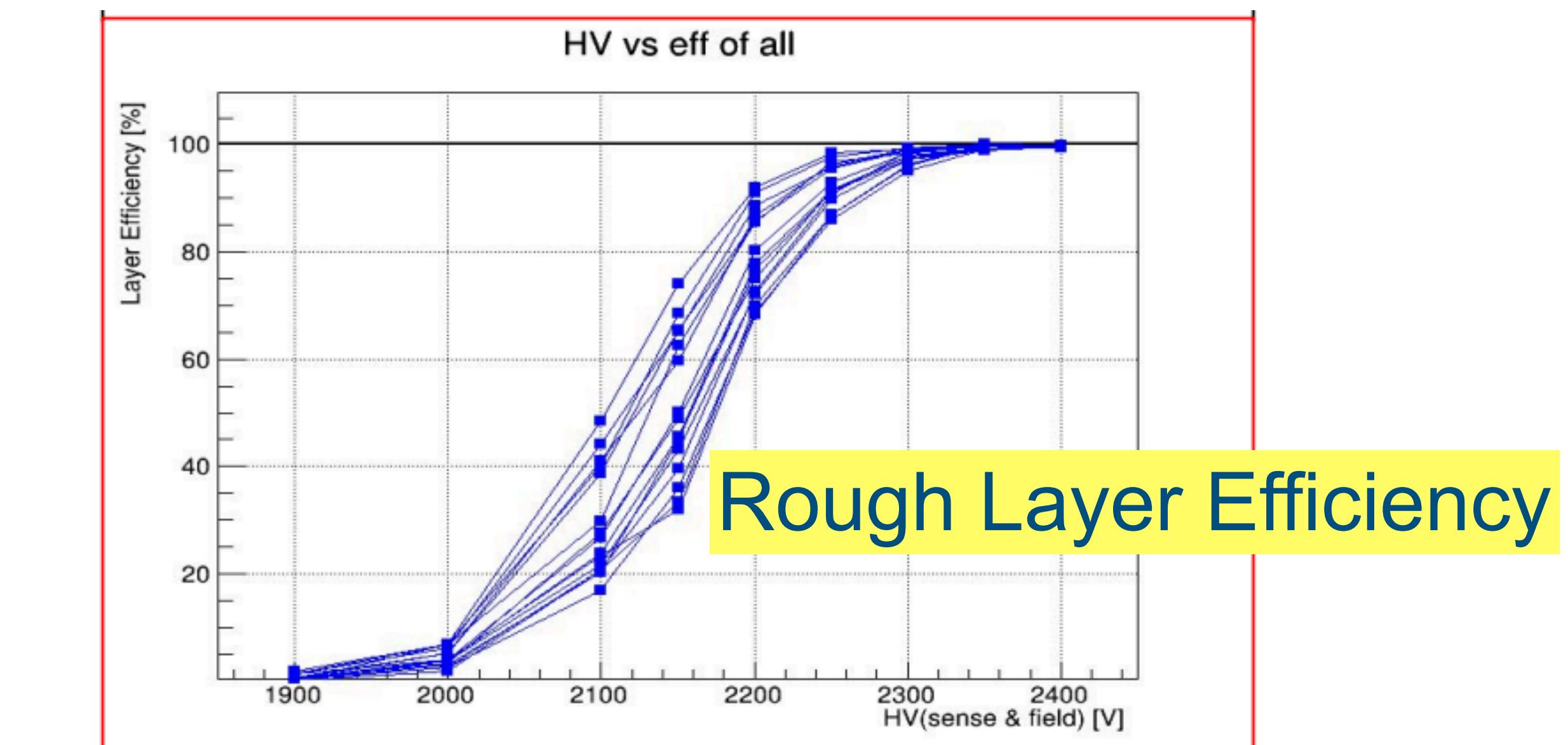
2250~2400 V

— ArC2H6



Current Status

- 熱縮作業中 for E80 CDC in GeV-g 測定室, 明日中に終わらせたい.
- ArCO₂ (90:10) study with E15 CDC
 - Tracking Eff vs HV, Residual vs HV plotをまずは作りたい。
 - そのためにXT parameter tuneをした。<—今日のレポート
(2250~2400Vのみ。2275V以下は統計が不十分)



Schedule

2024/08/26 Mon		
2024/08/27 Tue		
2024/08/28 Wed		
2024/08/29 Thu		
2024/08/30 Fri		
2024/08/31 Sat		
2024/09/01 Sun	東海へ	
2024/09/02 Mon	16	
2024/09/03 Tue	17	
2024/09/04 Wed	18	
2024/09/05 Thu	19	
2024/09/06 Fri	20	
2024/09/07 Sat		
2024/09/08 Sun		
2024/09/09 Mon	21	
2024/09/10 Tue	22	
2024/09/11 Wed	23	
2024/09/12 Thu	24	
2024/09/13 Fri	25	
2024/09/14 Sat		仙台へ
2024/09/15 Sun		北海道へ
2024/09/16 Mon		JPS@北大
2024/09/17 Tue		JPS@北大
2024/09/18 Wed		JPS@北大
2024/09/19 Thu		JPS@北大
2024/09/20 Fri		運転免許
2024/09/21 Sat		end
2024/09/22 Sun		
2024/09/23 Mon		東海へ
2024/09/24 Tue		
2024/09/25 Wed		
2024/09/26 Thu		
2024/09/27 Fri		
2024/09/28 Sat		
2024/09/29 Sun		
2024/09/30 Mon		

- Tracking Eff vs HV, Residual vs HV plot
- ArC2H6(50:50)とArCO2の比較をまとめる
- CDC関連論文、記事、TDRを漁って自分がやるべきことを炙り出す。
- 学会トークの骨格考える。
(スライド作りつつ)



松: 木曜までには！
竹: 土曜までに。
梅: 仙台発(日曜)までに。

Back Up

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