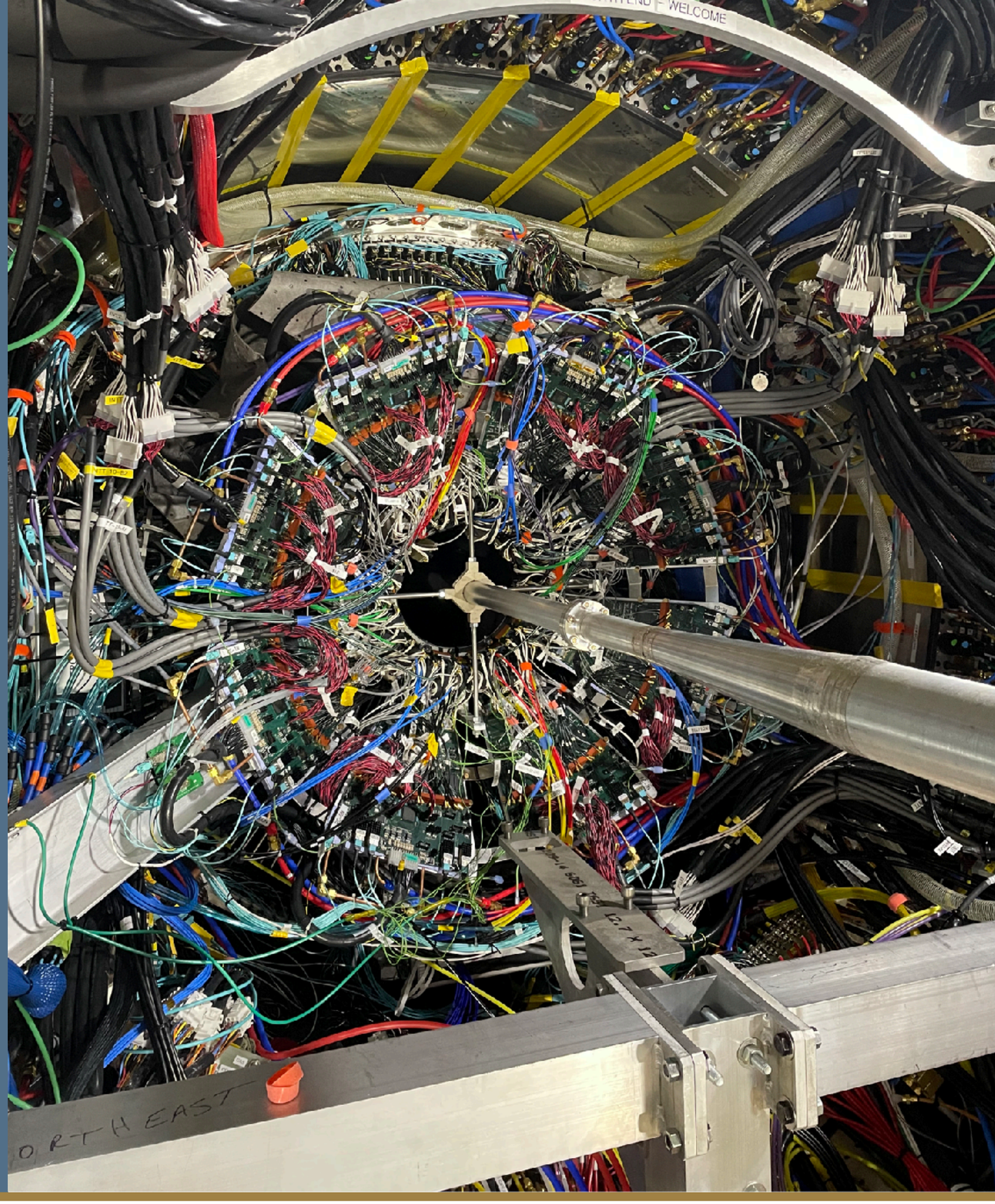
sPEHNIX INTT - Beam Test Analysis

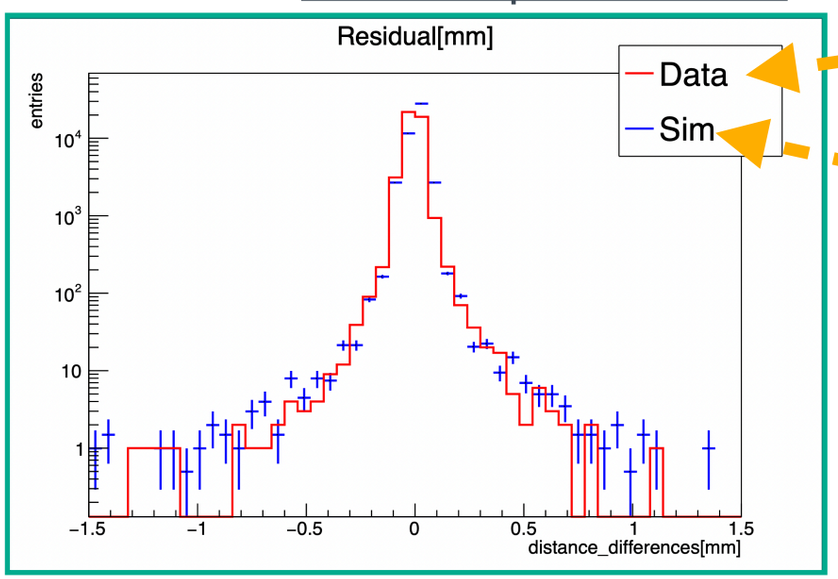
Cheng-Wei Shih, Chia-Ming Kuo
National Central University



2023/07/20 INTT meeting

Distribution comparison

Reminder : Hinako's presentation



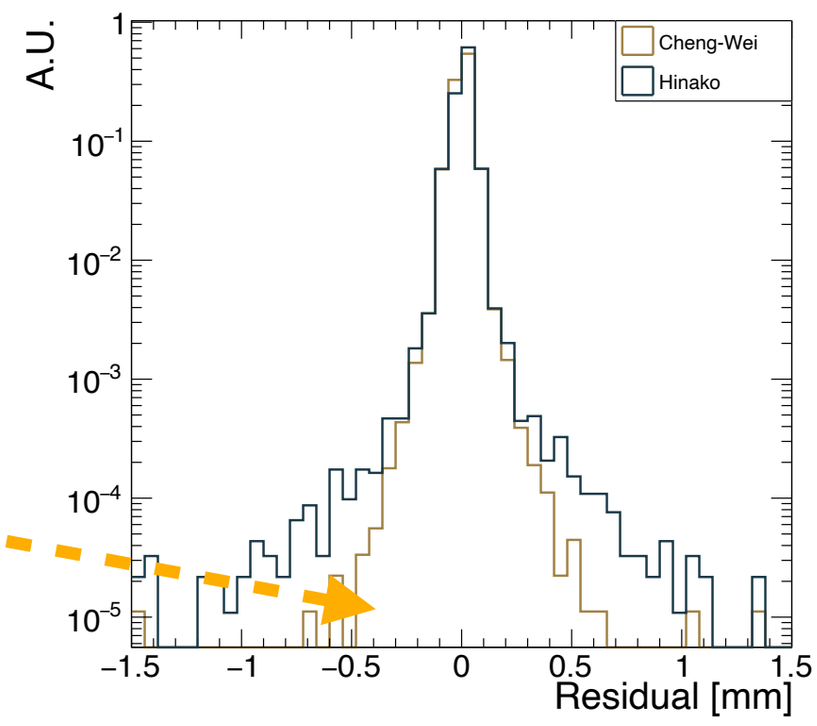
Data : from run52 U8, tight selection

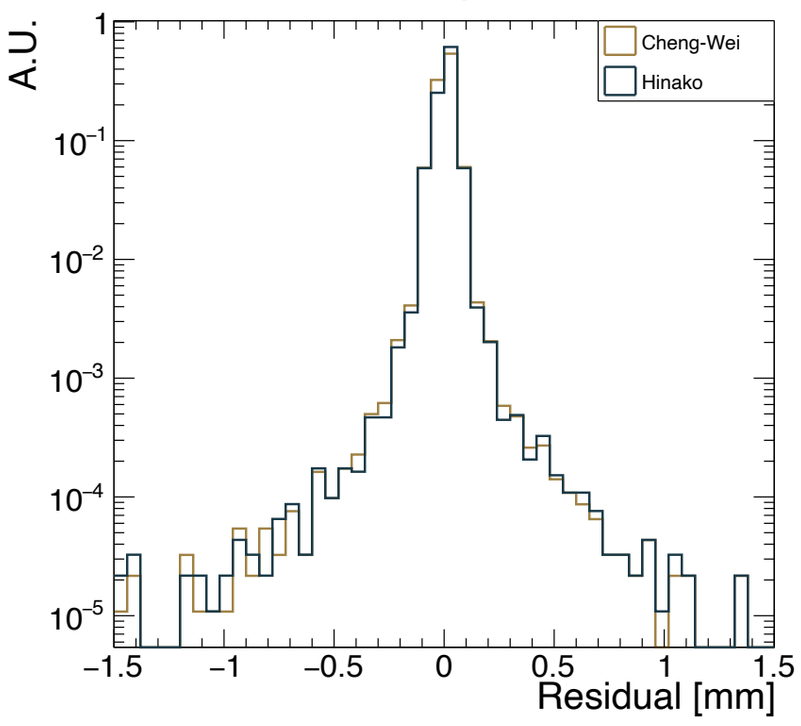
MC : generated by Hinako, loose selection

Same MC root file (generated by Hinako)
Different selection

Try to loose my selection and make the comparison

Selection as tight as the hit effi. study



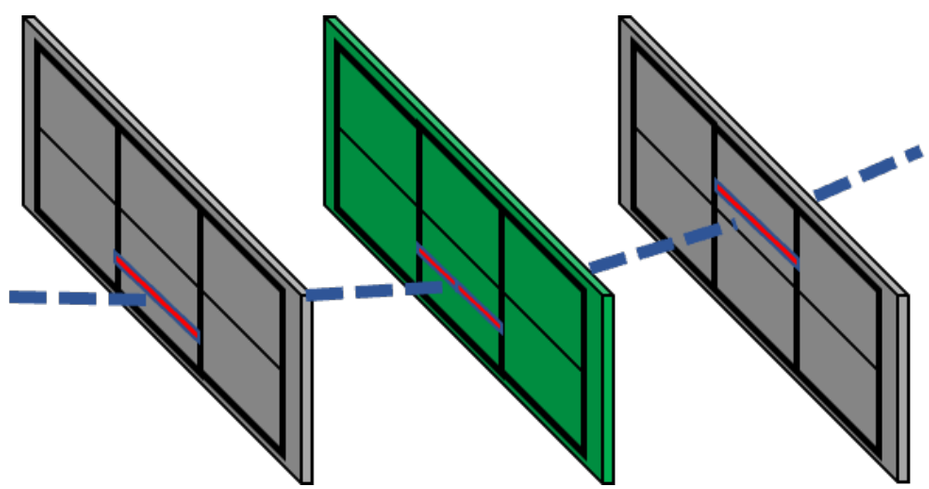


The difference is due to different selections, not the normalization method

Algorithm update

- Original algorithm : check the Clu_{L0} and Clu_{L2} first
  → The amount of scattering is confined X

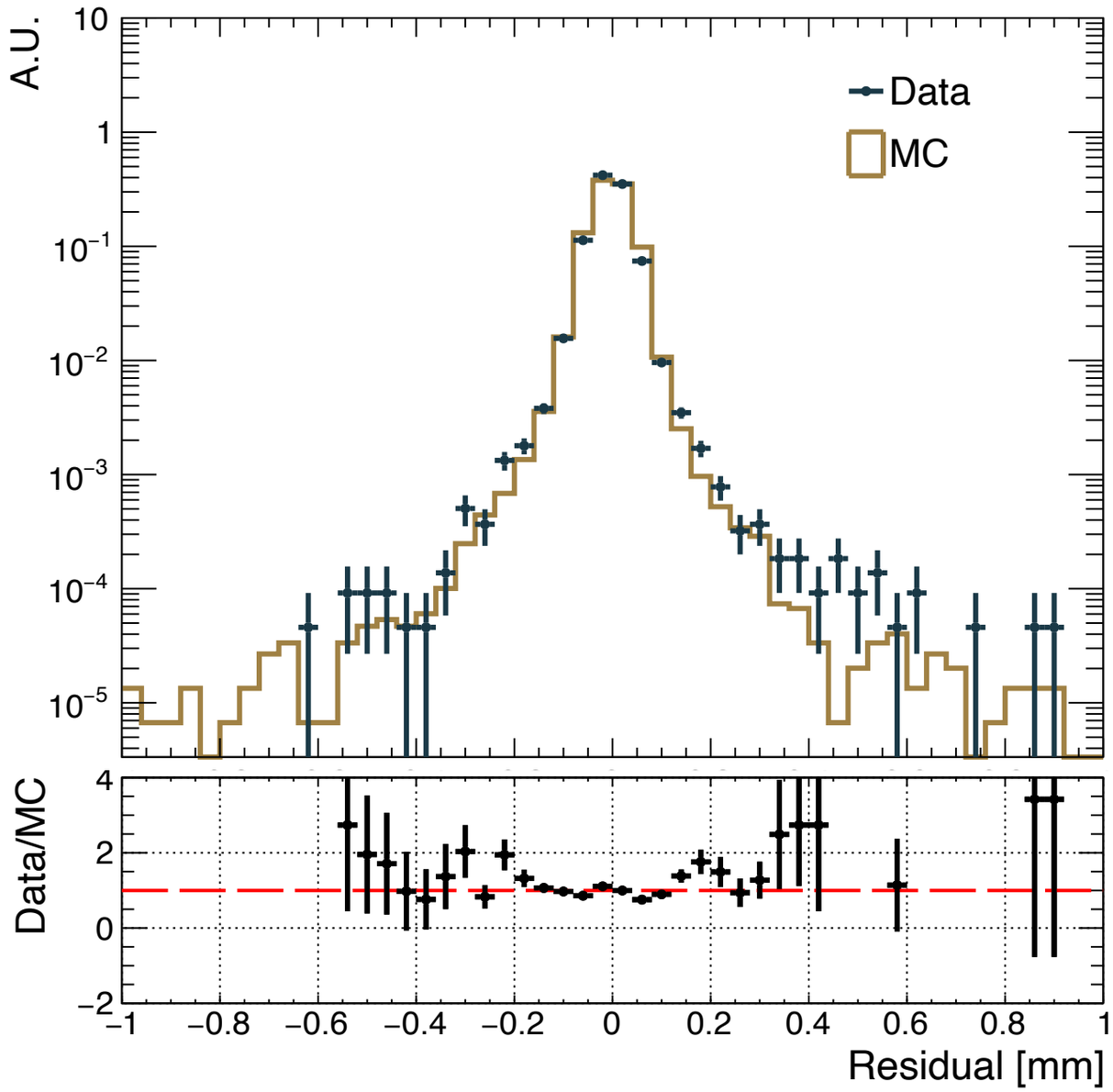
- New algorithm : confirm Clu_{L0} and Clu_{L1} first
  1. Make sure only one cluster each layer
  2. The 3 clusters have to be in the same column (purest event)
  3. Calculate the slope and mean pos of line Clu_{L0} and Clu_{L1}
  4. If the slope passes the slope_cut and mean_pos_cut -> calculate the scattering



New residual distribution

Same criteria are applied on MC and data

MC beam smeared



Backup