

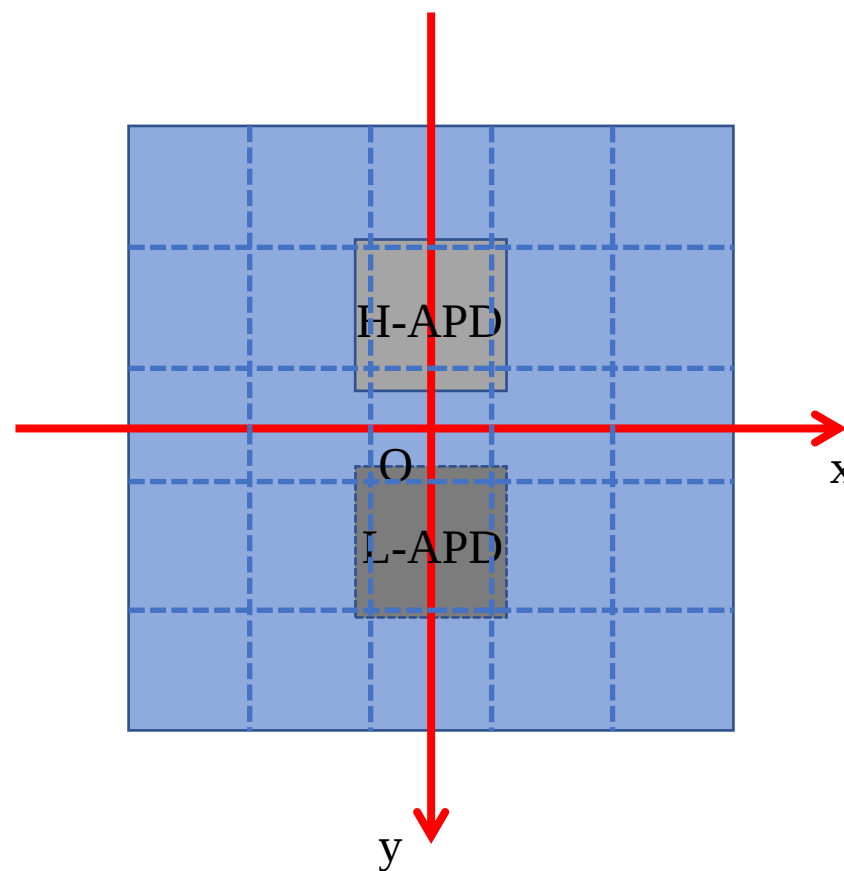
HEIC-Cube cosmic ray test

张研硕

2026.07.22

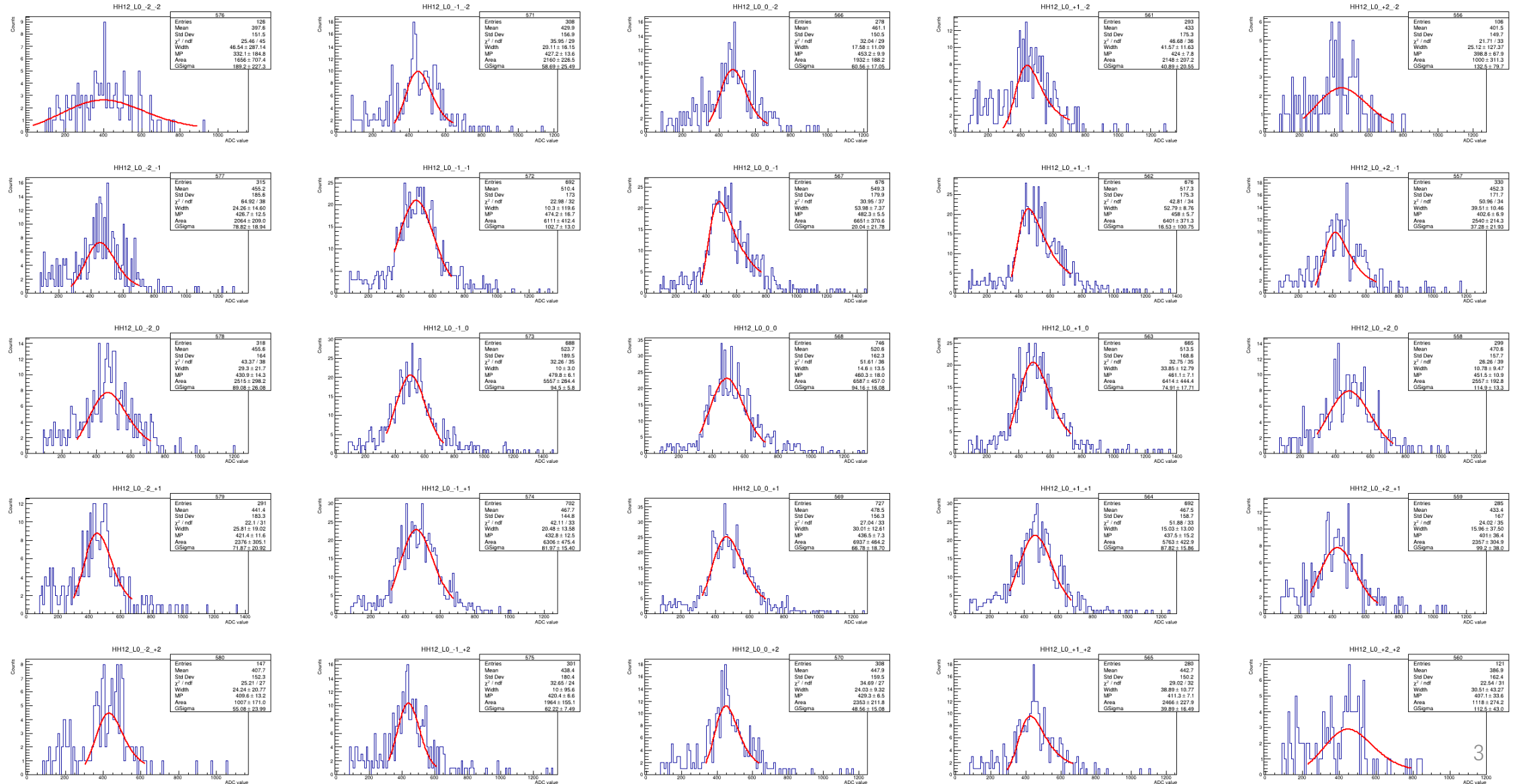
荧光传输与收集的不均匀性

- 若按 5×5 的方式分割中央晶体，则有1个单元将覆盖APD的主体区域；
- 目前已经测试15天，每块晶体上获得~12000个有效事例；

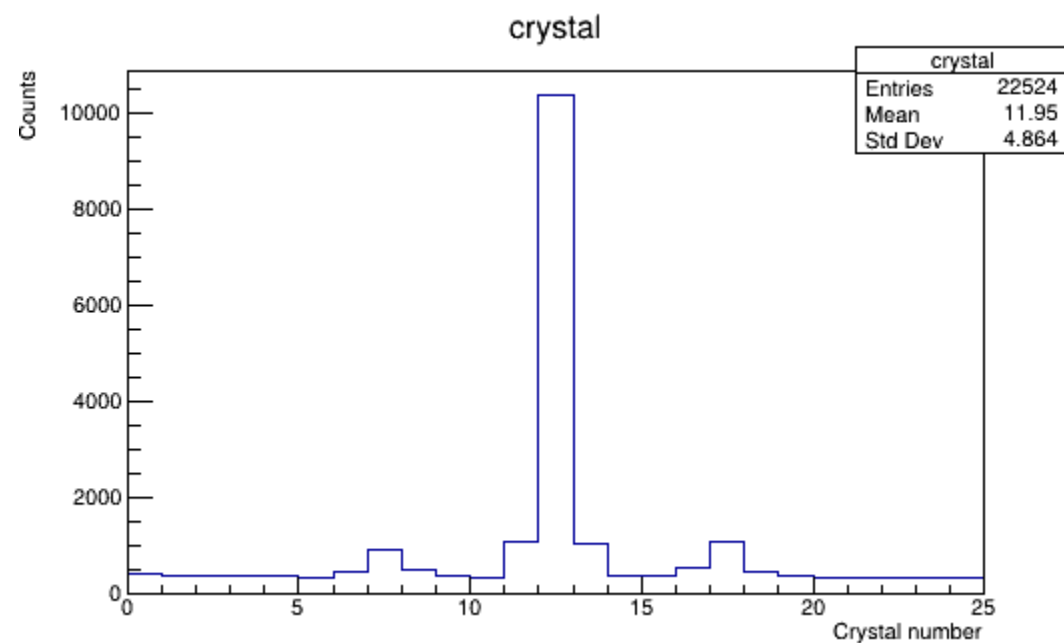


晶体的假想分割方式

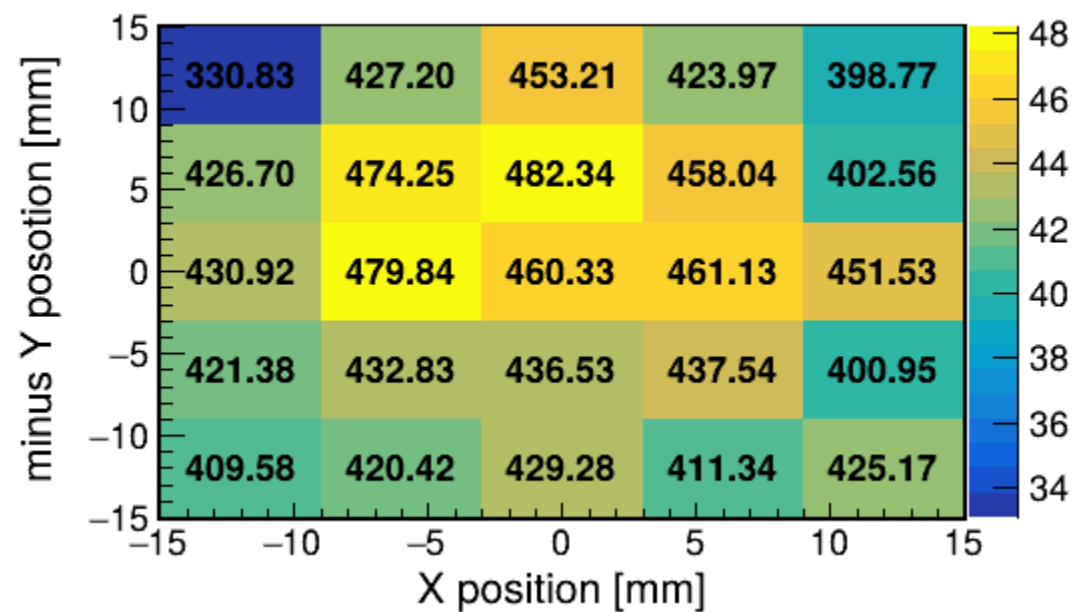
HH12layer0 按5×5划分



HH12layer0 按 5×5 划分

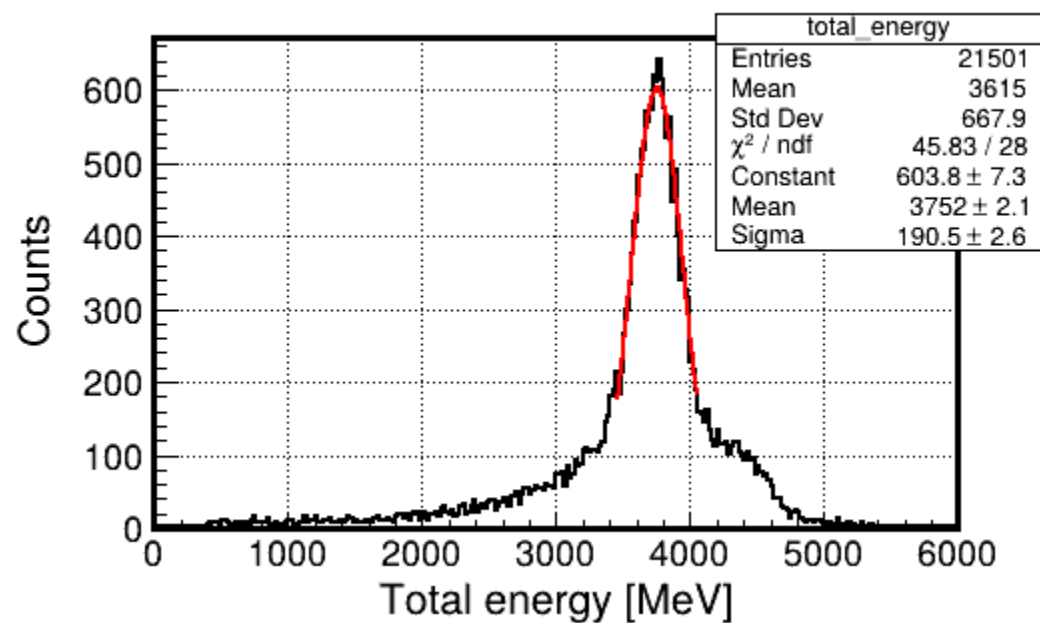


每个晶体上的计数分布

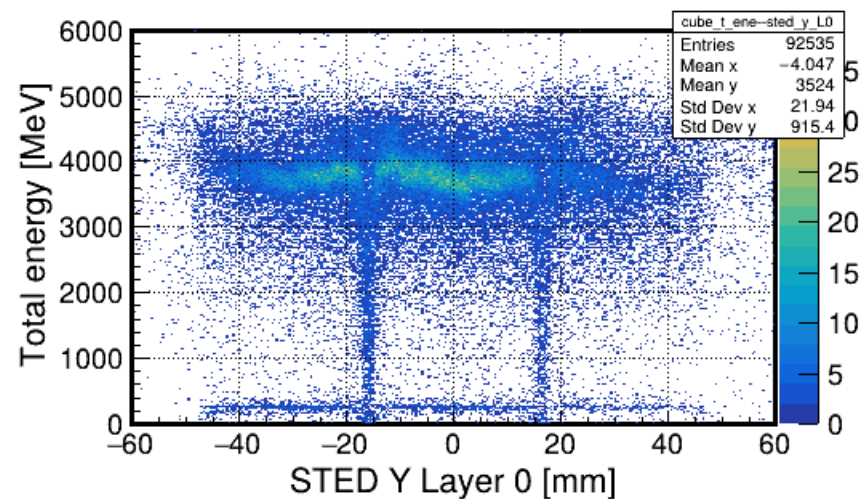
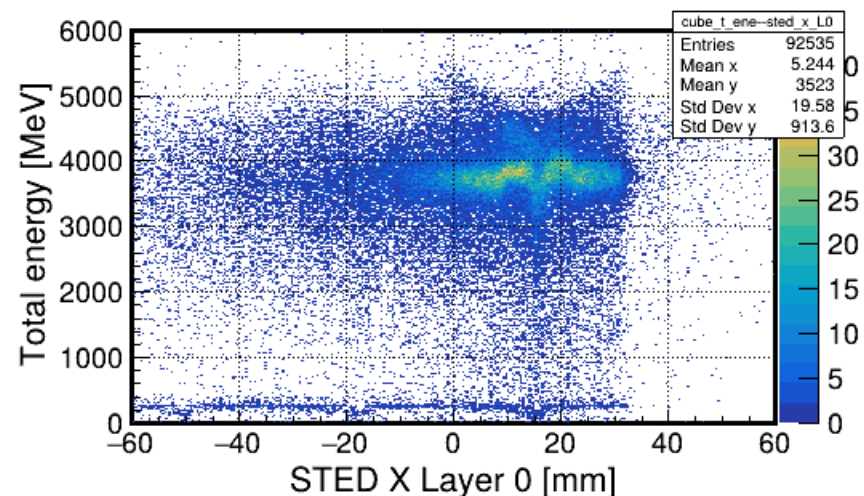


HH12每个小单元的mpv分布

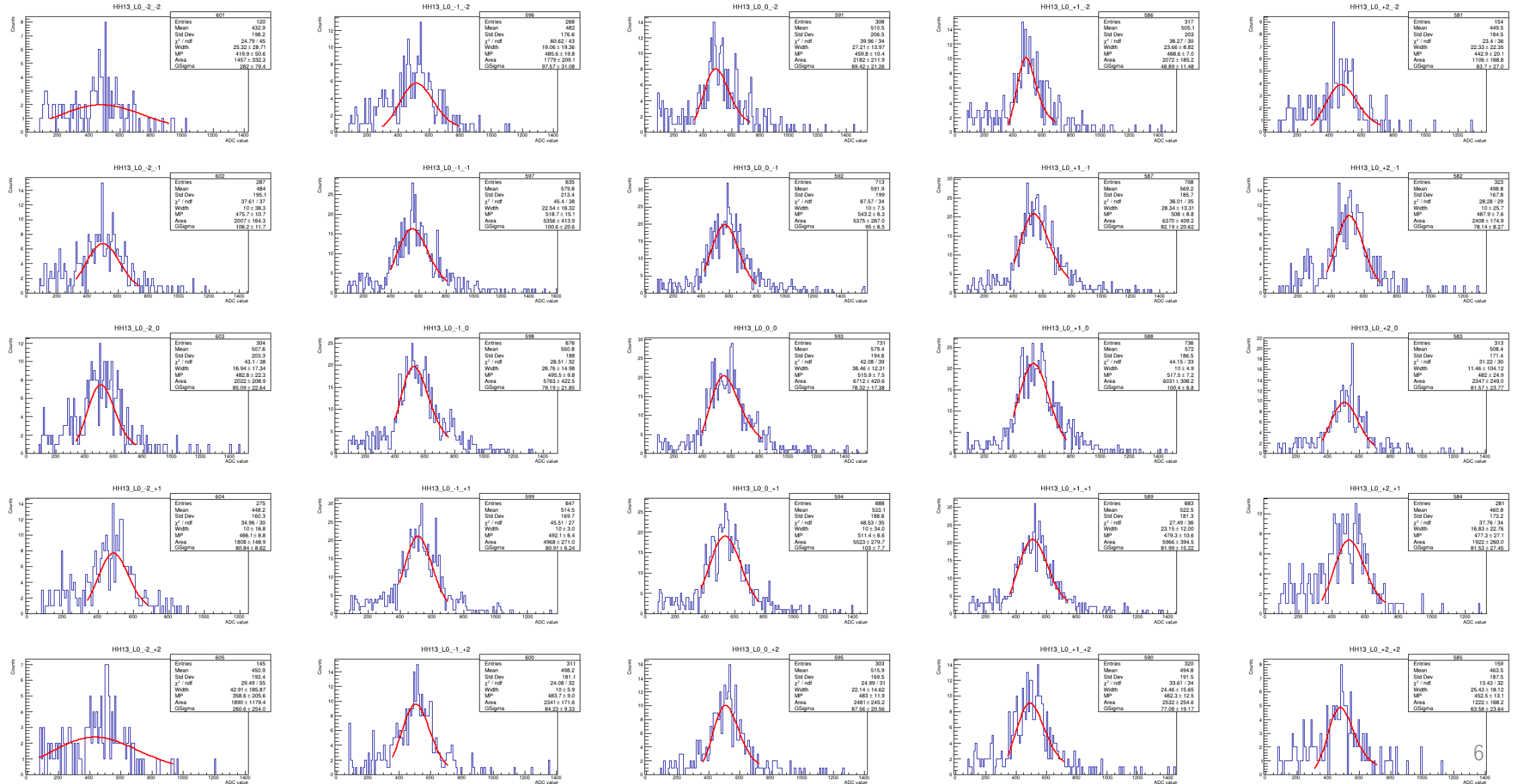
将此结果用于电子能谱修正



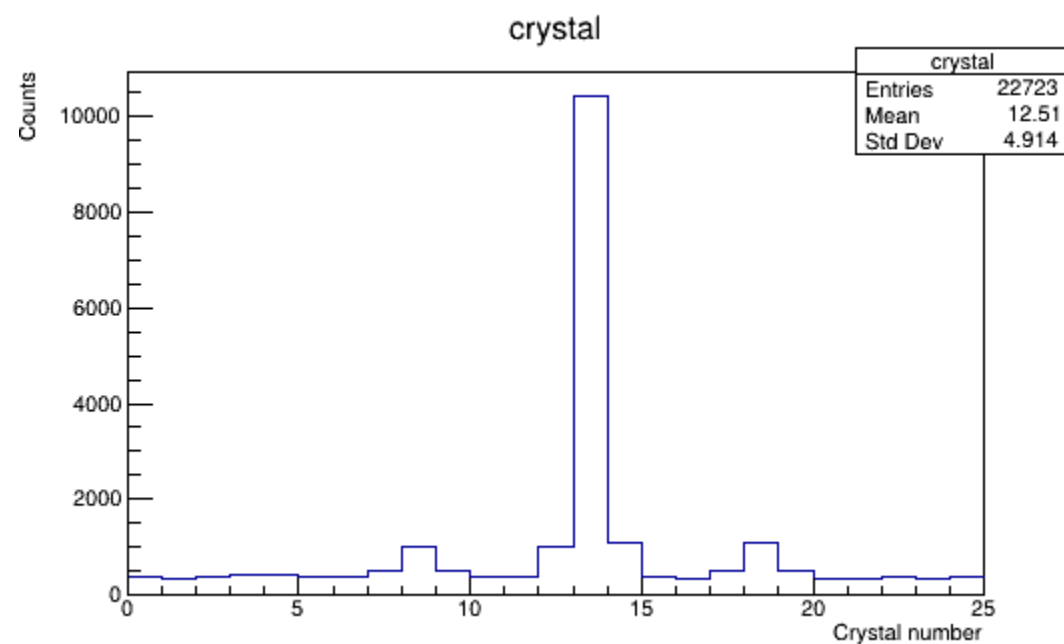
能量分辨率: 5.1%



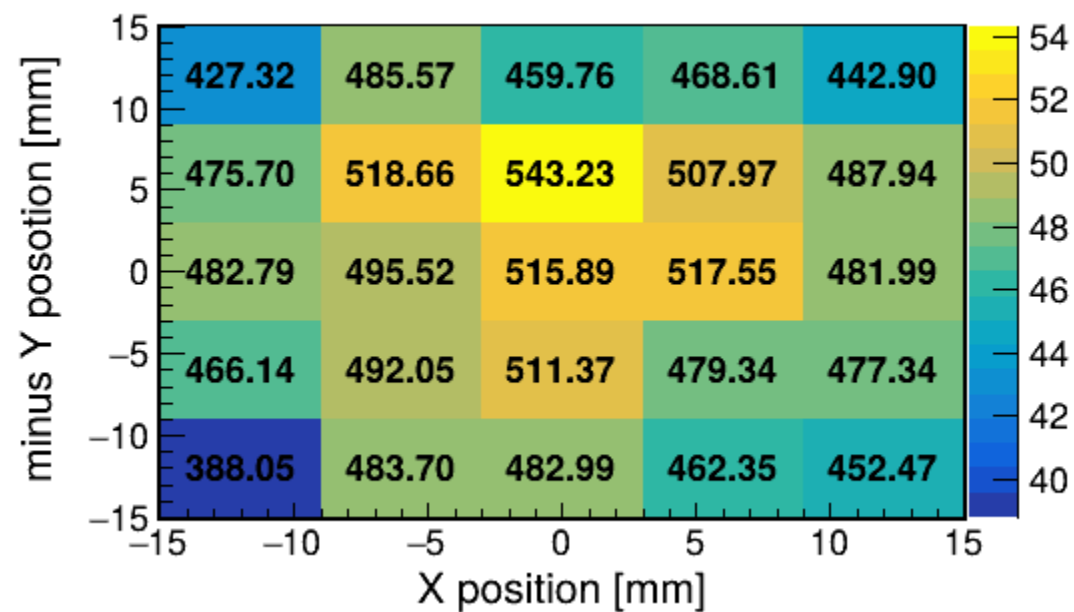
HH13layer0 按5×5划分



HH13layer0 按 5×5 划分

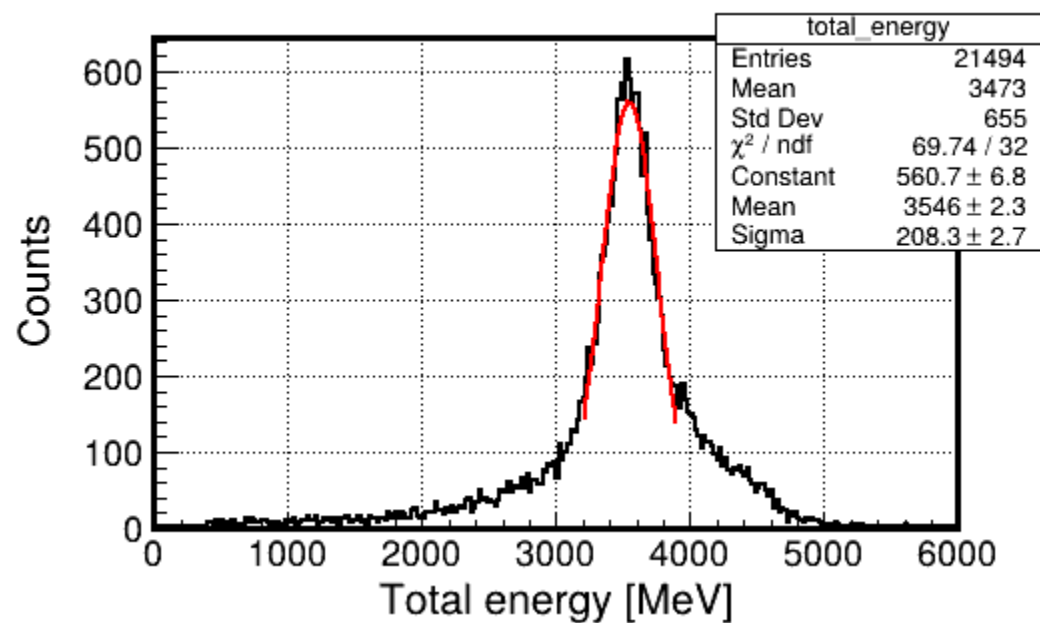


每个晶体上的计数分布

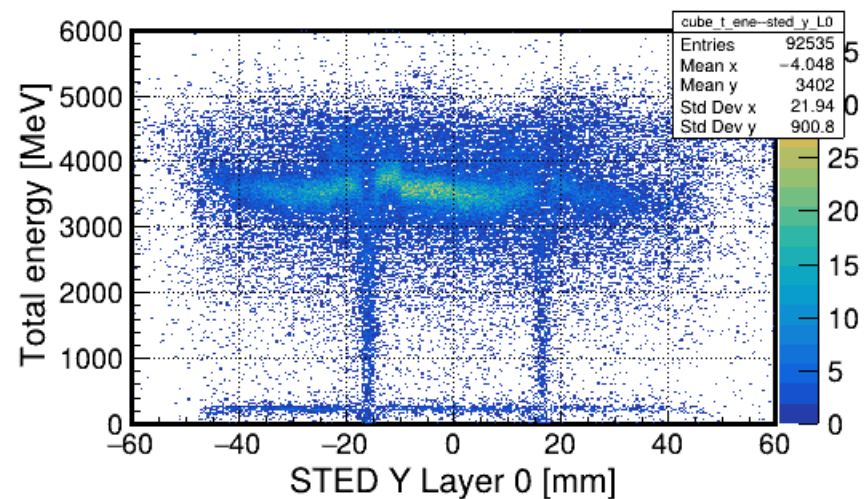
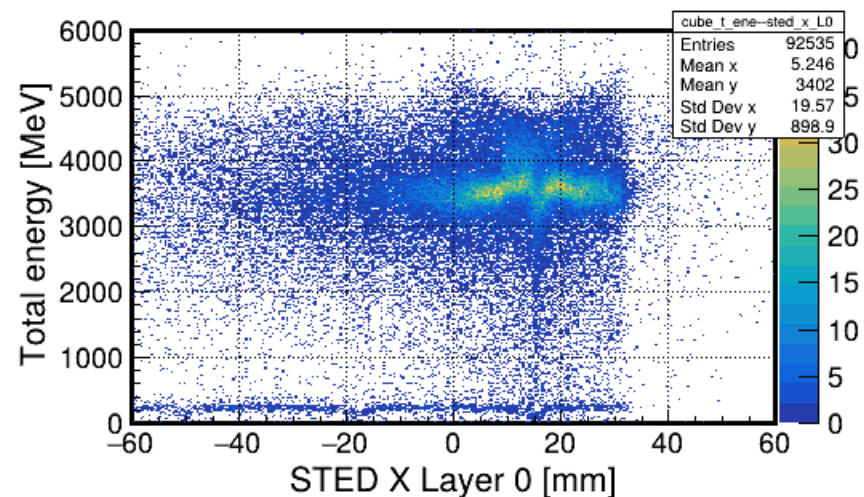


HH13每个小单元的mpv分布

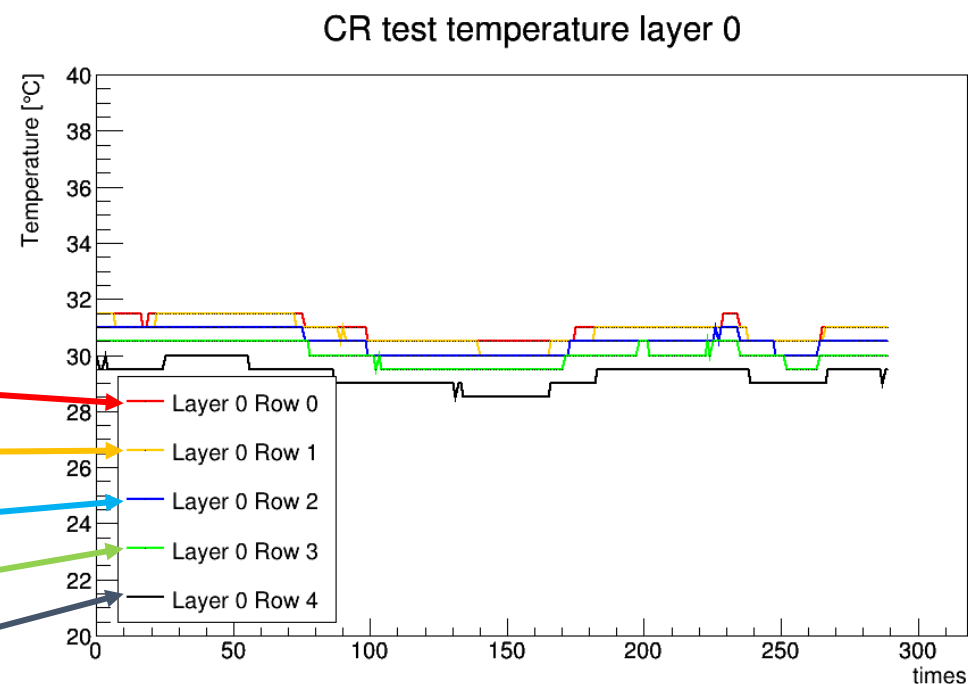
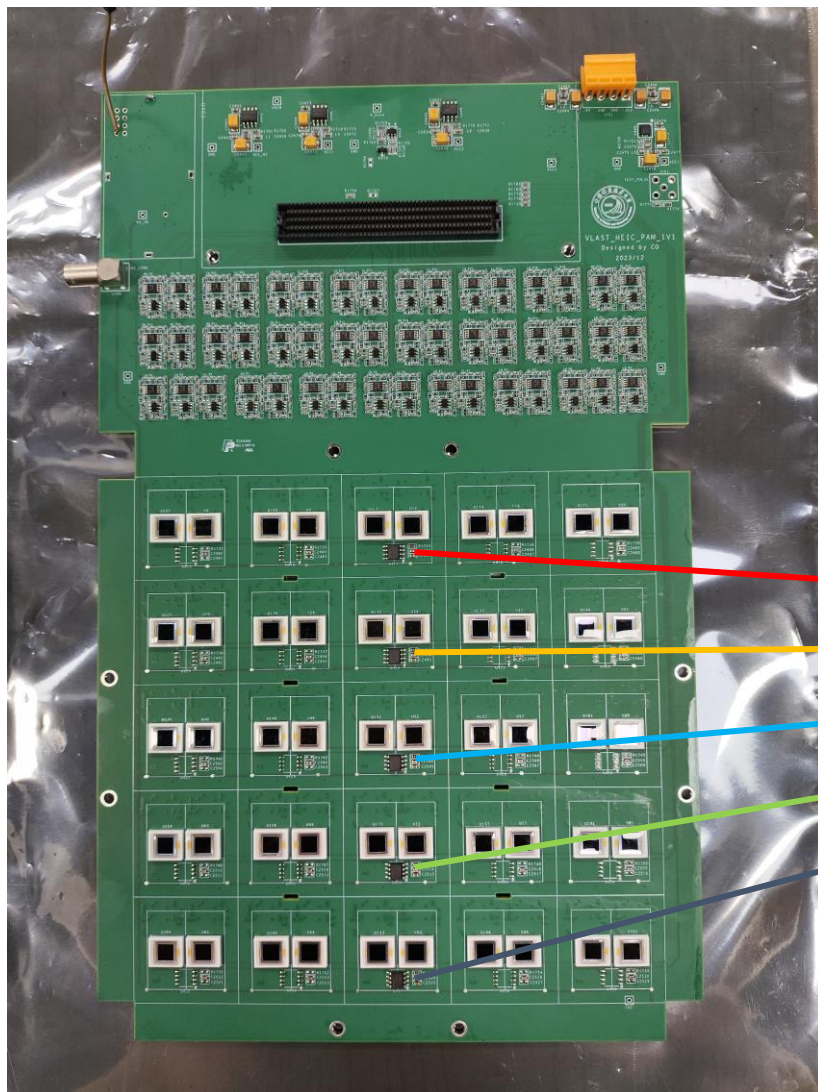
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能量分辨率: 5.8%

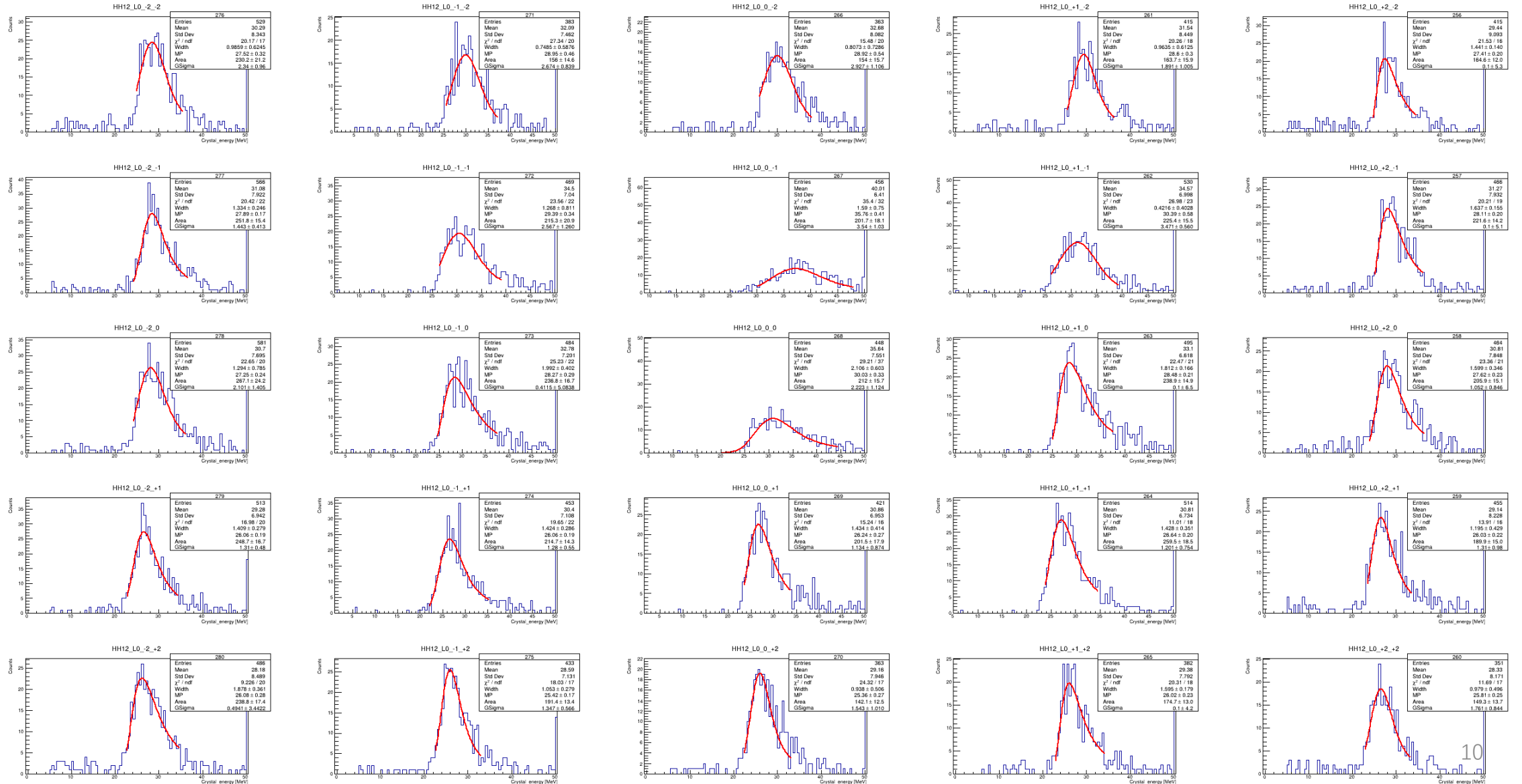


PCB上的温度变化—05.11

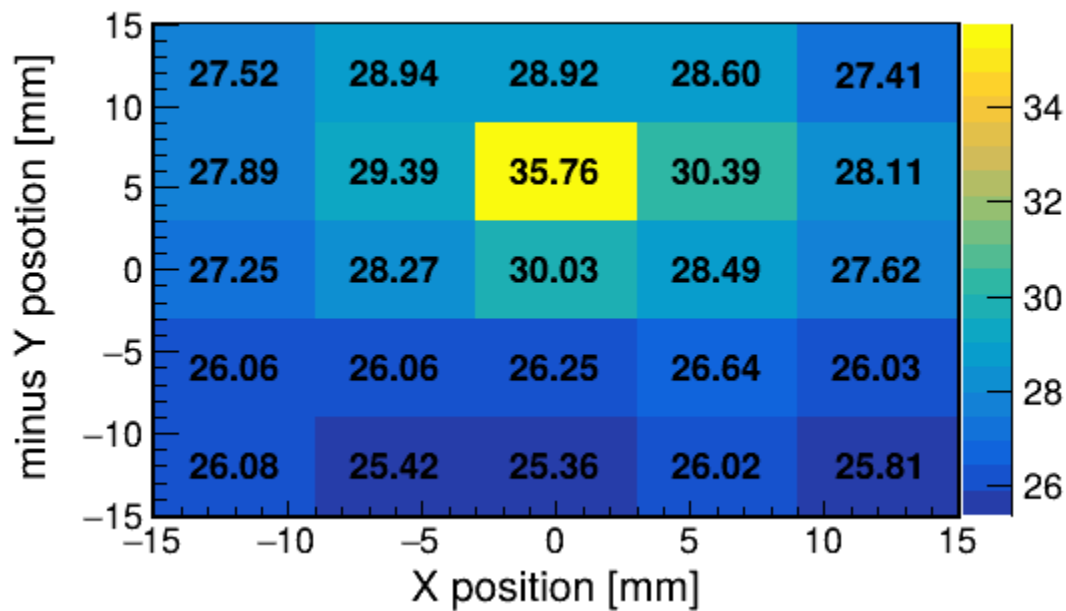


5分钟保存一次，平均温度：30.5℃

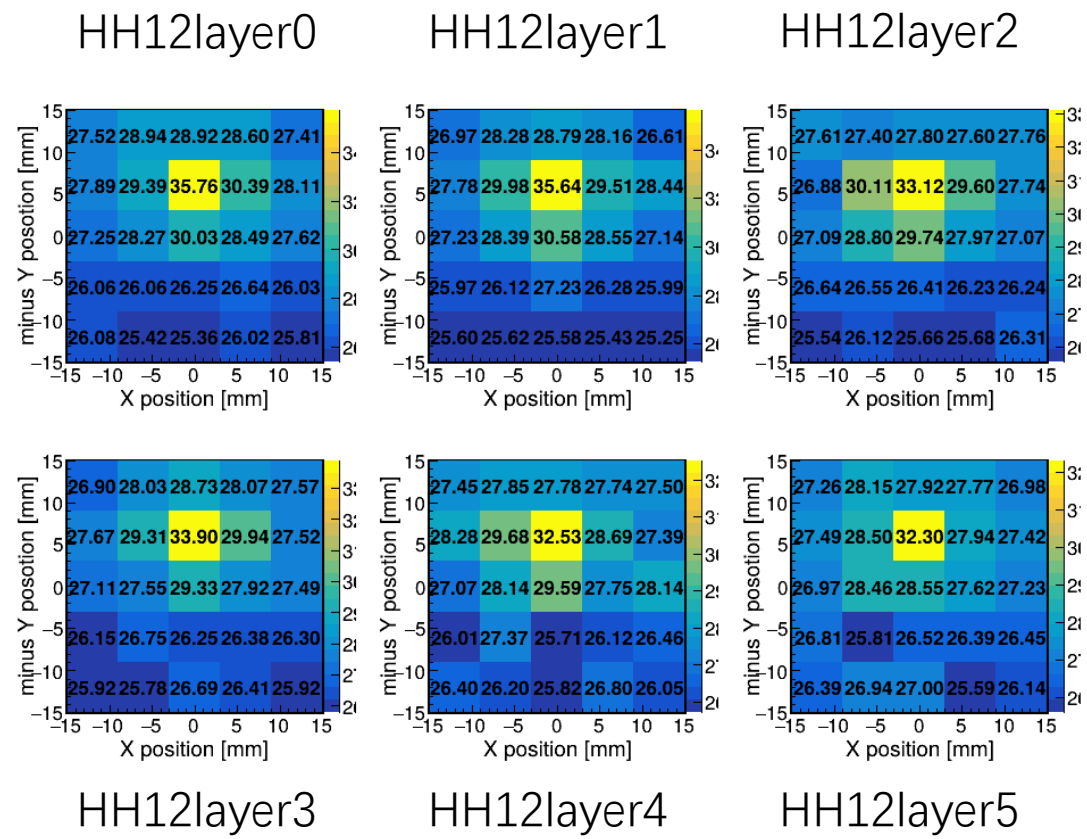
HH12layer0 按5×5划分



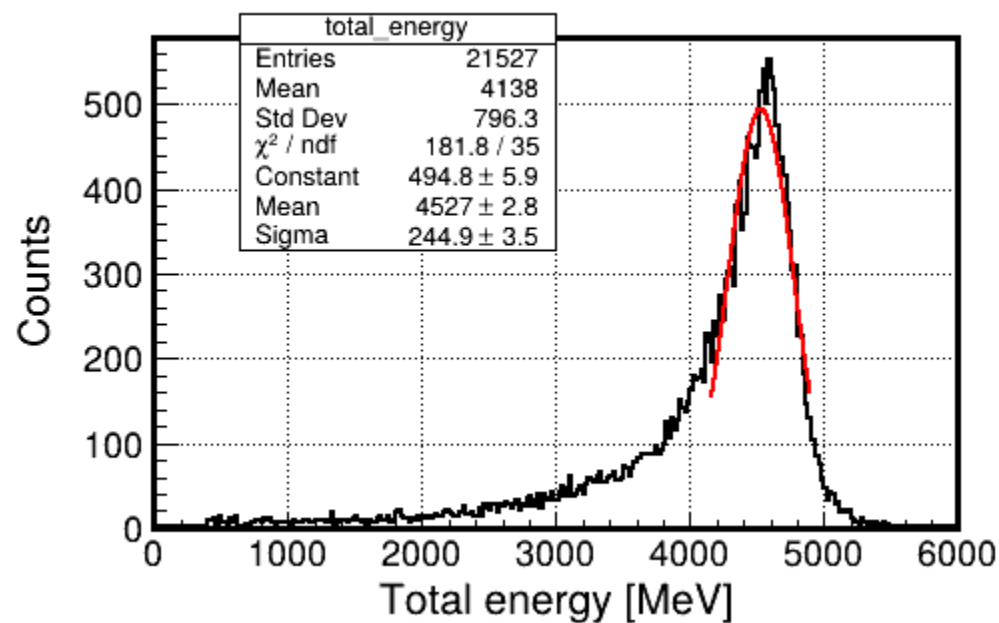
HH12layer0 按 5×5 划分



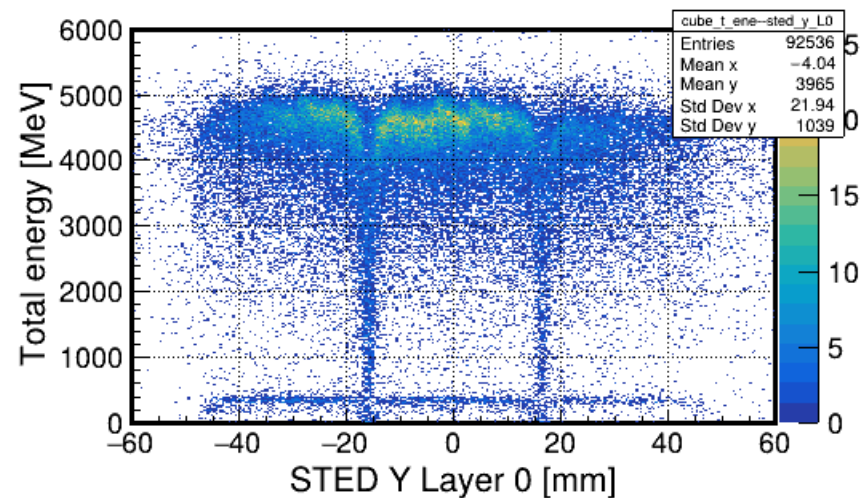
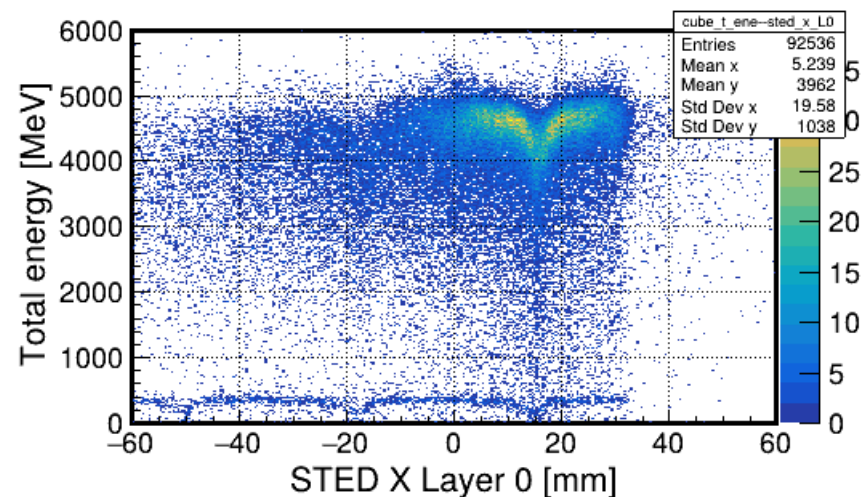
HH12每个小单元的mpv分布



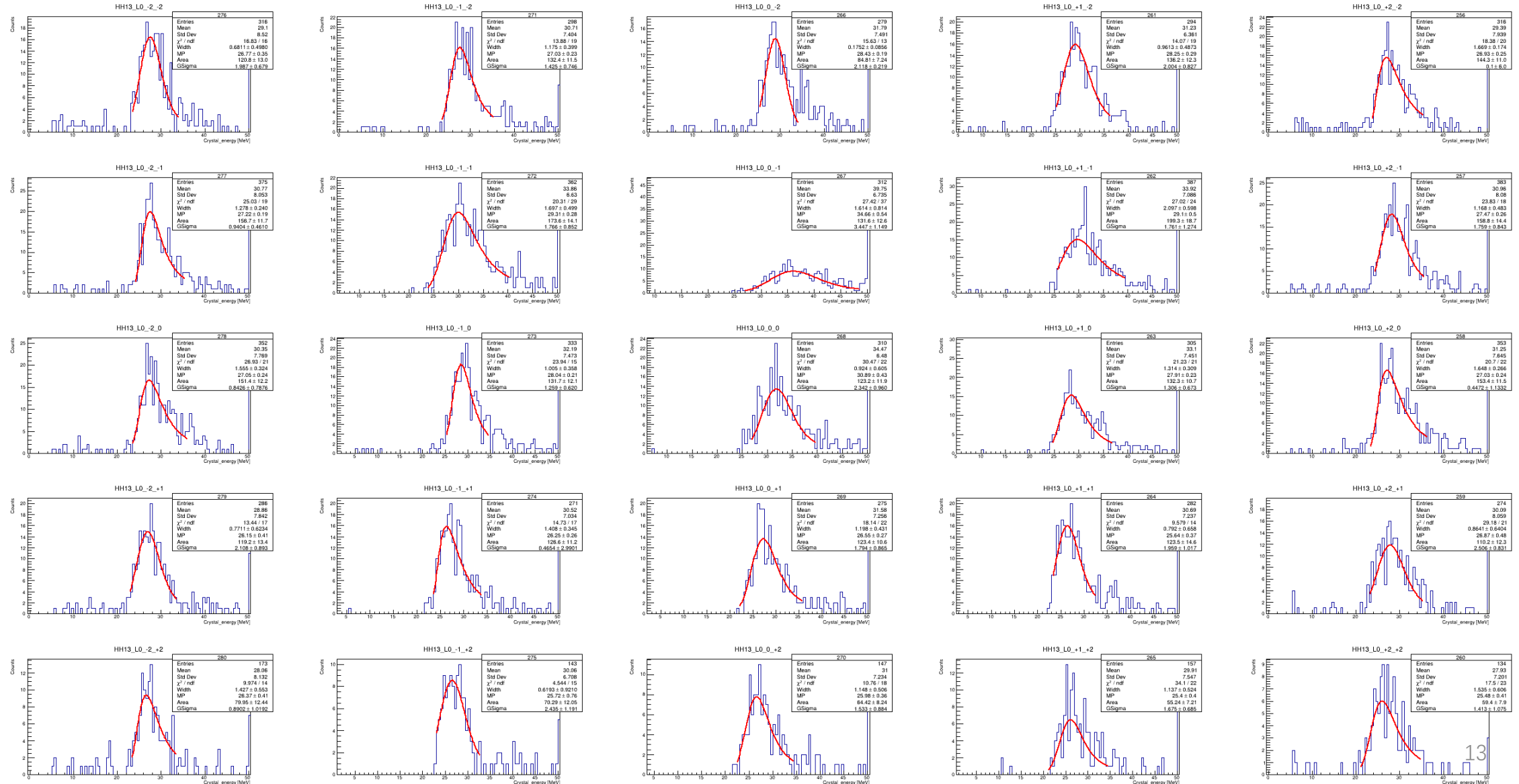
将此结果用于电子能谱修正



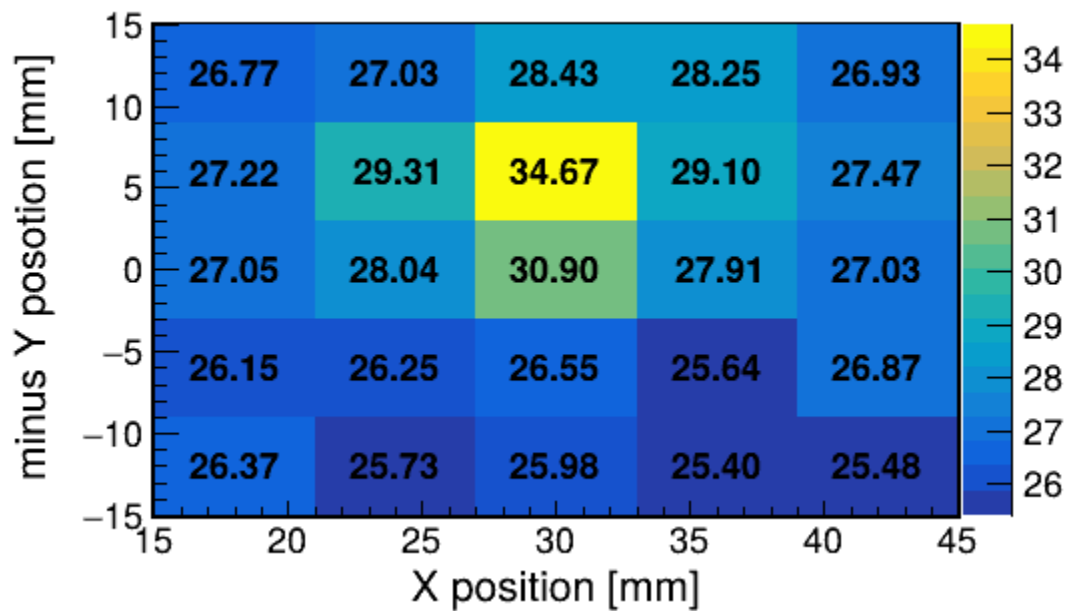
能量分辨率: 5.4%



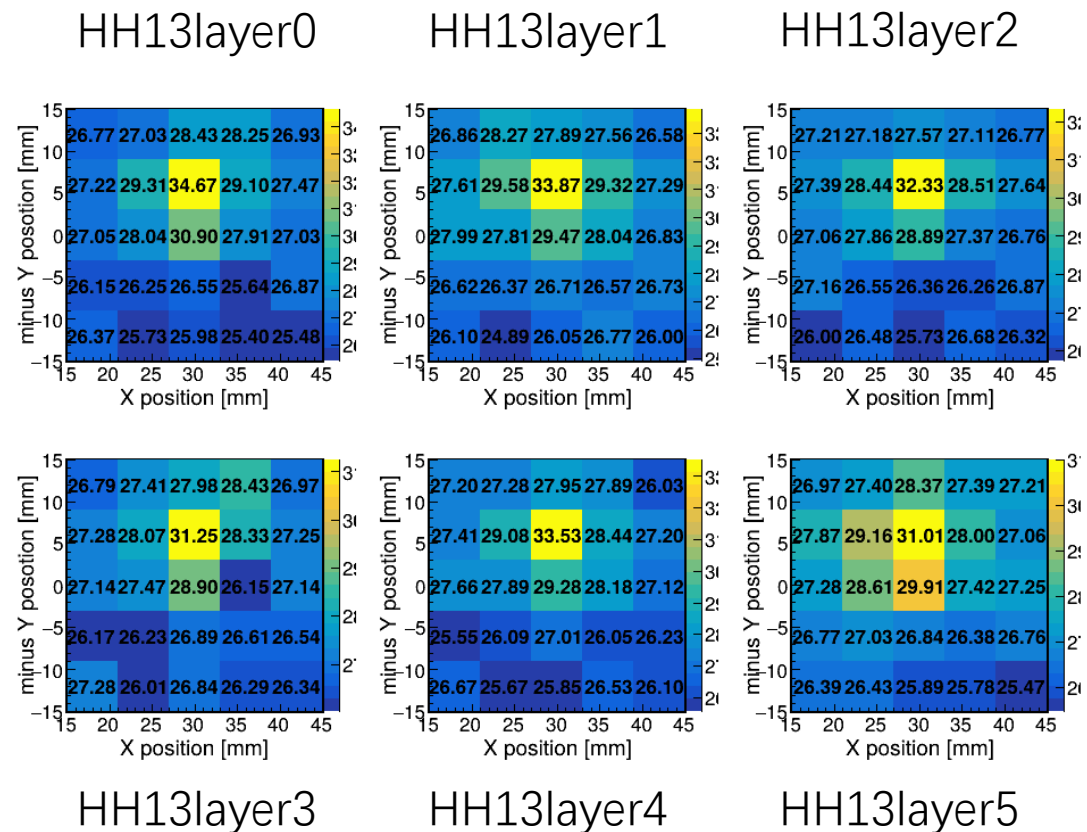
HH13layer0 按5×5划分



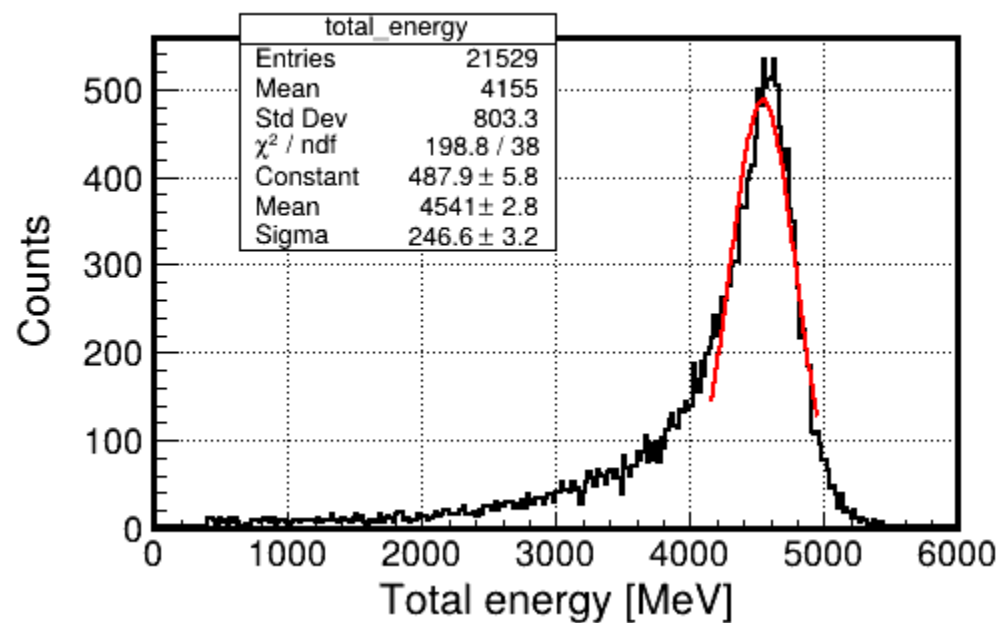
HH13layer0 按 5×5 划分



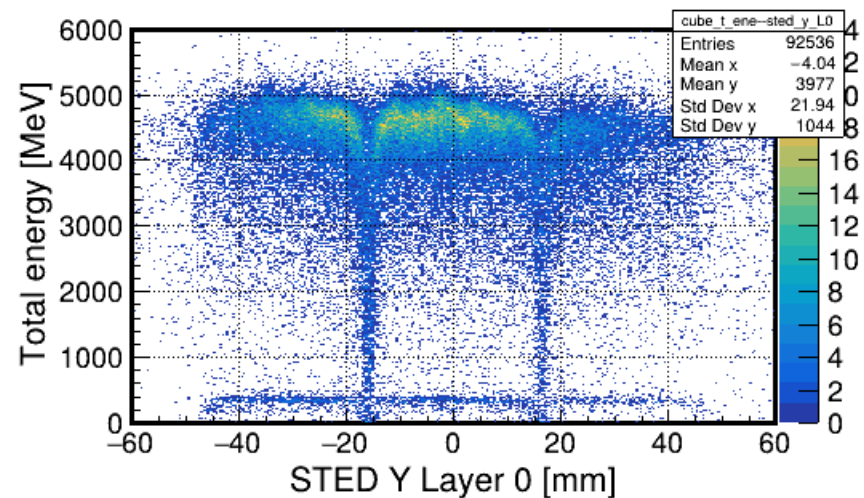
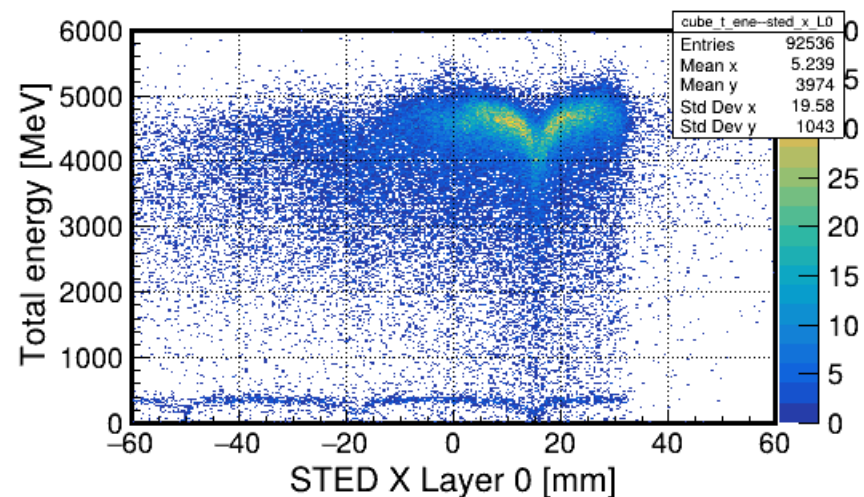
HH13每个小单元的mpv分布



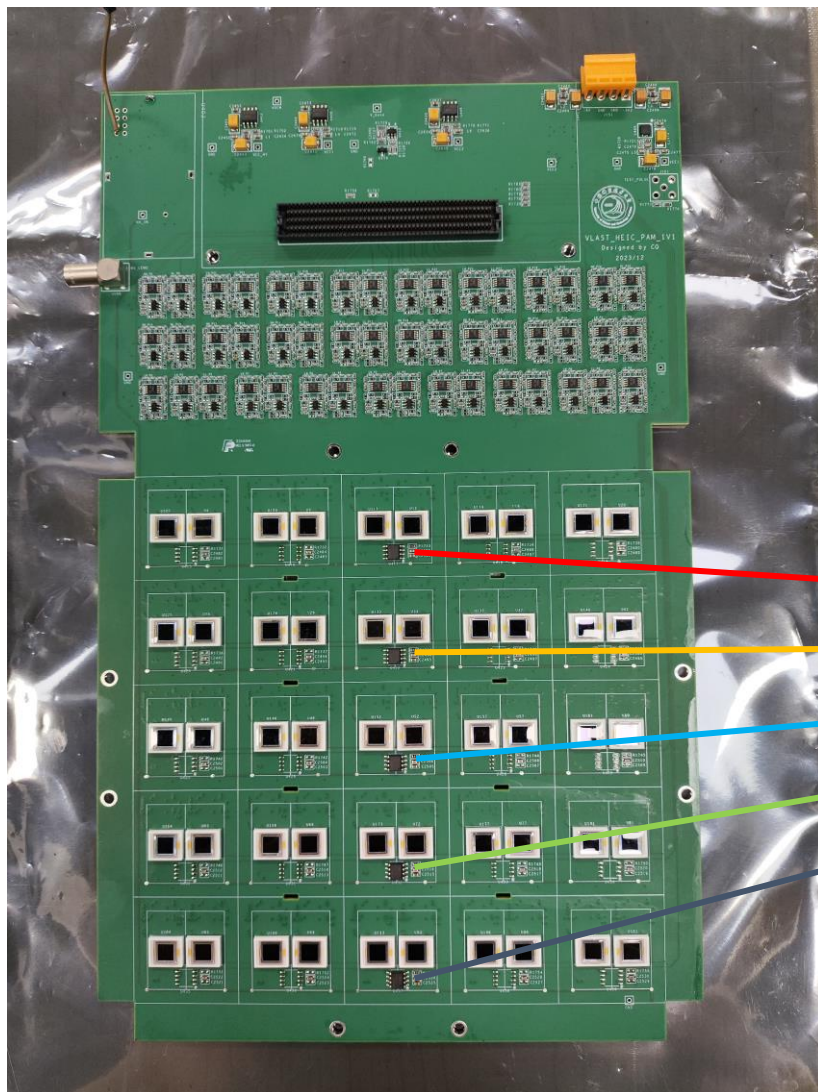
将此结果用于电子能谱修正



能量分辨率: 5.4%

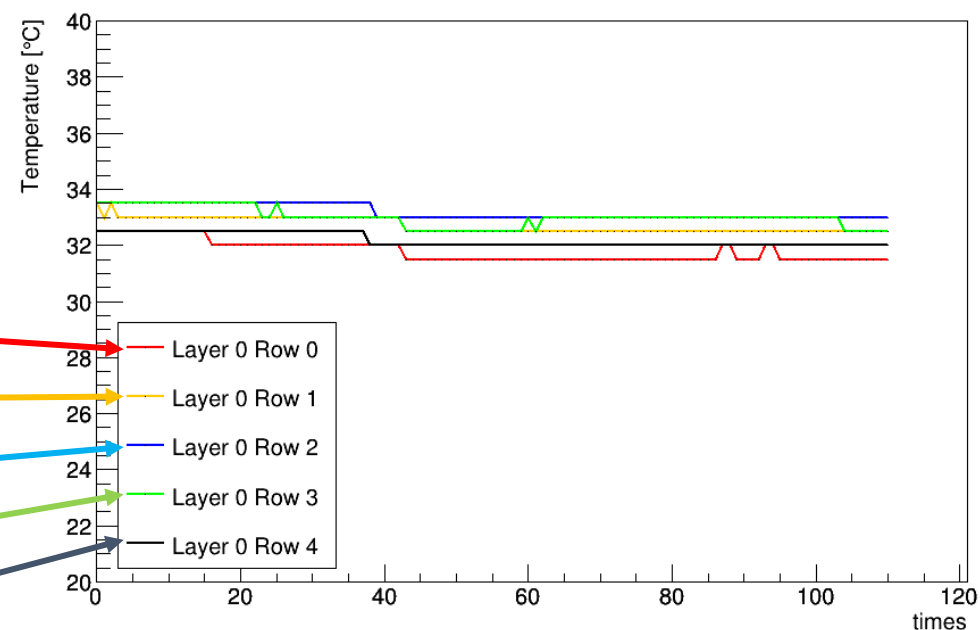


Temperature – 5GeV muon



RunID20140+142+143+144+145+330+332+335

muon test temperature layer 0



5分钟保存一次，平均温度：33°C

