



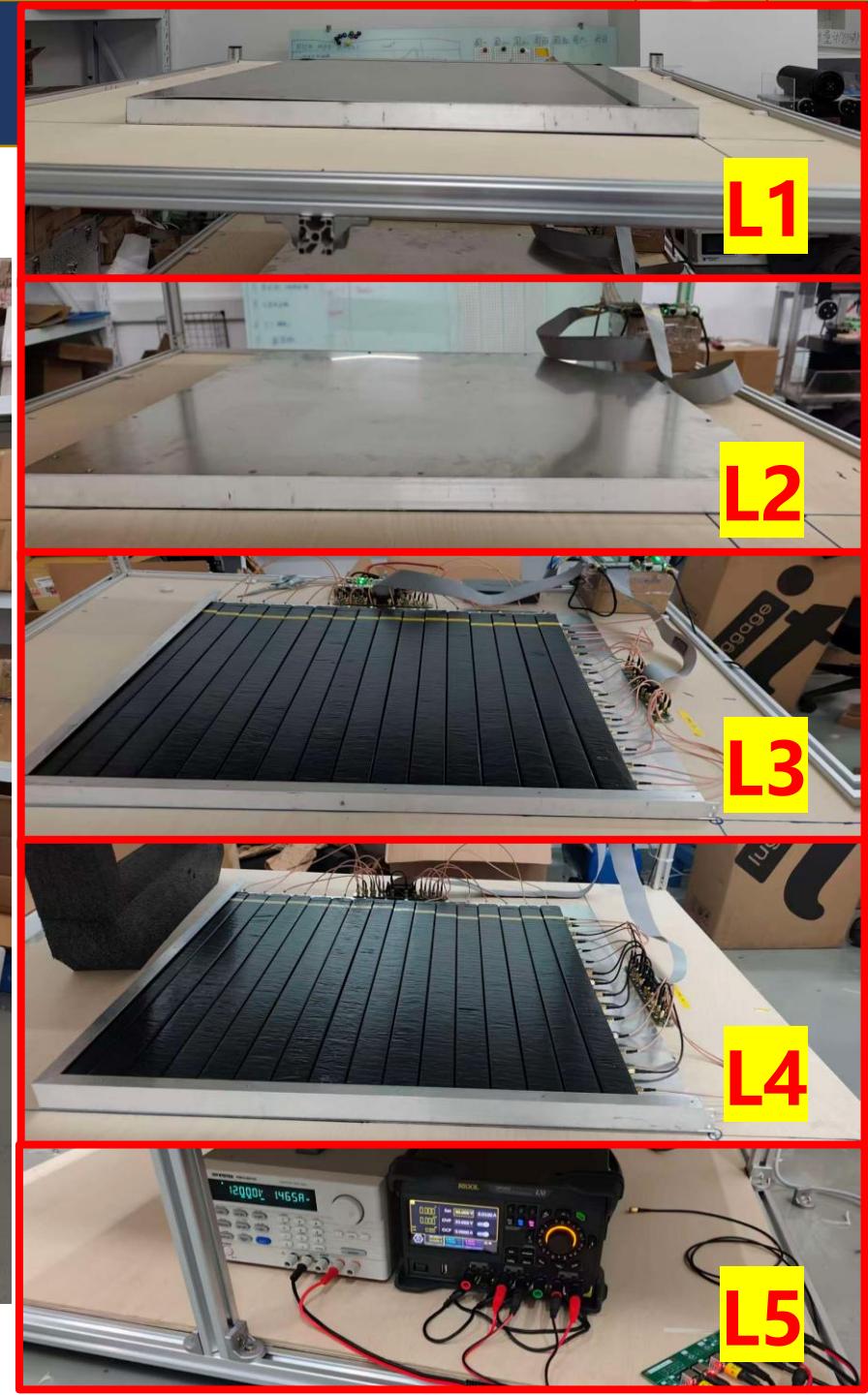
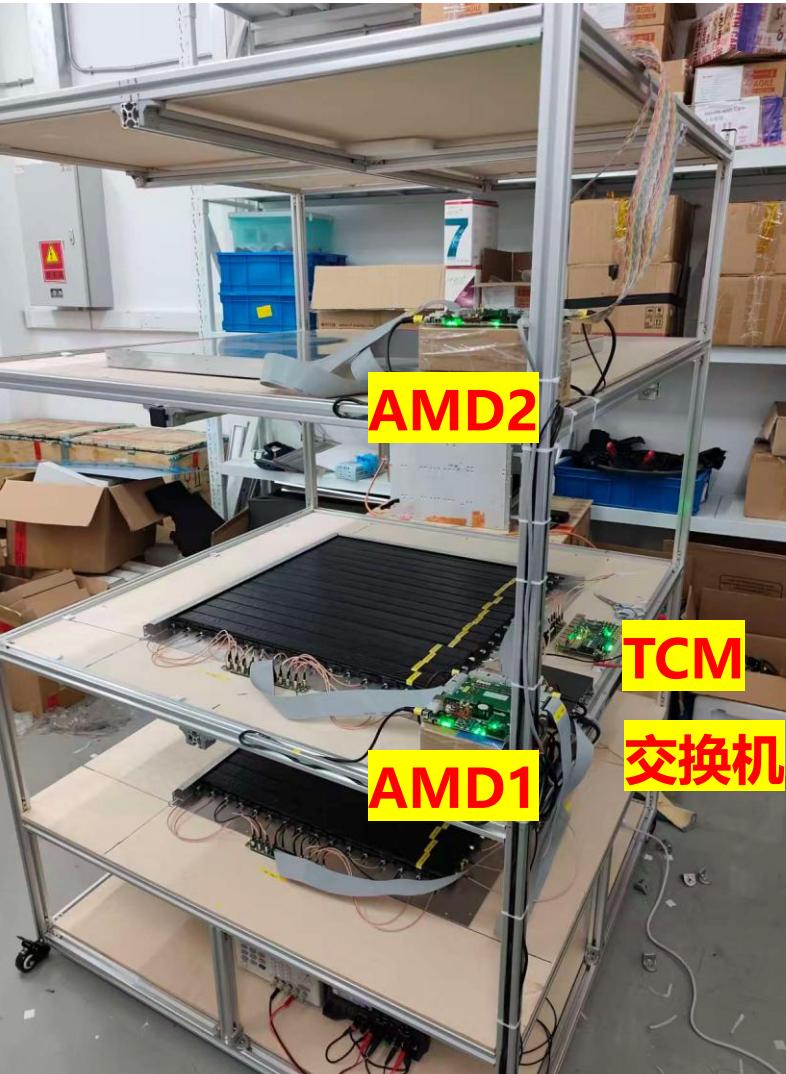
復旦大學
FUDAN UNIVERSITY

宇宙线成像装置搭建进展

王曦阳

2025.12.26

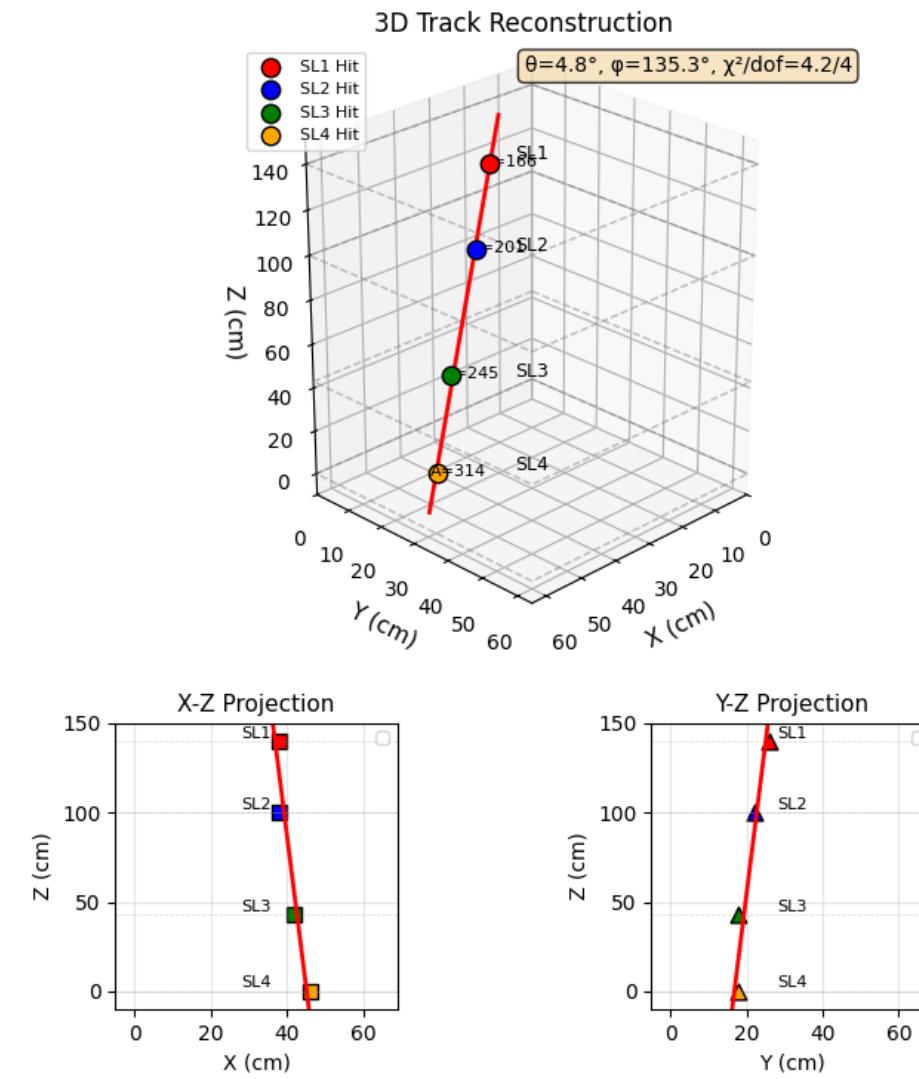
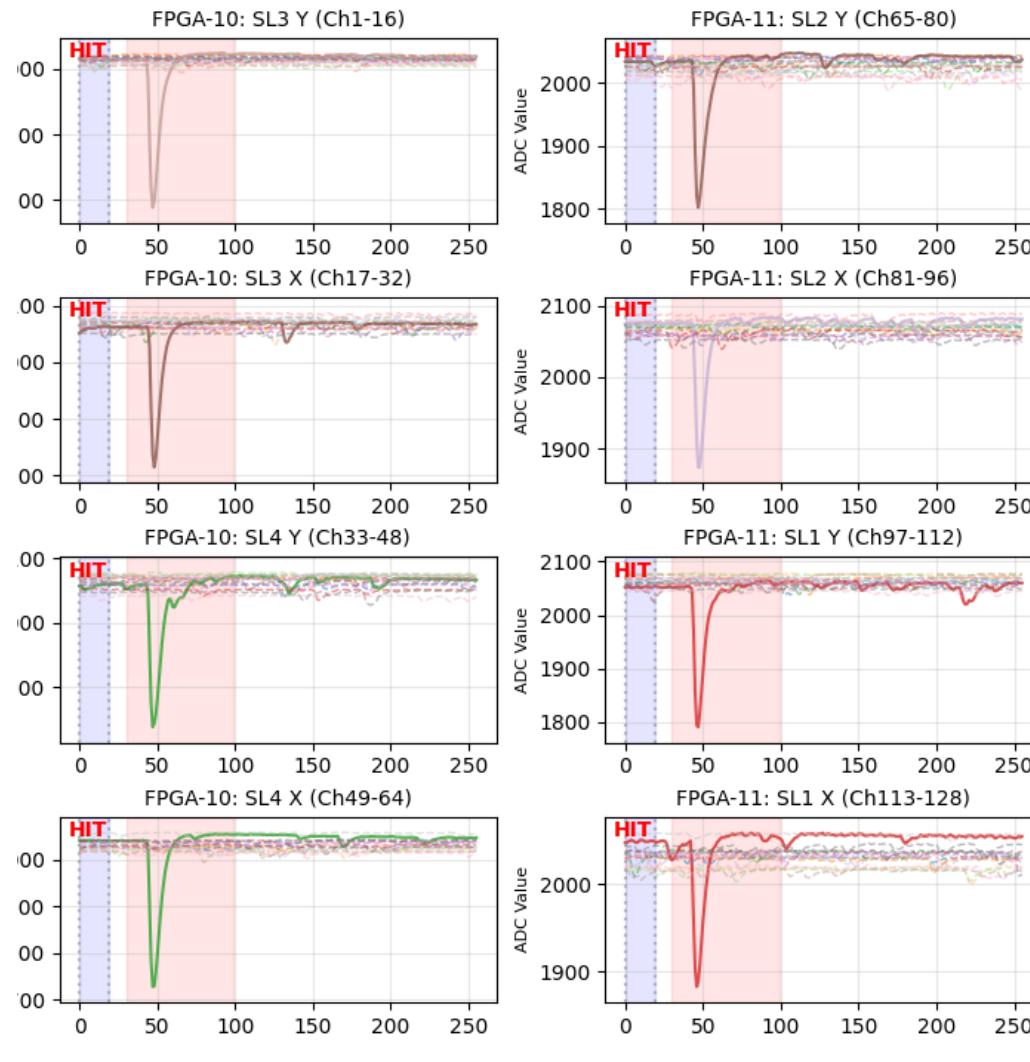
宇宙线成像装置进展



宇宙线径迹重建



Event Analysis - Timestamp: 3102090006

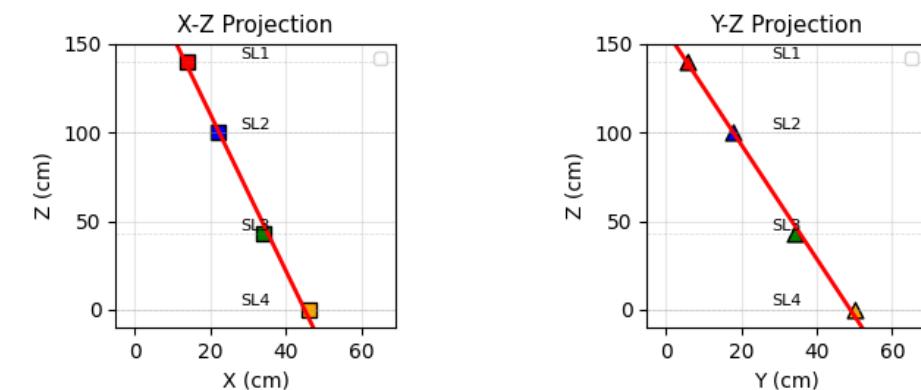
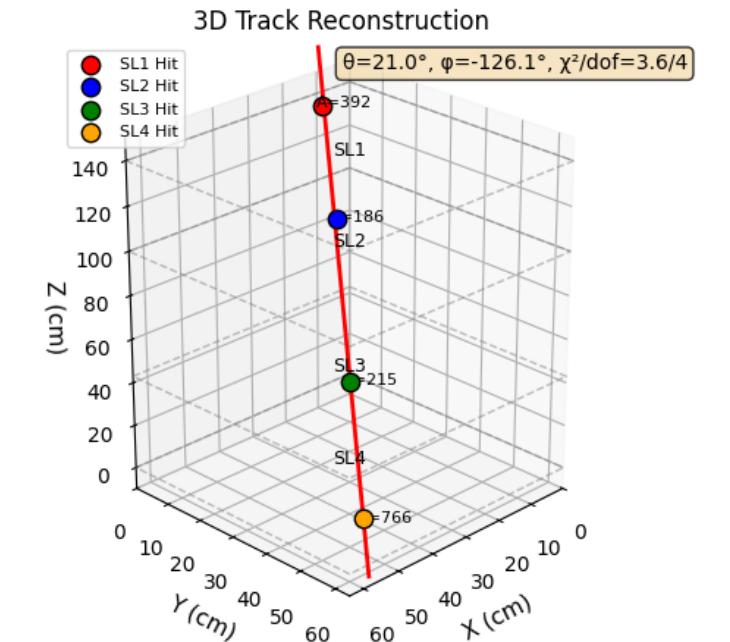
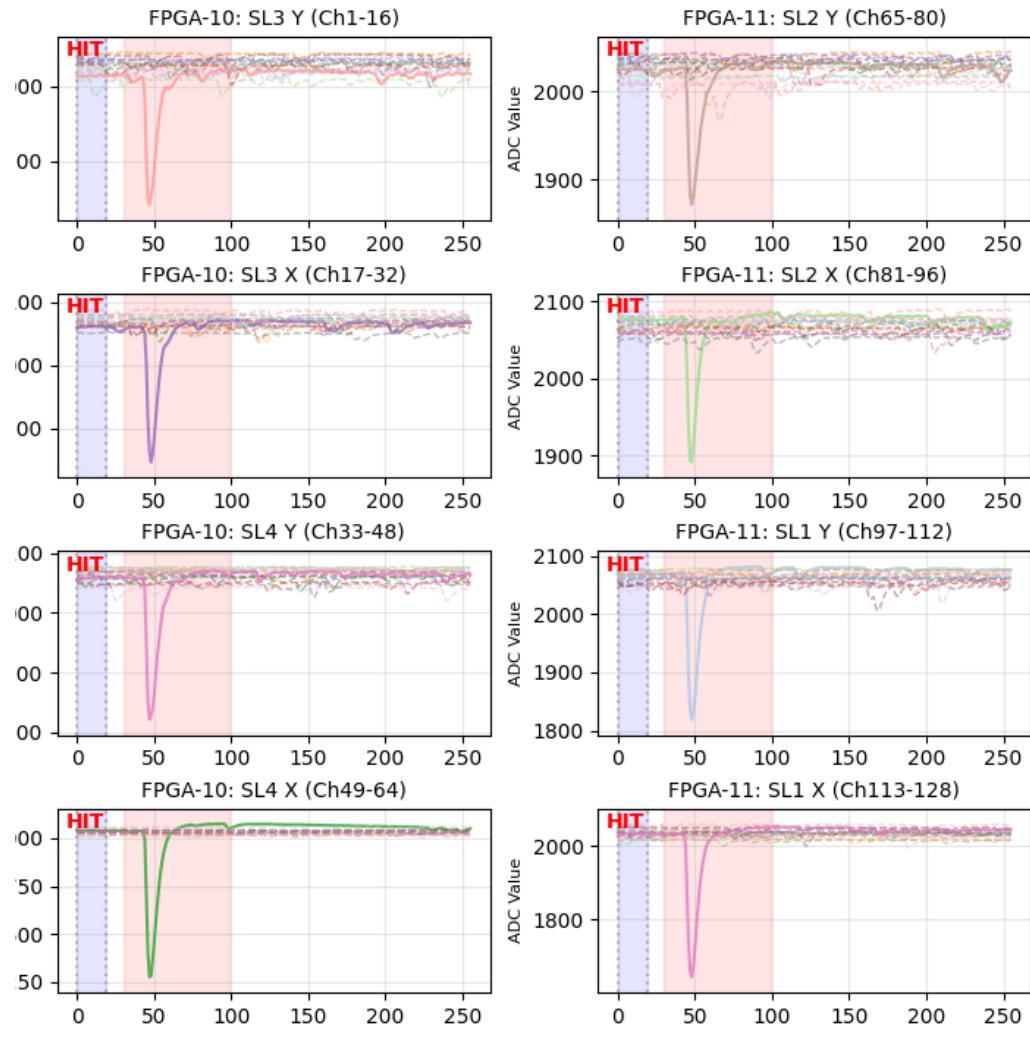


Hit Summary (Threshold=100 ADC): SL1(1X,1Y) | SL2(1X,1Y) | SL3(1X,1Y) | SL4(1X,1Y) [Using max amplitude per strip]

宇宙线径迹重建



Event Analysis - Timestamp: 3214357068

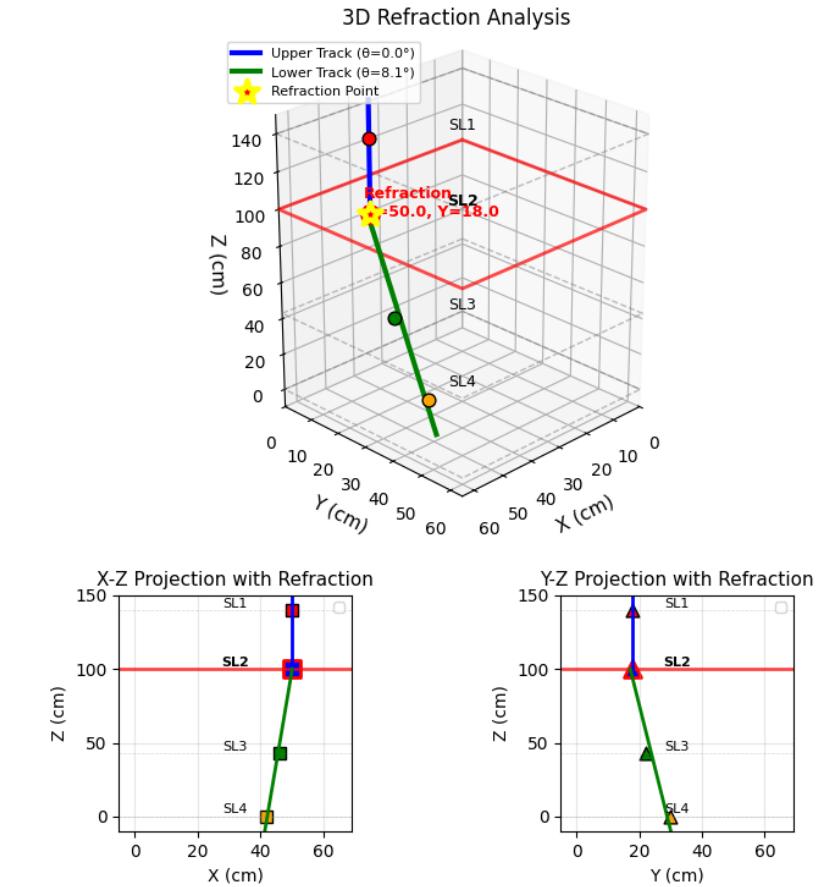
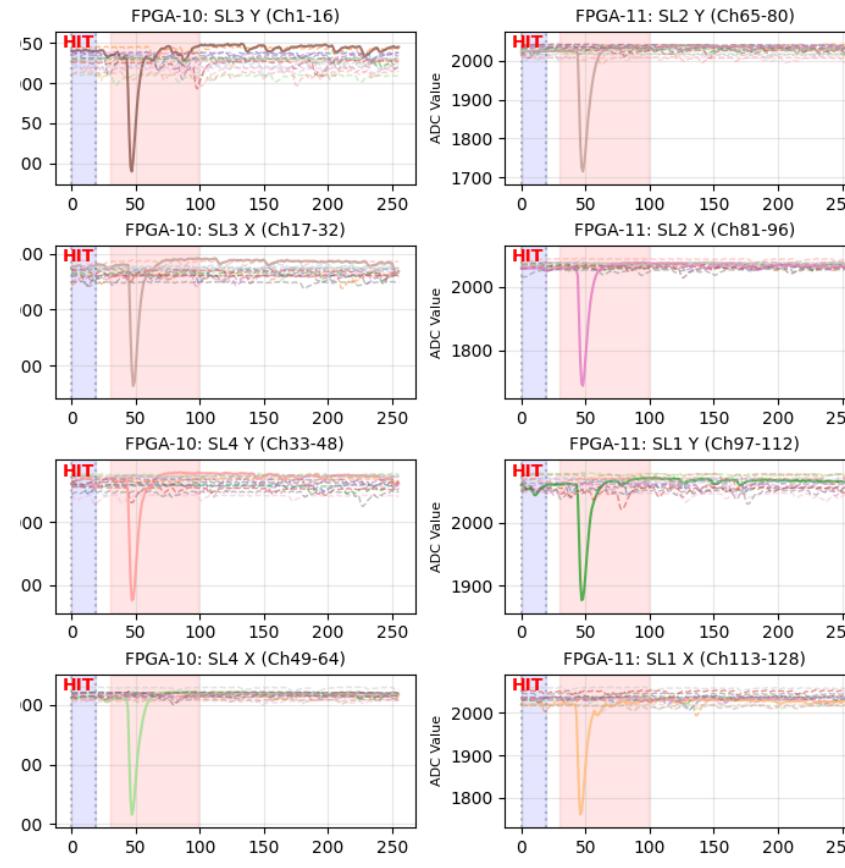


Hit Summary (Threshold=100 ADC): SL1(1X,1Y) | SL2(1X,1Y) | SL3(1X,1Y) | SL4(1X,1Y) [Using max amplitude per strip]

散射成像测试

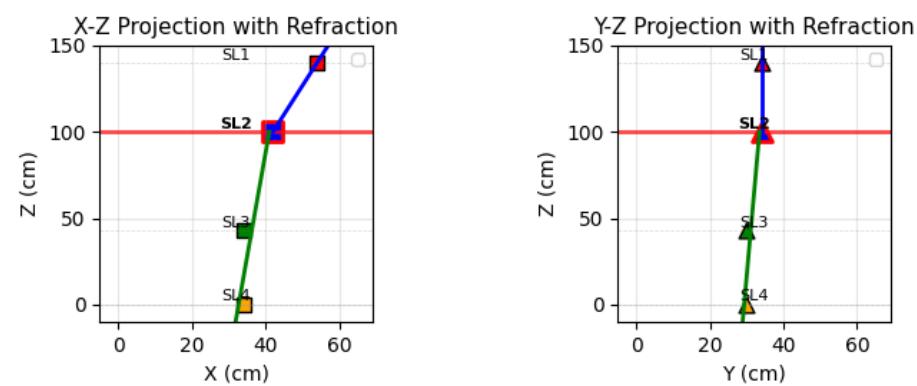
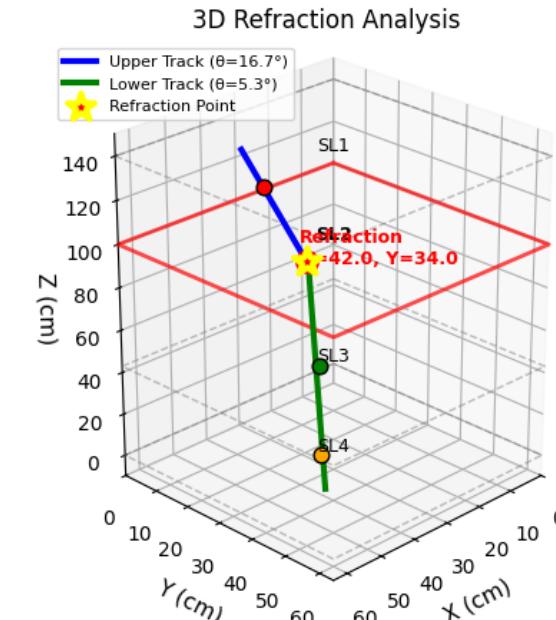
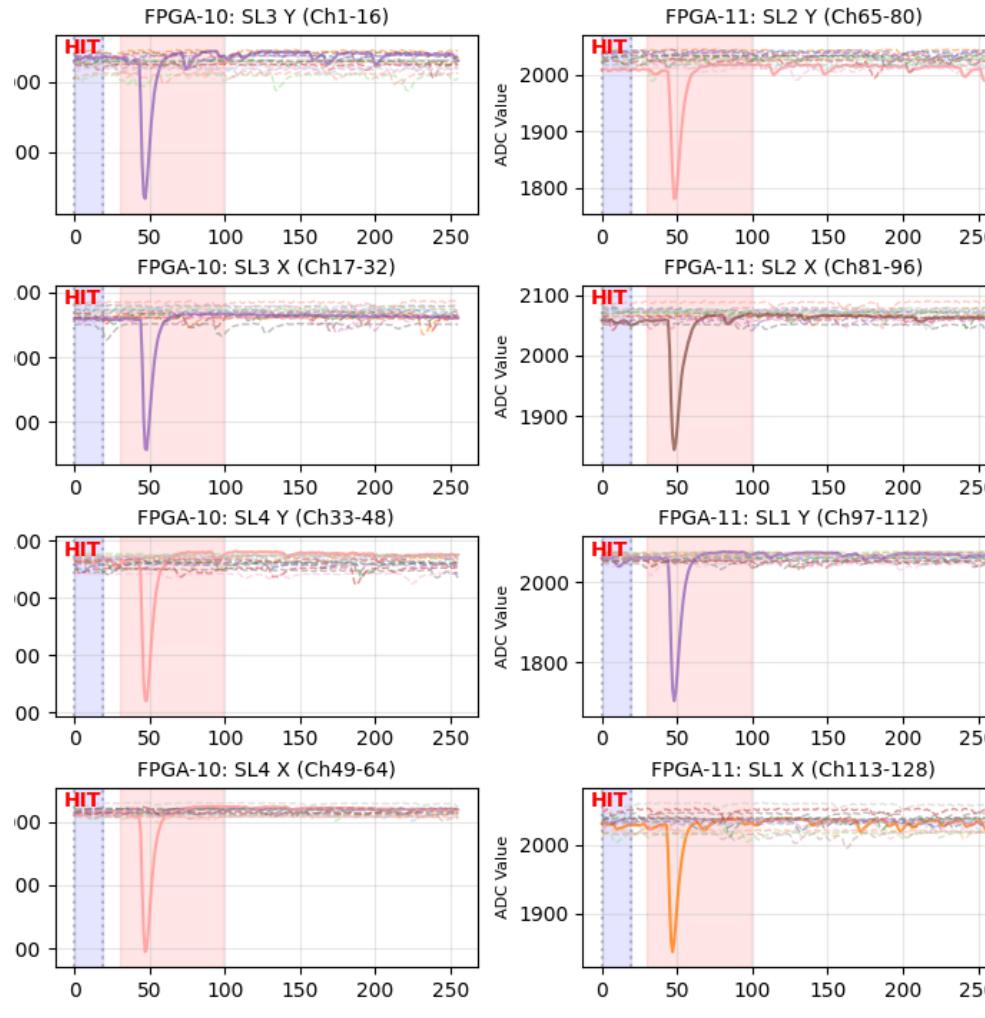


Refraction Analysis - Event 15/32 - Timestamp: 21086410822 - REFRACTED ($\Delta\theta=8.1^\circ$)

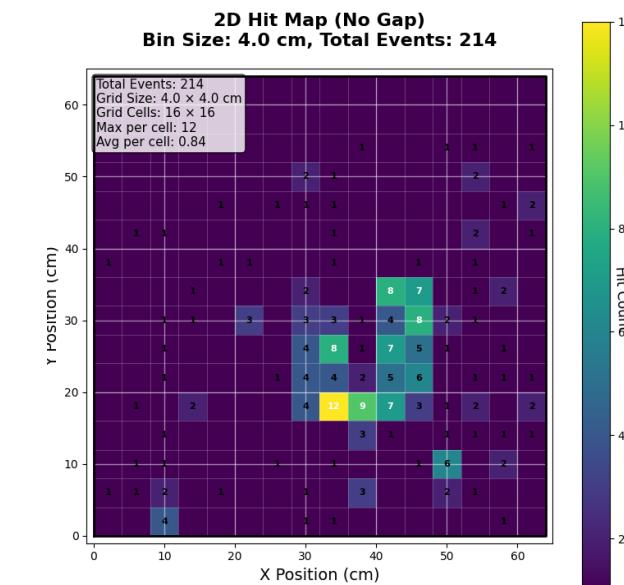
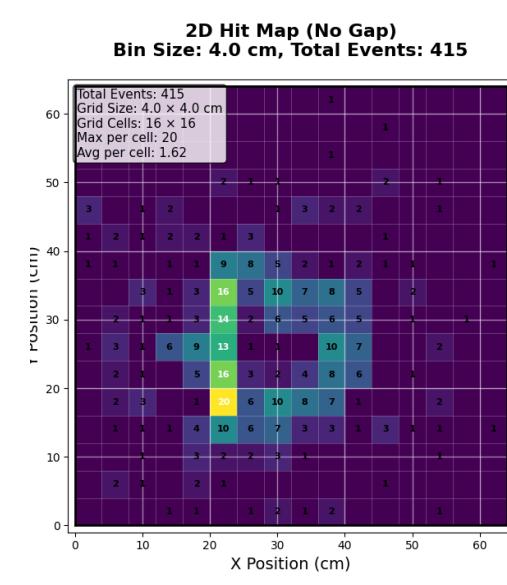
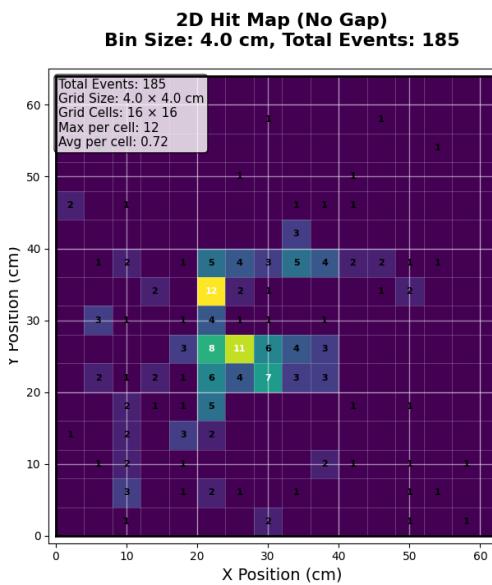


Event Summary - Threshold: 100.0 ADC - SL1(1X,1Y) SL2(1X,1Y) SL3(1X,1Y) SL4(1X,1Y) - Fit Quality: Upper $R^2=1.000$, Lower $R^2=0.961$ (GOOD)

Refraction Analysis - Event 7/119 - Timestamp: 44090051443 - REFRACTED ($\Delta\theta=12.2^\circ$)



散射成像结果——铅块成像



成像5小时

探测到宇宙线事件: 30030

成像10小时

有效折射事件: 415

成像6小时

比值: 0.014

散射成像结果——空心砝码

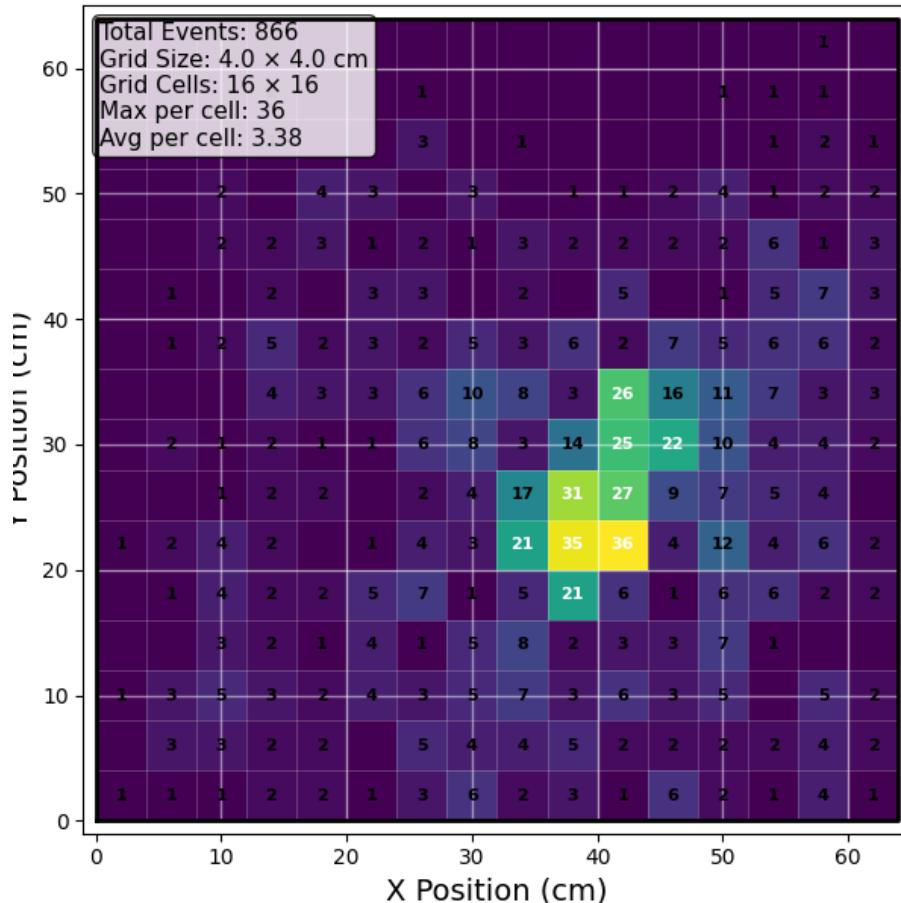


探测到宇宙线事件: 120193

有效折射事件: 866

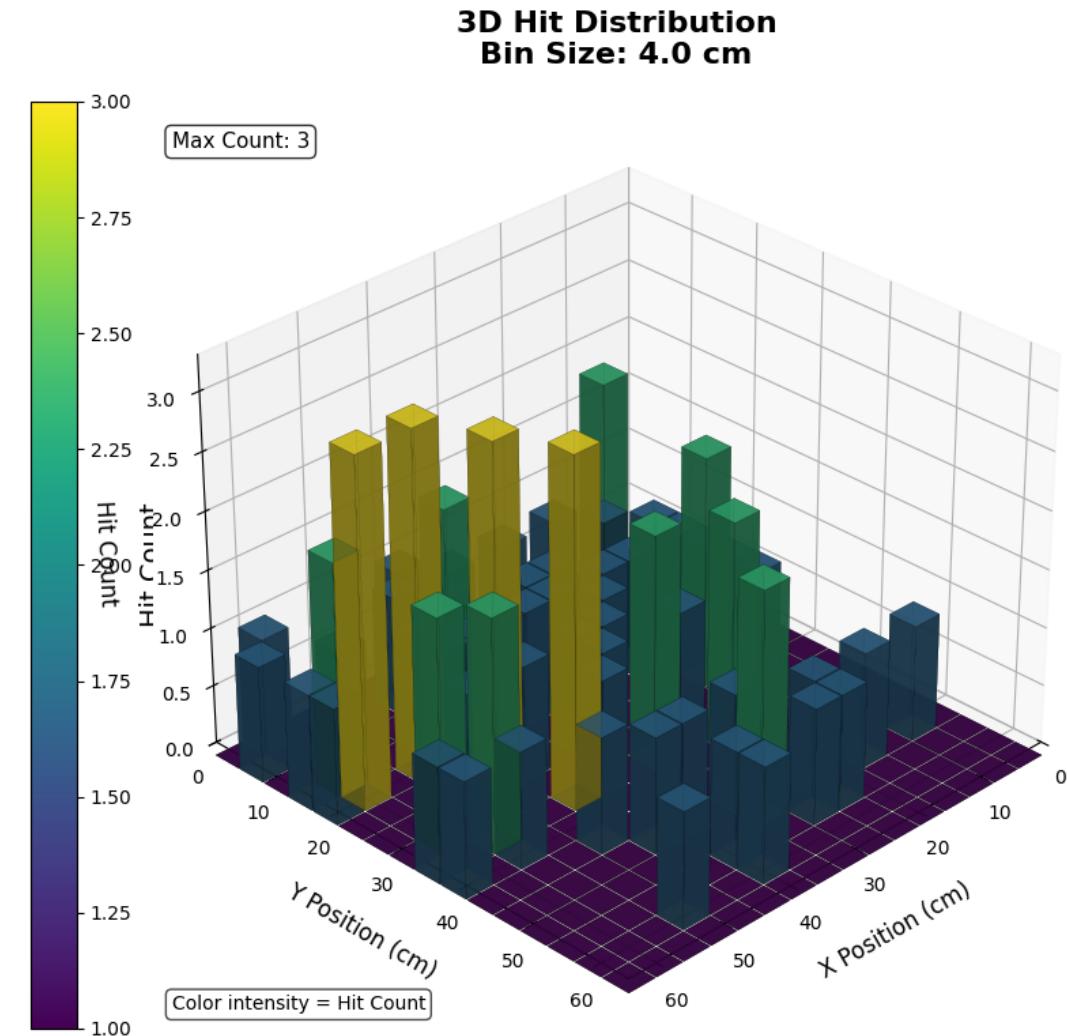
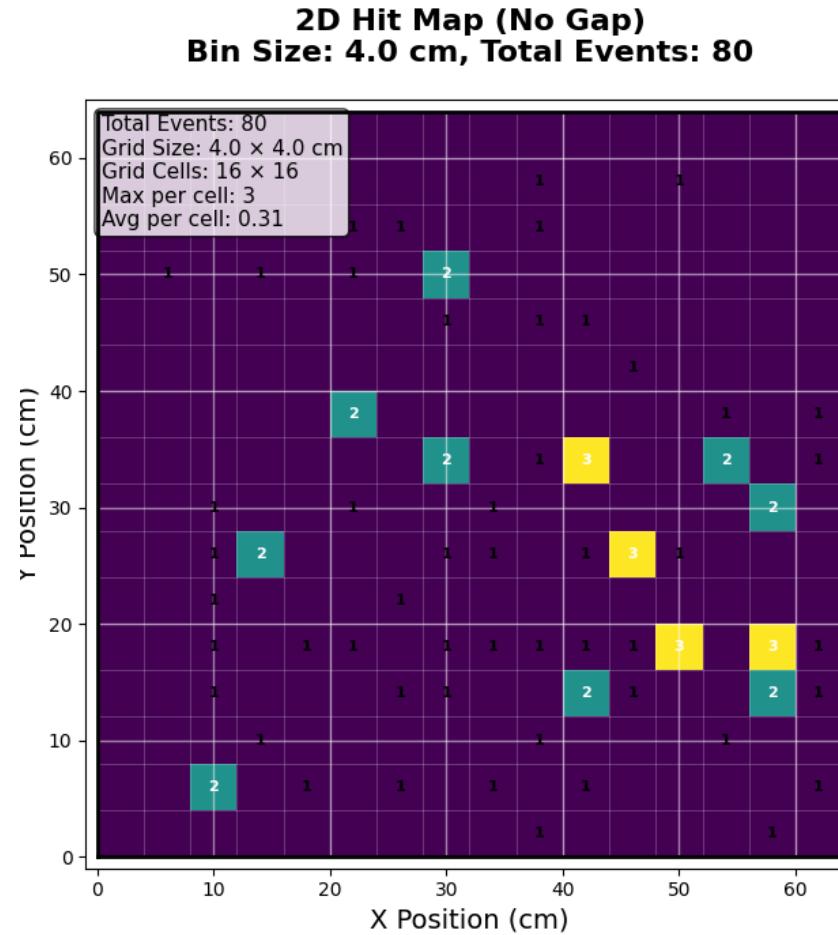
限制折射夹角>10°

2D Hit Map (No Gap)
Bin Size: 4.0 cm, Total Events: 866



比值: 0.007

散射成像结果——本底情况



探测到宇宙线事件: 18193

有效折射事件: 80

比值: 0.004