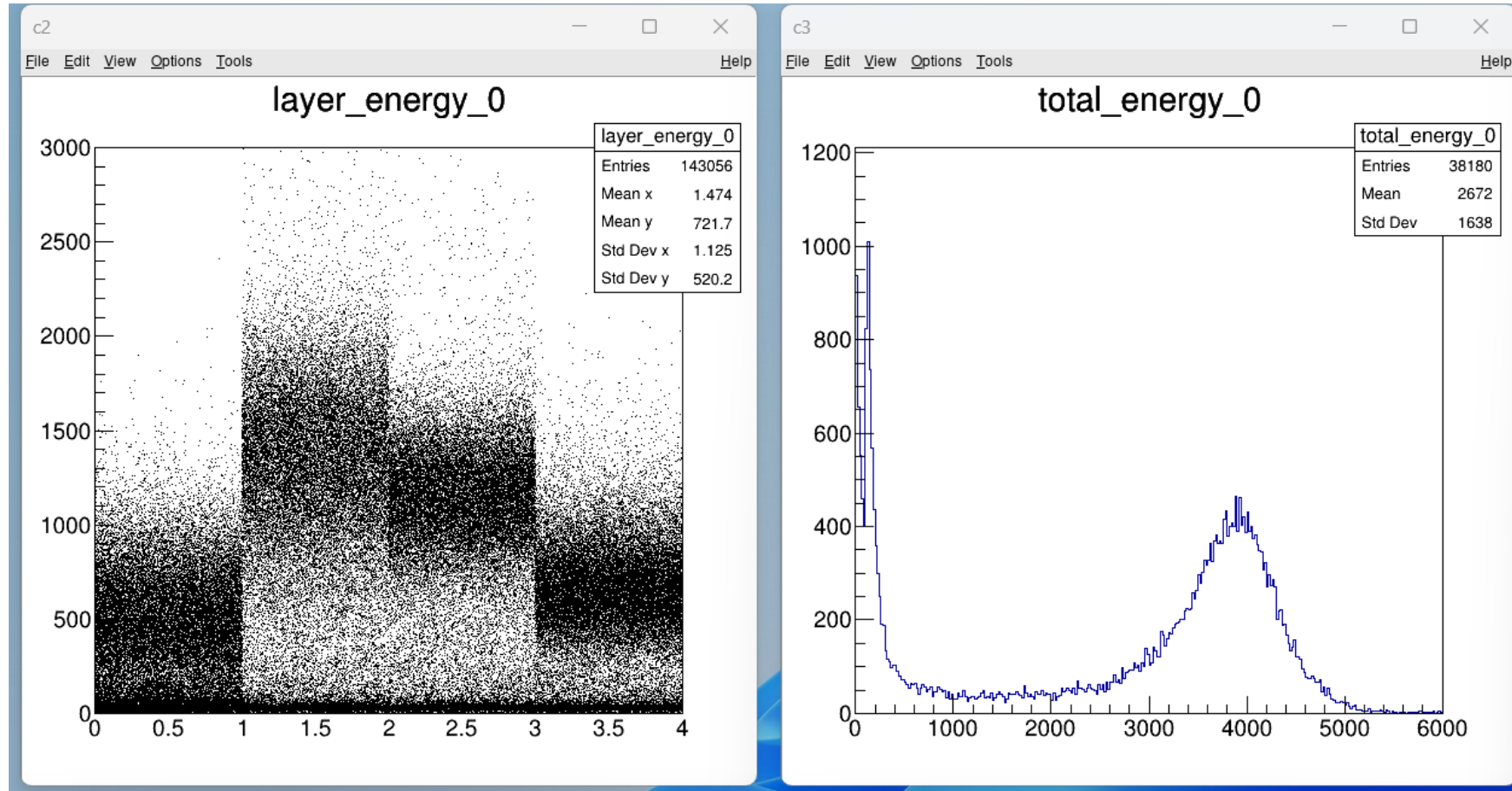


HEIC-Cube PS electron spectrum

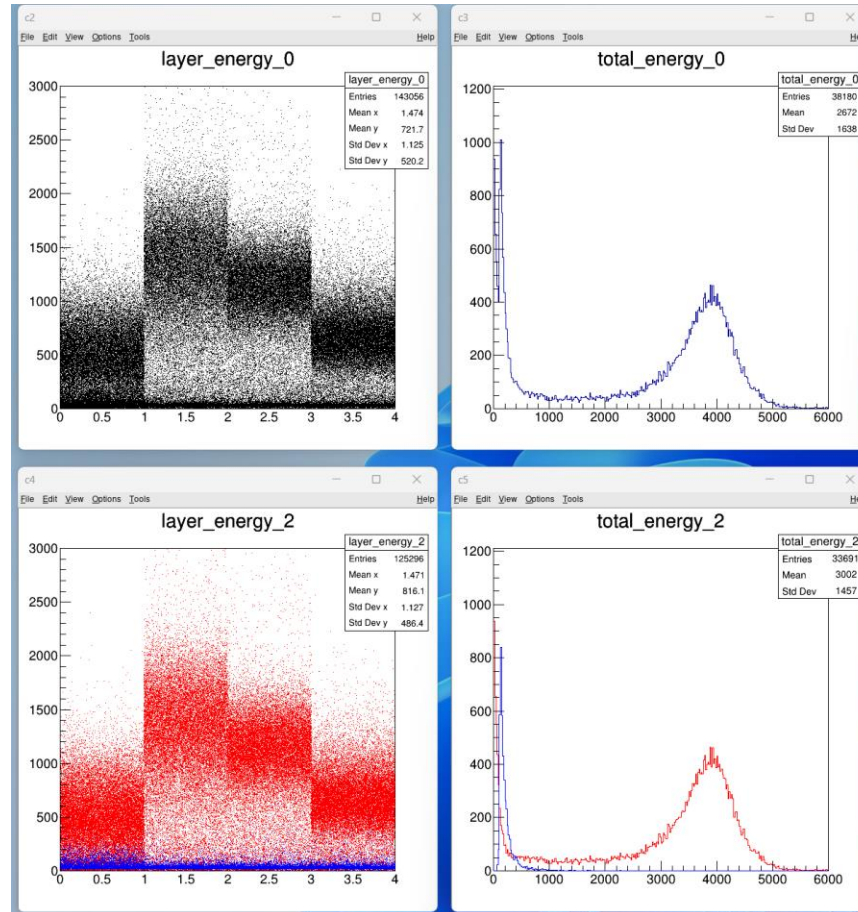
Yanshuo ZHANG

2023.11.30

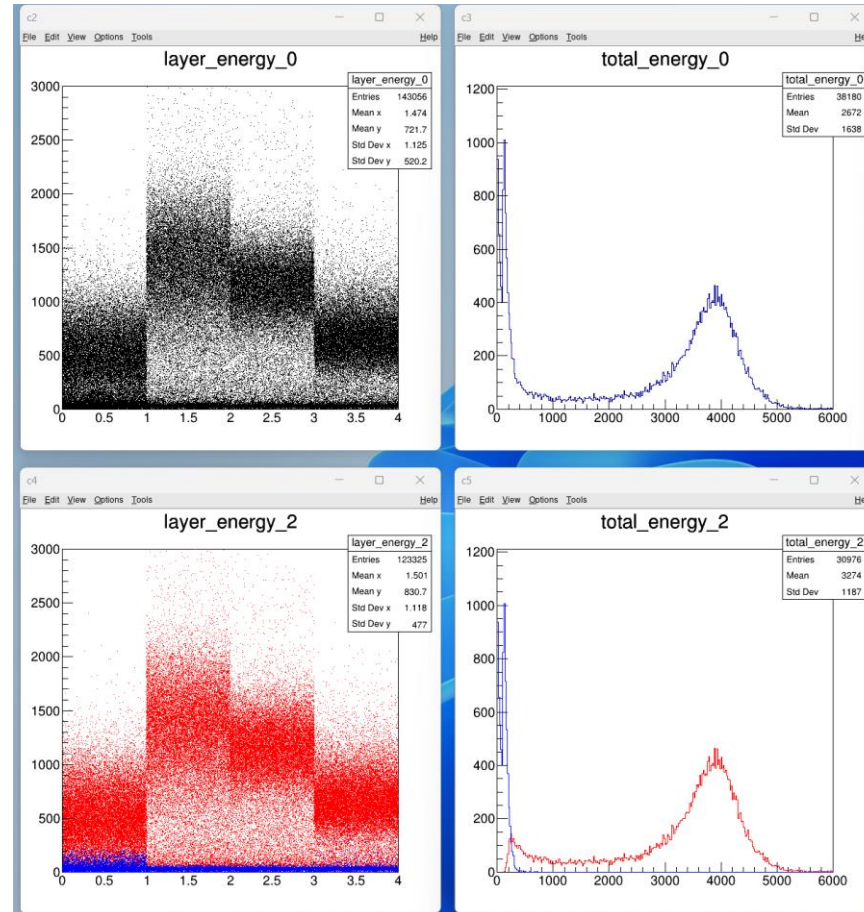
5 GeV/c electron



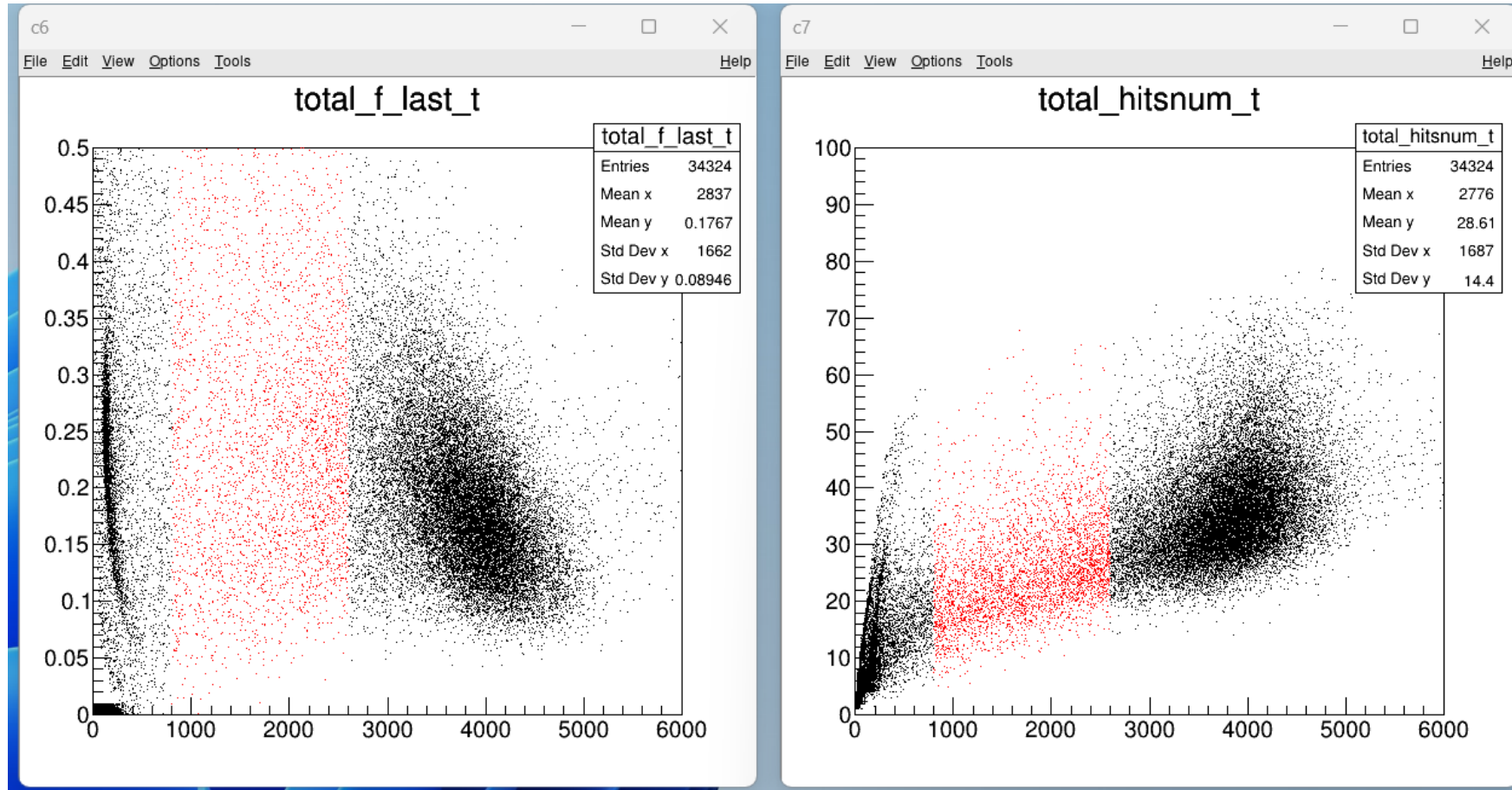
$\text{crystal} > 0.5 * \text{MIP} == 1 \text{ or } 2, \text{layer} \geq 3$



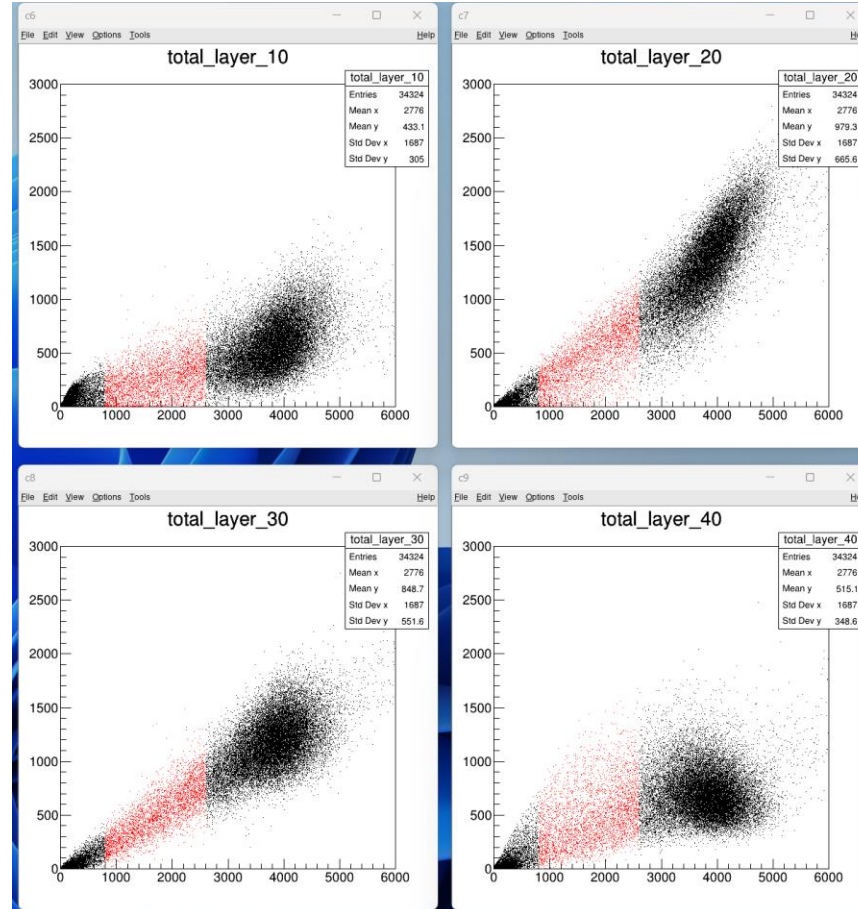
layer < 2 * MIP, layer >= 3



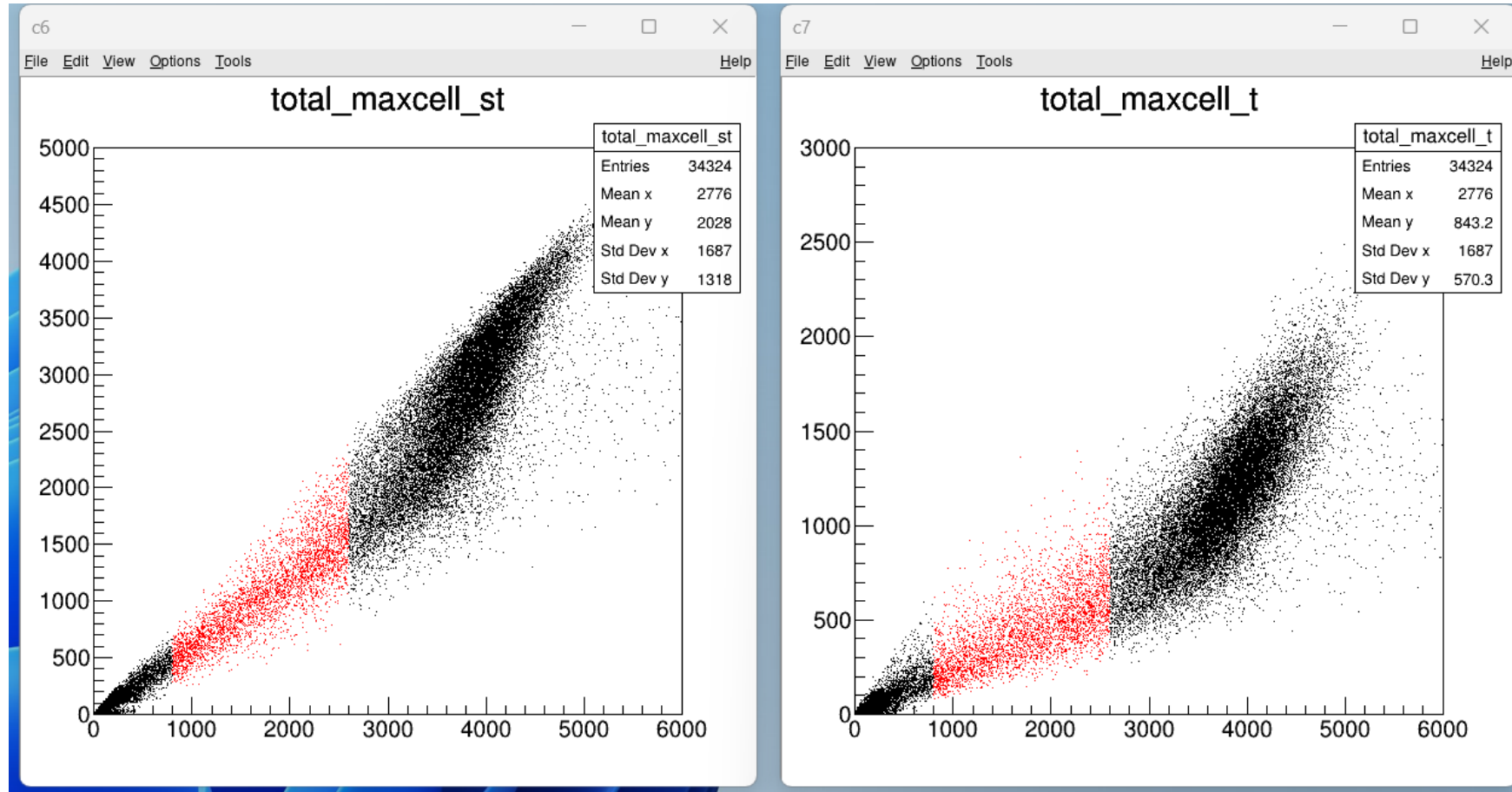
layer[3]/total; hitsnum



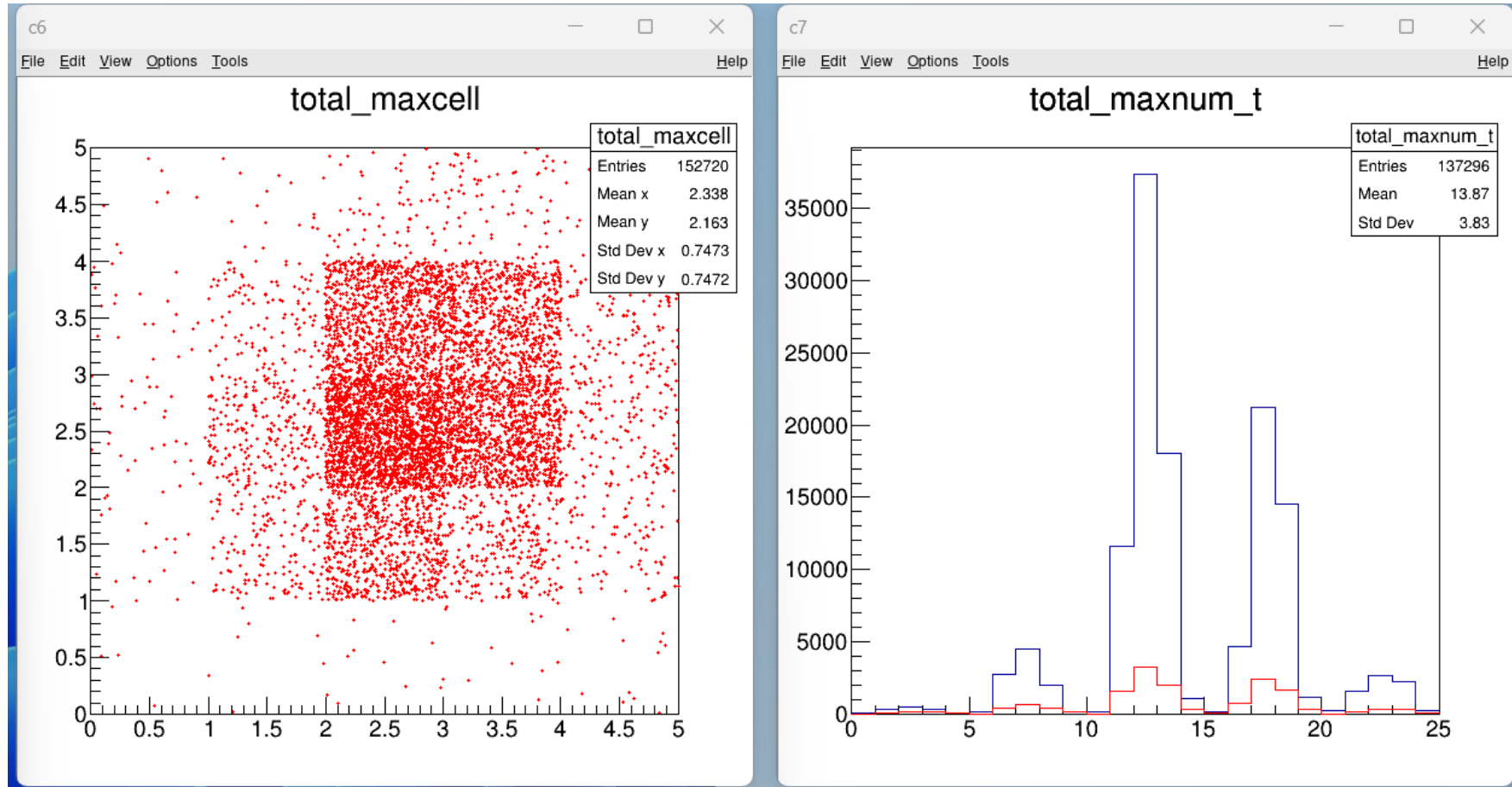
layer[*]



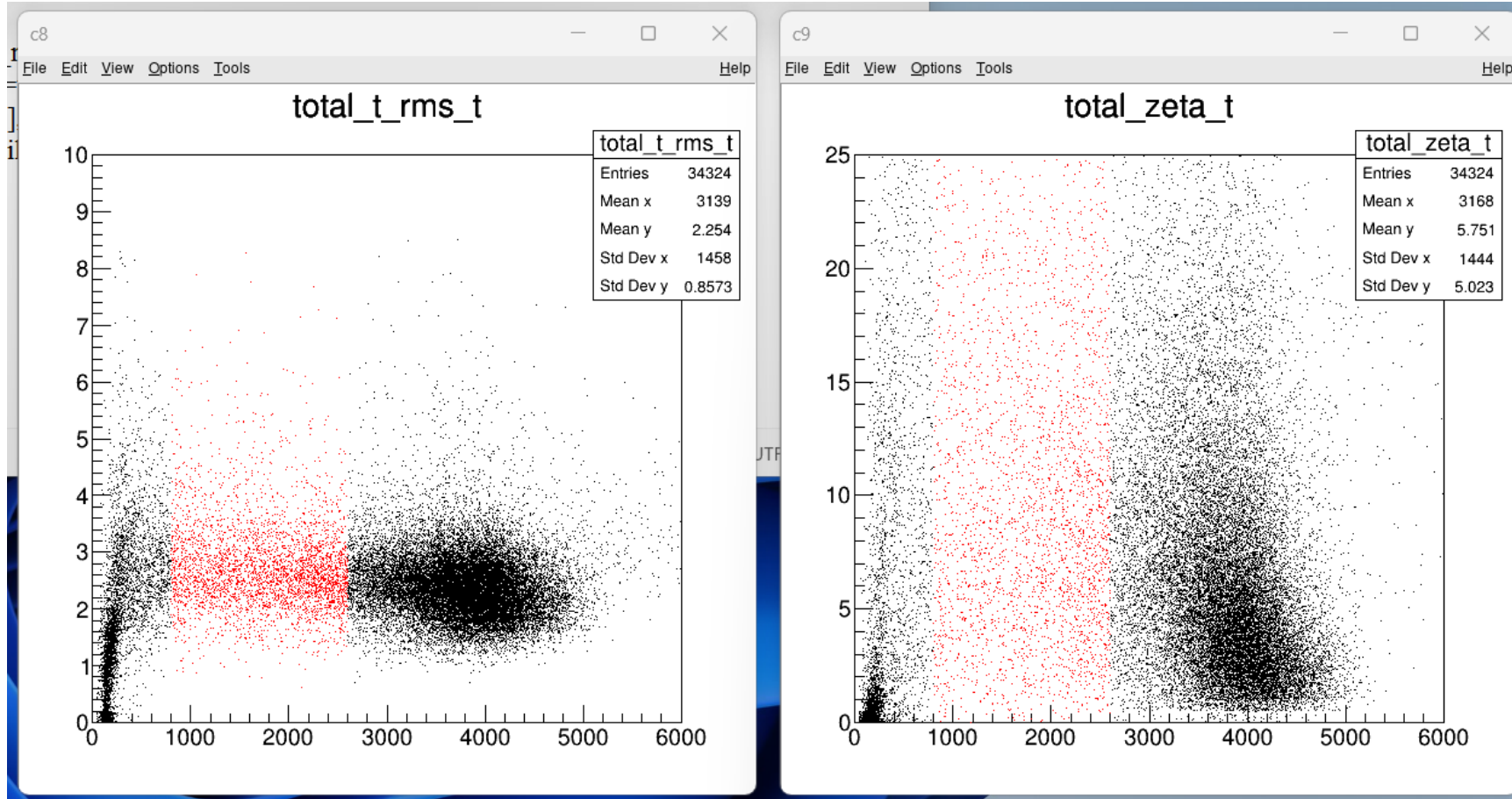
4 maxcell sum; 1 maxcell



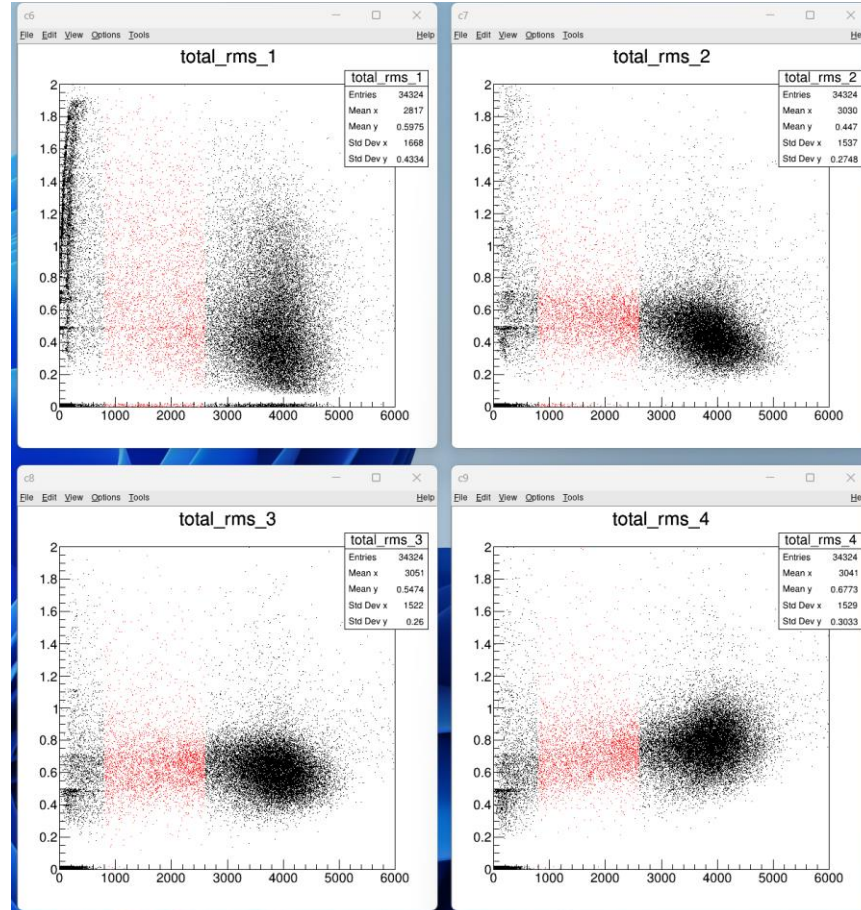
maxcell distribution



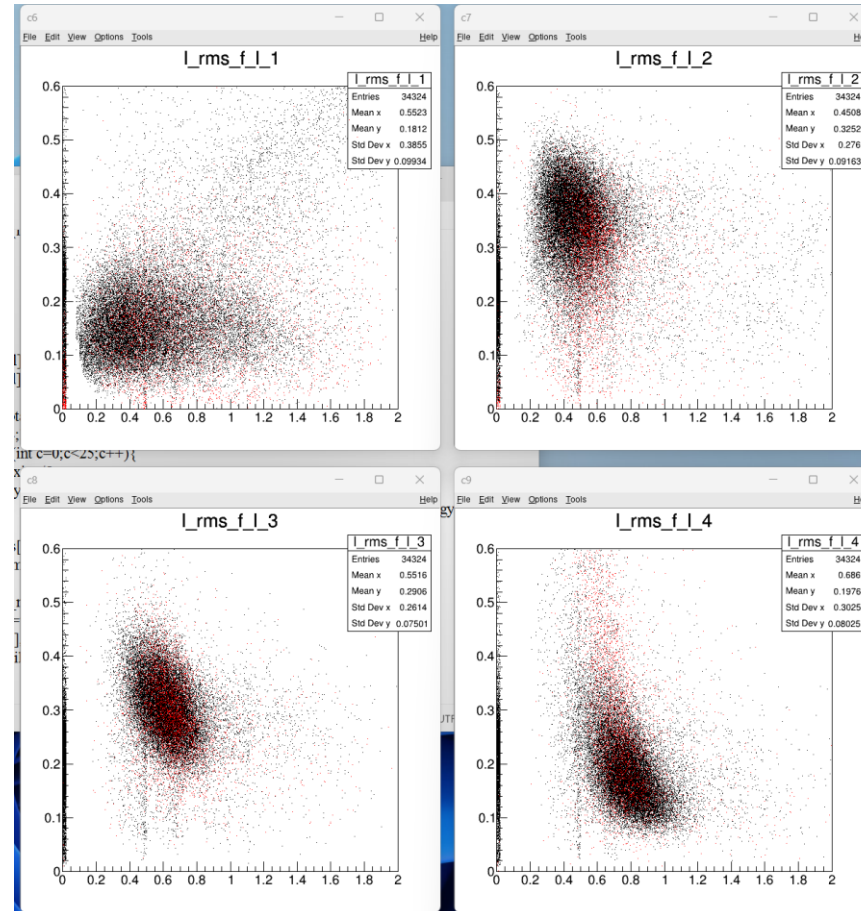
$$\text{RMS_sum}; f_last \times \text{RMS_sum}^4$$



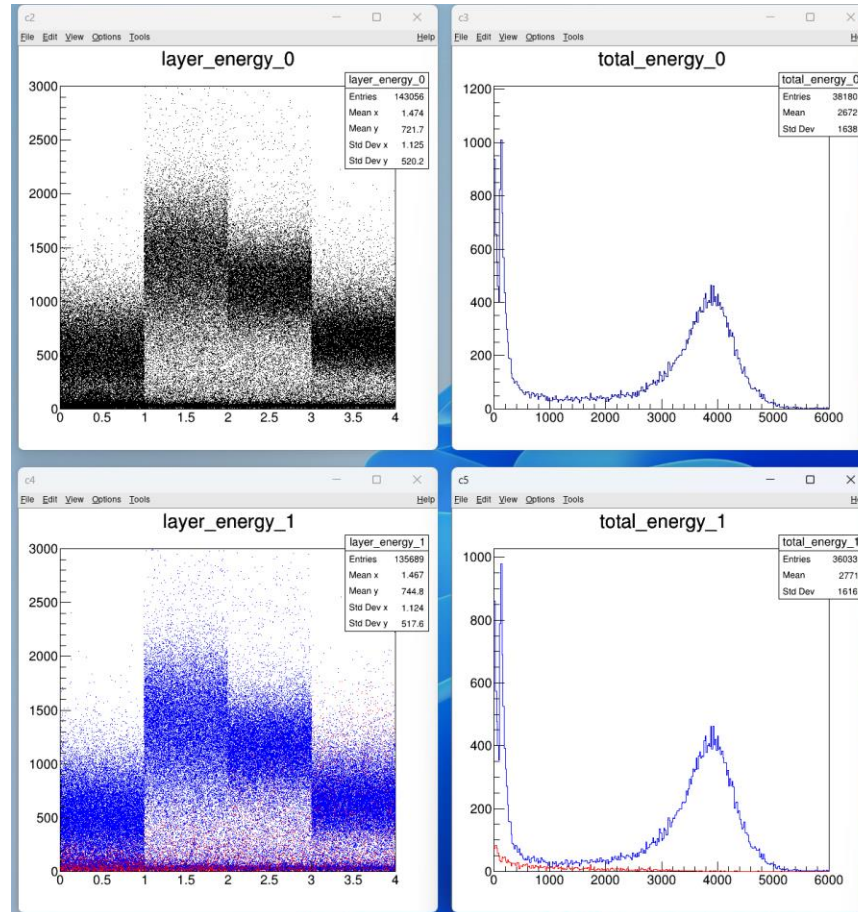
RMS[*]



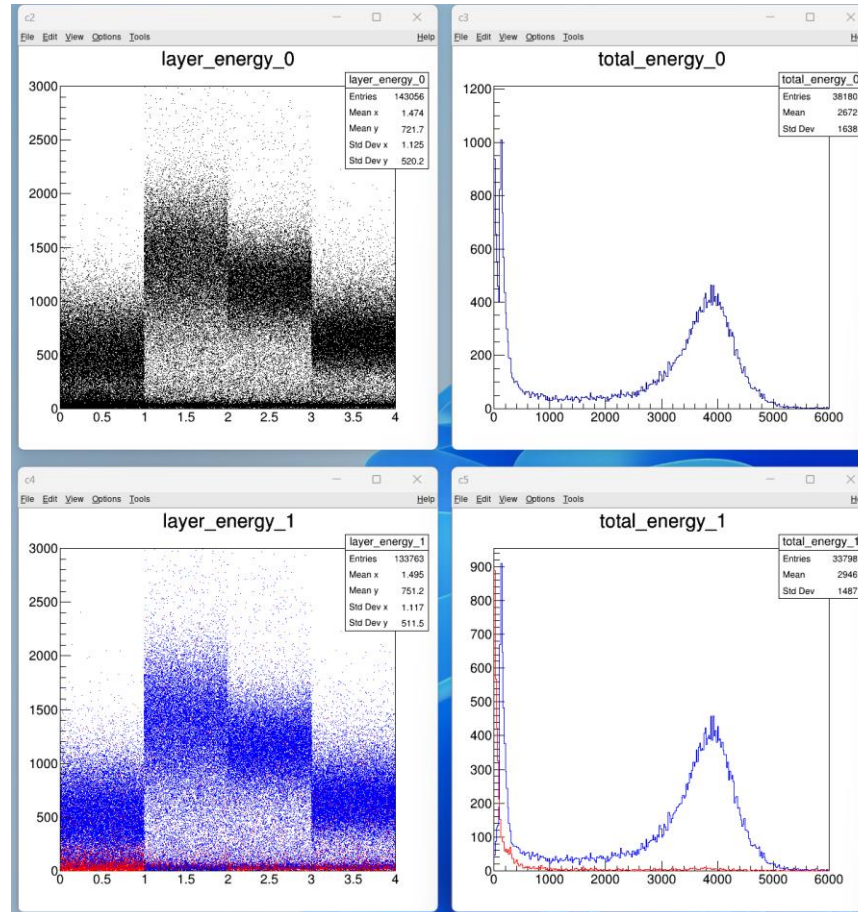
X: RMS[*], Y: layer[*]/total



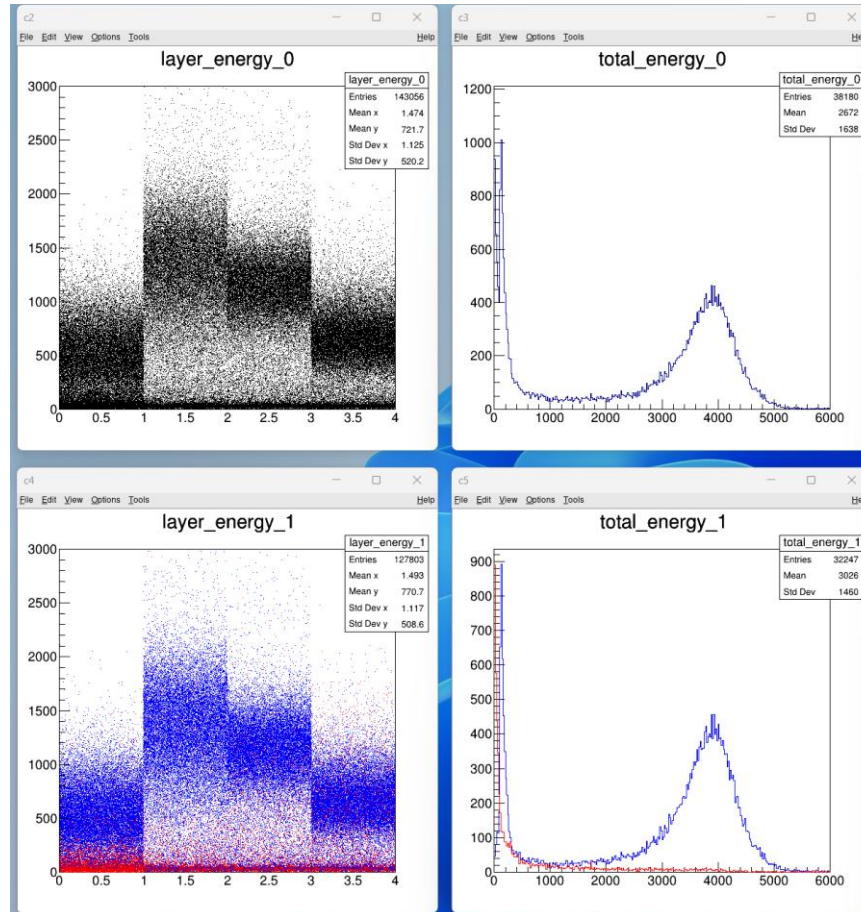
(1) $\text{layer}[3]/\text{total} < 0.4$



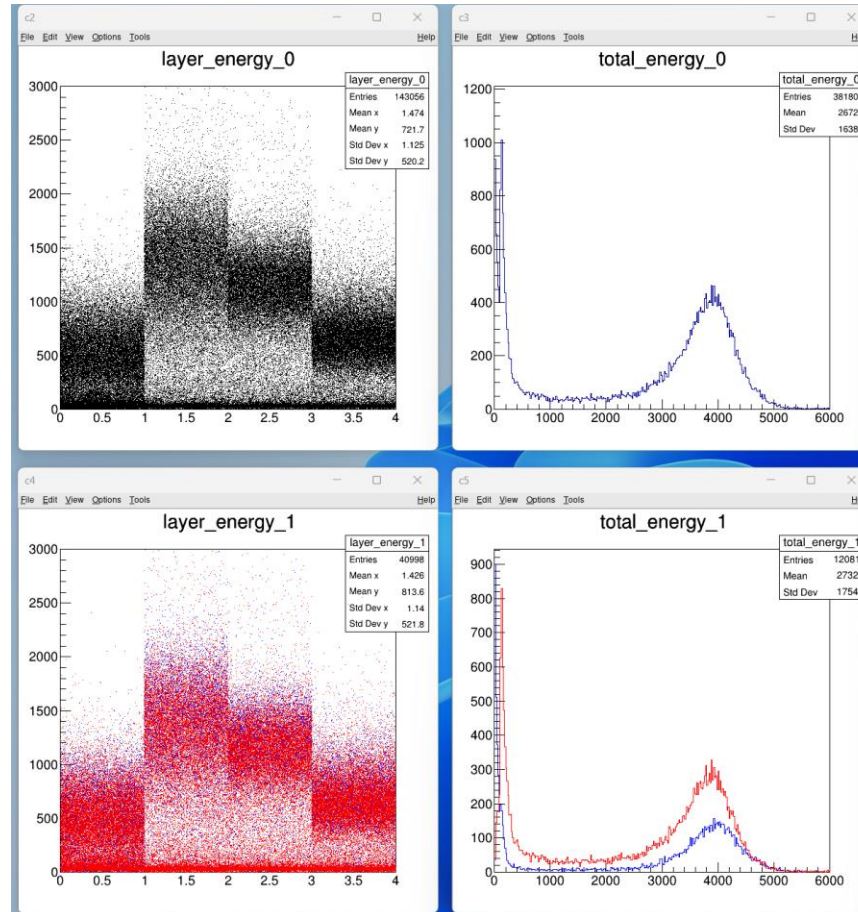
(2) $\text{RMS}[1] < 1$



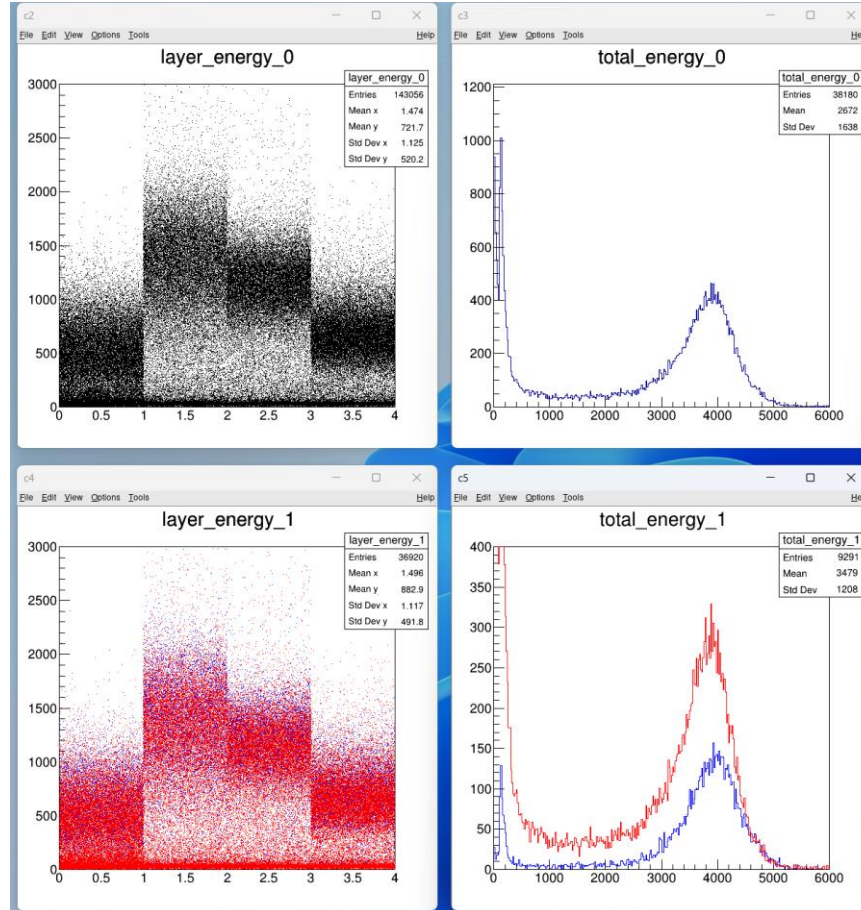
(1) + (2)



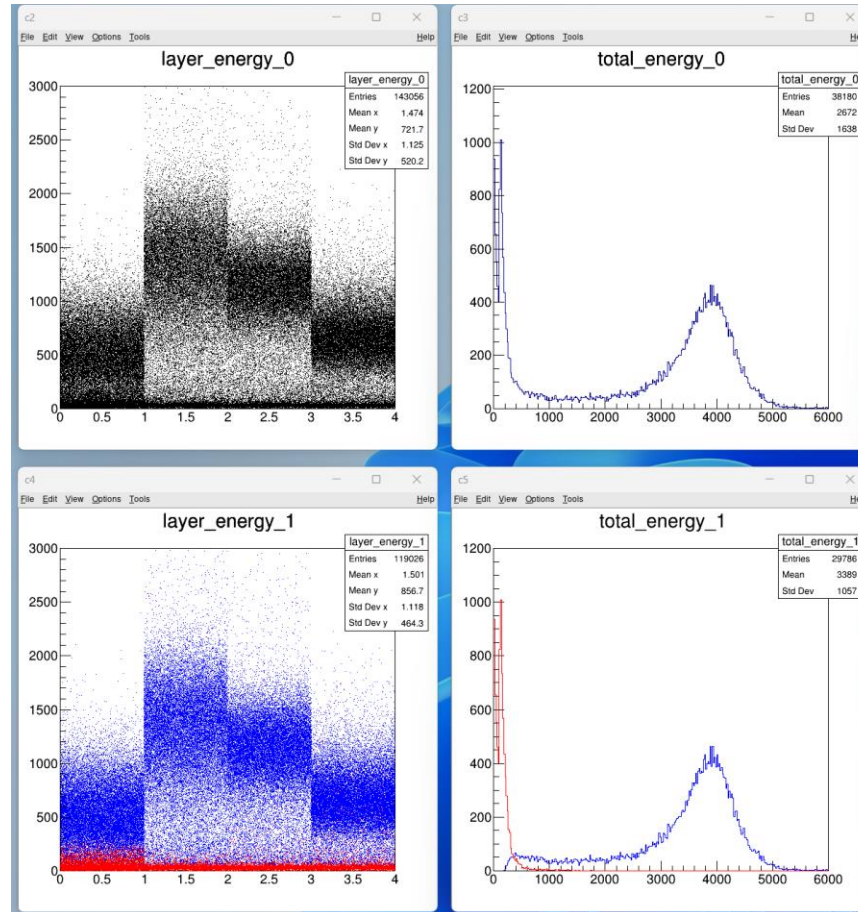
(3) $\text{maxcell} == \text{crystal}[*][12]$, $\text{layer} \geq 3$



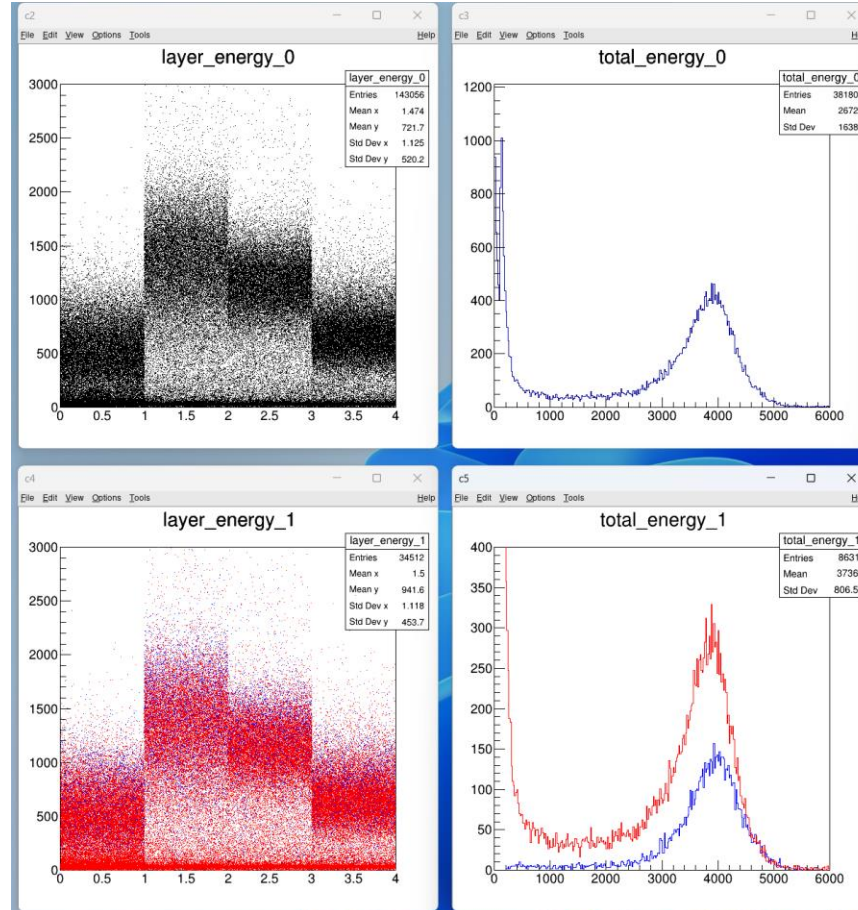
$$(1) + (2) + (3)$$



(4) $\text{layer} > 2 * \text{MIP}$, $\text{layer} \geq 3$



$$(1) + (2) + (3) + (4)$$



summary

selected condition	counts	ratio
(0) none	38180	100.00%
(1) layer[3]/total<0.4	36033	94.38%
(2) RMS[1]<1	33798	88.52%
(1) + (2)	32247	84.46%
(3) maxcell==crystal[*][12]	12081	31.64%
(1) + (2) + (3)	9291	24.33%
(4) layer>2*MIP, layer>=3	29786	78.01%
(1) + (2) + (3) + (4)	8631	22.61%

