Position Calibration LUT

Bin	Tube 0		Tube 1				Tube 127	
	Pixel	Occupancy	Pixel	Occupancy	...	...	Pixel	Occupancy
0	-1	0						
1	-1	0						
2	0							
...								
...								
29	3	1						
30	3	1						
31	3	1						
32	3	0,92						
33	4	1						
34	4	1						
...								
...								
957	127							
958	-1	0						
959	-1	0						

Given counts_raw[bin] calculate counts_raw[pixel]

for tube = 0 to 127 loop

   for bin = 0 to 959 loop

      pixel=Pixel[tube, bin]

      cnts=counts_raw[tube, bin]*occupancy[tube, bin]

      cnts_next=counts_raw[tube, bin]-cnts

      counts_raw[tube, pixel]=counts_raw[tube, pixel]+cnts

      counts_raw[tube, pixel+1]=counts_raw[tube, pixel+1]+cnts_next

Position Calibration LUT

Efficiency Calibraton LUT

Pixel	Mask	Tube 0 Efficiency	Tube 1 Efficiency	... ...	... ...	Tube 126 Efficiency	Tube 127 Efficiency
0	0	1,101					
1	8/7	1,107					
2	1	1,109					
...	1	1,009					
...	1	1,002					
...	1	0,998					
...	1	1,001					
...	1	...					
...	1	...					
...	1	...					
...	1	...					
...	1	...					
...	1	...					
...	1	...					
126	8/7	...					
127	0	...					

counts_cal[tube, pixel]=counts_raw[tube, pixel]*mask[pixel]*efficiency[tube, pixel]

How to calculate position calibration

1. Known Cd bars position determine relation
   y[mm]= a + b * x[bin]

   where X[bin] is the position in the range from 0..959 provided by Mesytec System

2. Define pixel position in the active area of the PSDs.