SRC Weekly Meeting
June 26, 2012

- Revisit Optics for LHRS,

LEFT Optics

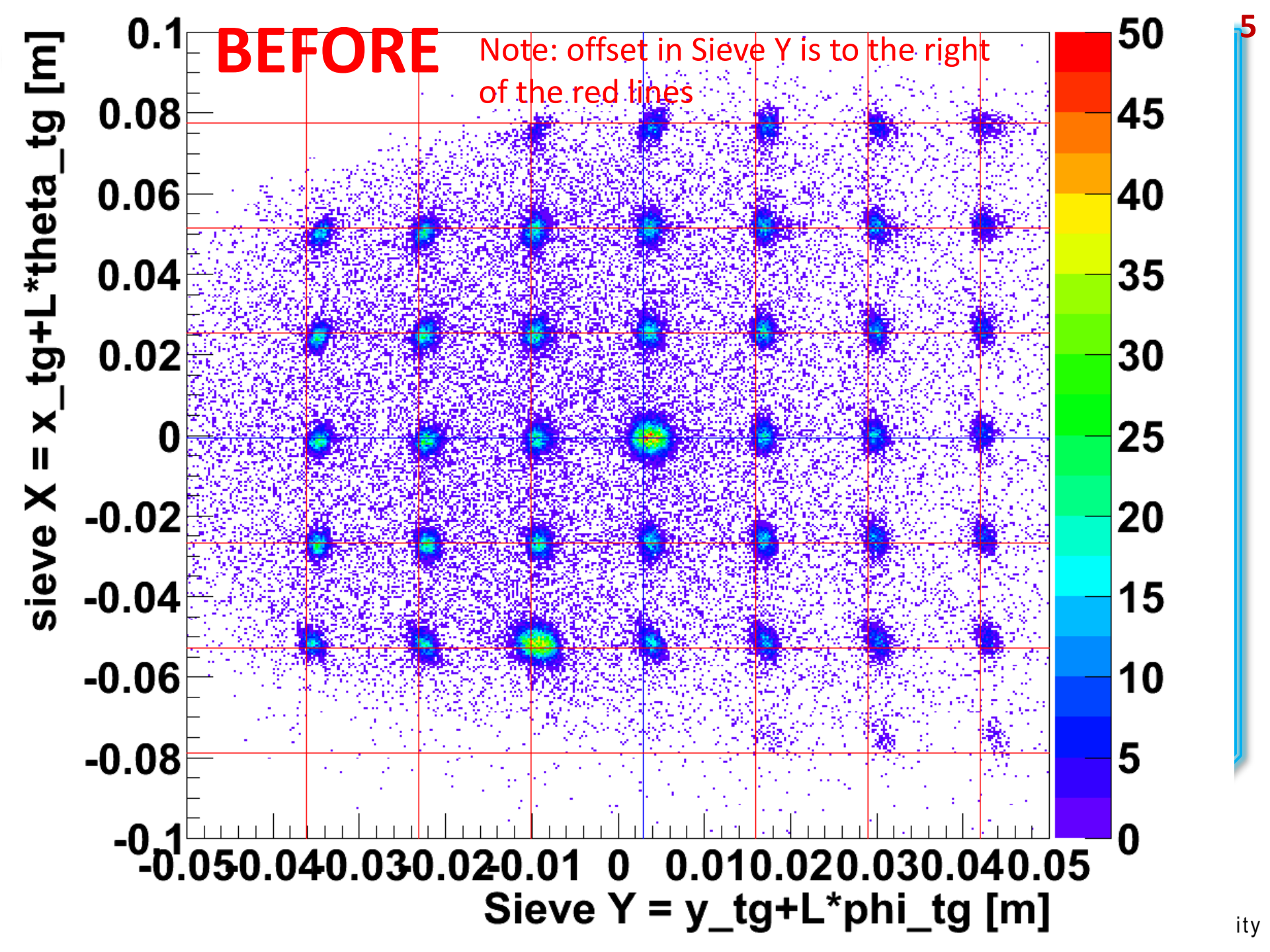
- Re-Calibration of phi

SIEVE X & Y RECONSTRUCTION

→ RECALIBRATION OF Φ IS NEEDED

Sieve X Y before calibration

- With scale Effect on the vertex Z, the change is made to target_Y calculation. This effect only the phi variable as the Sieve Y defined as:
  - $Y_{sieve} = L*phi_{tg} + Y_{tg}$

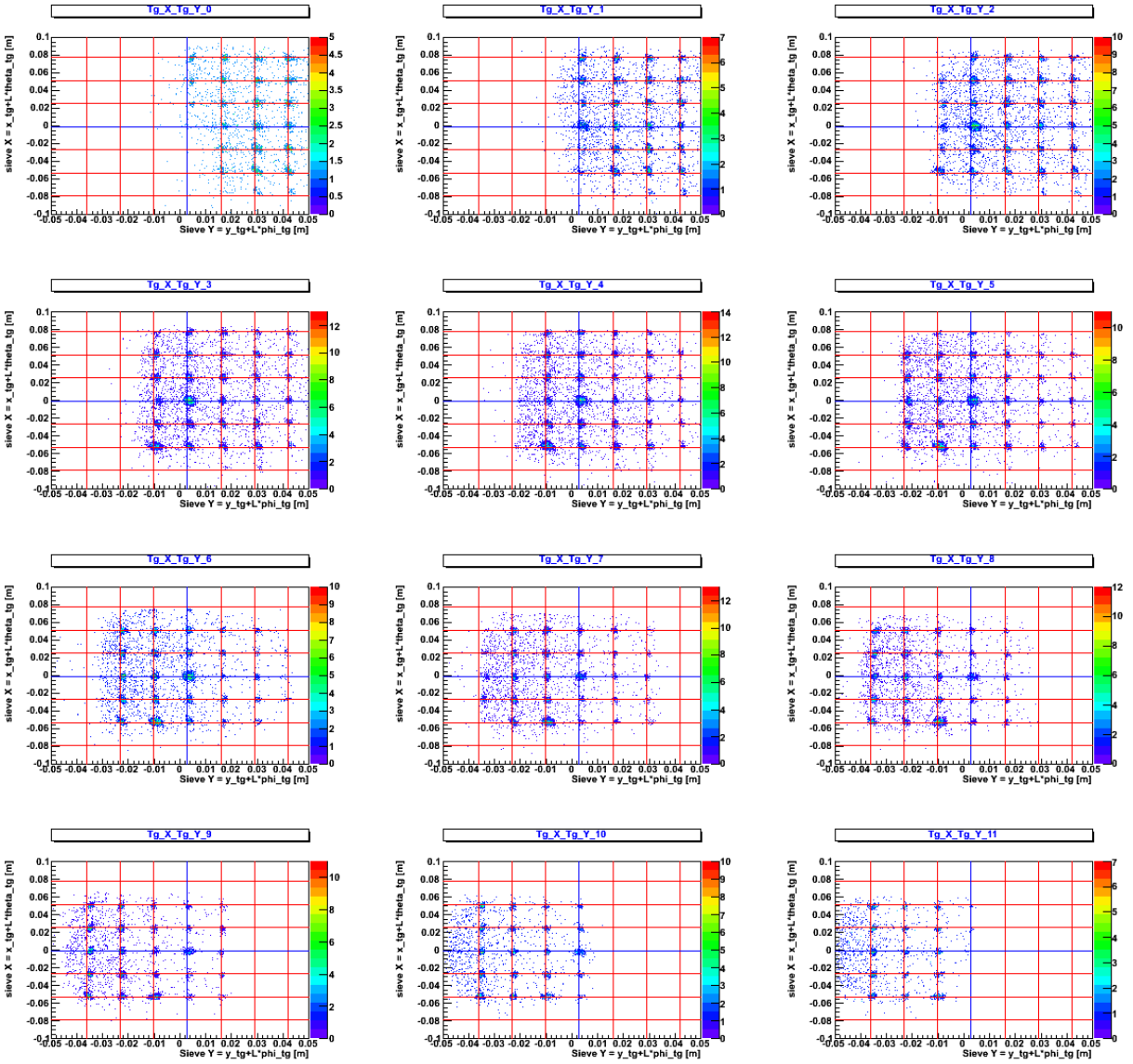

BEFORE
Note: offset in Sieve Y is to the right of the red lines
sieve X = x_tg+L*theta_tg [m]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
-0.05 -0.04 -0.03 -0.02 -0.01 0 0.01 0.02 0.03 0.04 0.05
Sieve Y = y_tg+L*phi_tg [m]
50
45
40
35
30
25
20
15
10
5
0

Sieve X Y, per foil **before** calibration

Run 1238

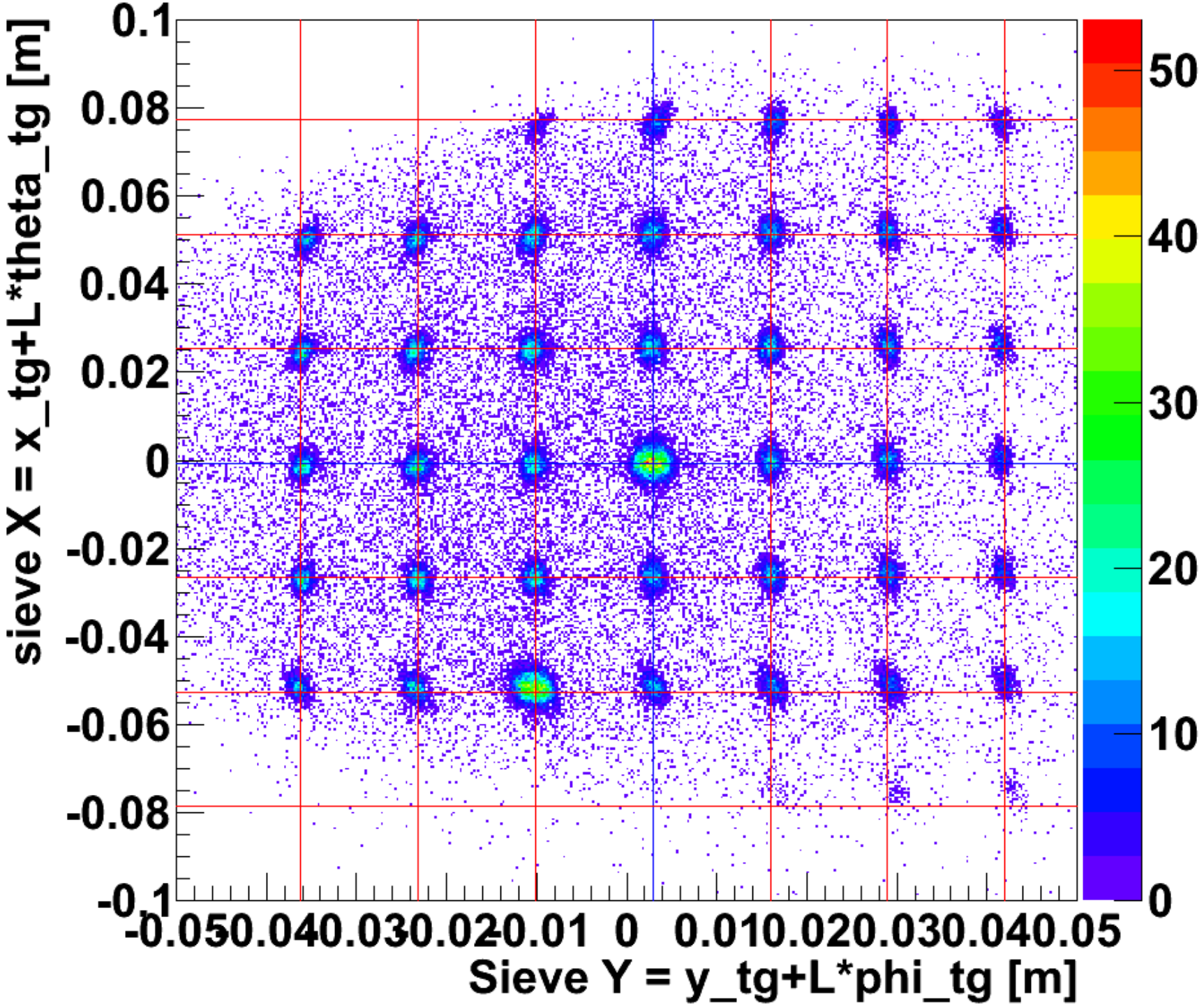
C12- 13foils

At 16.5 degree



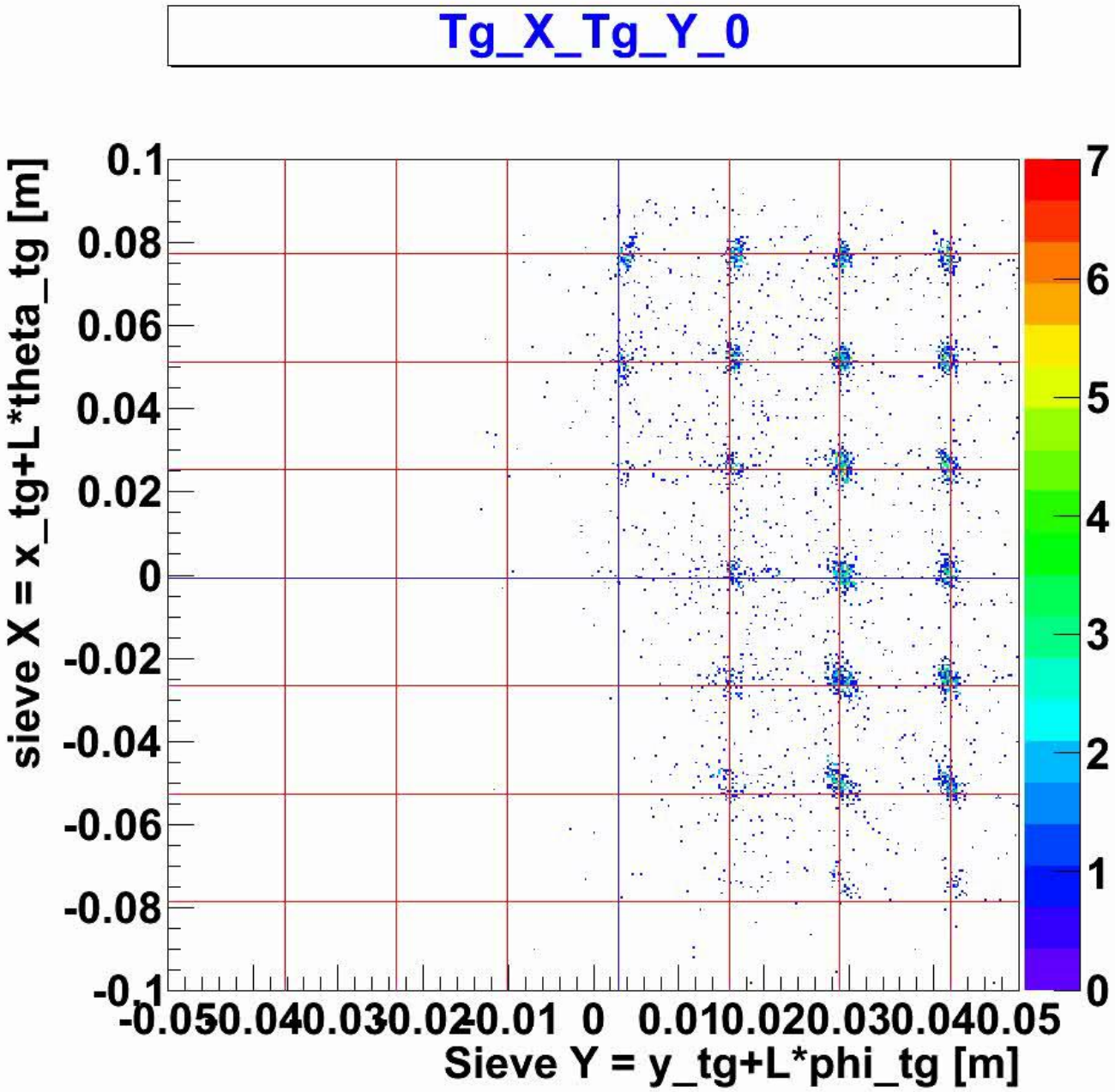
Sieve X Y after calibration

- Run 1238
- C12- 13foils
- At 16.5 degree
- Sieve In

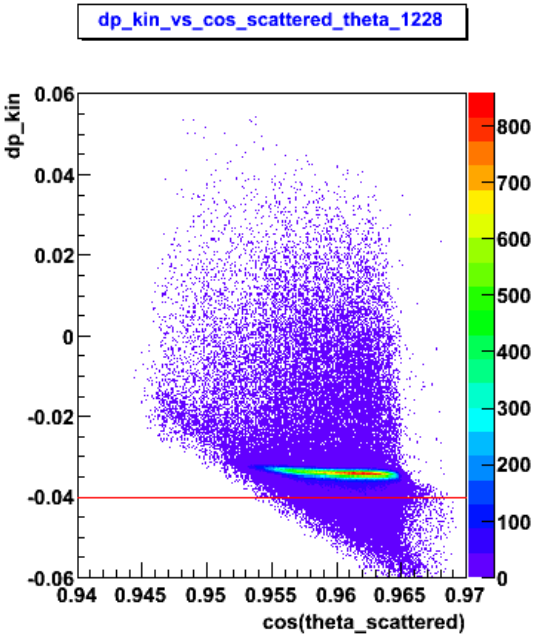

sieve X = x_tg+L*theta_tg [m]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
-0.05
-0.04
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
0.04
0.05
Sieve Y = y_tg+L*phi_tg [m]
50
40
30
20
10
0

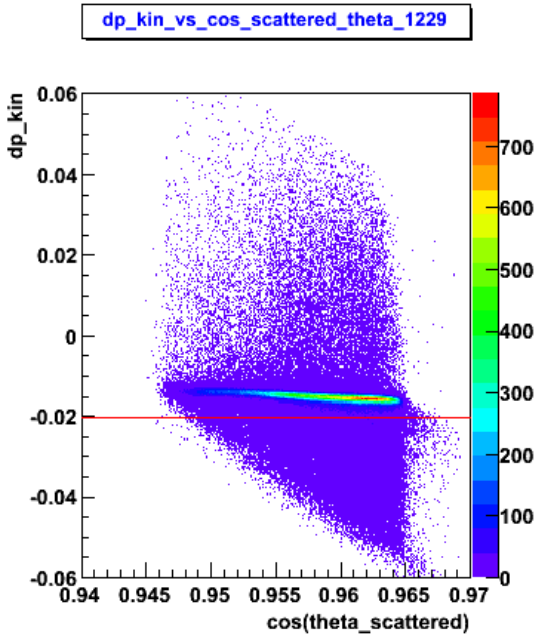
Sieve X Y, per foil after calibration

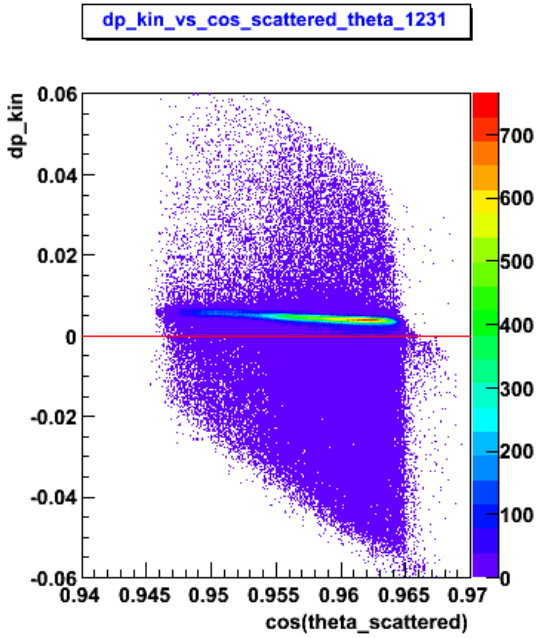
Run 1238
C12- 13foils
At 16.5 degree

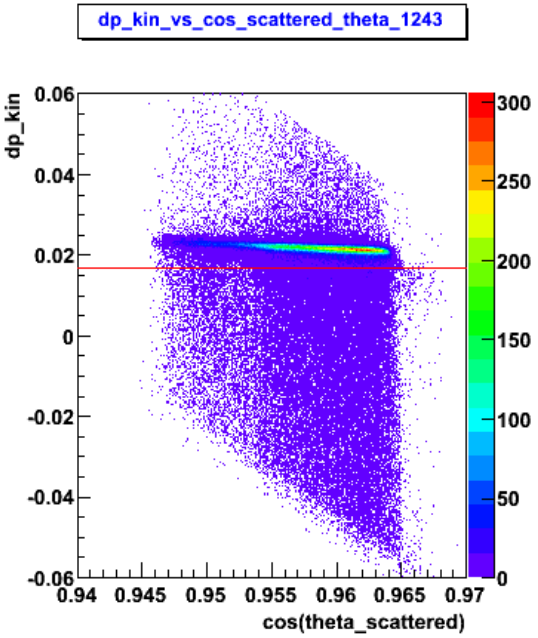


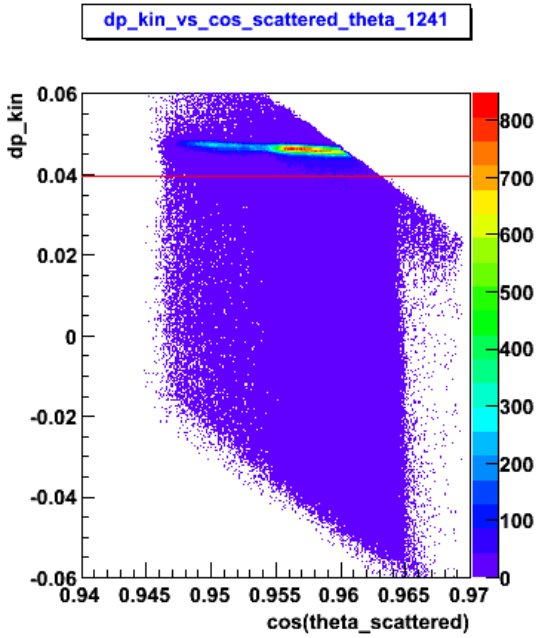
DP SCAN ON HYDROGEN



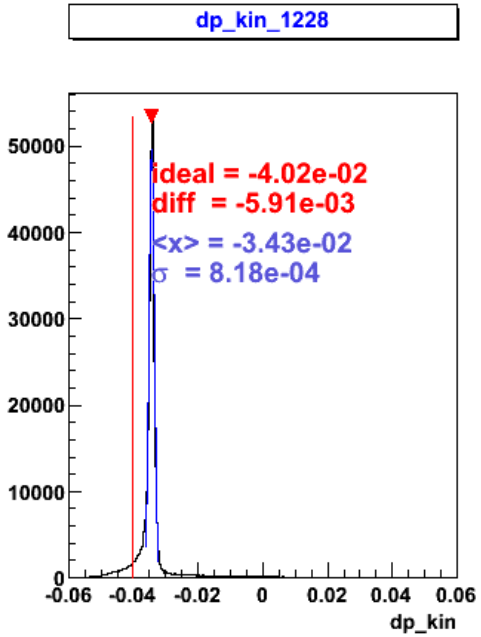


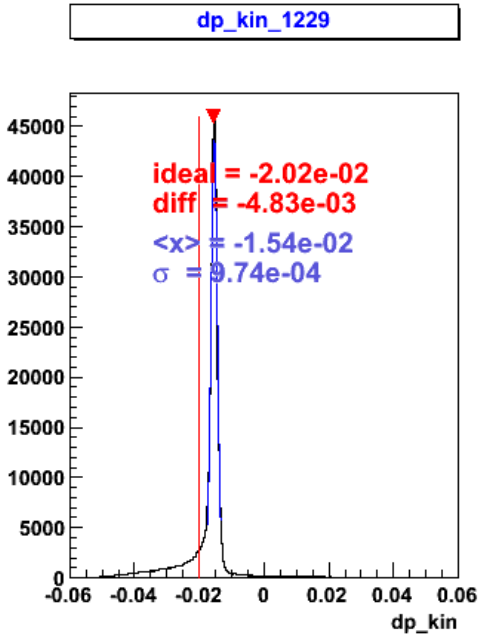


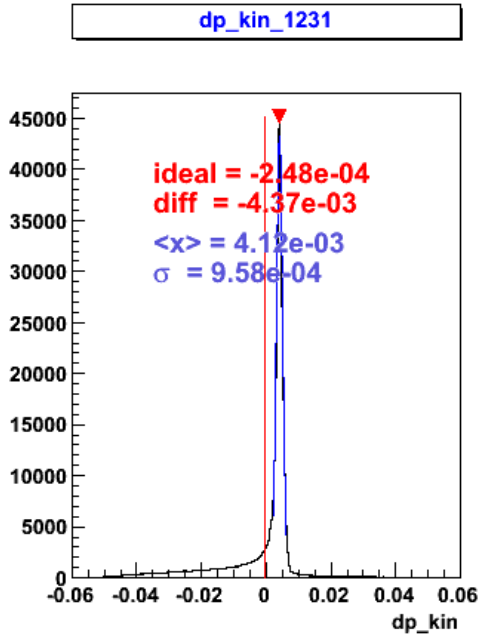


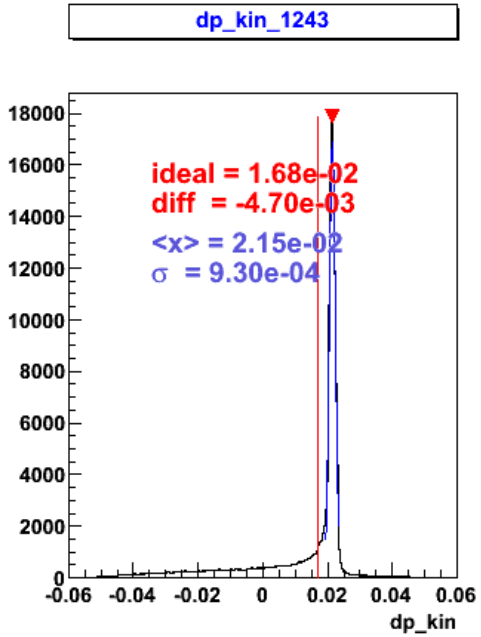


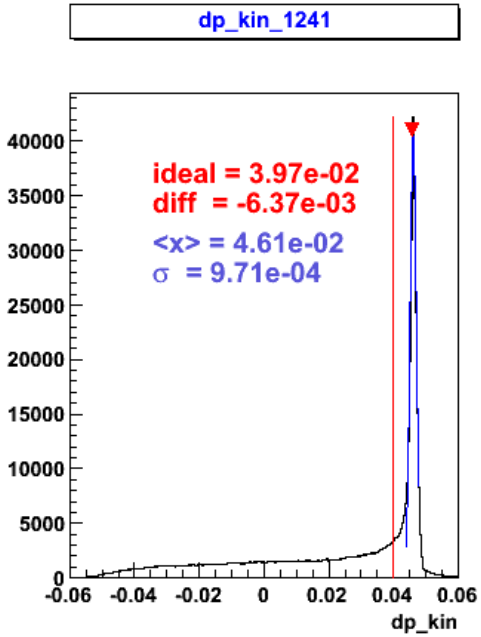
Hydrogen scan.
Redline is the momentum setting of the Dipole.











Hydrogen scan.
Redline is the momentum setting of the Dipole.

Focus on the run 1229, 1231, and 1243 where we have full acceptance, the ideal-mean is approximately the same

Left HRS optics summary

- ✓ Vertex
- ✓ Phi
- ✓ Theta
- ❖ Momentum (half done)