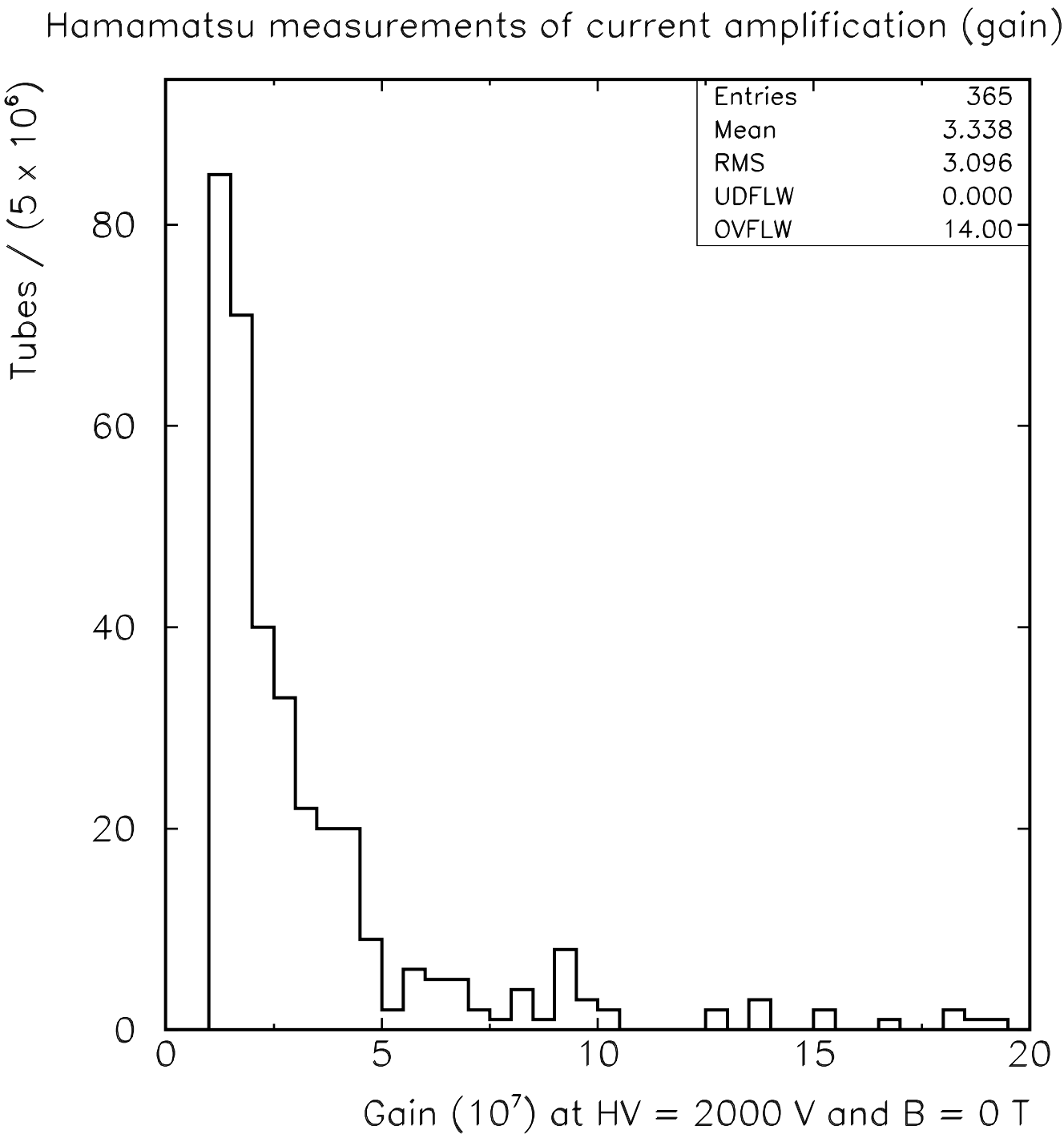
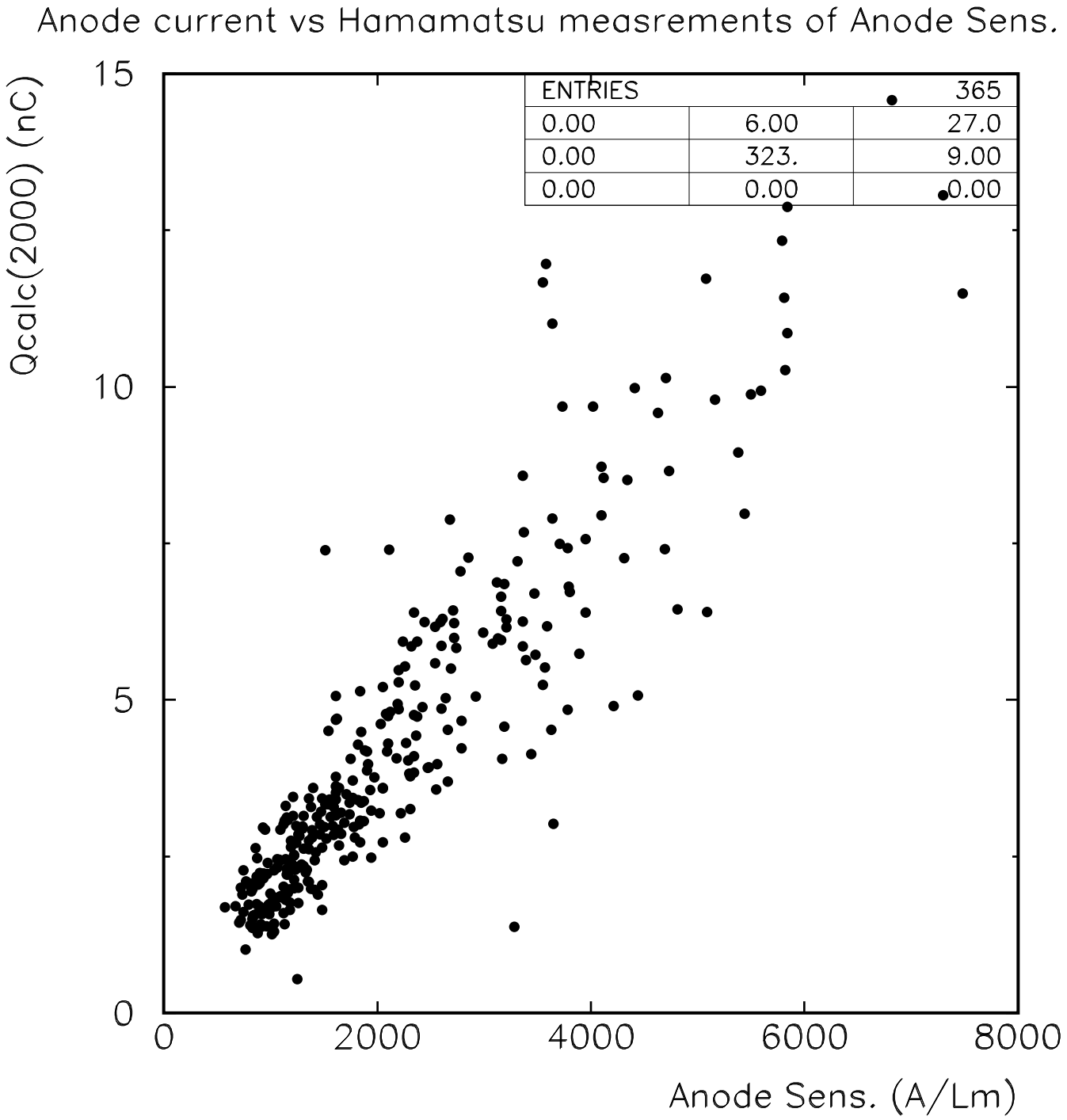
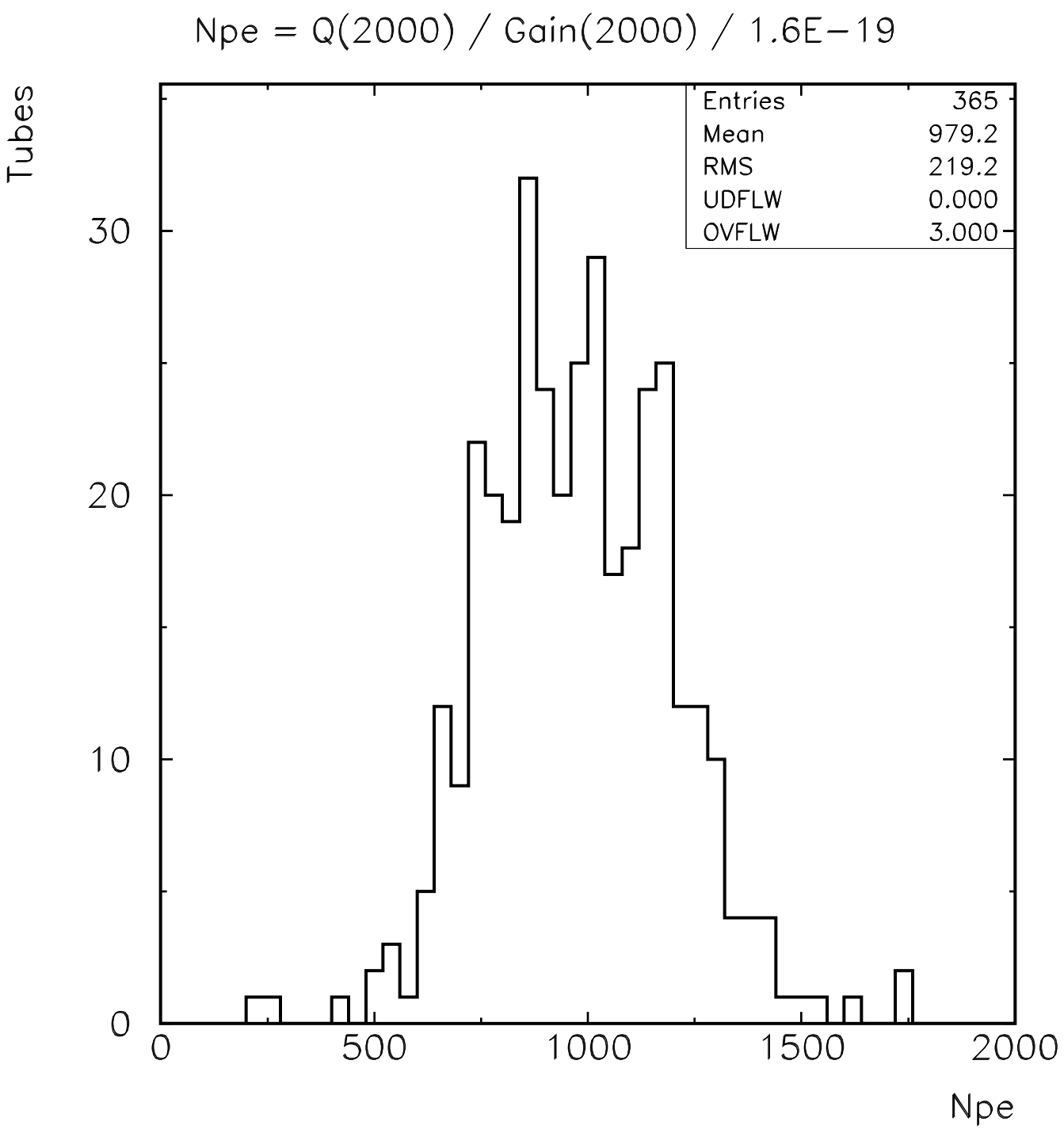
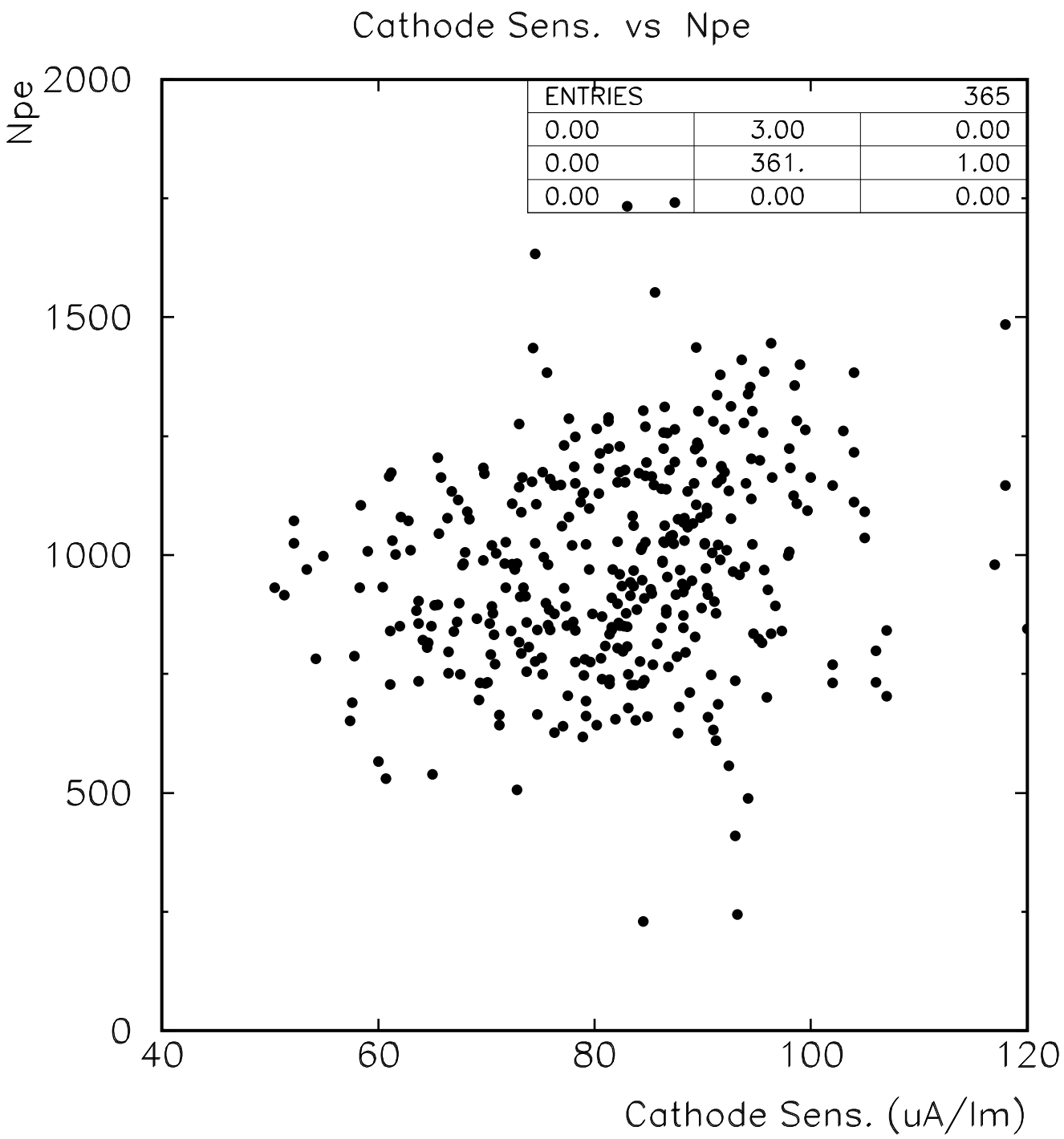
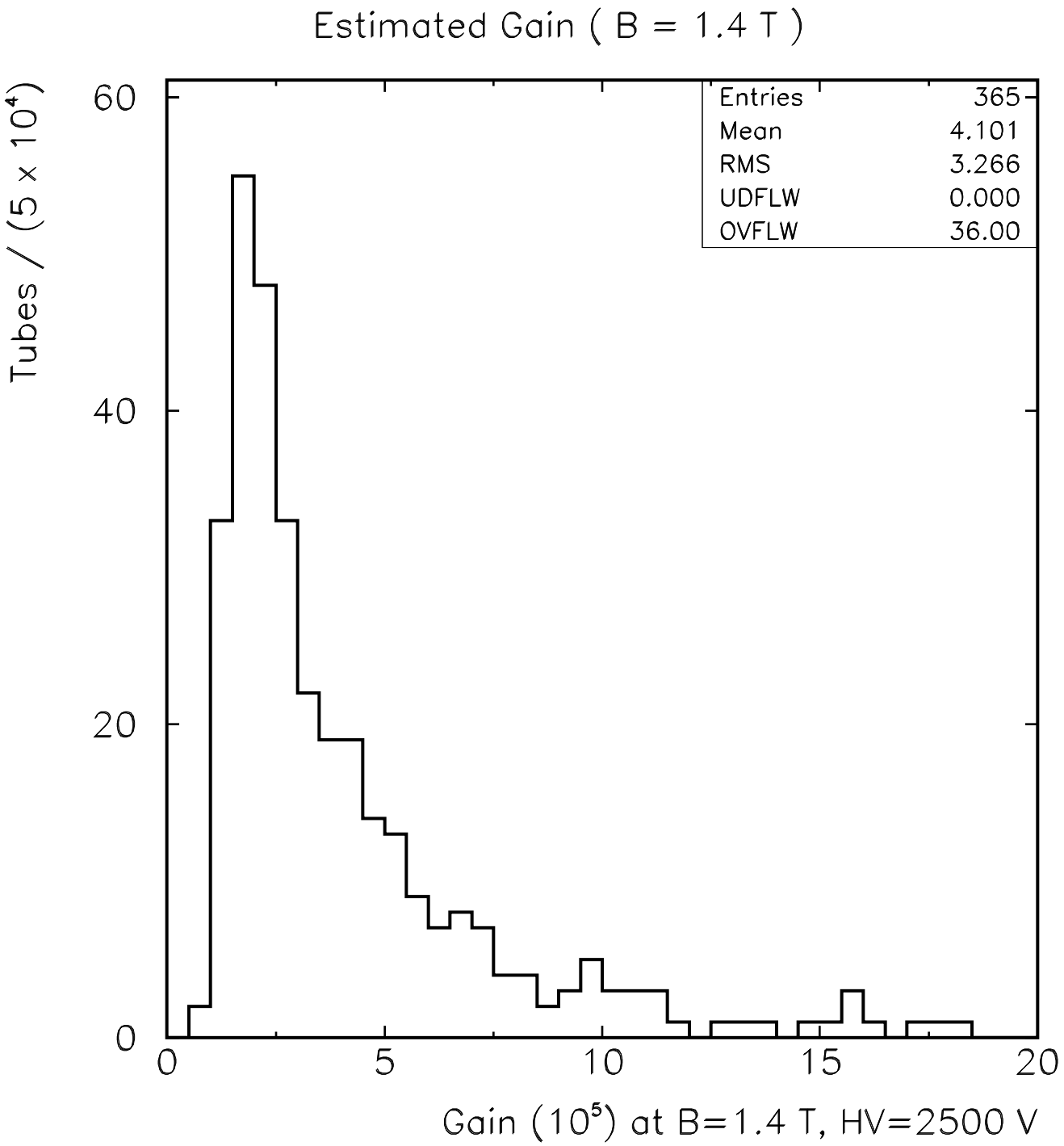
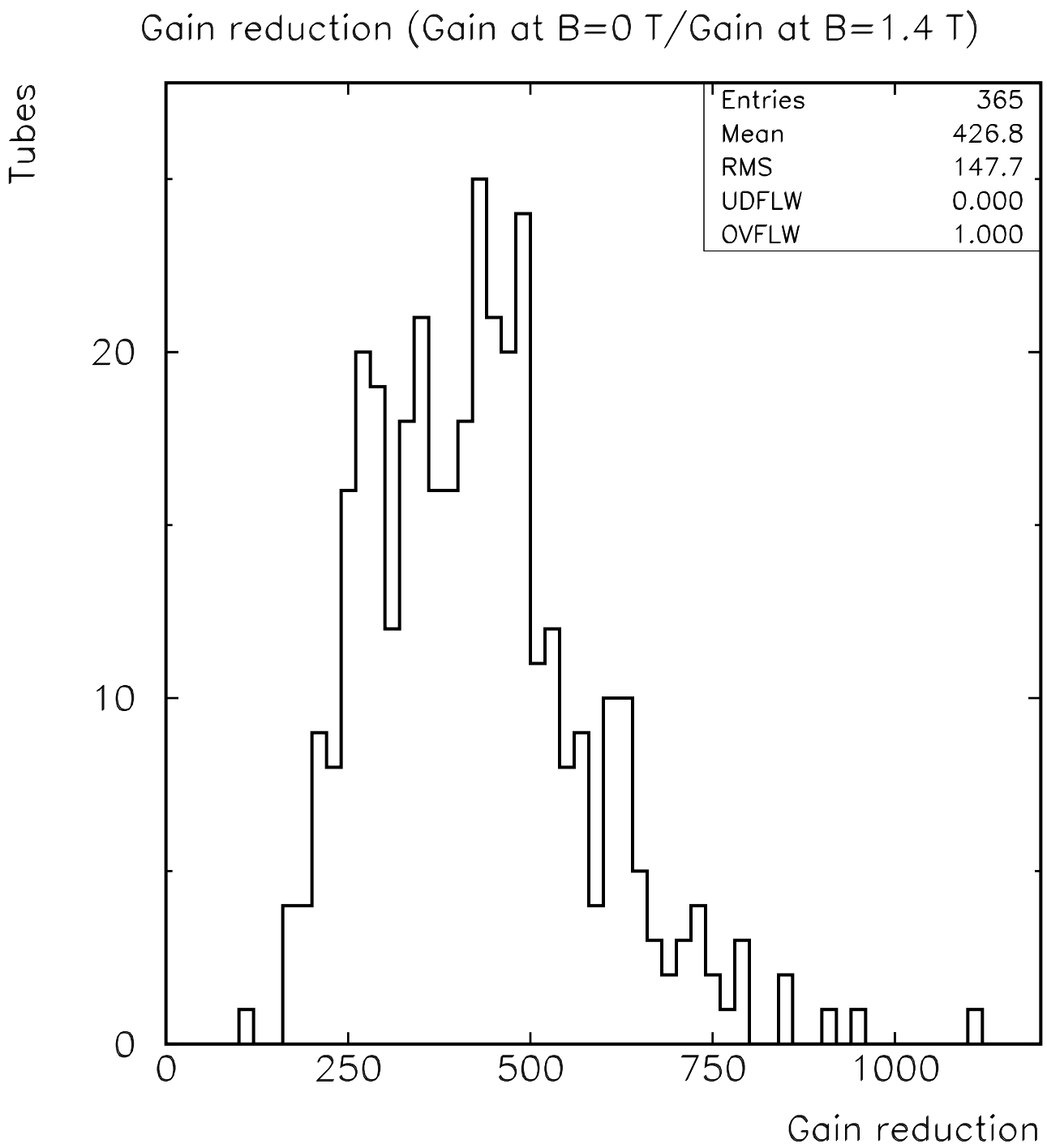

Hamamatsu measurements of current amplification (gain)
Entries 365
Mean 3.338
RMS 3.096
UDFLW 0.000
OVFLW 14.00
Tubes / (5 x 10^6)
0
20
40
60
80
0
5
10
15
20
Gain (10^7) at HV = 2000 V and B = 0 T

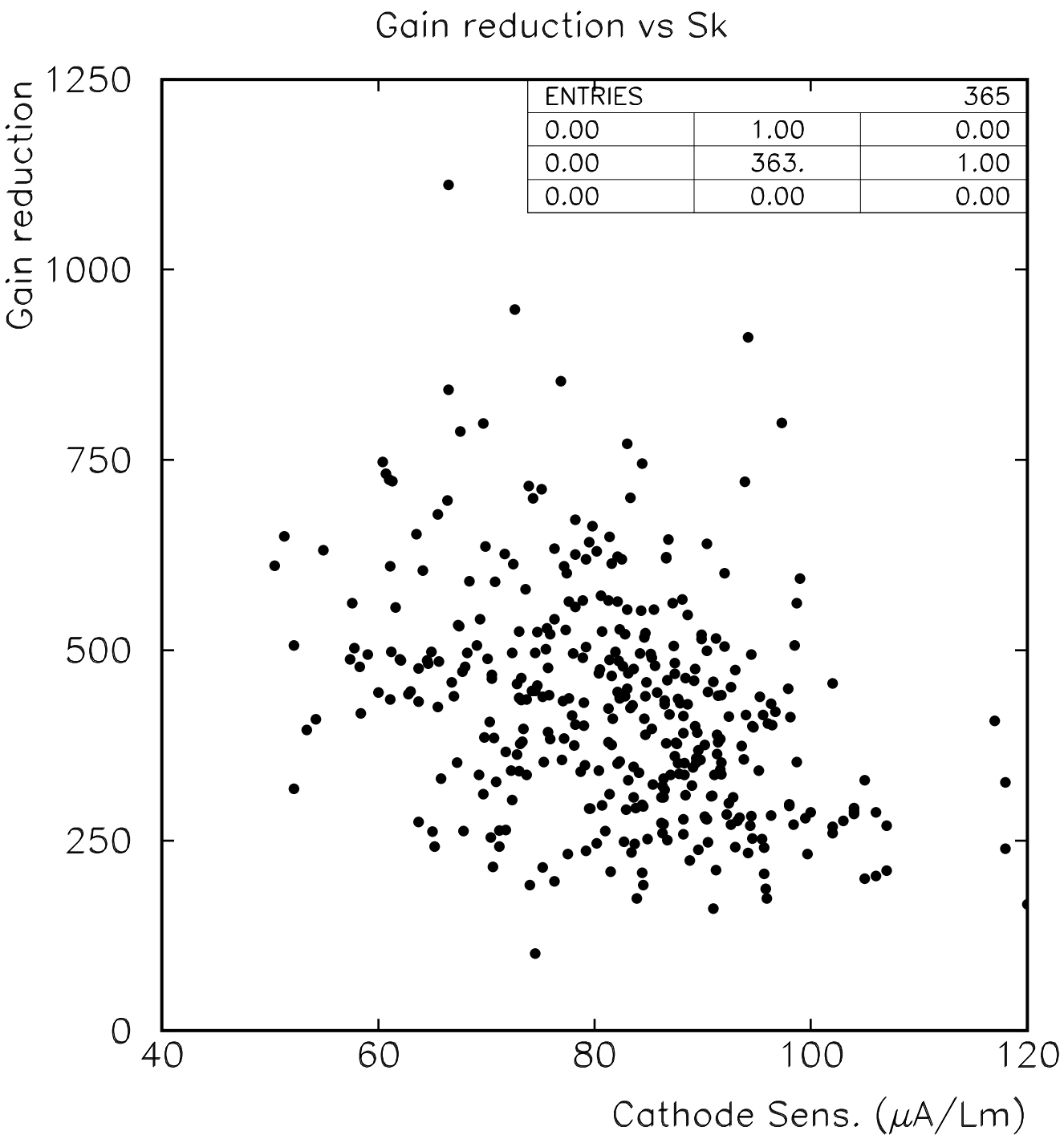

Anode current vs Hamamatsu measrements of Anode Sens.
ENTRIES 365
0.00 6.00 27.0
0.00 323. 9.00
0.00 0.00 0.00
Qcalc(2000) (nC)
15
10
5
0
0
2000
4000
6000
8000
Anode Sens. (A/Lm)

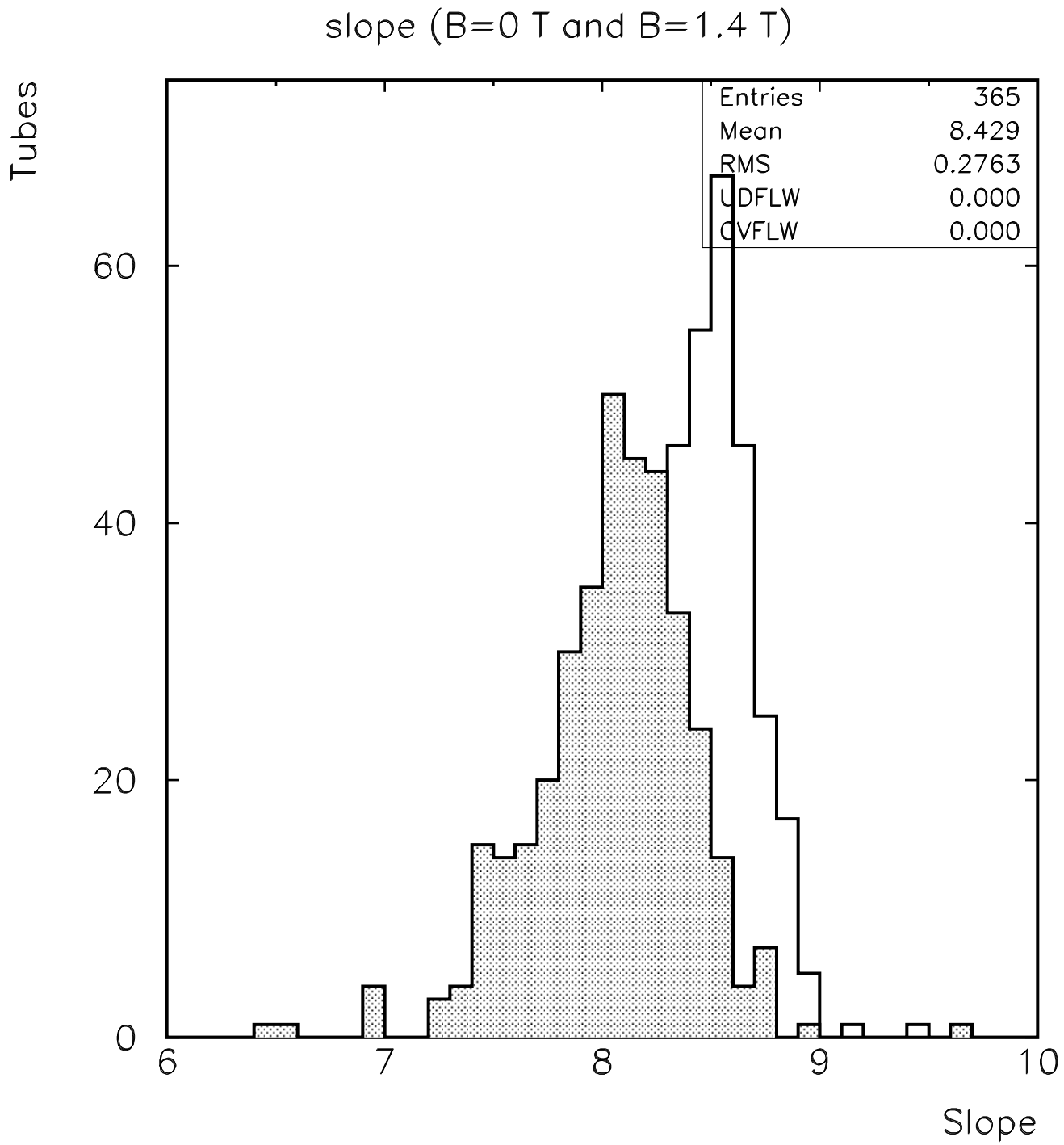

Npe = Q(2000) / Gain(2000) / 1.6E−19
Tubes
Entries 365
Mean 979.2
RMS 219.2
UDFLW 0.000
OVFLW 3.000
30
20
10
0
0
500
1000
1500
2000
Npe

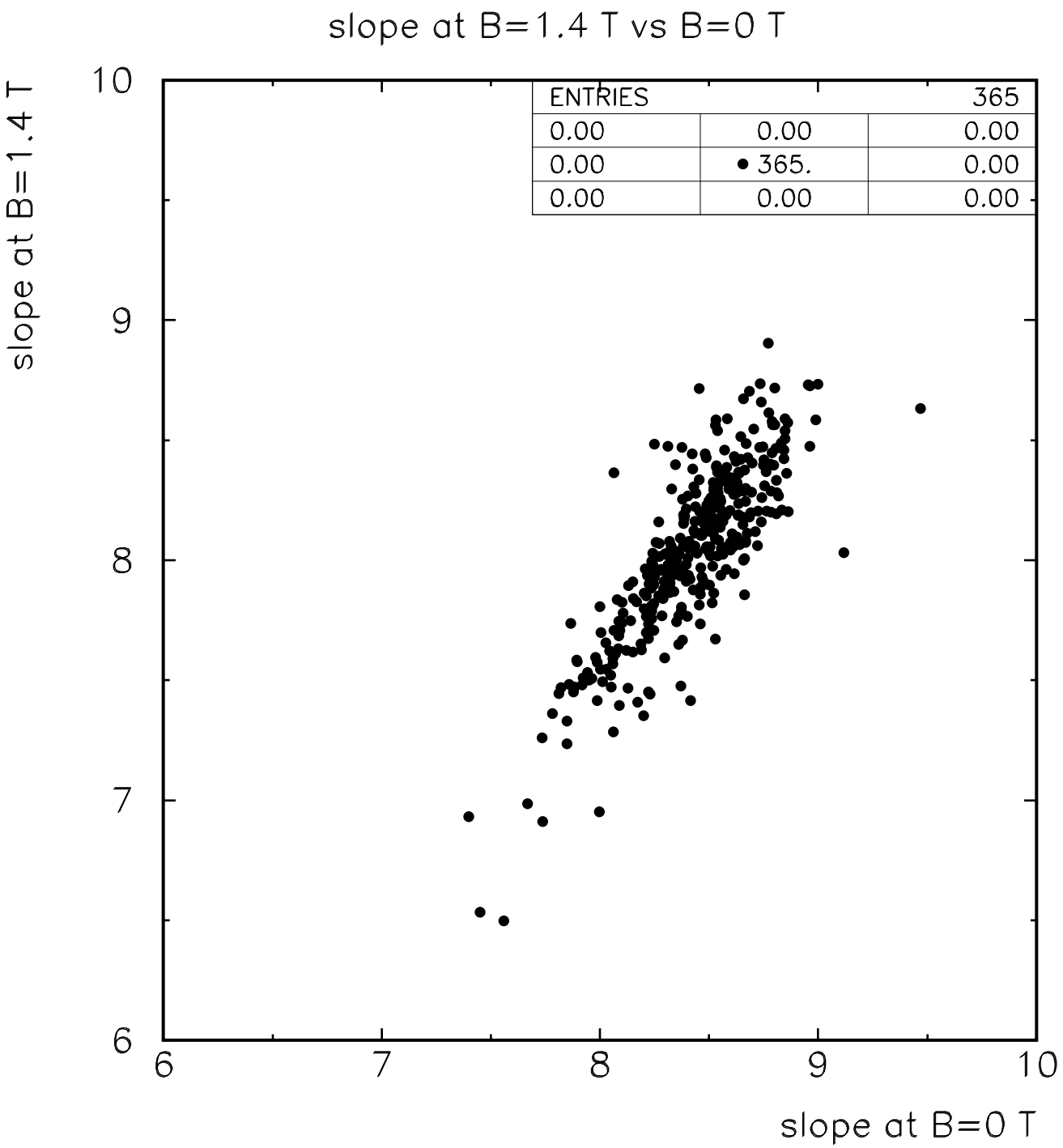

Cathode Sens. vs Npe
Npe
2000
1500
1000
500
0
40
60
80
100
120
Cathode Sens. (uA/lm)
ENTRIES 365
0.00 3.00 0.00
0.00 361. 1.00
0.00 0.00 0.00

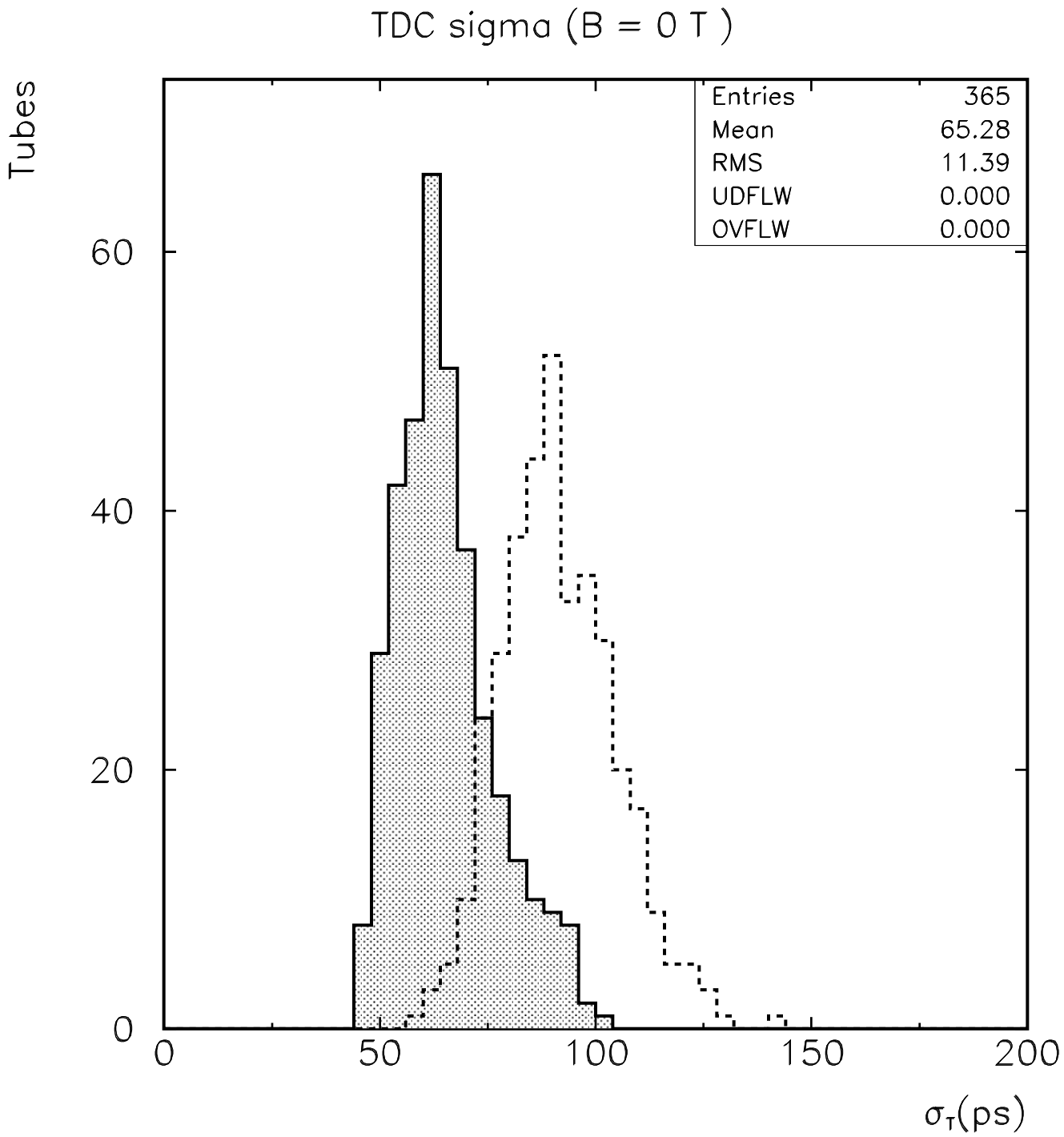

Estimated Gain (B = 1.4 T)
Entries 365
Mean 4.101
RMS 3.266
UDFLW 0.000
OVFLW 36.00
Tubes / (5 x 10⁴)
60
40
20
0
0
5
10
15
20
Gain (10⁵) at B=1.4 T, HV=2500 V

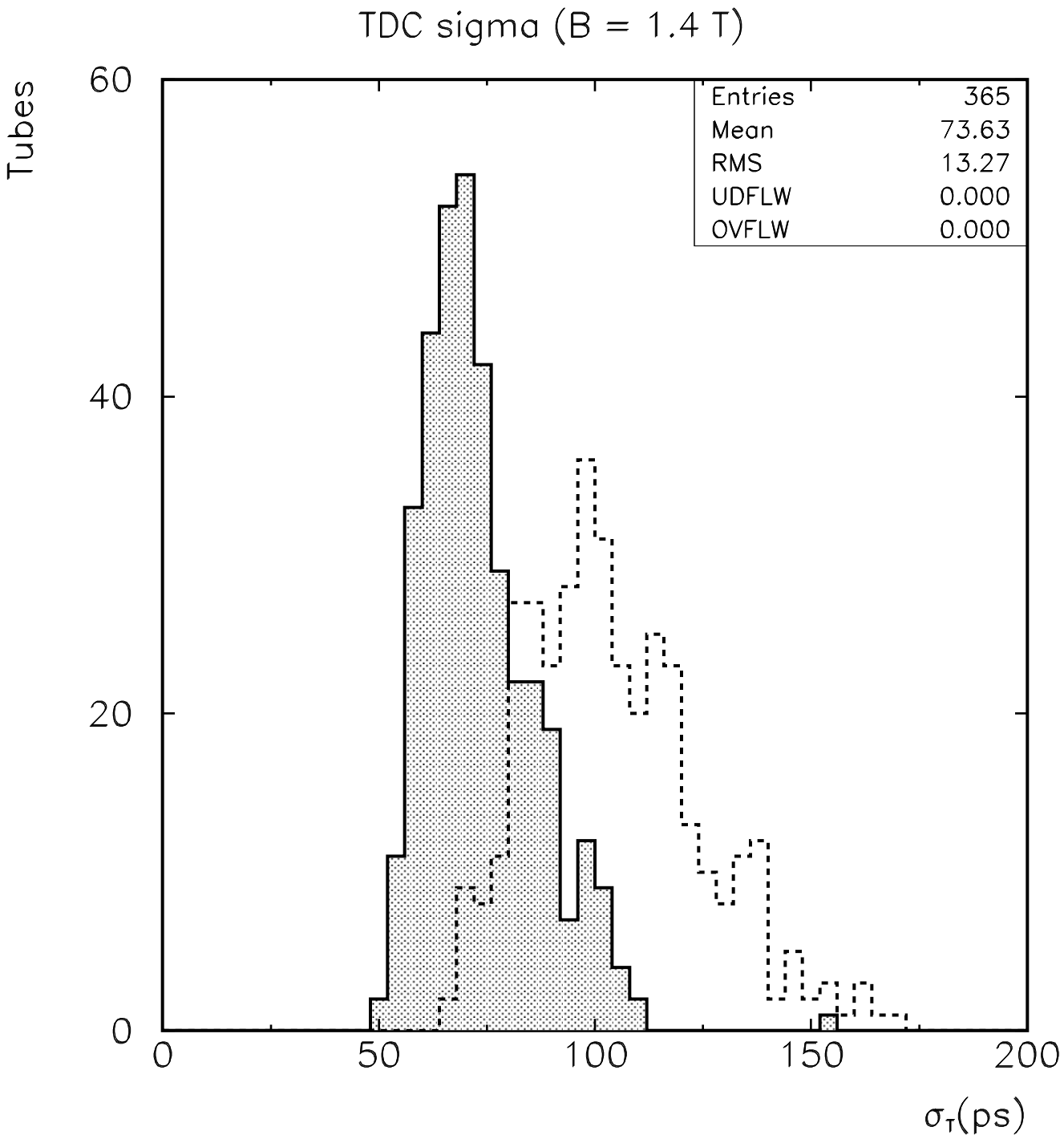

Gain reduction (Gain at B=0 T/Gain at B=1.4 T)
Entries 365
Mean 426.8
RMS 147.7
UDFLW 0.000
OVFLW 1.000
Tubes
0
10
20
0
250
500
750
1000
Gain reduction

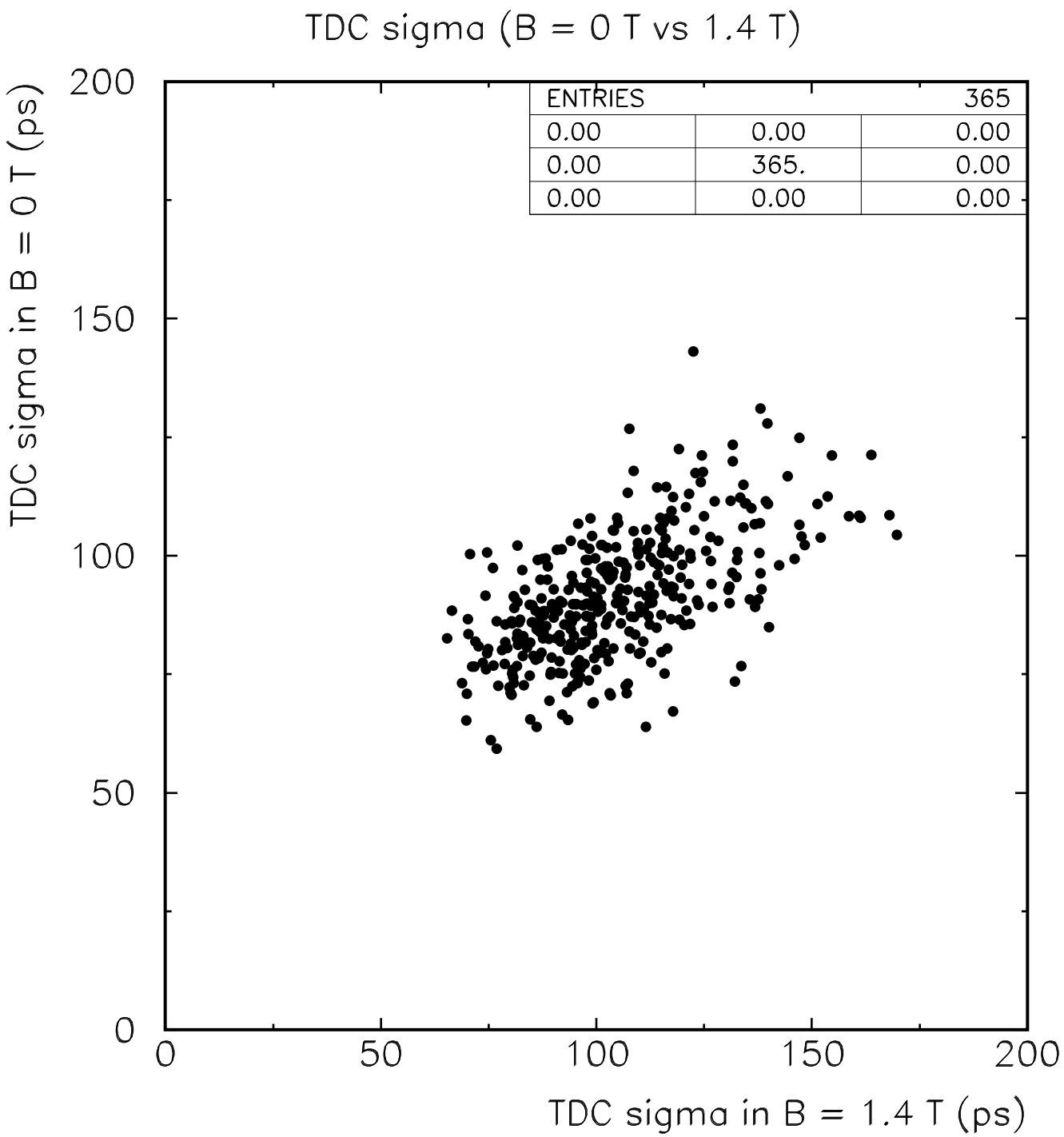

Gain reduction vs Sk
ENTRIES 365
0.00 1.00 0.00
0.00 363. 1.00
0.00 0.00 0.00
Gain reduction
1250
1000
750
500
250
0
40
60
80
100
120
Cathode Sens. (μA/Lm)

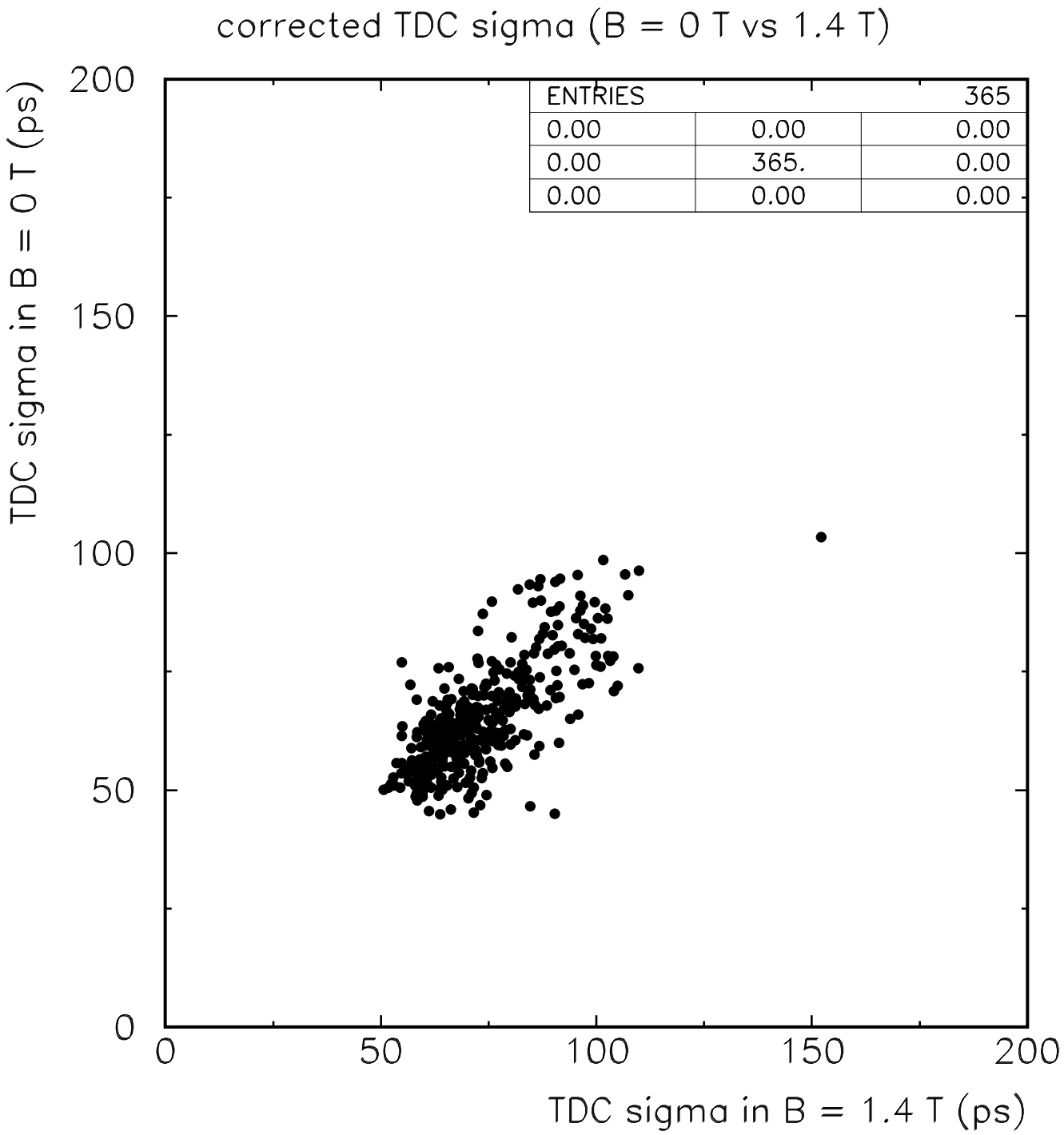

slope (B=0 T and B=1.4 T)
Entries 365
Mean 8.429
RMS 0.2763
UDFLW 0.000
OVFLW 0.000
Tubes
60
40
20
0
6
7
8
9
10
Slope

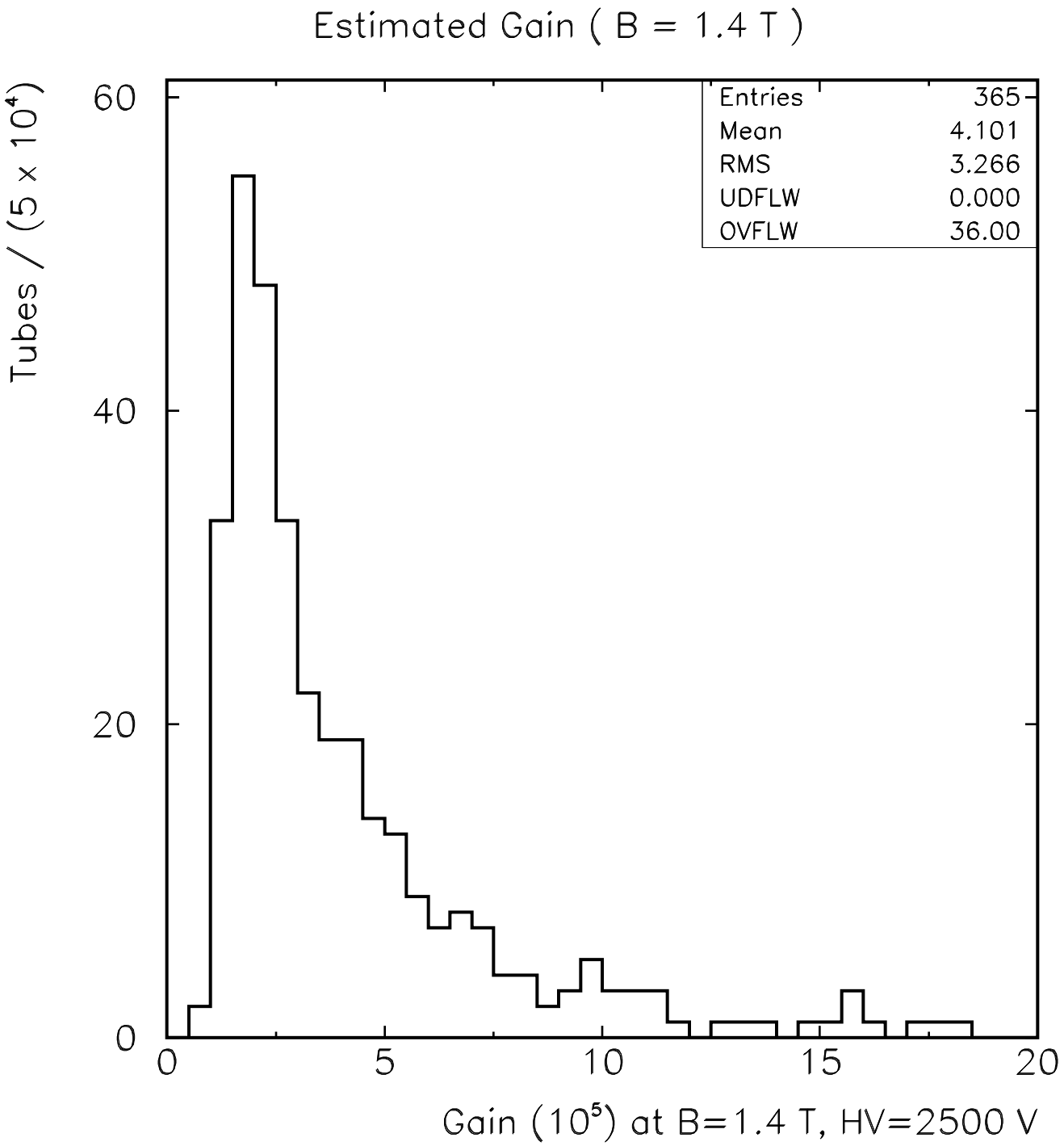

slope at B=1.4 T vs B=0 T
ENTRIES 365
0.00 0.00 0.00
0.00 • 365. 0.00
0.00 0.00 0.00
slope at B=1.4 T
slope at B=0 T
10
9
8
7
6
6
7
8
9
10

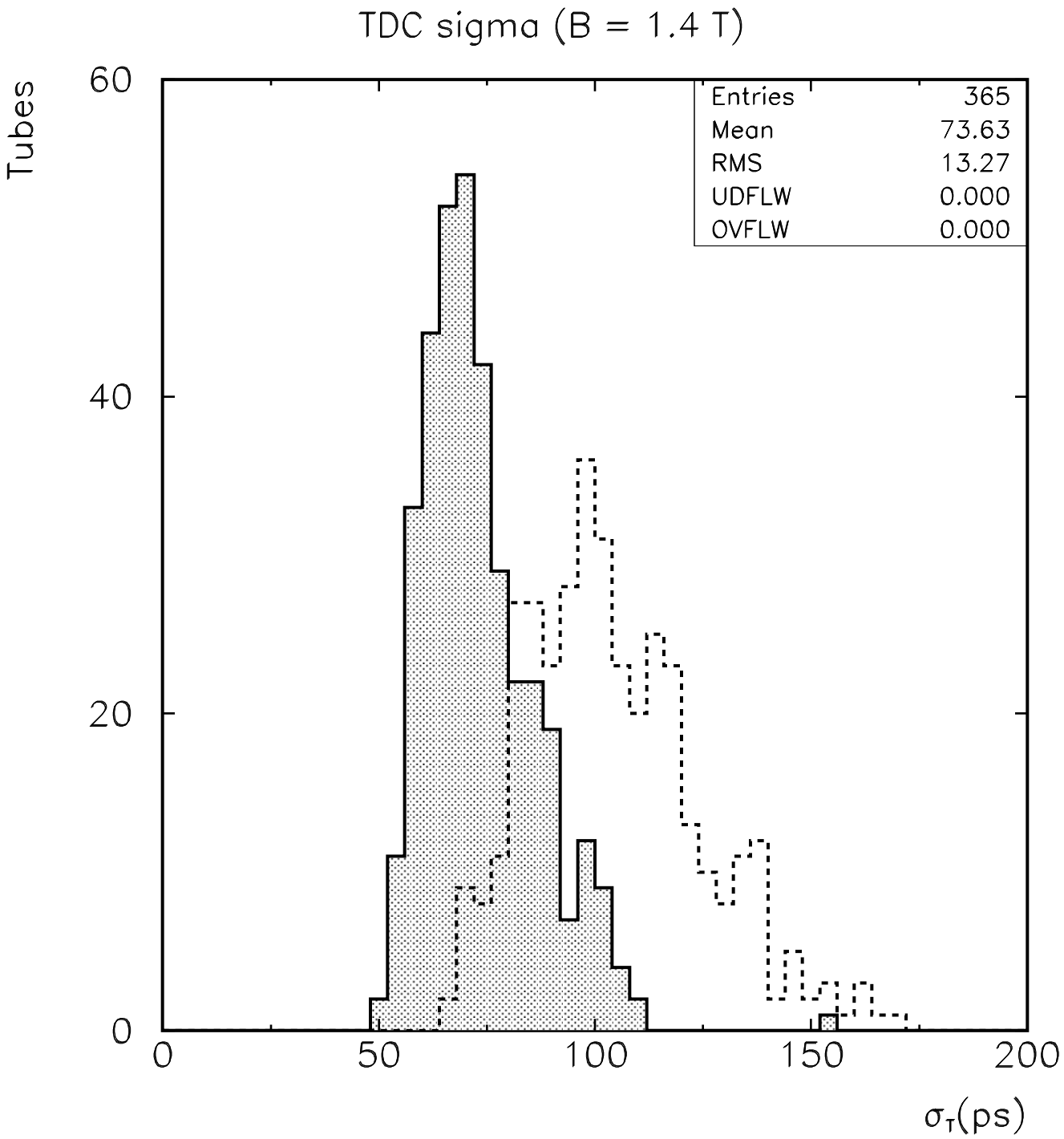

TDC sigma (B = 0 T)
Tubes
Entries 365
Mean 65.28
RMS 11.39
UDFLW 0.000
OVFLW 0.000
0
20
40
60
0
50
100
150
200
σT(ps)


TDC sigma (B = 1.4 T)
Tubes
60
40
20
0
0
50
100
150
200
σ_T(ps)
Entries 365
Mean 73.63
RMS 13.27
UDFLW 0.000
OVFLW 0.000


TDC sigma (B = 0 T vs 1.4 T)
ENTRIES 365
0.00 0.00 0.00
0.00 365. 0.00
0.00 0.00 0.00
TDC sigma in B = 0 T (ps)
TDC sigma in B = 1.4 T (ps)
0
50
100
150
200


corrected TDC sigma (B = 0 T vs 1.4 T)
ENTRIES 365
0.00 0.00 0.00
0.00 365. 0.00
0.00 0.00 0.00
TDC sigma in B = 0 T (ps)
TDC sigma in B = 1.4 T (ps)
0
50
100
150
200


Estimated Gain (B = 1.4 T)
Entries 365
Mean 4.101
RMS 3.266
UDFLW 0.000
OVFLW 36.00
Tubes / (5 x 10⁴)
60
40
20
0
0
5
10
15
20
Gain (10⁵) at B=1.4 T, HV=2500 V


TDC sigma (B = 1.4 T)
Tubes
60
40
20
0
0
50
100
150
200
σ_T(ps)
Entries 365
Mean 73.63
RMS 13.27
UDFLW 0.000
OVFLW 0.000