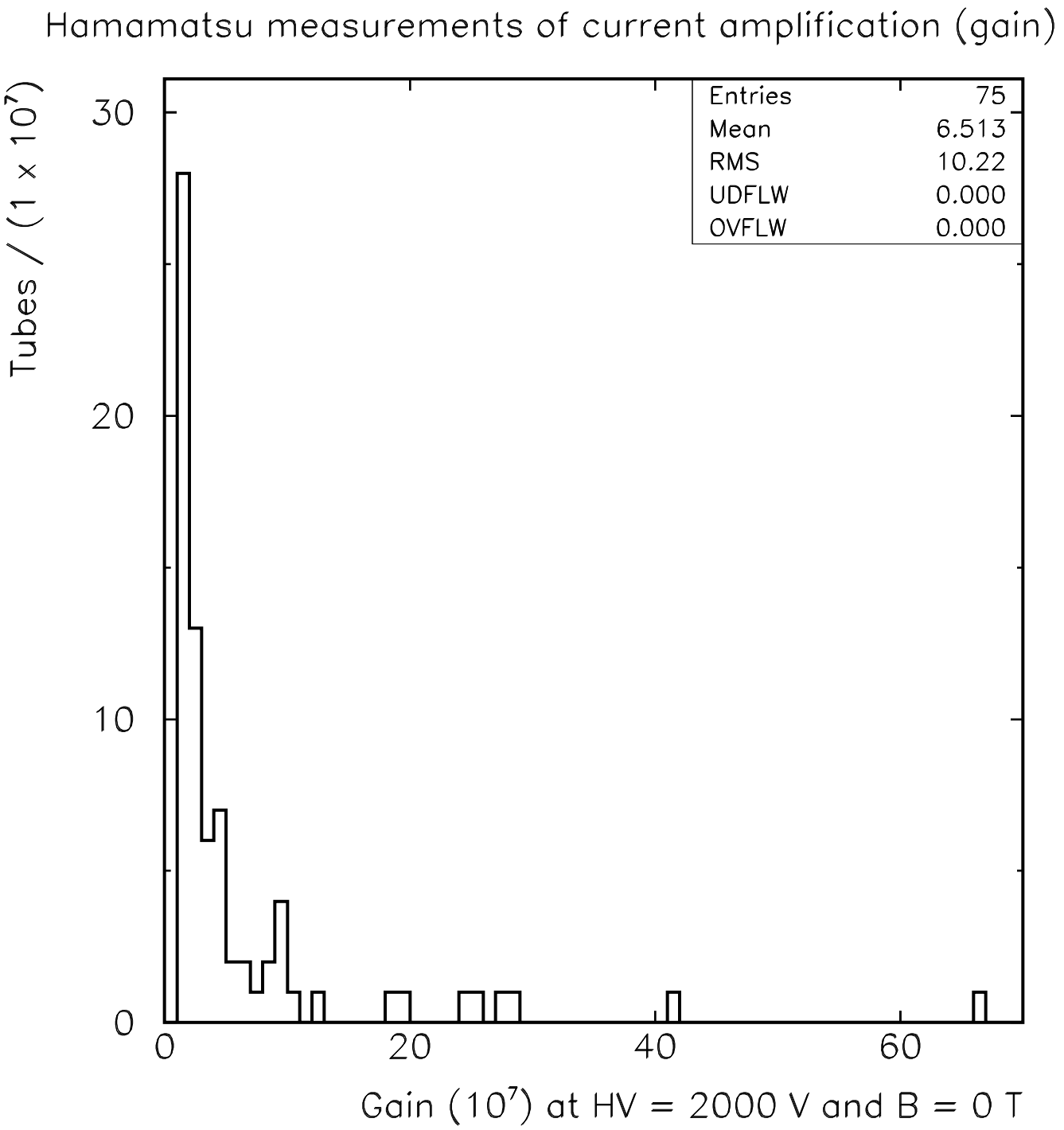
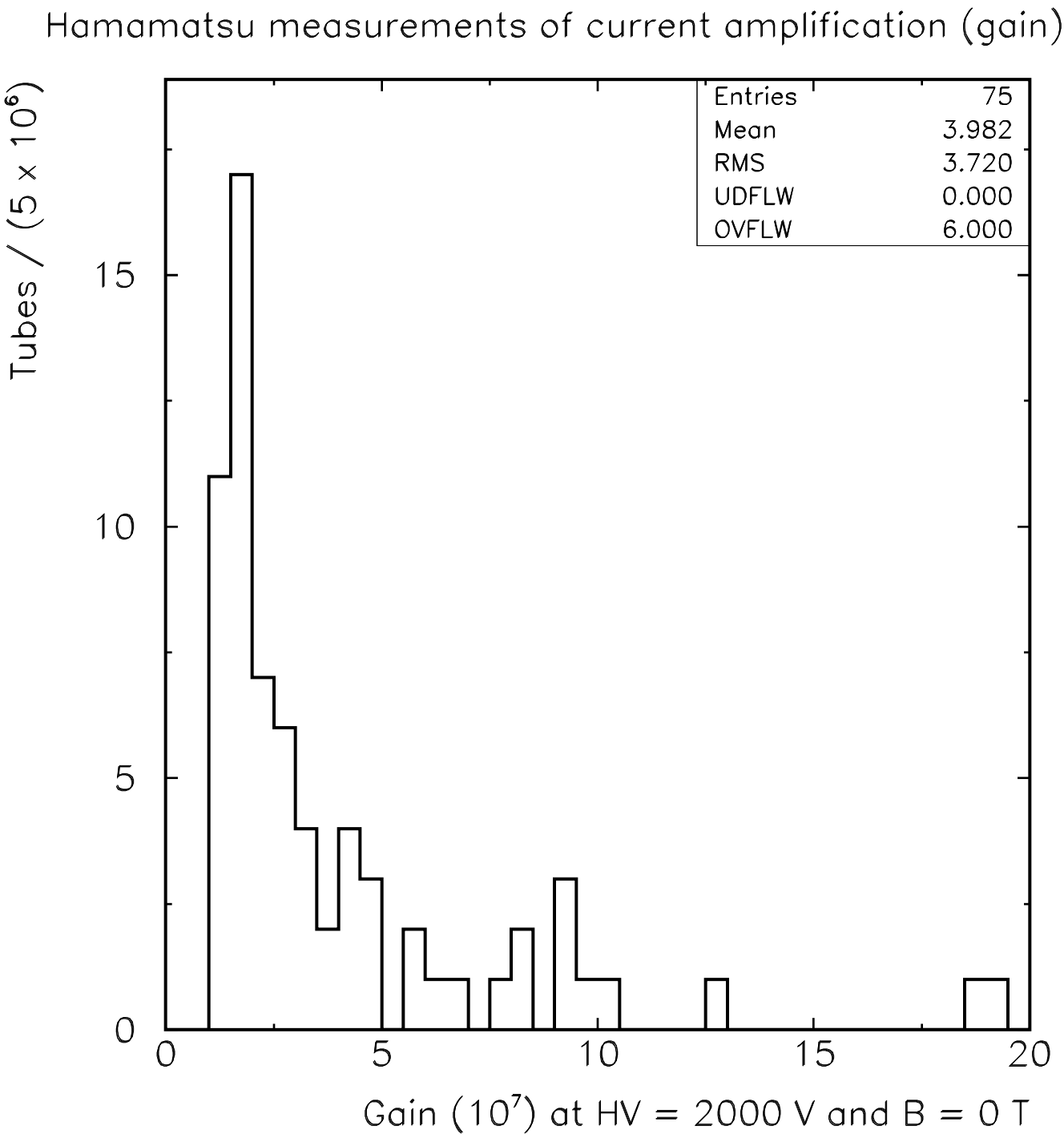
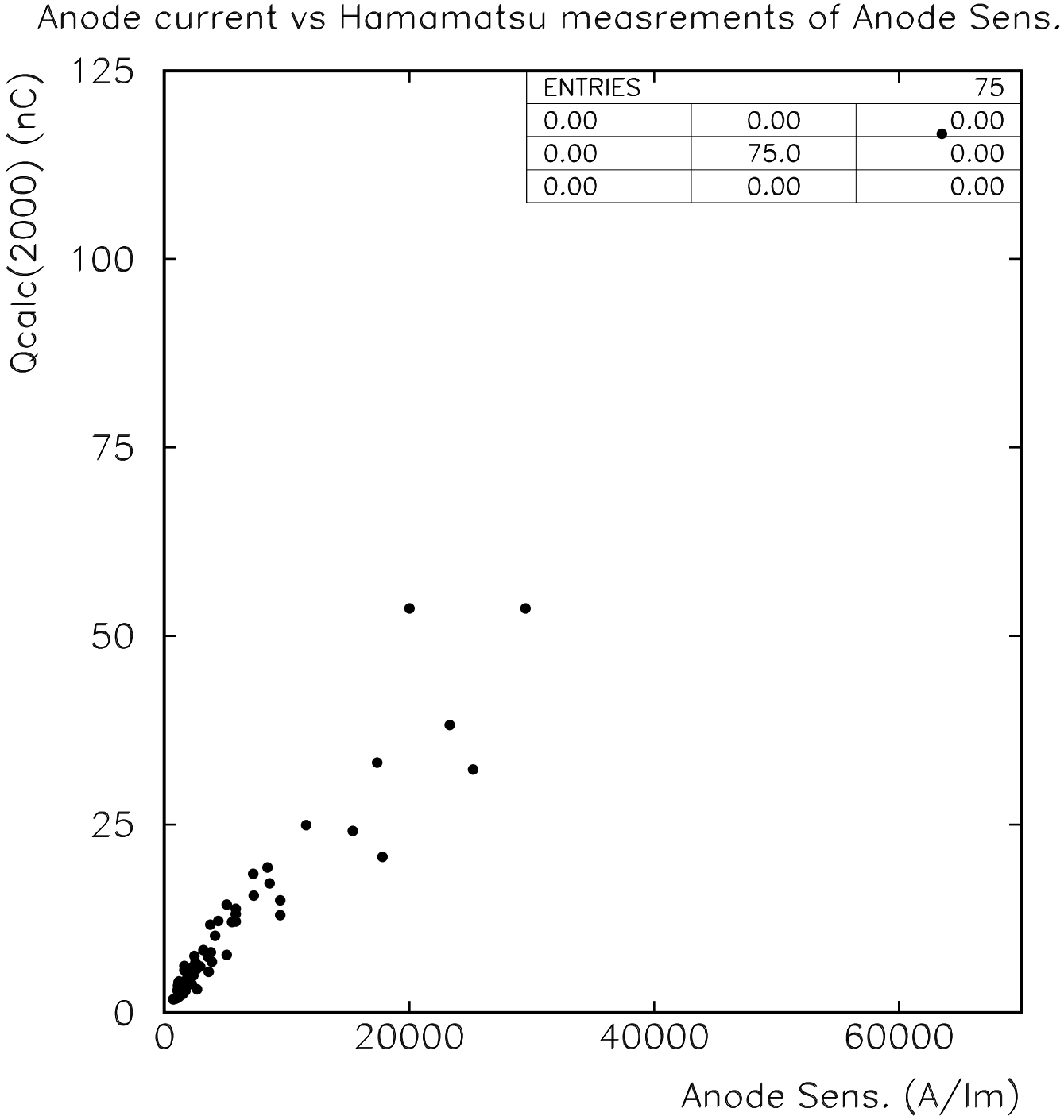
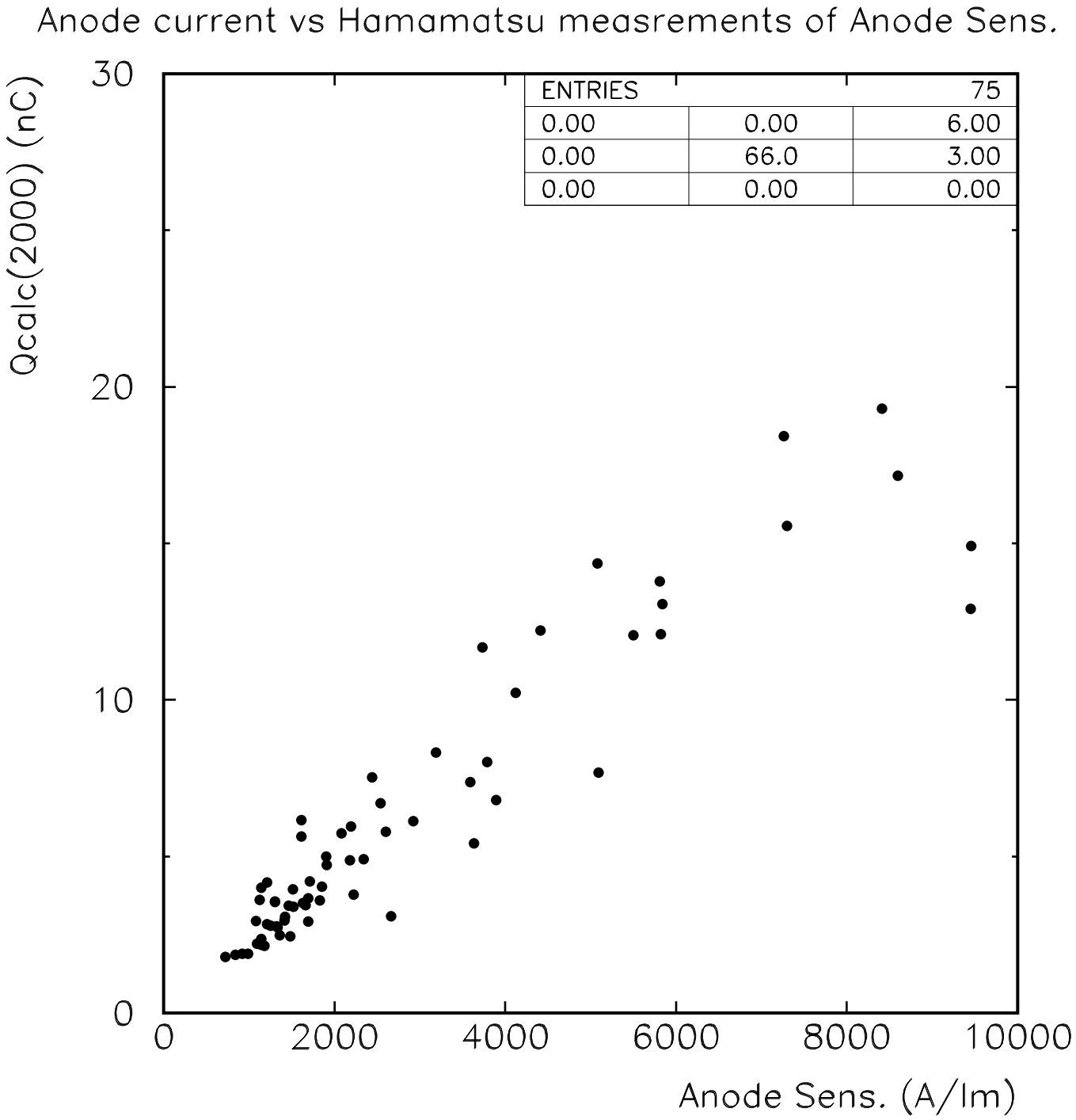
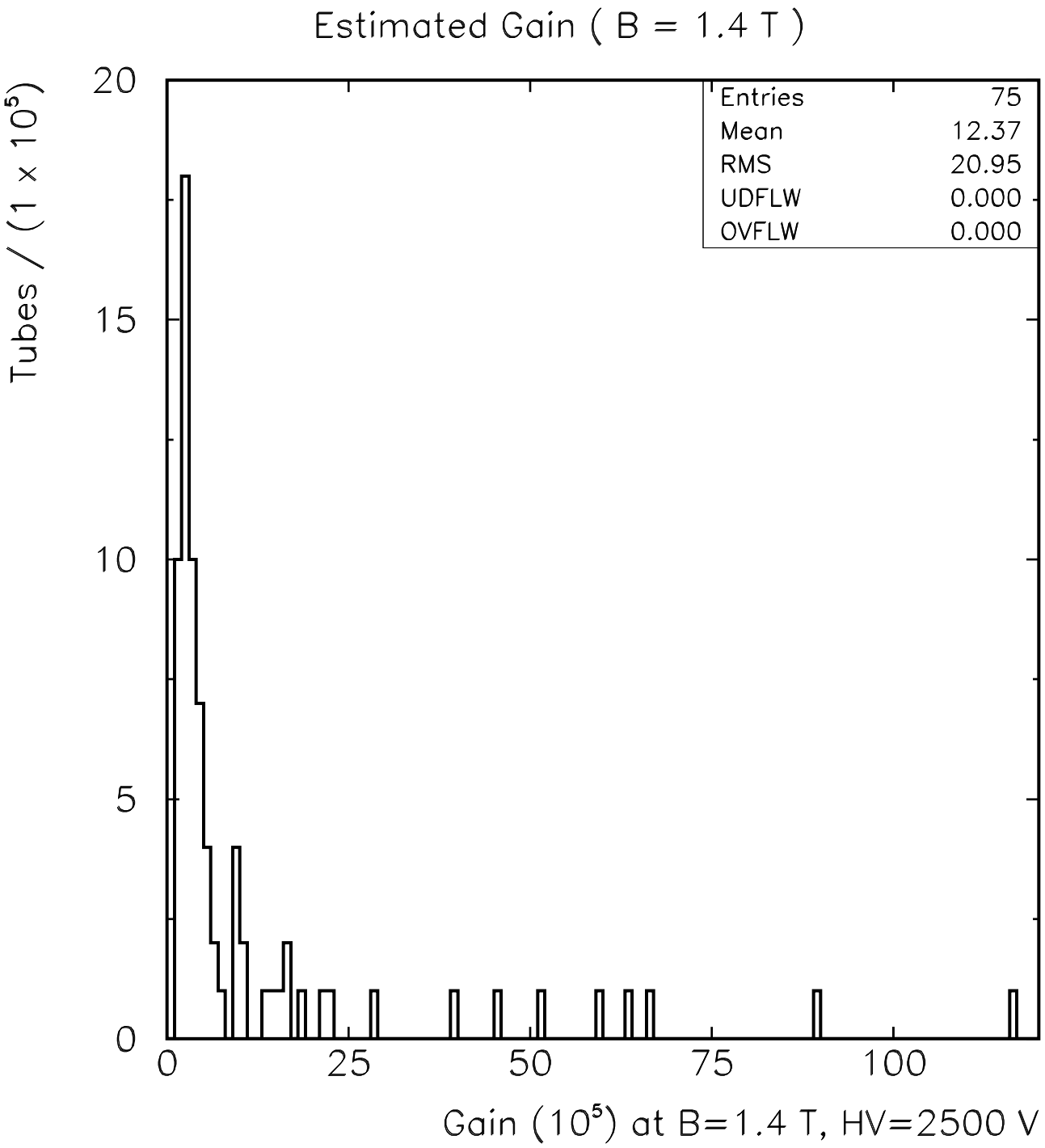
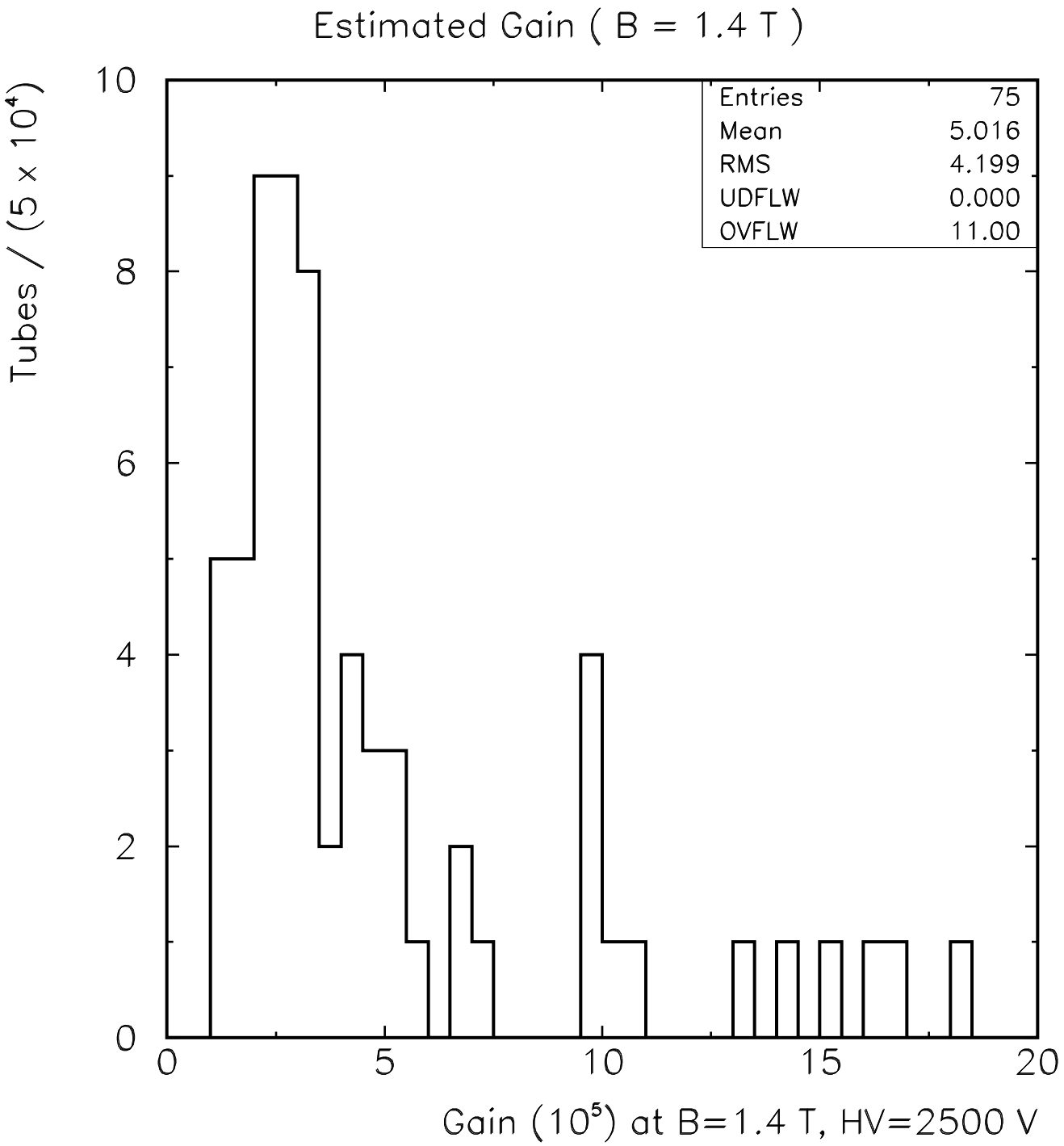

Hamamatsu measurements of current amplification (gain)
Entries 75
Mean 6.513
RMS 10.22
UDFLW 0.000
OVFLW 0.000
Tubes / (1 x 10⁷)
30
20
10
0
0
20
40
60
Gain (10⁷) at HV = 2000 V and B = 0 T

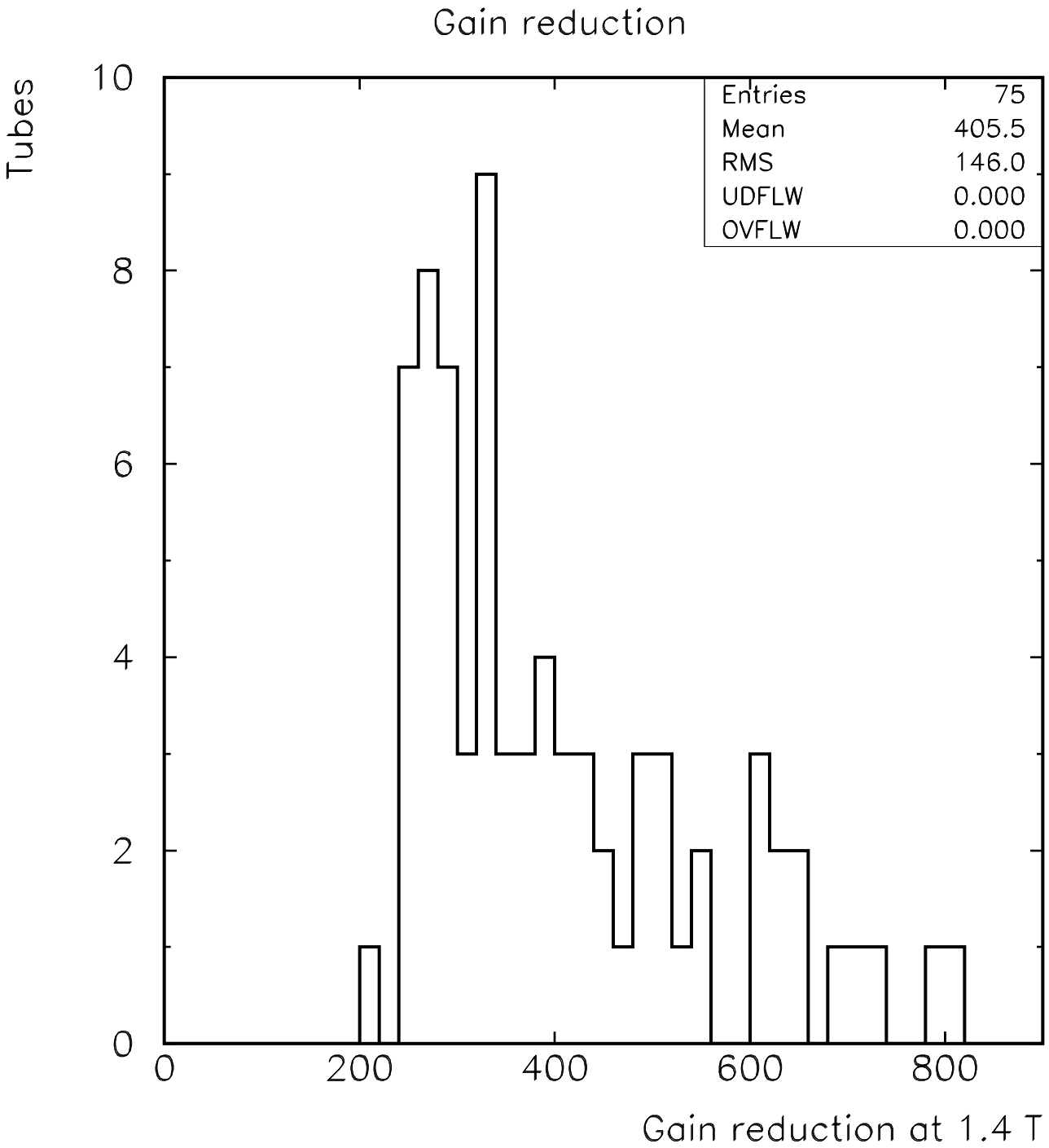

Hamamatsu measurements of current amplification (gain)
Entries 75
Mean 3.982
RMS 3.720
UDFLW 0.000
OVFLW 6.000
Tubes / (5 x 10^6)
0
5
10
15
0
5
10
15
20
Gain (10^7) at HV = 2000 V and B = 0 T

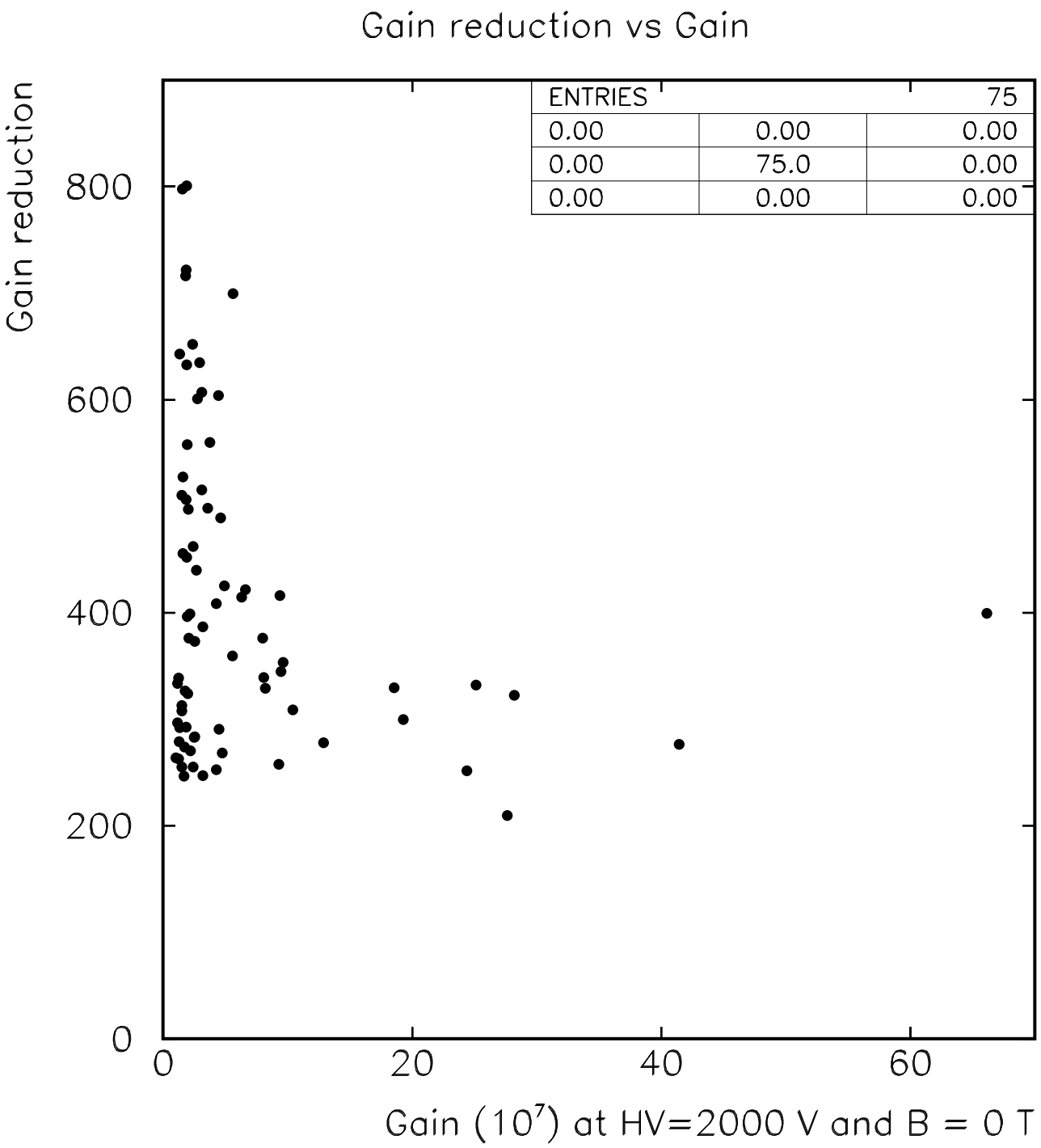

Anode current vs Hamamatsu measrements of Anode Sens.
ENTRIES 75
0.00 0.00 0.00
0.00 75.0 0.00
0.00 0.00 0.00
Qcalc(2000) (nC)
125
100
75
50
25
0
0
20000
40000
60000
Anode Sens. (A/lm)

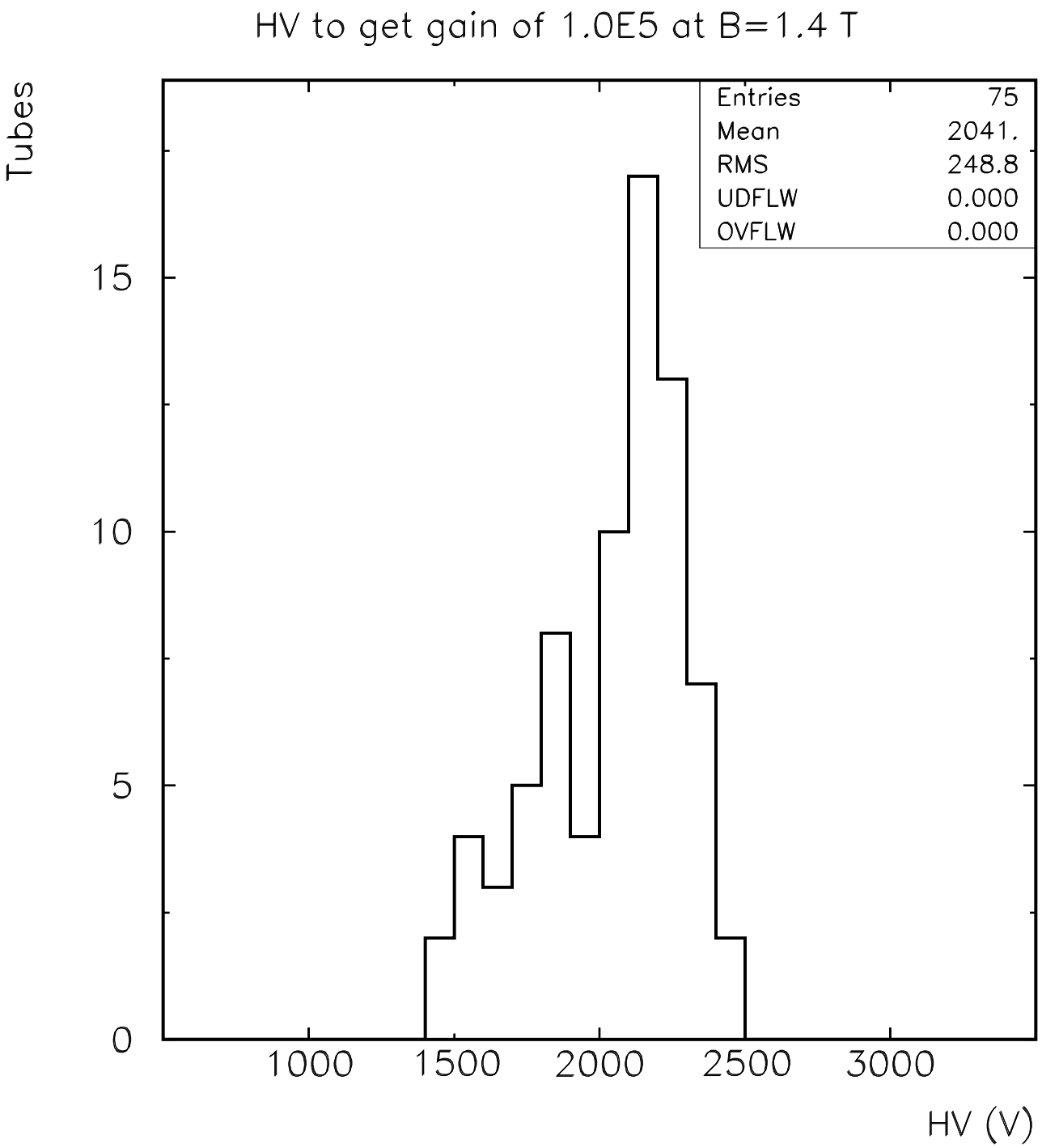

Anode current vs Hamamatsu measrements of Anode Sens.
ENTRIES 75
0.00 0.00 6.00
0.00 66.0 3.00
0.00 0.00 0.00
Qcalc(2000) (nC)
30
20
10
0
0
2000
4000
6000
8000
10000
Anode Sens. (A/lm)

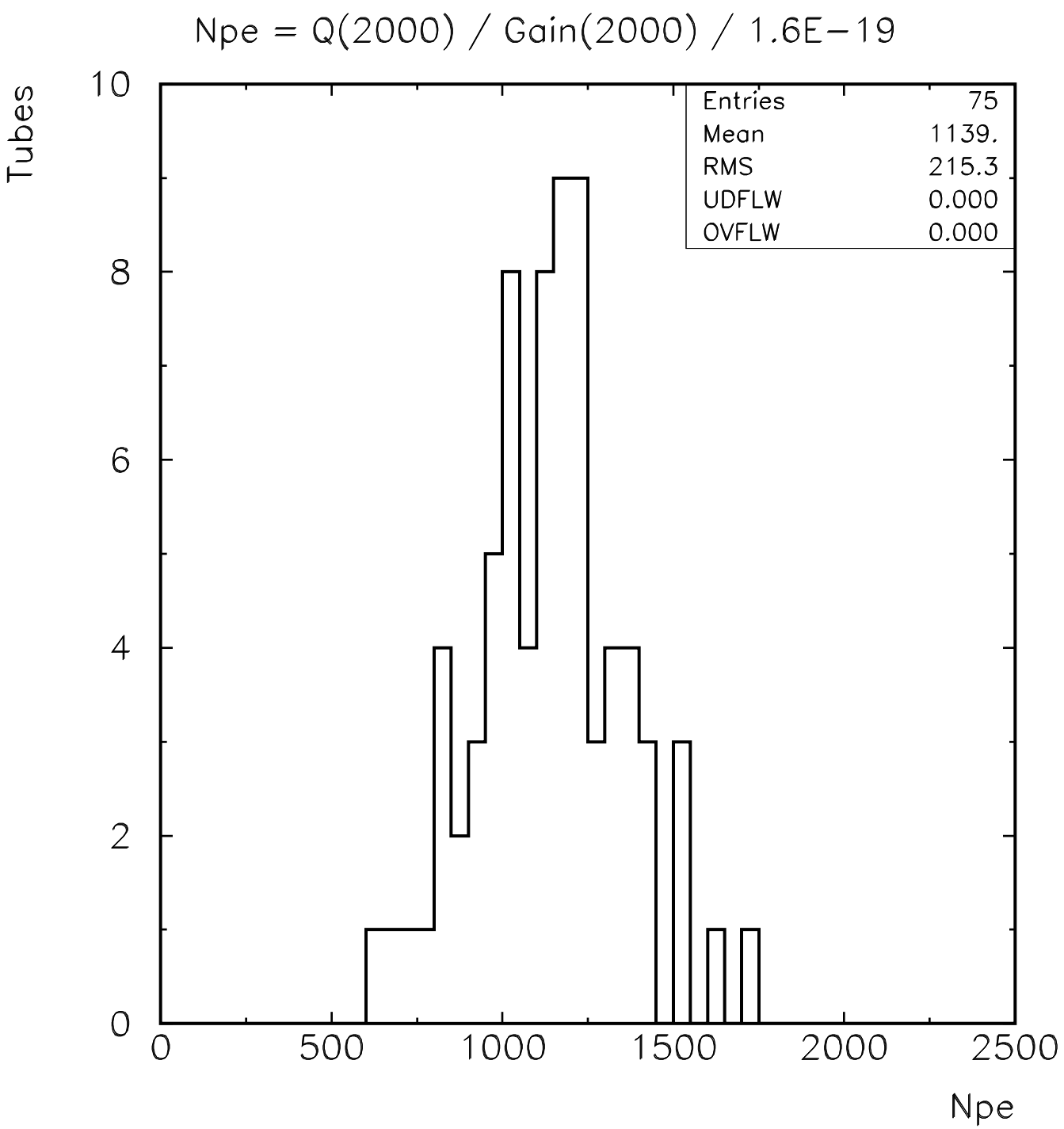

Estimated Gain (B = 1.4 T)
Entries 75
Mean 12.37
RMS 20.95
UDFLW 0.000
OVFLW 0.000
Tubes / (1 x 10^5)
20
15
10
5
0
0
25
50
75
100
Gain (10^5) at B=1.4 T, HV=2500 V

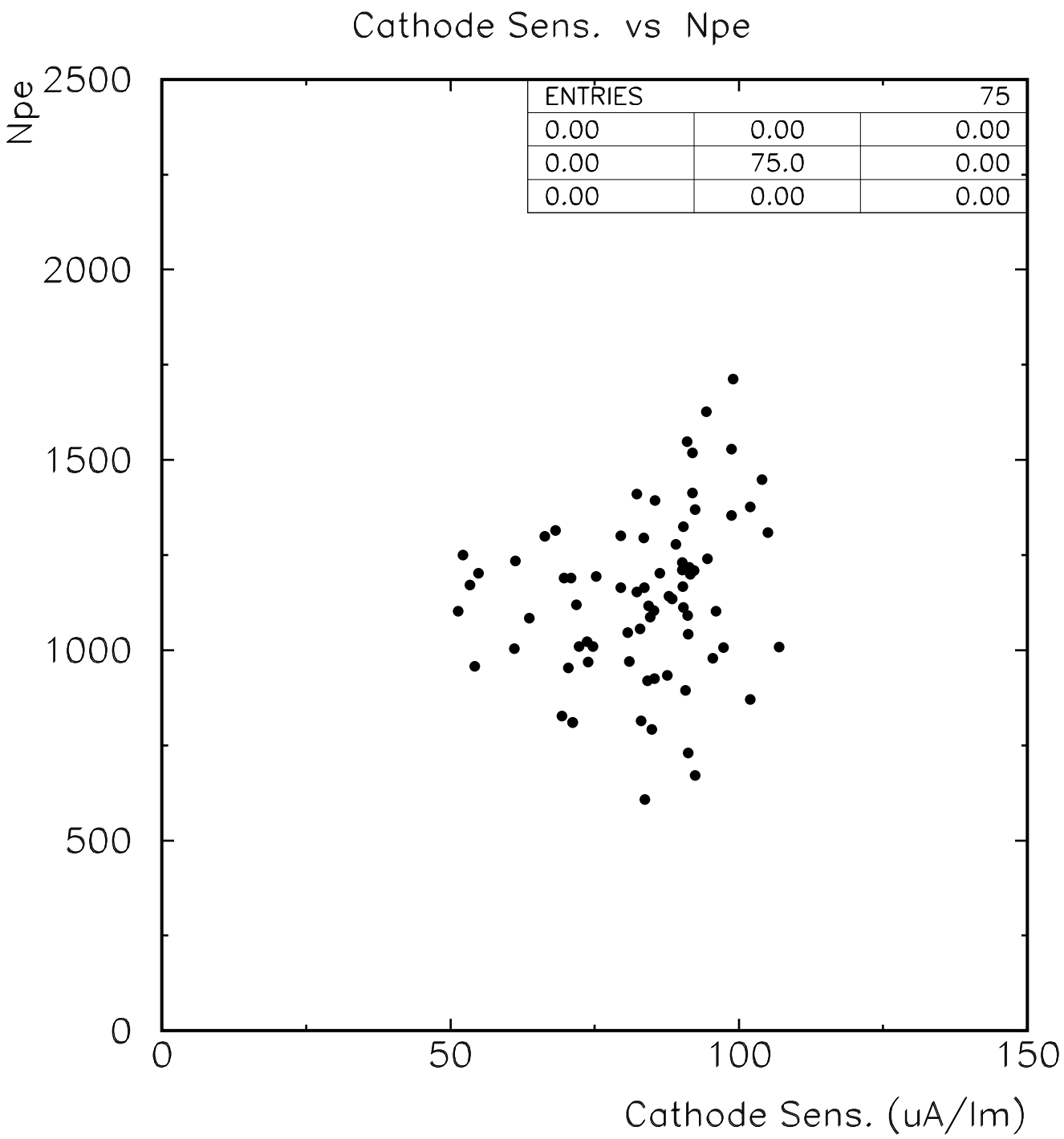

Estimated Gain (B = 1.4 T)
Entries 75
Mean 5.016
RMS 4.199
UDFLW 0.000
OVFLW 11.00
Tubes / (5 x 10⁴)
0
2
4
6
8
10
0
5
10
15
20
Gain (10⁵) at B=1.4 T, HV=2500 V

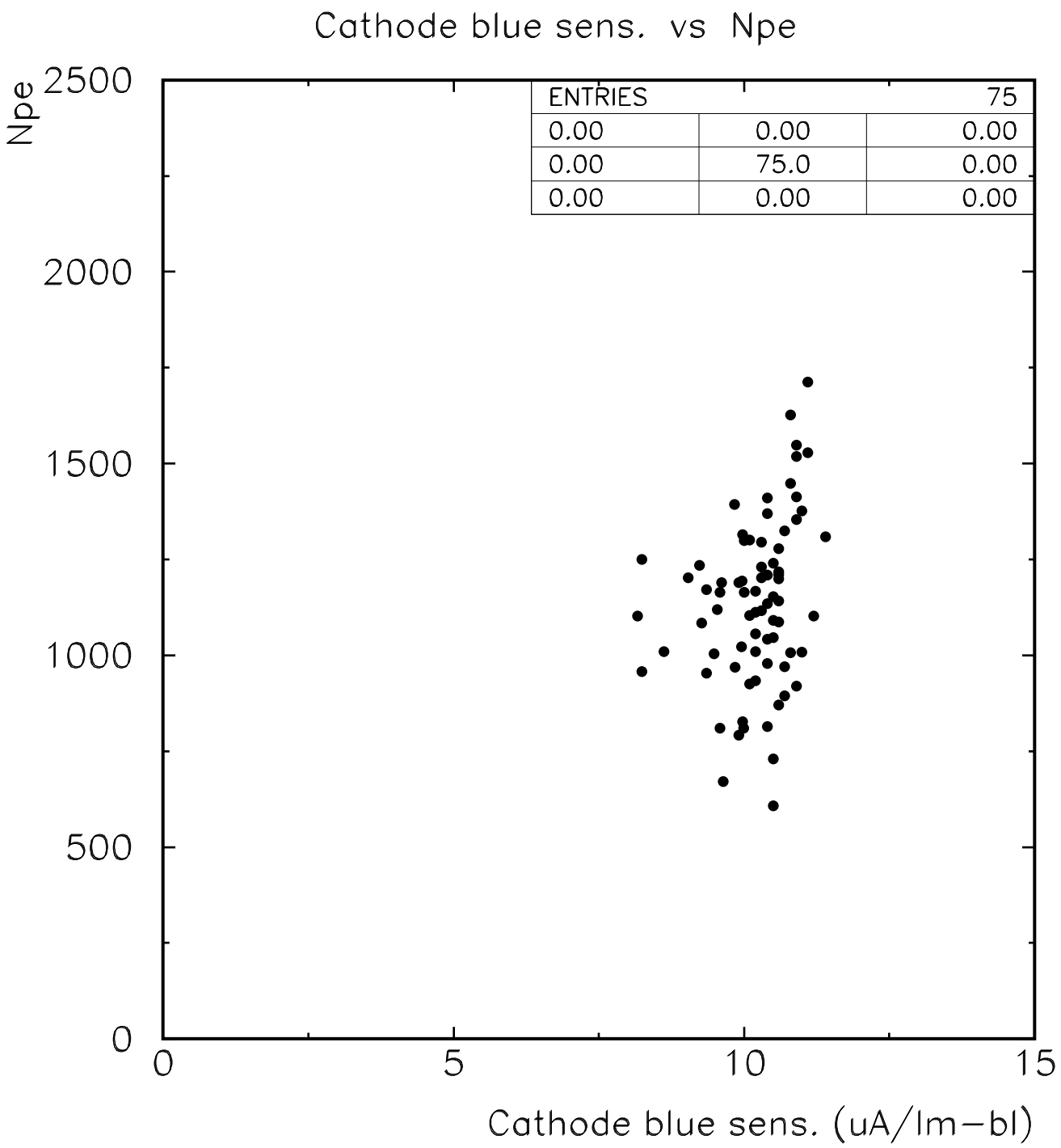

Gain reduction
Tubes
10
8
6
4
2
0
0
200
400
600
800
Gain reduction at 1.4 T
Entries 75
Mean 405.5
RMS 146.0
UDFLW 0.000
OVFLW 0.000

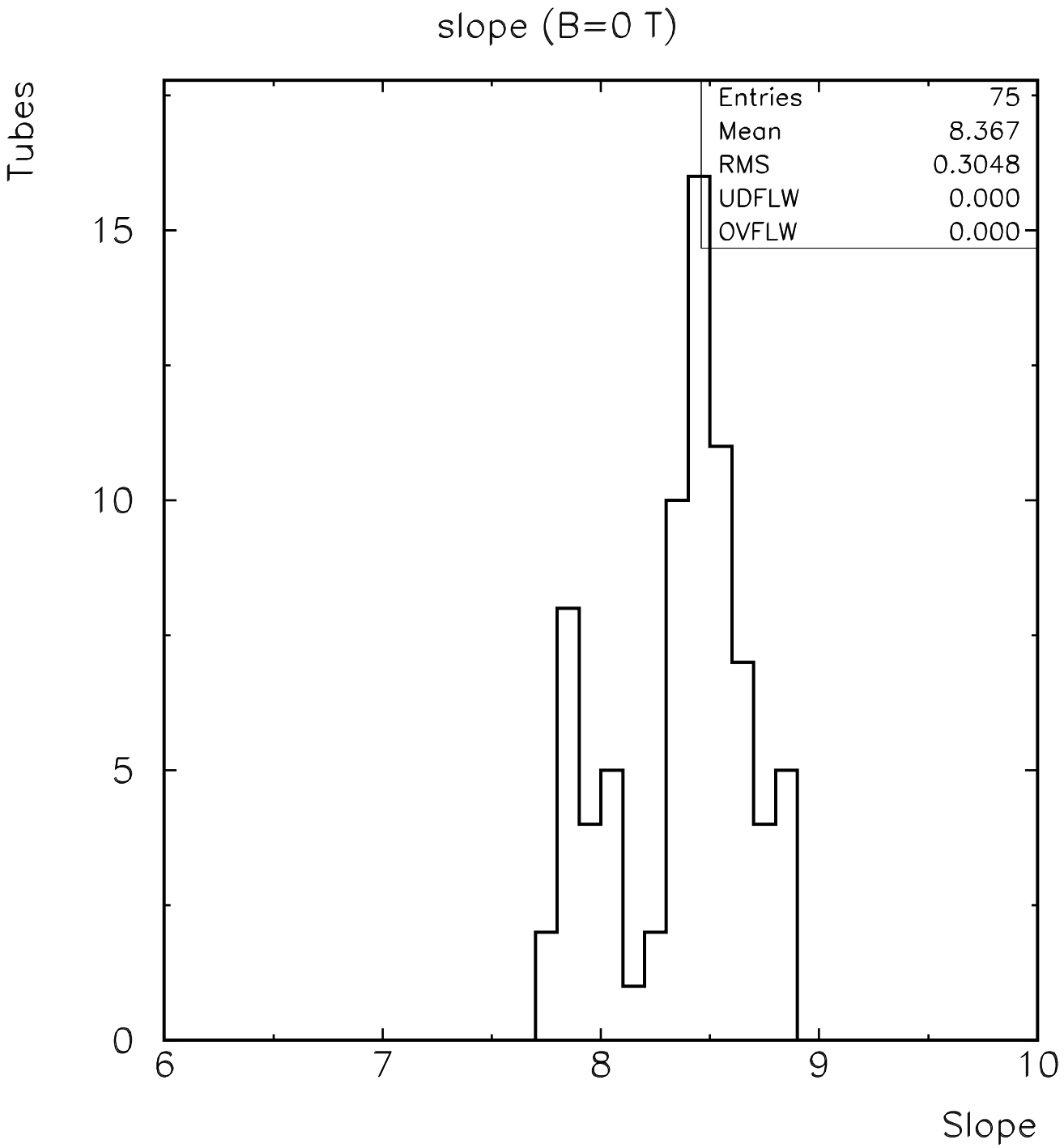

Gain reduction vs Gain
ENTRIES 75
0.00 0.00 0.00
0.00 75.0 0.00
0.00 0.00 0.00
Gain reduction
800
600
400
200
0
0
20
40
60
Gain (10^7) at HV=2000 V and B = 0 T

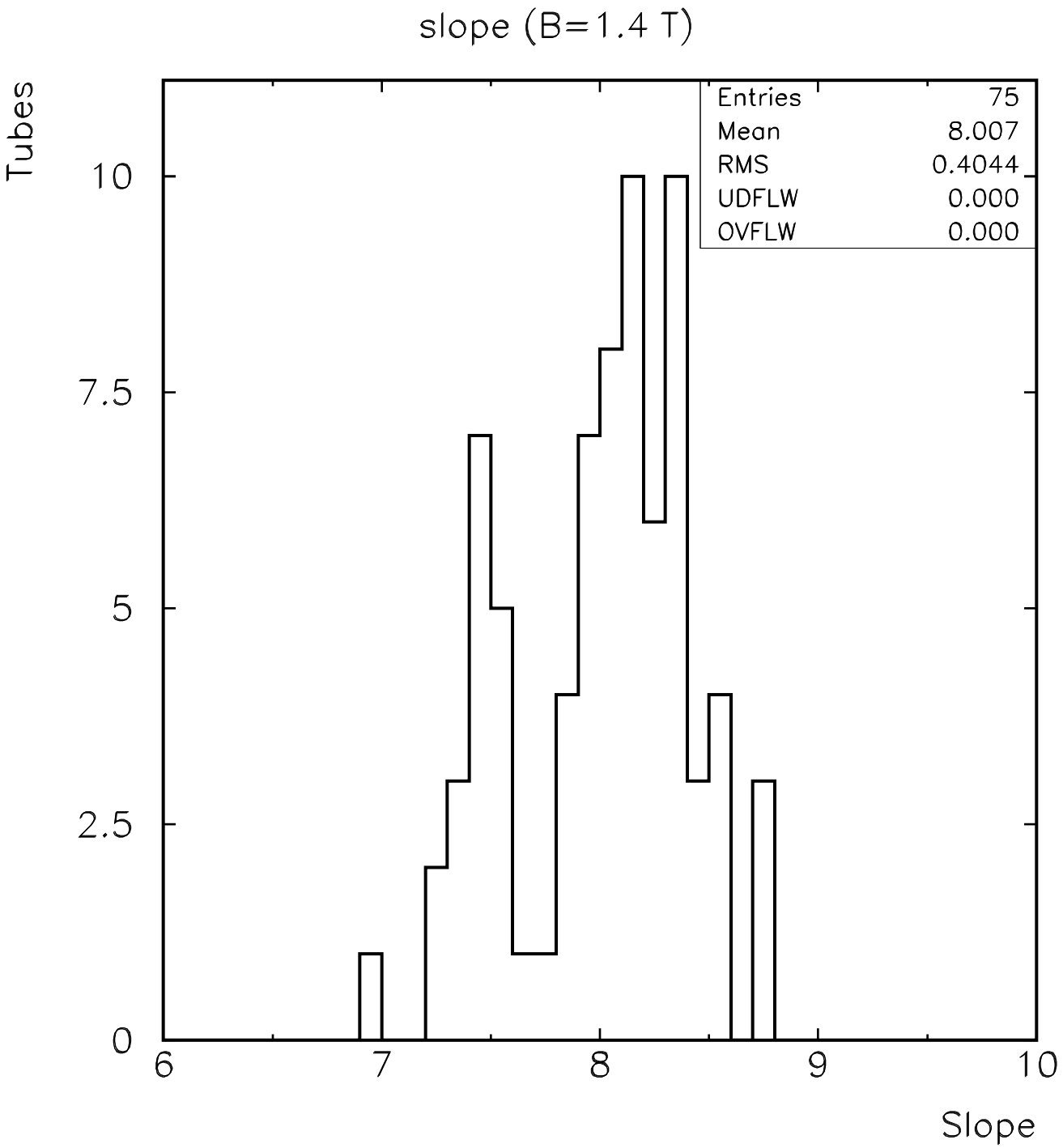

HV to get gain of 1.0E5 at B=1.4 T
Tubes
Entries 75
Mean 2041.
RMS 248.8
UDFLW 0.000
OVFLW 0.000
0
5
10
15
1000
1500
2000
2500
3000
HV (V)

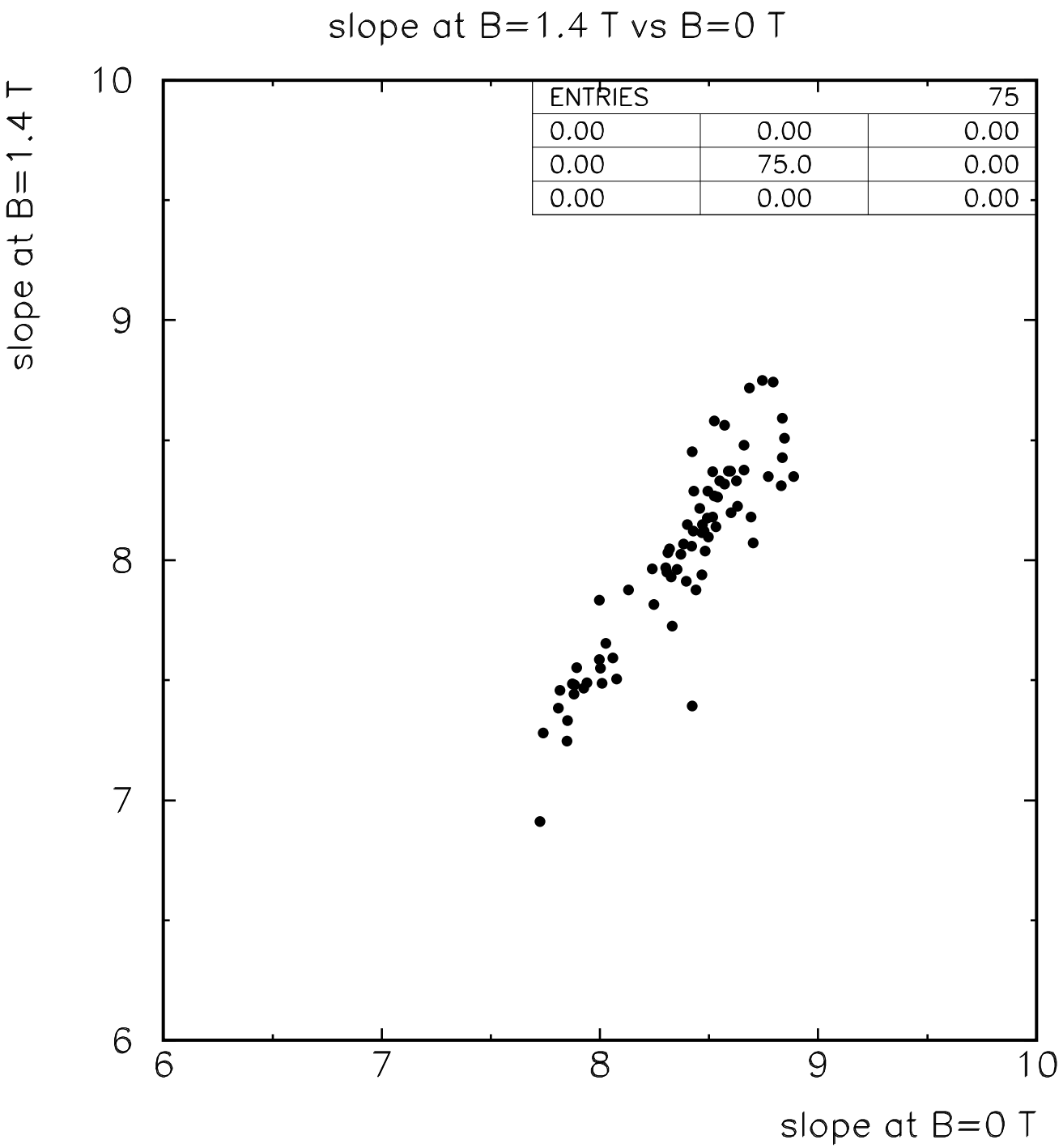

Npe = Q(2000) / Gain(2000) / 1.6E−19
Tubes
Npe
Entries 75
Mean 1139.
RMS 215.3
UDFLW 0.000
OVFLW 0.000
0
2
4
6
8
10
0
500
1000
1500
2000
2500


Cathode Sens. vs Npe
Npe
2500
2000
1500
1000
500
0
0
50
100
150
Cathode Sens. (uA/lm)
ENTRIES 75
0.00 0.00 0.00
0.00 75.0 0.00
0.00 0.00 0.00


Cathode blue sens. vs Npe
Npe
2500
2000
1500
1000
500
0
0
5
10
15
Cathode blue sens. (uA/lm−bl)
ENTRIES 75
0.00 0.00 0.00
0.00 75.0 0.00
0.00 0.00 0.00


slope (B=0 T)
Tubes
Entries 75
Mean 8.367
RMS 0.3048
UDFLW 0.000
OVFLW 0.000
0
5
10
15
6
7
8
9
10
Slope


slope (B=1.4 T)
Tubes
Entries 75
Mean 8.007
RMS 0.4044
UDFLW 0.000
OVFLW 0.000
10
7.5
5
2.5
0
6
7
8
9
10
Slope


slope at B=1.4 T vs B=0 T
ENTRIES 75
0.00 0.00 0.00
0.00 75.0 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