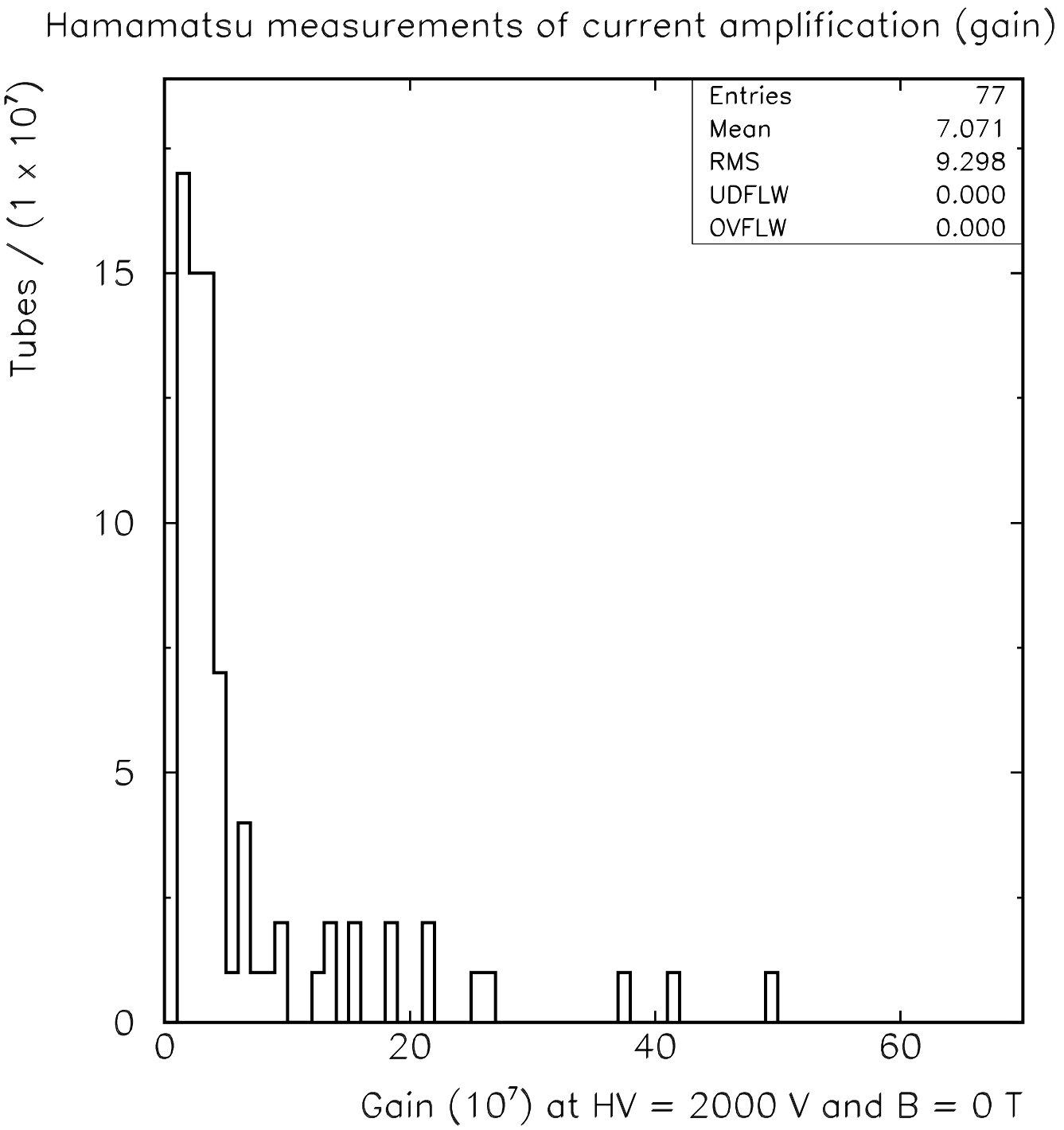
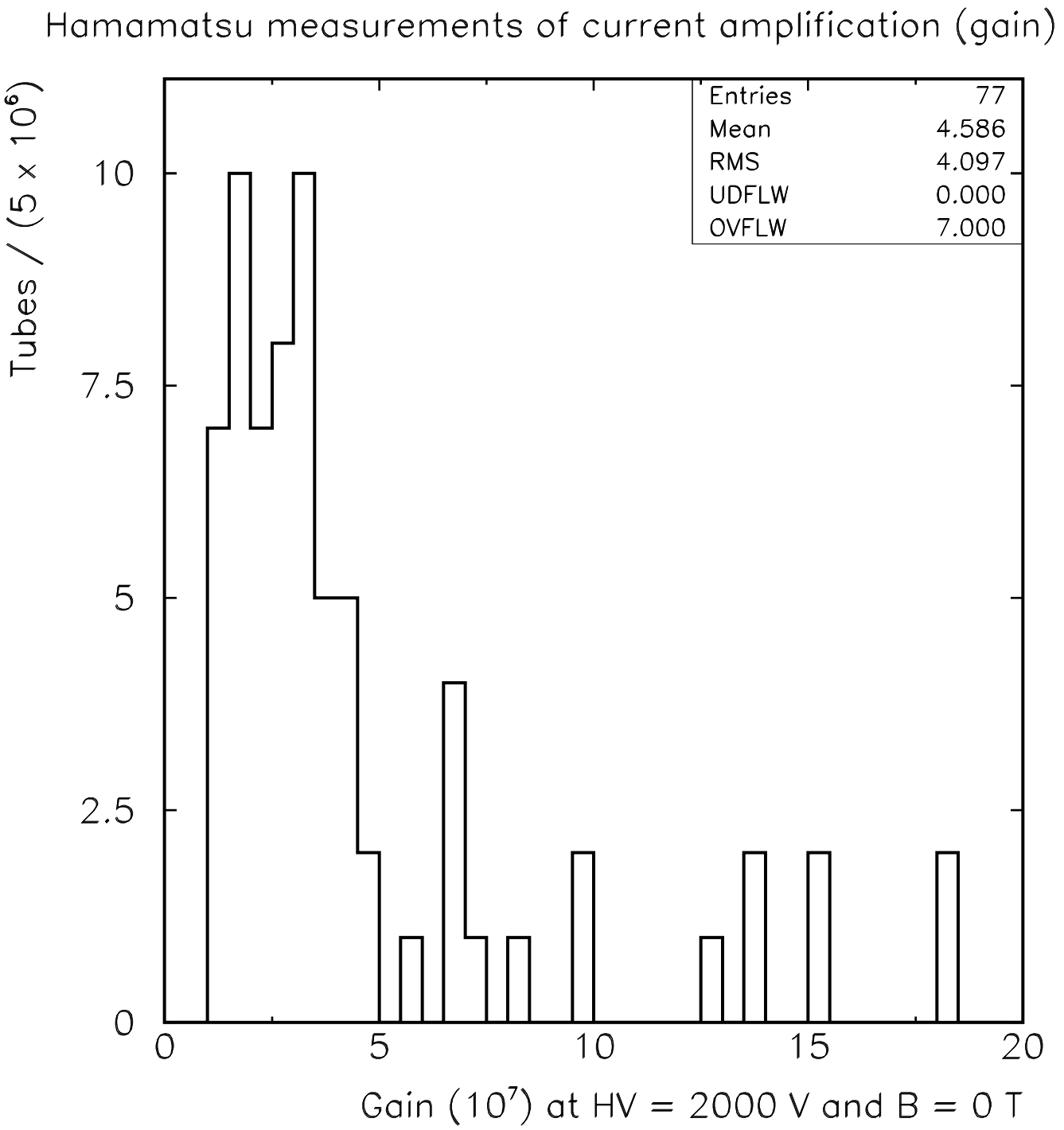
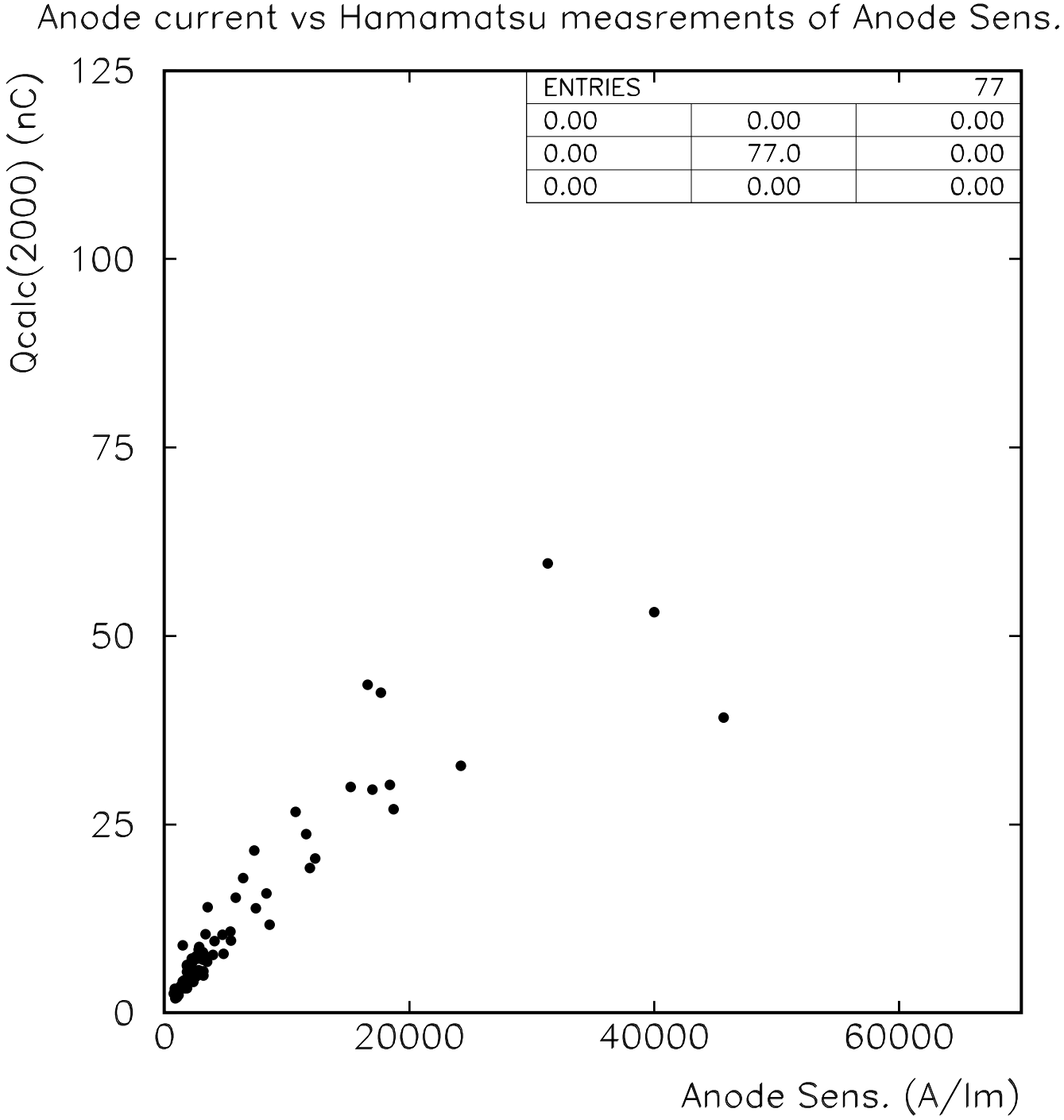
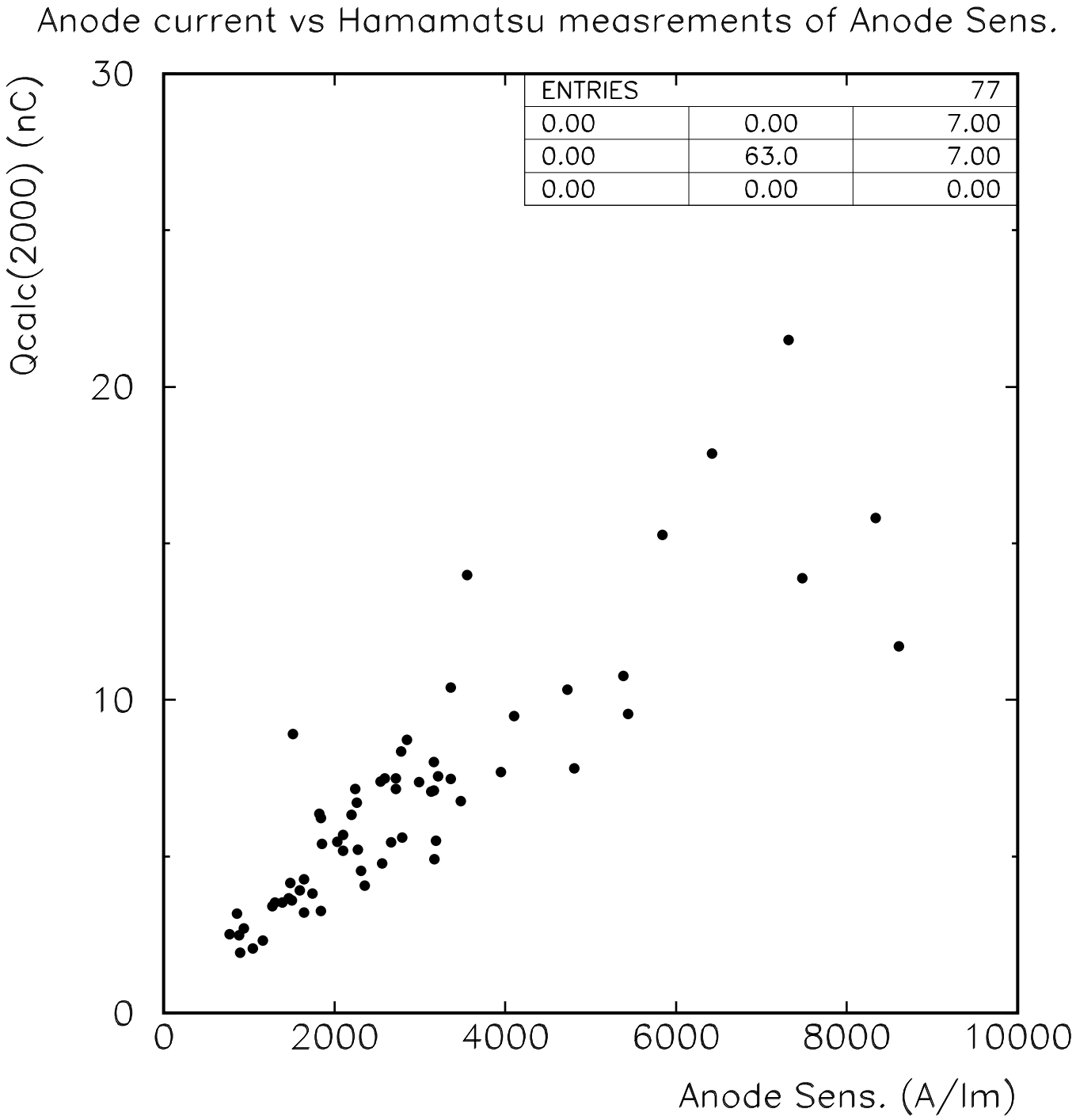
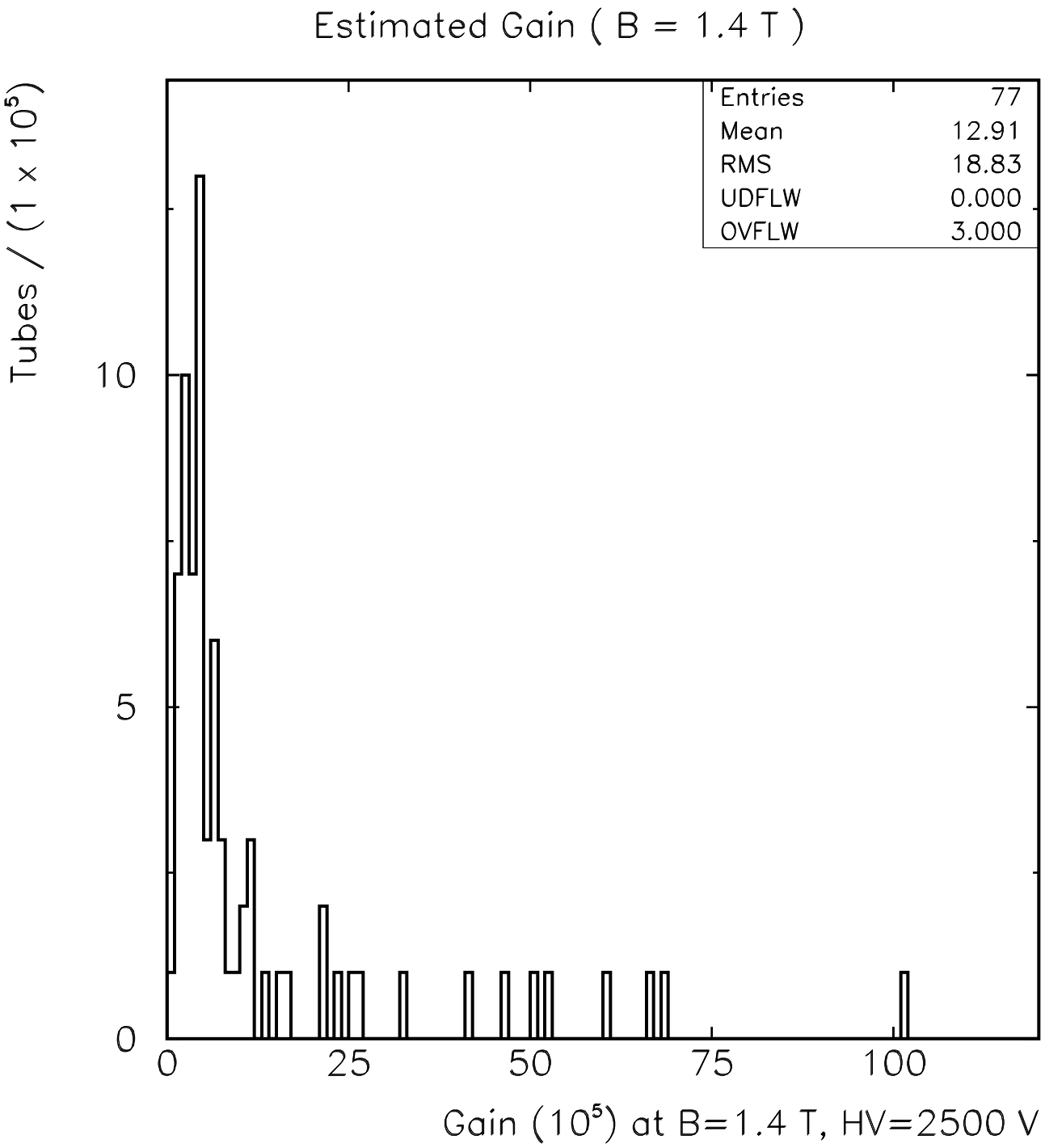
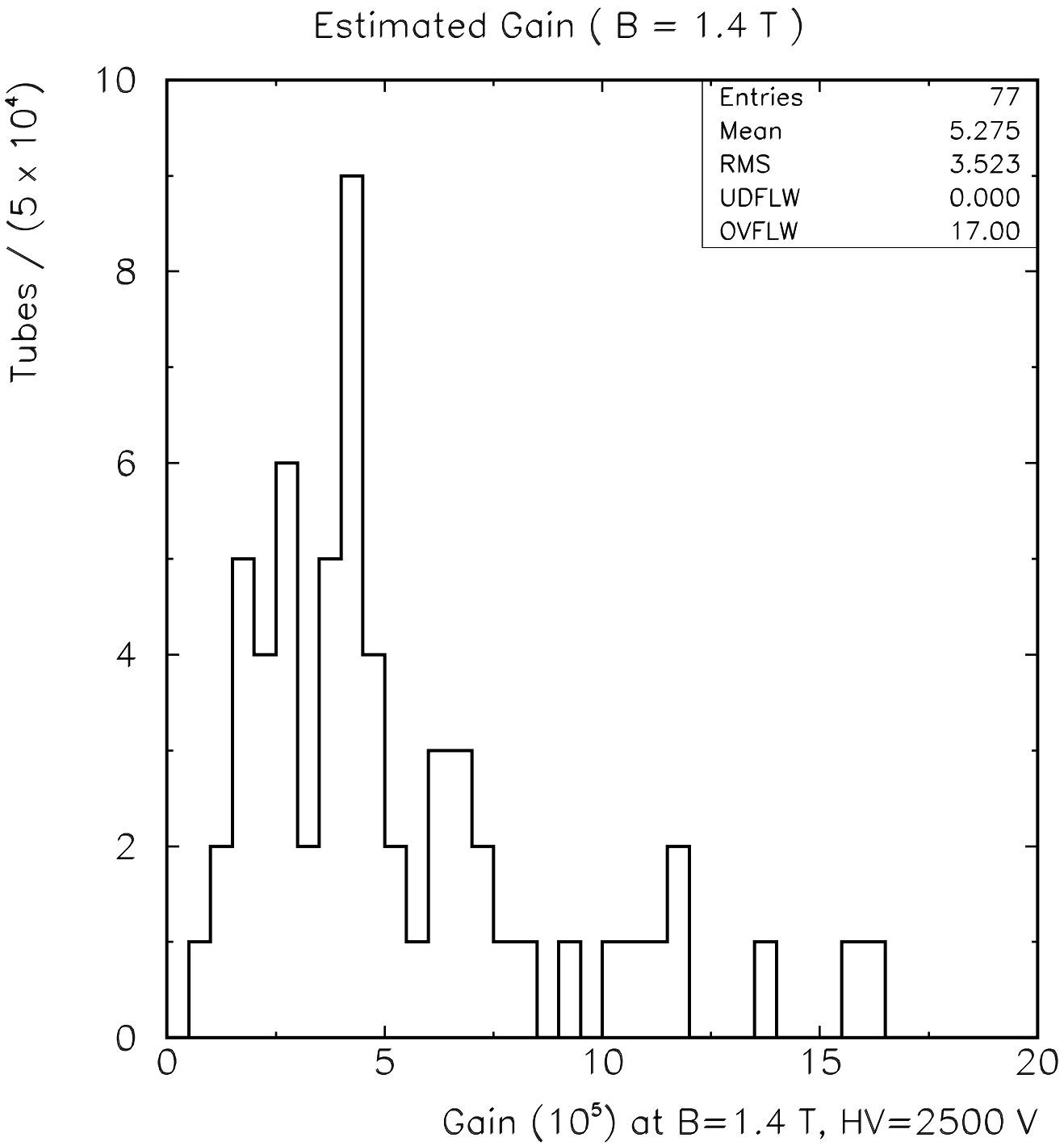

Hamamatsu measurements of current amplification (gain)
Entries 77
Mean 7.071
RMS 9.298
UDFLW 0.000
OVFLW 0.000
Tubes / (1 x 10^7)
0
5
10
15
0
20
40
60
Gain (10^7) at HV = 2000 V and B = 0 T

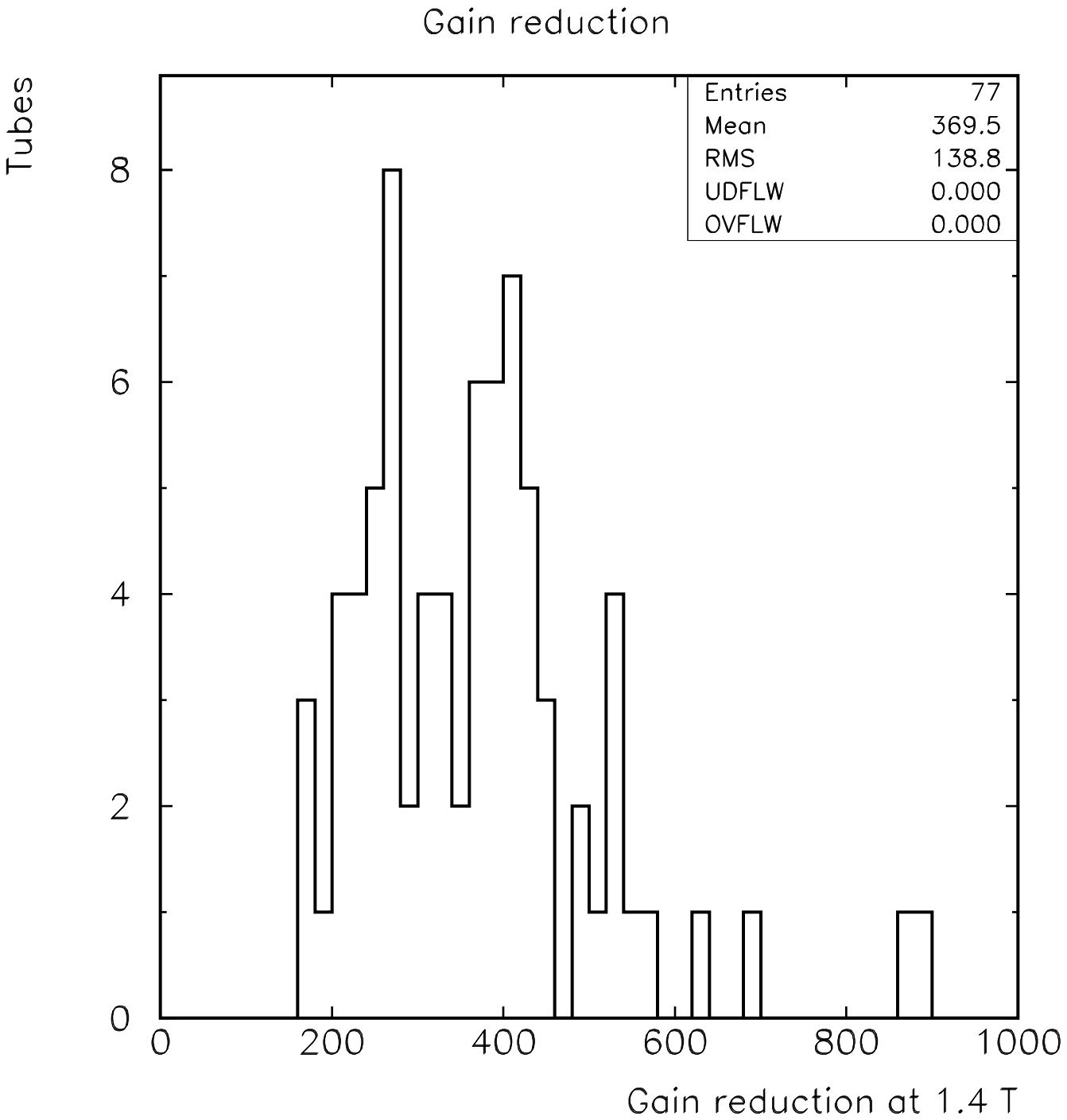

Hamamatsu measurements of current amplification (gain)
Entries 77
Mean 4.586
RMS 4.097
UDFLW 0.000
OVFLW 7.000
Tubes / (5 x 10^6)
10
7.5
5
2.5
0
0
5
10
15
20
Gain (10^7) at HV = 2000 V and B = 0 T

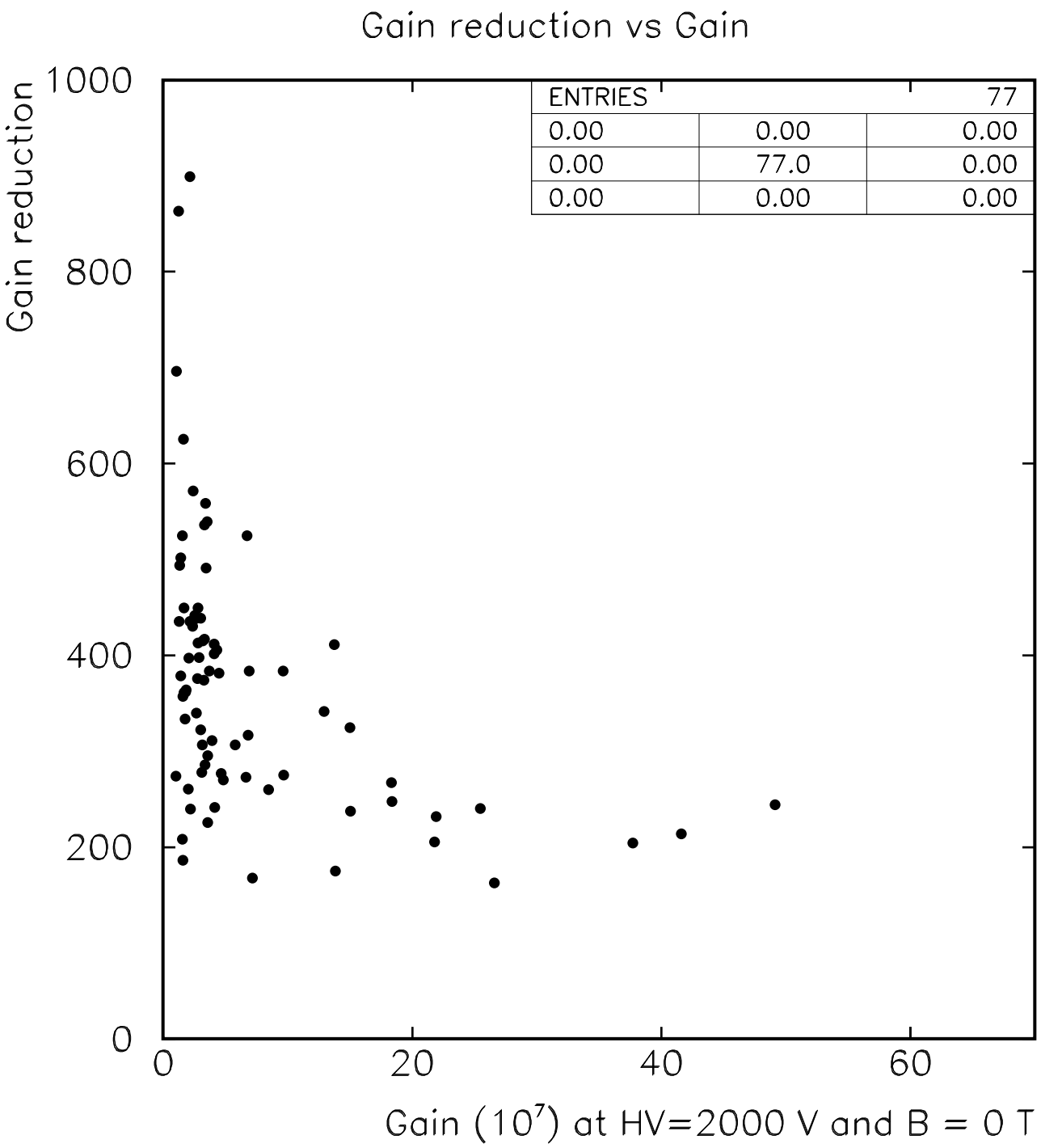

Anode current vs Hamamatsu measrements of Anode Sens.
ENTRIES 77
0.00 0.00 0.00
0.00 77.0 0.00
0.00 0.00 0.00
Qcalc(2000) (nC)
125
100
75
50
25
0
0
20000
40000
60000
Anode Sens. (A/lm)

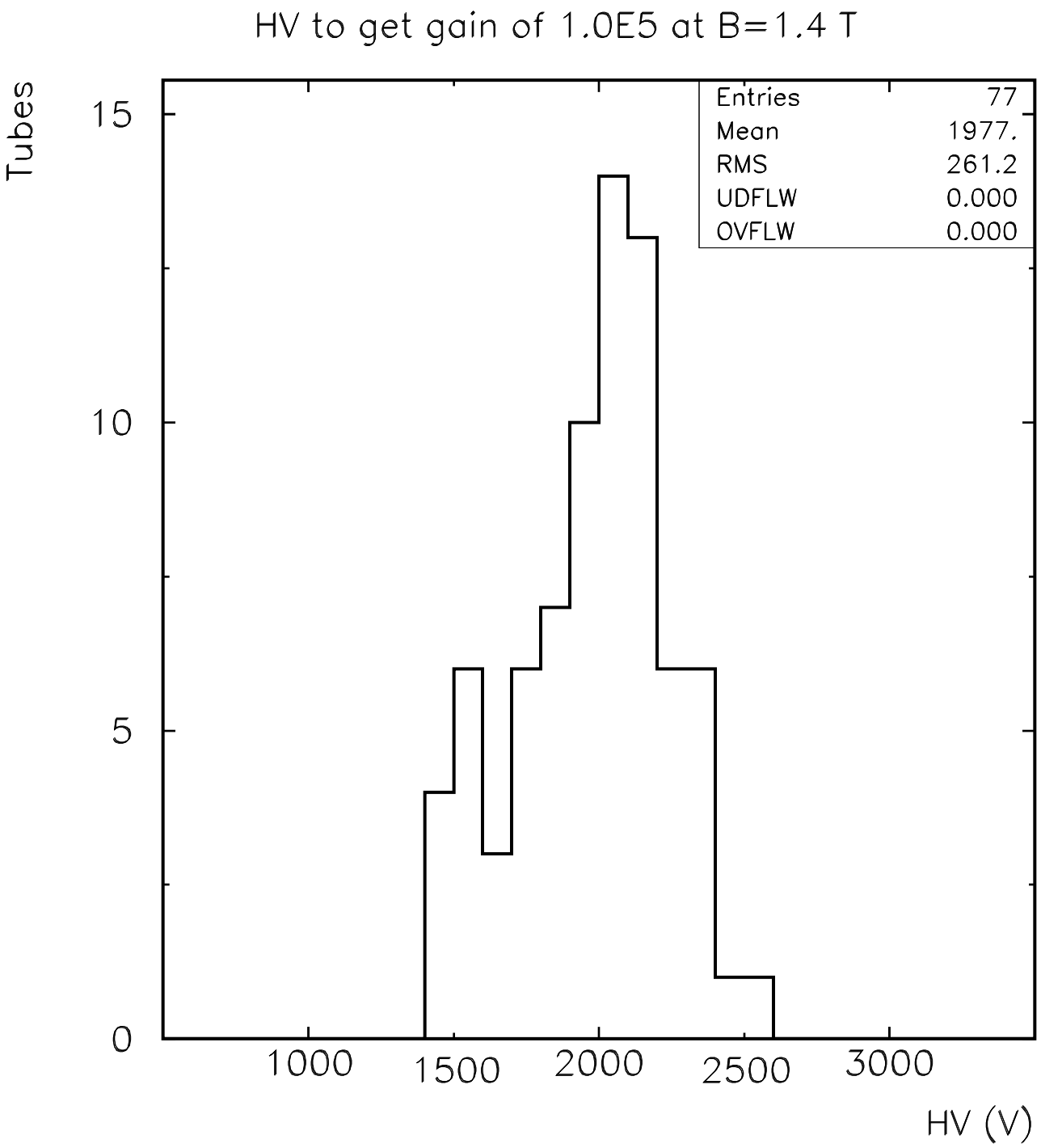

Anode current vs Hamamatsu measrements of Anode Sens.
ENTRIES 77
0.00 0.00 7.00
0.00 63.0 7.00
0.00 0.00 0.00
Qcalc(2000) (nC)
30
20
10
0
0
2000
4000
6000
8000
10000
Anode Sens. (A/lm)

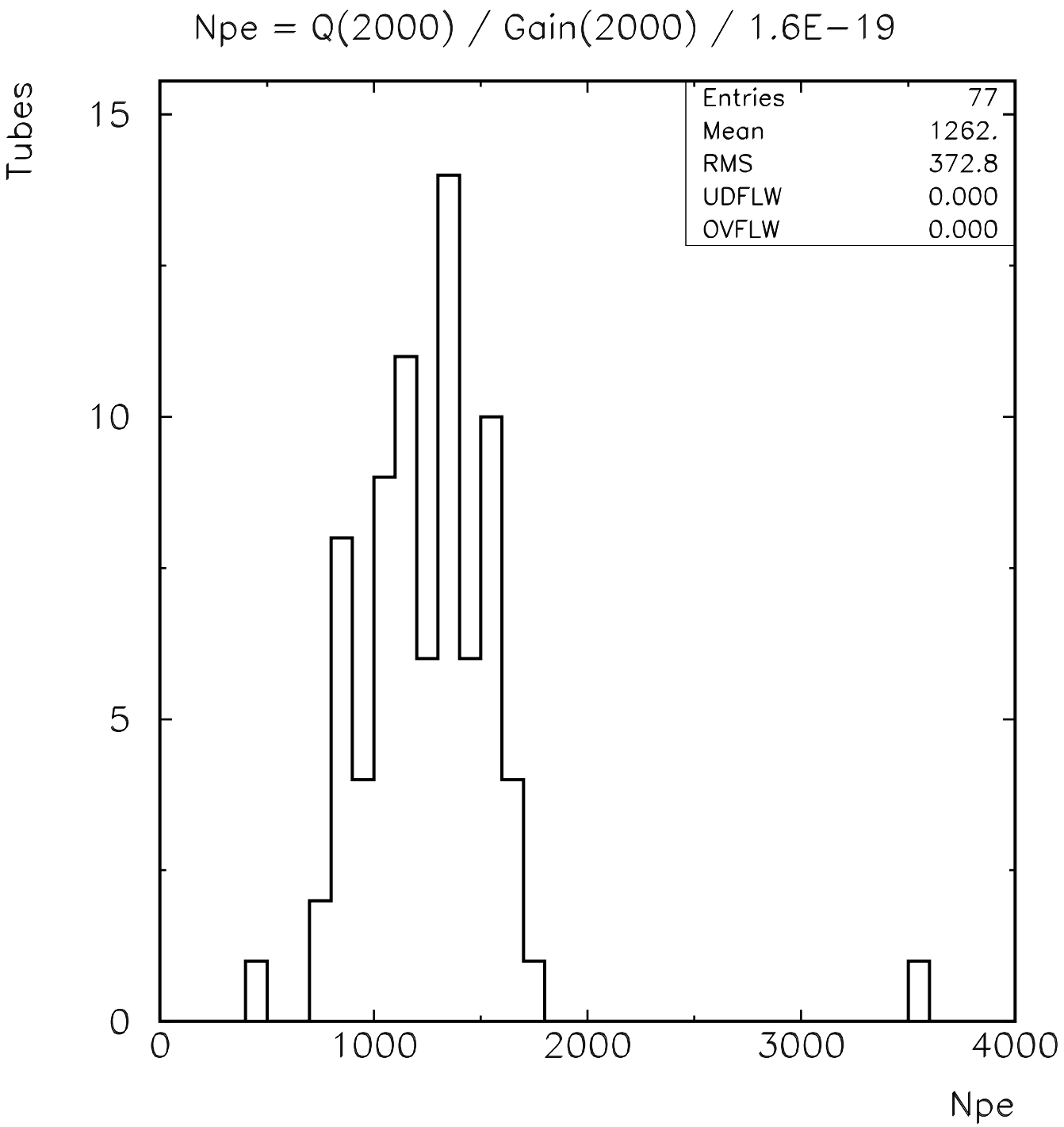

Estimated Gain (B = 1.4 T)
Entries 77
Mean 12.91
RMS 18.83
UDFLW 0.000
OVFLW 3.000
Tubes / (1 x 10^5)
0
5
10
0
25
50
75
100
Gain (10^5) at B=1.4 T, HV=2500 V

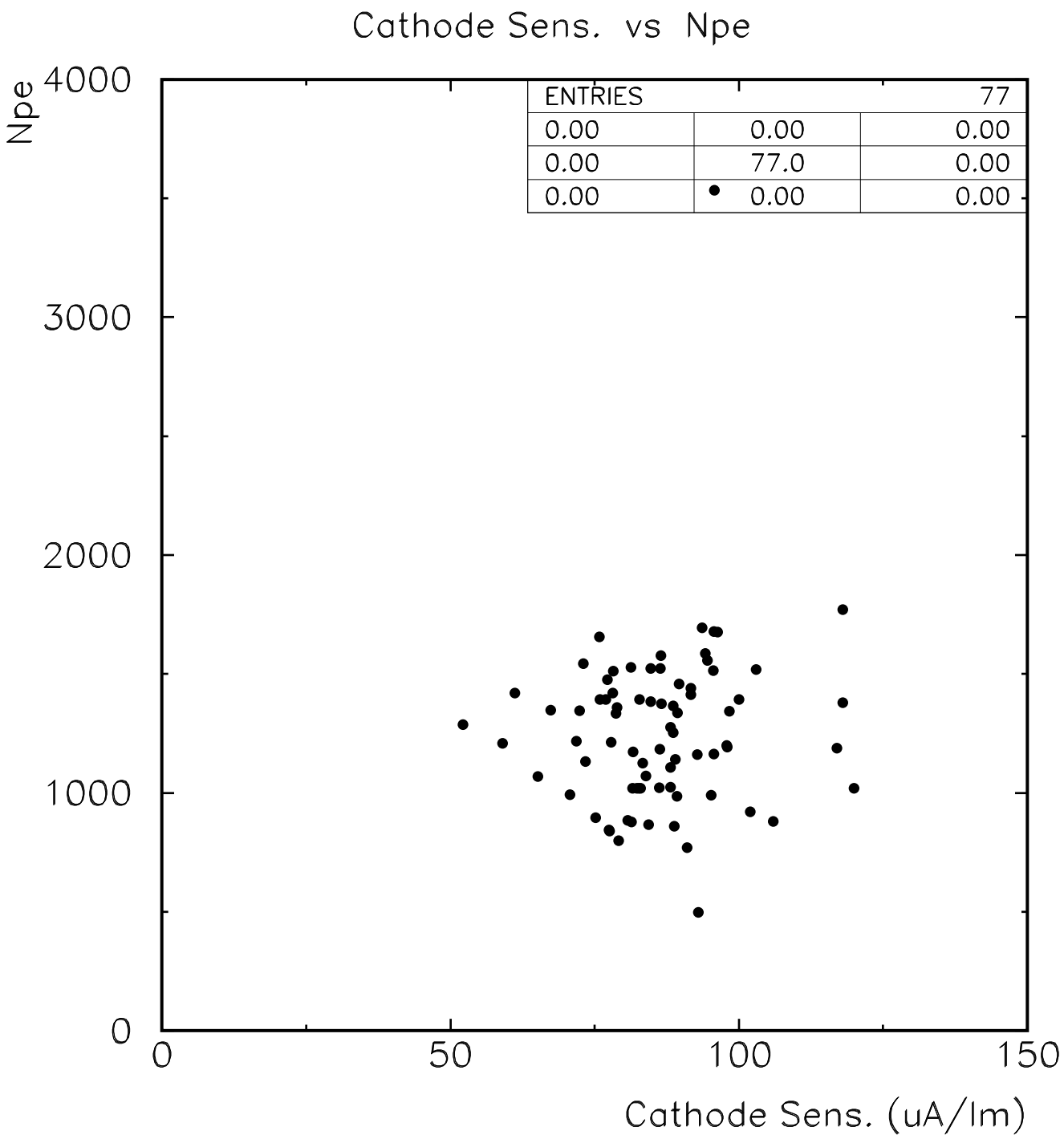

Estimated Gain (B = 1.4 T)
Entries 77
Mean 5.275
RMS 3.523
UDFLW 0.000
OVFLW 17.00
Tubes / (5 x 10⁴)
0
2
4
6
8
10
0
5
10
15
20
Gain (10⁵) at B=1.4 T, HV=2500 V

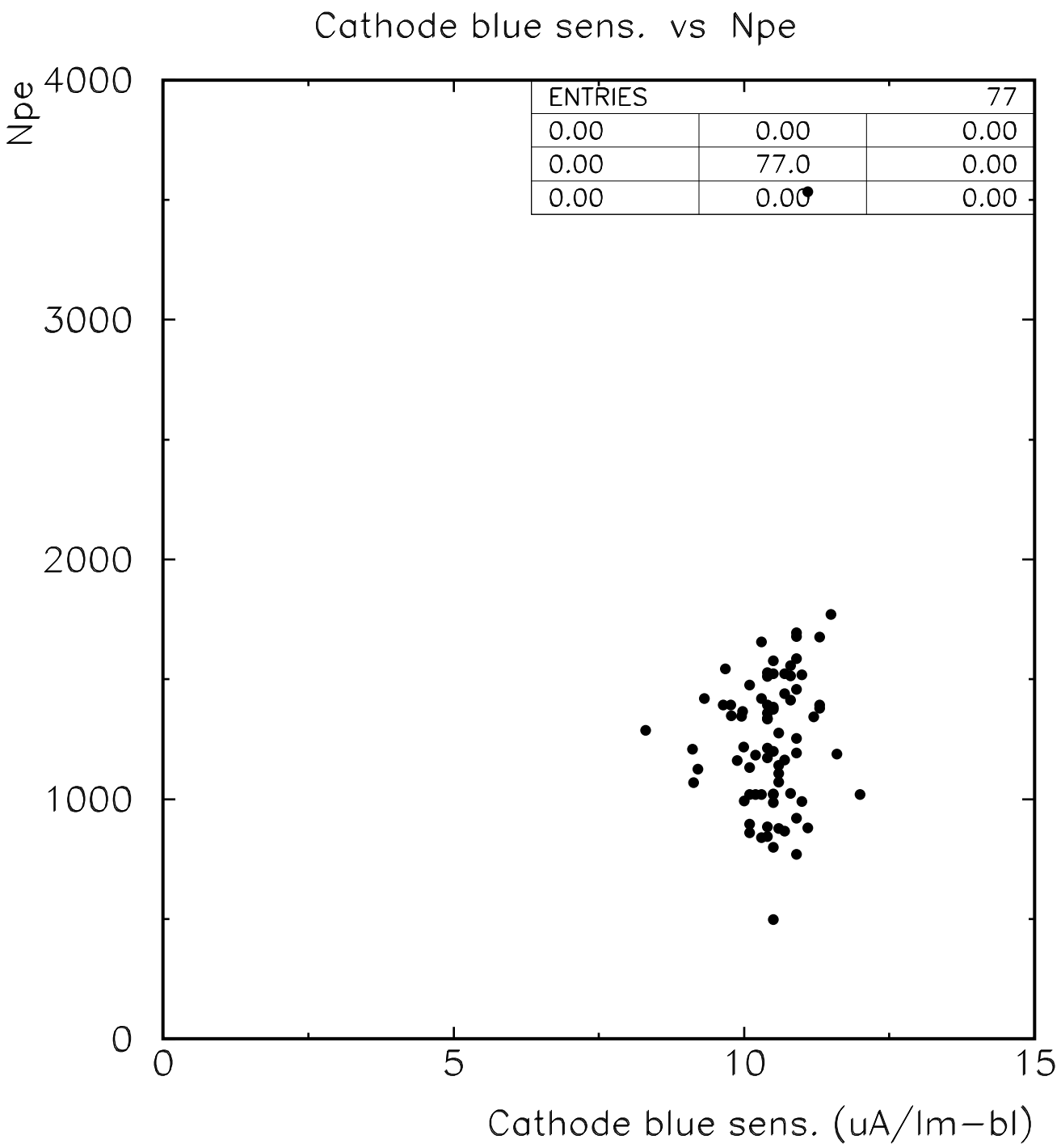

Gain reduction
Tubes
Entries 77
Mean 369.5
RMS 138.8
UDFLW 0.000
OVFLW 0.000
0
2
4
6
8
0
200
400
600
800
1000
Gain reduction at 1.4 T

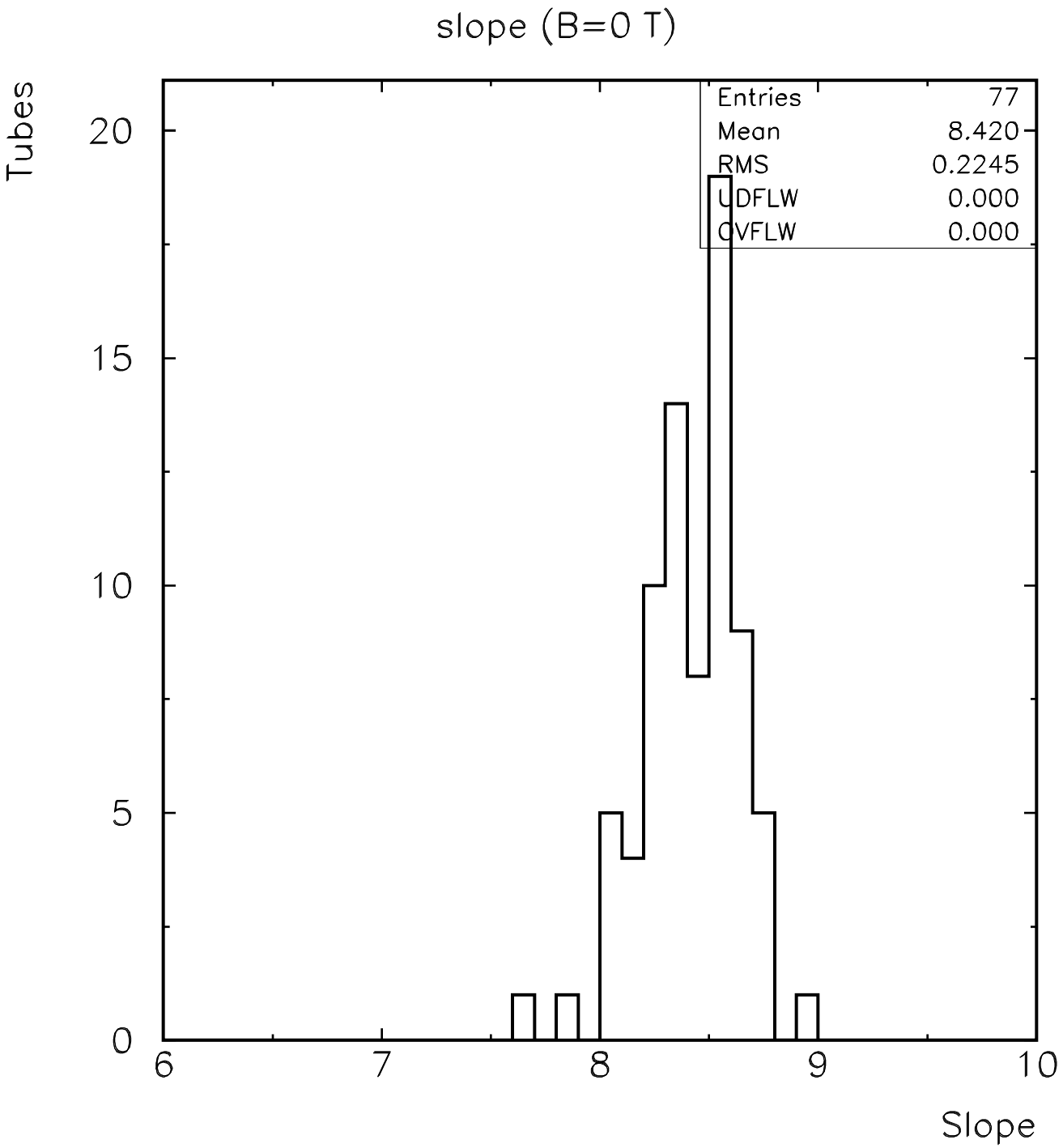

Gain reduction vs Gain
ENTRIES 77
0.00 0.00 0.00
0.00 77.0 0.00
0.00 0.00 0.00
Gain reduction
1000
800
600
400
200
0
0
20
40
60
Gain (10^7) at HV=2000 V and B = 0 T

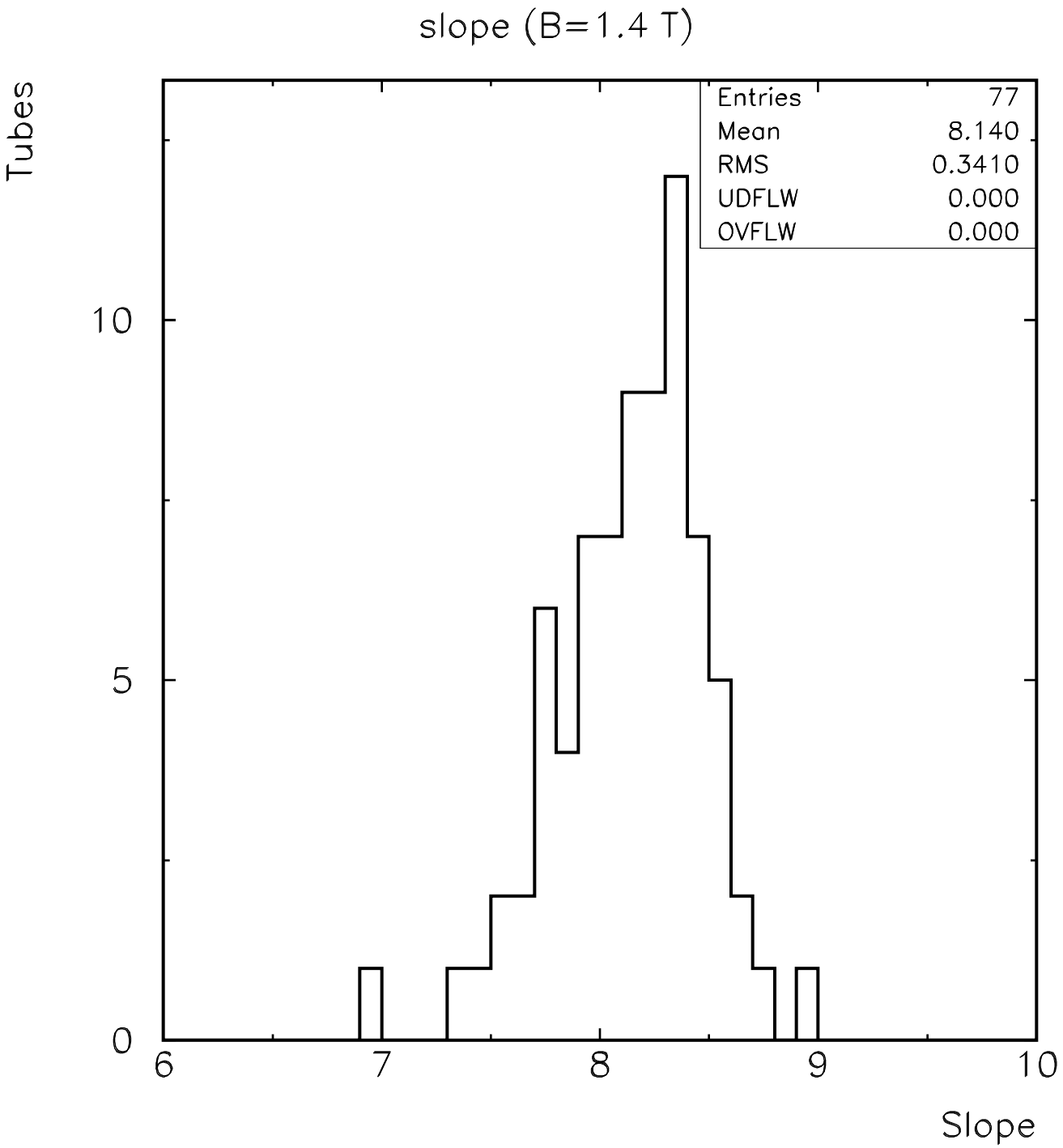

HV to get gain of 1.0E5 at B=1.4 T
Tubes
15
10
5
0
1000
1500
2000
2500
3000
HV (V)
Entries 77
Mean 1977.
RMS 261.2
UDFLW 0.000
OVFLW 0.000

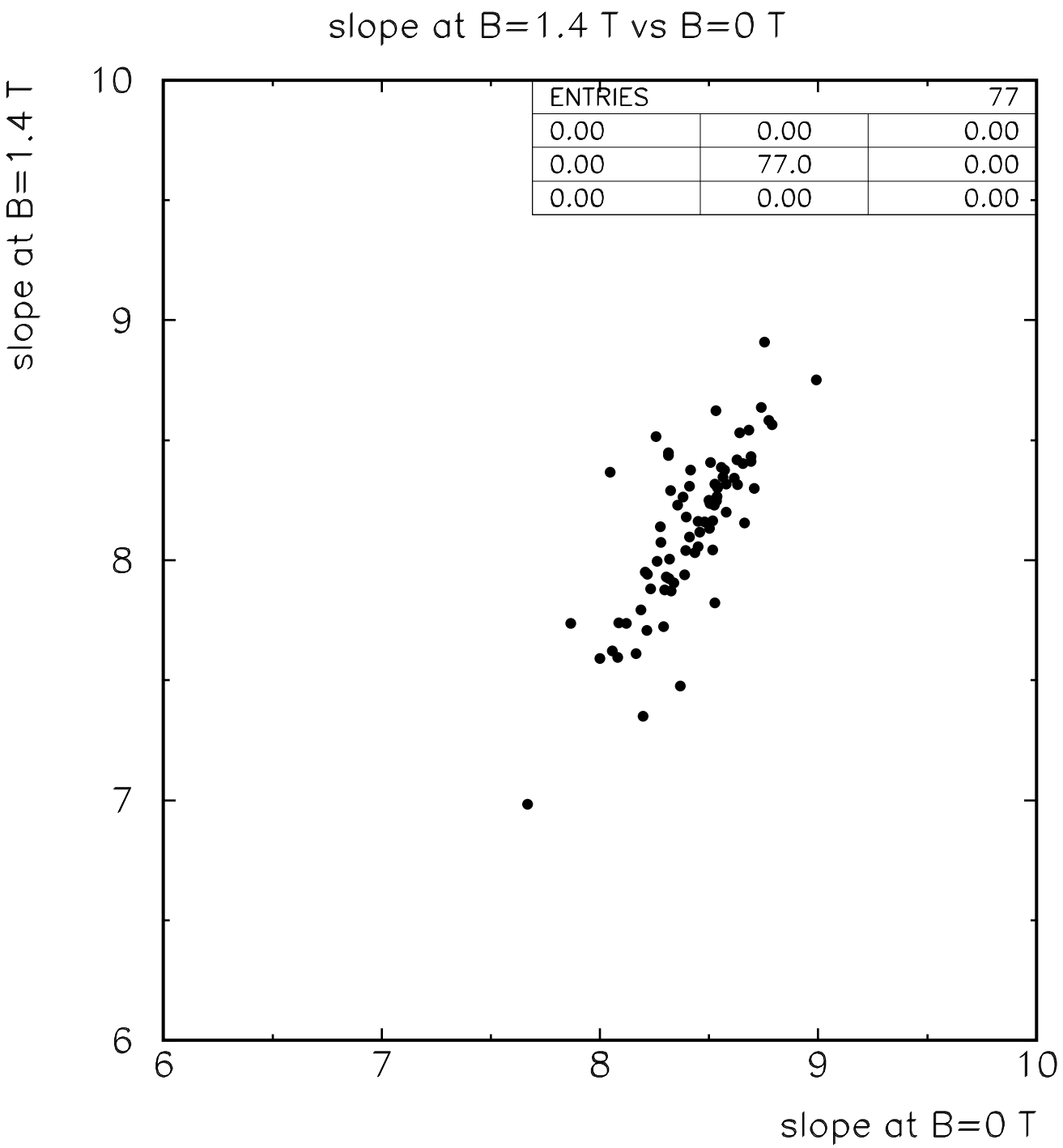

Npe = Q(2000) / Gain(2000) / 1.6E−19
Tubes
15
10
5
0
0
1000
2000
3000
4000
Npe
Entries 77
Mean 1262.
RMS 372.8
UDFLW 0.000
OVFLW 0.000


Cathode Sens. vs Npe
Npe
4000
3000
2000
1000
0
ENTRIES 77
0.00 0.00 0.00
0.00 77.0 0.00
0.00 0.00 0.00
0
50
100
150
Cathode Sens. (uA/lm)


Cathode blue sens. vs Npe
Npe
4000
3000
2000
1000
0
0
5
10
15
Cathode blue sens. (uA/lm−bl)
ENTRIES 77
0.00 0.00 0.00
0.00 77.0 0.00
0.00 0.00 0.00


slope (B=0 T)
Tubes
Entries 77
Mean 8.420
RMS 0.2245
UDFLW 0.000
OVFLW 0.000
0
5
10
15
20
6
7
8
9
10
Slope


slope (B=1.4 T)
Tubes
Entries 77
Mean 8.140
RMS 0.3410
UDFLW 0.000
OVFLW 0.000
10
5
0
6
7
8
9
10
Slope


slope at B=1.4 T vs B=0 T
ENTRIES 77
0.00 0.00 0.00
0.00 77.0 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