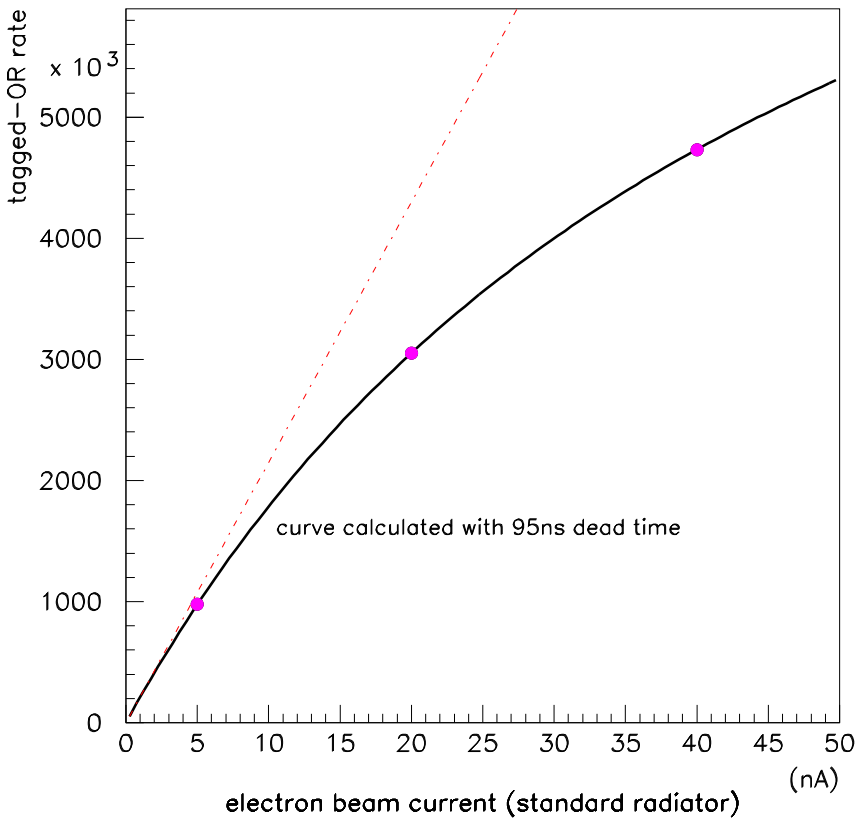
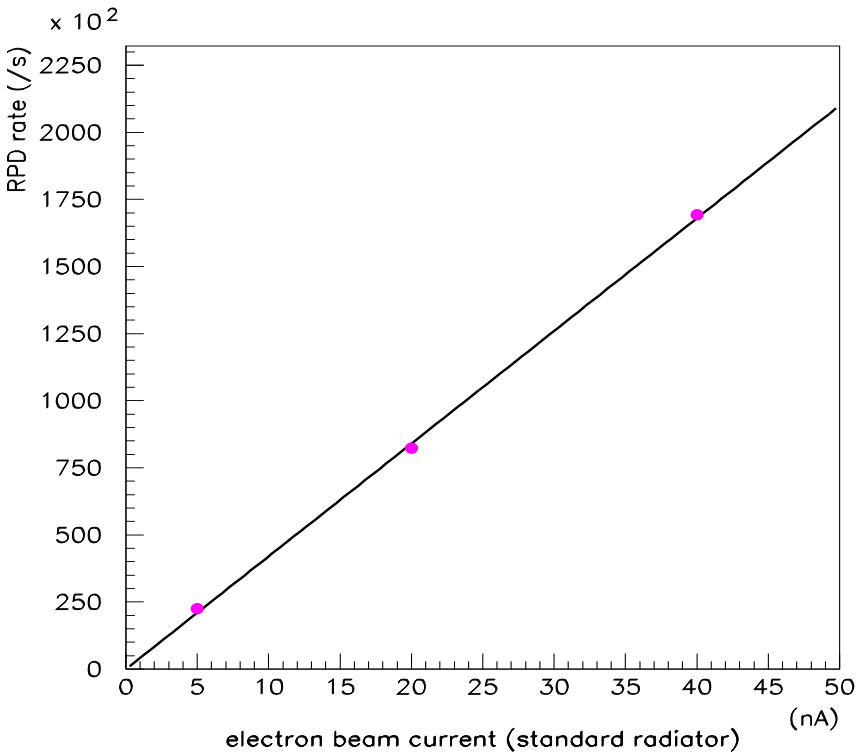
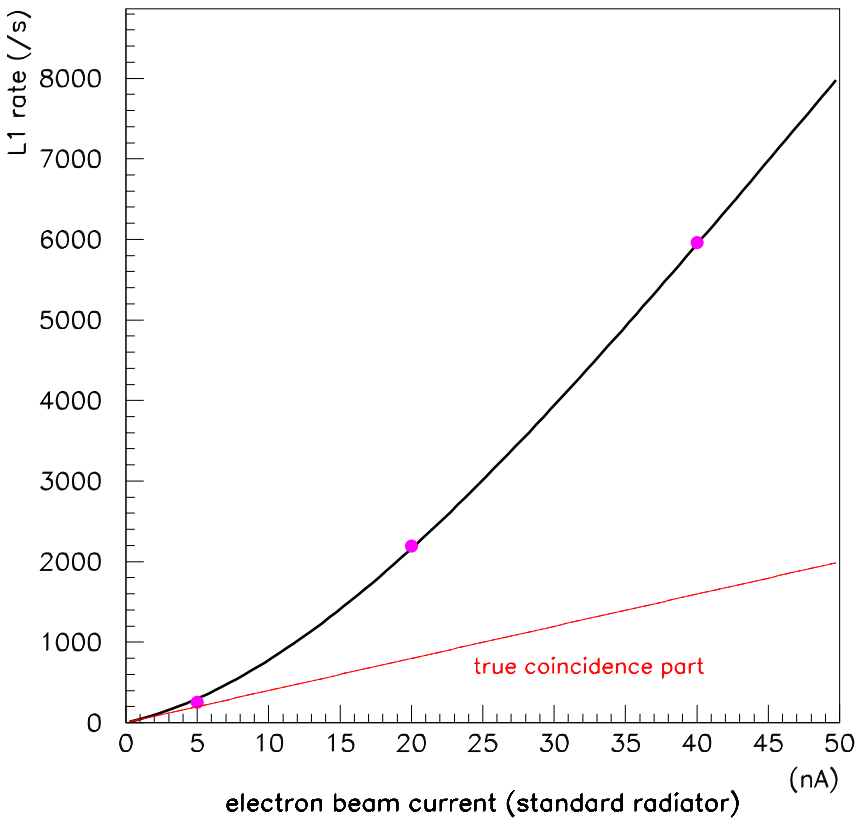
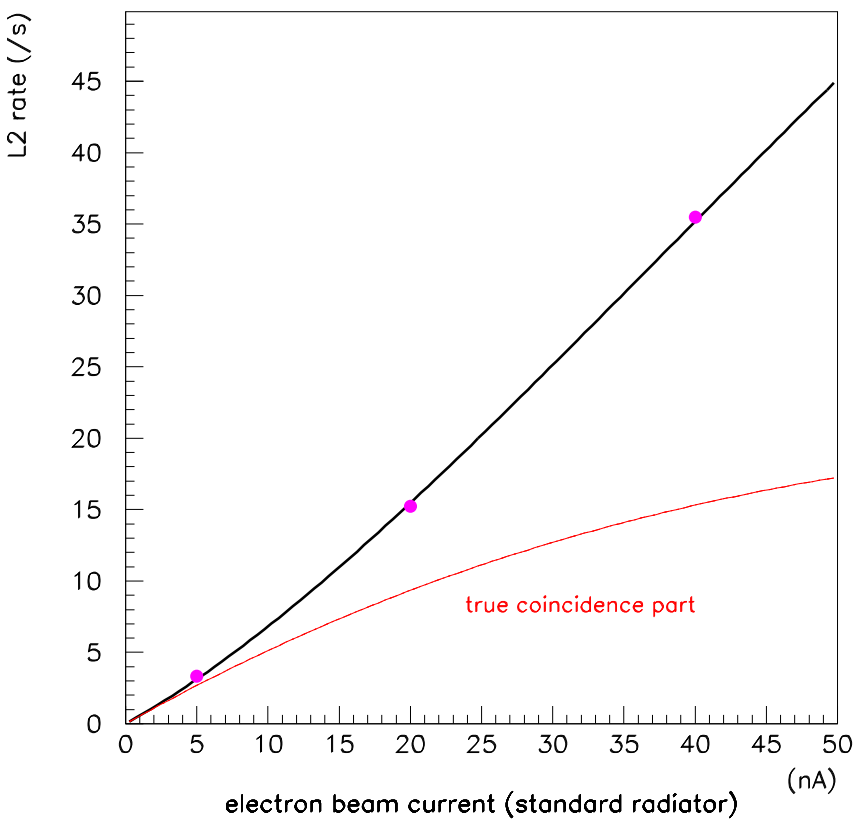
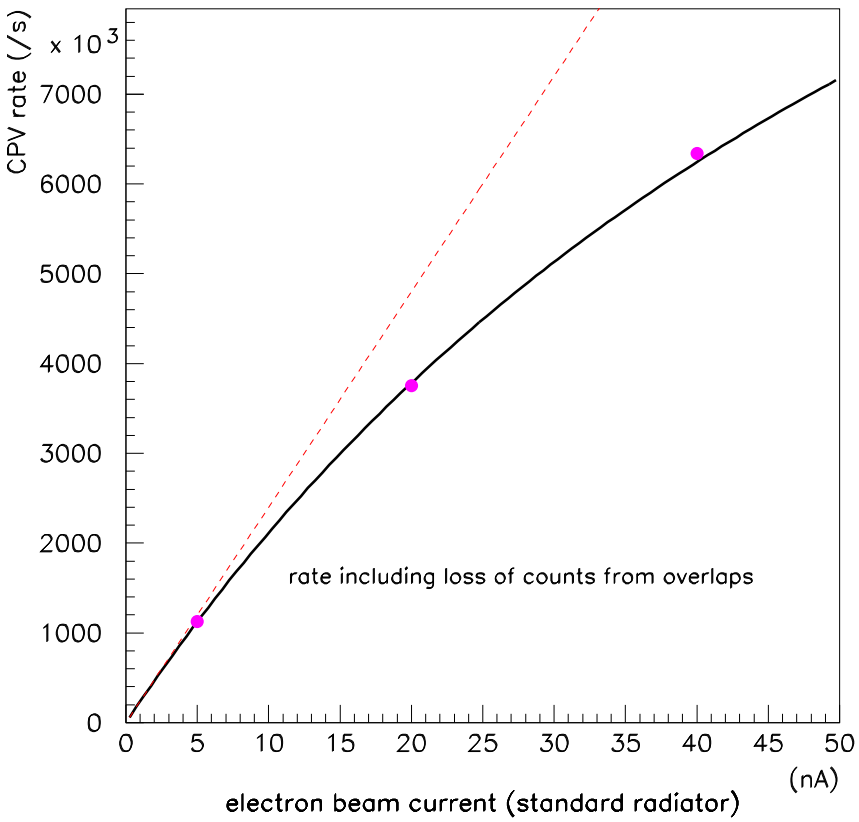
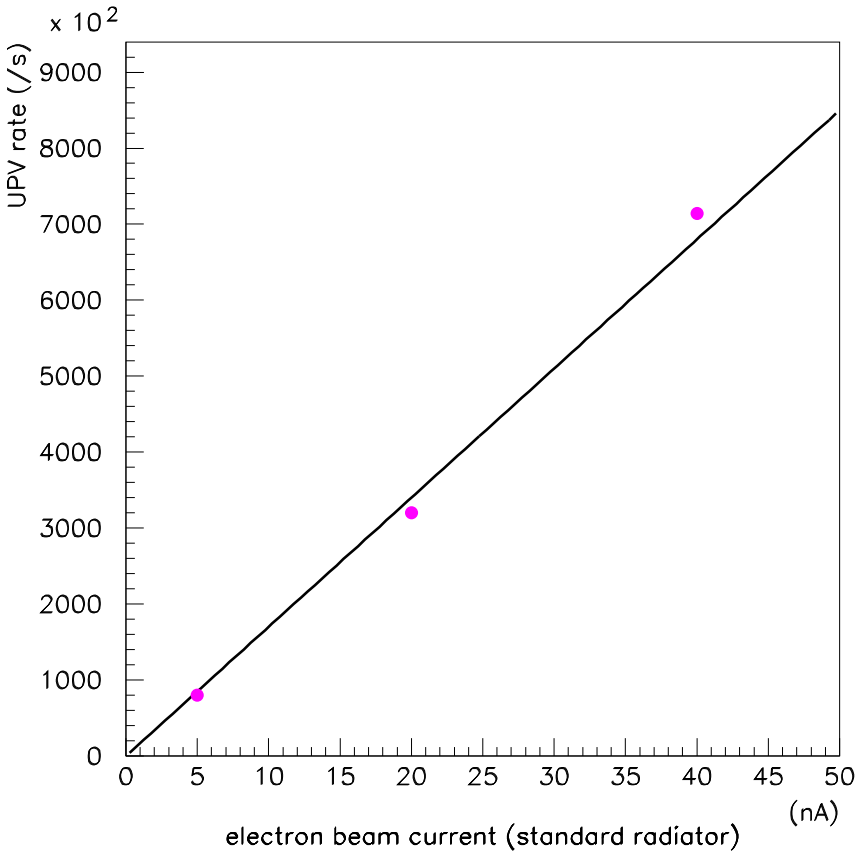

tagged−OR rate
x 10 3
5000
4000
3000
2000
1000
0
curve calculated with 95ns dead time
0
5
10
15
20
25
30
35
40
45
50
(nA)
electron beam current (standard radiator)

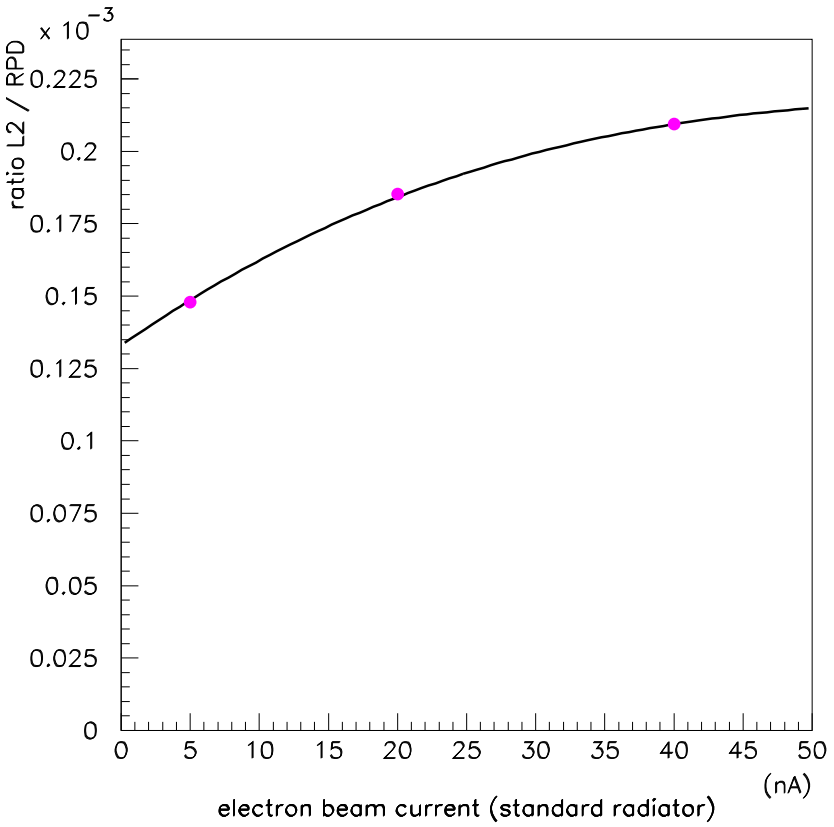

x 10 2
RPD rate (/s)
2250
2000
1750
1500
1250
1000
750
500
250
0
0
5
10
15
20
25
30
35
40
45
50
(nA)
electron beam current (standard radiator)

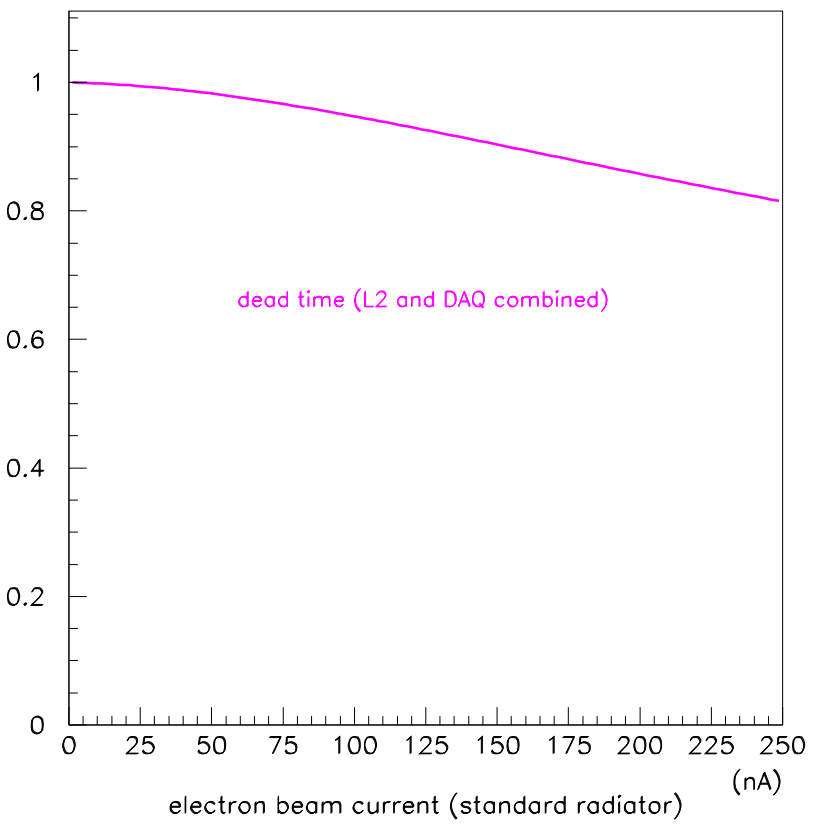

L1 rate (/s)
8000
7000
6000
5000
4000
3000
2000
1000
0
true coincidence part
0
5
10
15
20
25
30
35
40
45
50
(nA)
electron beam current (standard radiator)

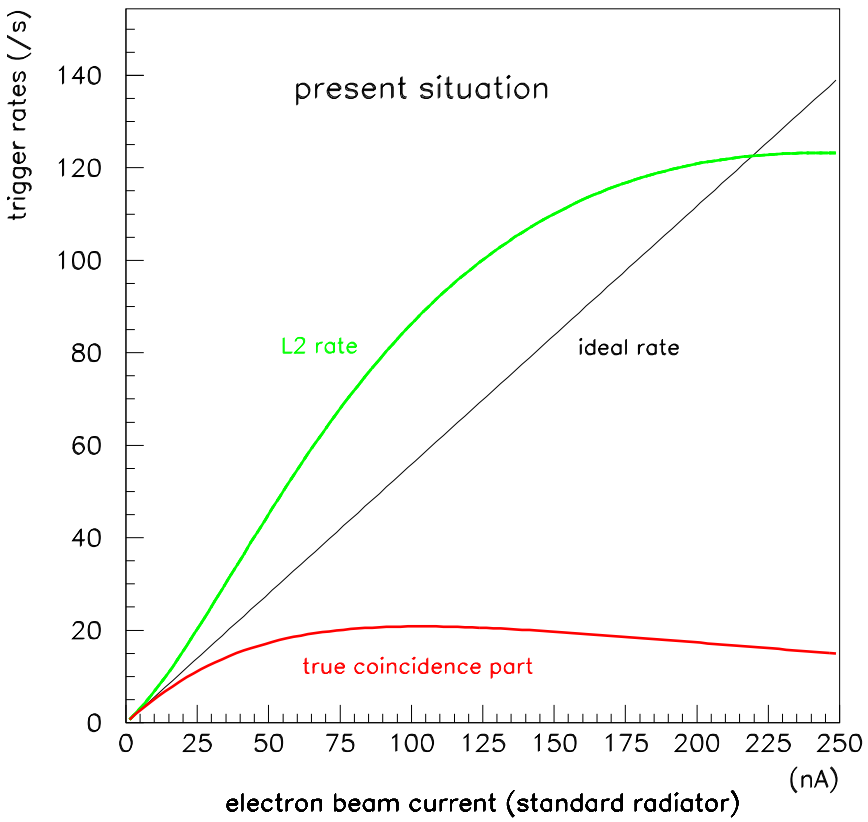

L2 rate (/s)
45
40
35
30
25
20
15
10
5
0
true coincidence part
0
5
10
15
20
25
30
35
40
45
50
(nA)
electron beam current (standard radiator)

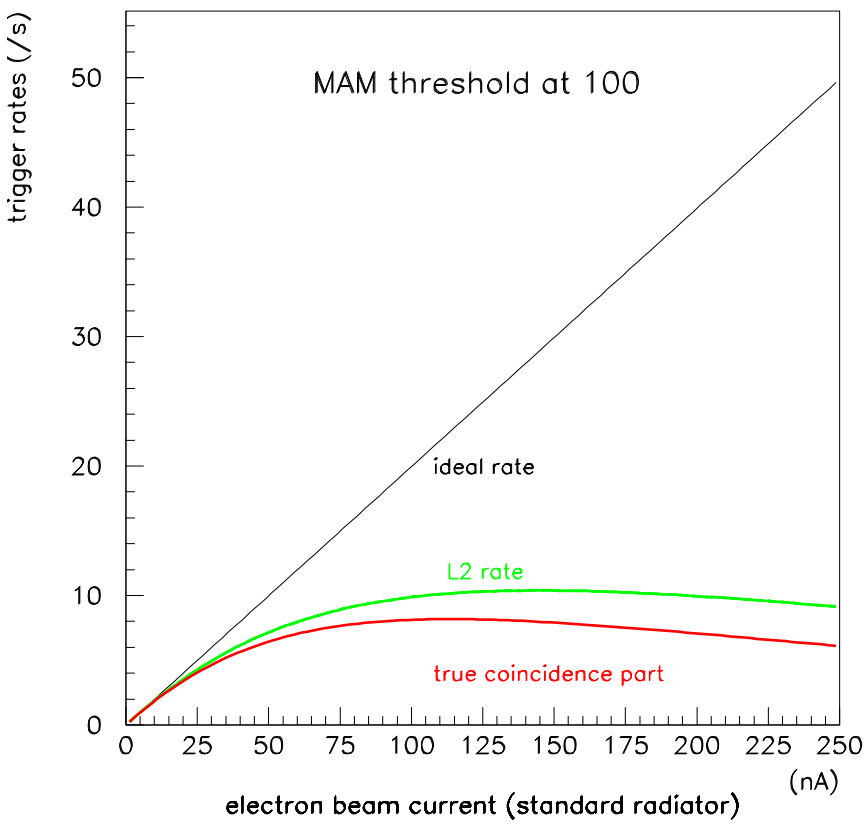

CPV rate (/s)
x 10 3
7000
6000
5000
4000
3000
2000
1000
0
rate including loss of counts from overlaps
0
5
10
15
20
25
30
35
40
45
50
(nA)
electron beam current (standard radiator)

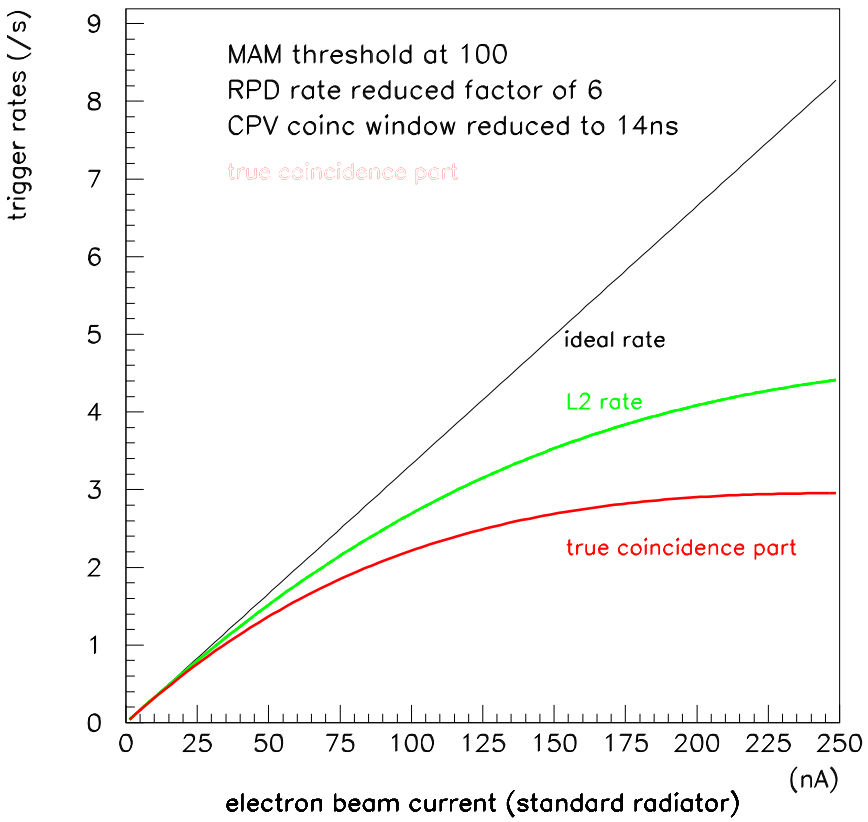

x 10 2
UPV rate (/s)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0
5
10
15
20
25
30
35
40
45
50
(nA)
electron beam current (standard radiator)

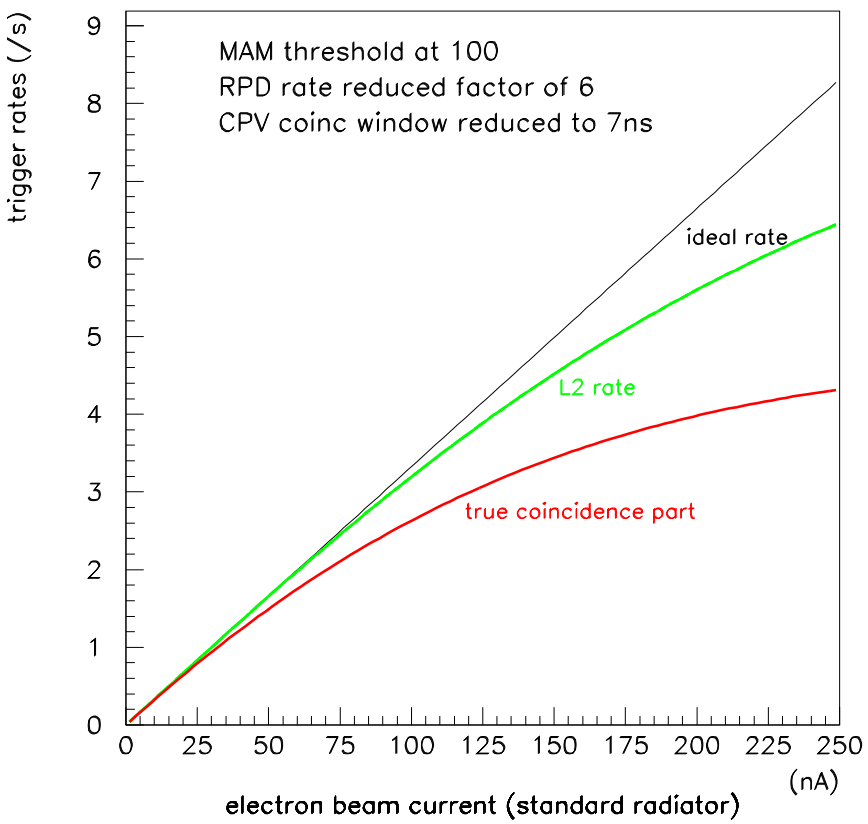

x 10^-3
ratio L2 / RPD
0.225
0.2
0.175
0.15
0.125
0.1
0.075
0.05
0.025
0
0 5 10 15 20 25 30 35 40 45 50
(nA)
electron beam current (standard radiator)

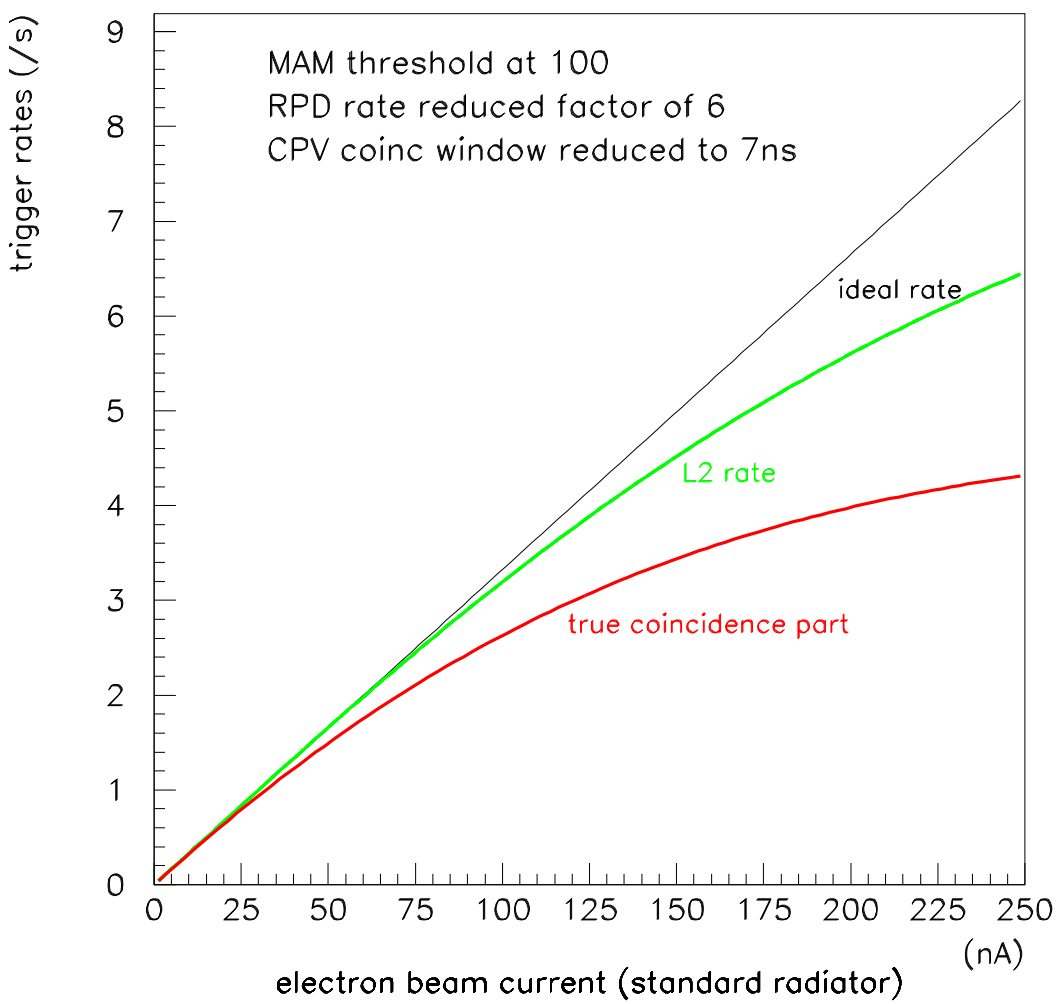

1
0.8
0.6
0.4
0.2
0
dead time (L2 and DAQ combined)
0 25 50 75 100 125 150 175 200 225 250
(nA)
electron beam current (standard radiator)


present situation
trigger rates (/s)
140
120
100
80
60
40
20
0
L2 rate
ideal rate
true coincidence part
0
25
50
75
100
125
150
175
200
225
250
(nA)
electron beam current (standard radiator)


MAM threshold at 100
trigger rates (/s)
50
40
30
20
10
0
ideal rate
L2 rate
true coincidence part
0
25
50
75
100
125
150
175
200
225
250
(nA)
electron beam current (standard radiator)


MAM threshold at 100
RPD rate reduced factor of 6
CPV coinc window reduced to 14ns
true coincidence part
ideal rate
L2 rate
true coincidence part
trigger rates (/s)
electron beam current (standard radiator)
(nA)
0
1
2
3
4
5
6
7
8
9
0
25
50
75
100
125
150
175
200
225
250


MAM threshold at 100
RPD rate reduced factor of 6
CPV coinc window reduced to 7ns
ideal rate
L2 rate
true coincidence part
trigger rates (/s)
electron beam current (standard radiator)
(nA)
0
1
2
3
4
5
6
7
8
9
0
25
50
75
100
125
150
175
200
225
250


MAM threshold at 100
RPD rate reduced factor of 6
CPV coinc window reduced to 7ns
ideal rate
L2 rate
true coincidence part
trigger rates (/s)
electron beam current (standard radiator)
(nA)
0
1
2
3
4
5
6
7
8
9
0
25
50
75
100
125
150
175
200
225
250