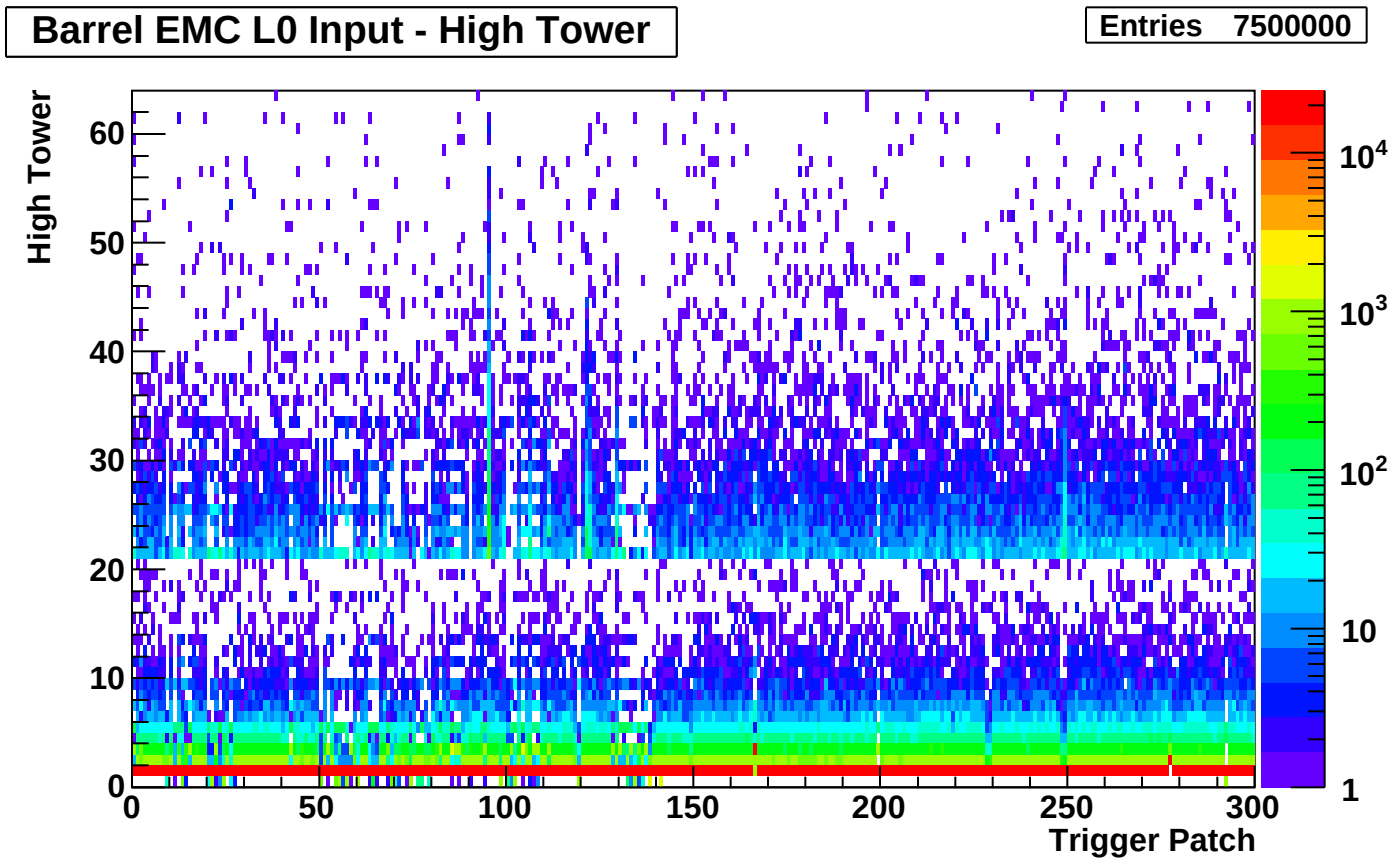
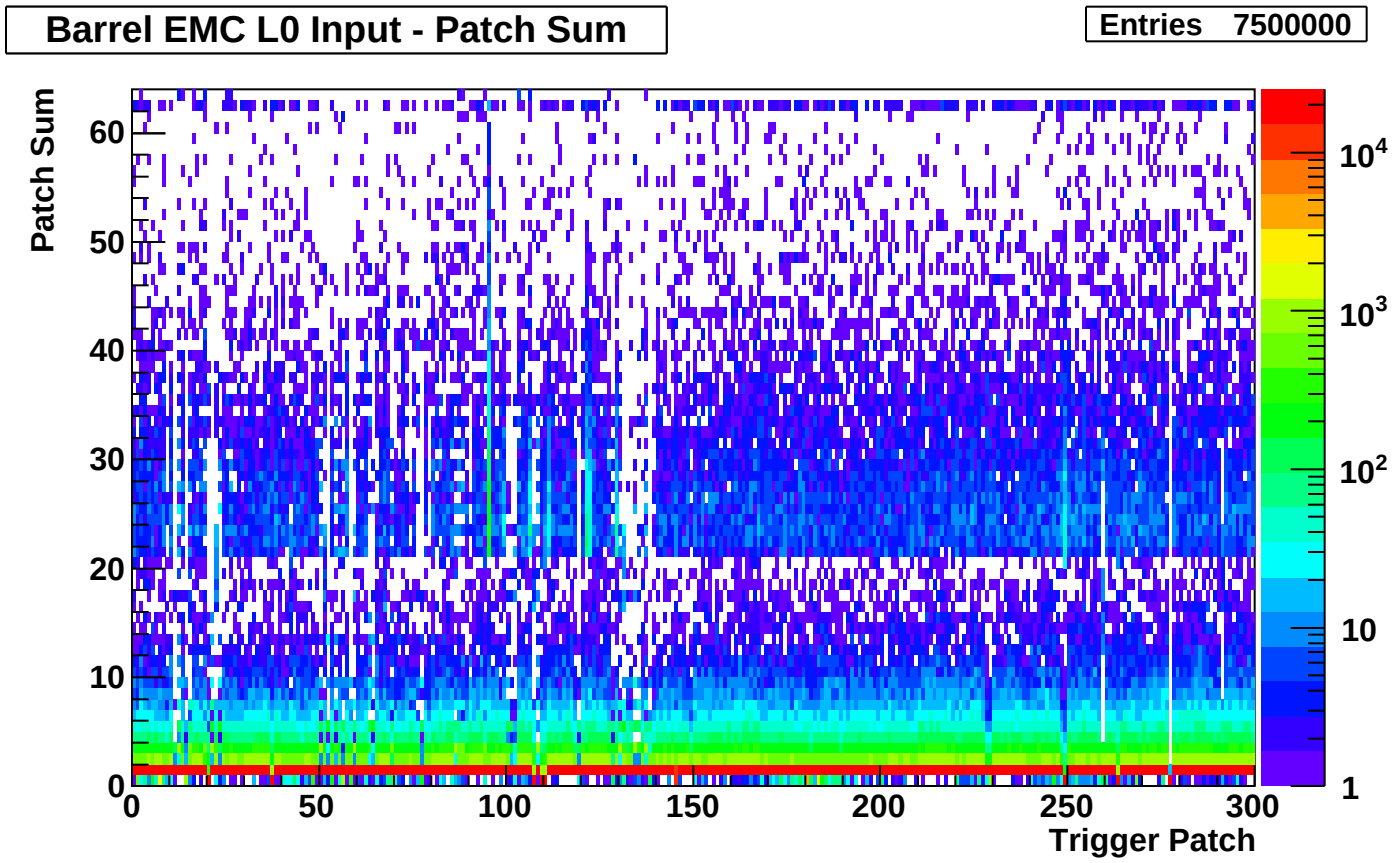
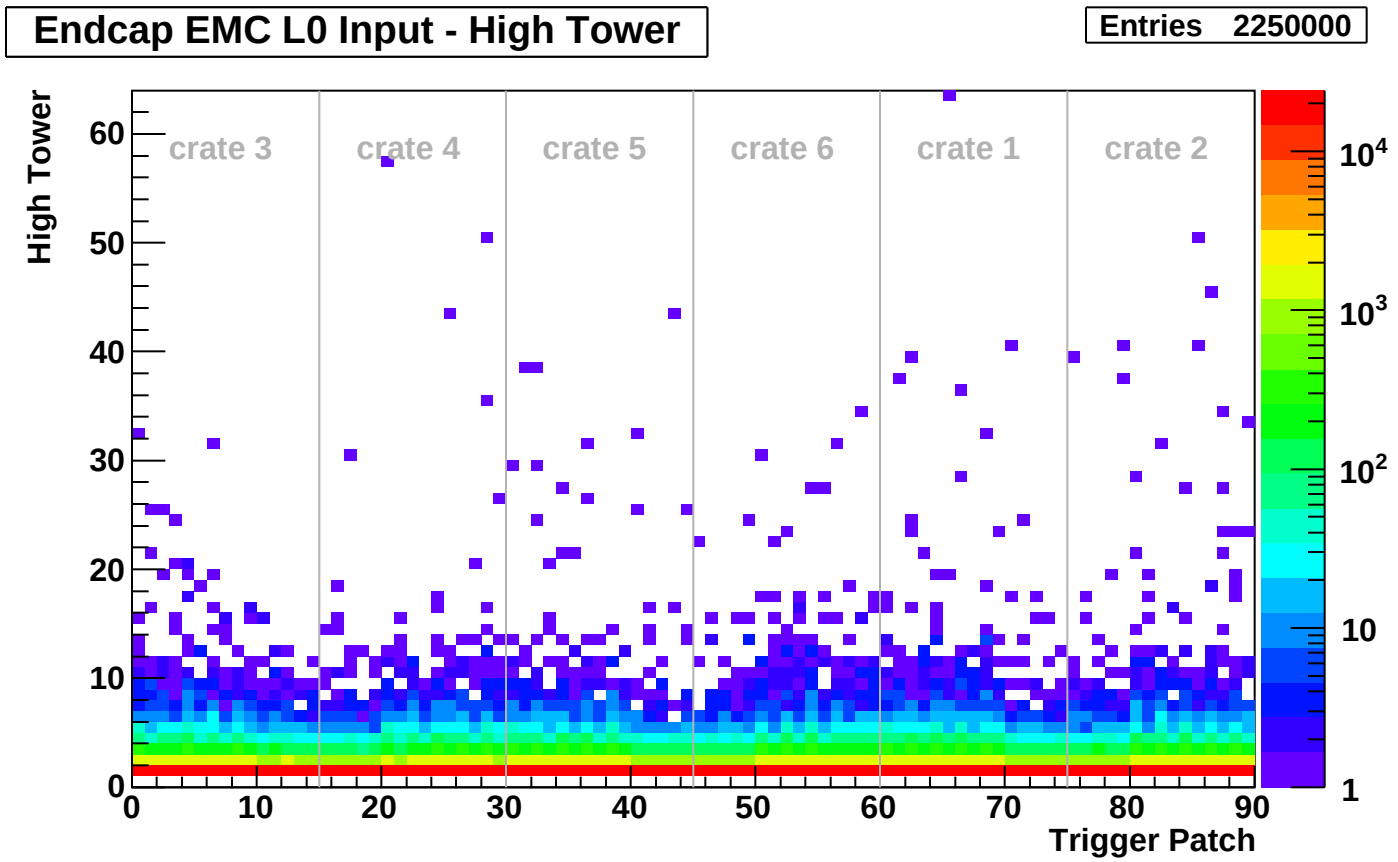
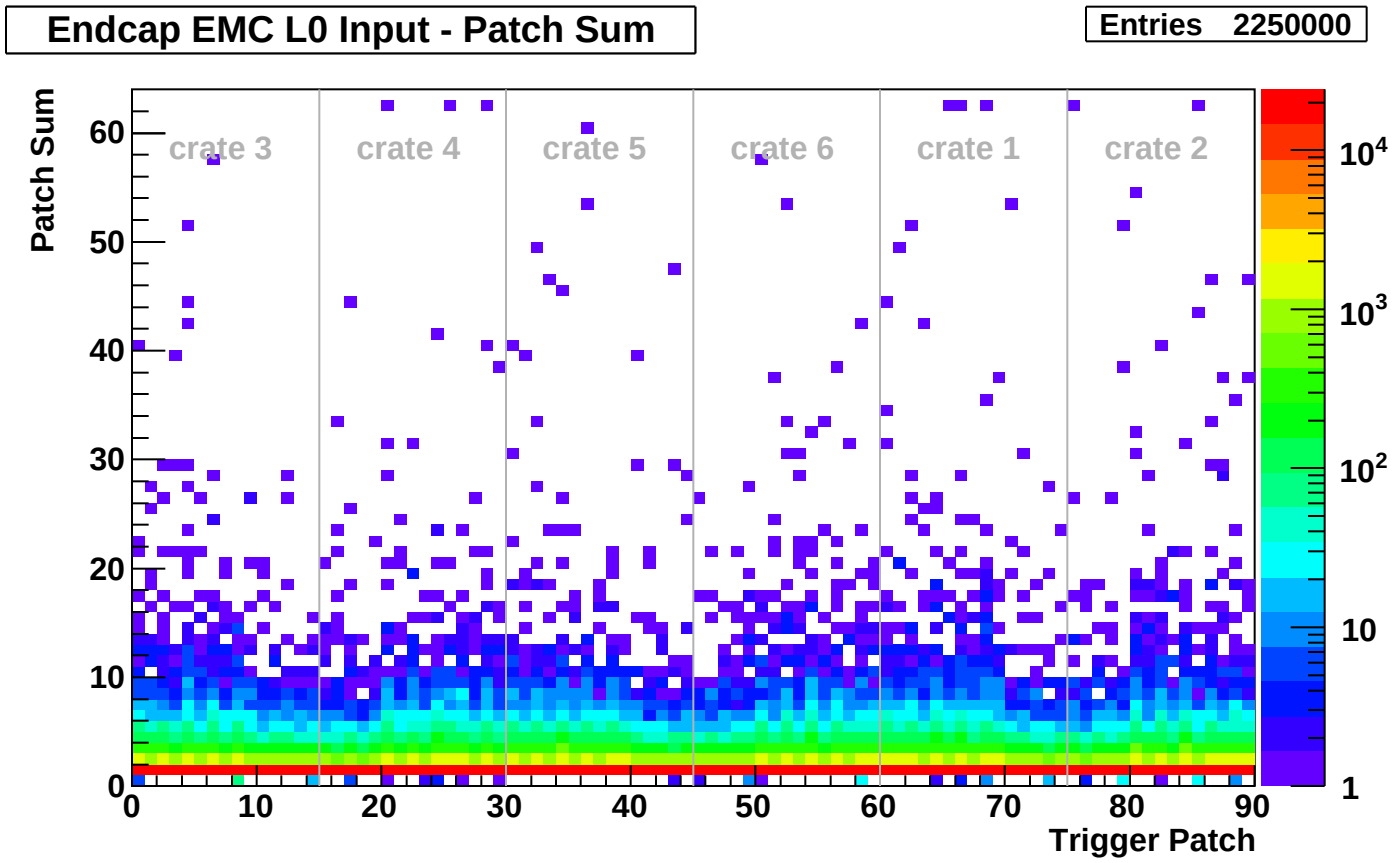
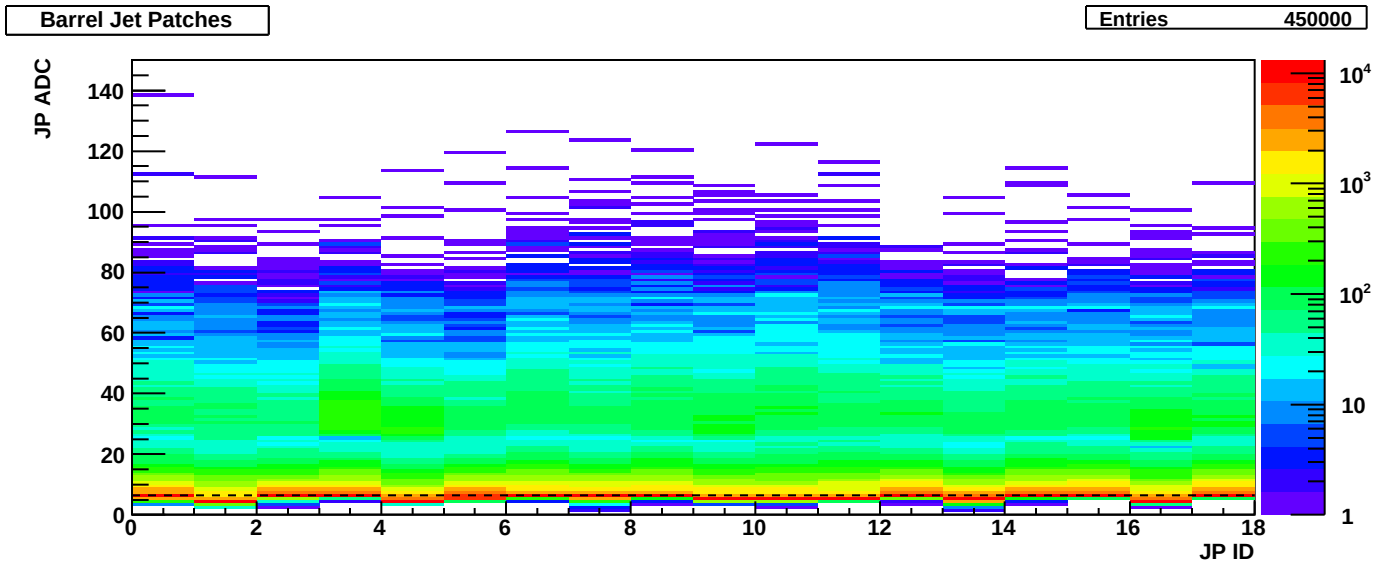
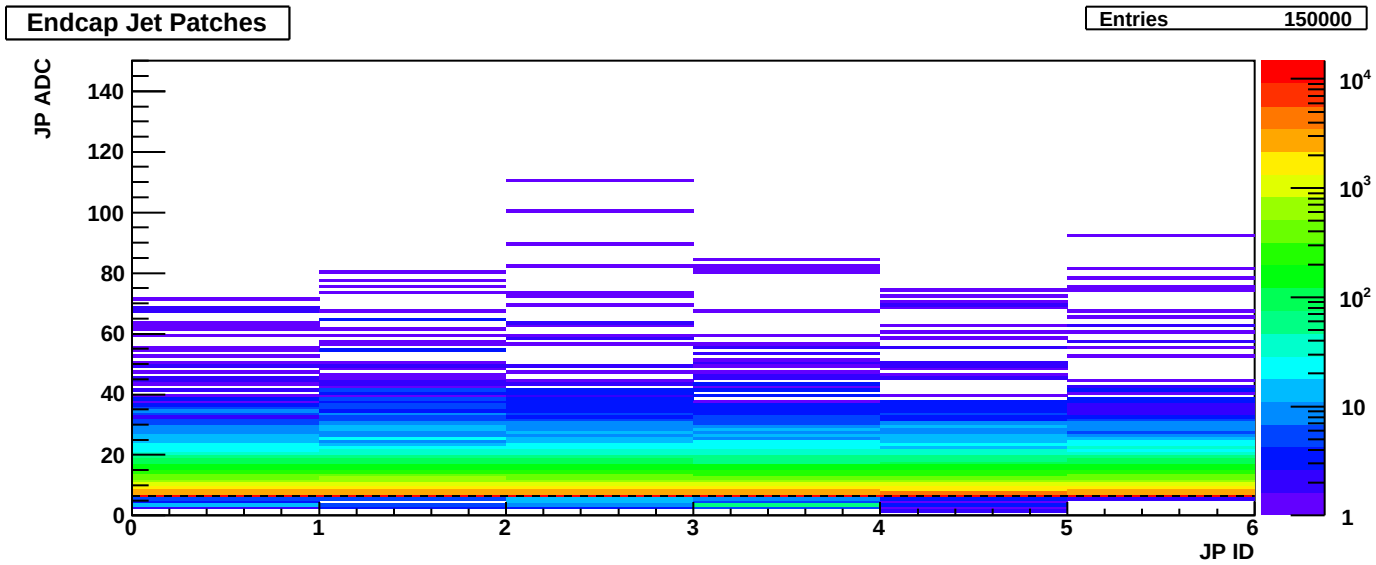

Barrel EMC L0 Input - High Tower
Entries 7500000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

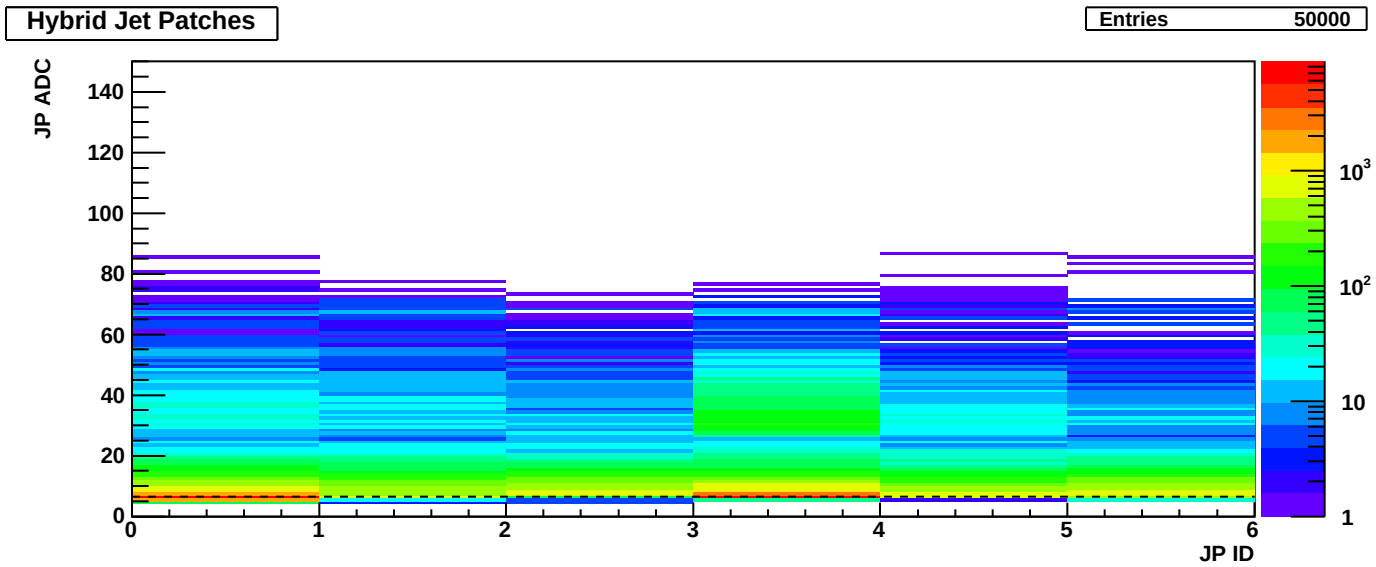

Barrel EMC L0 Input - Patch Sum
Entries 7500000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

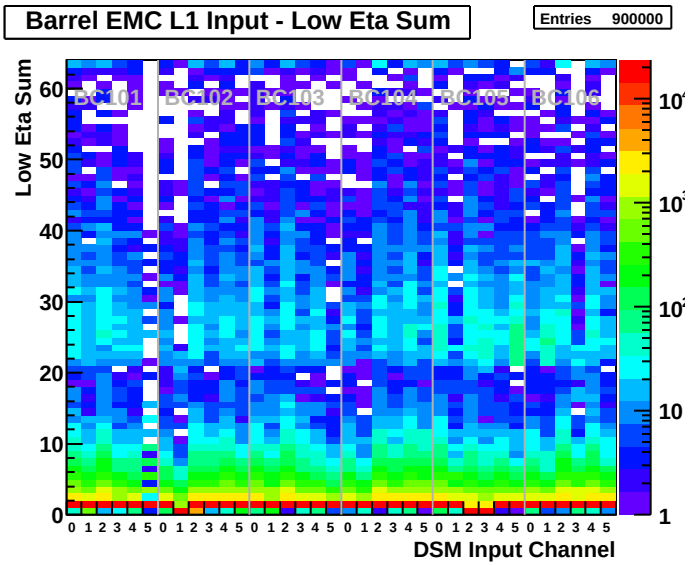

Endcap EMC L0 Input - High Tower
Entries 2250000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

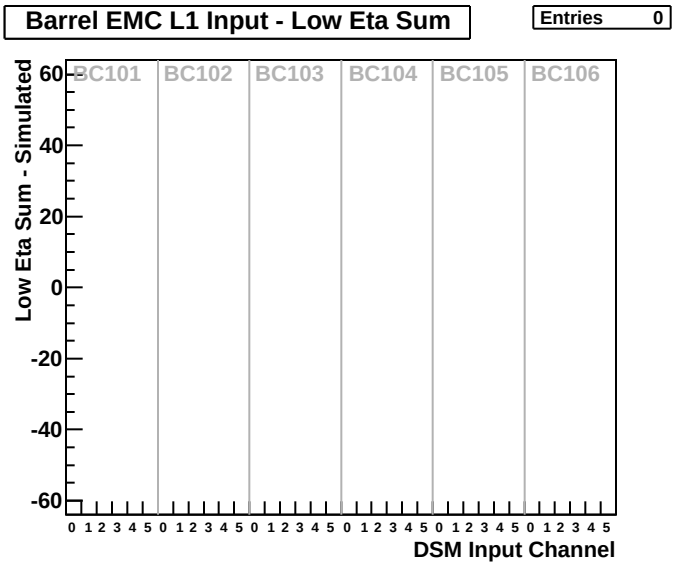

Endcap EMC L0 Input - Patch Sum
Entries 2250000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

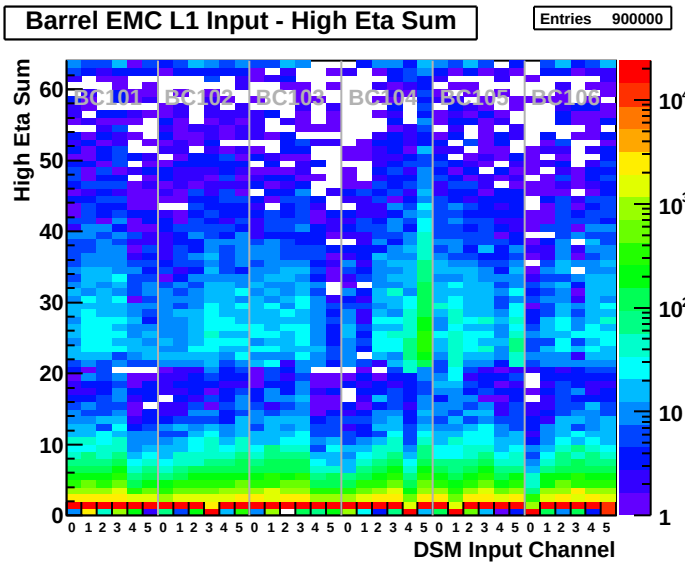

Barrel Jet Patches
Entries 450000
JP ADC
JP ID

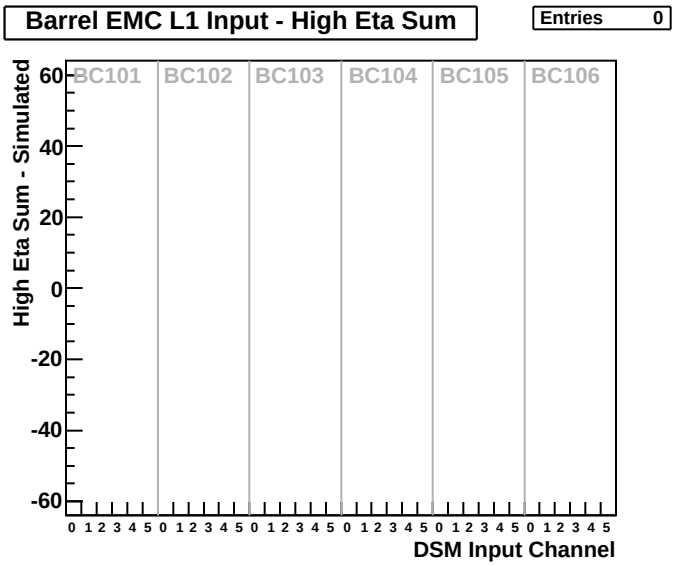

Endcap Jet Patches
Entries 150000
JP ADC
JP ID

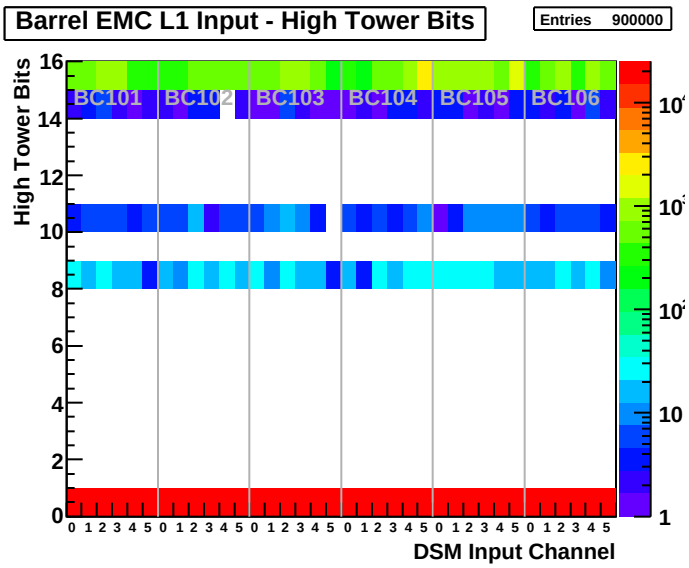

Hybrid Jet Patches
Entries 50000
JP ADC
JP ID

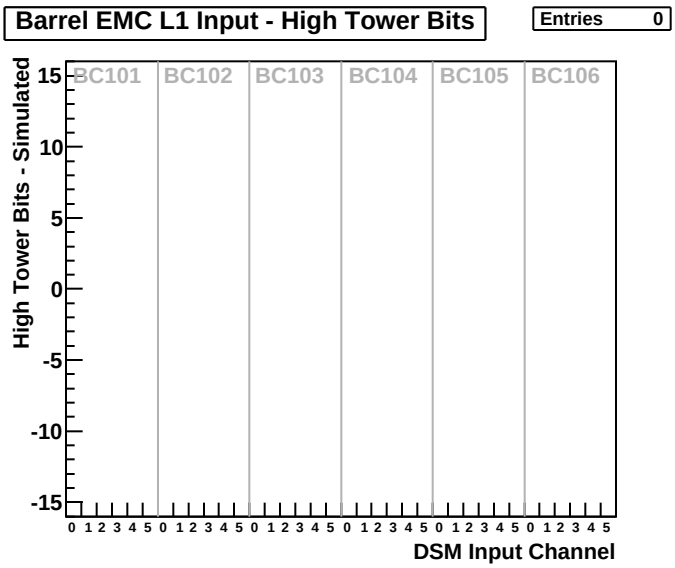

Barrel EMC L1 Input - Low Eta Sum
Entries 900000
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

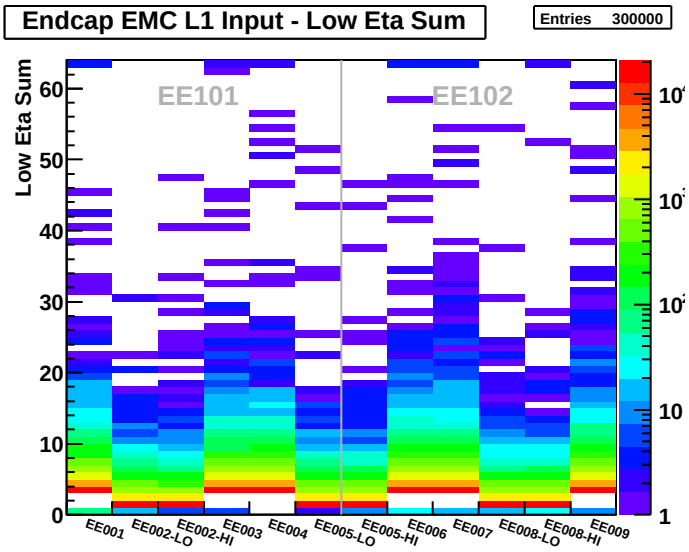

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

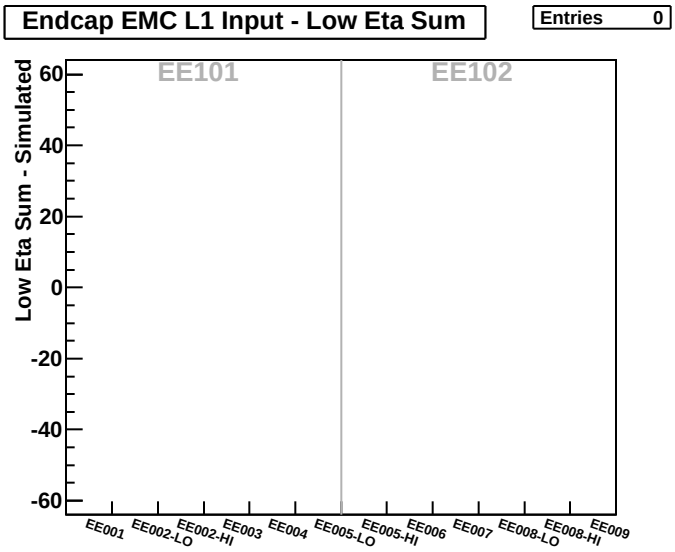

Barrel EMC L1 Input - High Eta Sum
Entries 900000
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

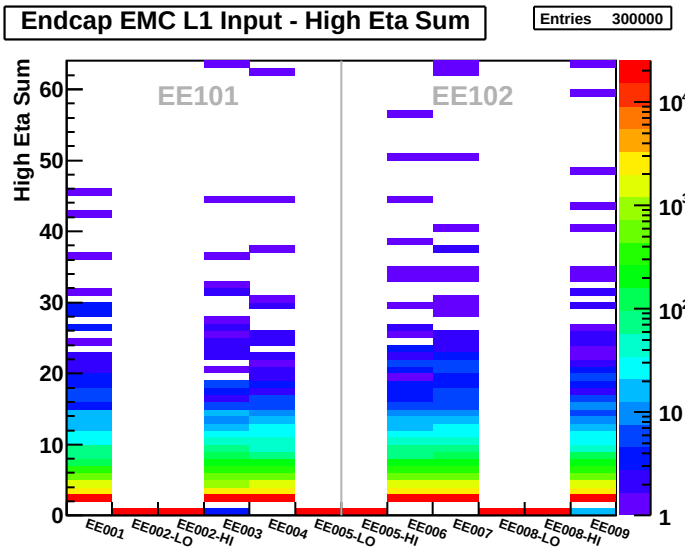

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

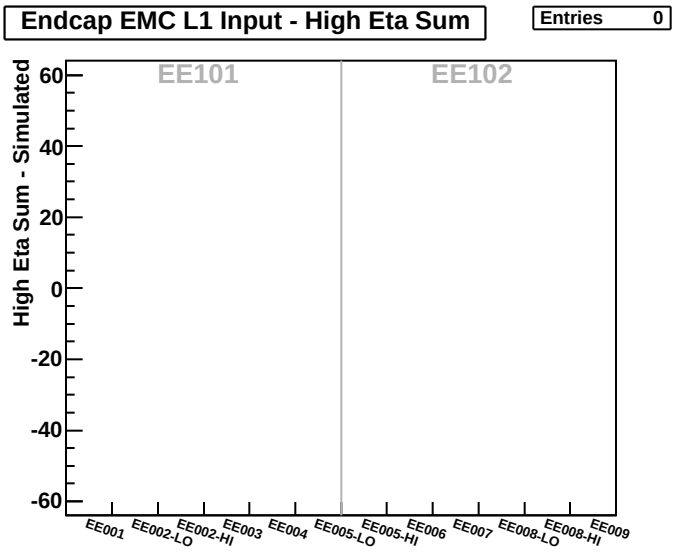

Barrel EMC L1 Input - High Tower Bits
Entries 900000
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

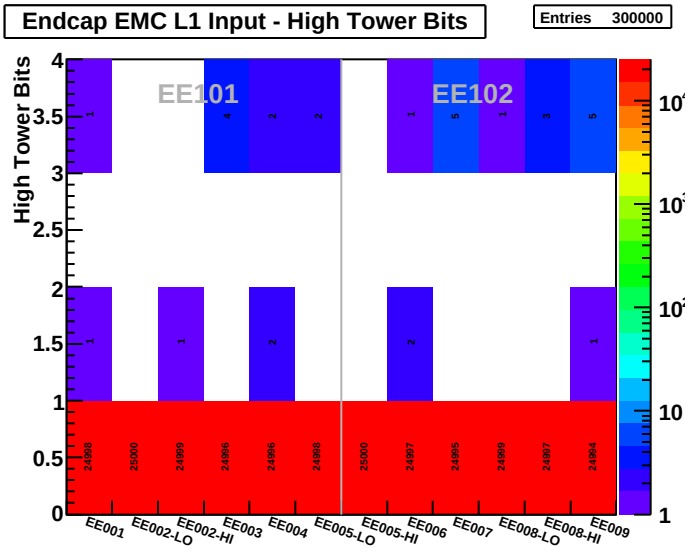

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

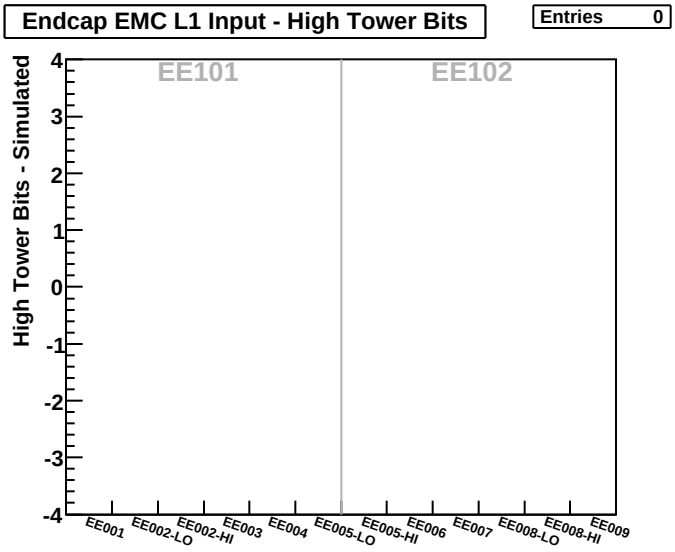

Endcap EMC L1 Input - Low Eta Sum
Entries 300000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

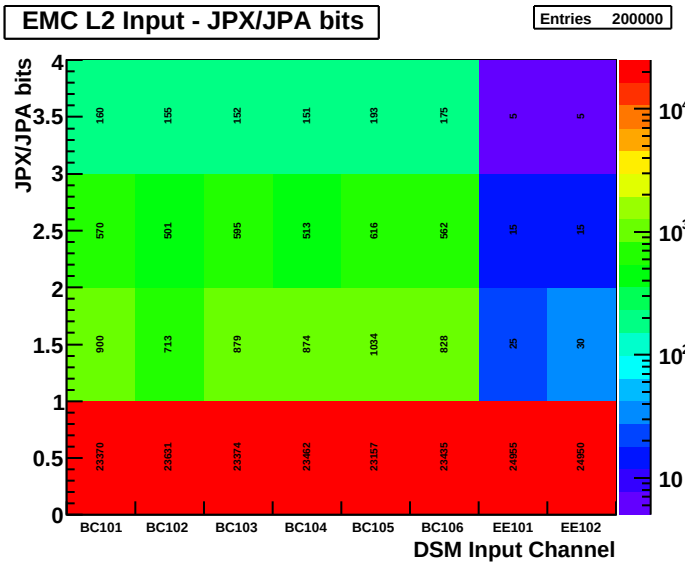

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

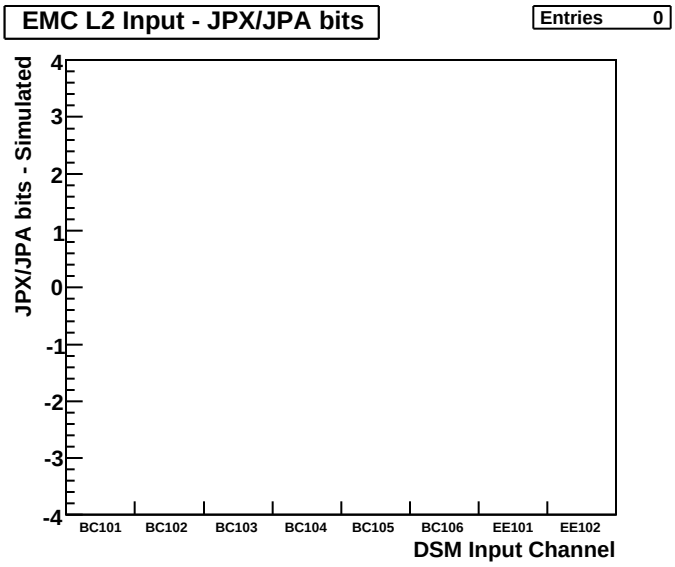

Endcap EMC L1 Input - High Eta Sum
Entries 300000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

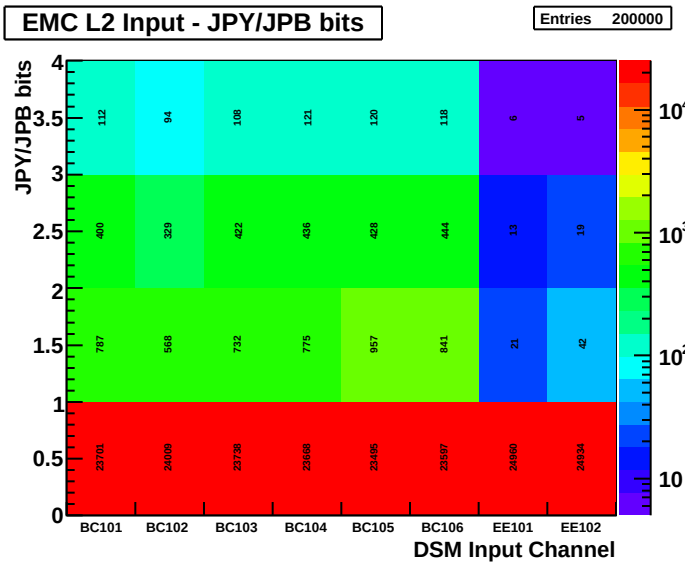

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

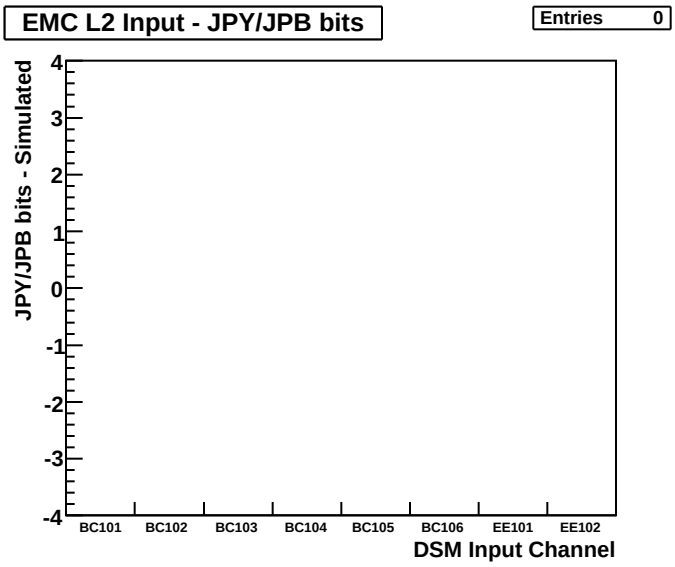

Endcap EMC L1 Input - High Tower Bits
Entries 300000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

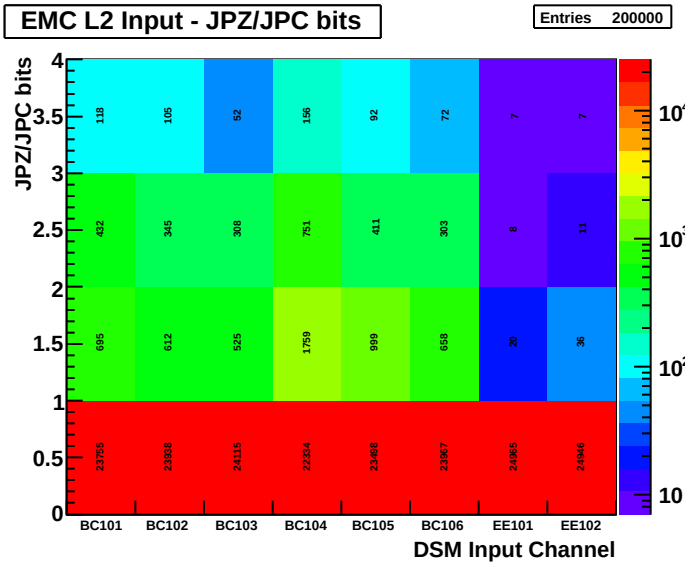

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

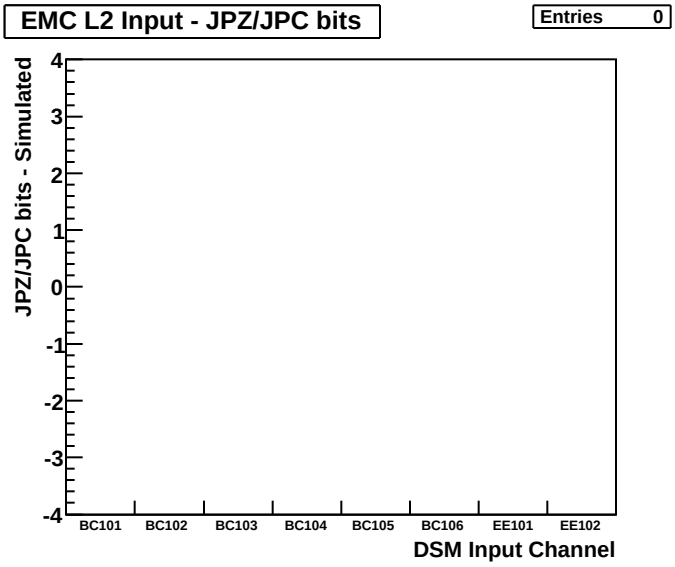

EMC L2 Input - JPX/JPA bits
Entries 200000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
160 155 152 151 193 175 5 5
570 501 595 513 616 562 15 15
900 713 879 874 1034 828 25 30
23370 23631 23374 23462 23157 23435 24955 24950

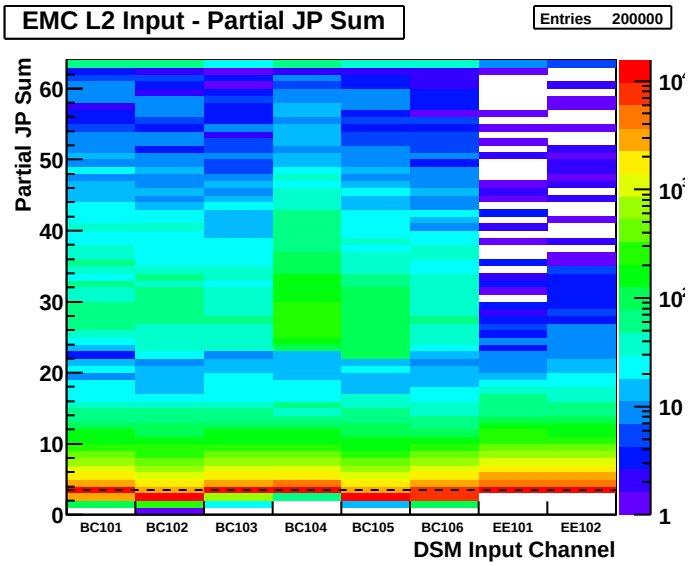

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

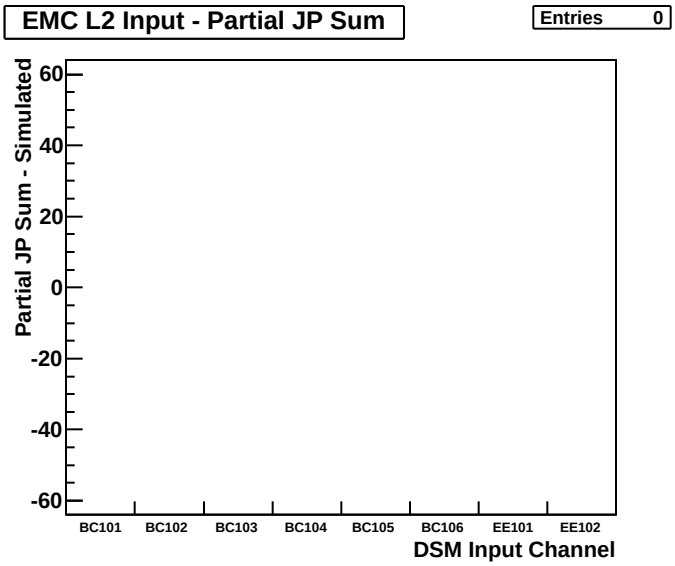

EMC L2 Input - JPY/JPB bits
Entries 200000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
112 94 108 121 120 118 6 5
400 329 422 436 428 444 13 19
787 568 732 775 957 841 21 42
23701 24009 23738 23668 23495 23597 24960 24934

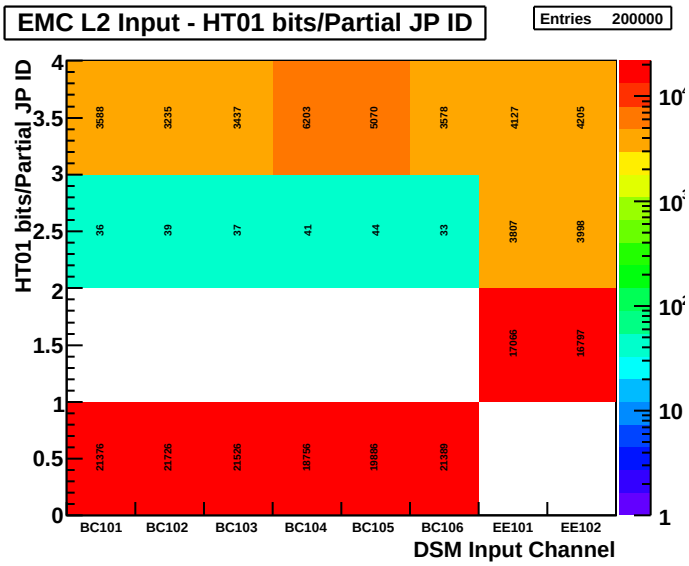

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

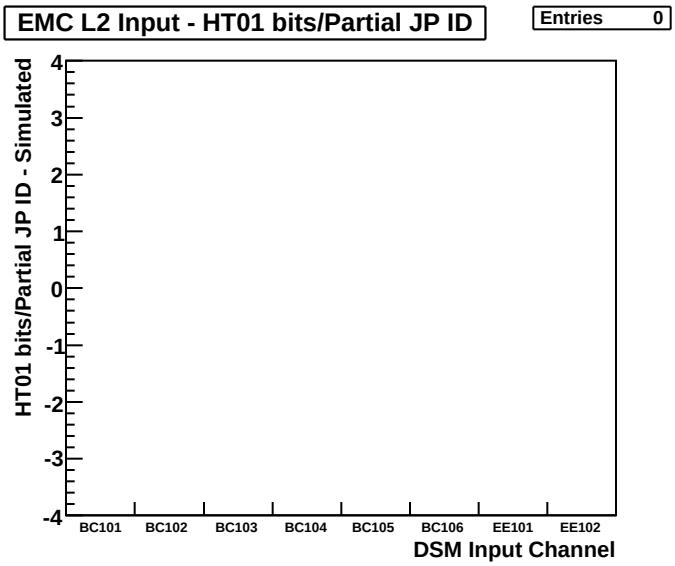

EMC L2 Input - JPZ/JPC bits
Entries 200000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
118 105 52 156 92 72 7 7
432 345 308 751 411 303 8 11
695 612 525 1759 999 658 20 36
23755 23938 24115 22324 23498 23967 24965 24946

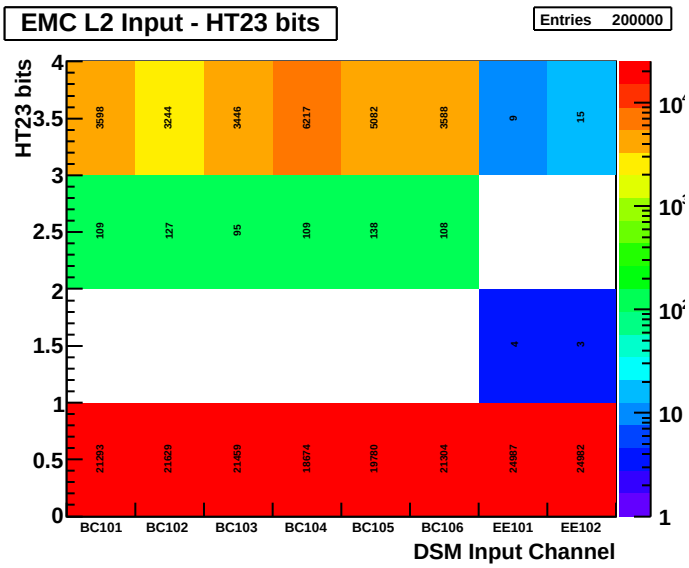

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

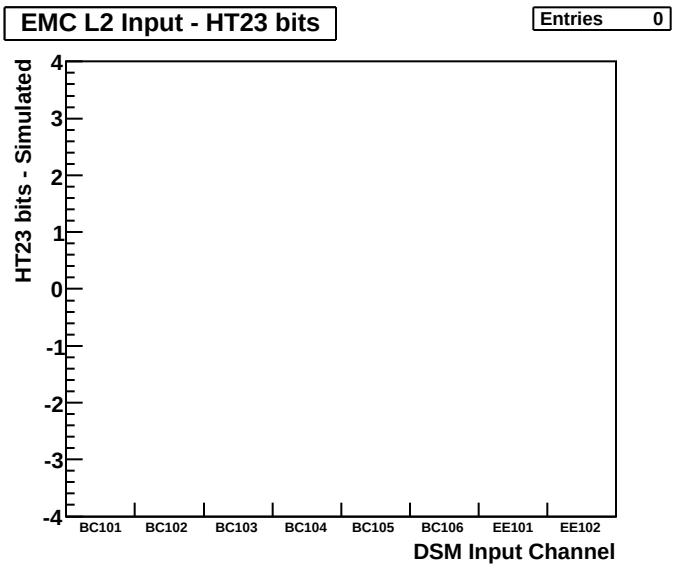

EMC L2 Input - Partial JP Sum
Entries 200000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

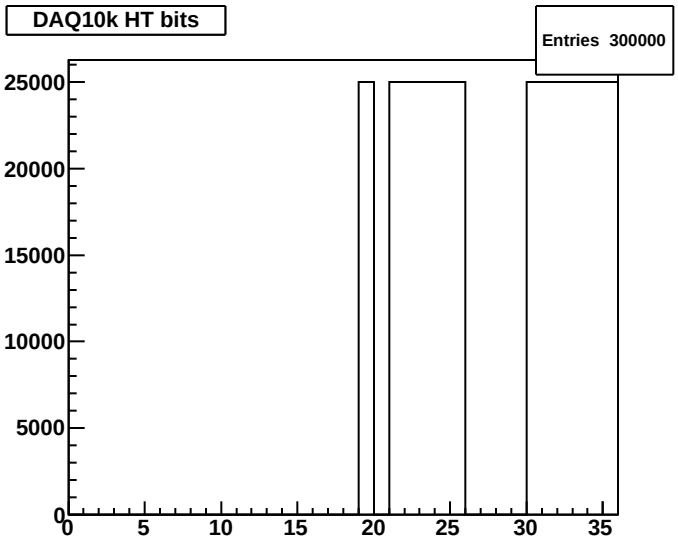

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

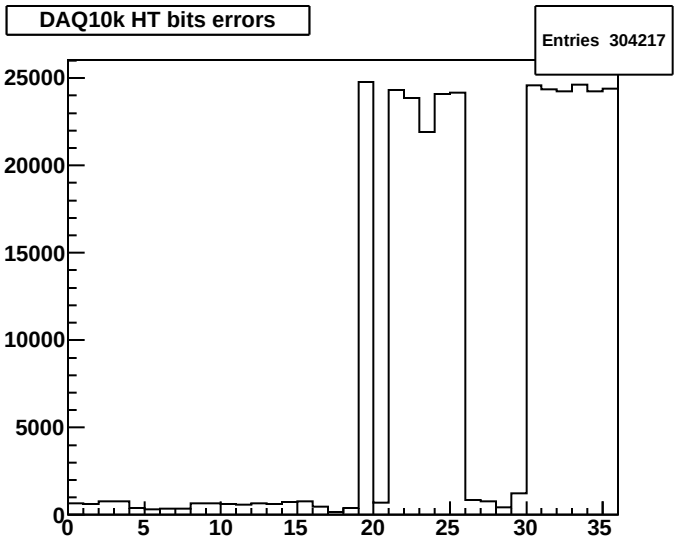

EMC L2 Input - HT01 bits/Partial JP ID
Entries 200000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

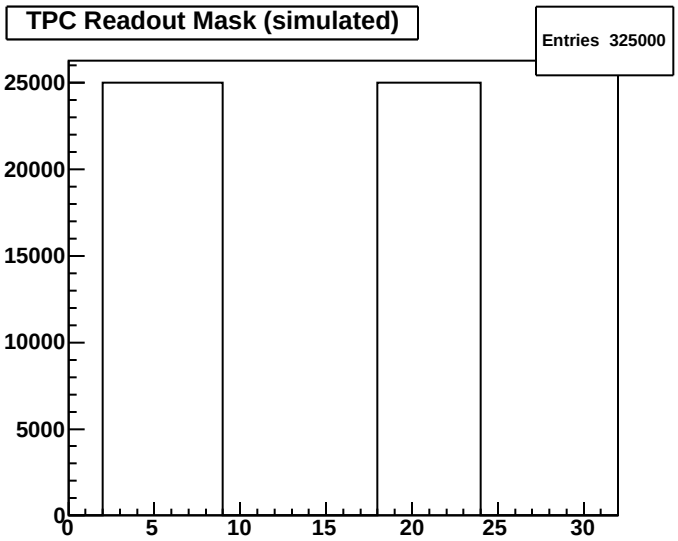

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

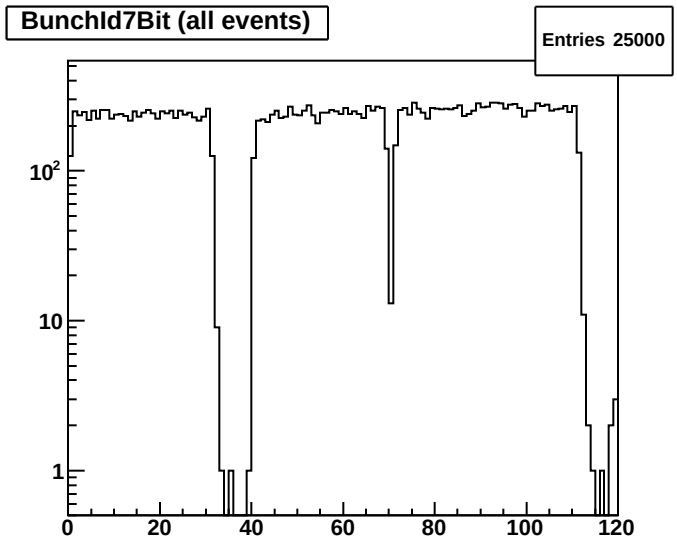

EMC L2 Input - HT23 bits
Entries 200000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

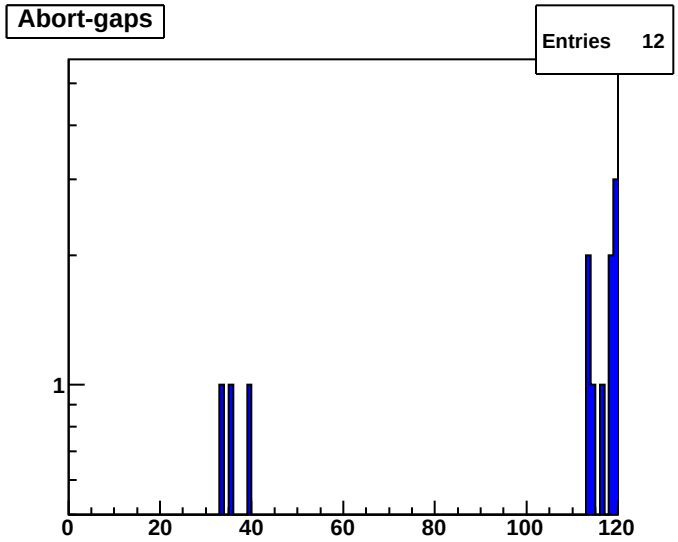

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

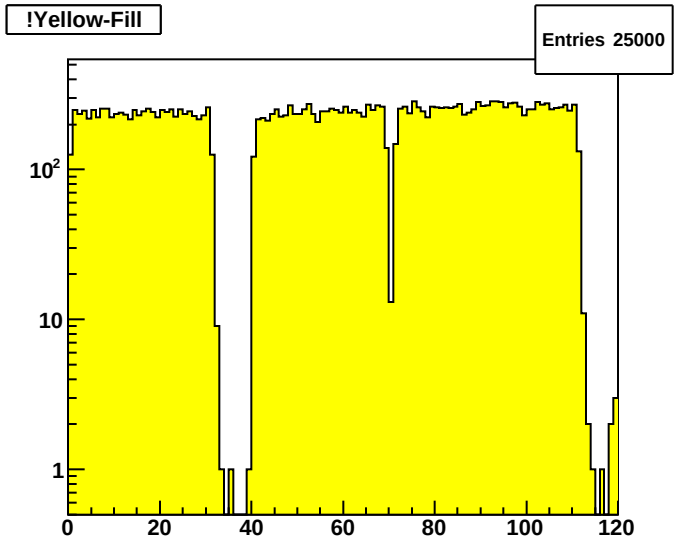

DAQ10k HT bits
Entries 300000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

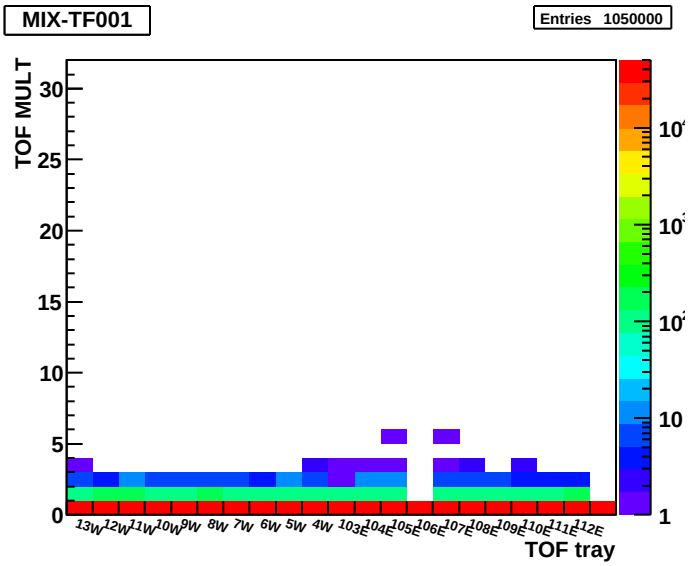

DAQ10k HT bits errors
Entries 304217
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

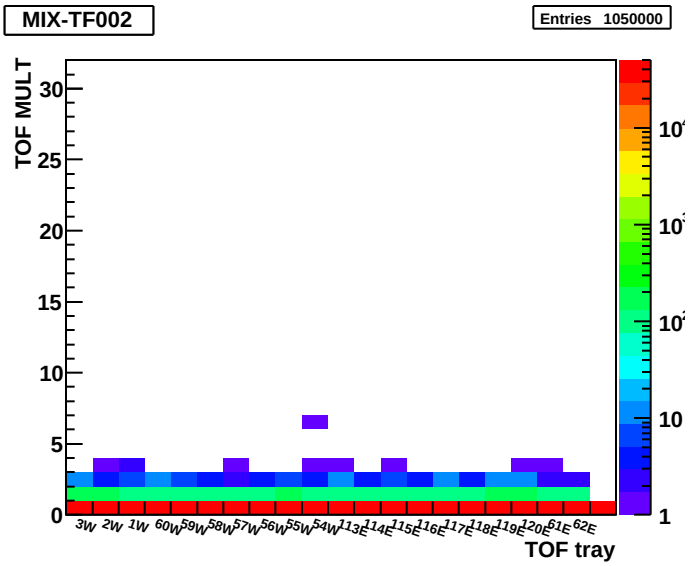

TPC Readout Mask (simulated)
Entries 325000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

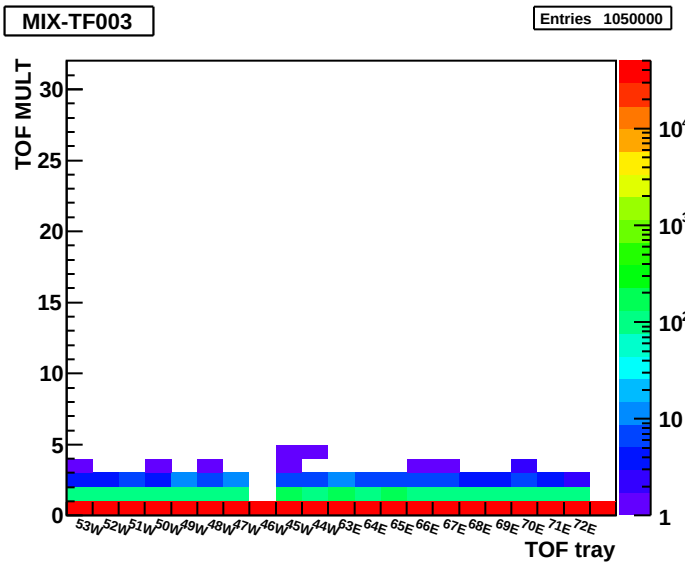

BunchId7Bit (all events)
Entries 25000
10^2
10
1
0 20 40 60 80 100 120

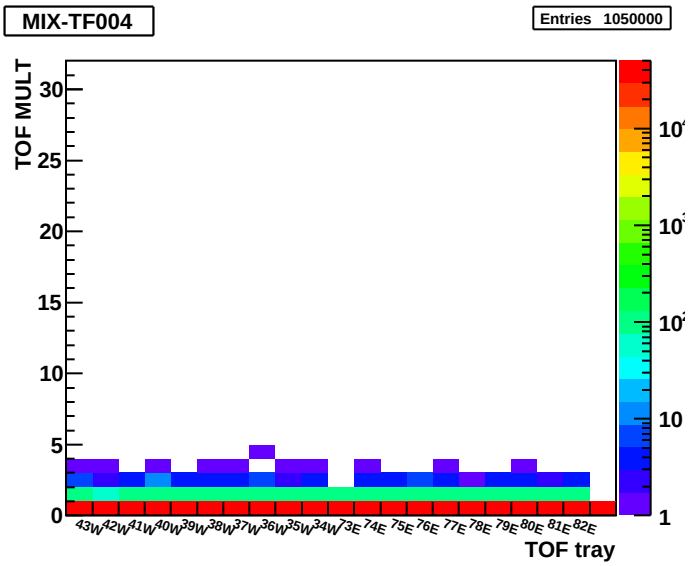

Abort-gaps
Entries 12
1
0 20 40 60 80 100 120

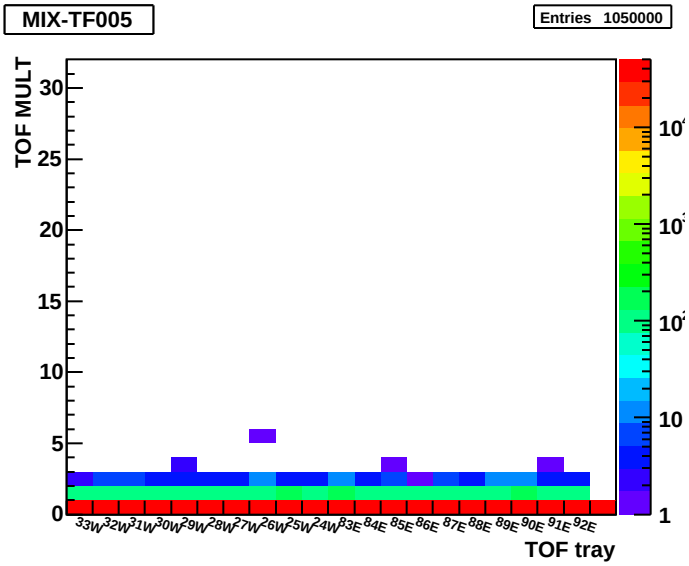

!Yellow-Fill
Entries 25000
10^2
10
1
0 20 40 60 80 100 120

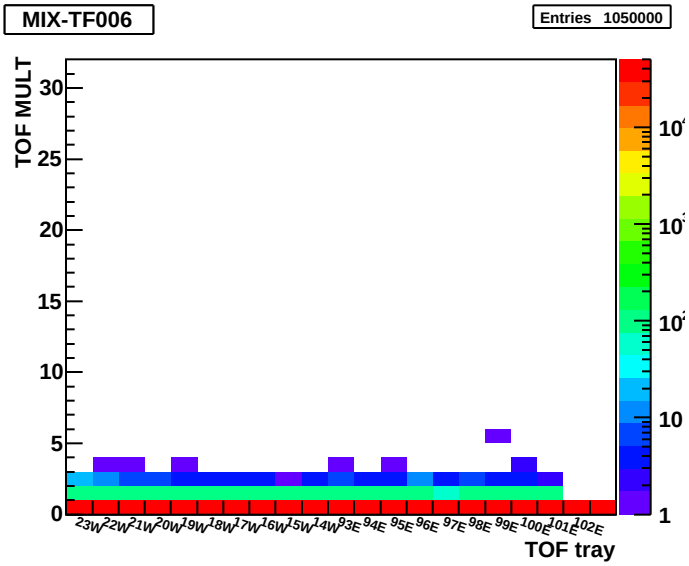

MIX-TF001
Entries 1050000
TOF MULT
TOF tray

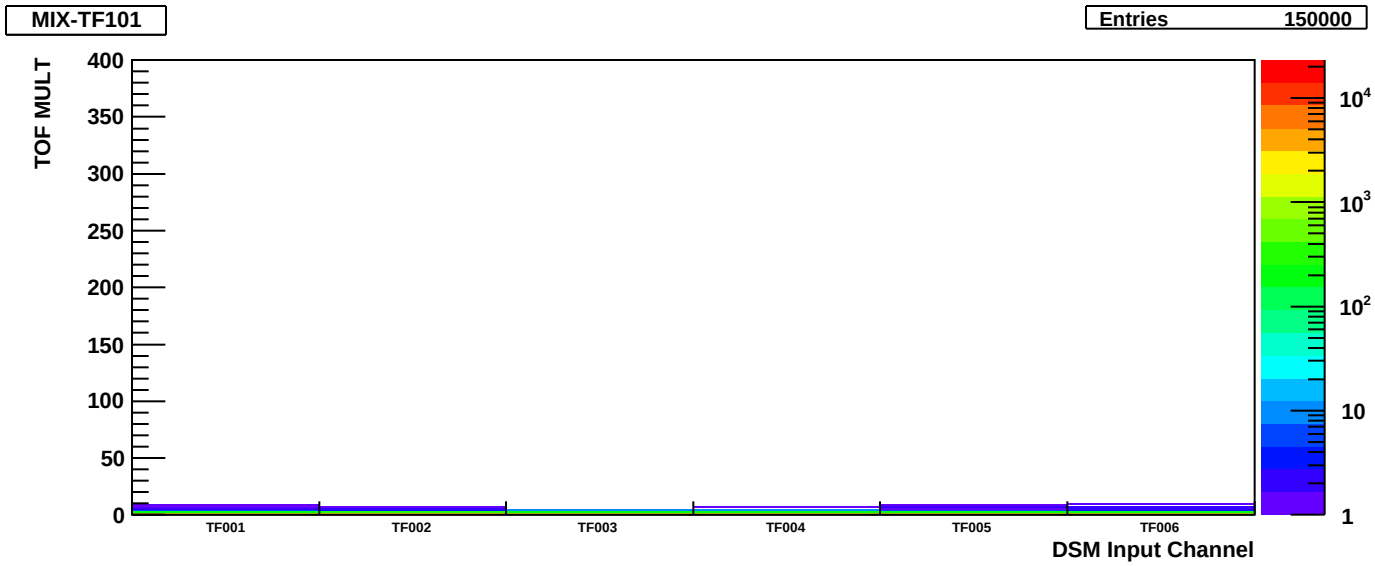

MIX-TF002
Entries 1050000
TOF MULT
TOF tray

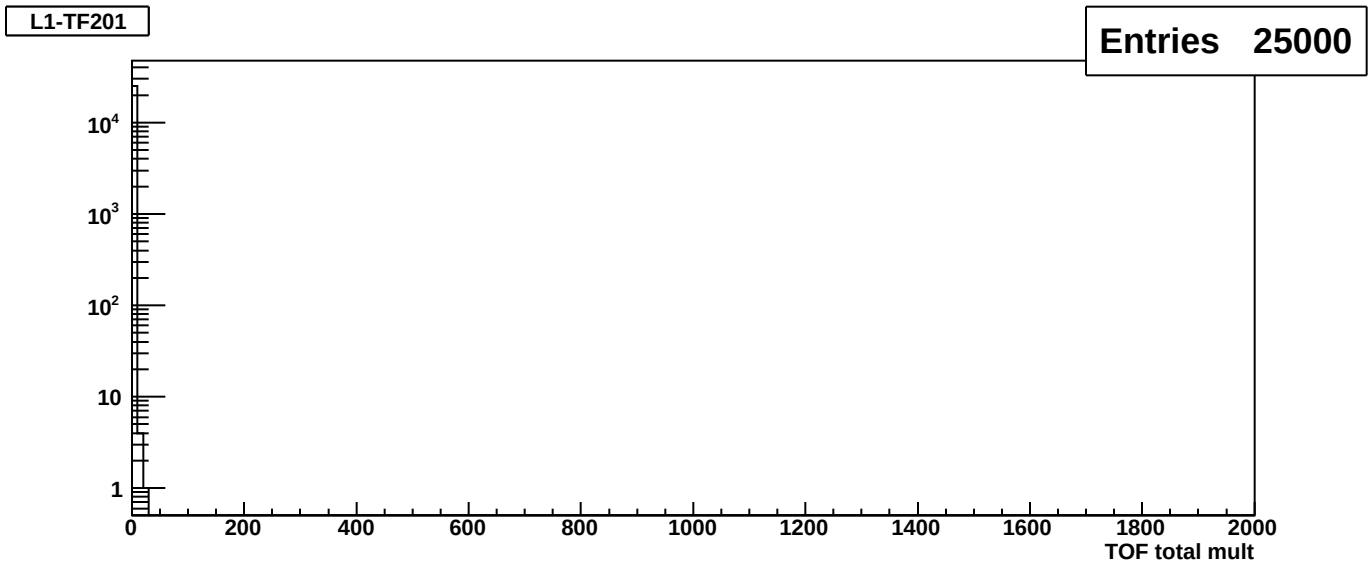

MIX-TF003
Entries 1050000
TOF MULT
TOF tray

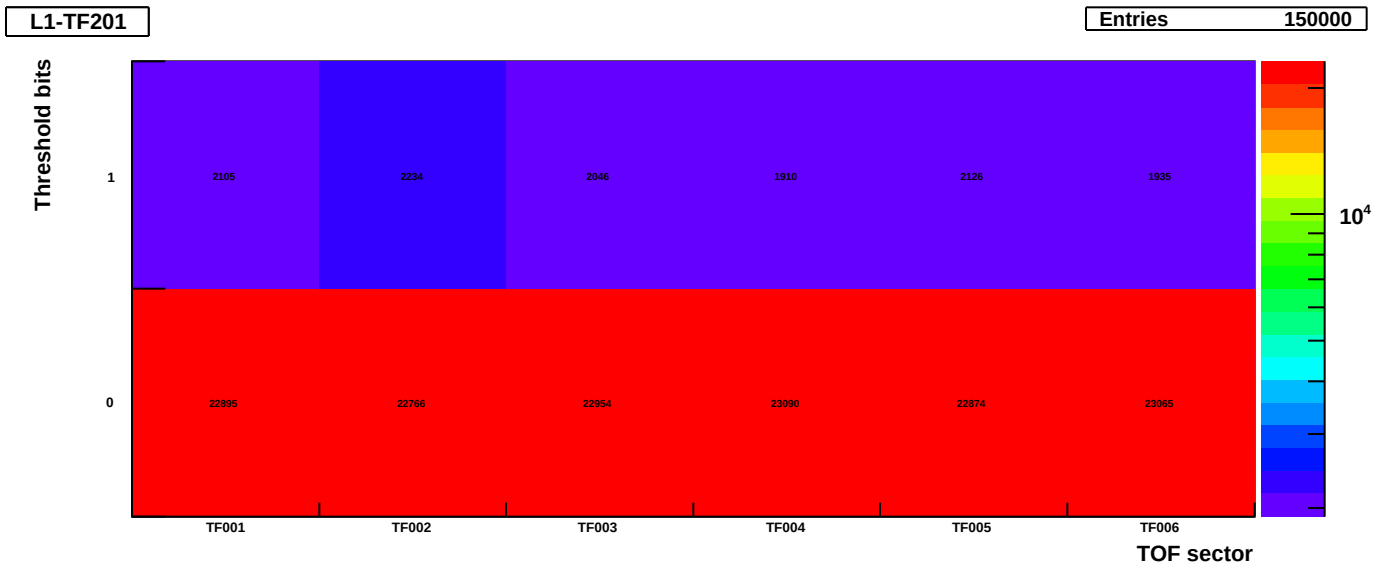

MIX-TF004
Entries 1050000
TOF MULT
TOF tray

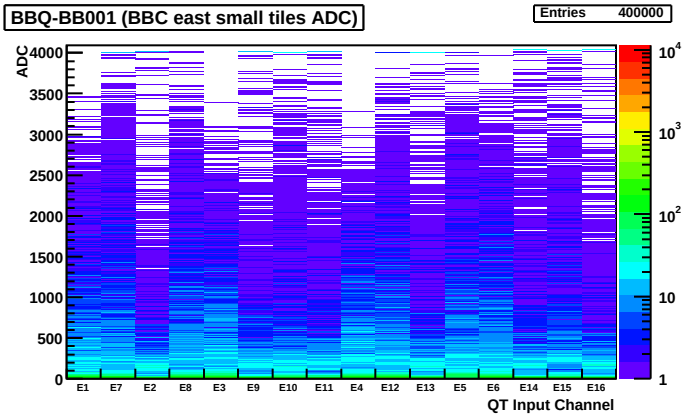

MIX-TF005
Entries 1050000
TOF MULT
TOF tray

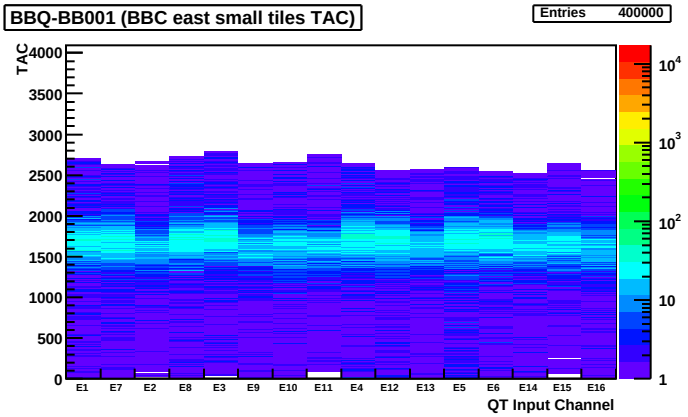

MIX-TF006
Entries 1050000
TOF MULT
TOF tray

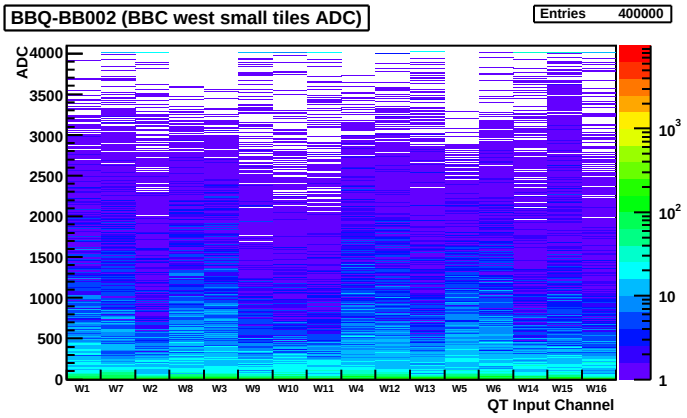

MIX-TF101
Entries 150000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

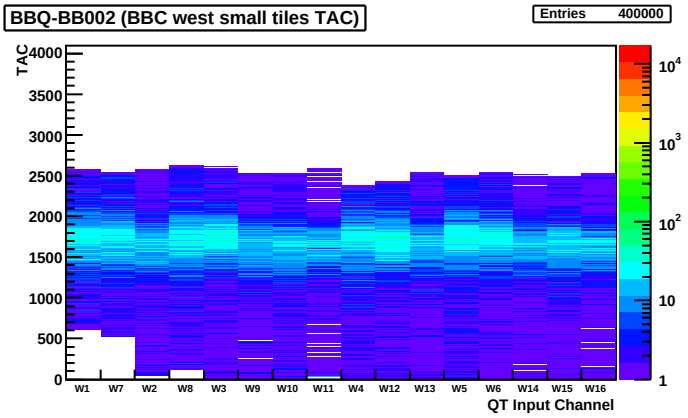

L1-TF201
Entries 25000
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

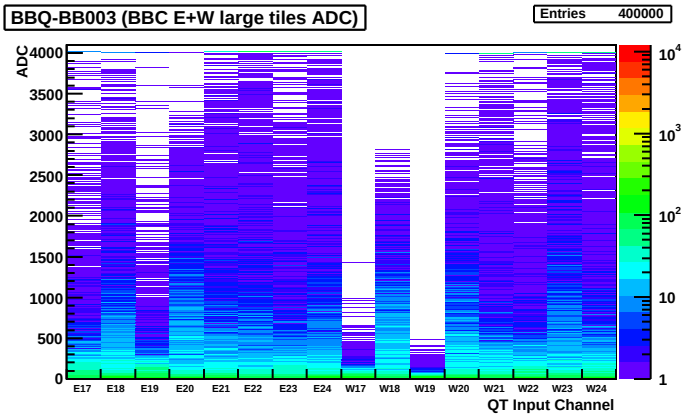

L1-TF201
Entries 150000
Threshold bits
1
0
2105
2234
2046
1910
2126
1935
22895
22766
22954
23090
22874
23065
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

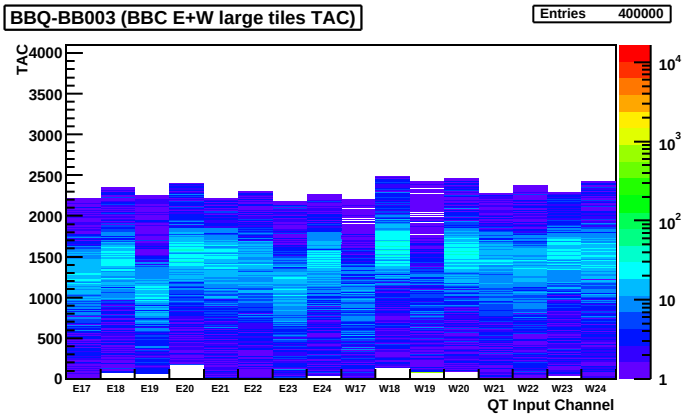

BBQ-BB001 (BBC east small tiles ADC)
Entries 400000
ADC
QT Input Channel

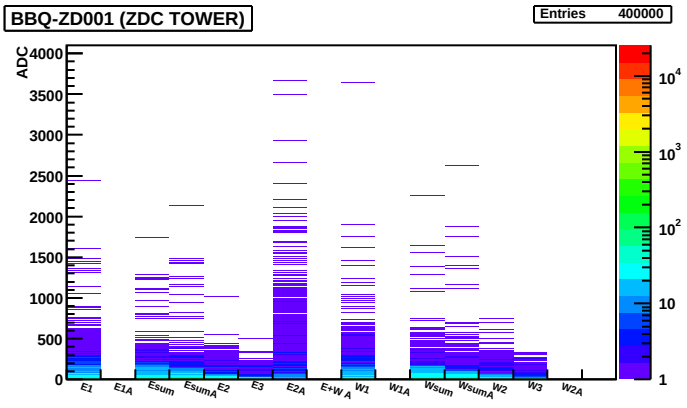

BBQ-BB001 (BBC east small tiles TAC)
Entries 400000
TAC
QT Input Channel

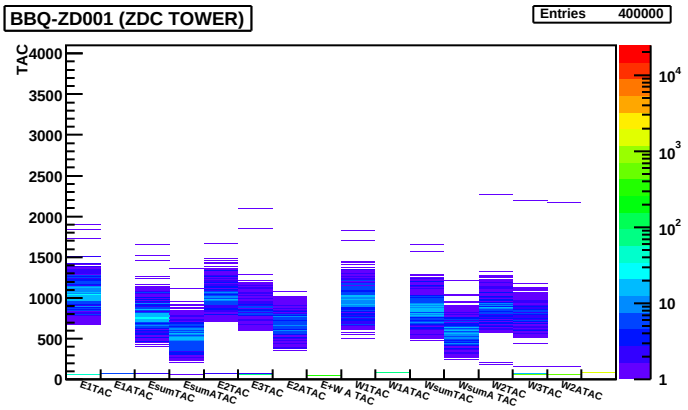

BBQ-BB002 (BBC west small tiles ADC)
Entries 400000
ADC
QT Input Channel

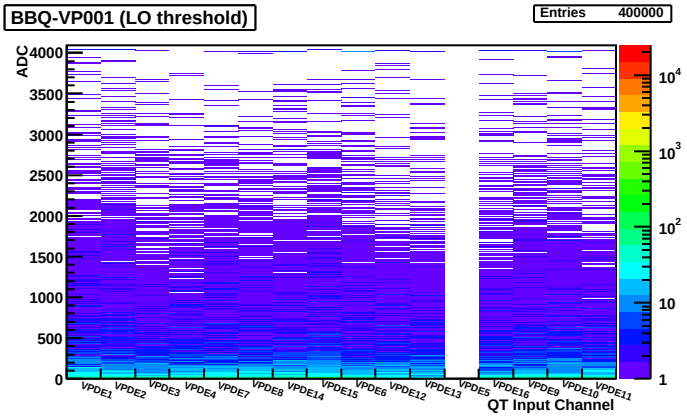

BBQ-BB002 (BBC west small tiles TAC)
Entries 400000
TAC
QT Input Channel

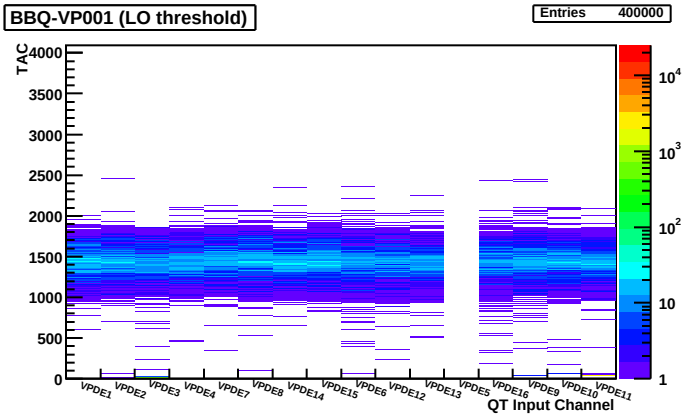

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 400000
ADC
QT Input Channel

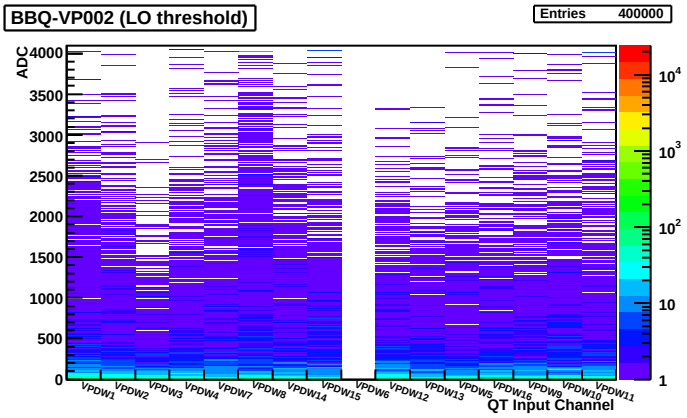

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 400000
TAC
QT Input Channel

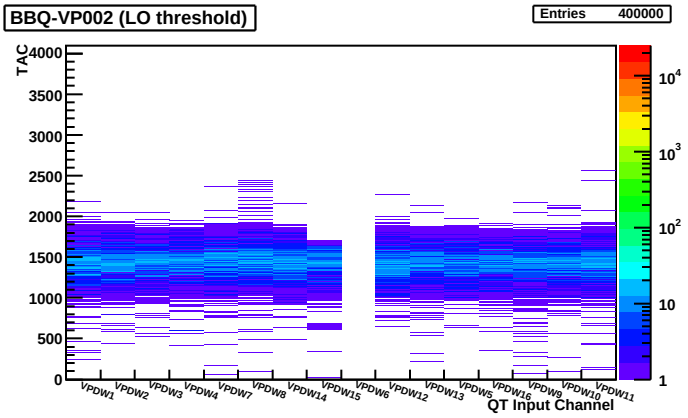

BBQ-ZD001 (ZDC TOWER)
Entries 400000
ADC

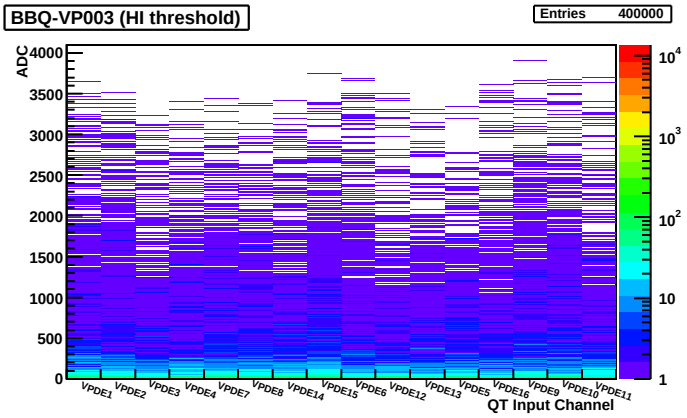

BBQ-ZD001 (ZDC TOWER)
Entries 400000
TAC

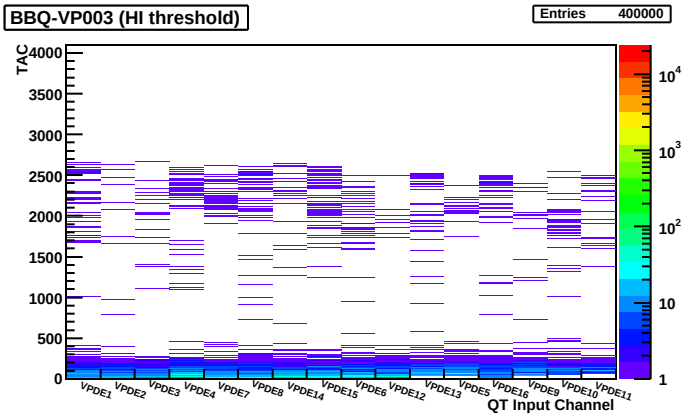

BBQ-VP001 (LO threshold)
Entries 400000
ADC
QT Input Channel

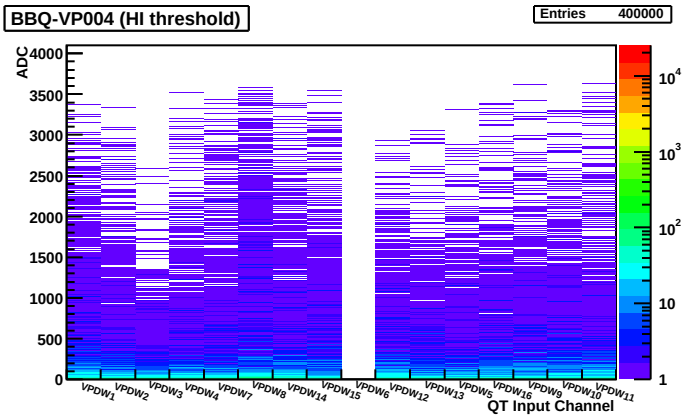

BBQ-VP001 (LO threshold)
Entries 400000
TAC
QT Input Channel

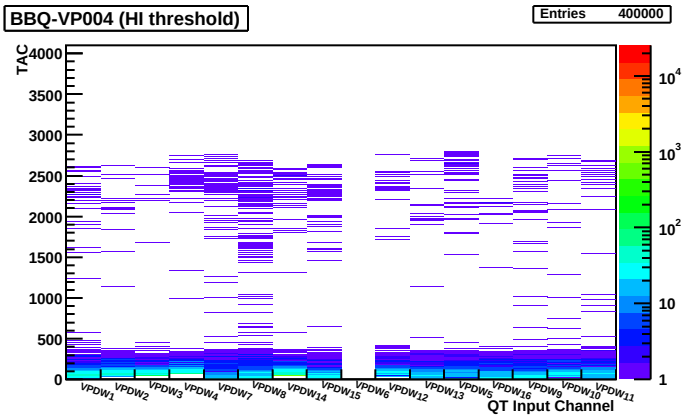

BBQ-VP002 (LO threshold)
Entries 400000
ADC
QT Input Channel

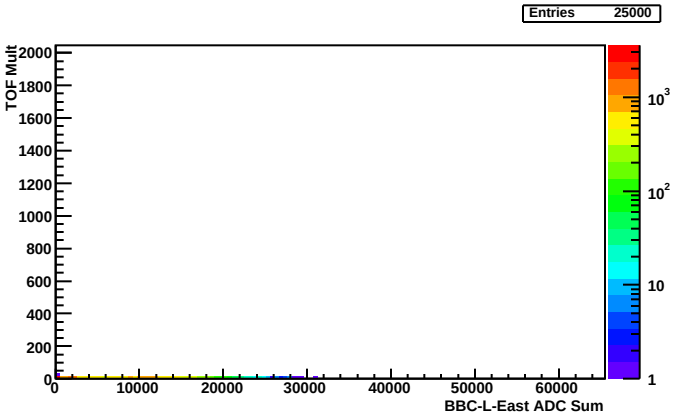

BBQ-VP002 (LO threshold)
Entries 400000
TAC
QT Input Channel

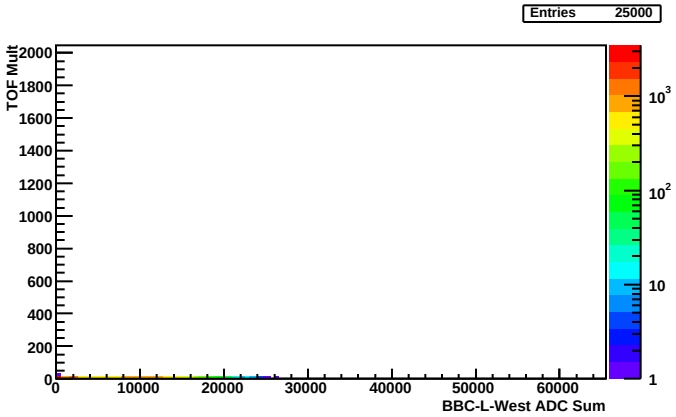

BBQ-VP003 (HI threshold)
Entries 400000
ADC
QT Input Channel

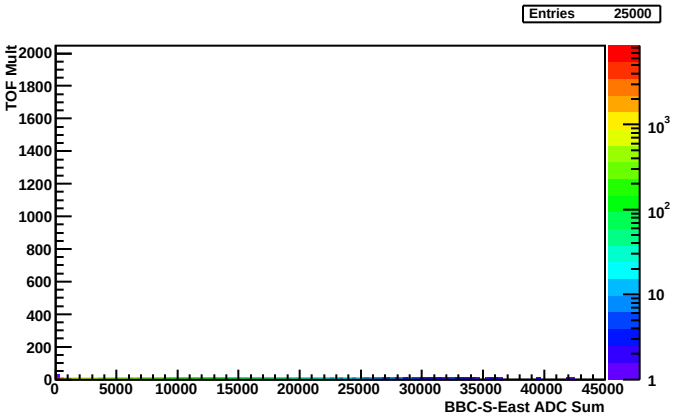

BBQ-VP003 (HI threshold)
Entries 400000
TAC
QT Input Channel

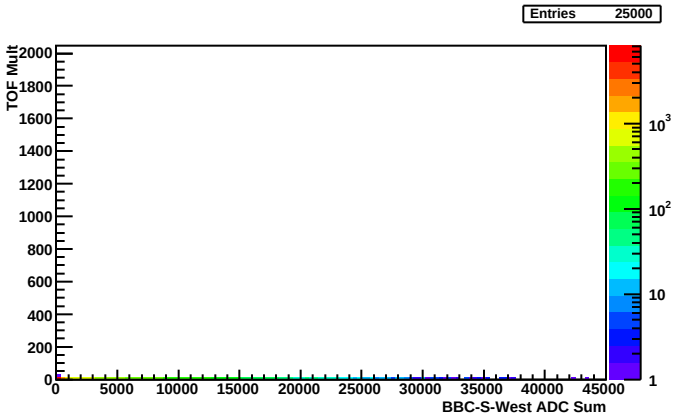

BBQ-VP004 (HI threshold)
Entries 400000
ADC
QT Input Channel

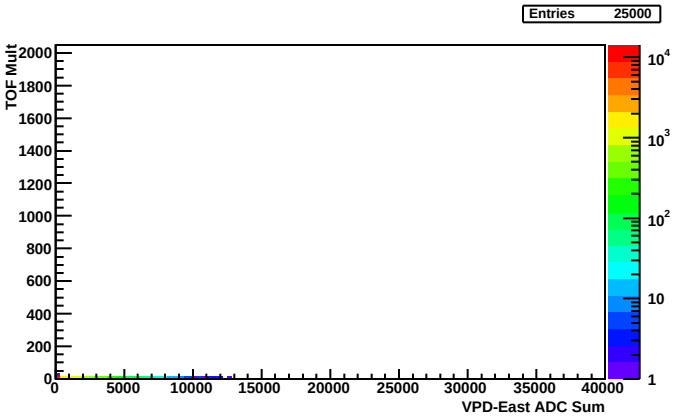

BBQ-VP004 (HI threshold)
Entries 400000
TAC
QT Input Channel

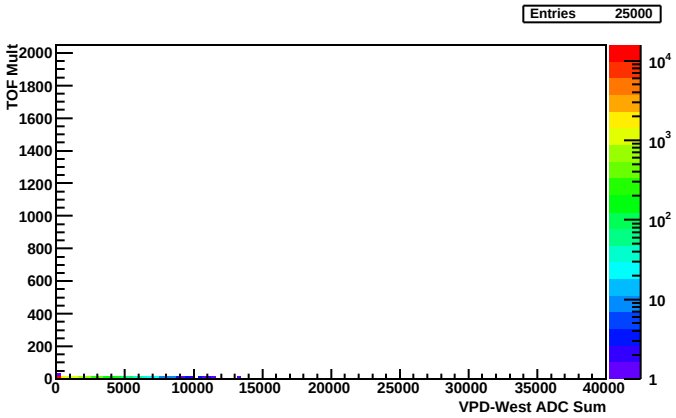

Entries 25000
TOF Mult
BBC-L-East ADC Sum

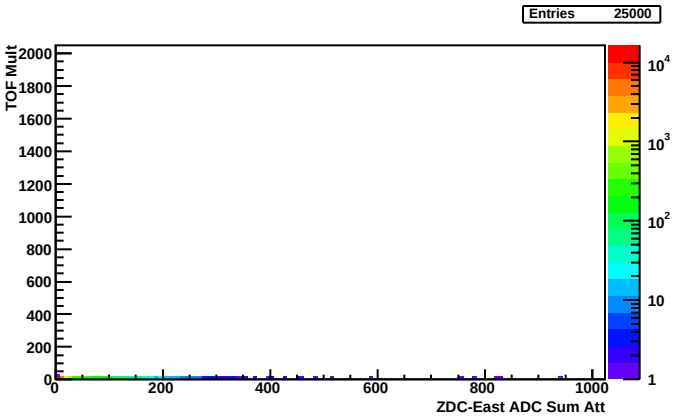

Entries 25000
TOF Mult
BBC-L-West ADC Sum

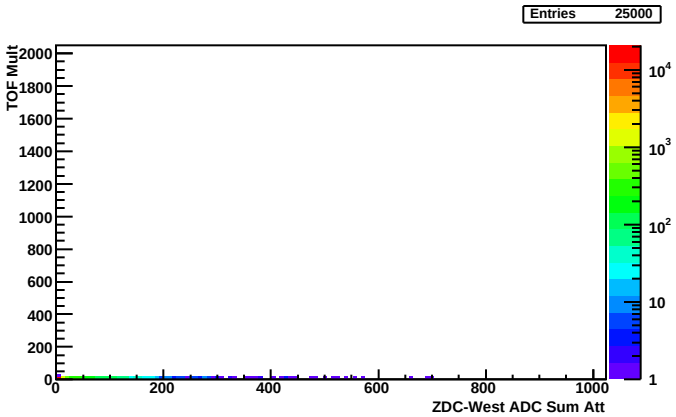

Entries 25000
TOF Mult
BBC-S-East ADC Sum

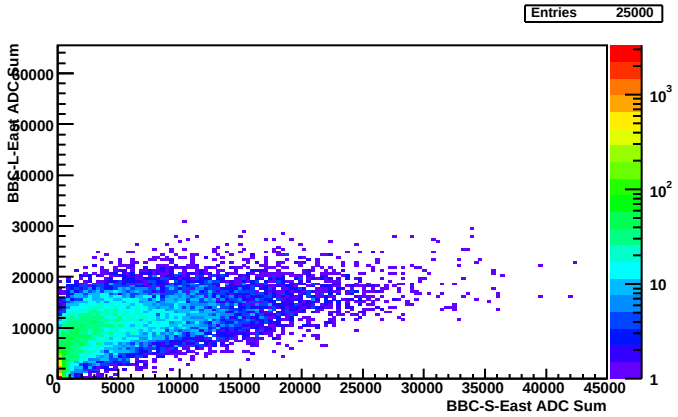

Entries 25000
TOF Mult
BBC-S-West ADC Sum

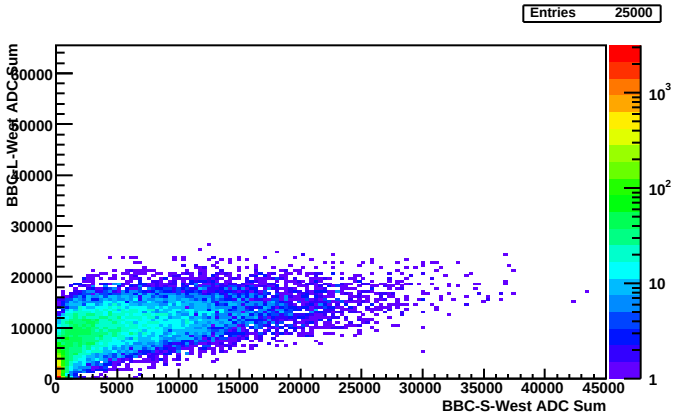

Entries 25000
TOF Mult
VPD-East ADC Sum

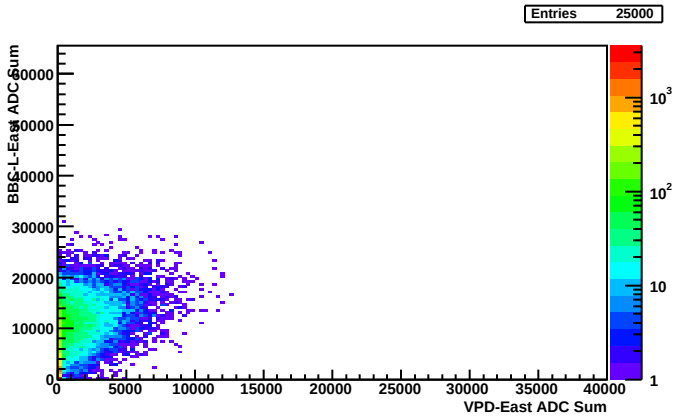

Entries 25000
TOF Mult
VPD-West ADC Sum

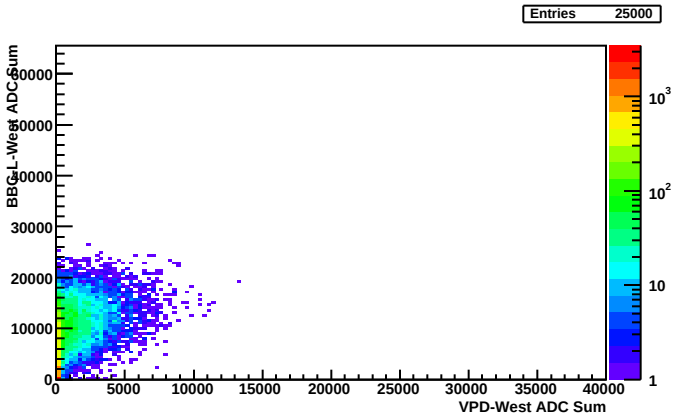

Entries 25000
TOF Mult
ZDC-East ADC Sum Att

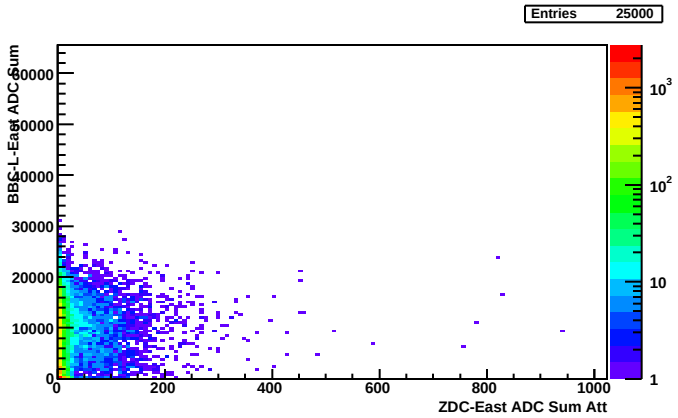

Entries 25000
TOF Mult
ZDC-West ADC Sum Att

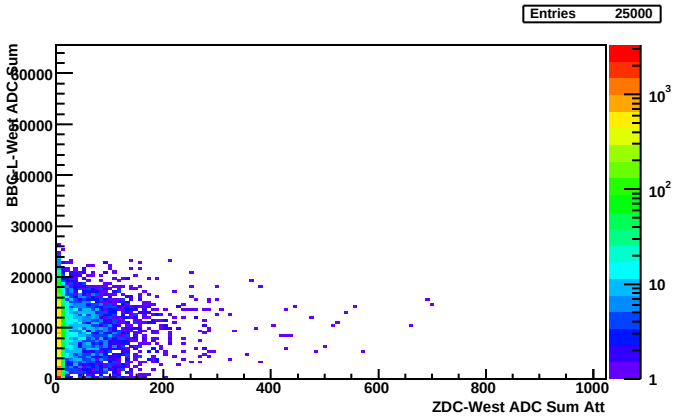

Entries 25000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

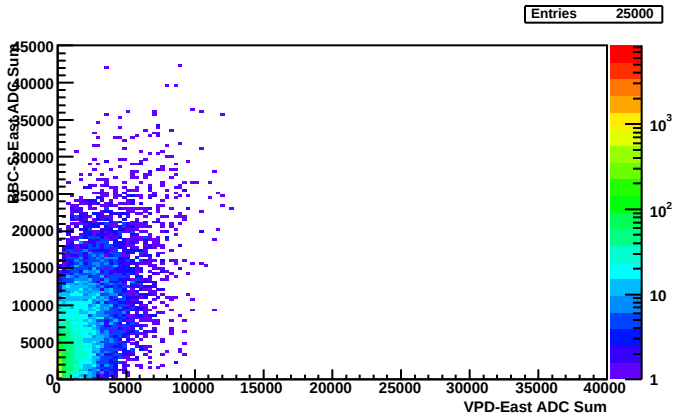

Entries 25000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

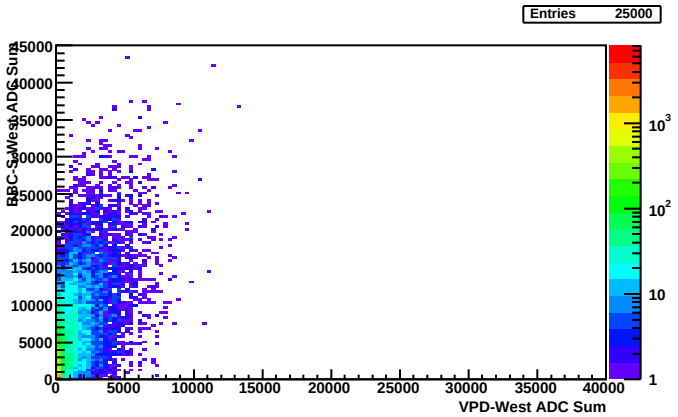

Entries 25000
BBC-L-East ADC Sum
VPD-East ADC Sum

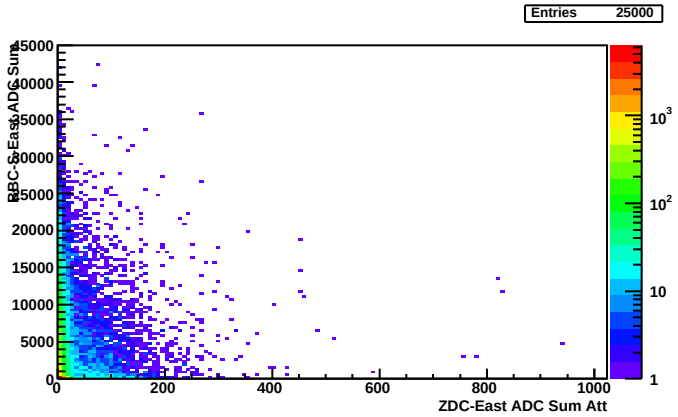

Entries 25000
BBC-L-West ADC Sum
VPD-West ADC Sum

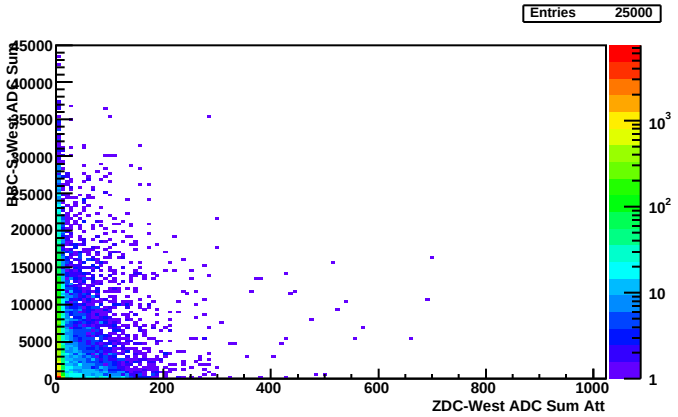

Entries 25000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

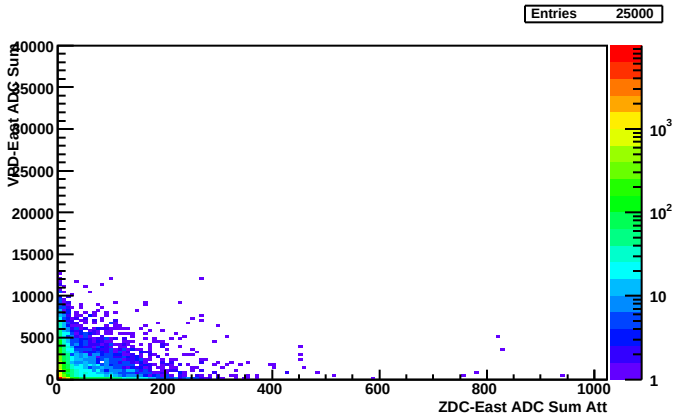

Entries 25000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

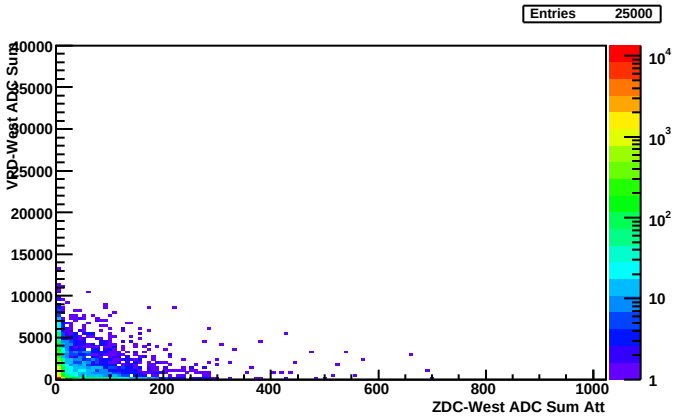

Entries 25000
BBC-S-East ADC Sum
VPD-East ADC Sum

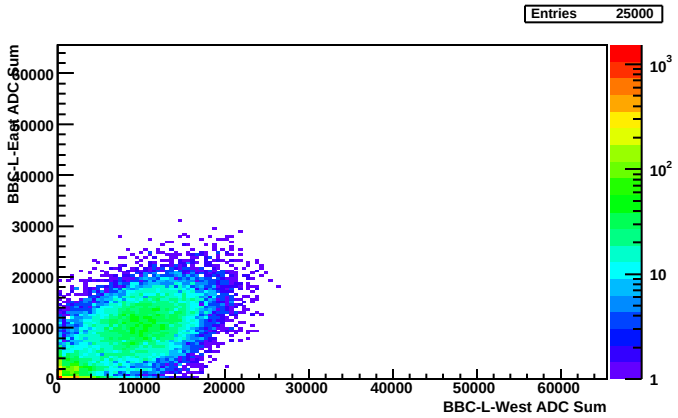

Entries 25000
BBC-S-West ADC Sum
VPD-West ADC Sum

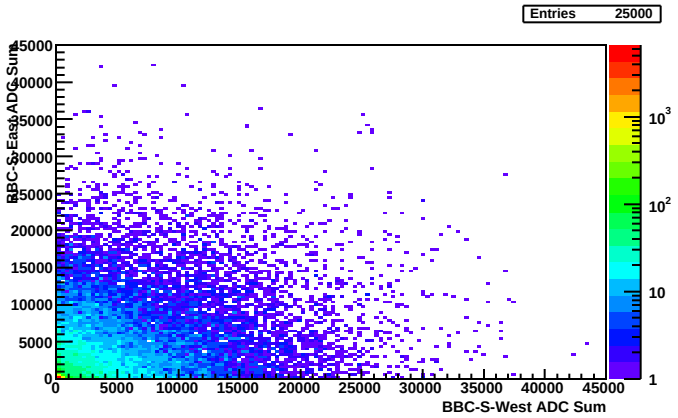

Entries 25000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

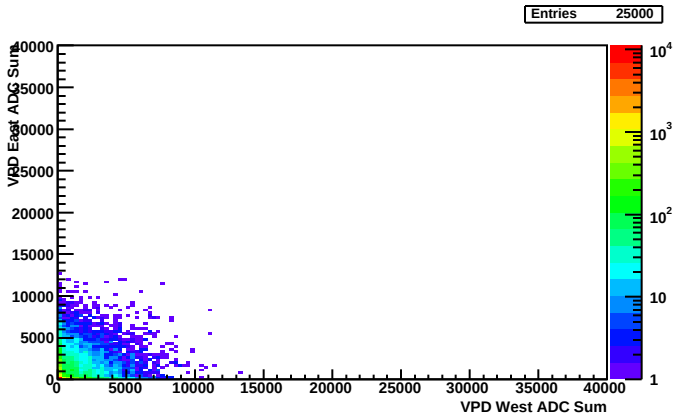

Entries 25000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

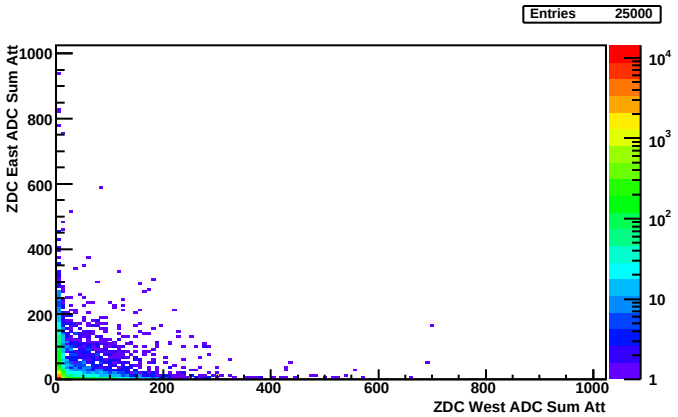

Entries 25000
VPD-East ADC Sum
ZDC-East ADC Sum Att

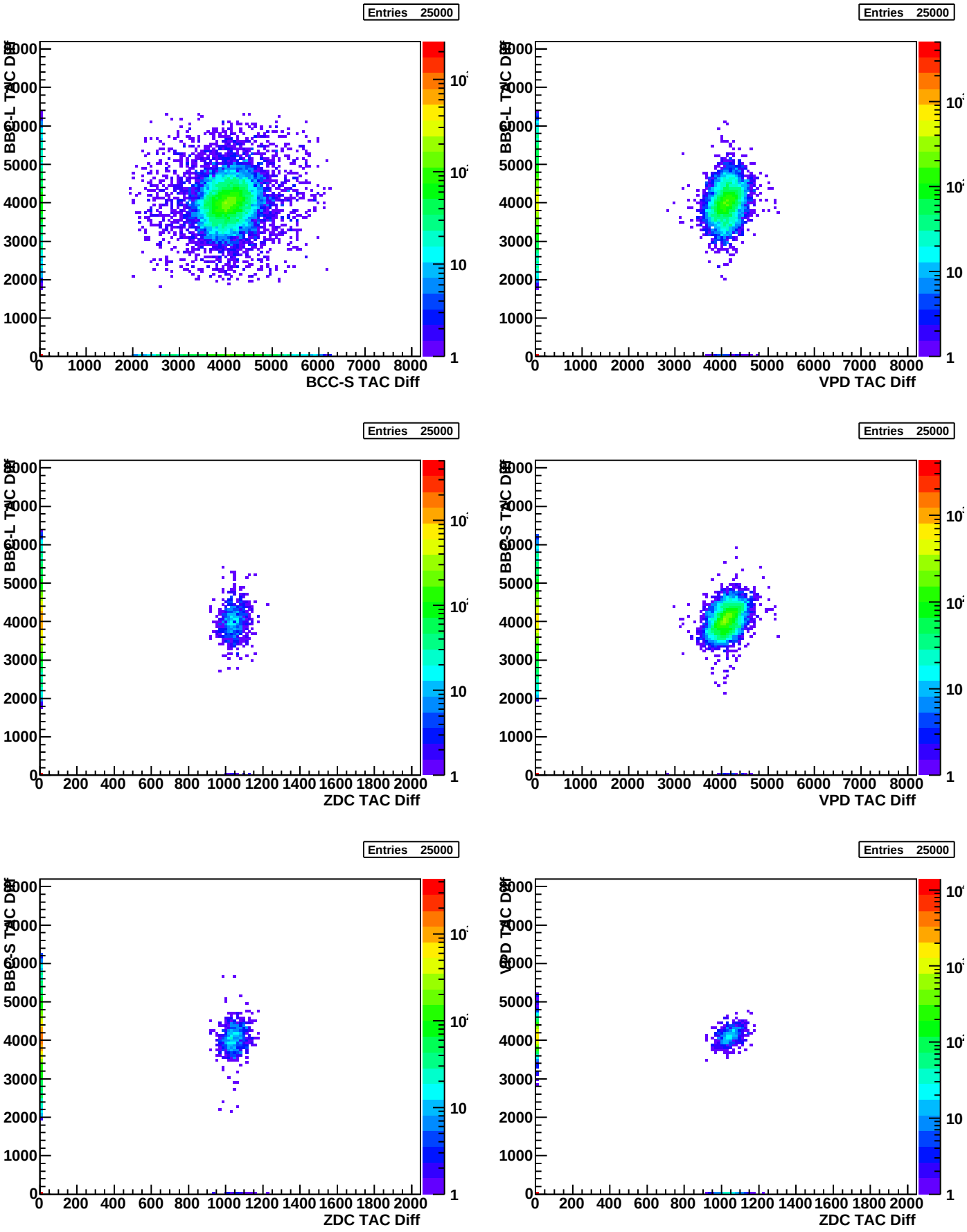

Entries 25000
VPD-West ADC Sum
ZDC-West ADC Sum Att

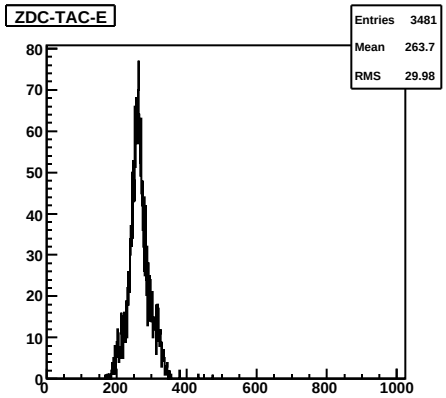

Entries 25000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

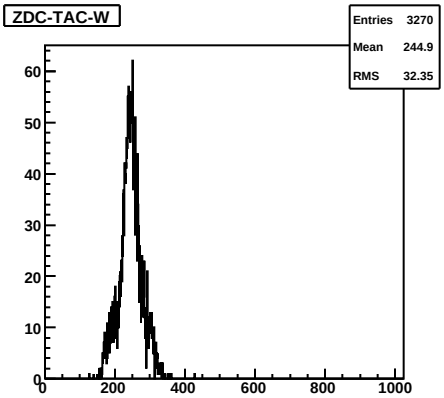

Entries 25000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

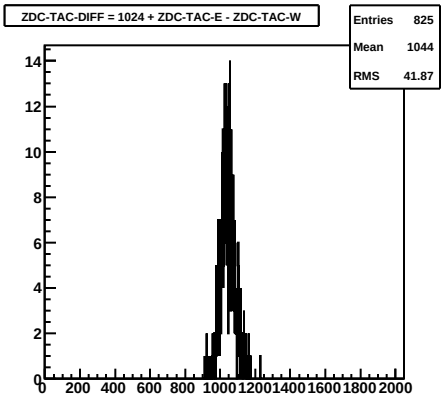

Entries 25000
VPD East ADC Sum
VPD West ADC Sum

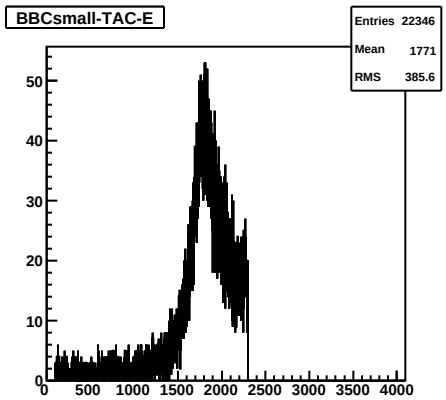

Entries 25000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

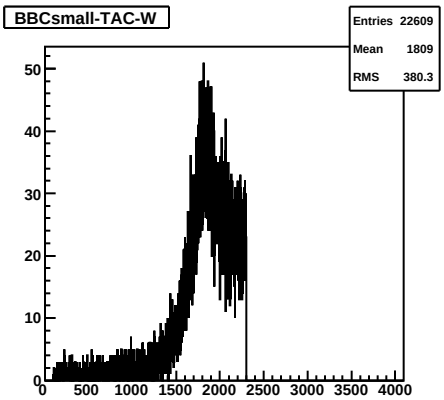

Entries 25000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 25000
BBC-L TAC Diff
VPD TAC Diff
Entries 25000
BBC-L TAC Diff
ZDC TAC Diff
Entries 25000
BBC-S TAC Diff
VPD TAC Diff
Entries 25000
BBC-S TAC Diff
ZDC TAC Diff
Entries 25000
VPD TAC Diff
ZDC TAC Diff

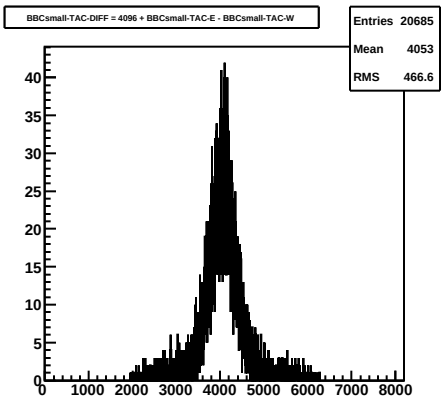

ZDC-TAC-E
Entries 3481
Mean 263.7
RMS 29.98

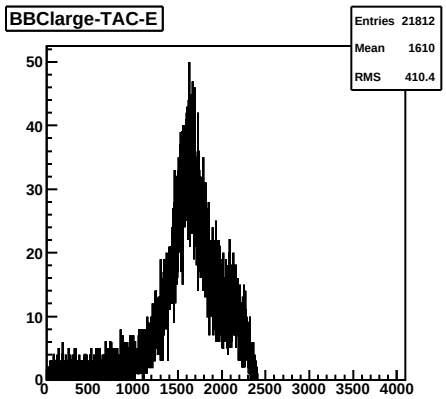

ZDC-TAC-W
Entries 3270
Mean 244.9
RMS 32.35

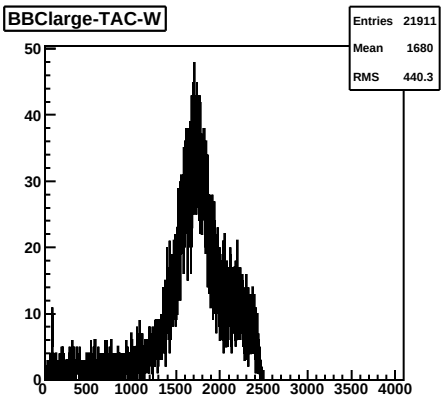

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 825
Mean 1044
RMS 41.87

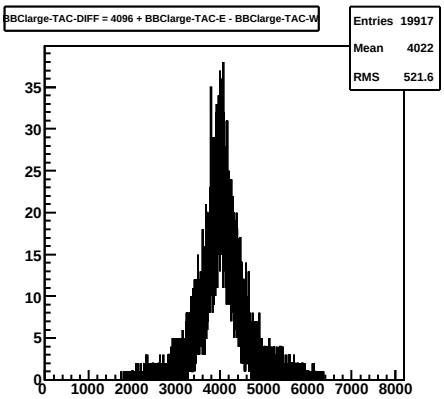

BBCsmall-TAC-E
Entries 22346
Mean 1771
RMS 385.6

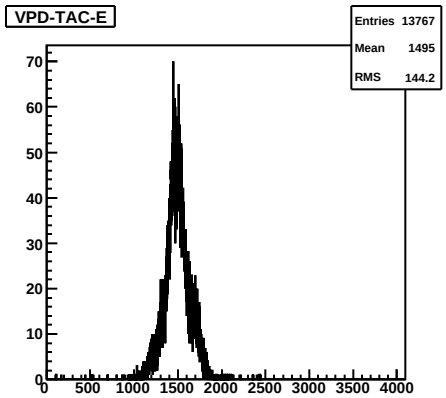

BBCsmall-TAC-W
Entries 22609
Mean 1809
RMS 380.3

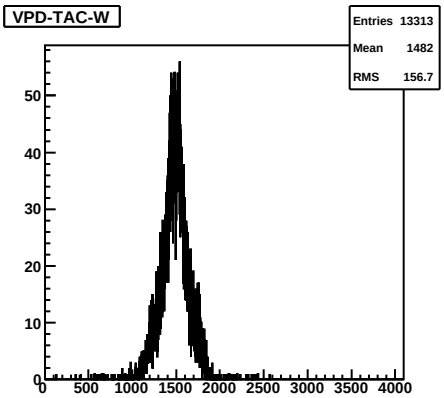

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 20685
Mean 4053
RMS 466.6

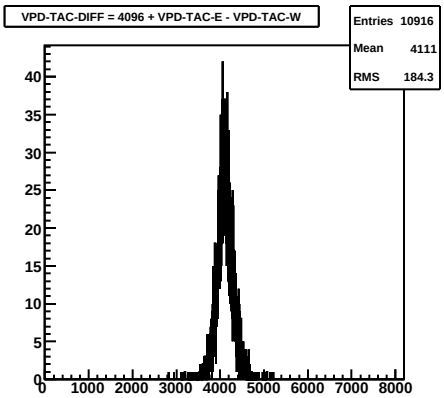

BBClarge-TAC-E
Entries 21812
Mean 1610
RMS 410.4

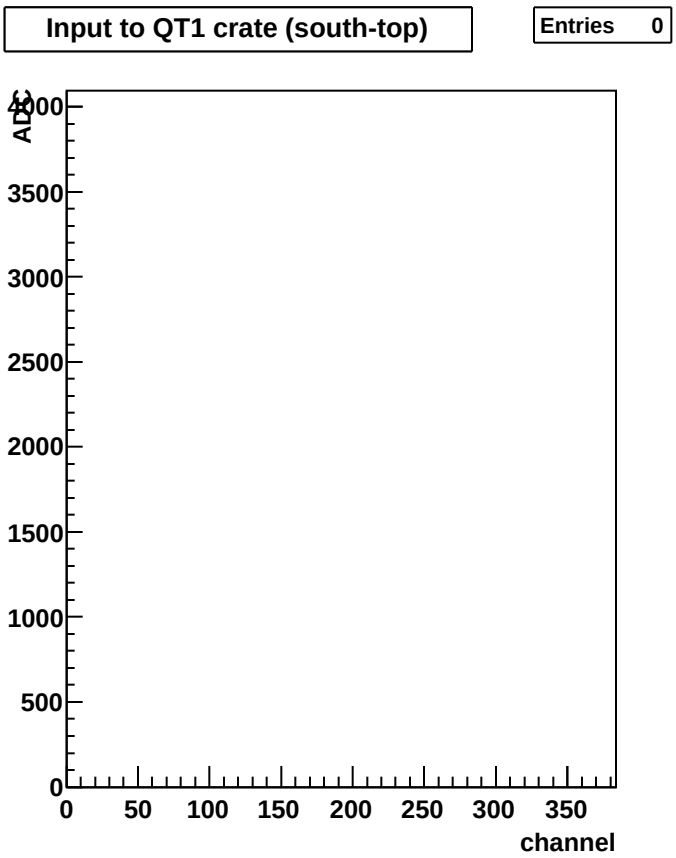

BBClarge-TAC-W
Entries 21911
Mean 1680
RMS 440.3

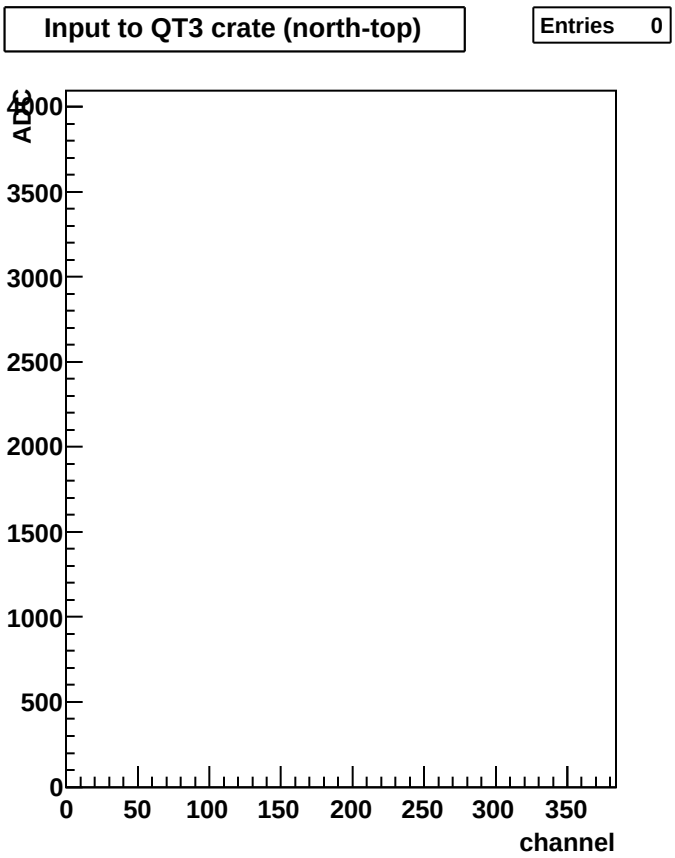

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 19917
Mean 4022
RMS 521.6

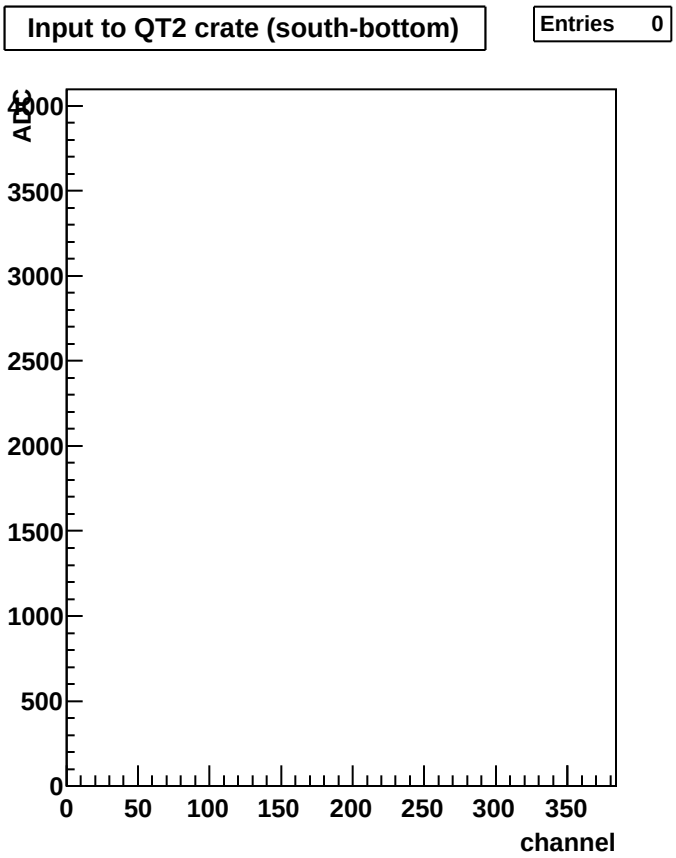

VPD-TAC-E
Entries 13767
Mean 1495
RMS 144.2

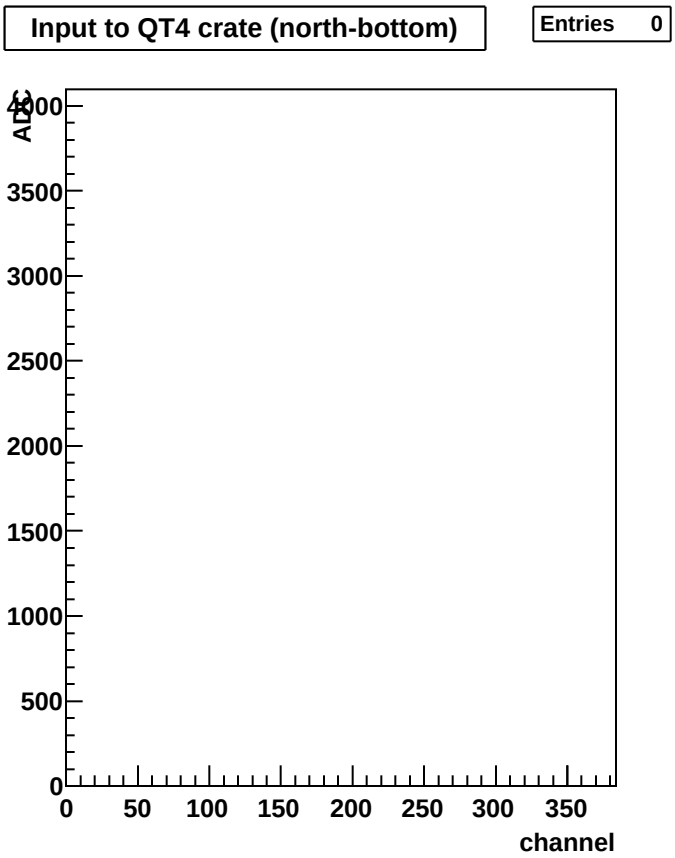

VPD-TAC-W
Entries 13313
Mean 1482
RMS 156.7

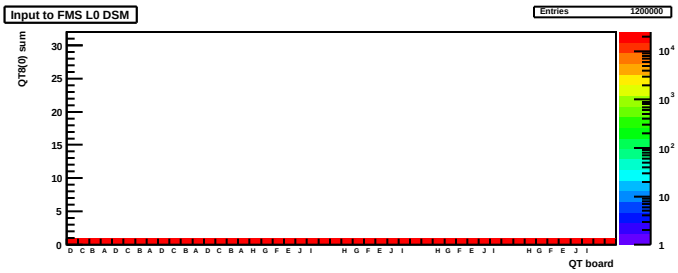

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 10916
Mean 4111
RMS 184.3

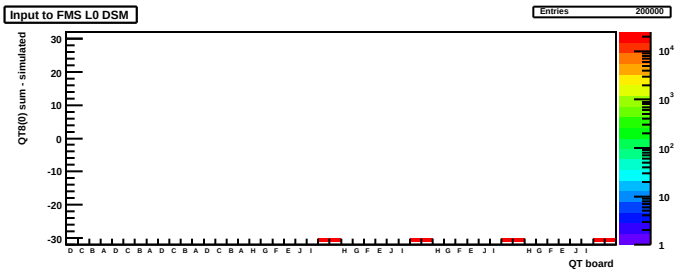

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

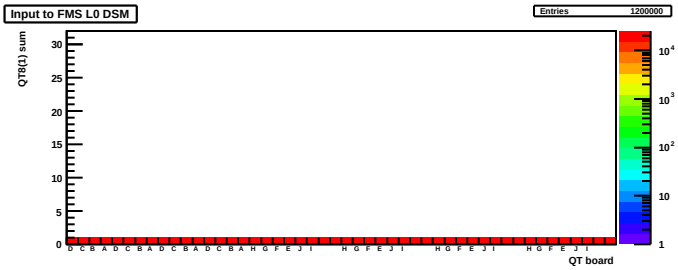

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

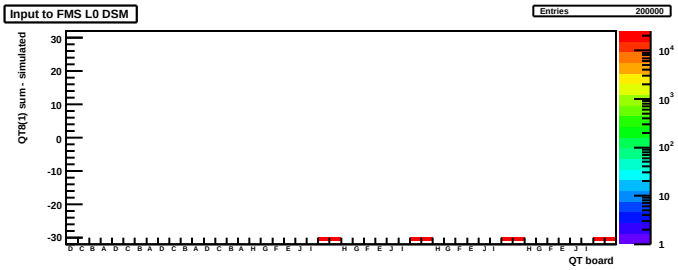

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

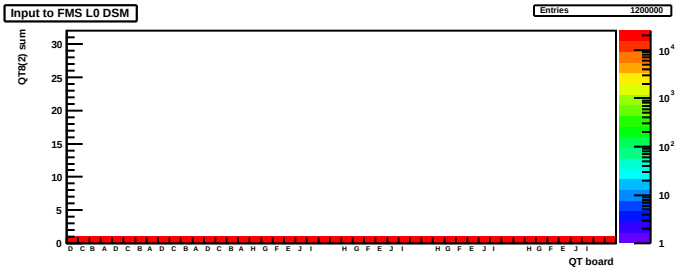

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

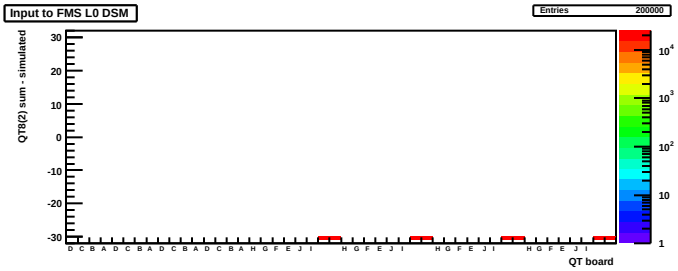

Input to FMS L0 DSM
Entries 1200000
QT8(0) sum
QT board

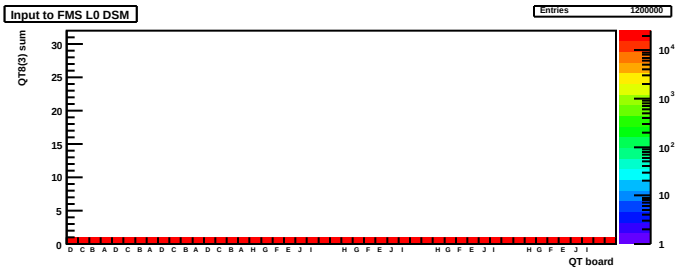

Input to FMS L0 DSM
Entries 200000
QT8(0) sum - simulated
QT board

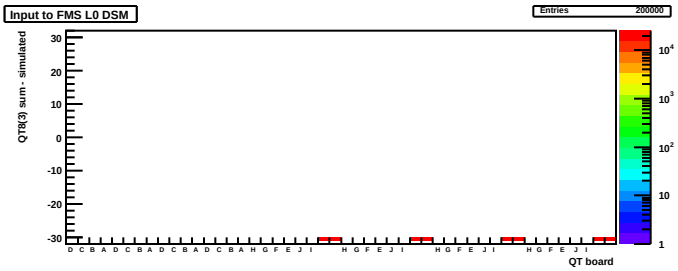

Input to FMS L0 DSM
Entries 1200000
QT8(1) sum
QT board

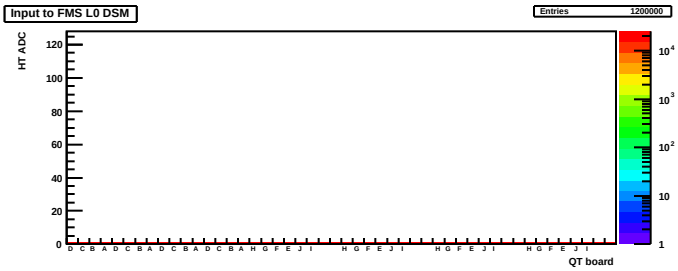

Input to FMS L0 DSM
Entries 200000
QT8(1) sum - simulated
QT board

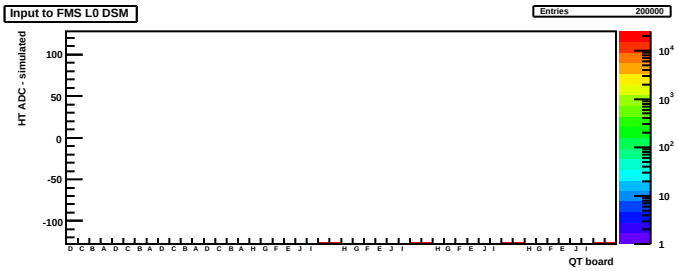

Input to FMS L0 DSM
Entries 1200000
QT8(2) sum
QT board

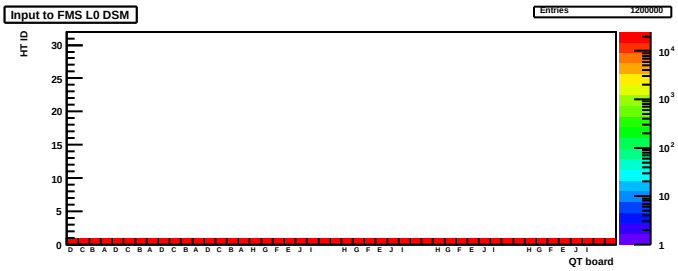

Input to FMS L0 DSM
Entries 200000
QT8(2) sum - simulated
QT board

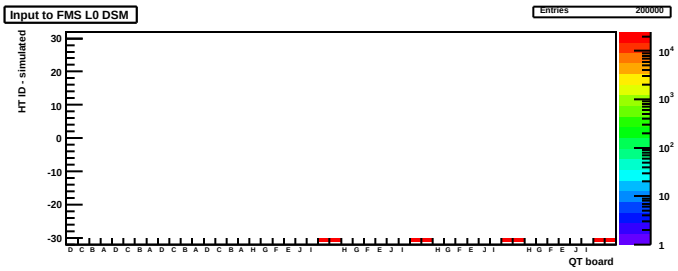

Input to FMS L0 DSM
Entries 1200000
QT8(3) sum
QT board

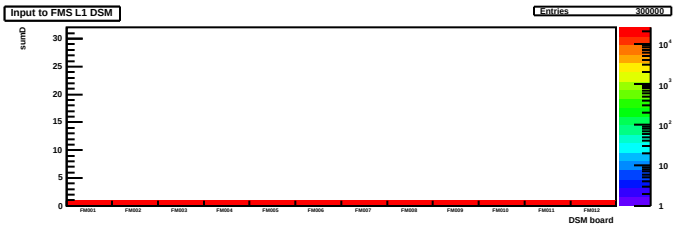

Input to FMS L0 DSM
Entries 200000
QT8(3) sum - simulated
QT board

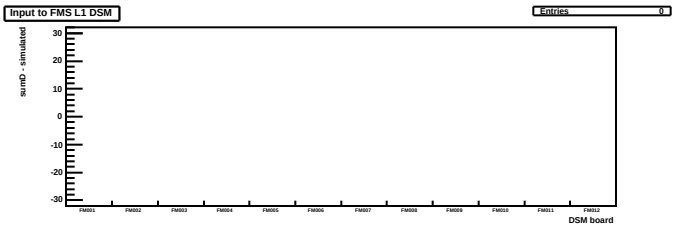

Input to FMS L0 DSM
Entries 1200000
HT ADC
QT board

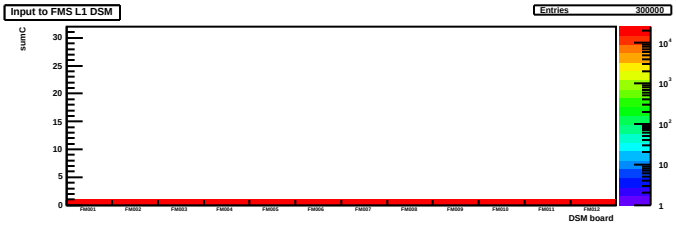

Input to FMS L0 DSM
Entries 200000
HT ADC - simulated
QT board

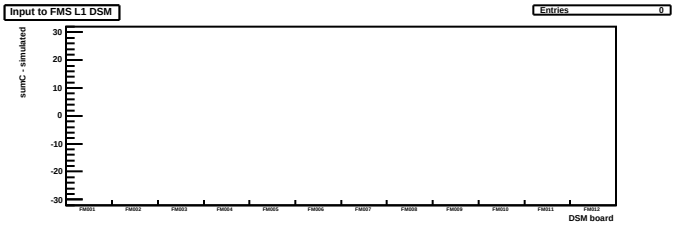

Input to FMS L0 DSM
Entries 1200000
HT ID
QT board

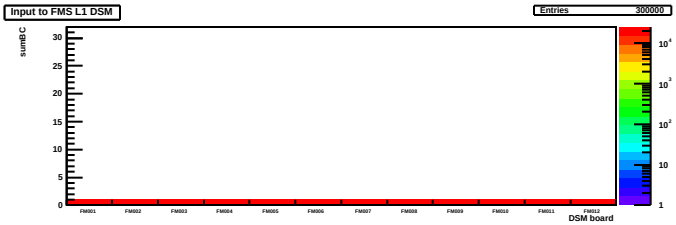

Input to FMS L0 DSM
Entries 200000
HT ID - simulated
QT board

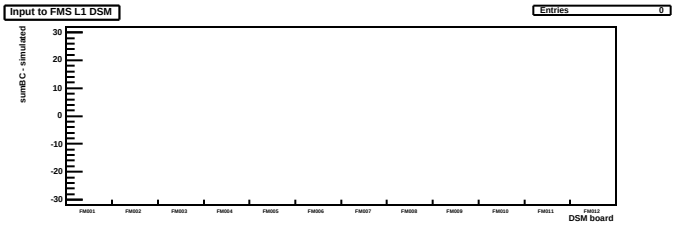

Input to FMS L1 DSM
Entries 300000
sumD
DSM board

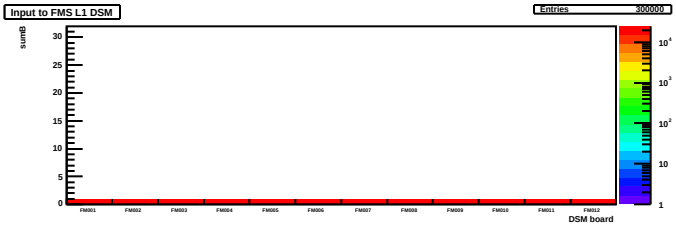

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

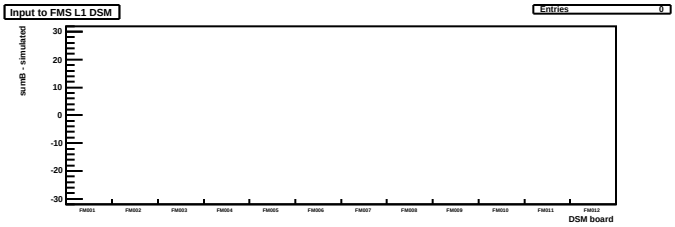

Input to FMS L1 DSM
Entries 300000
sumC
DSM board

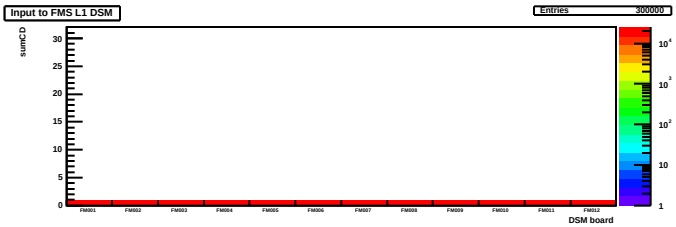

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

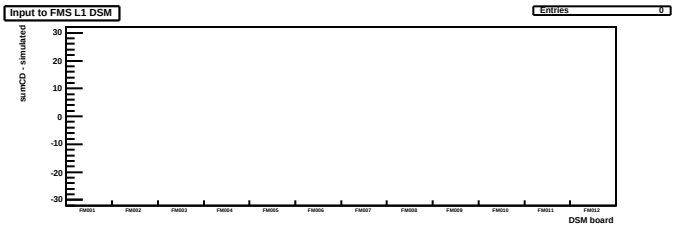

Input to FMS L1 DSM
Entries 300000
sumBC
DSM board

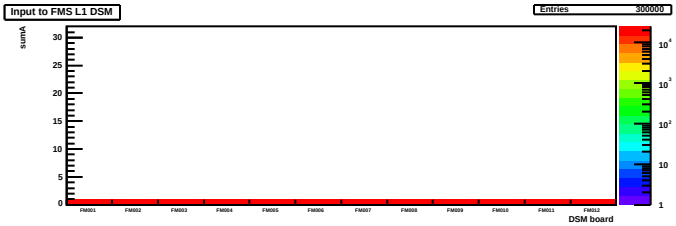

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

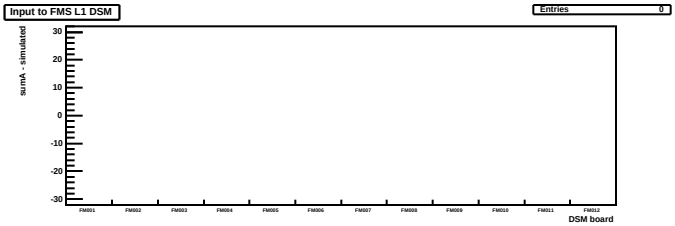

Input to FMS L1 DSM
Entries 300000
sumB
DSM board

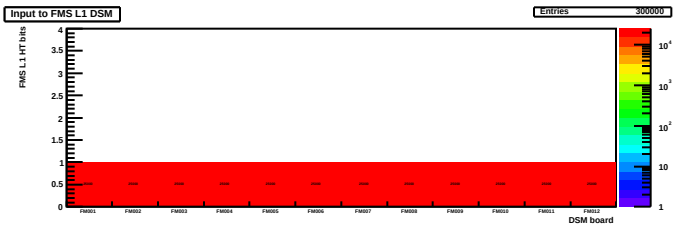

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

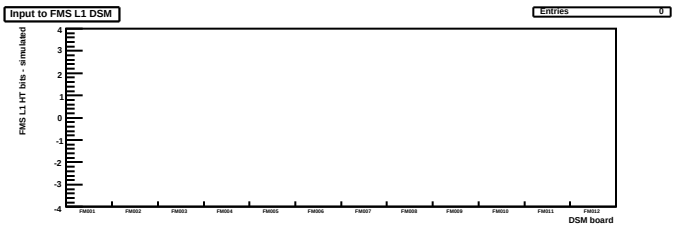

Input to FMS L1 DSM
Entries 300000
sumCD
DSM board

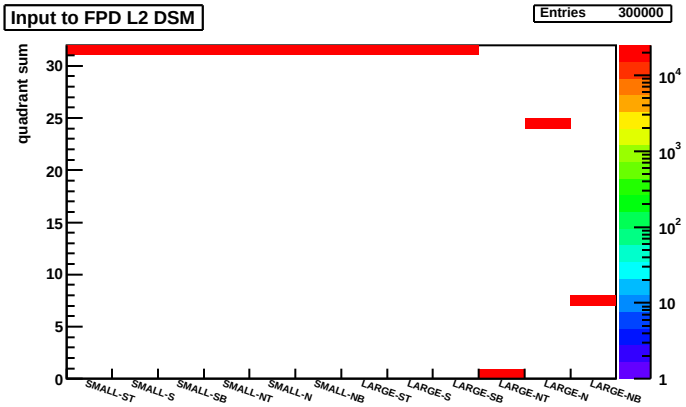

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

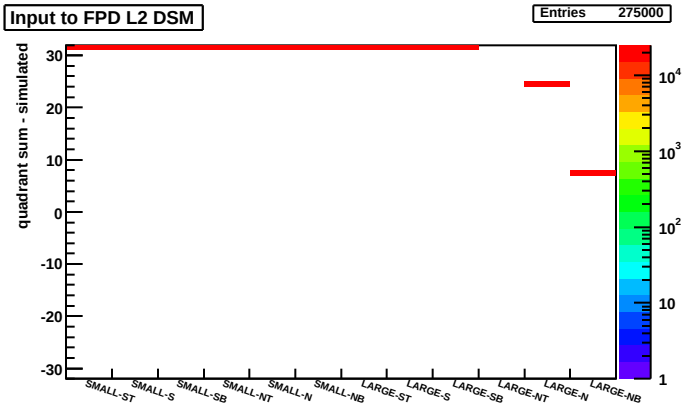

Input to FMS L1 DSM
Entries 300000
sumA
DSM board

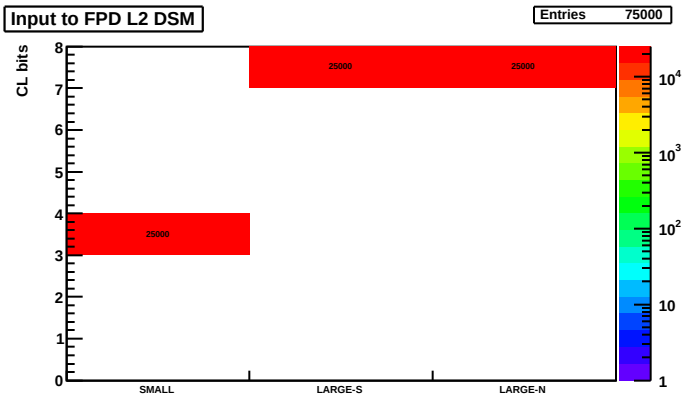

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

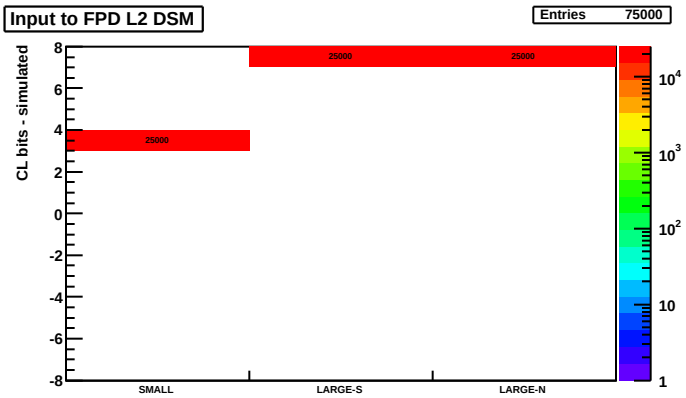

Input to FMS L1 DSM
Entries 300000
FMS L1 HT bits
DSM board

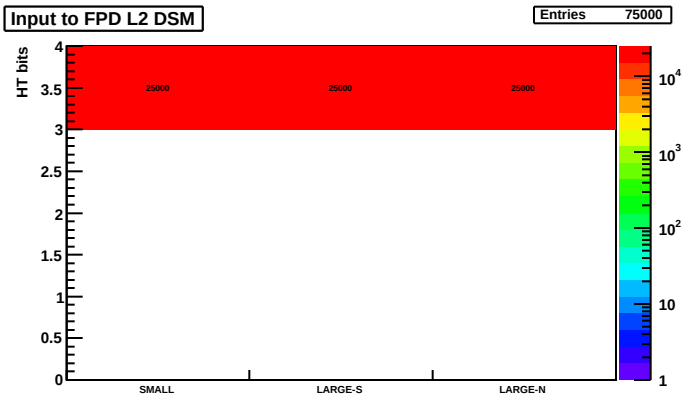

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

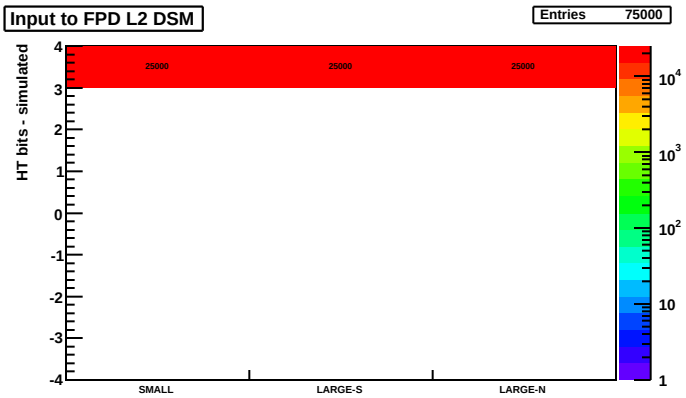

Input to FPD L2 DSM
Entries 300000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

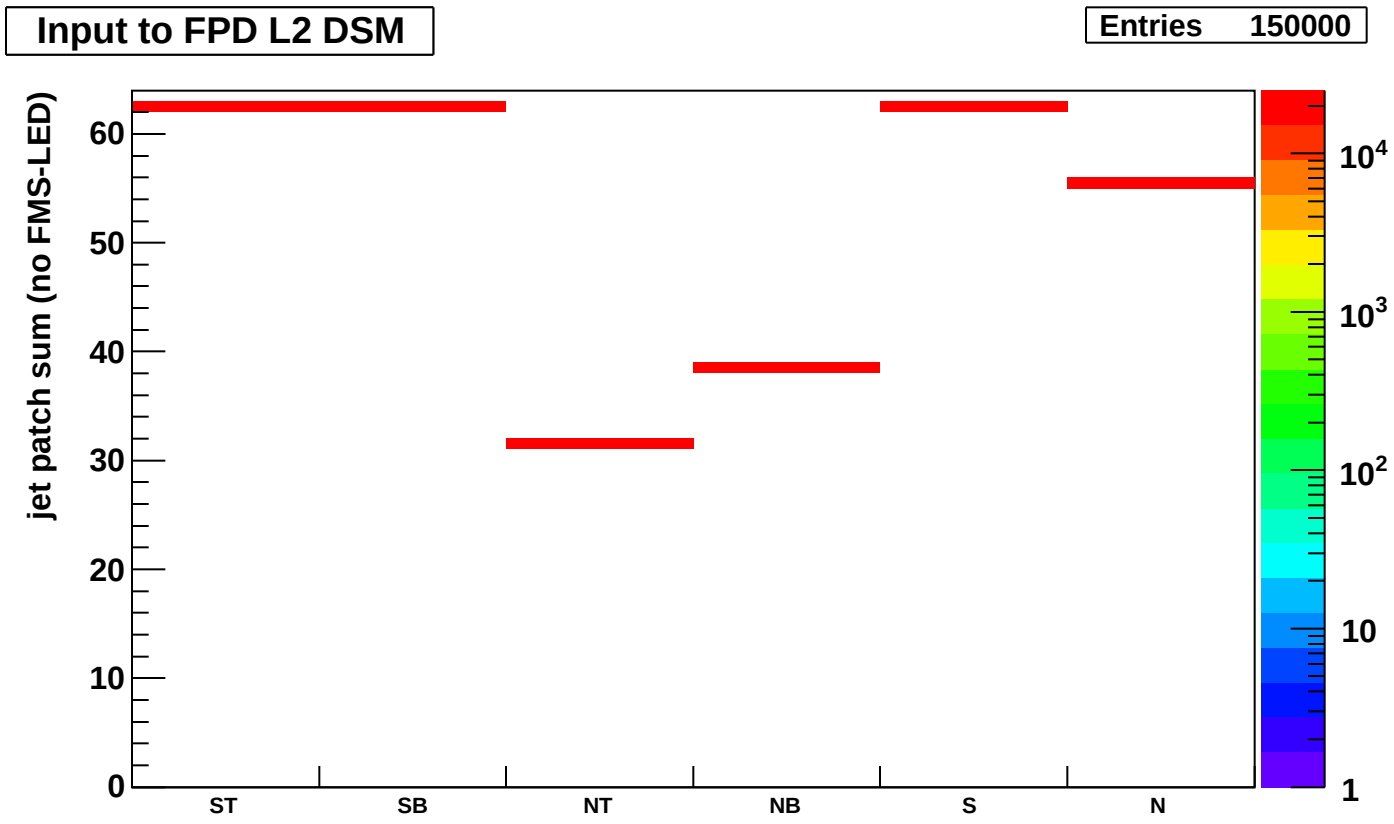

Input to FPD L2 DSM
Entries 275000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

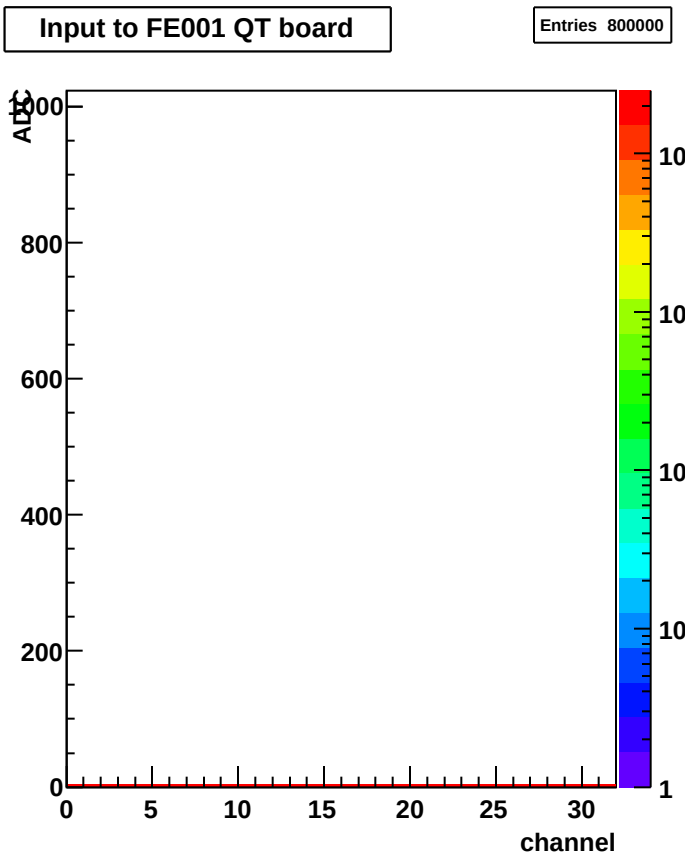

Input to FPD L2 DSM
Entries 75000
CL bits
25000
25000
25000
SMALL
LARGE-S
LARGE-N

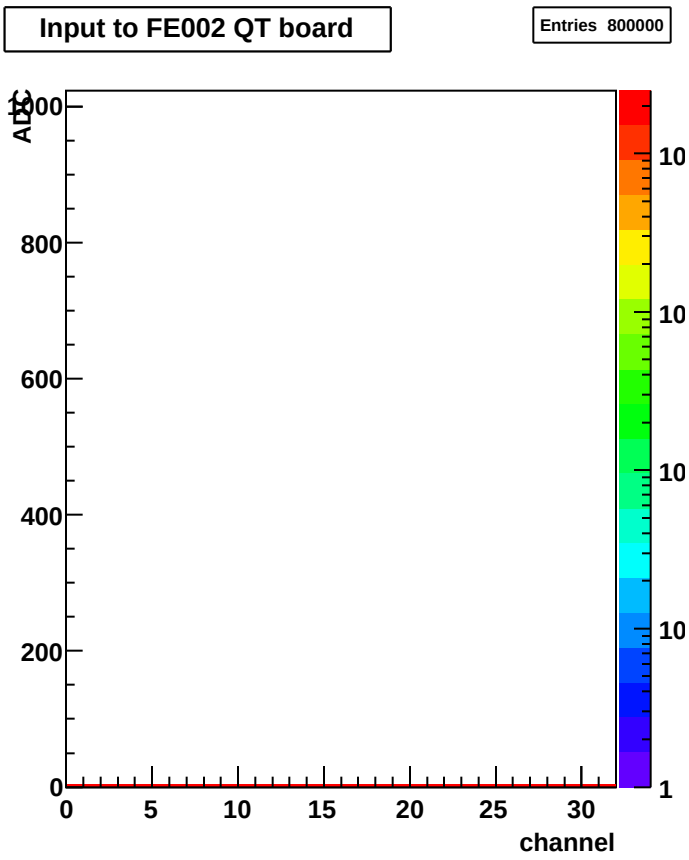

Input to FPD L2 DSM
Entries 75000
CL bits - simulated
25000
25000
25000
SMALL
LARGE-S
LARGE-N

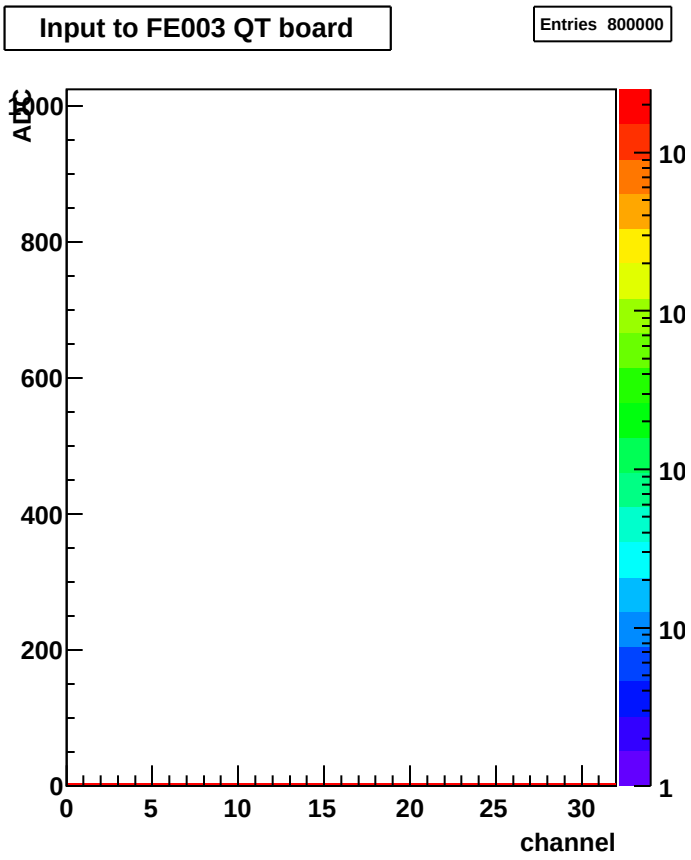

Input to FPD L2 DSM
Entries 75000
HT bits
25000
25000
25000
SMALL
LARGE-S
LARGE-N

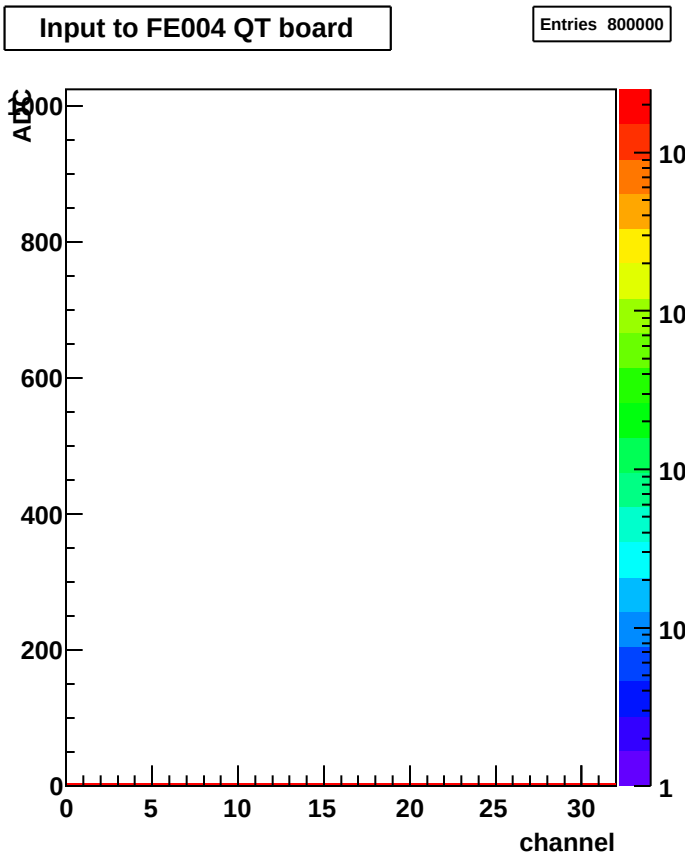

Input to FPD L2 DSM
Entries 75000
HT bits - simulated
25000
25000
25000
SMALL
LARGE-S
LARGE-N

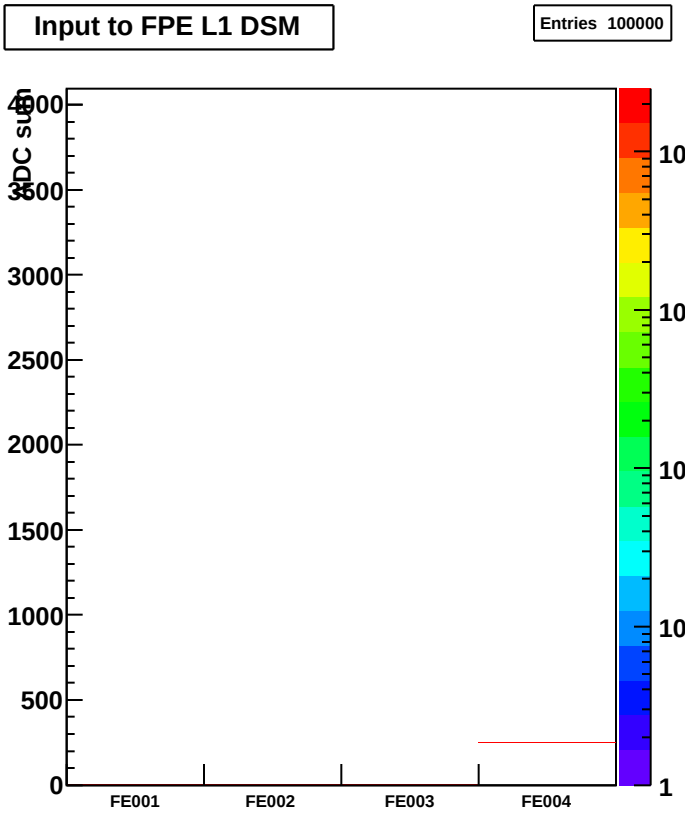

Input to FPD L2 DSM
Entries 150000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

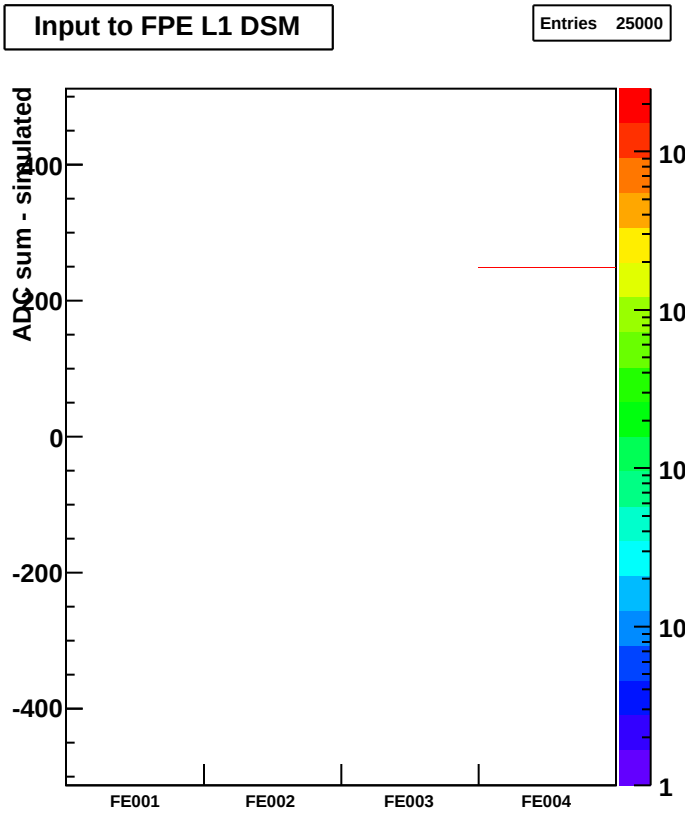

Input to FE001 QT board
Entries 800000
ADC
channel

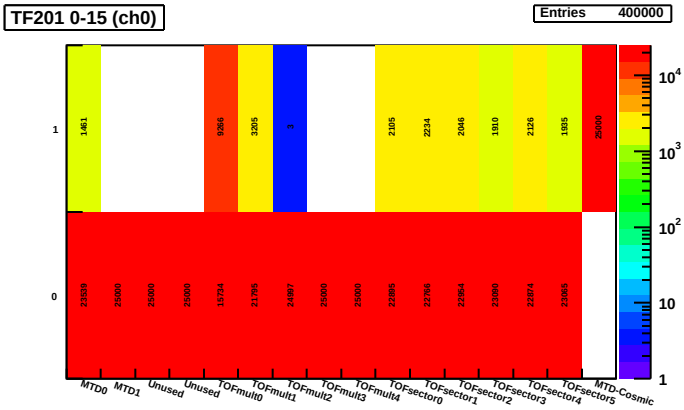

Input to FE002 QT board
Entries 800000
ADC
channel

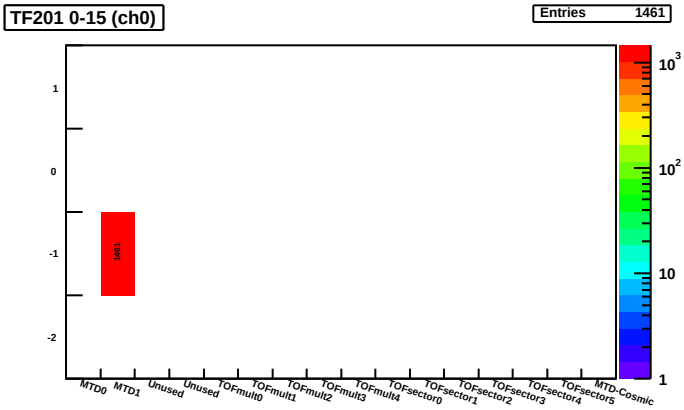

Input to FE003 QT board
Entries 800000
ADC
channel

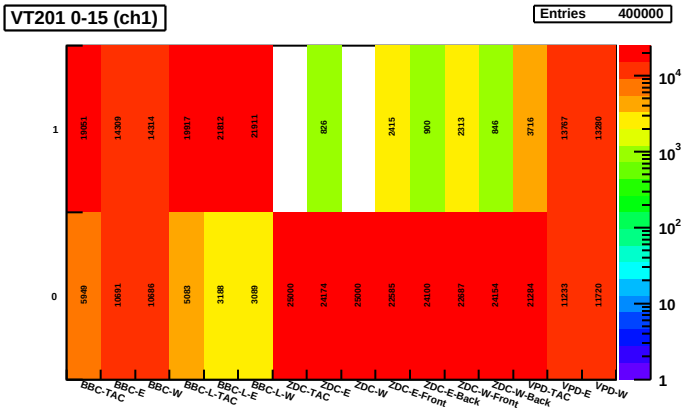

Input to FE004 QT board
Entries 800000
ADC
channel

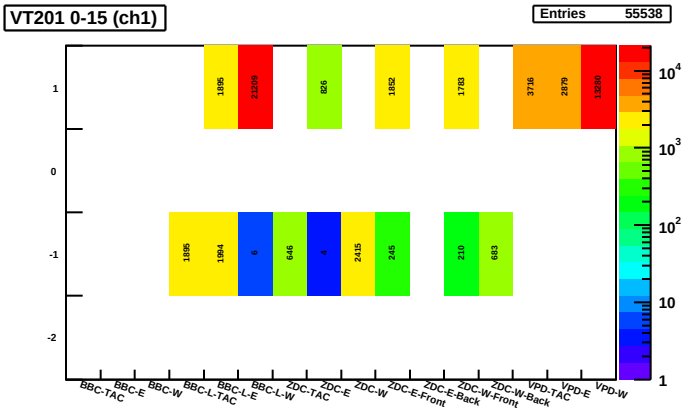

Input to FPE L1 DSM
Entries 100000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 25000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 400000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 1461
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 400000
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 55538
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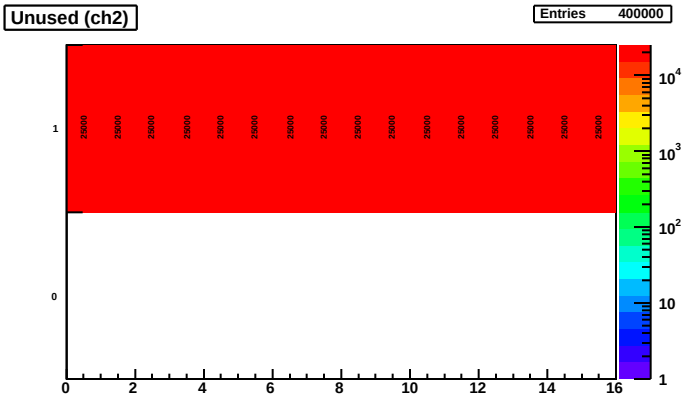
Unused (ch2)
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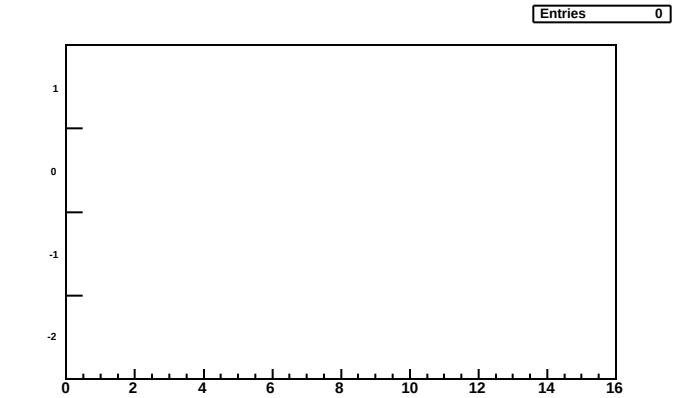
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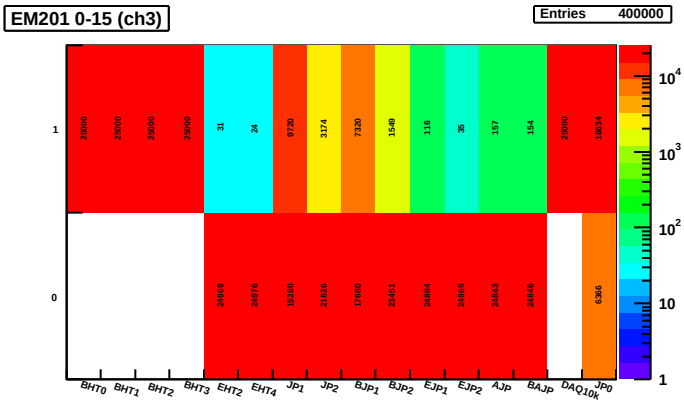
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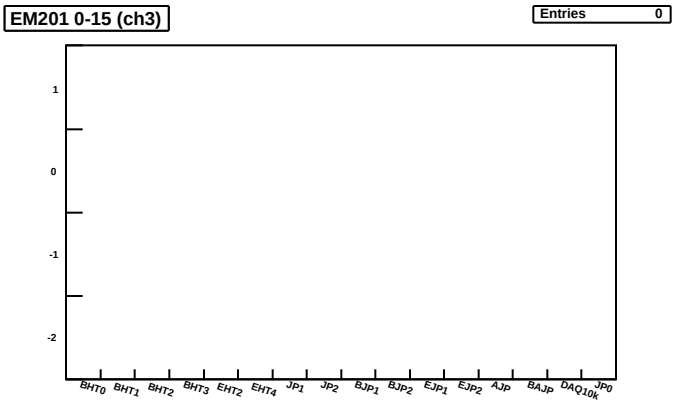
EM201 0-15 (ch3)
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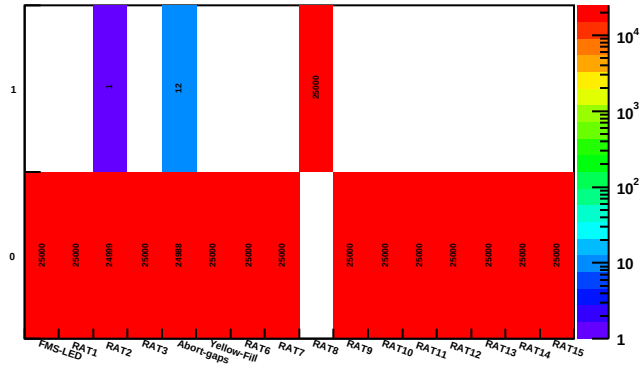
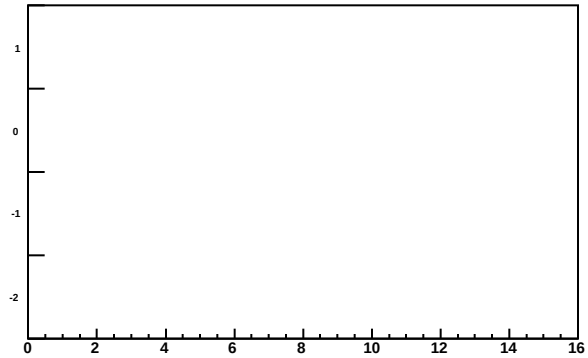
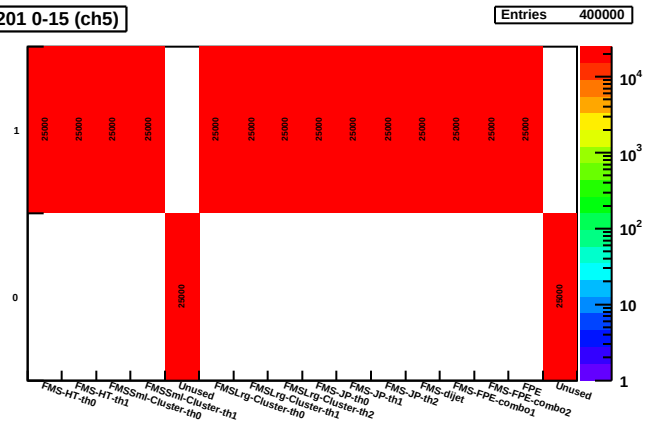
RAT board (ch4)

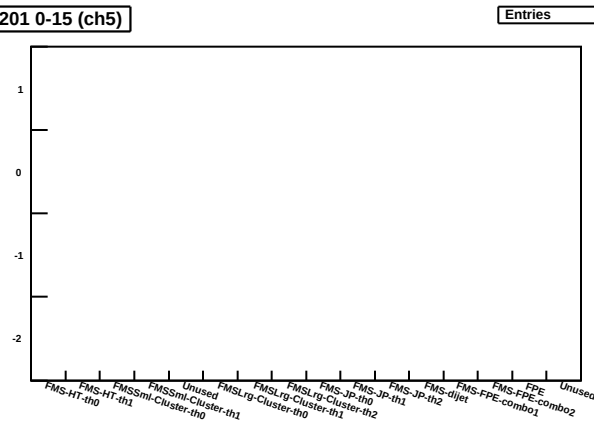




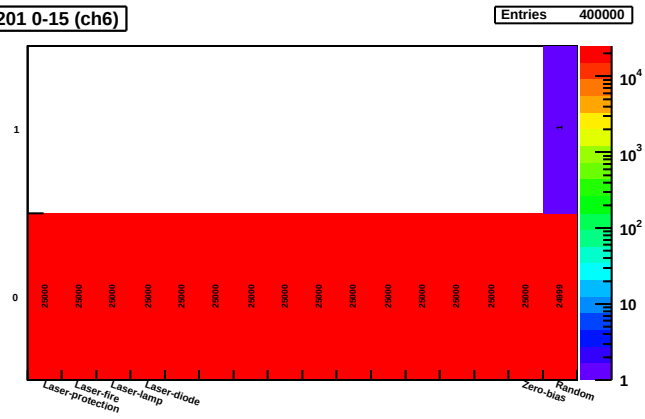
FP201 0-15 (ch5)

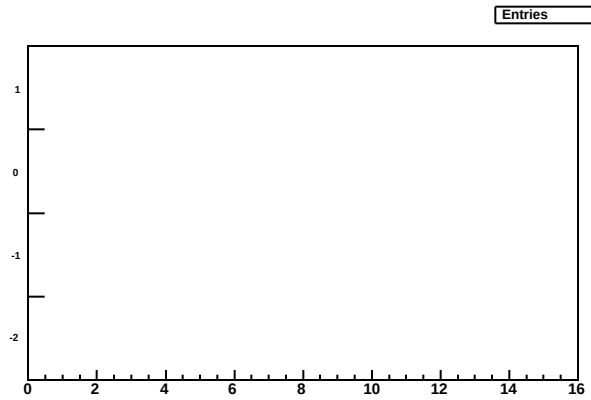
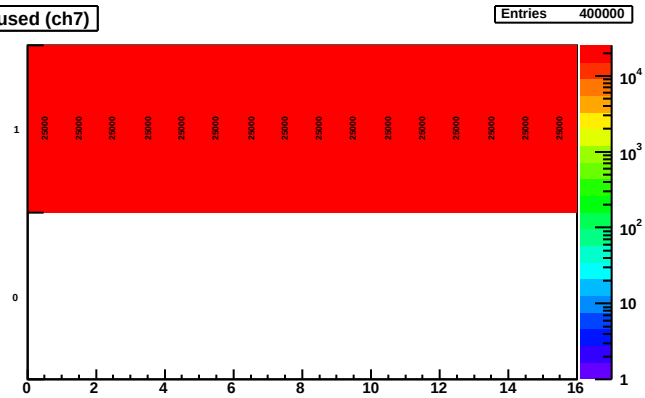
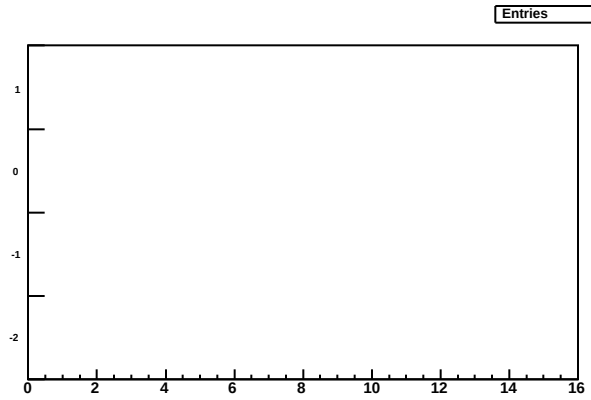


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)