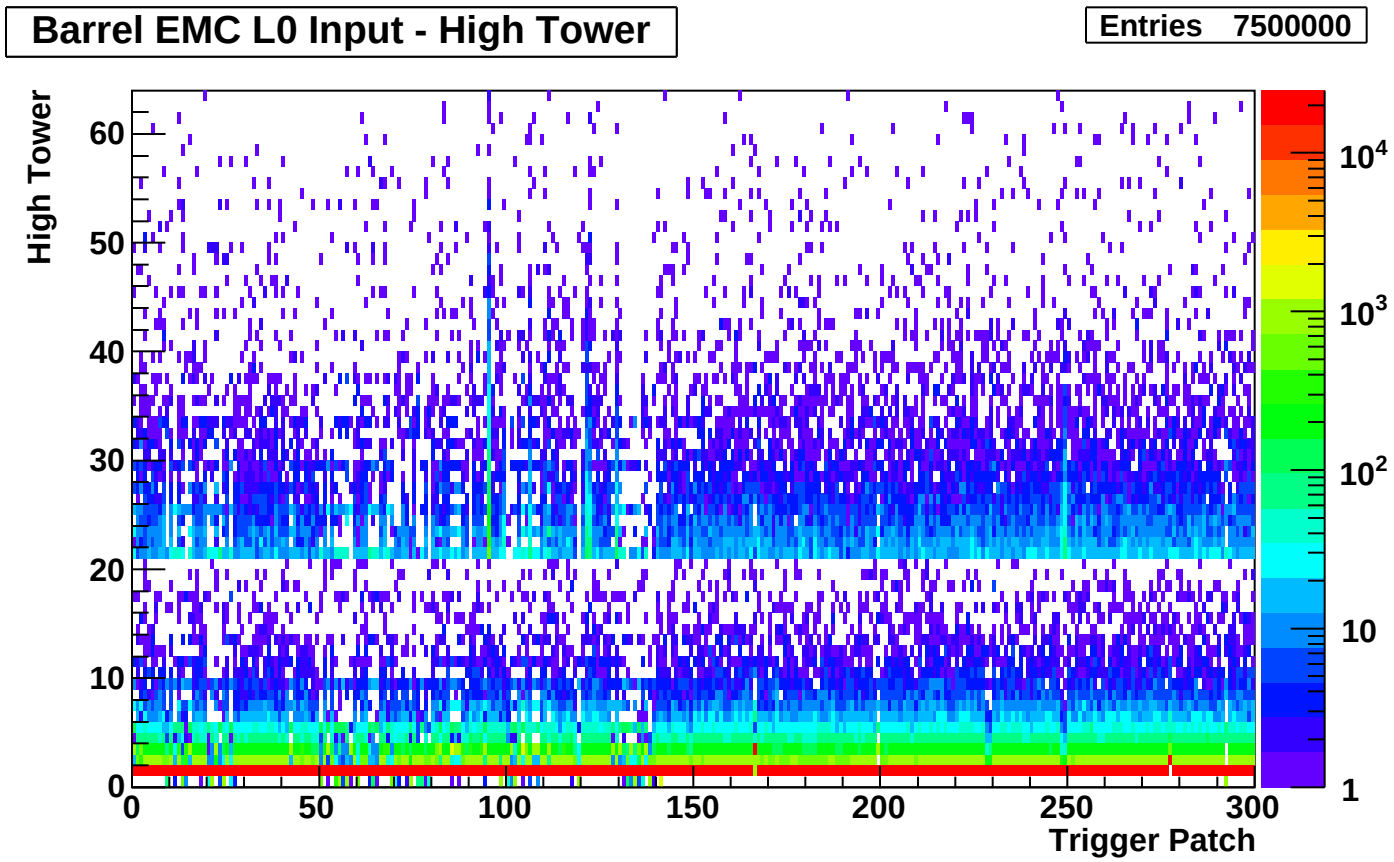
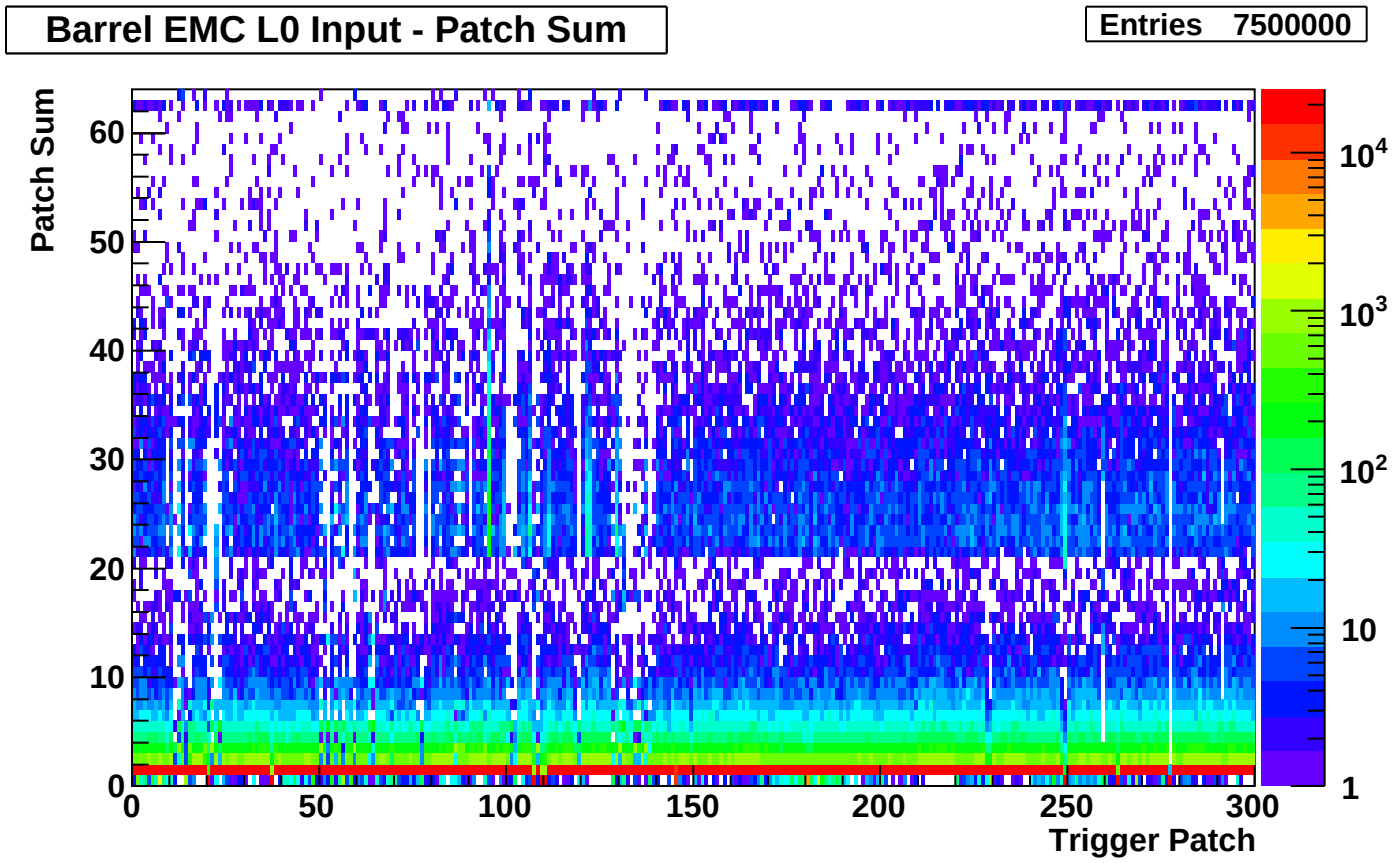
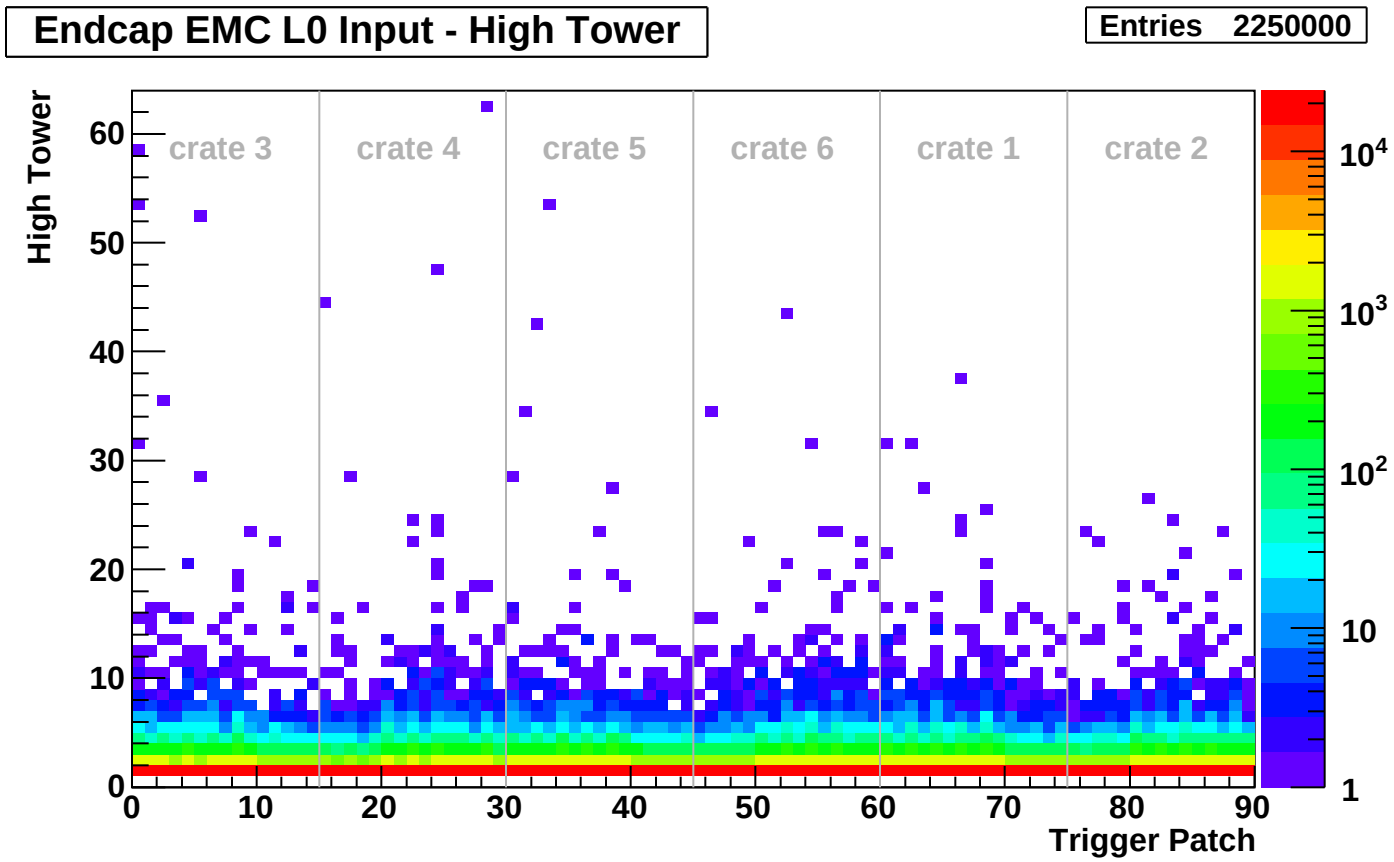
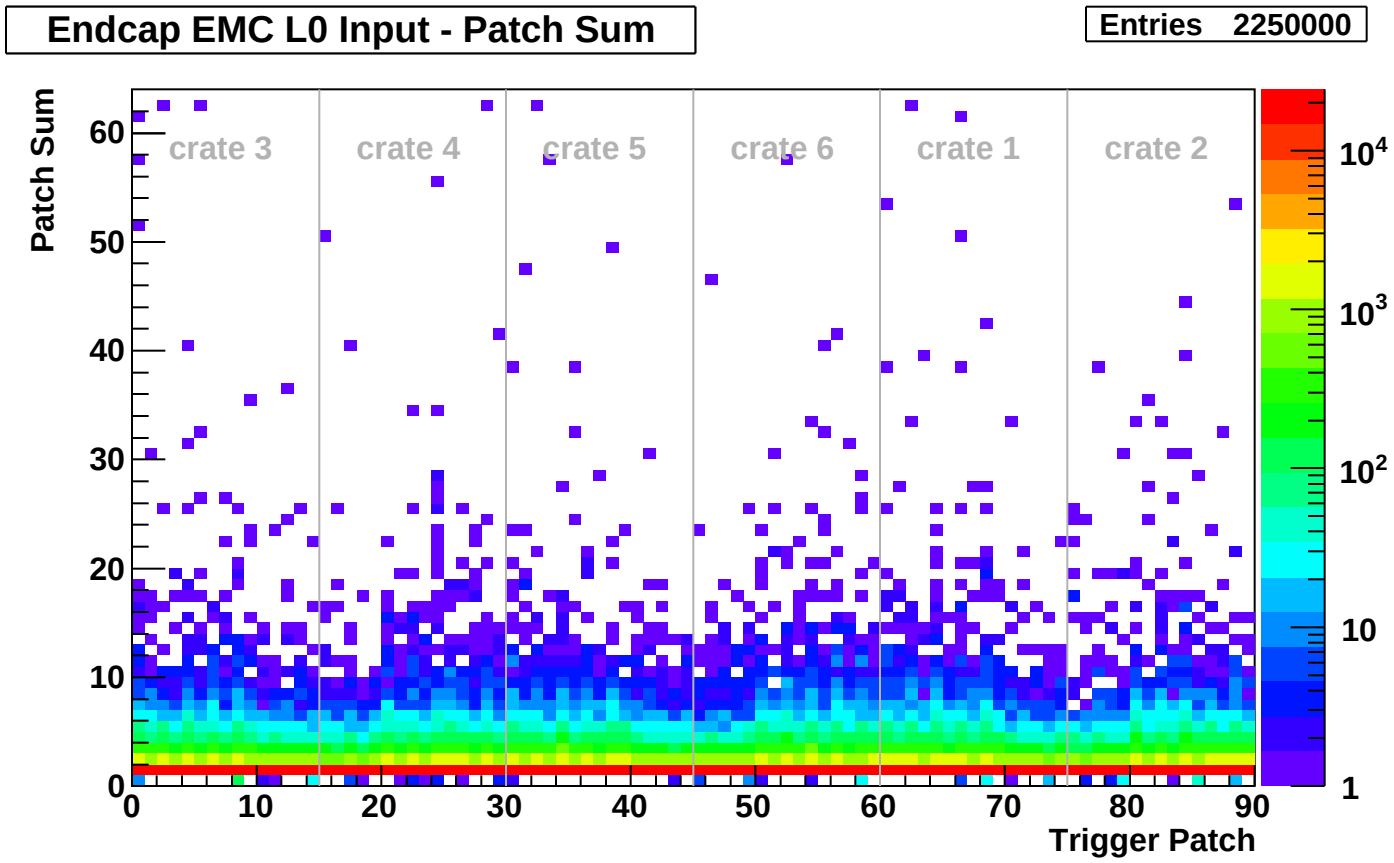
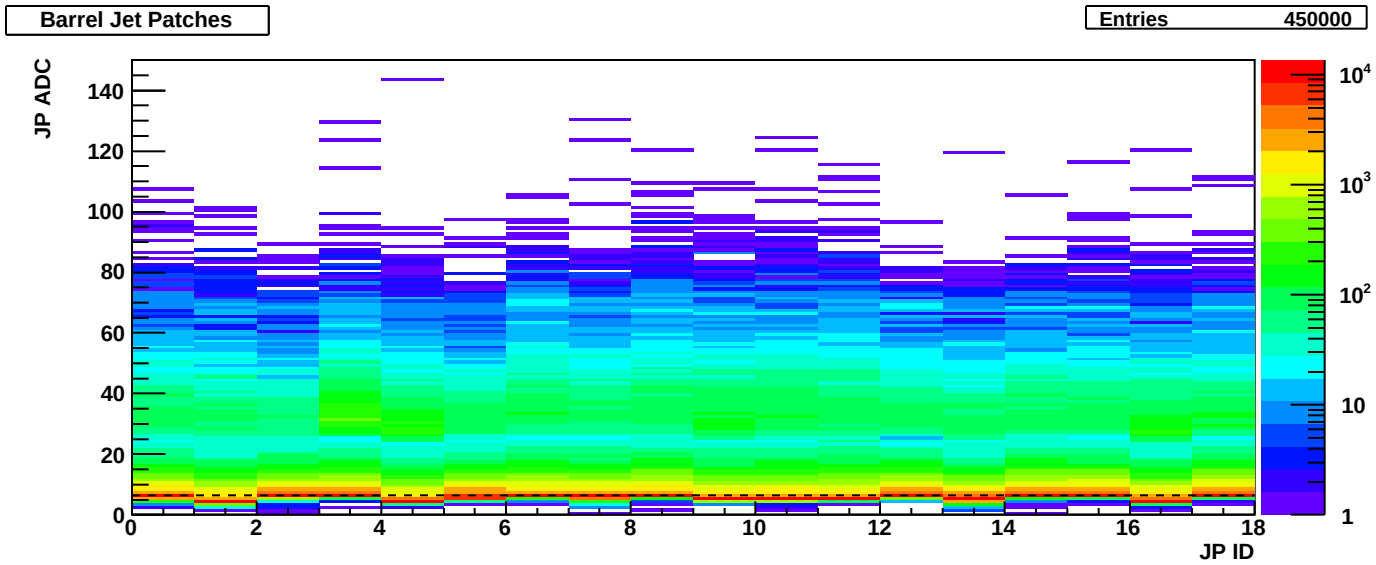
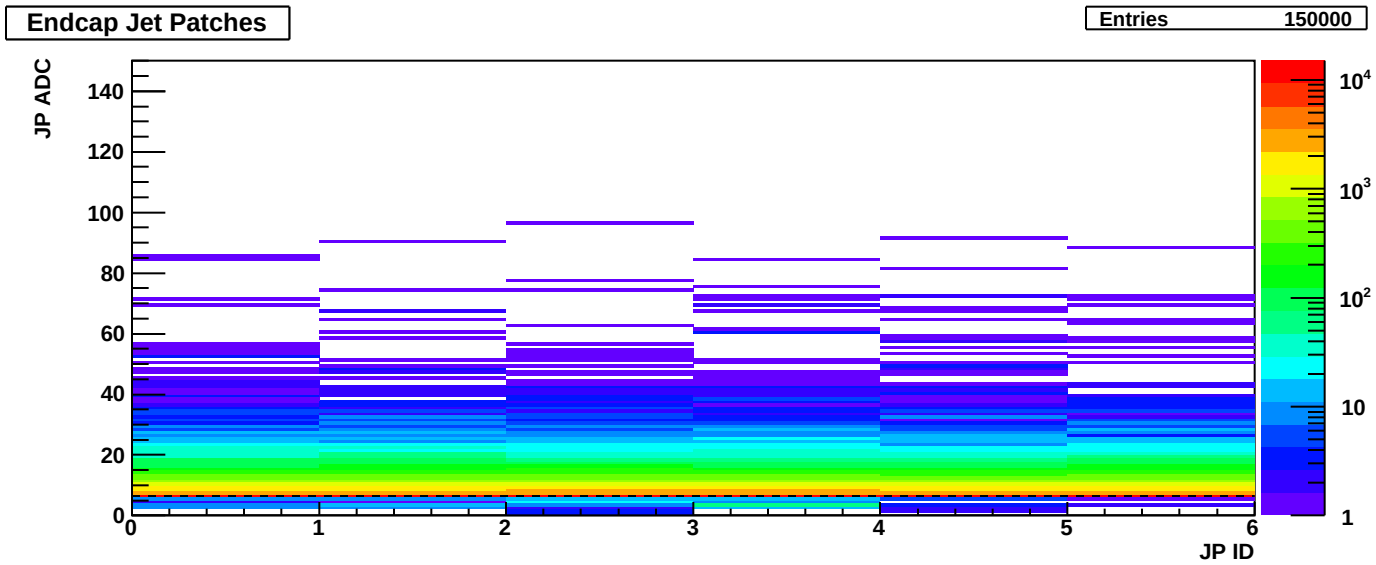

Barrel EMC L0 Input - High Tower
Entries 7500000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

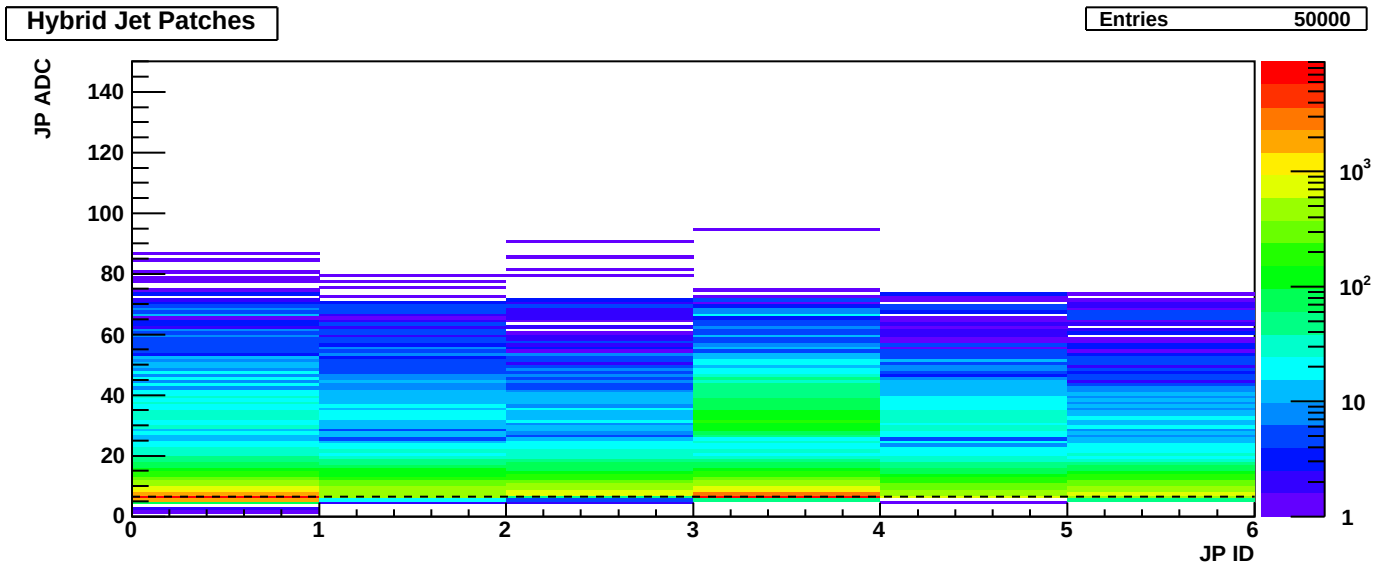

Barrel EMC L0 Input - Patch Sum
Entries 7500000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

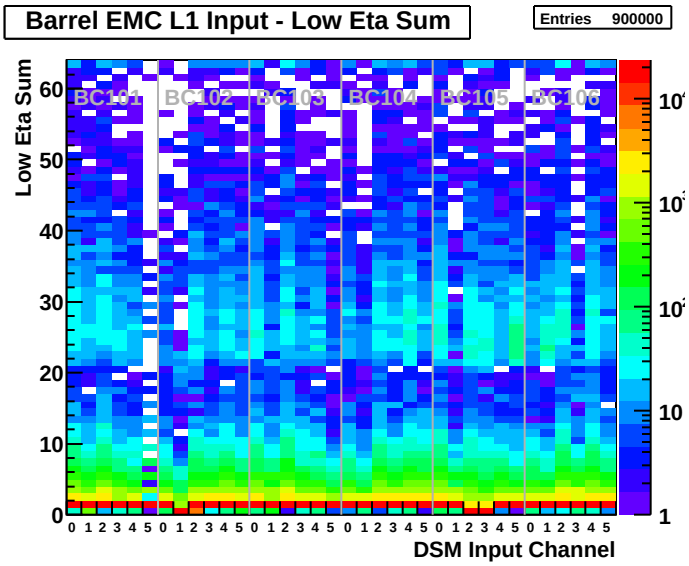

Endcap EMC L0 Input - High Tower
Entries 2250000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

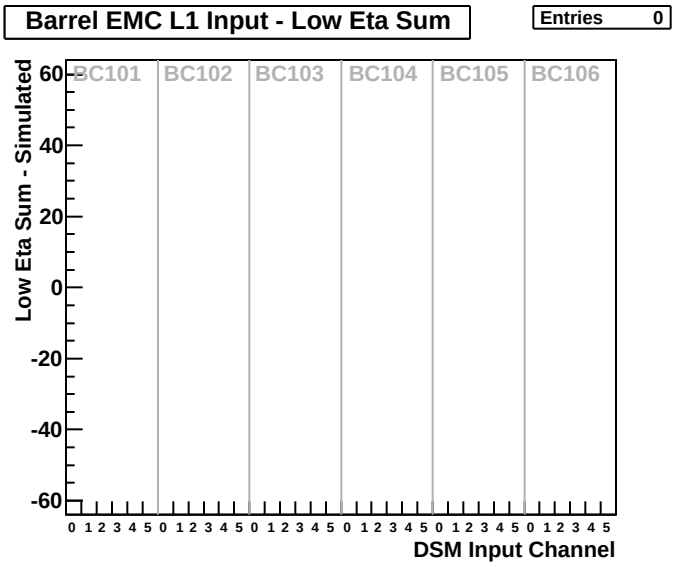

Endcap EMC L0 Input - Patch Sum
Entries 2250000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

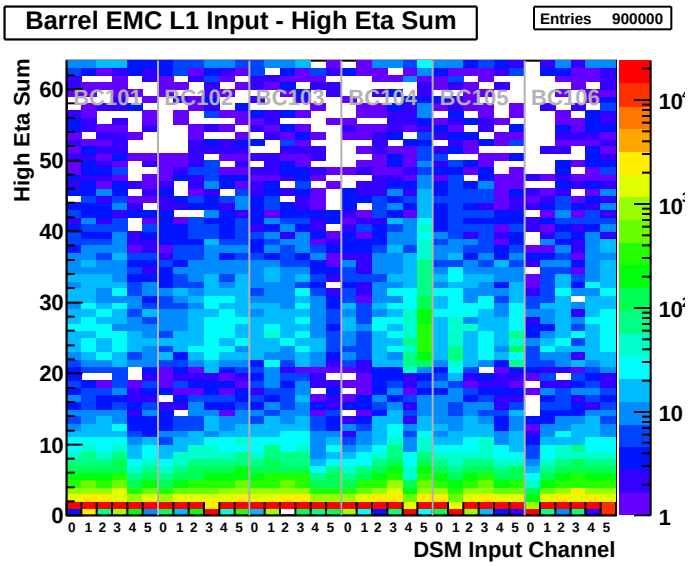

Barrel Jet Patches
Entries 450000
JP ADC
JP ID

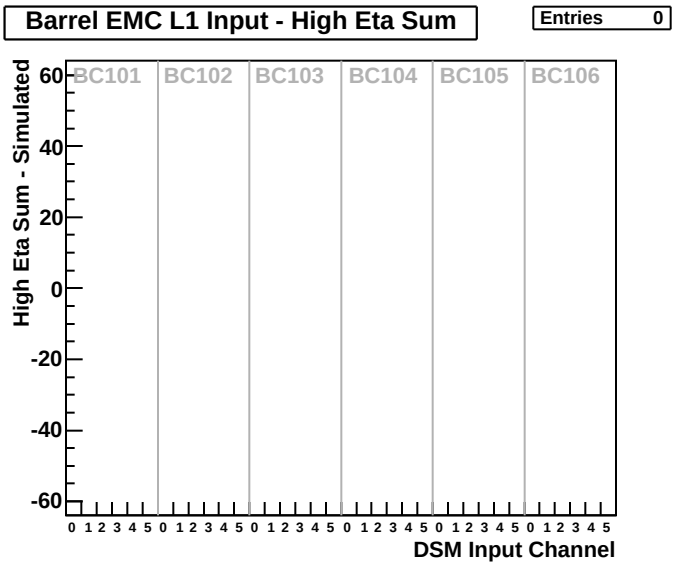

Endcap Jet Patches
Entries 150000
JP ADC
JP ID

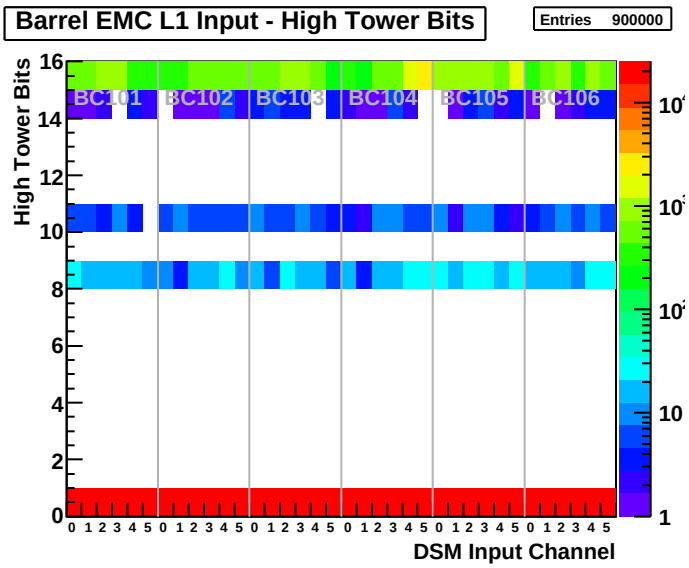

Hybrid Jet Patches
Entries 50000
JP ADC
JP ID

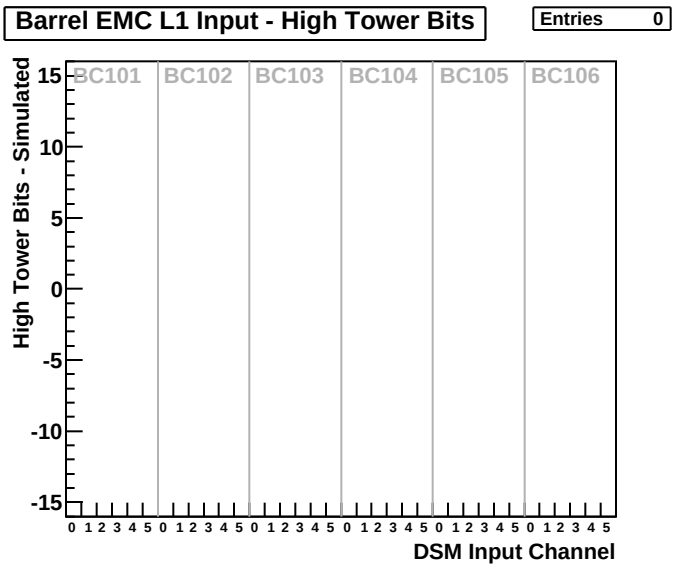

Barrel EMC L1 Input - Low Eta Sum
Entries 900000
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

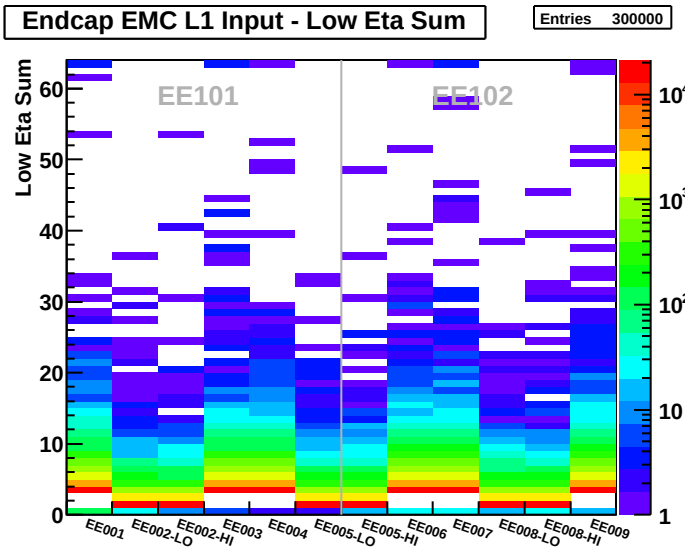

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

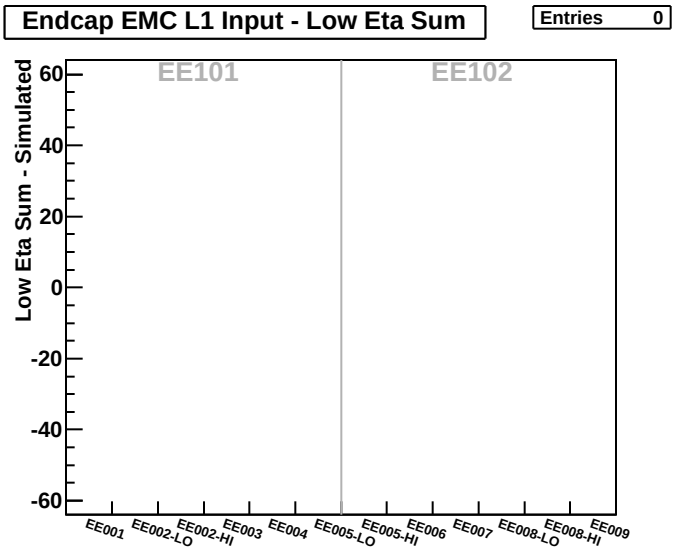

Barrel EMC L1 Input - High Eta Sum
Entries 900000
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

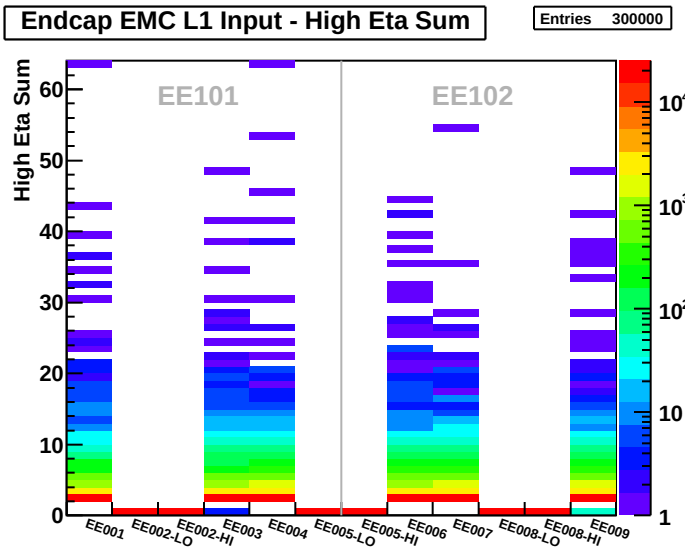

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

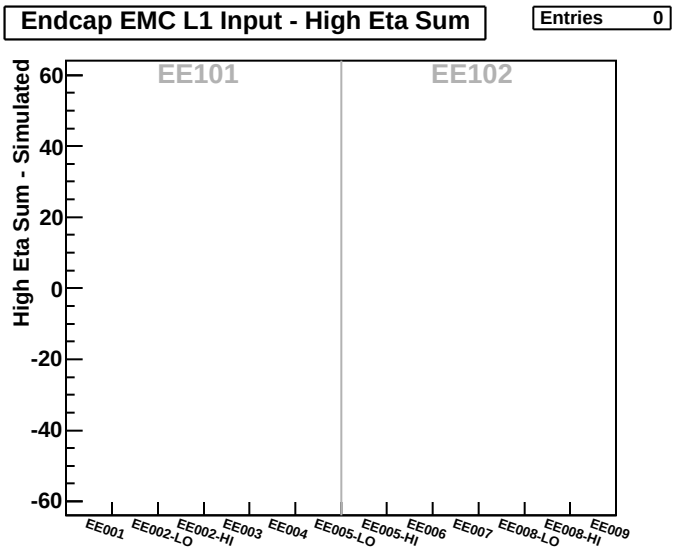

Barrel EMC L1 Input - High Tower Bits
Entries 900000
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

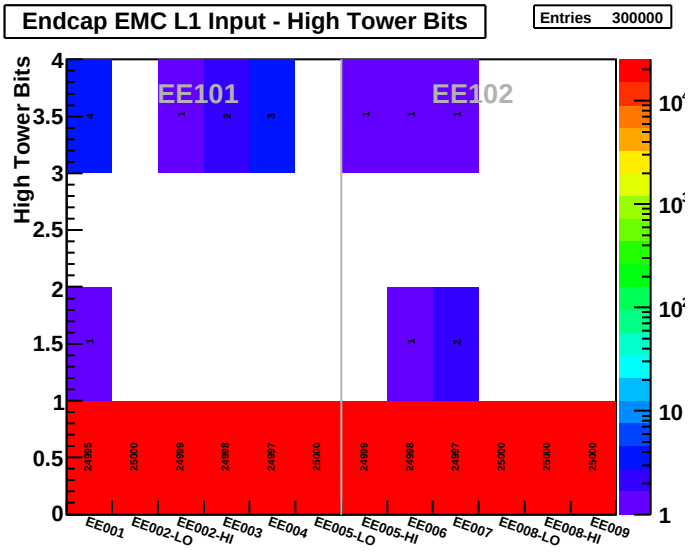

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

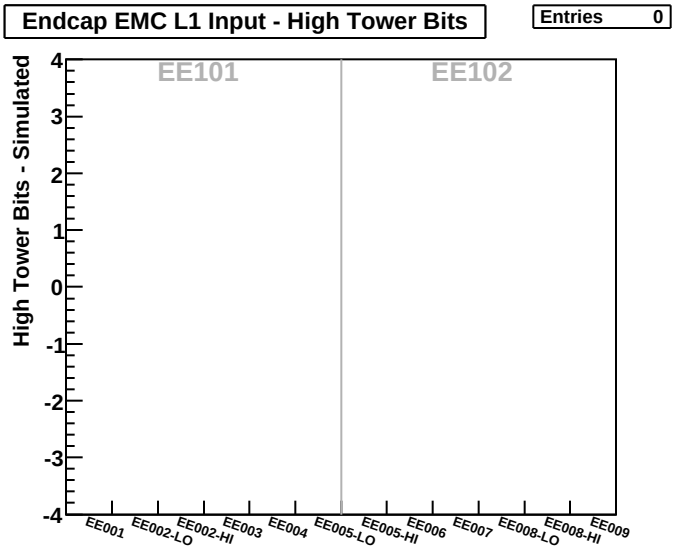

Endcap EMC L1 Input - Low Eta Sum
Entries 300000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

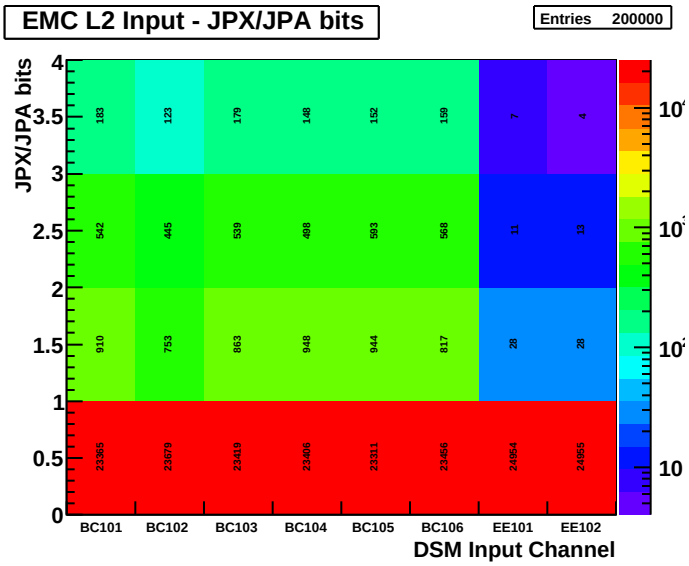

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

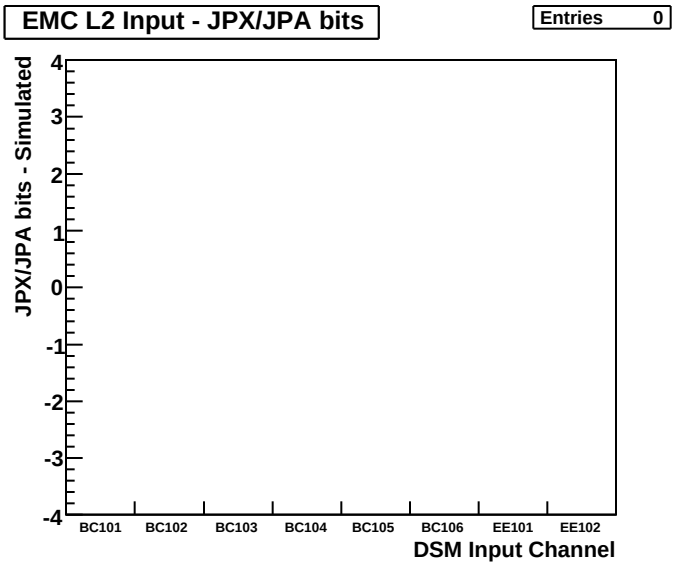

Endcap EMC L1 Input - High Eta Sum
Entries 300000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

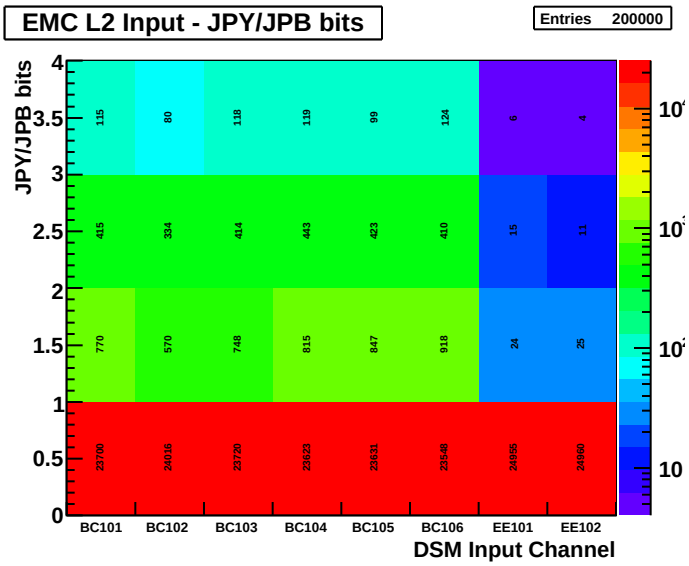

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

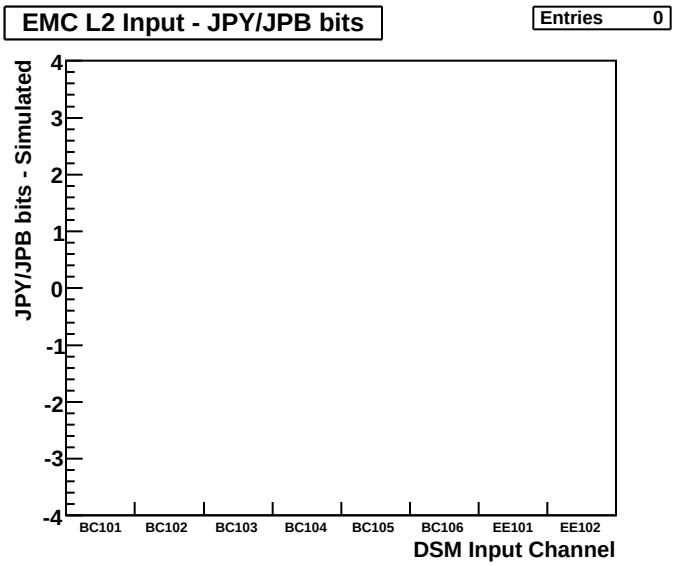

Endcap EMC L1 Input - High Tower Bits
Entries 300000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

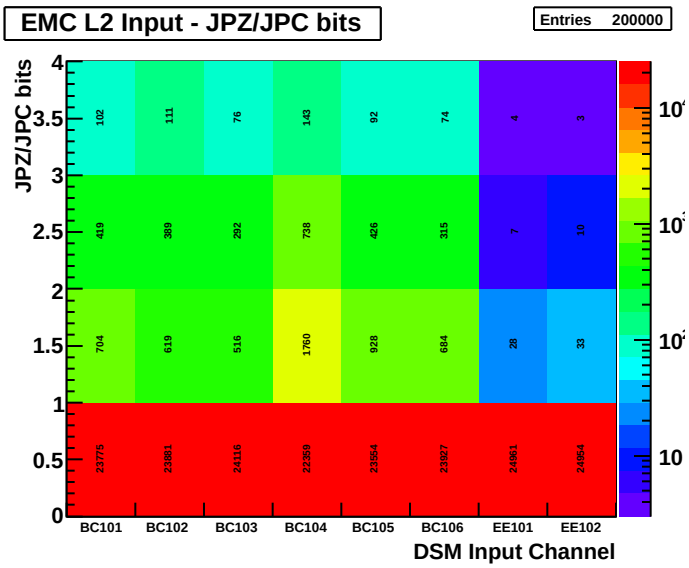

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

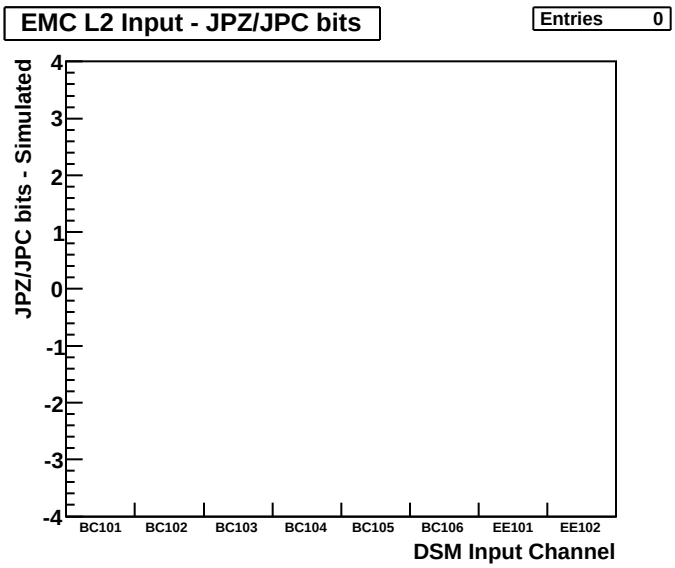

EMC L2 Input - JPX/JPA bits
Entries 200000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
183 123 179 148 152 159 7 4
542 445 539 498 593 566 11 13
910 753 863 948 944 817 28 28
23365 23679 23419 23406 23311 23456 24954 24955

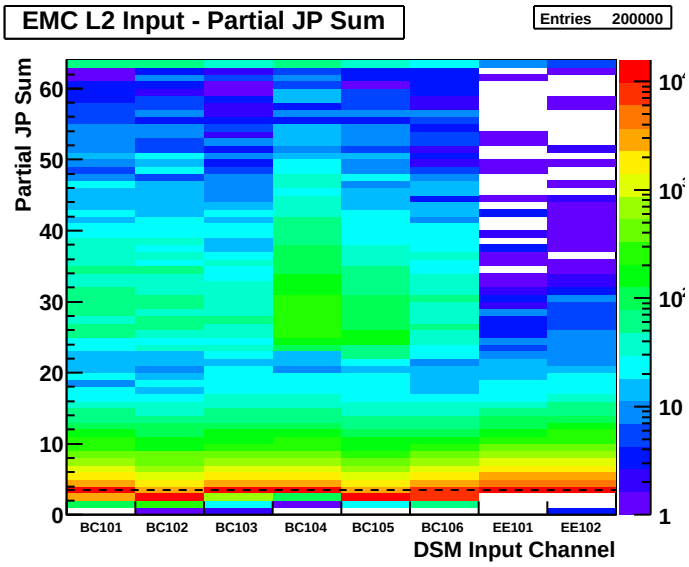

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

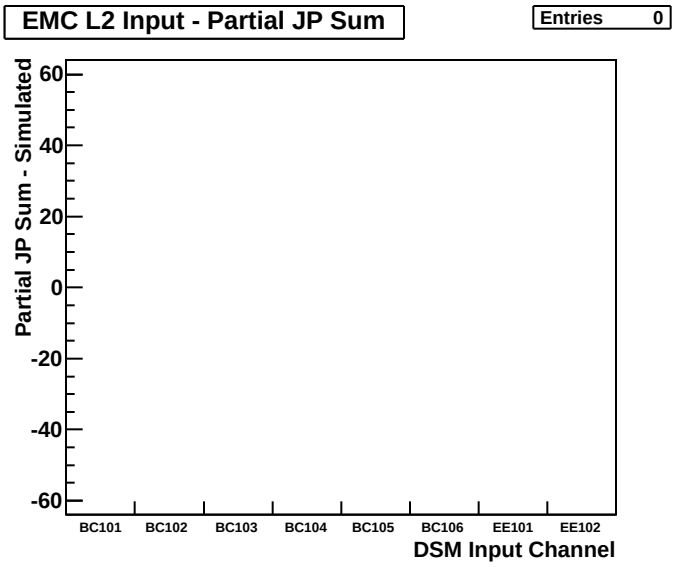

EMC L2 Input - JPY/JPB bits
Entries 200000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
115 80 118 119 99 124 6 4
415 324 414 443 423 410 15 11
770 570 748 815 847 918 24 25
23700 24016 23720 23623 23631 23548 24955 24960

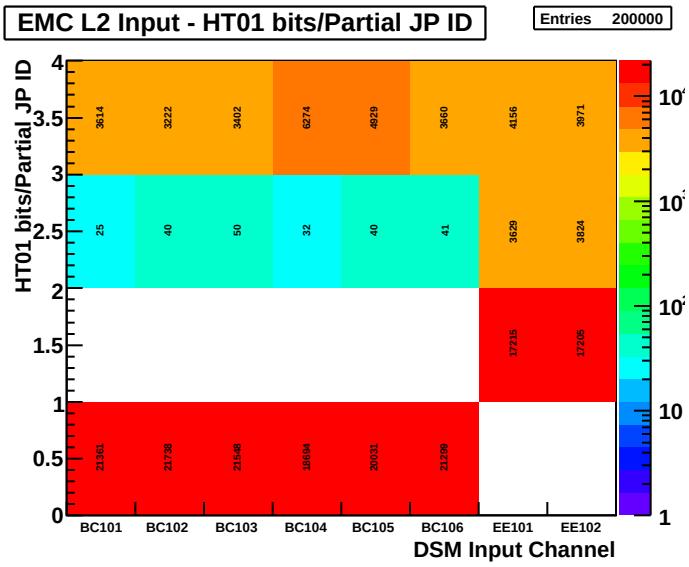

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

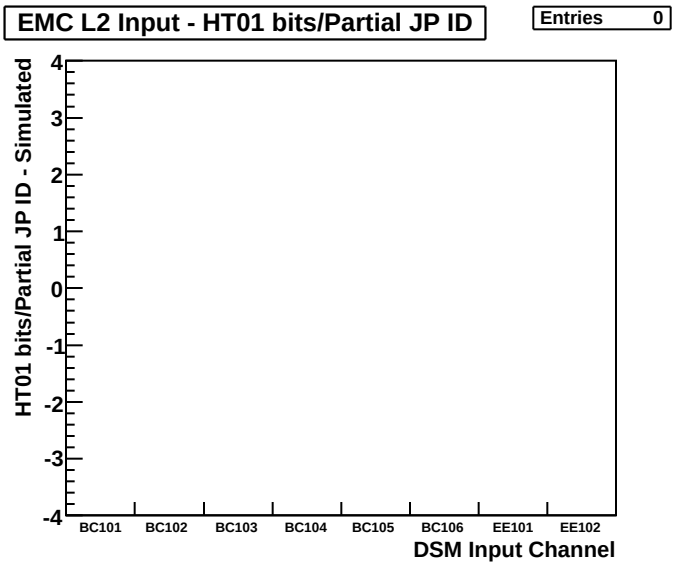

EMC L2 Input - JPZ/JPC bits
Entries 200000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
102 111 76 143 92 74 4 3
419 389 292 738 426 315 7 10
704 619 516 1760 928 684 28 33
23775 23831 24116 22359 23554 23927 24961 24954

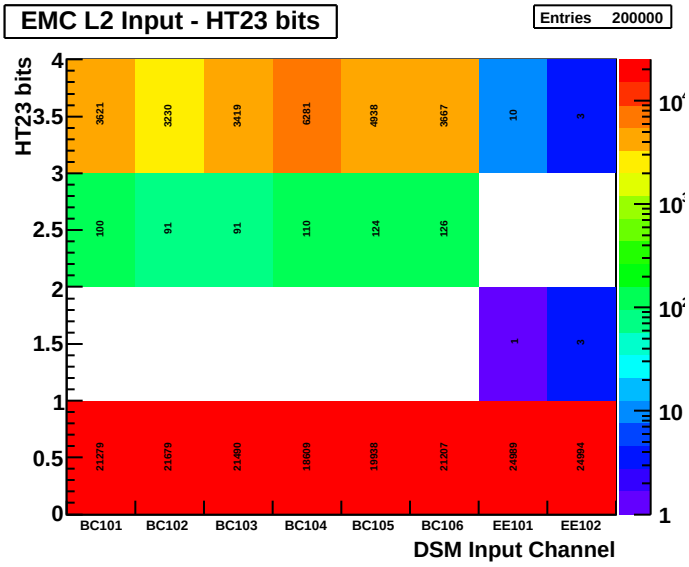

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

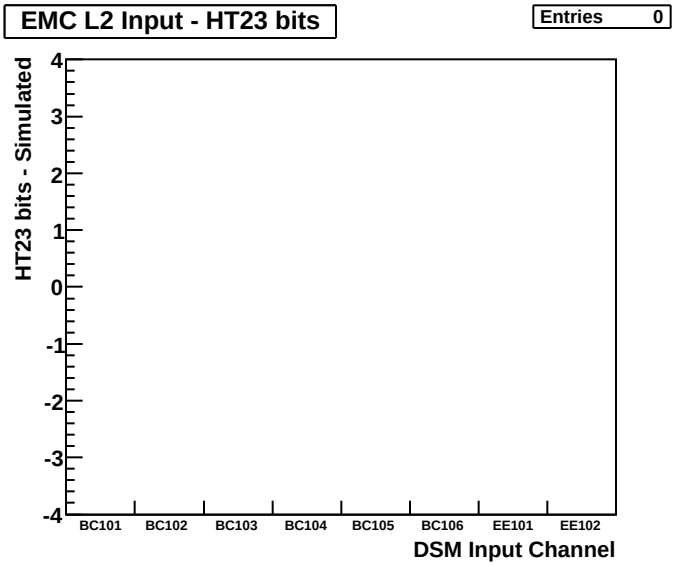

EMC L2 Input - Partial JP Sum
Entries 200000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

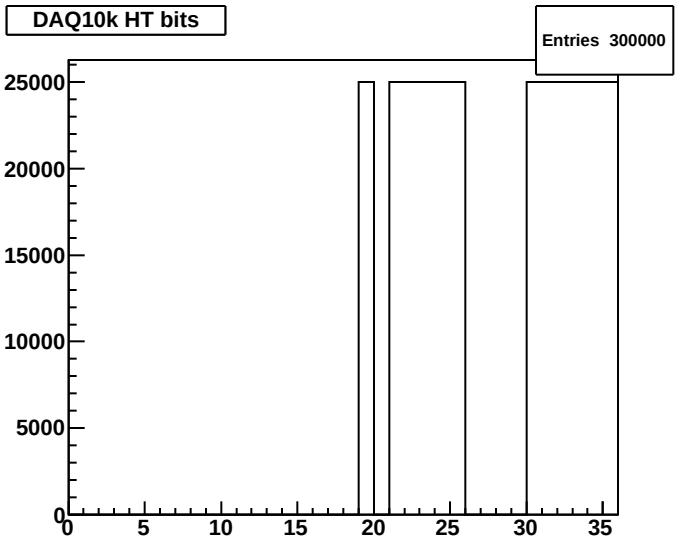

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

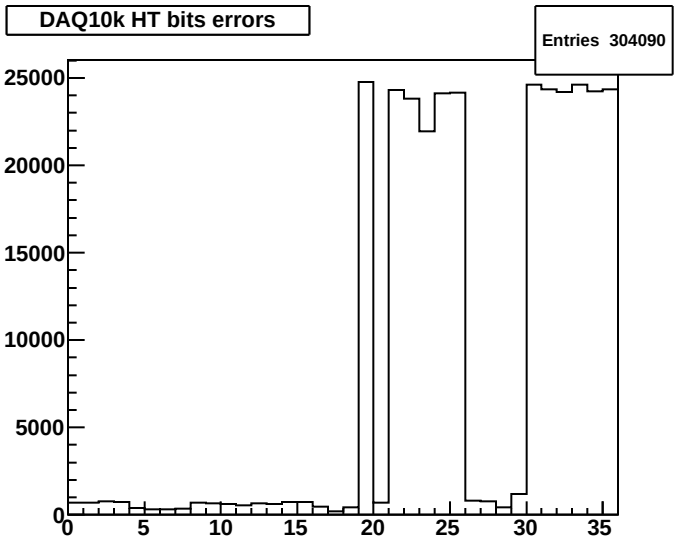

EMC L2 Input - HT01 bits/Partial JP ID
Entries 200000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

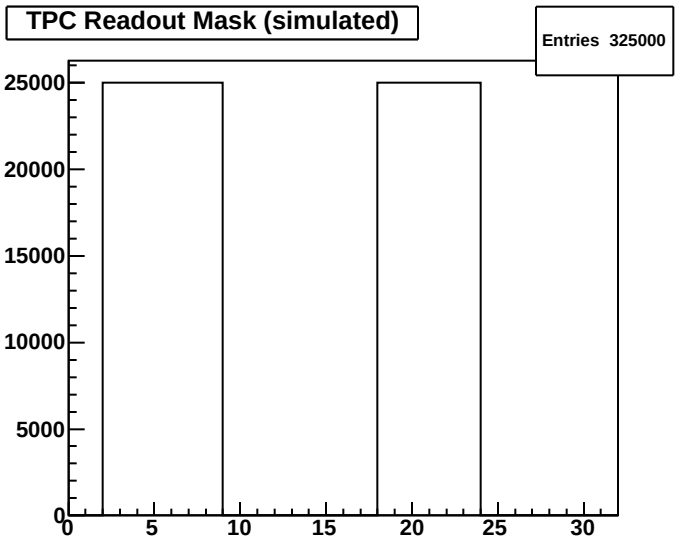

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

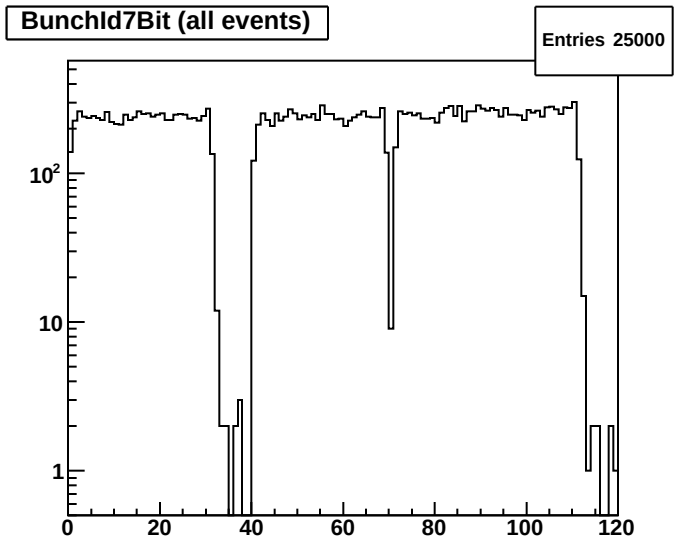

EMC L2 Input - HT23 bits
Entries 200000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

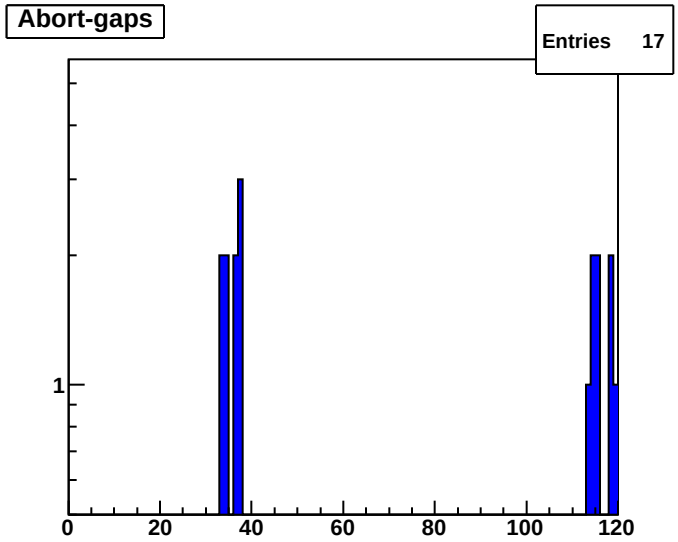

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

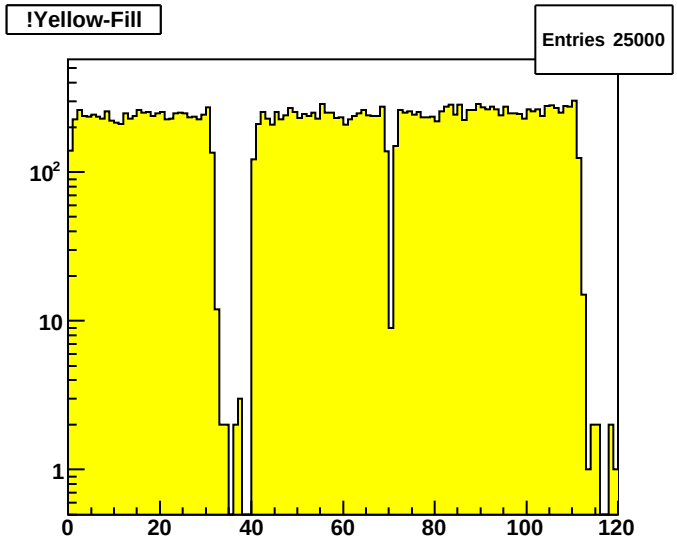

DAQ10k HT bits
Entries 300000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

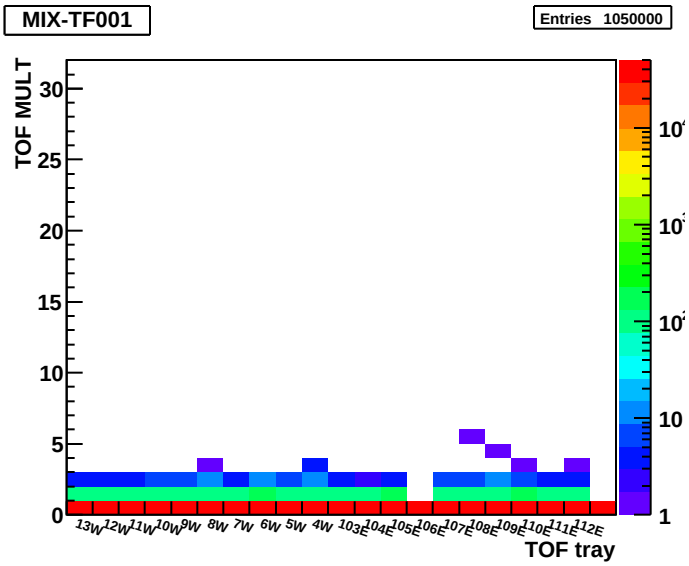

DAQ10k HT bits errors
Entries 304090
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

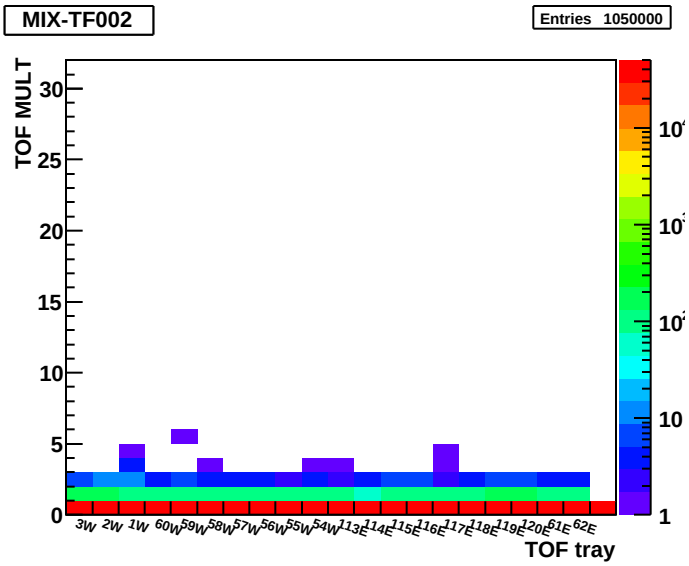

TPC Readout Mask (simulated)
Entries 325000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

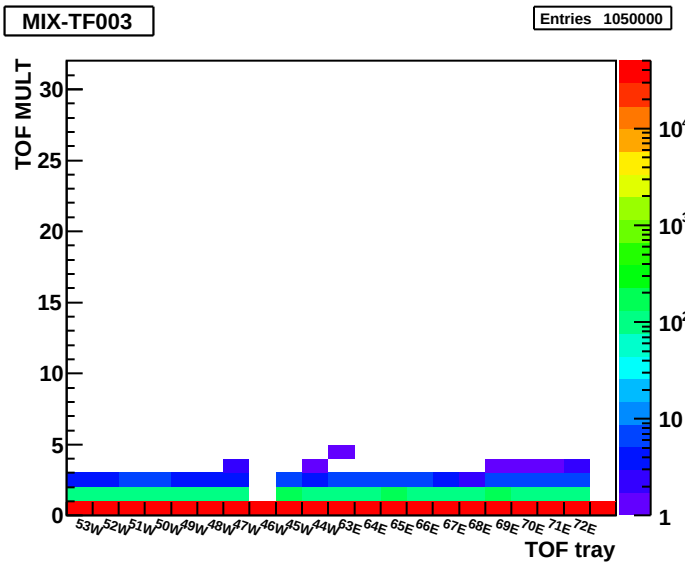

BunchId7Bit (all events)
Entries 25000
10^2
10
1
0 20 40 60 80 100 120

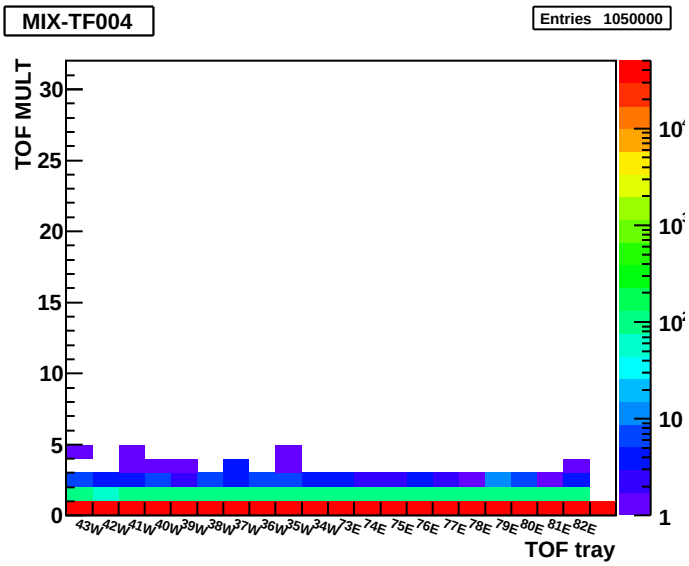

Abort-gaps
Entries 17
1
0 20 40 60 80 100 120

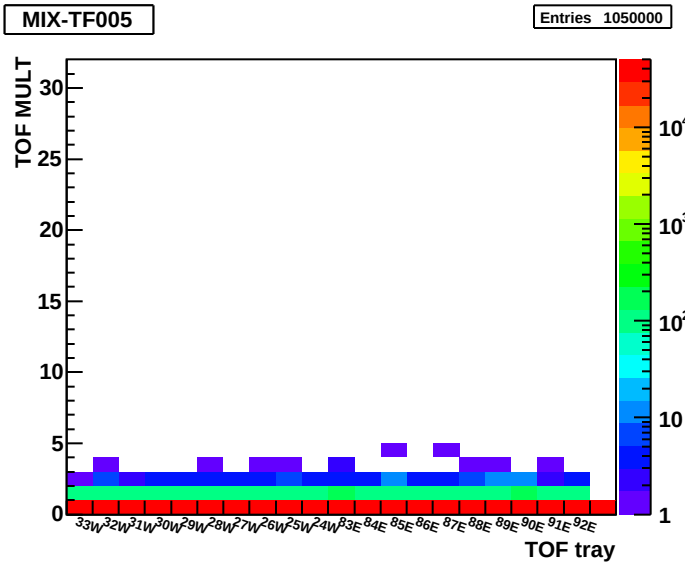

!Yellow-Fill
Entries 25000
10^2
10
1
0 20 40 60 80 100 120

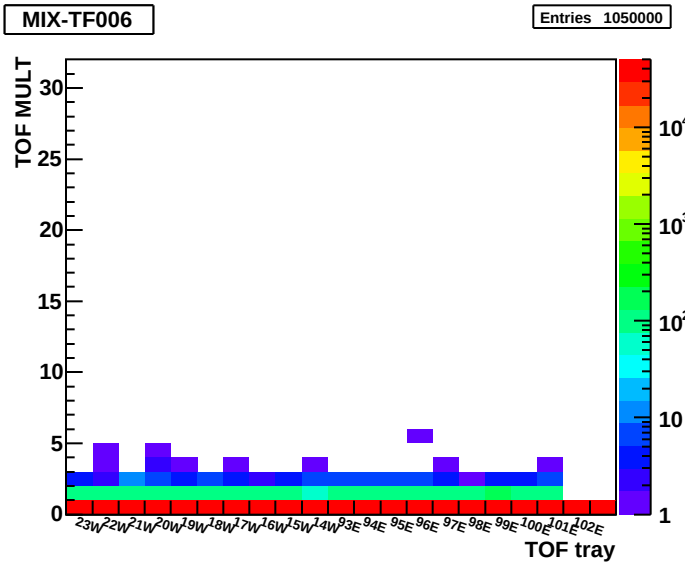

MIX-TF001
Entries 1050000
TOF MULT
TOF tray

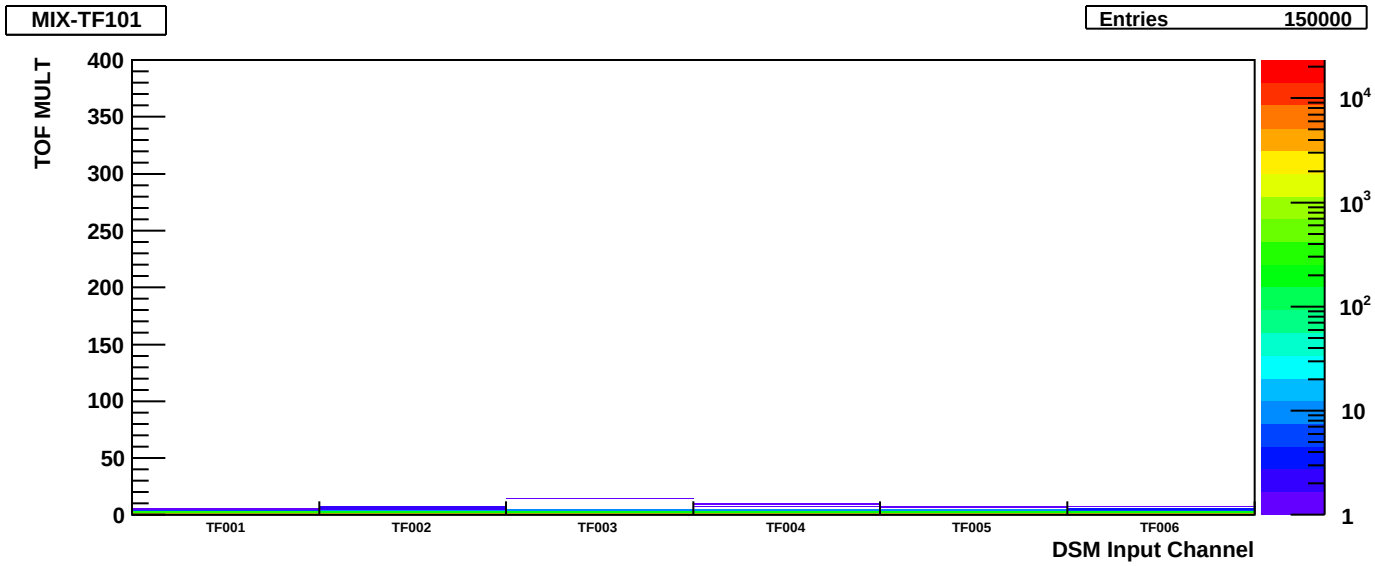

MIX-TF002
Entries 1050000
TOF MULT
TOF tray

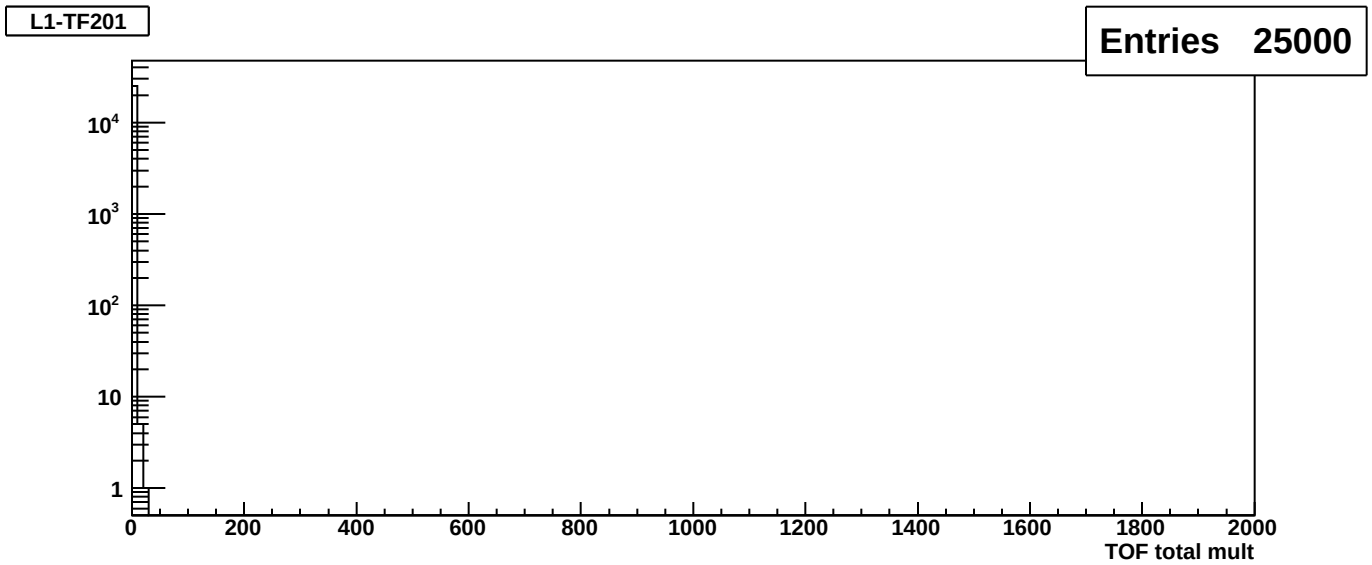

MIX-TF003
Entries 1050000
TOF MULT
TOF tray

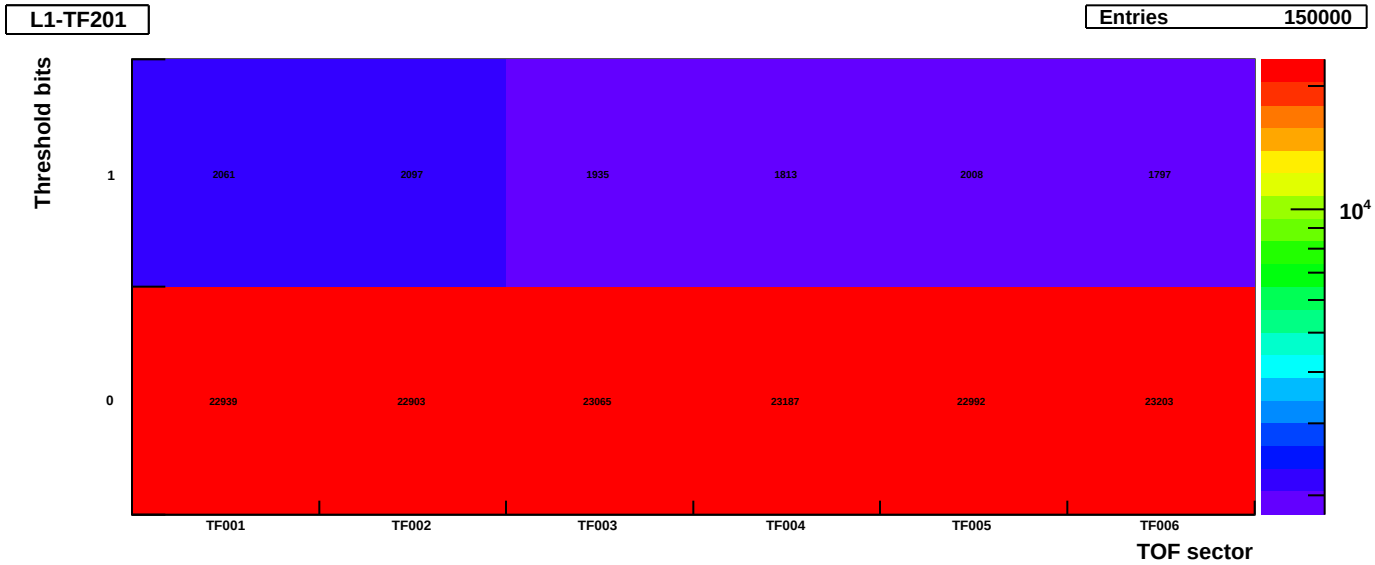

MIX-TF004
Entries 1050000
TOF MULT
TOF tray

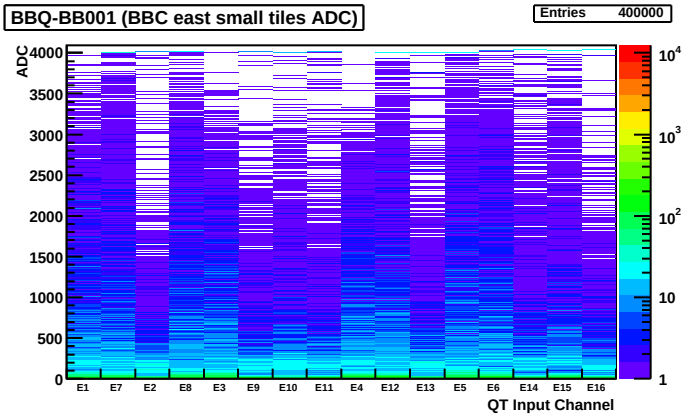

MIX-TF005
Entries 1050000
TOF MULT
TOF tray

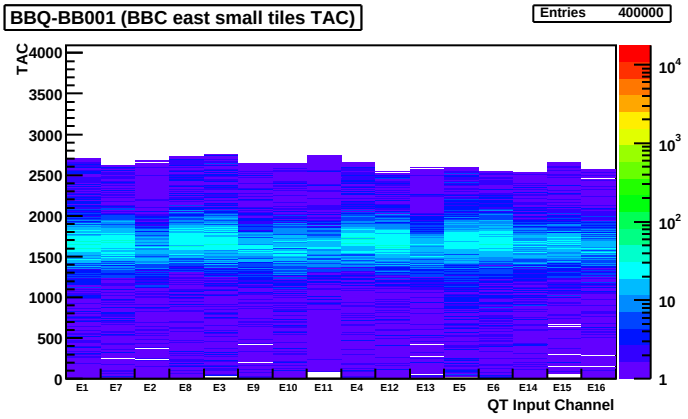

MIX-TF006
Entries 1050000
TOF MULT
TOF tray

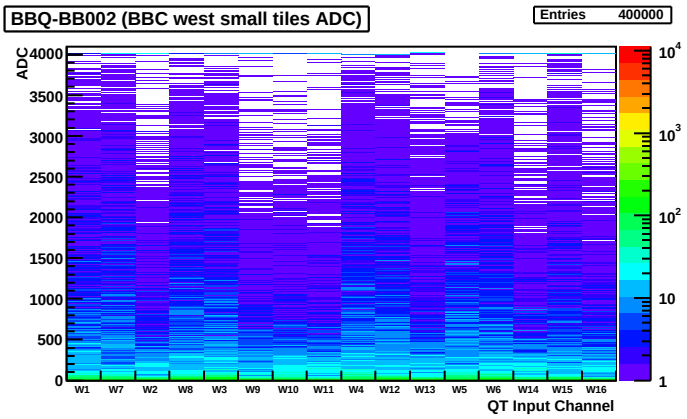

MIX-TF101
Entries 150000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

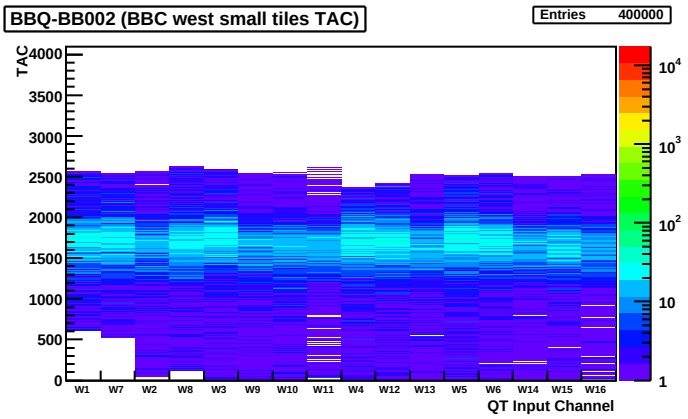

L1-TF201
Entries 25000
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

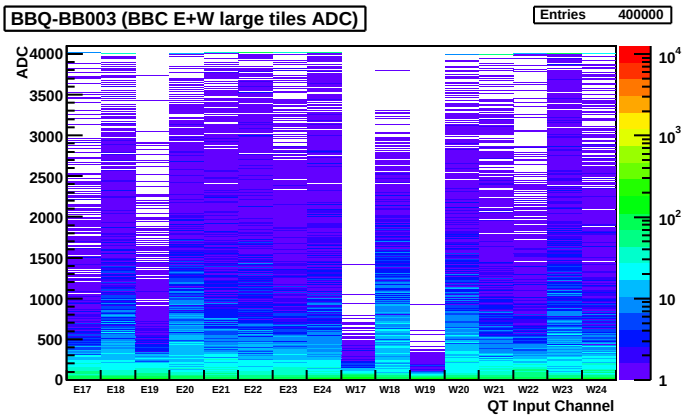

L1-TF201
Entries 150000
Threshold bits
1
0
2061
2097
1935
1813
2008
1797
22939
22903
23065
23187
22992
23203
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

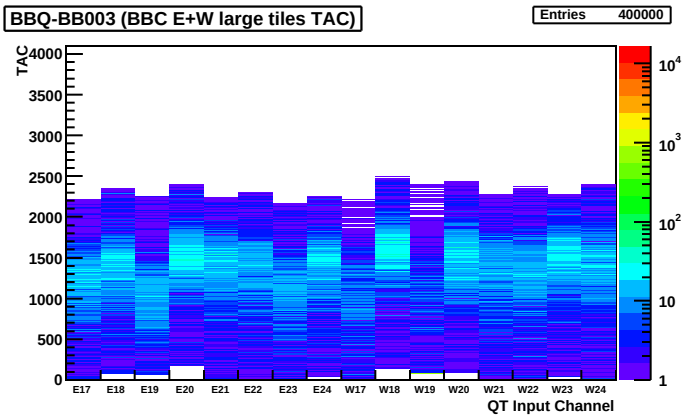

BBQ-BB001 (BBC east small tiles ADC)
Entries 400000
ADC
QT Input Channel

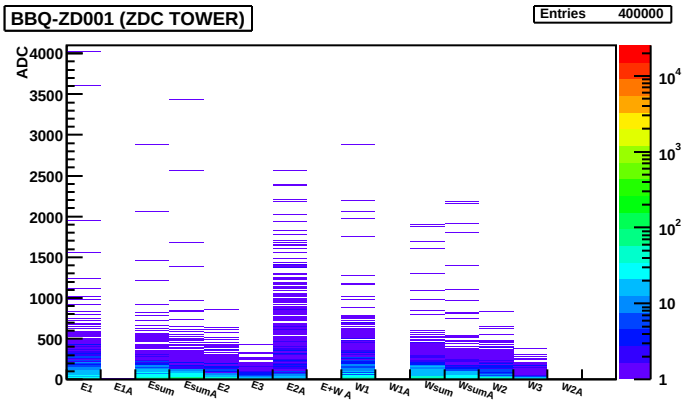

BBQ-BB001 (BBC east small tiles TAC)
Entries 400000
TAC
QT Input Channel

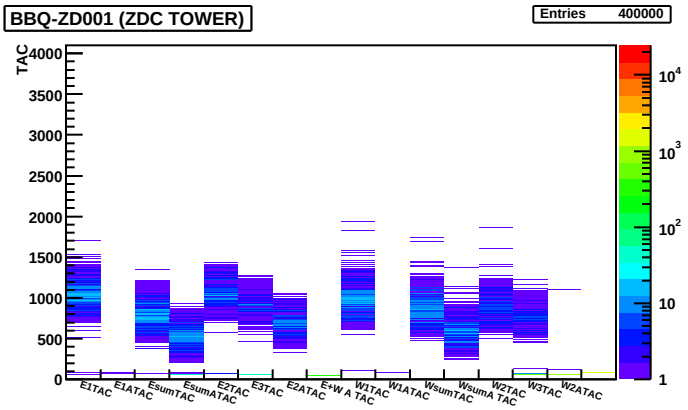

BBQ-BB002 (BBC west small tiles ADC)
Entries 400000
ADC
QT Input Channel

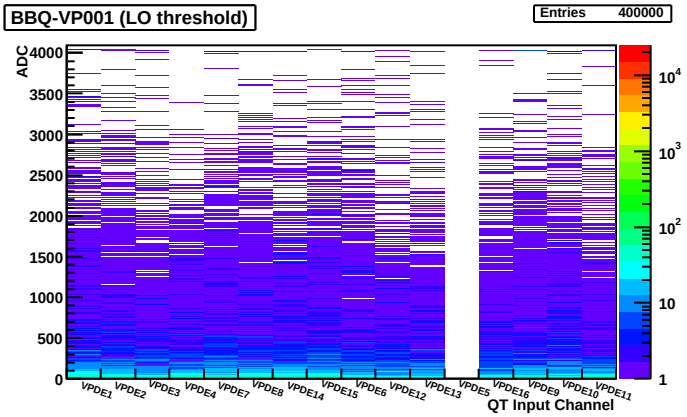

BBQ-BB002 (BBC west small tiles TAC)
Entries 400000
TAC
QT Input Channel

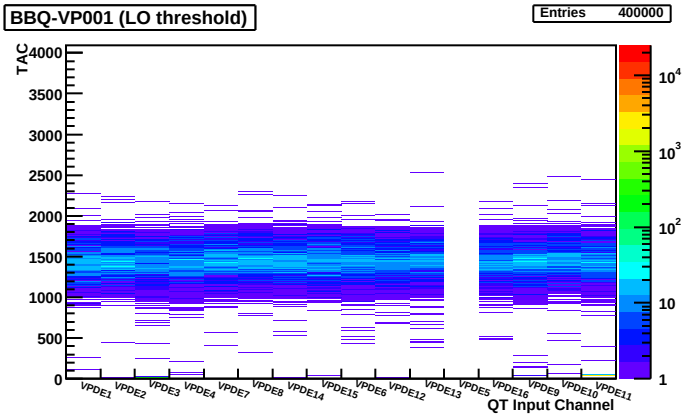

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 400000
ADC
QT Input Channel

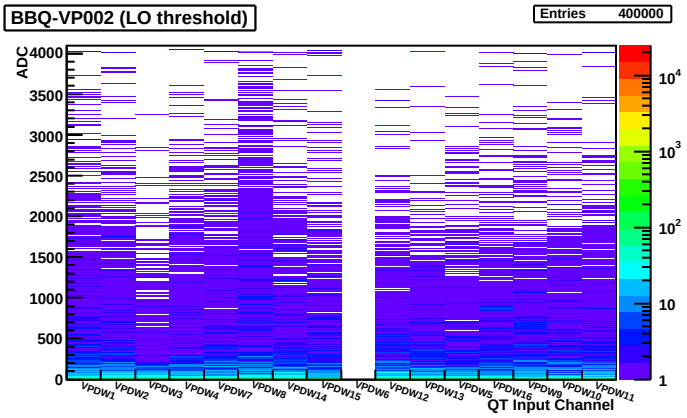

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 400000
TAC
QT Input Channel

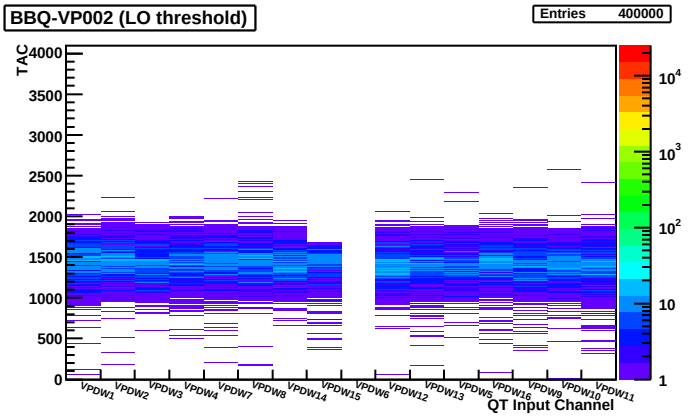

BBQ-ZD001 (ZDC TOWER)
Entries 400000
ADC

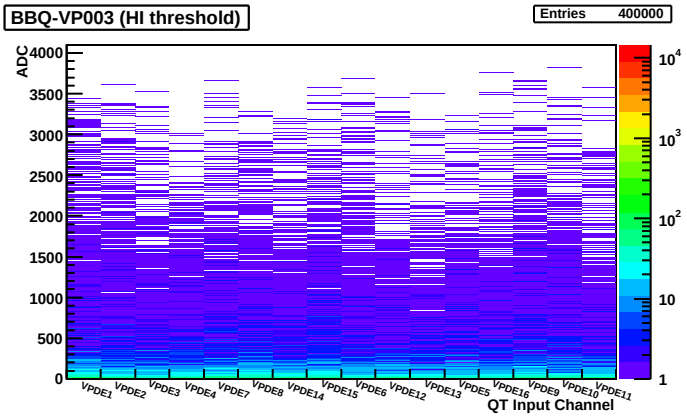

BBQ-ZD001 (ZDC TOWER)
Entries 400000
TAC

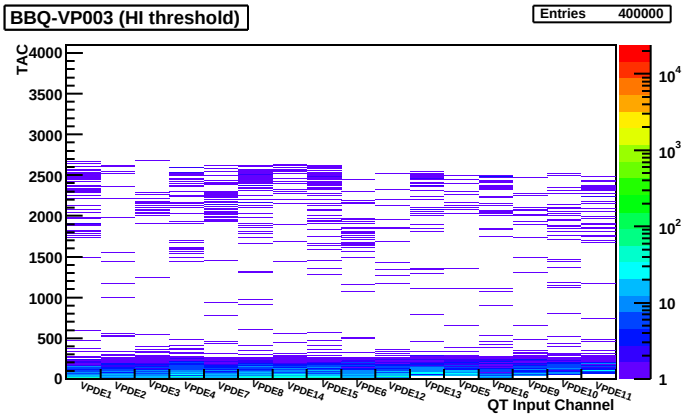

BBQ-VP001 (LO threshold)
Entries 400000
ADC
QT Input Channel

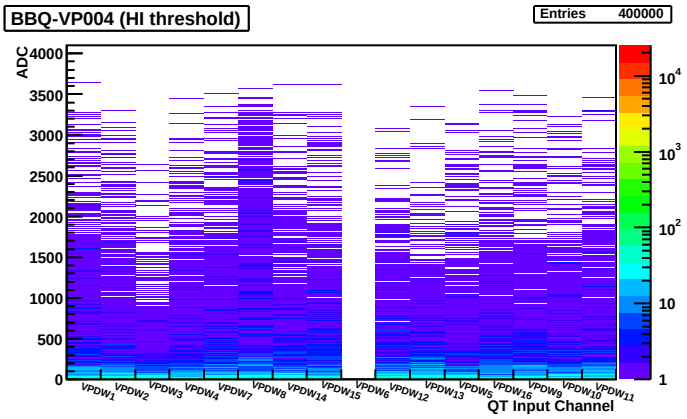

BBQ-VP001 (LO threshold)
Entries 400000
TAC
QT Input Channel

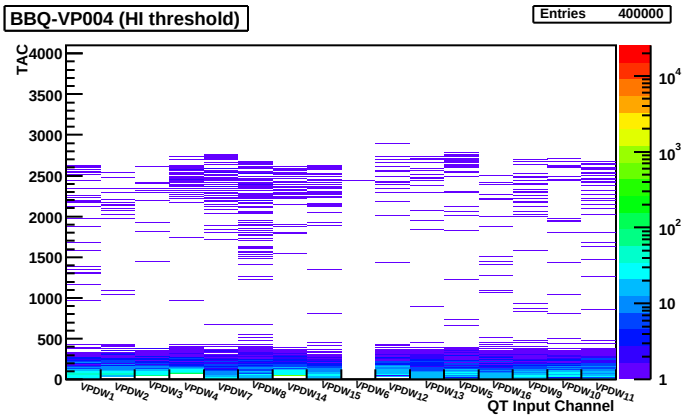

BBQ-VP002 (LO threshold)
Entries 400000
ADC
QT Input Channel

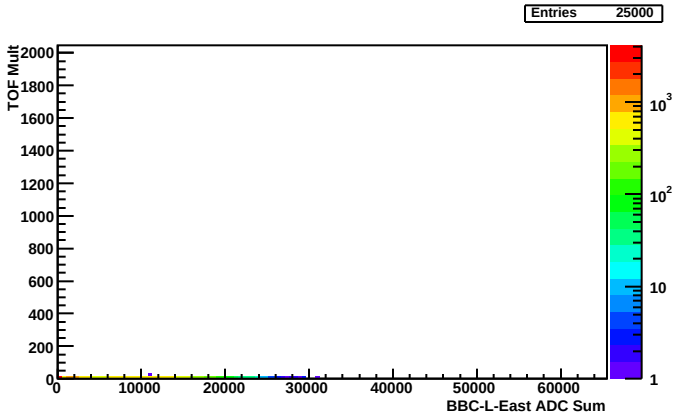

BBQ-VP002 (LO threshold)
Entries 400000
TAC
QT Input Channel

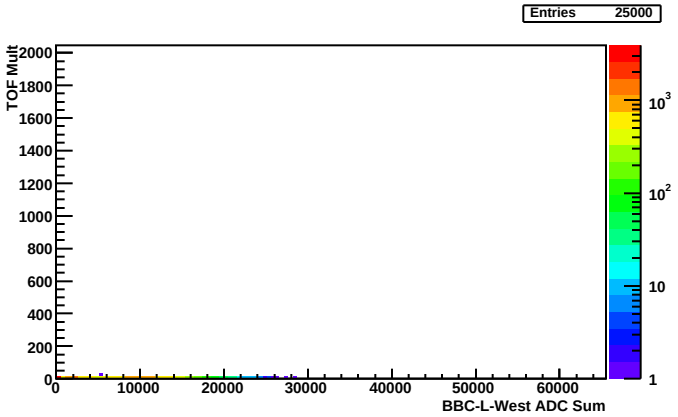

BBQ-VP003 (HI threshold)
Entries 400000
ADC
QT Input Channel

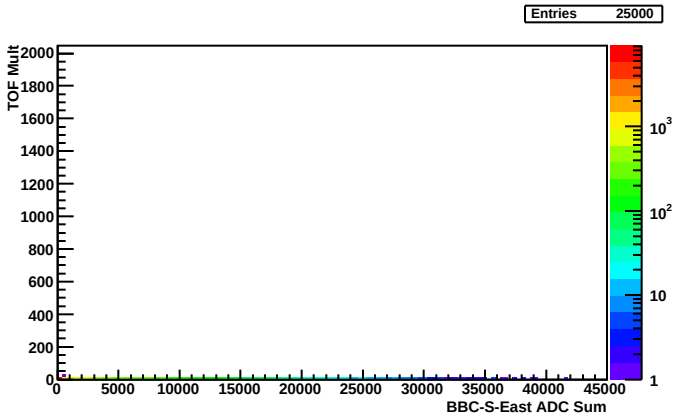

BBQ-VP003 (HI threshold)
Entries 400000
TAC
QT Input Channel

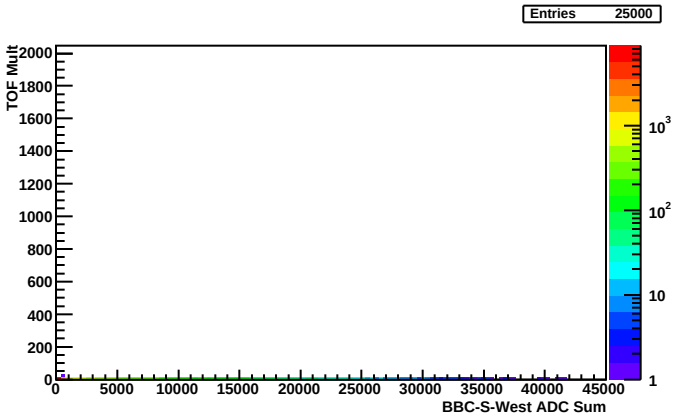

BBQ-VP004 (HI threshold)
Entries 400000
ADC
QT Input Channel

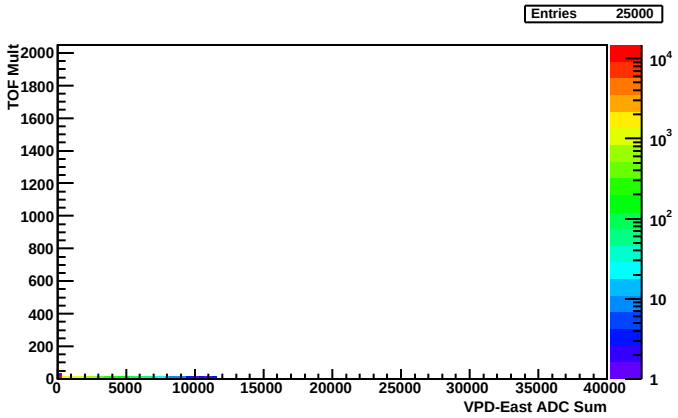

BBQ-VP004 (HI threshold)
Entries 400000
TAC
QT Input Channel

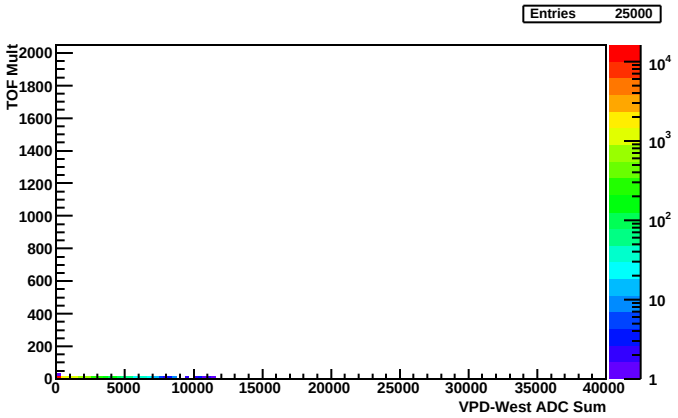

Entries 25000
TOF Mult
BBC-L-East ADC Sum

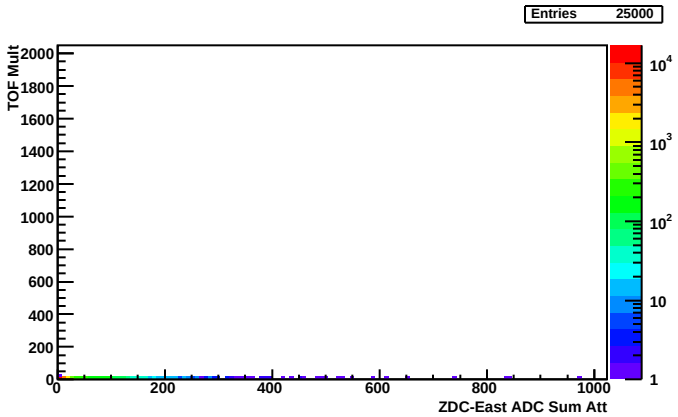

Entries 25000
TOF Mult
BBC-L-West ADC Sum

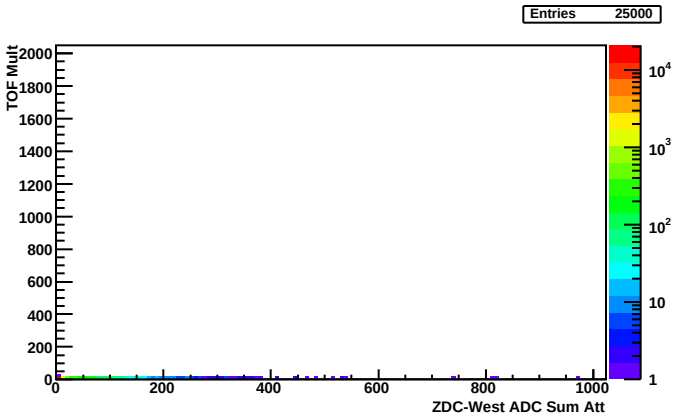

Entries 25000
TOF Mult
BBC-S-East ADC Sum

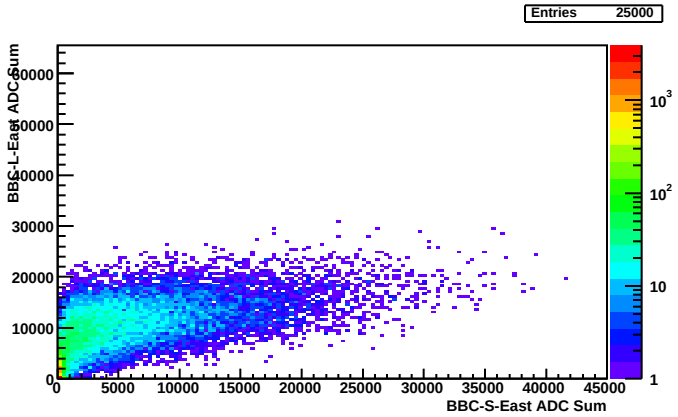

Entries 25000
TOF Mult
BBC-S-West ADC Sum

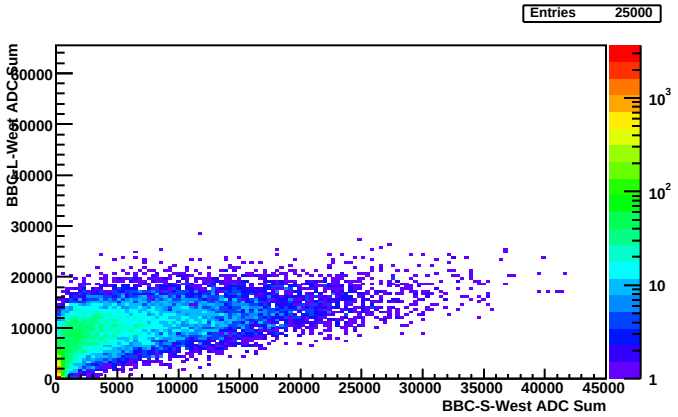

Entries 25000
TOF Mult
VPD-East ADC Sum

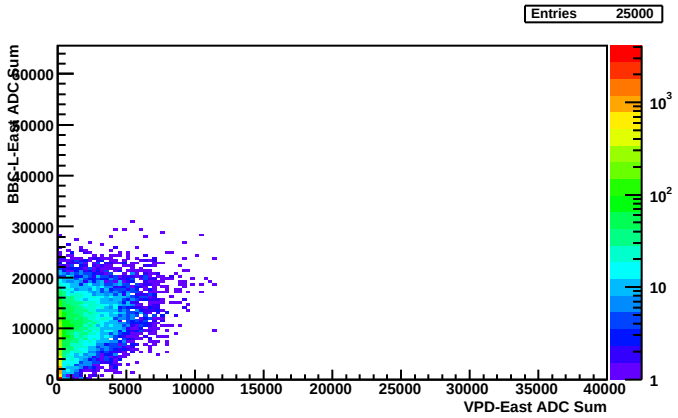

Entries 25000
TOF Mult
VPD-West ADC Sum

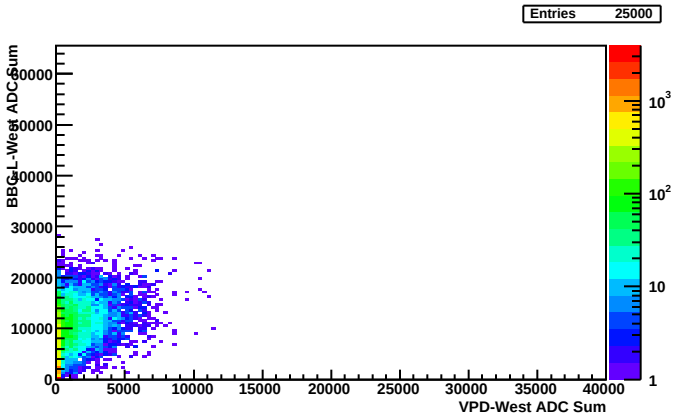

Entries 25000
TOF Mult
ZDC-East ADC Sum Att

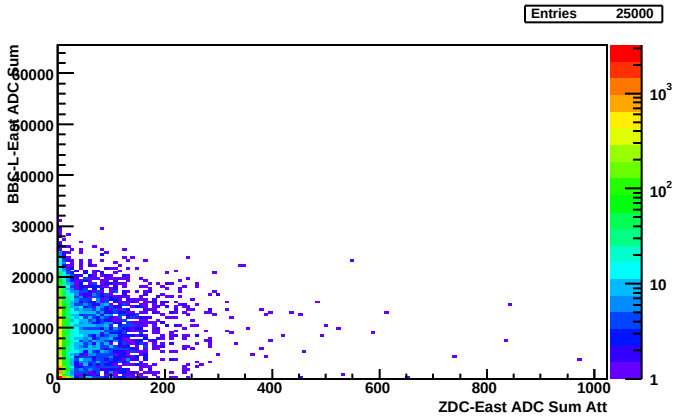

Entries 25000
TOF Mult
ZDC-West ADC Sum Att

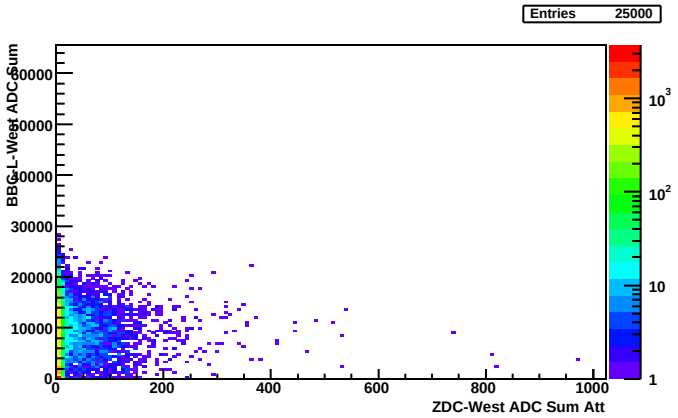

Entries 25000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

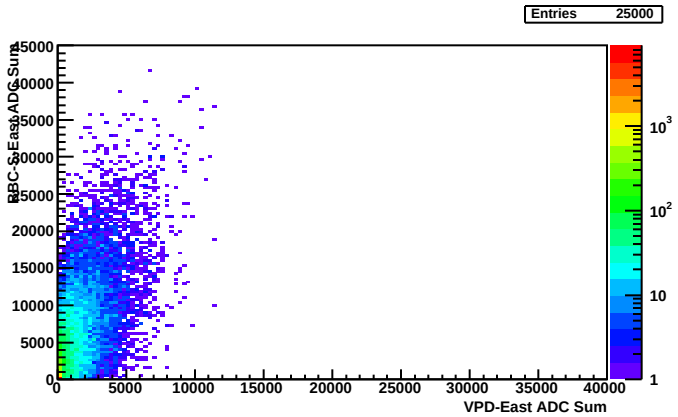

Entries 25000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

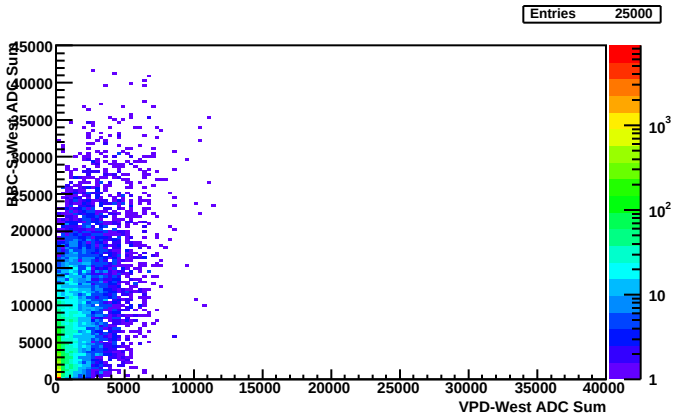

Entries 25000
BBC-L-East ADC Sum
VPD-East ADC Sum

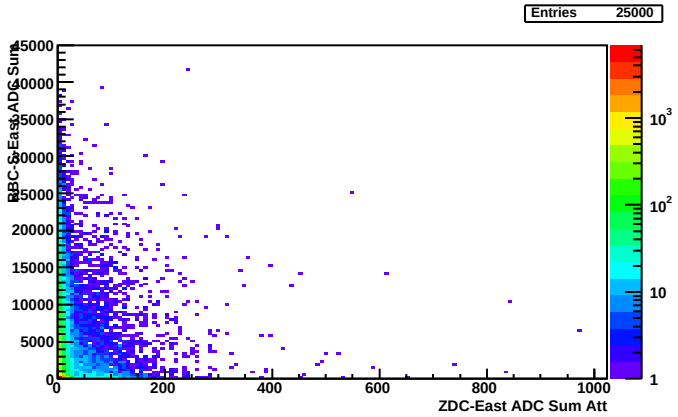

Entries 25000
BBC-L-West ADC Sum
VPD-West ADC Sum

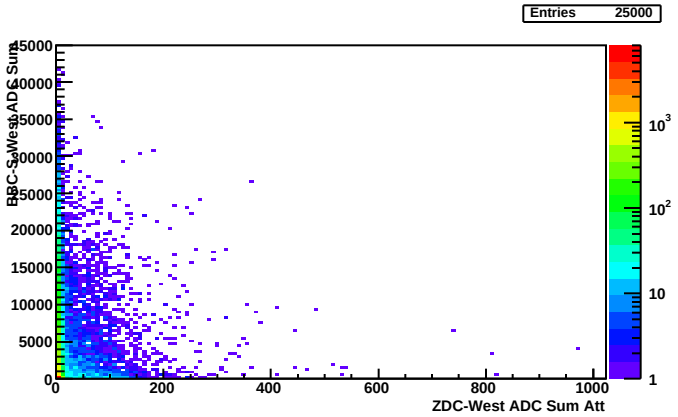

Entries 25000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

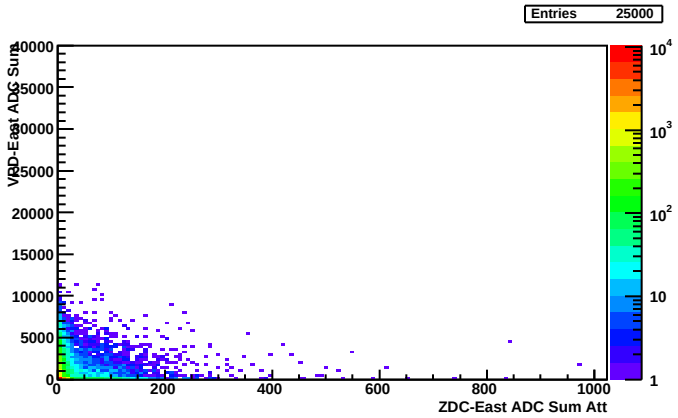

Entries 25000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

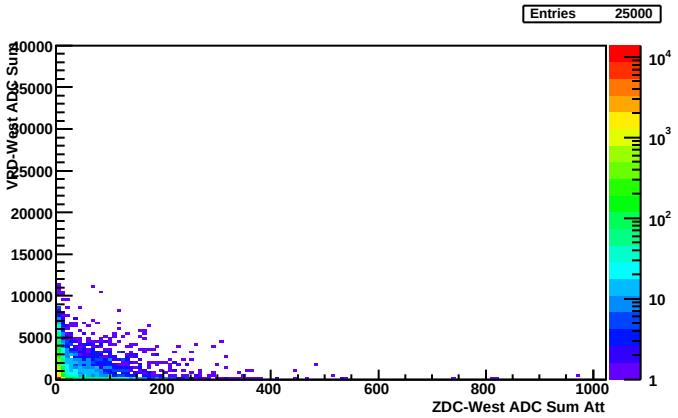

Entries 25000
BBC-S-East ADC Sum
VPD-East ADC Sum

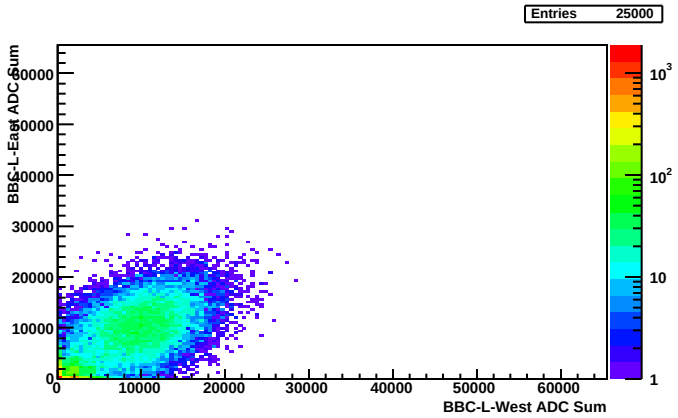

Entries 25000
BBC-S-West ADC Sum
VPD-West ADC Sum

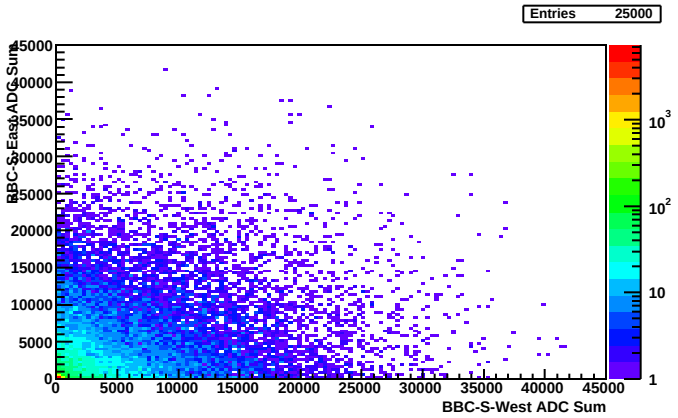

Entries 25000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

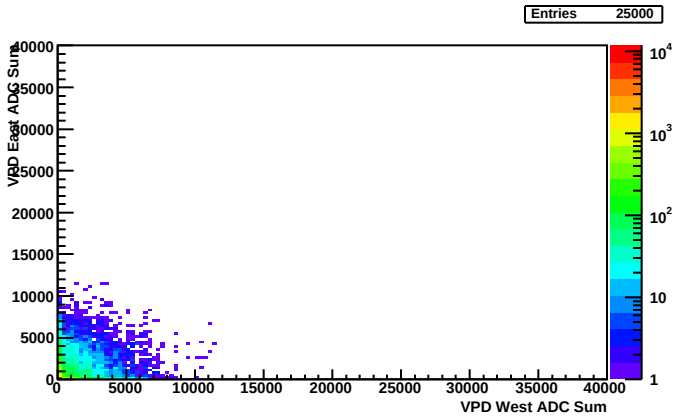

Entries 25000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

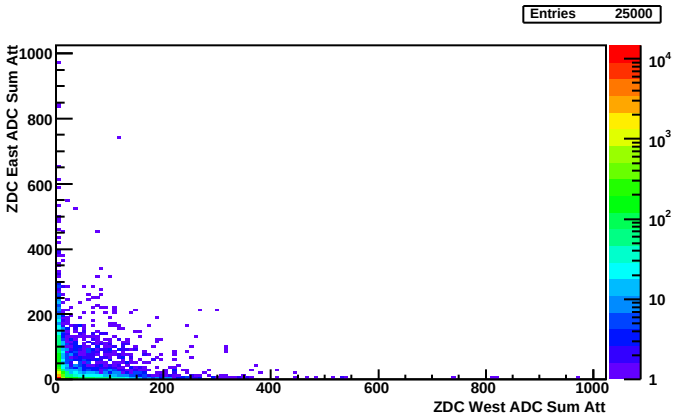

Entries 25000
VPD-East ADC Sum
ZDC-East ADC Sum Att

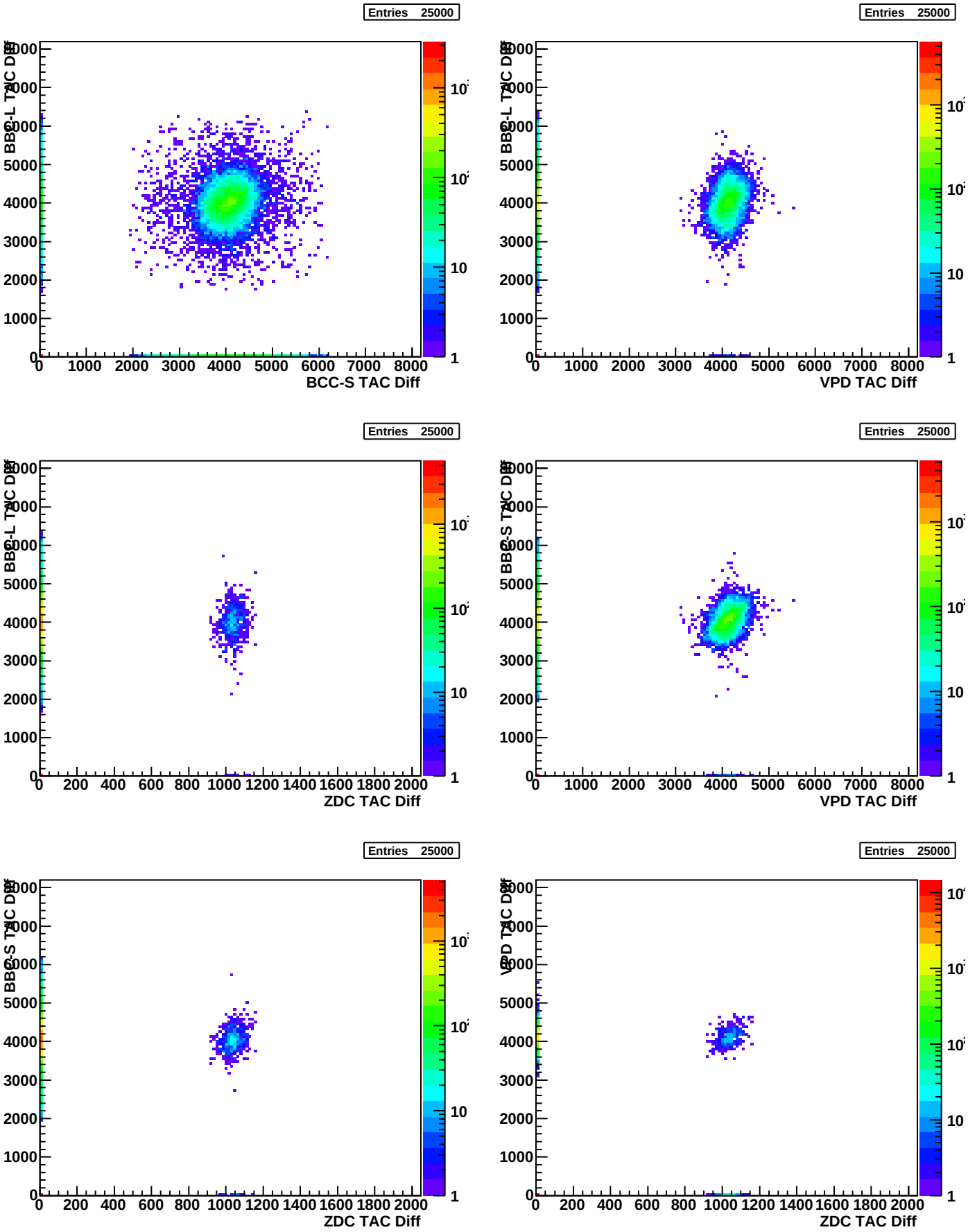

Entries 25000
VPD-West ADC Sum
ZDC-West ADC Sum Att

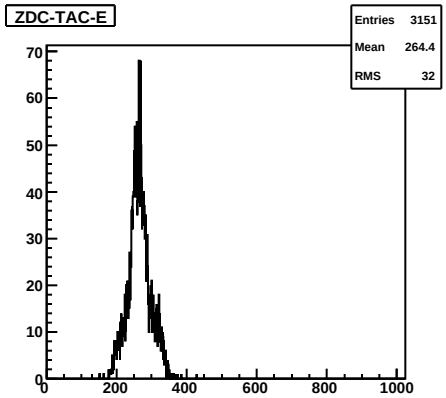

Entries 25000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

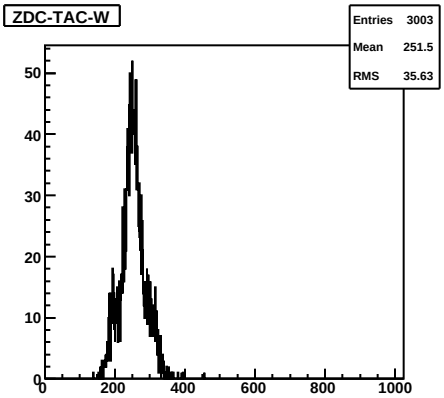

Entries 25000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

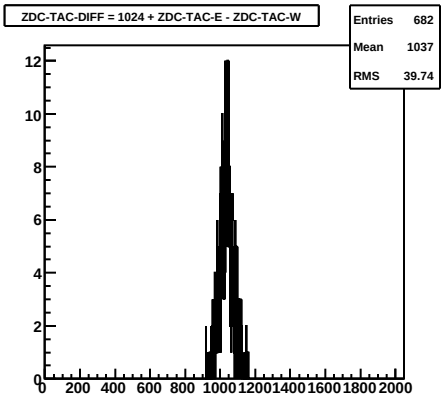

Entries 25000
VPD East ADC Sum
VPD West ADC Sum

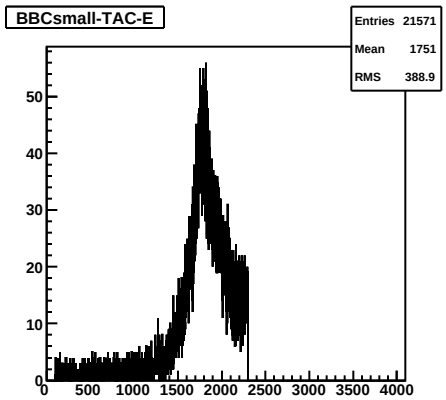

Entries 25000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

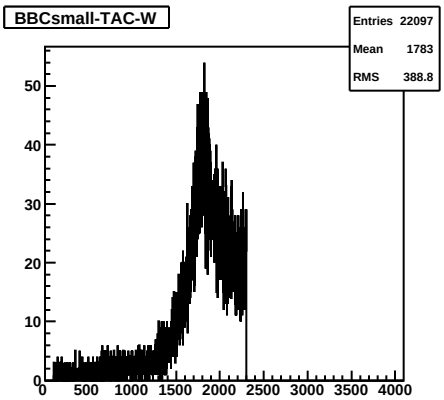

Entries 25000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 25000
BBC-L TAC Diff
VPD TAC Diff
Entries 25000
BBC-L TAC Diff
ZDC TAC Diff
Entries 25000
BBC-S TAC Diff
VPD TAC Diff
Entries 25000
BBC-S TAC Diff
ZDC TAC Diff
Entries 25000
VPD TAC Diff
ZDC TAC Diff

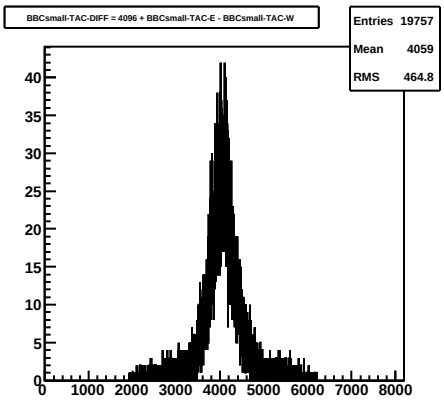

ZDC-TAC-E
Entries 3151
Mean 264.4
RMS 32

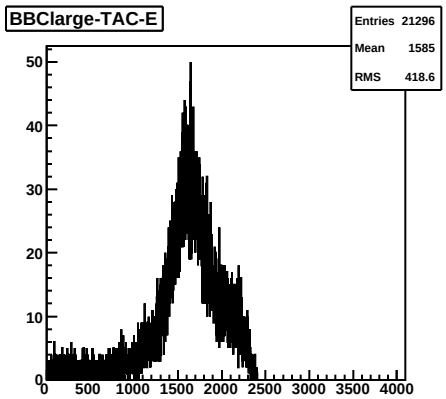

ZDC-TAC-W
Entries 3003
Mean 251.5
RMS 35.63

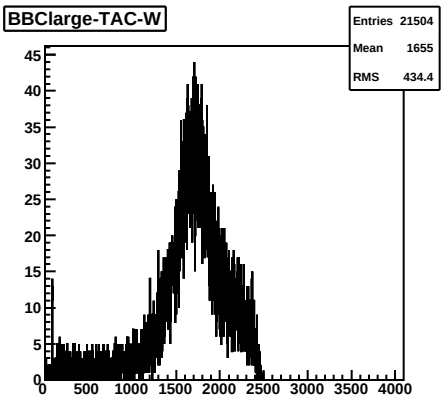

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 682
Mean 1037
RMS 39.74

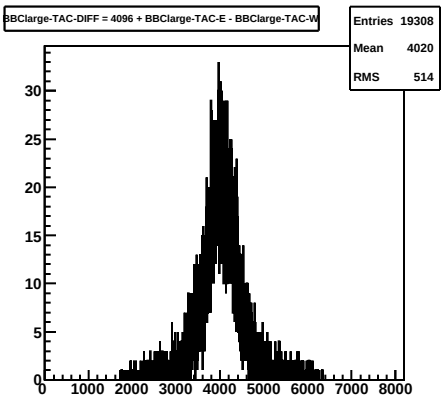

BBCsmall-TAC-E
Entries 21571
Mean 1751
RMS 388.9

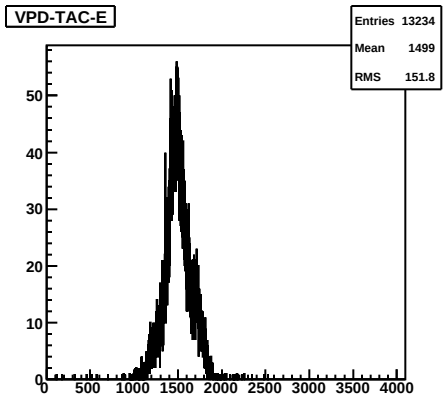

BBCsmall-TAC-W
Entries 22097
Mean 1783
RMS 388.8

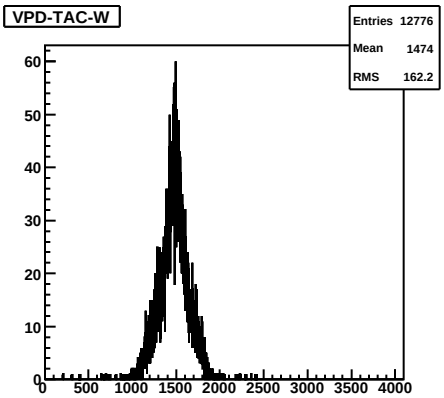

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 19757
Mean 4059
RMS 464.8

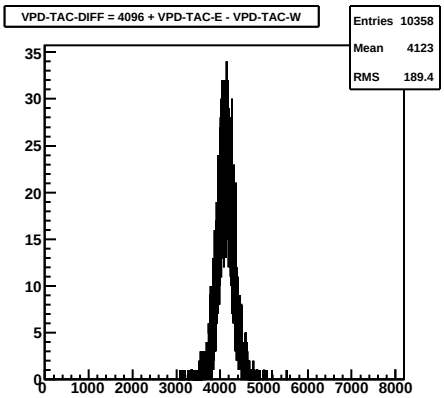

BBClarge-TAC-E
Entries 21296
Mean 1585
RMS 418.6

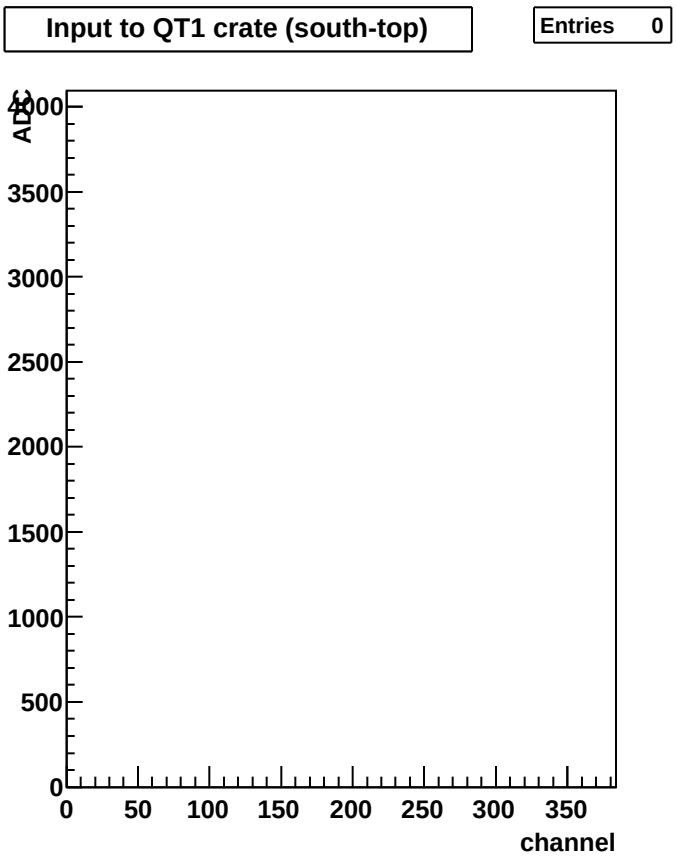

BBClarge-TAC-W
Entries 21504
Mean 1655
RMS 434.4

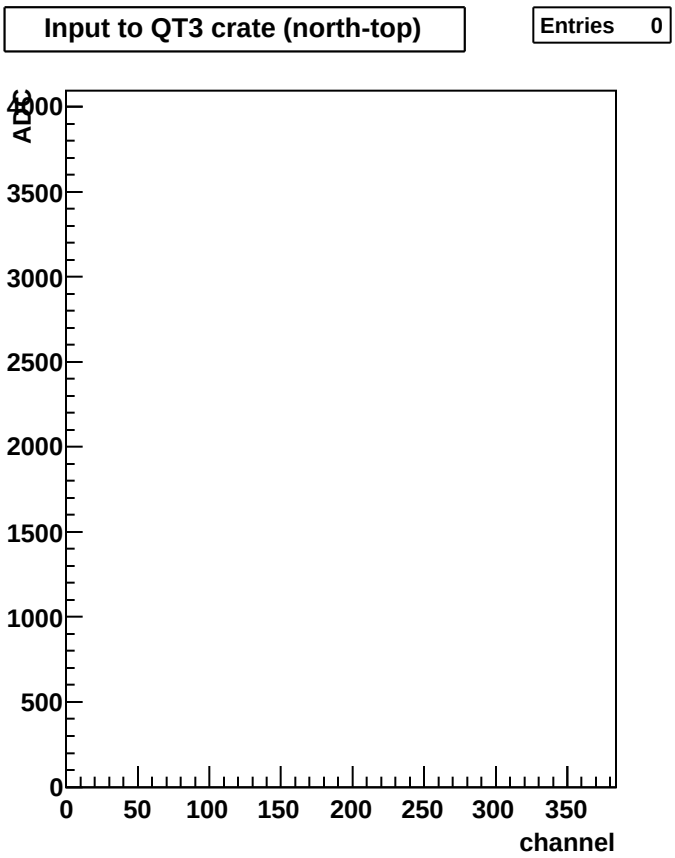

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 19308
Mean 4020
RMS 514

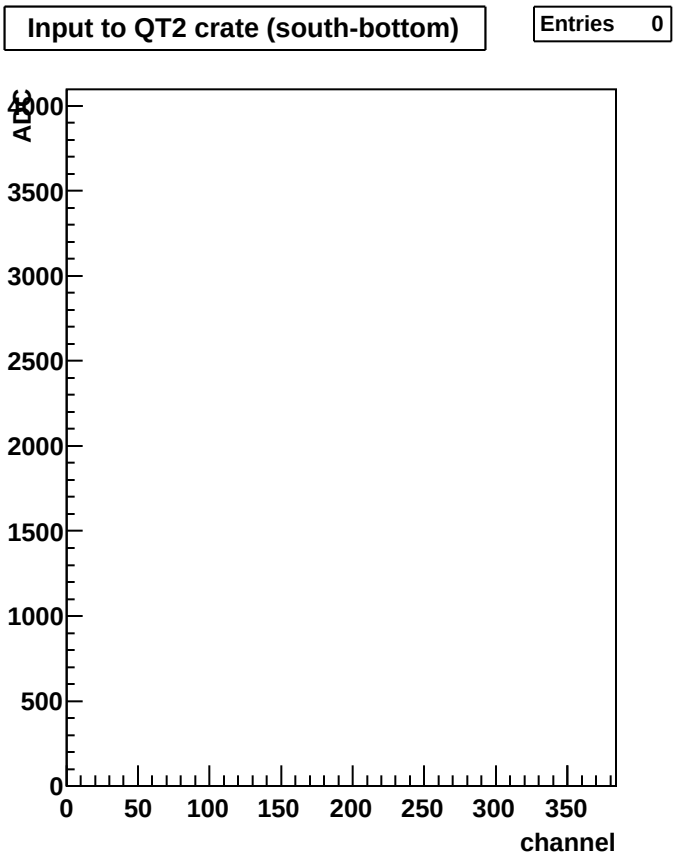

VPD-TAC-E
Entries 13234
Mean 1499
RMS 151.8

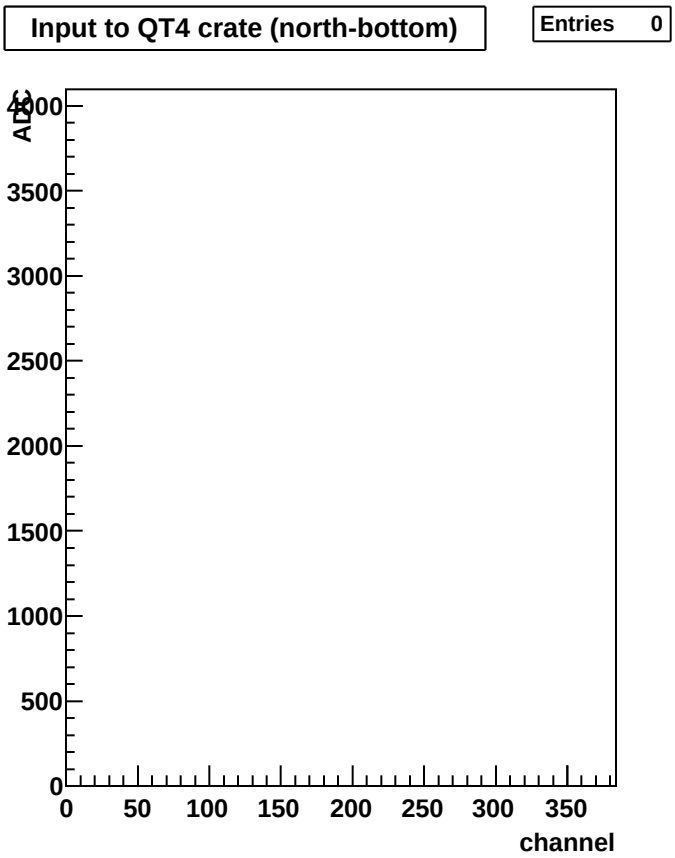

VPD-TAC-W
Entries 12776
Mean 1474
RMS 162.2

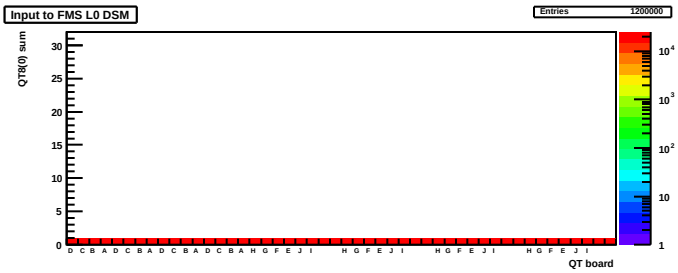

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 10358
Mean 4123
RMS 189.4

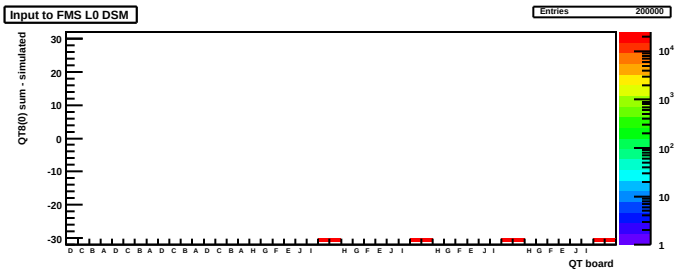

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

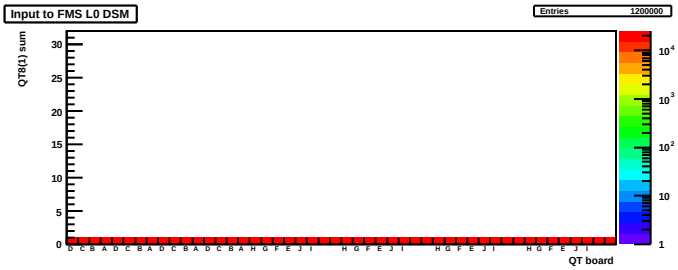

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

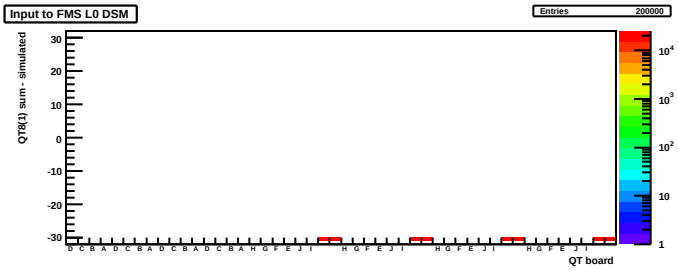

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

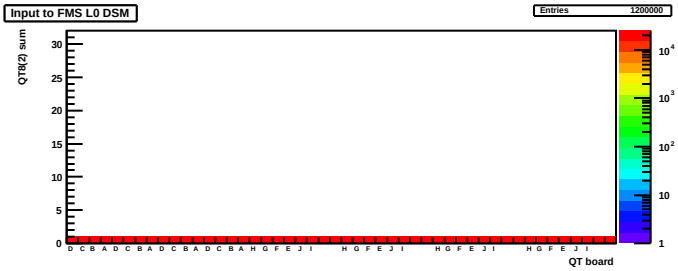

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

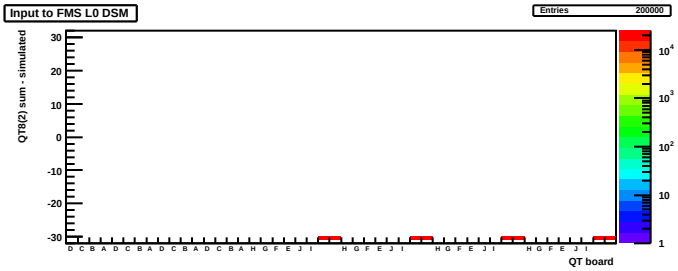

Input to FMS L0 DSM
Entries 1200000
QT8(0) sum
QT board

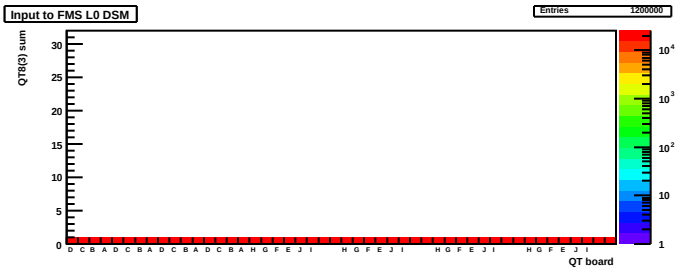

Input to FMS L0 DSM
Entries 200000
QT8(0) sum - simulated
QT board

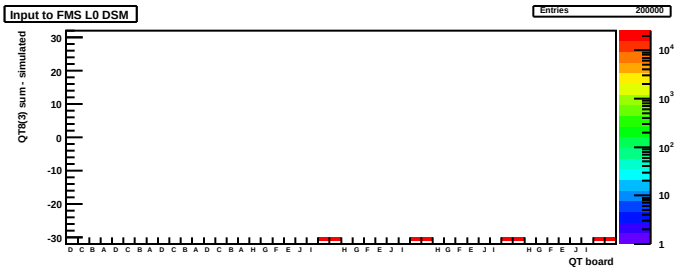

Input to FMS L0 DSM
Entries 1200000
QT8(1) sum
QT board

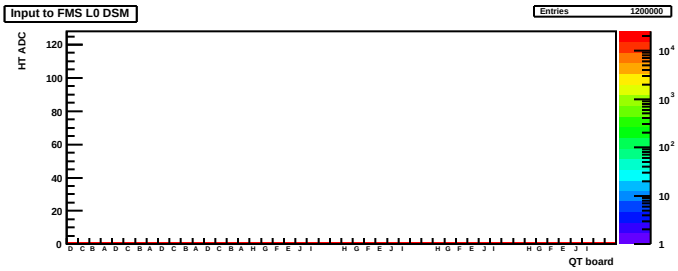

Input to FMS L0 DSM
Entries 200000
QT8(1) sum - simulated
QT board

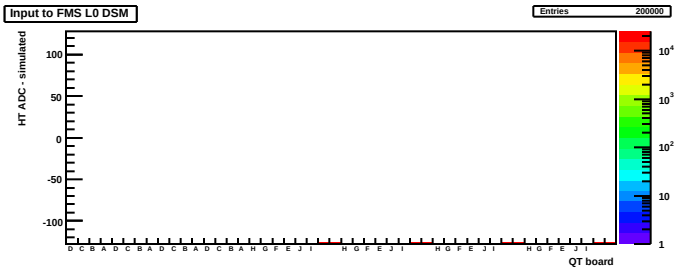

Input to FMS L0 DSM
Entries 1200000
QT8(2) sum
QT board

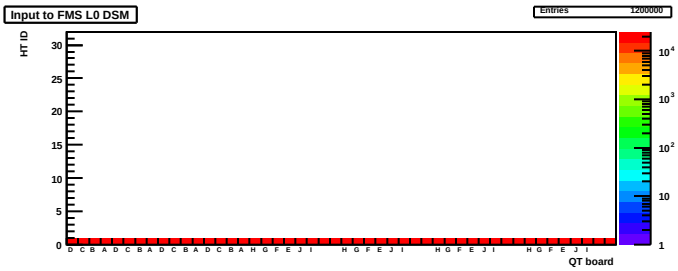

Input to FMS L0 DSM
Entries 200000
QT8(2) sum - simulated
QT board

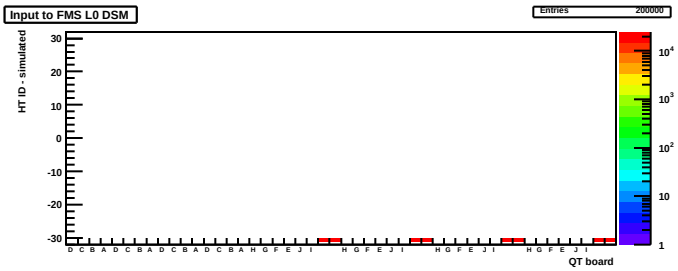

Input to FMS L0 DSM
Entries 1200000
QT8(3) sum
QT board

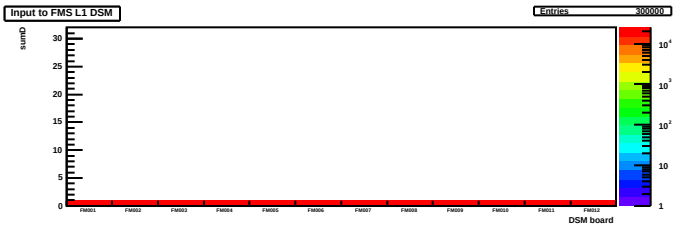

Input to FMS L0 DSM
Entries 200000
QT8(3) sum - simulated
QT board

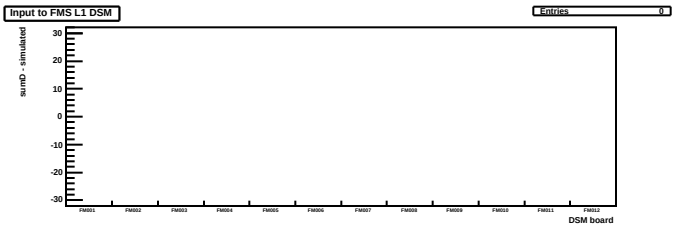

Input to FMS L0 DSM
Entries 1200000
HT ADC
QT board

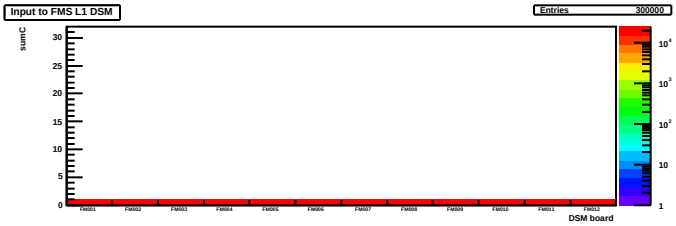

Input to FMS L0 DSM
Entries 200000
HT ADC - simulated
QT board

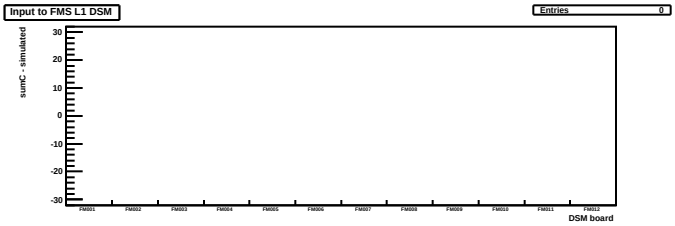

Input to FMS L0 DSM
Entries 1200000
HT ID
QT board

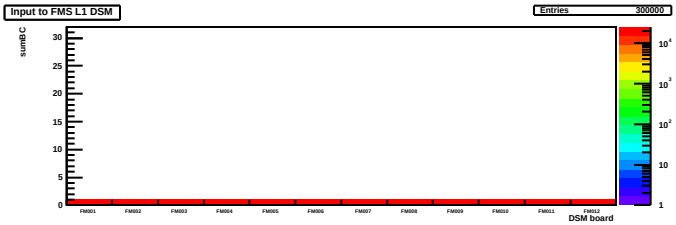

Input to FMS L0 DSM
Entries 200000
HT ID - simulated
QT board

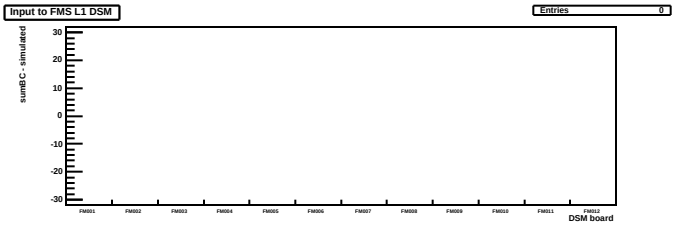

Input to FMS L1 DSM
Entries 300000
sumD
DSM board

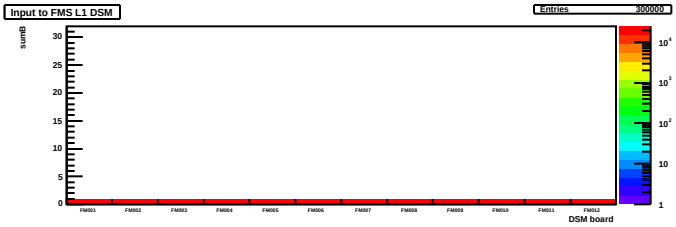

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

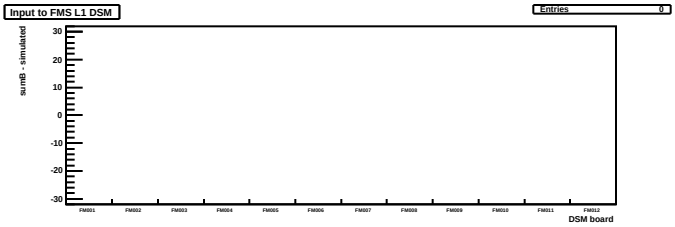

Input to FMS L1 DSM
Entries 300000
sumC
DSM board

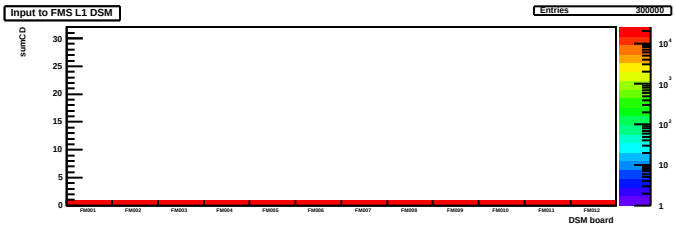

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

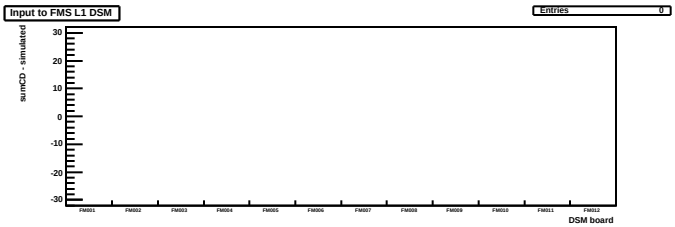

Input to FMS L1 DSM
Entries 300000
sumBC
DSM board

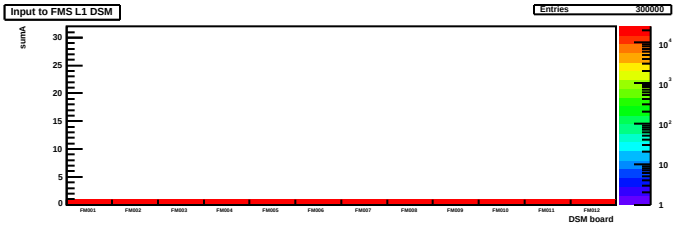

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

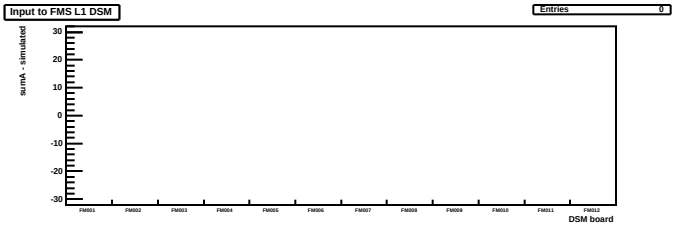

Input to FMS L1 DSM
Entries 300000
sumB
DSM board

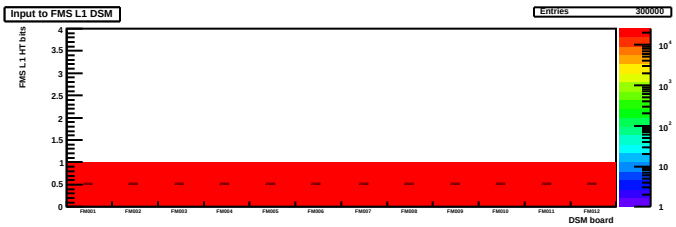

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

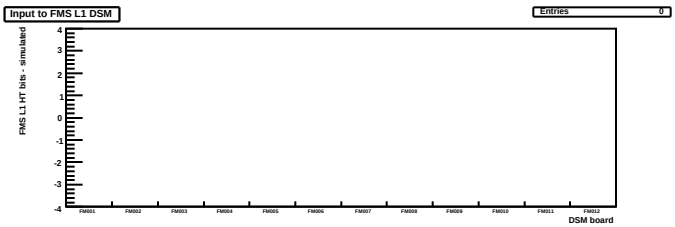

Input to FMS L1 DSM
Entries 300000
sumCD
DSM board

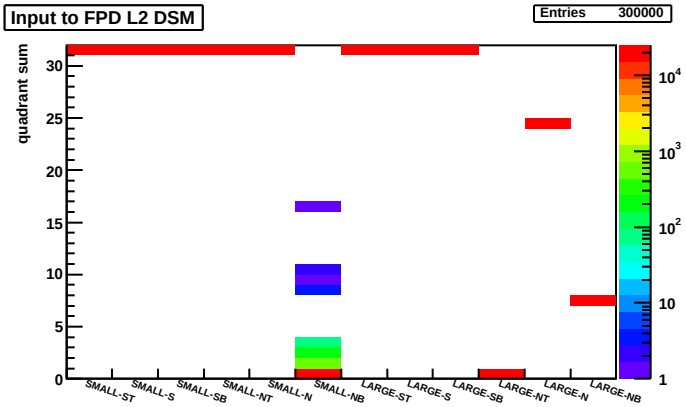

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

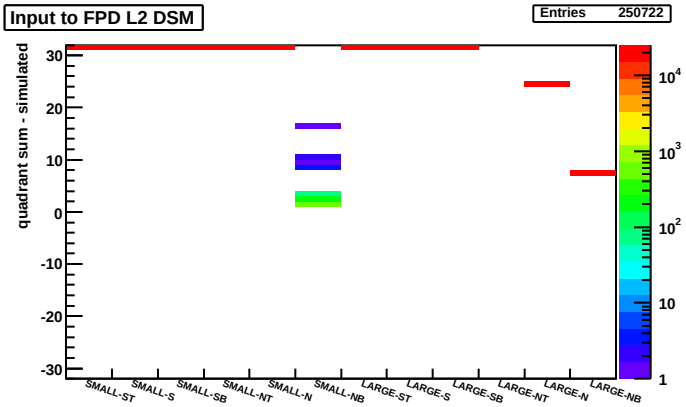

Input to FMS L1 DSM
Entries 300000
sumA
DSM board

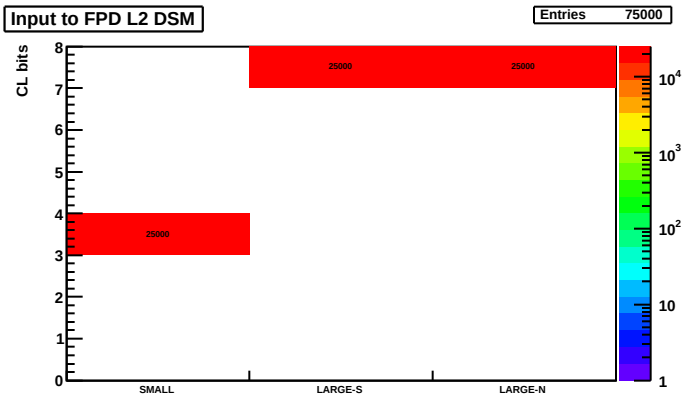

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

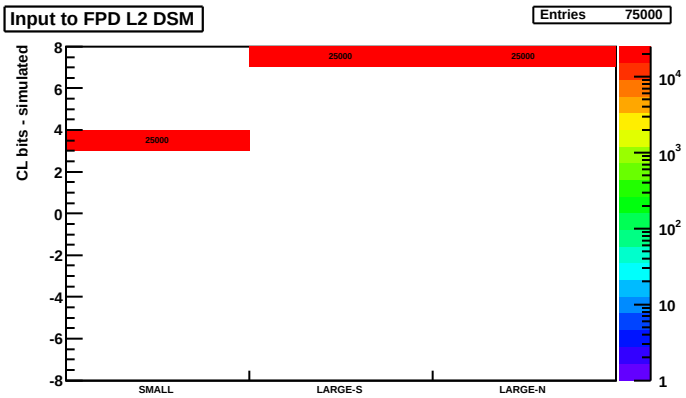

Input to FMS L1 DSM
Entries 300000
FMS L1 HT bits
DSM board

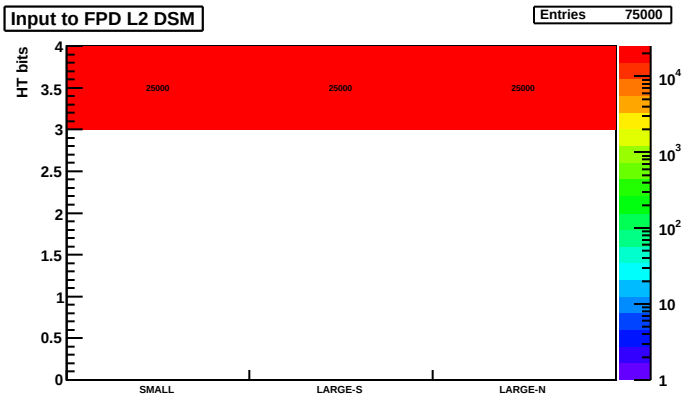

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

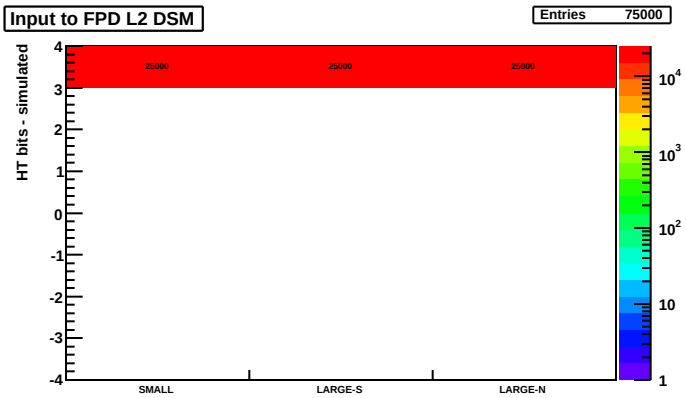

Input to FPD L2 DSM
Entries 300000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

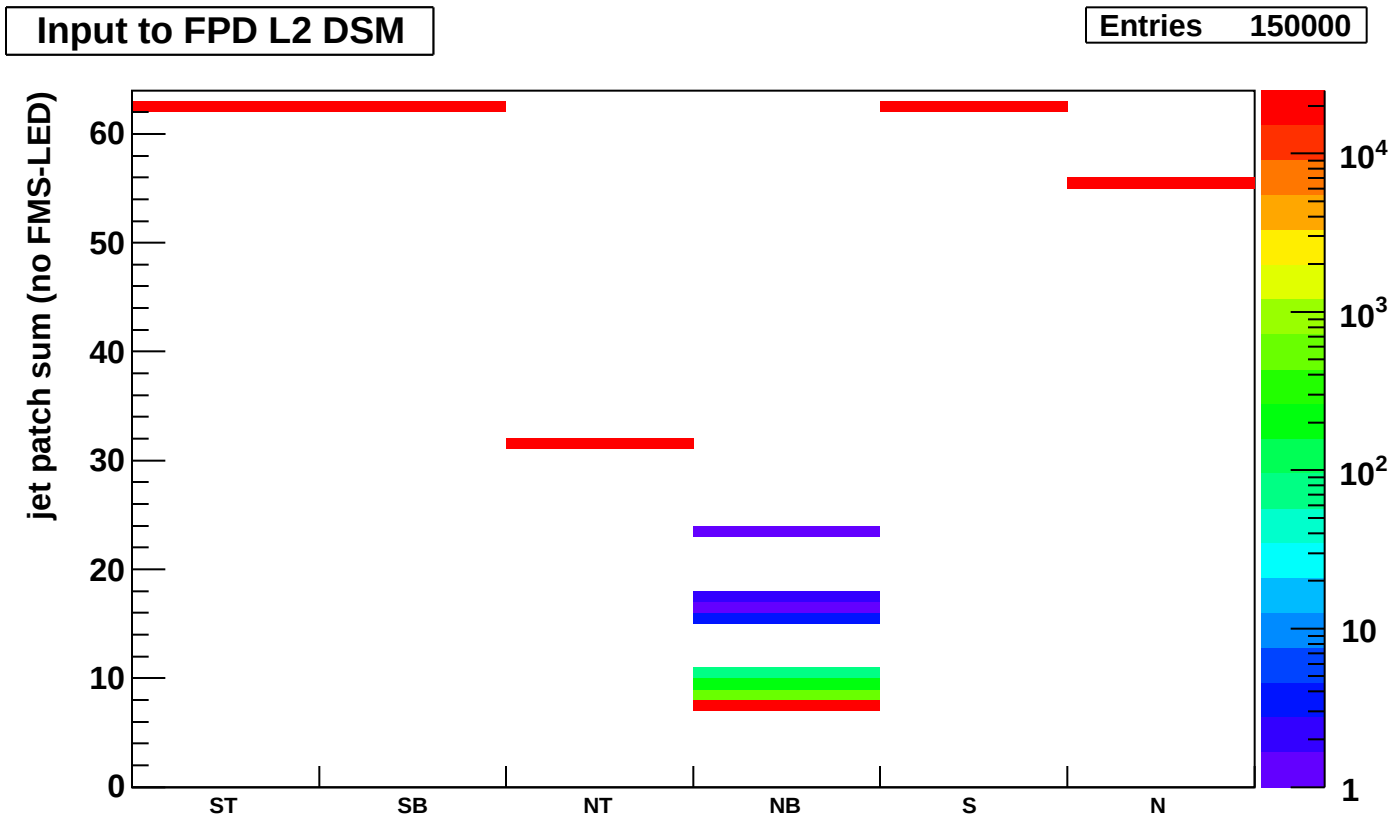

Input to FPD L2 DSM
Entries 250722
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

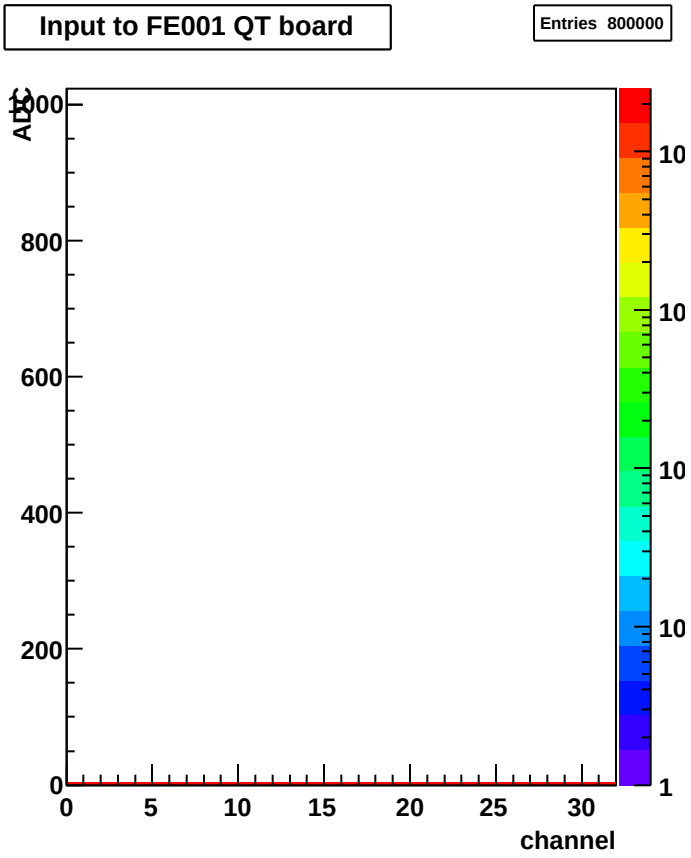

Input to FPD L2 DSM
Entries 75000
CL bits
25000
25000
25000
SMALL
LARGE-S
LARGE-N

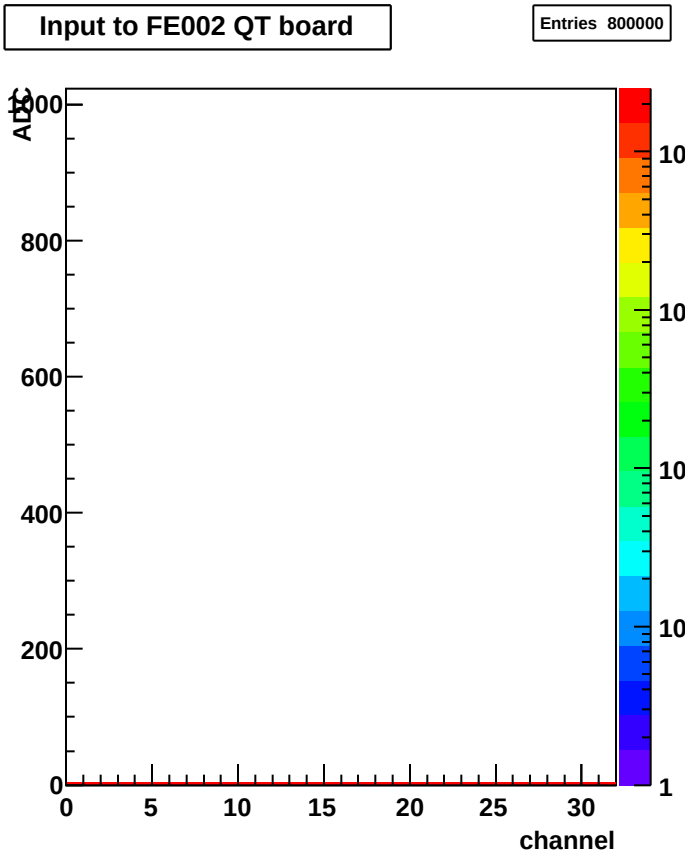

Input to FPD L2 DSM
Entries 75000
CL bits - simulated
25000
25000
25000
SMALL
LARGE-S
LARGE-N

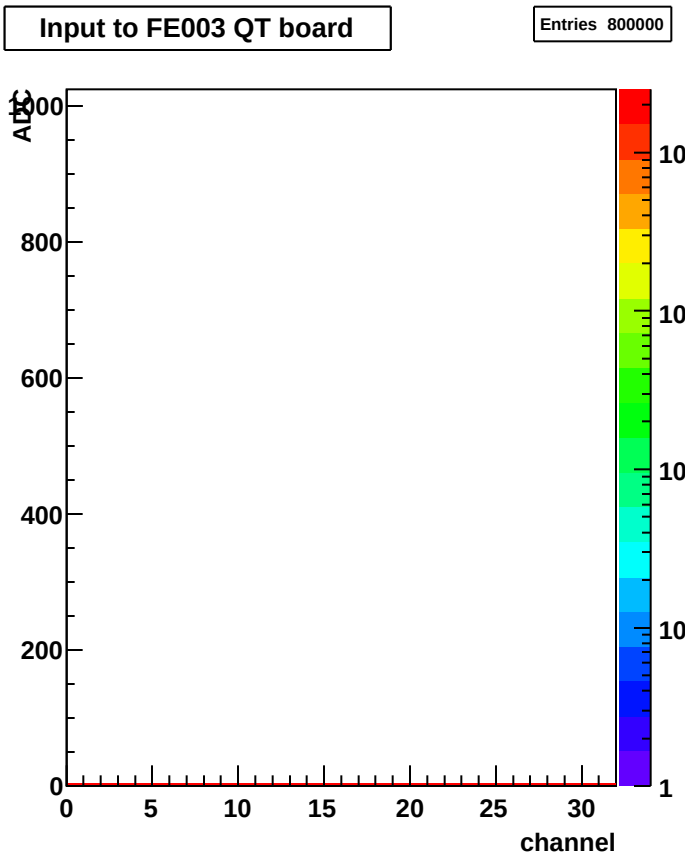

Input to FPD L2 DSM
Entries 75000
HT bits
25000
25000
25000
SMALL
LARGE-S
LARGE-N

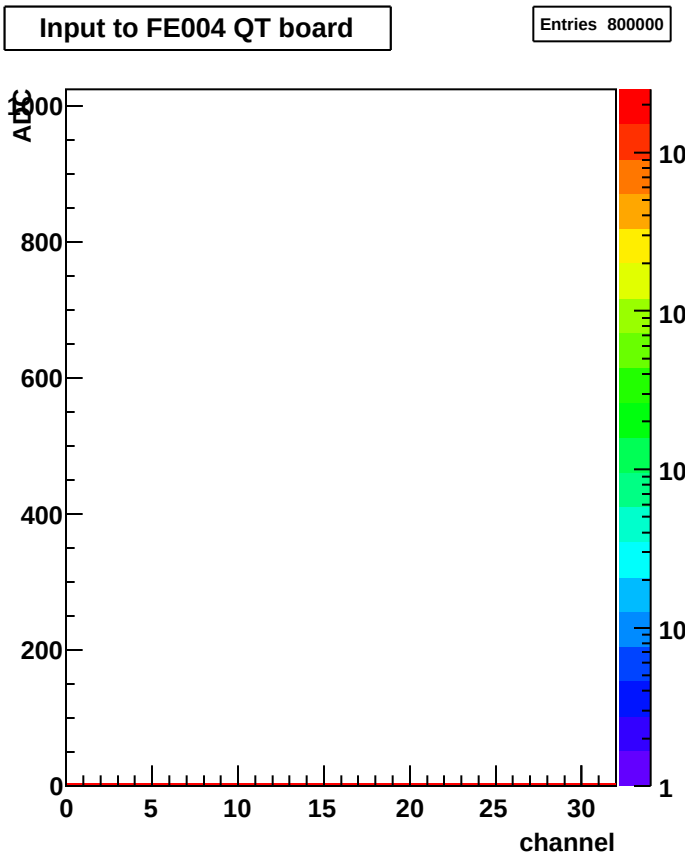

Input to FPD L2 DSM
Entries 75000
HT bits - simulated
25000
25000
25000
SMALL
LARGE-S
LARGE-N

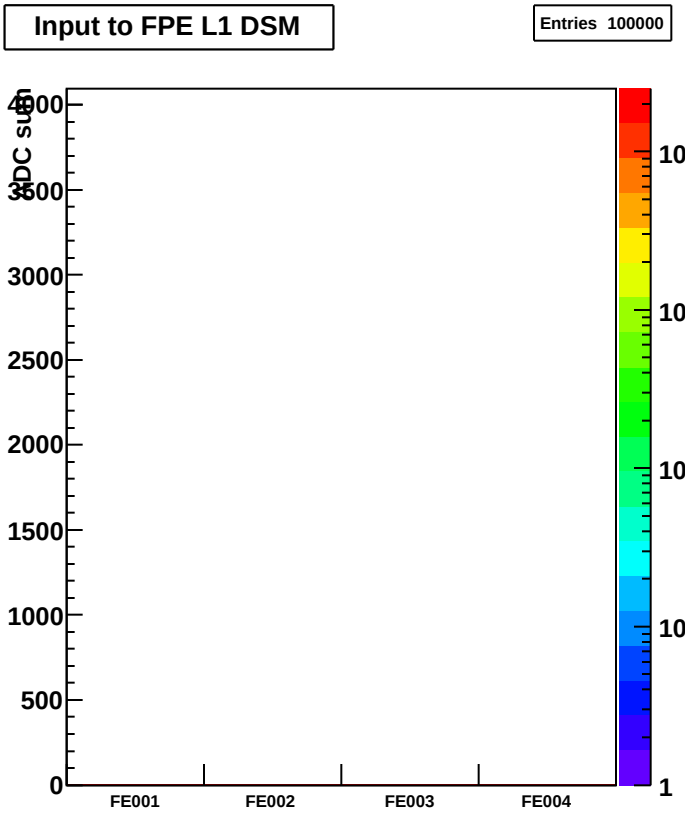

Input to FPD L2 DSM
Entries 150000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

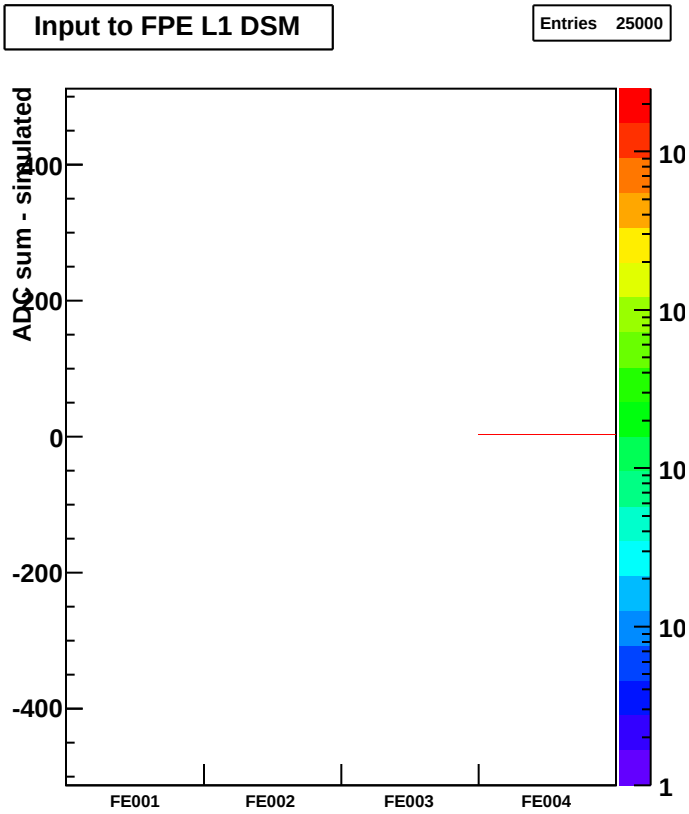

Input to FE001 QT board
Entries 800000
ADC
channel

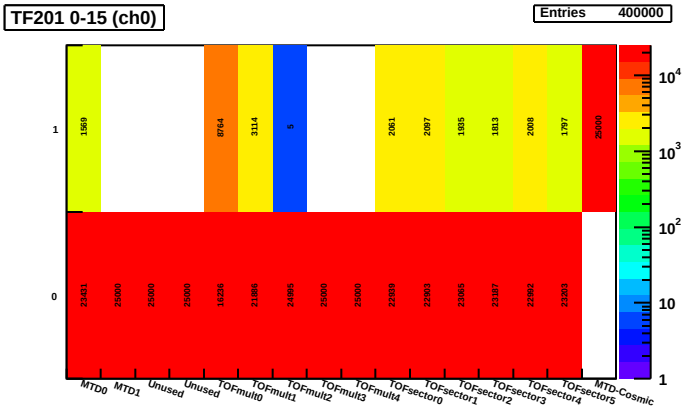

Input to FE002 QT board
Entries 800000
ADC
channel

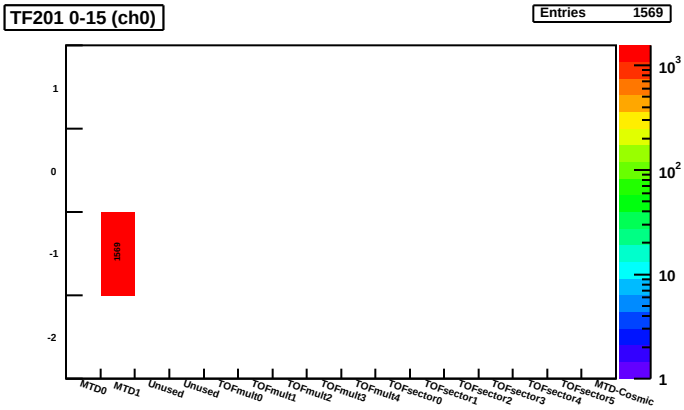

Input to FE003 QT board
Entries 800000
ADC
channel

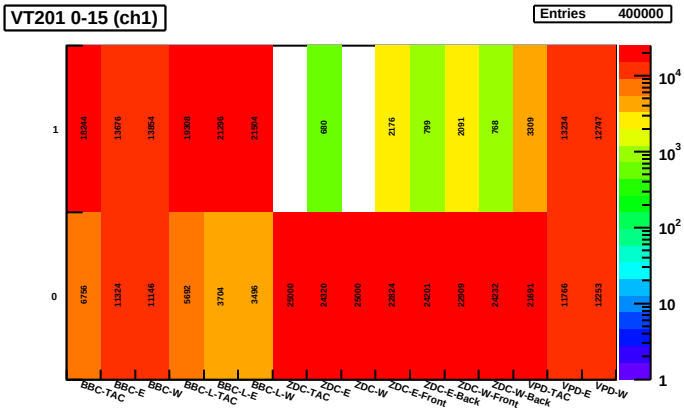

Input to FE004 QT board
Entries 800000
ADC
channel

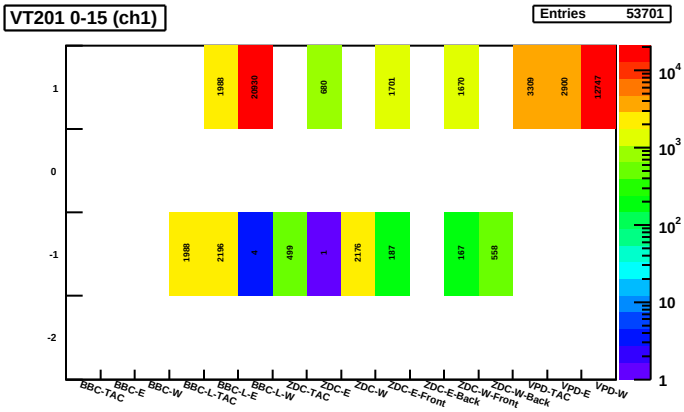

Input to FPE L1 DSM
Entries 100000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


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 1569
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 53701
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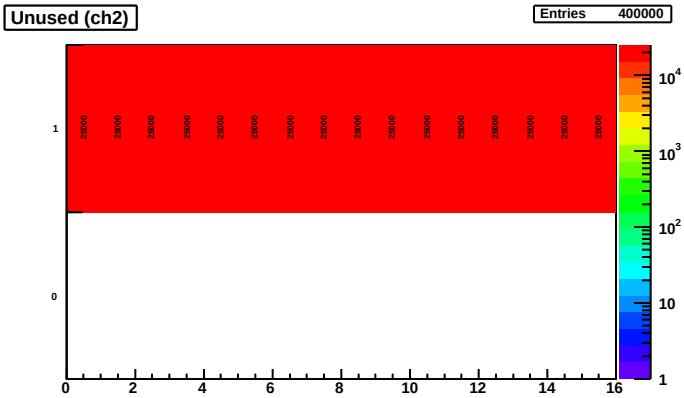
Unused (ch2)
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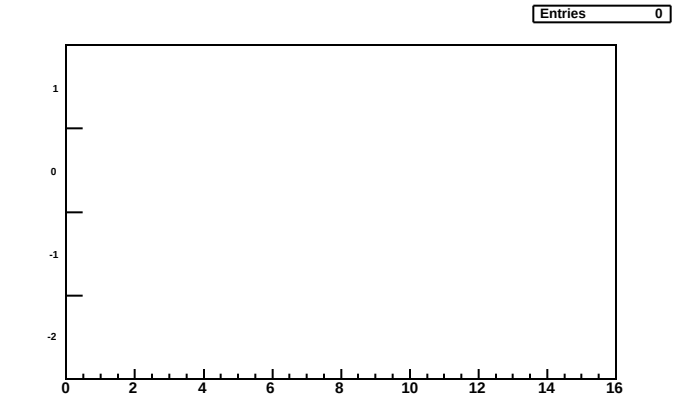
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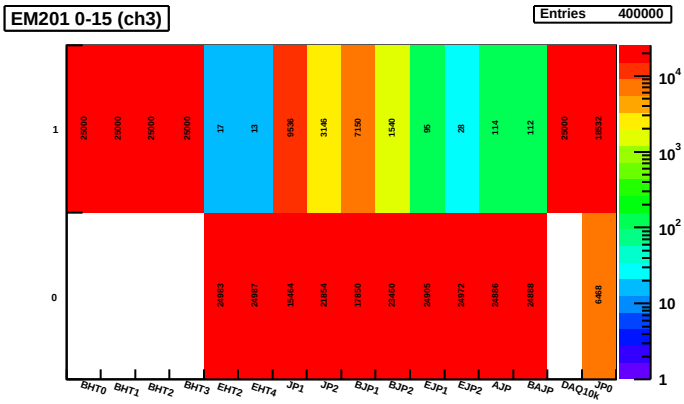
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Entries 400000
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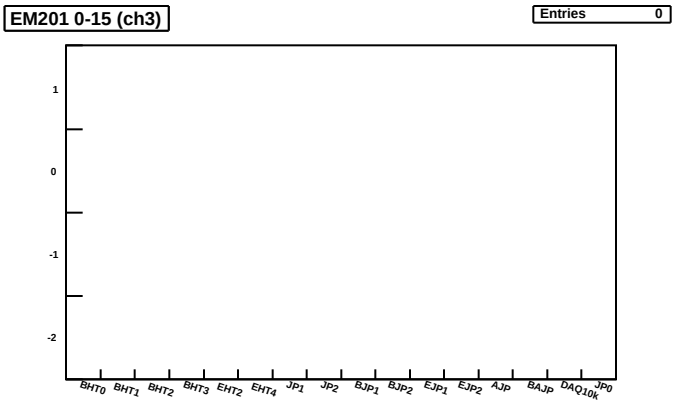
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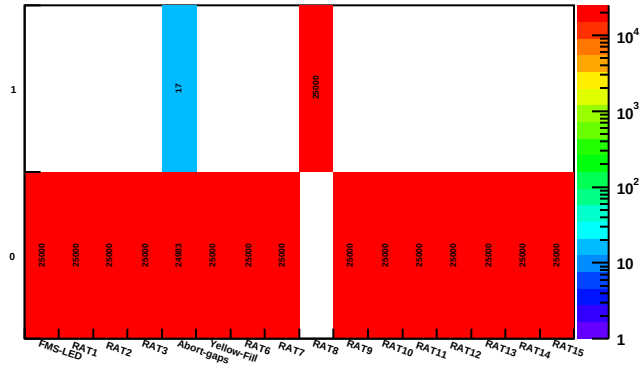
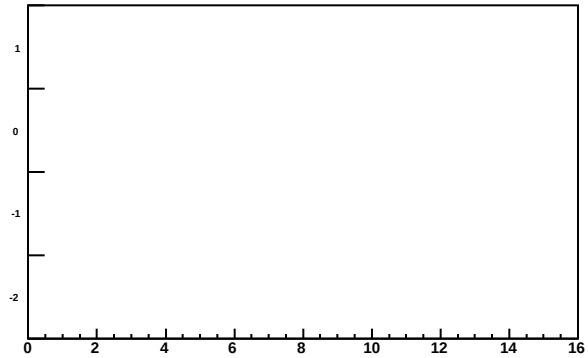
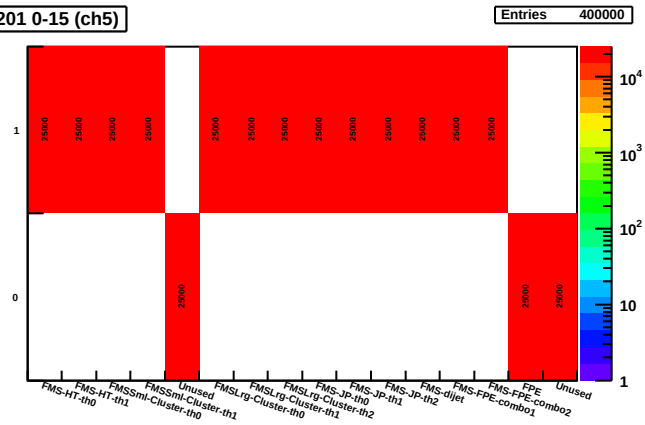
RAT board (ch4)

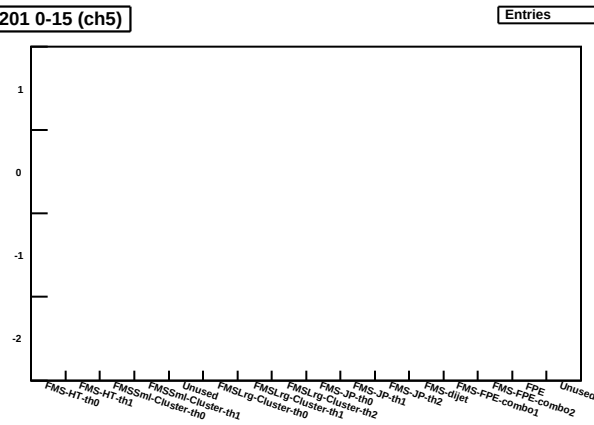




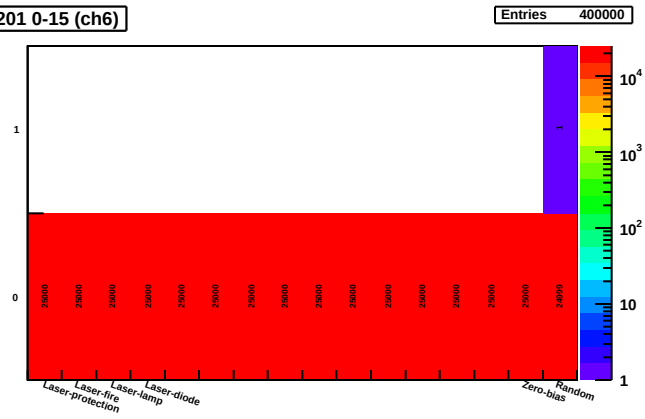
FP201 0-15 (ch5)

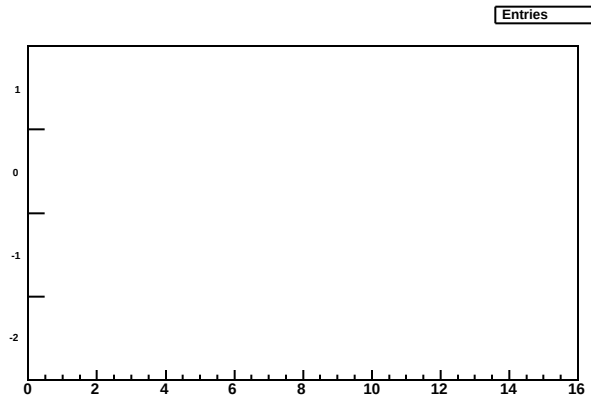
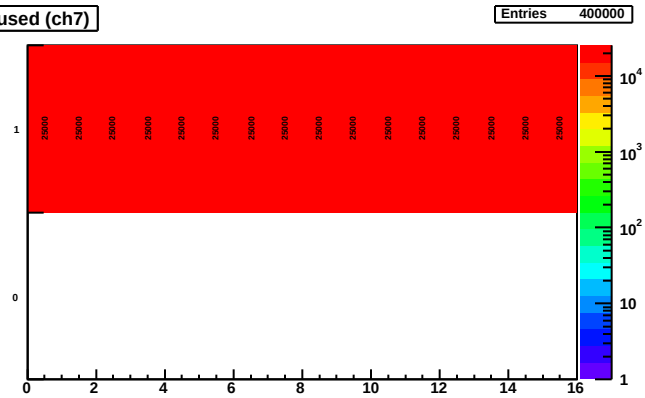
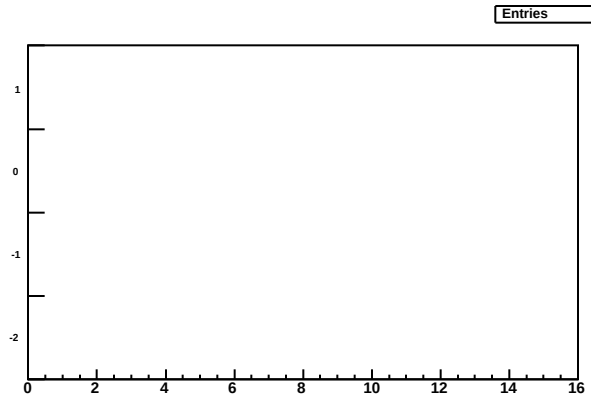


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)