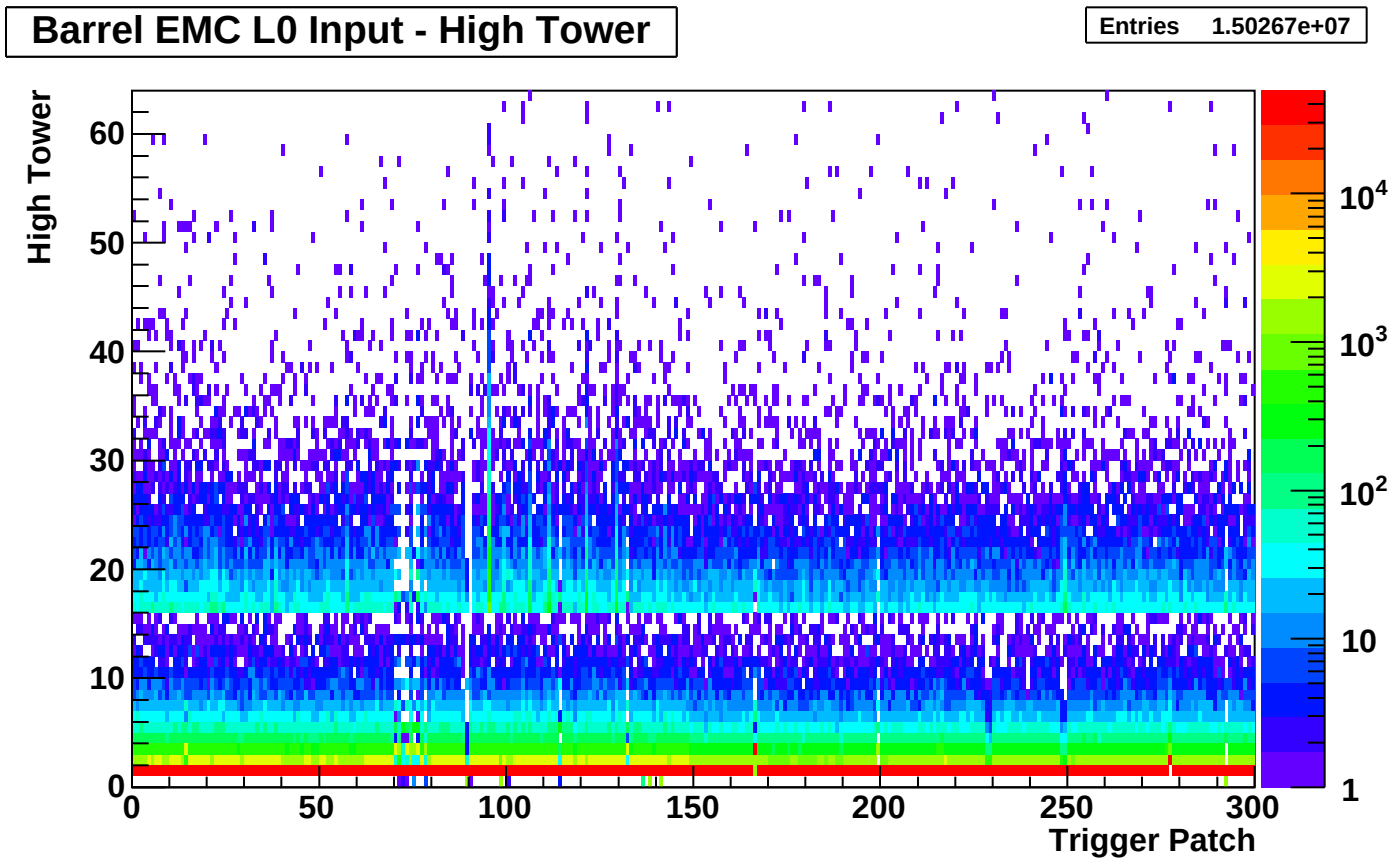
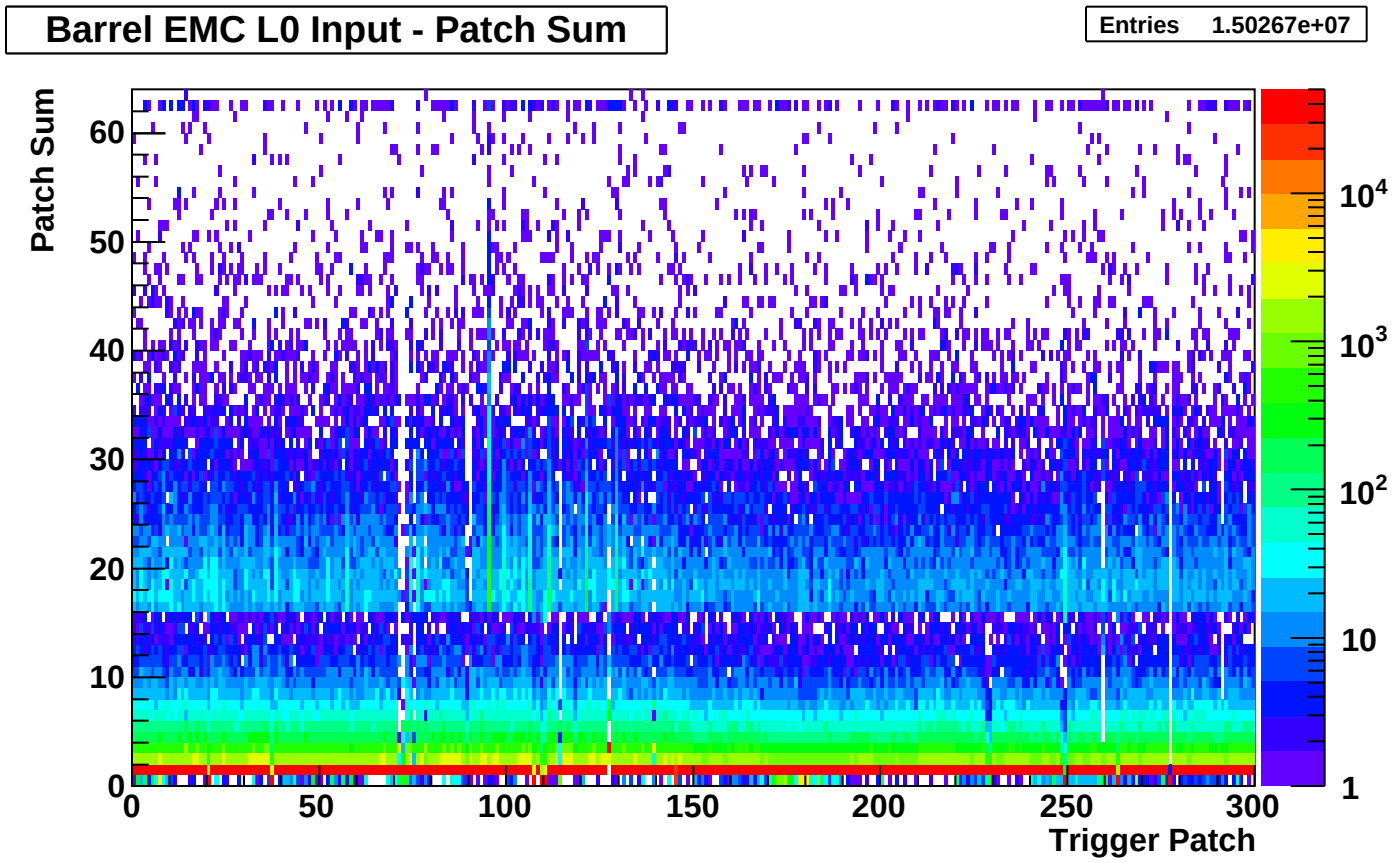
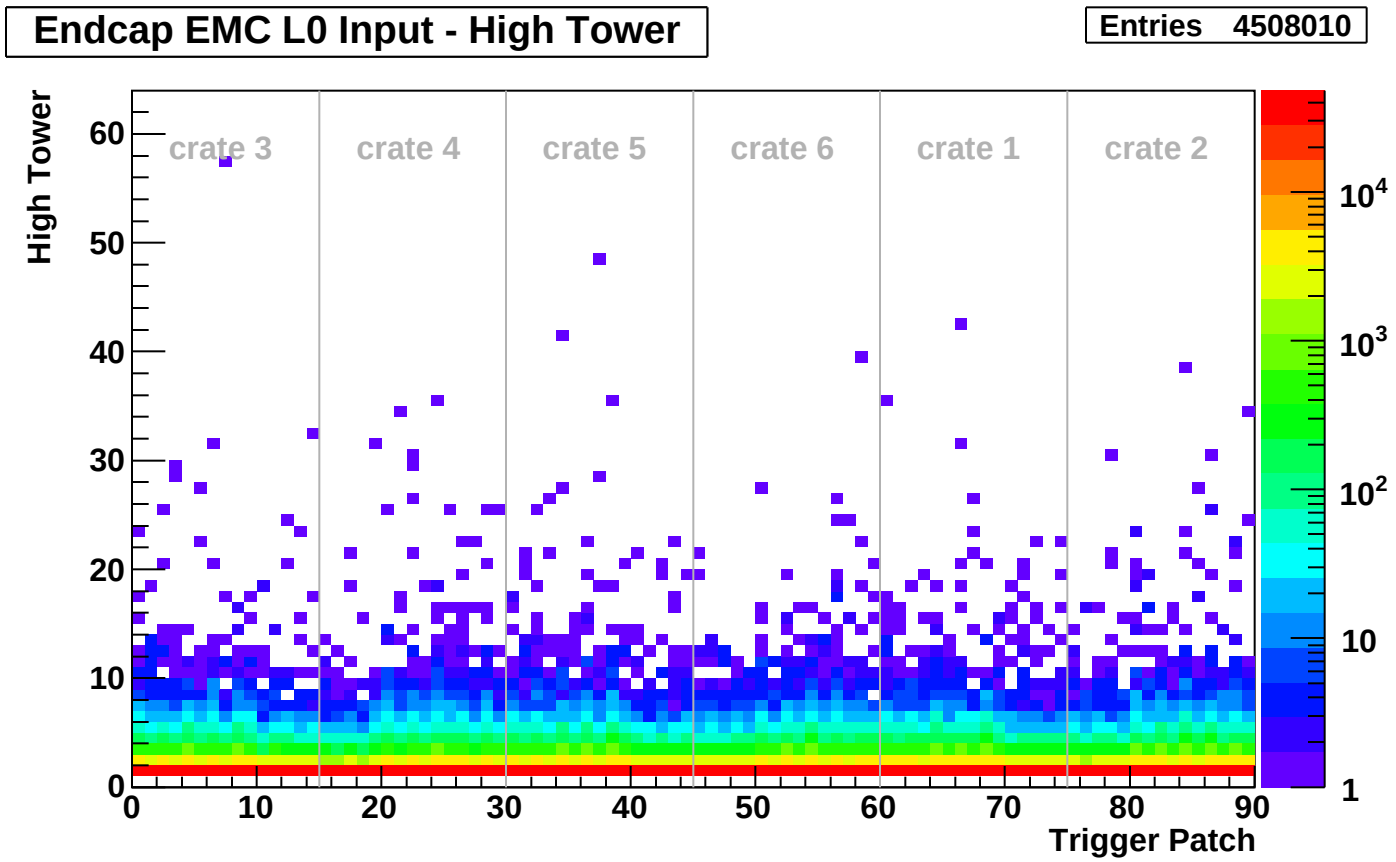
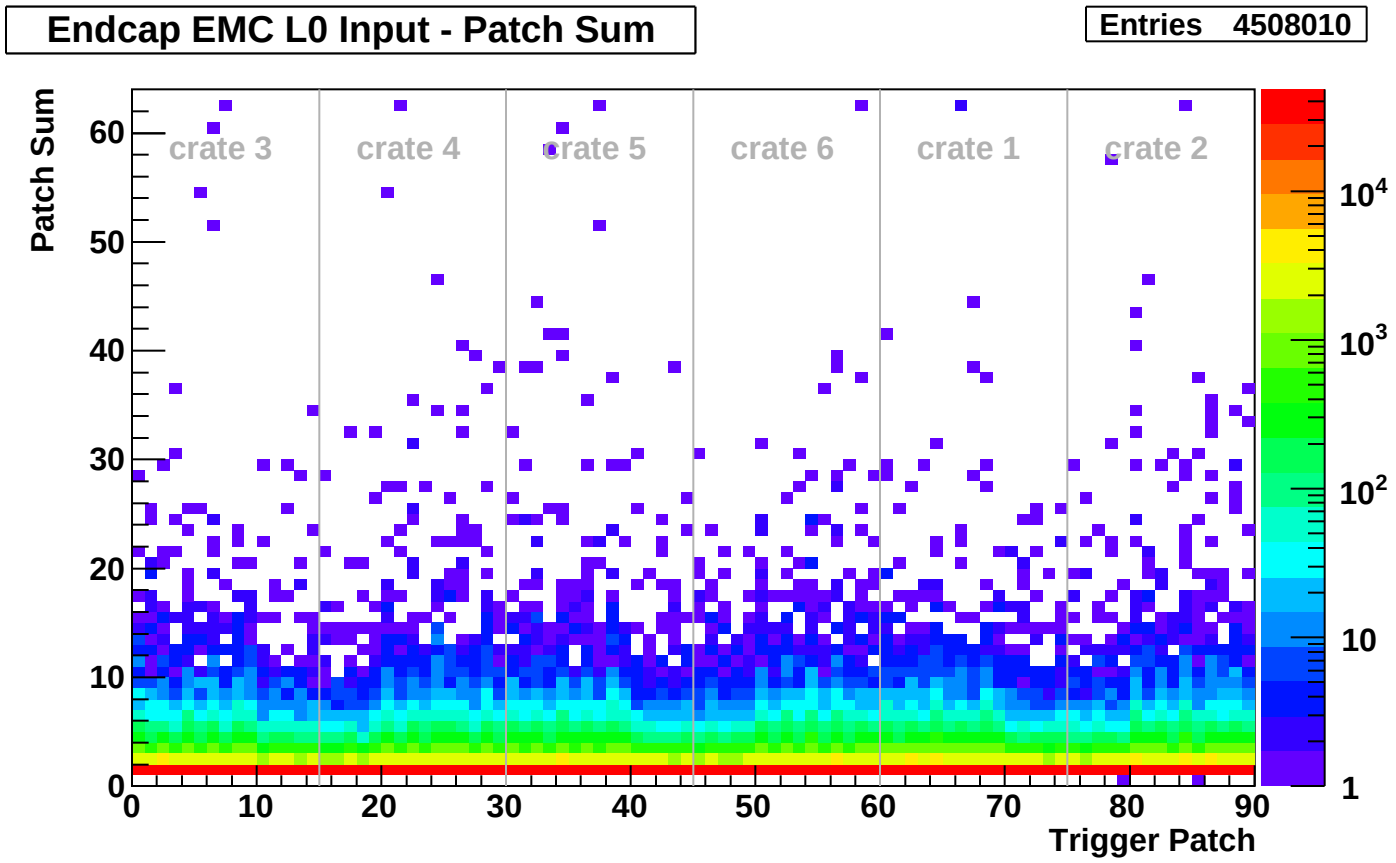
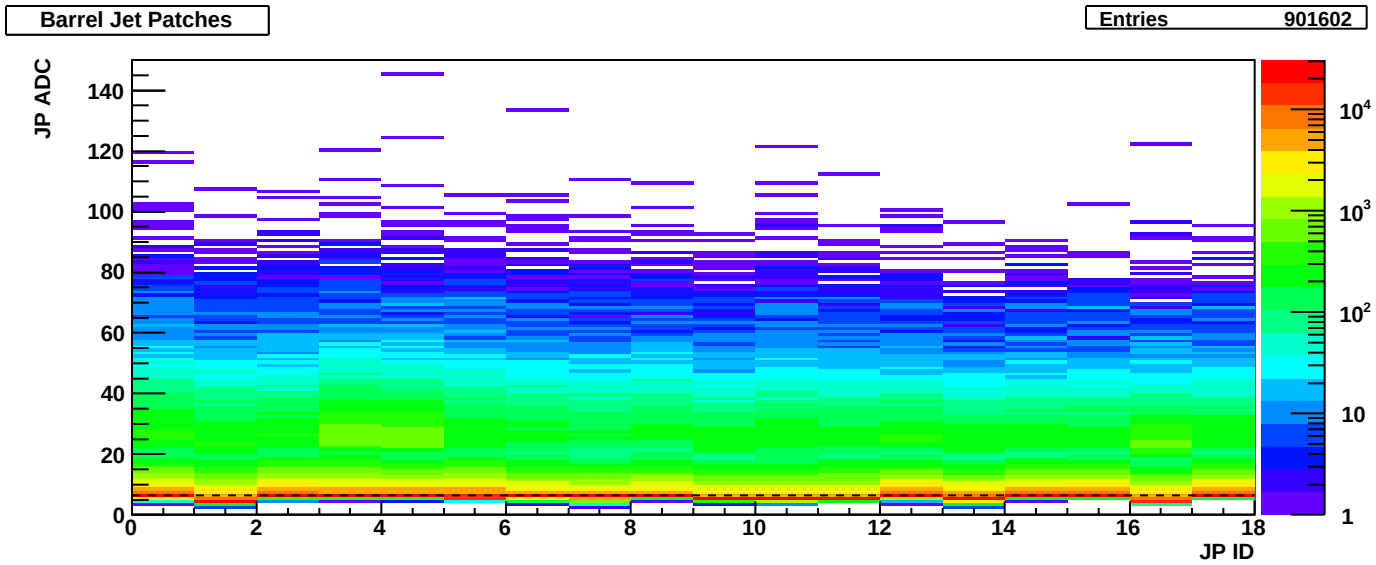
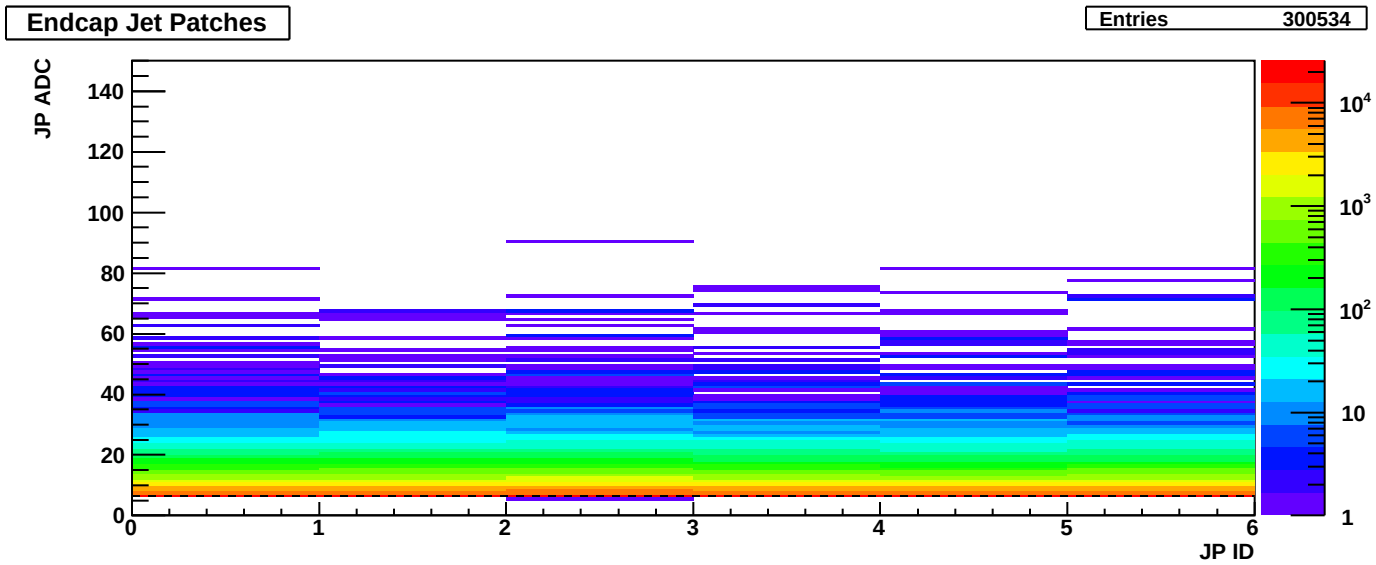

Barrel EMC L0 Input - High Tower
Entries 1.50267e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

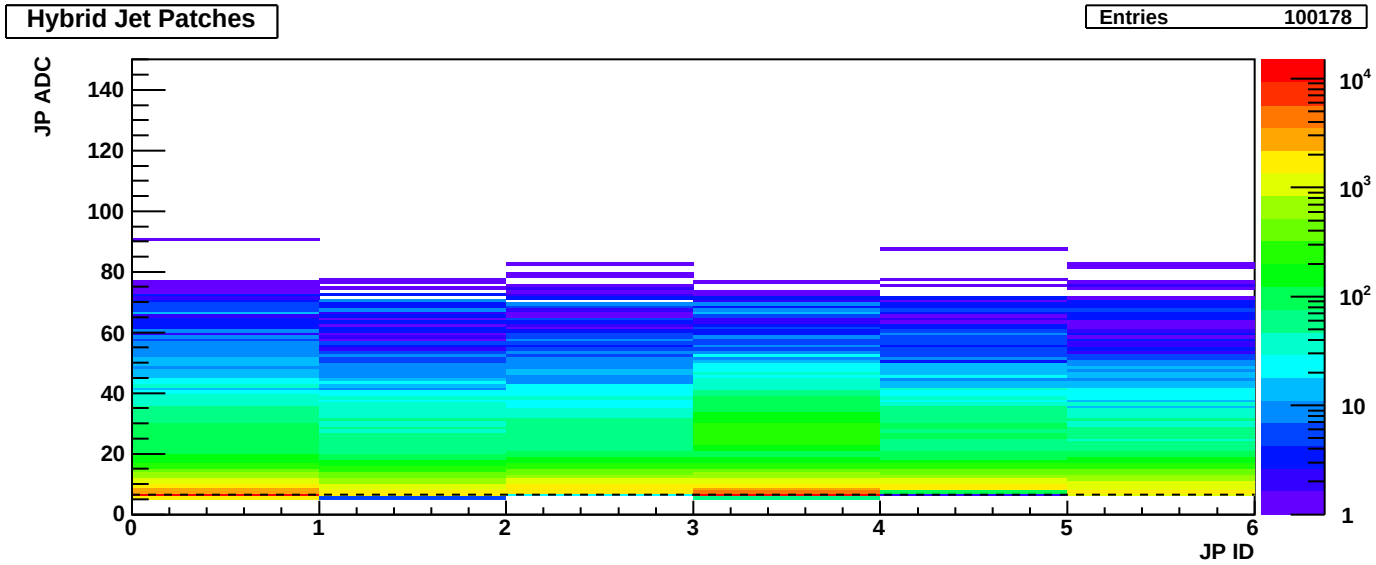

Barrel EMC L0 Input - Patch Sum
Entries 1.50267e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

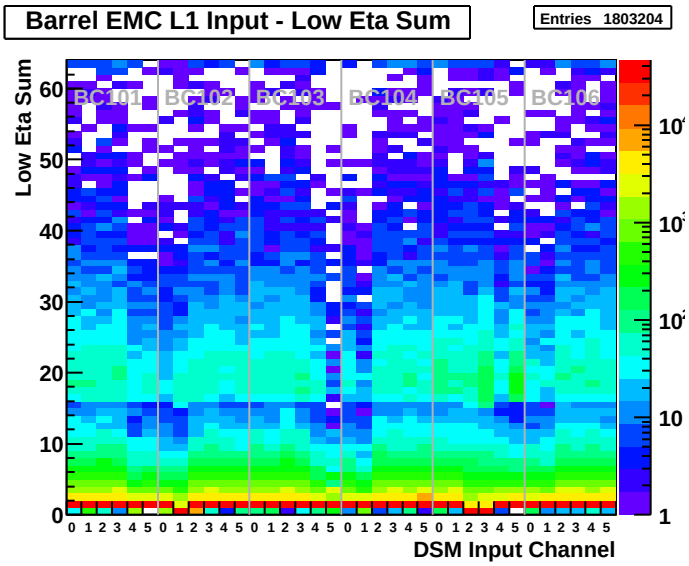

Endcap EMC L0 Input - High Tower
Entries 4508010
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

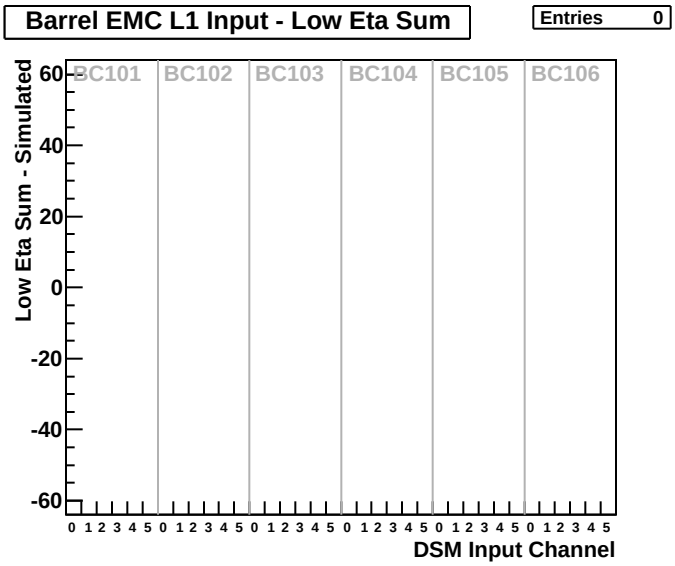

Endcap EMC L0 Input - Patch Sum
Entries 4508010
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

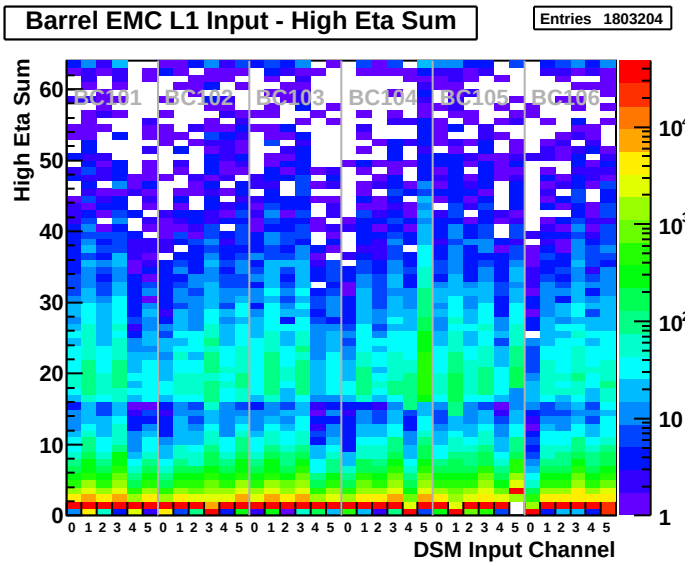

Barrel Jet Patches
Entries 901602
JP ADC
JP ID

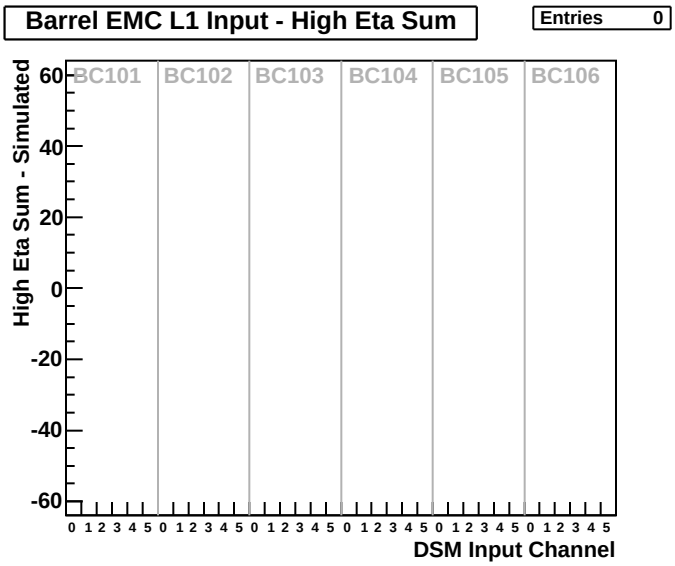

Endcap Jet Patches
Entries 300534
JP ADC
JP ID

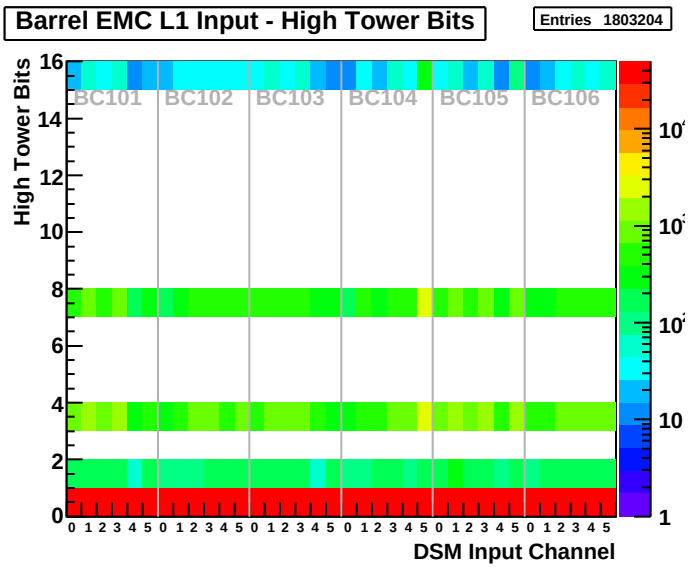

Hybrid Jet Patches
Entries 100178
JP ADC
JP ID

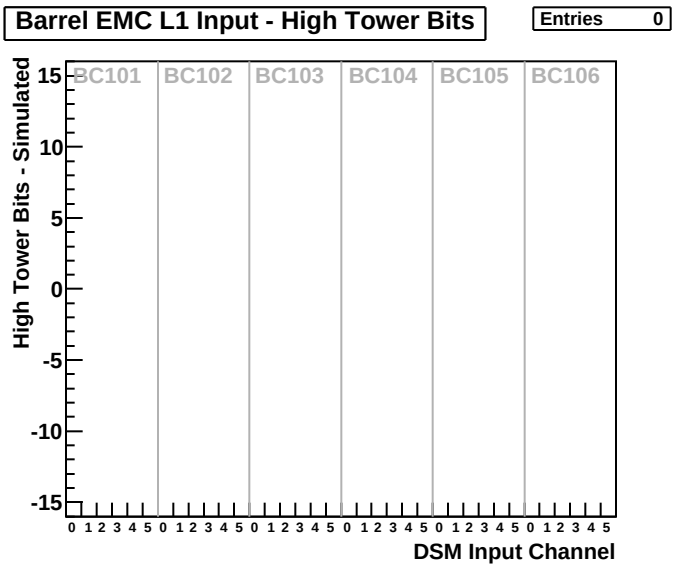

Barrel EMC L1 Input - Low Eta Sum
Entries 1803204
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

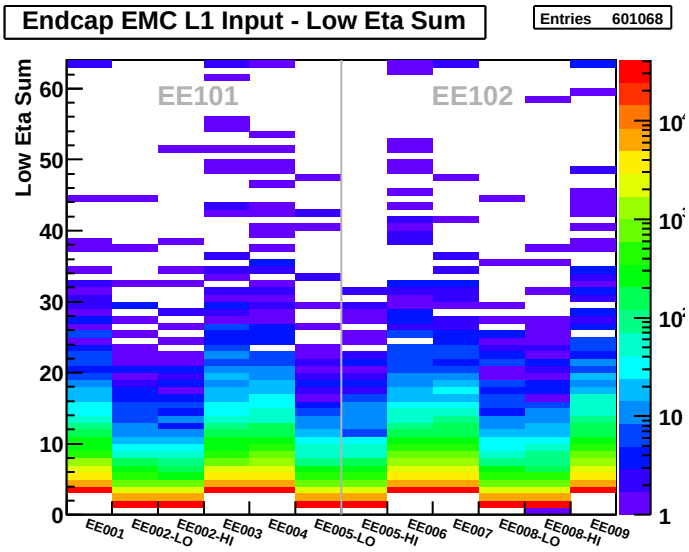

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

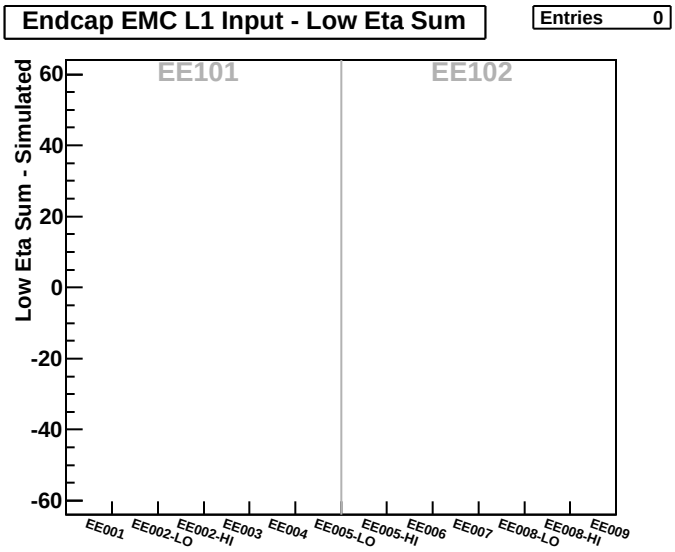

Barrel EMC L1 Input - High Eta Sum
Entries 1803204
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

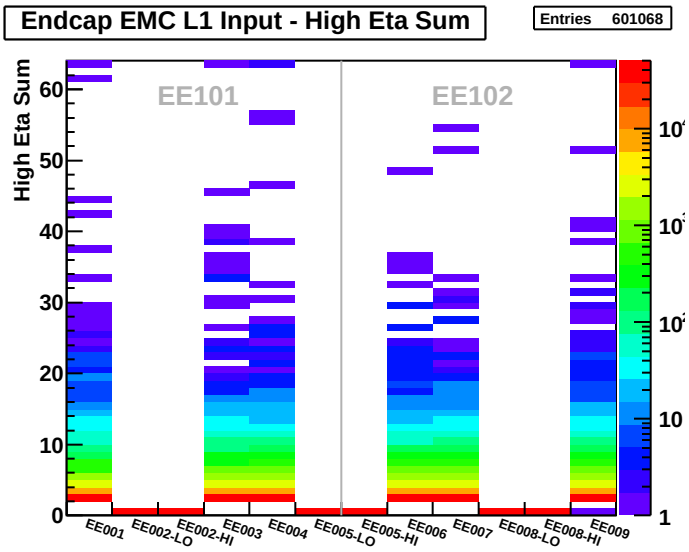

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

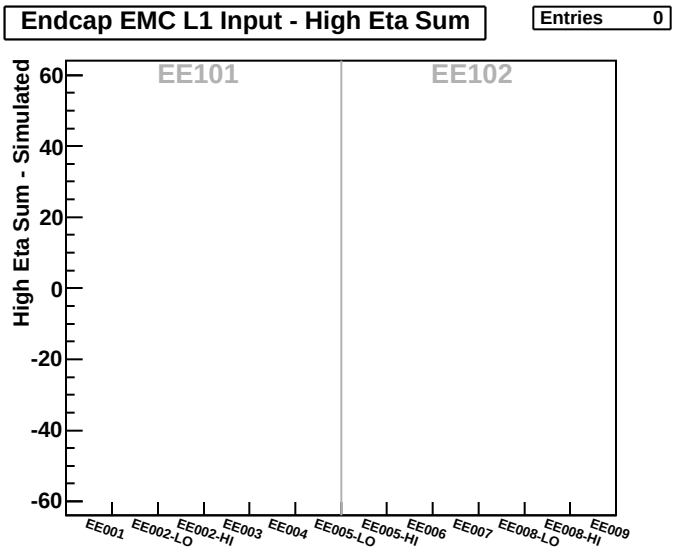

Barrel EMC L1 Input - High Tower Bits
Entries 1803204
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

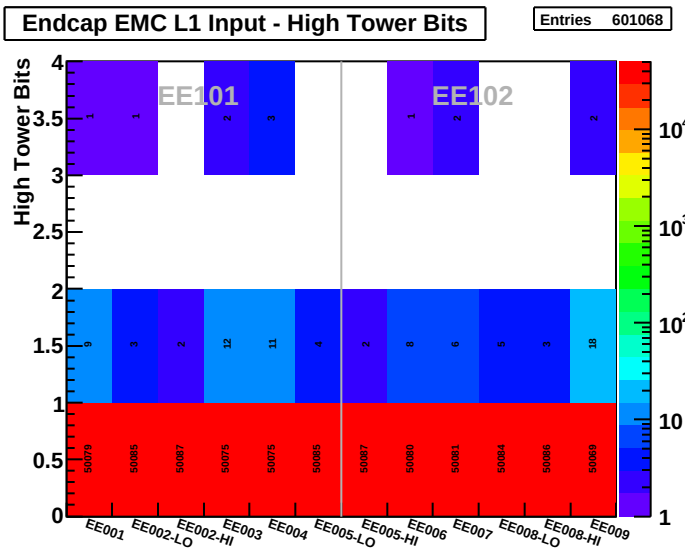

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

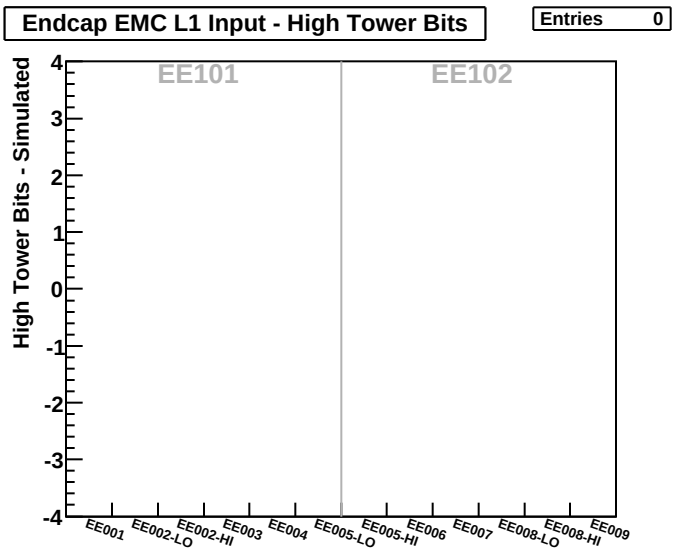

Endcap EMC L1 Input - Low Eta Sum
Entries 601068
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

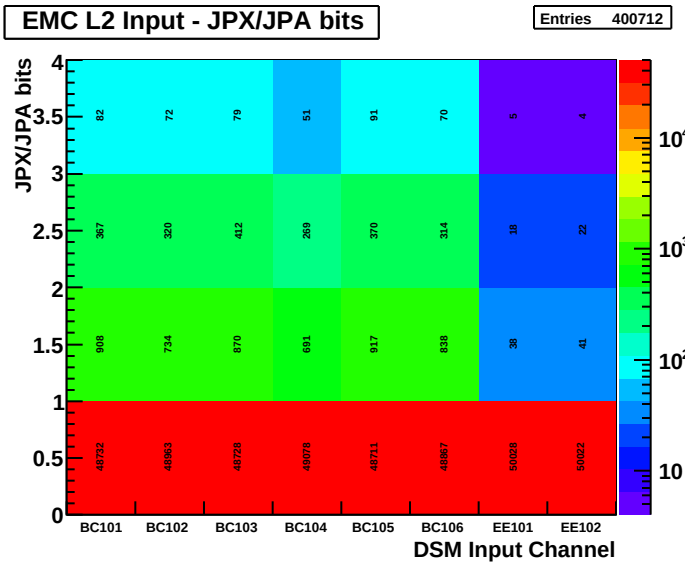

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

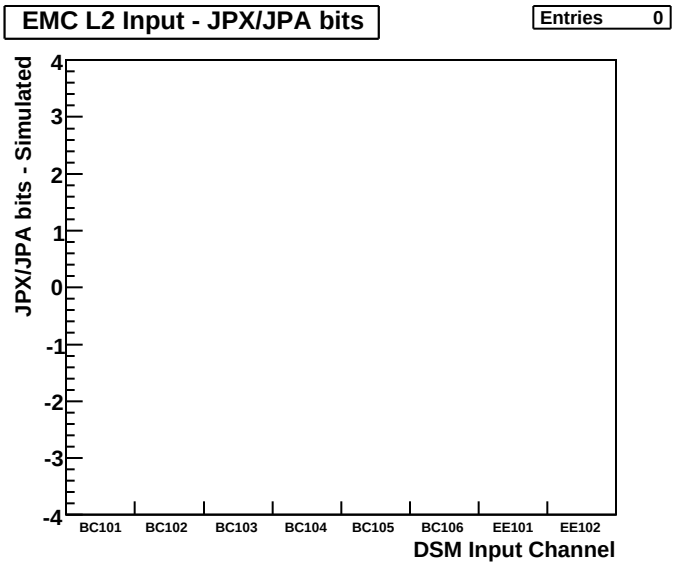

Endcap EMC L1 Input - High Eta Sum
Entries 601068
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

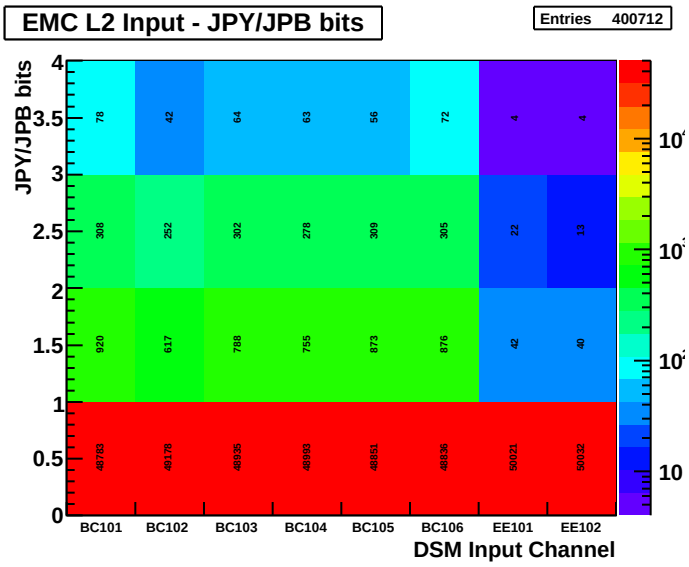

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

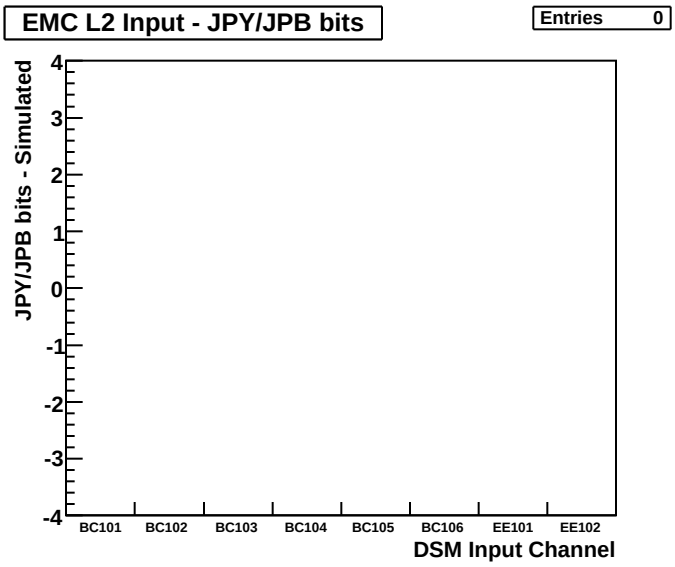

Endcap EMC L1 Input - High Tower Bits
Entries 601068
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

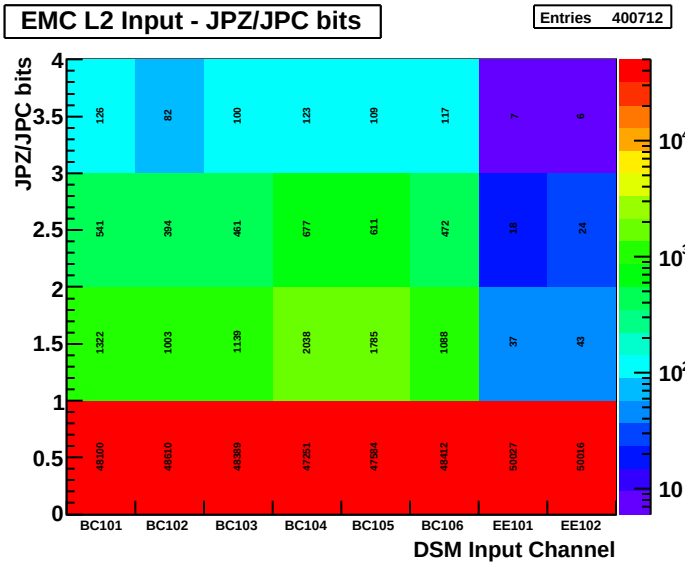

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

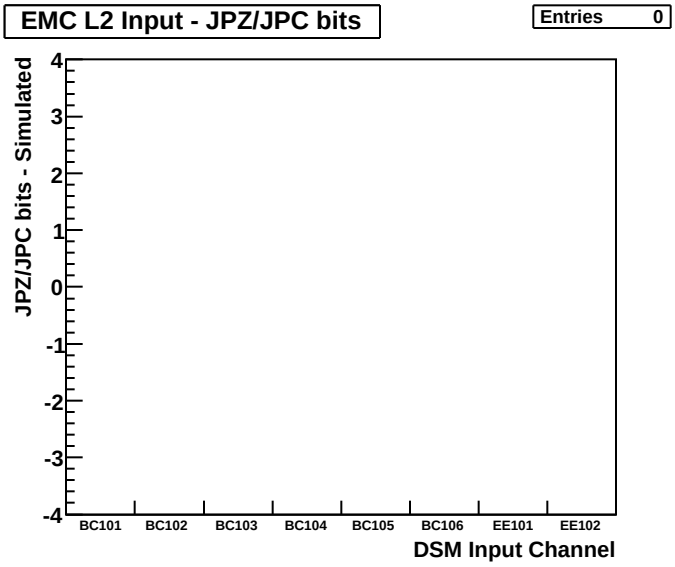

EMC L2 Input - JPX/JPA bits
Entries 400712
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
82 72 79 51 91 70 5 4
367 320 412 269 370 314 18 22
908 734 870 691 917 838 38 41
48732 49363 49728 49078 49711 49867 50028 50022

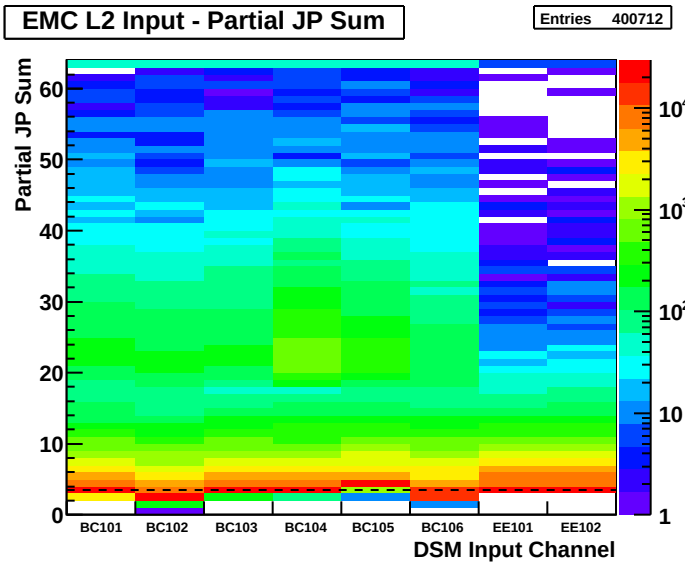

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

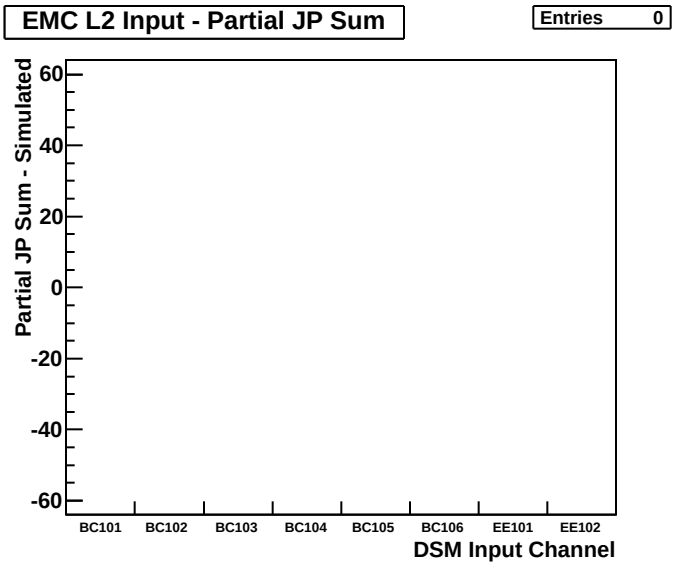

EMC L2 Input - JPY/JPB bits
Entries 400712
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
78 42 64 63 56 72 4 4
308 252 302 278 309 305 22 13
920 617 788 755 873 876 42 40
48783 49178 49335 48993 49851 49836 50021 50032

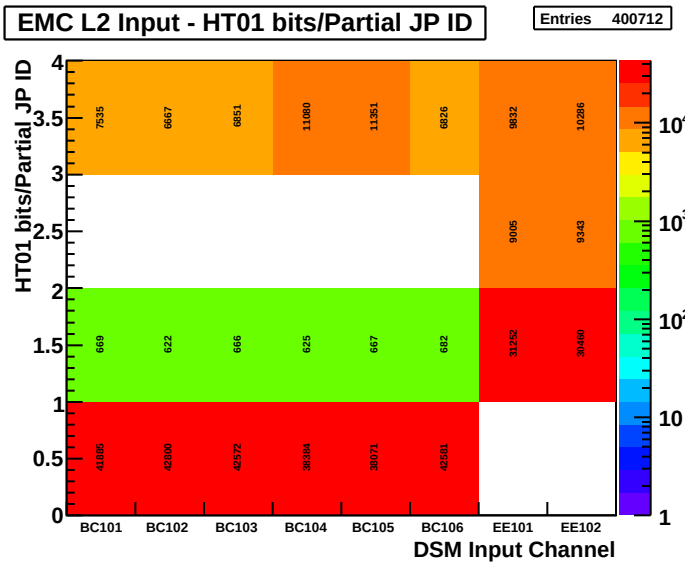

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

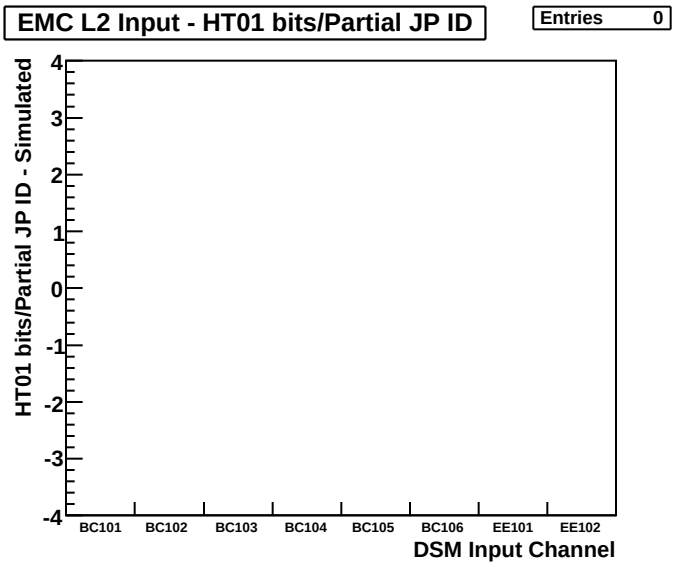

EMC L2 Input - JPZ/JPC bits
Entries 400712
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
126 82 100 123 109 117 7 6
541 394 461 677 611 472 18 24
1322 1003 1139 2038 1785 1088 37 43
48100 48610 48389 47251 47584 48412 50027 50016

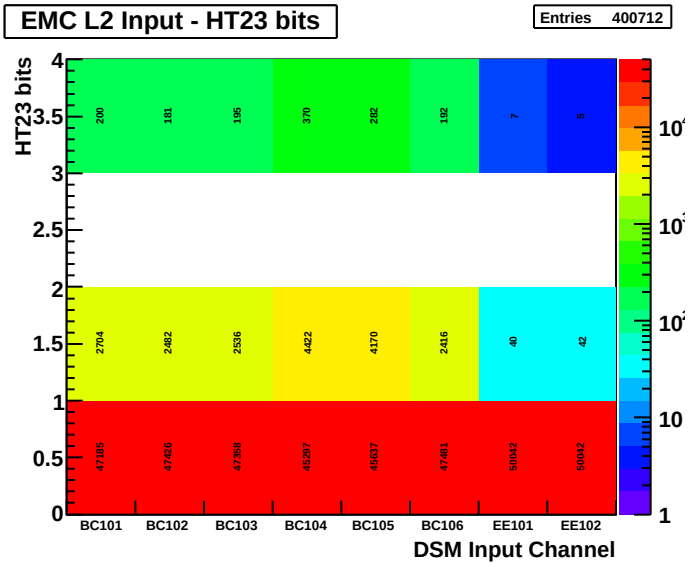

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

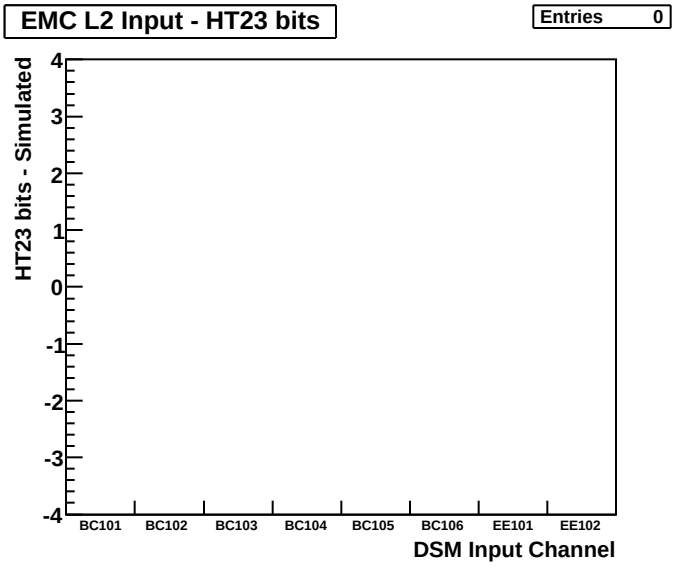

EMC L2 Input - Partial JP Sum
Entries 400712
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

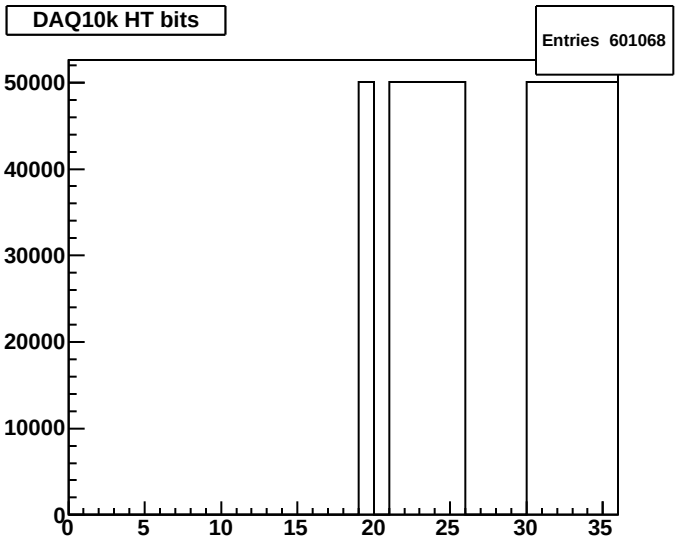

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

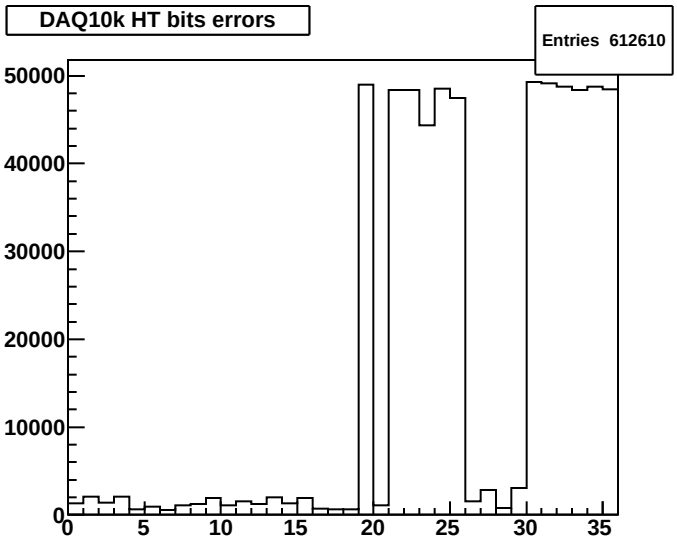

EMC L2 Input - HT01 bits/Partial JP ID
Entries 400712
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

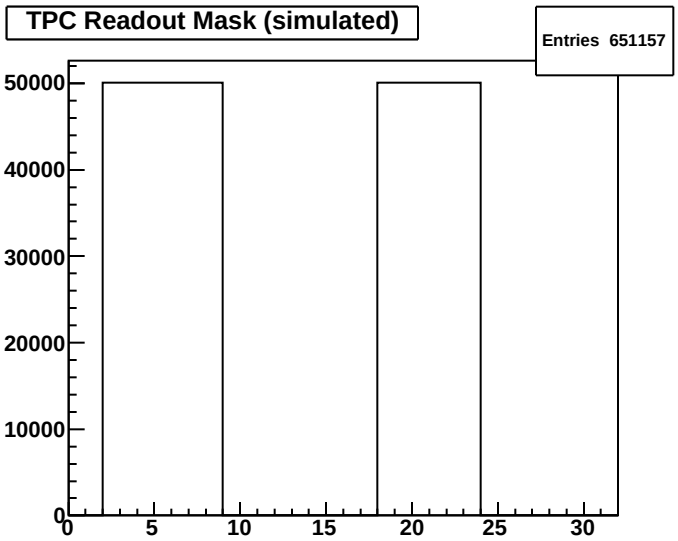

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

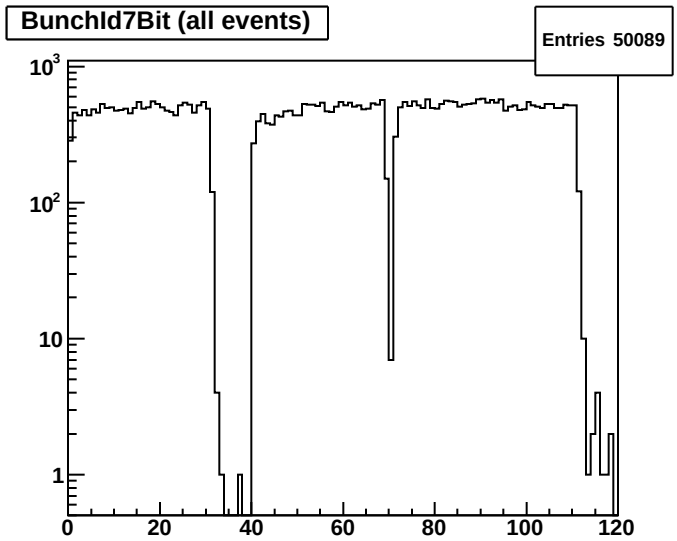

EMC L2 Input - HT23 bits
Entries 400712
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

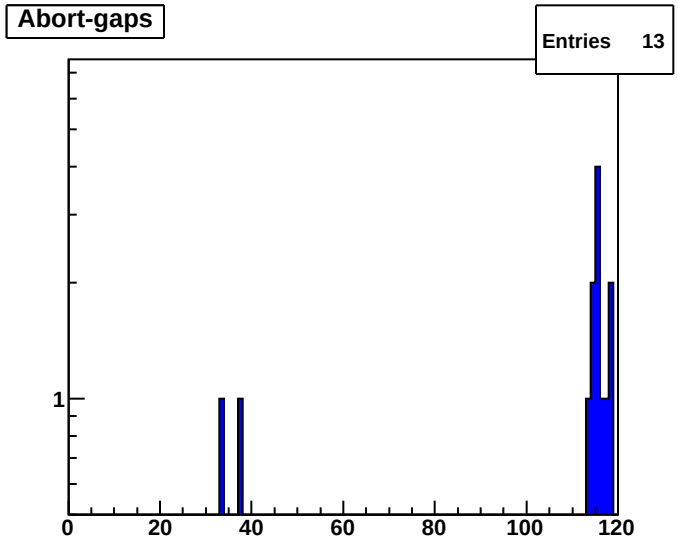

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

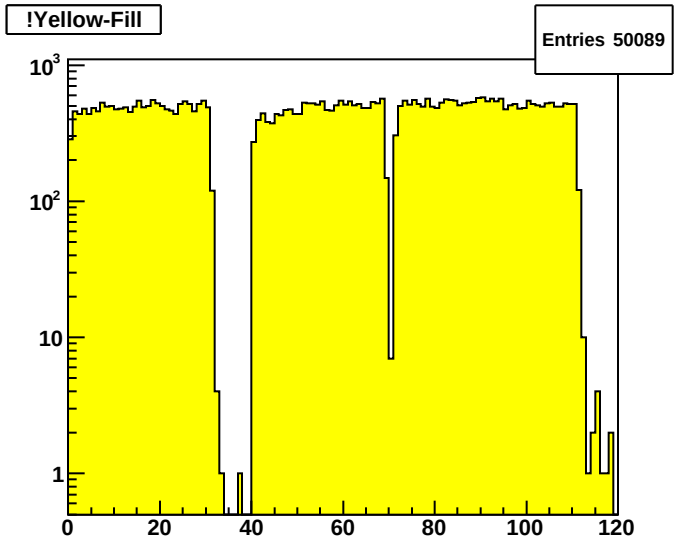

DAQ10k HT bits
Entries 601068
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

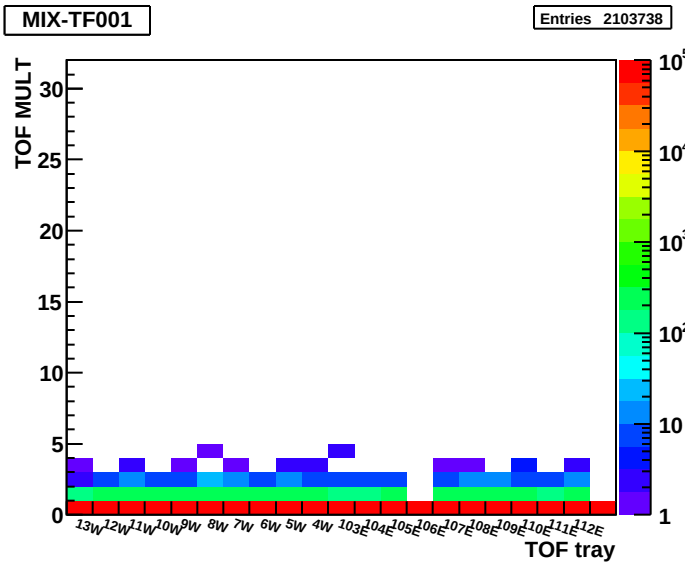

DAQ10k HT bits errors
Entries 612610
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

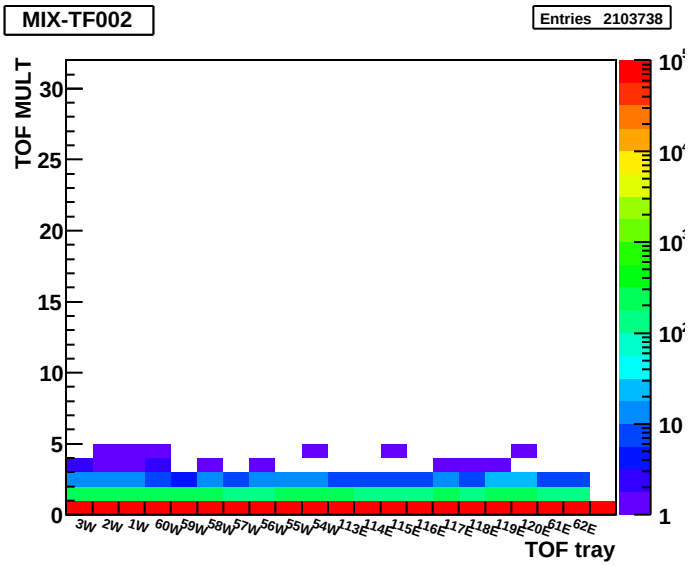

TPC Readout Mask (simulated)
Entries 651157
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

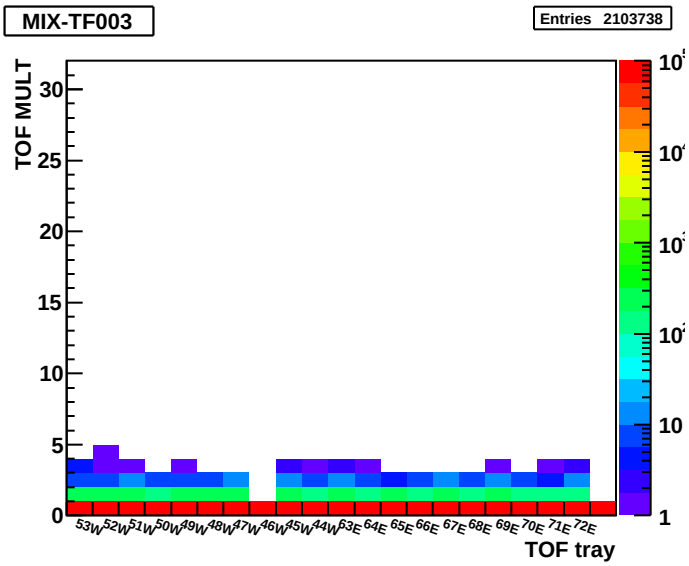

BunchId7Bit (all events)
Entries 50089
10^3
10^2
10
1
0 20 40 60 80 100 120

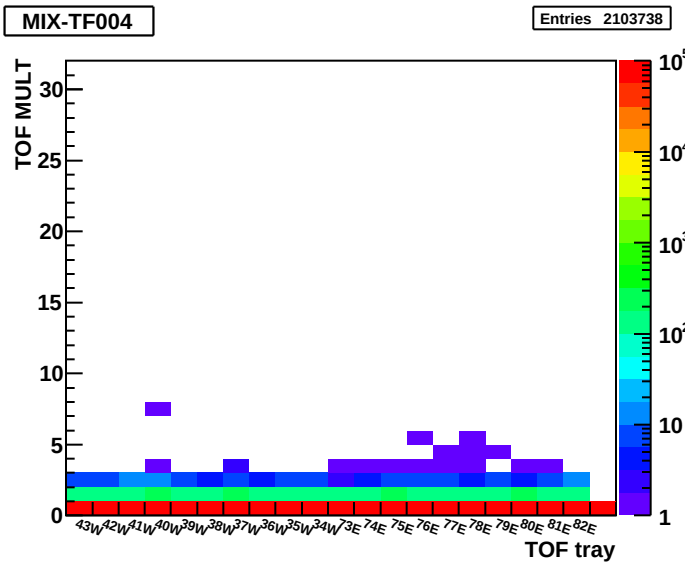

Abort-gaps
Entries 13
1
0 20 40 60 80 100 120

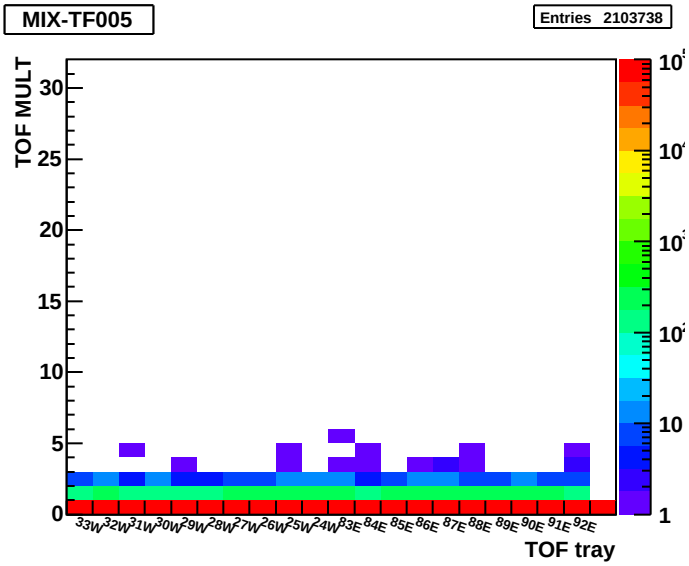

!Yellow-Fill
Entries 50089
10^3
10^2
10
1
0 20 40 60 80 100 120

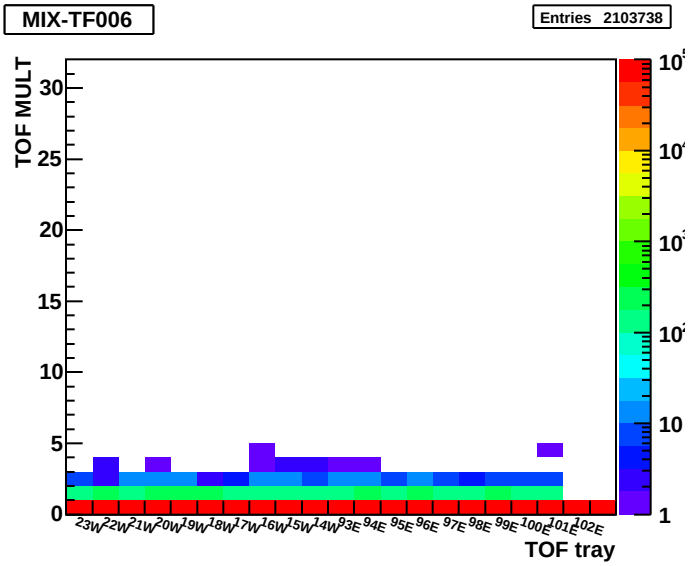

MIX-TF001
Entries 2103738
TOF MULT
TOF tray

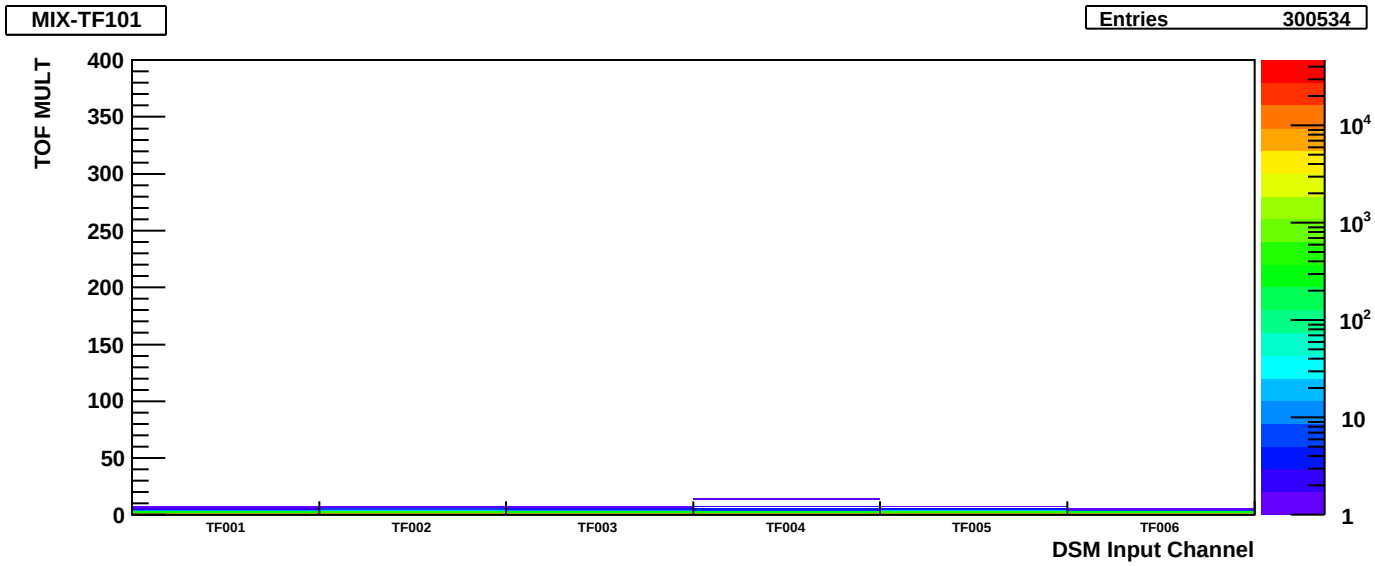

MIX-TF002
Entries 2103738
TOF MULT
TOF tray

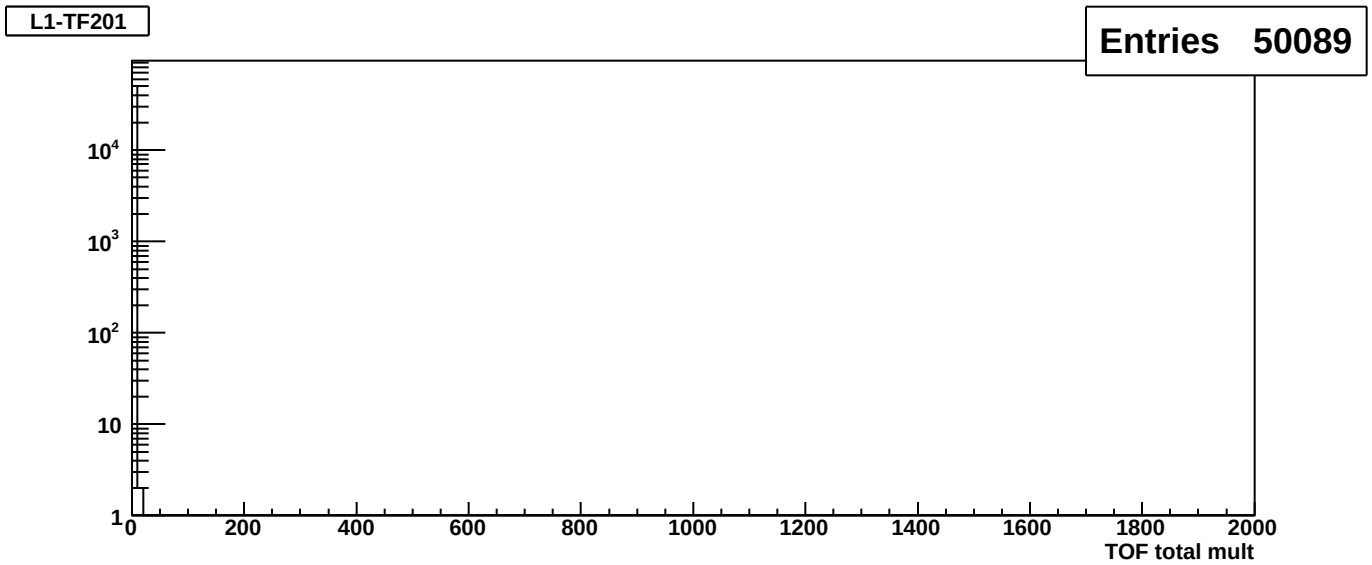

MIX-TF003
Entries 2103738
TOF MULT
TOF tray

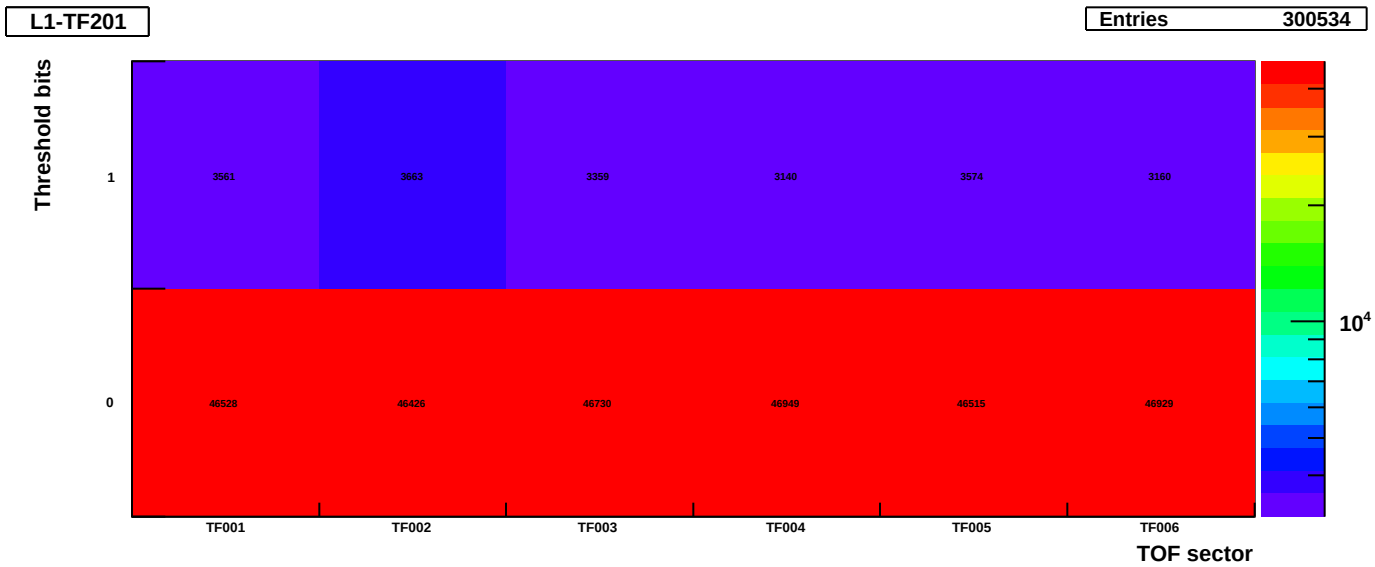

MIX-TF004
Entries 2103738
TOF MULT
TOF tray

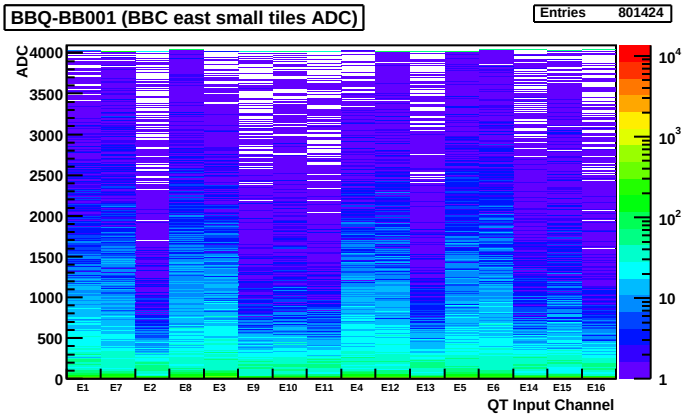

MIX-TF005
Entries 2103738
TOF MULT
TOF tray

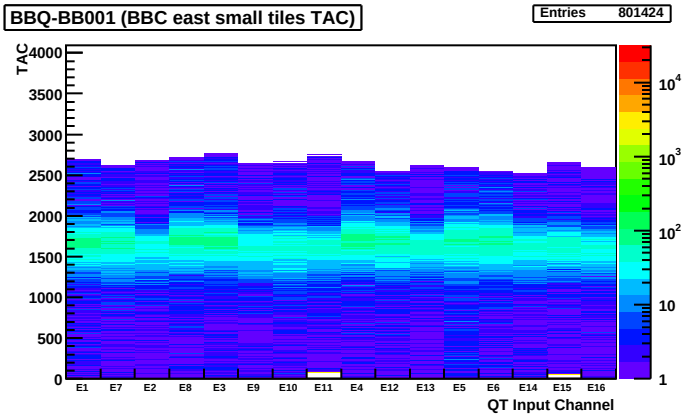

MIX-TF006
Entries 2103738
TOF MULT
TOF tray

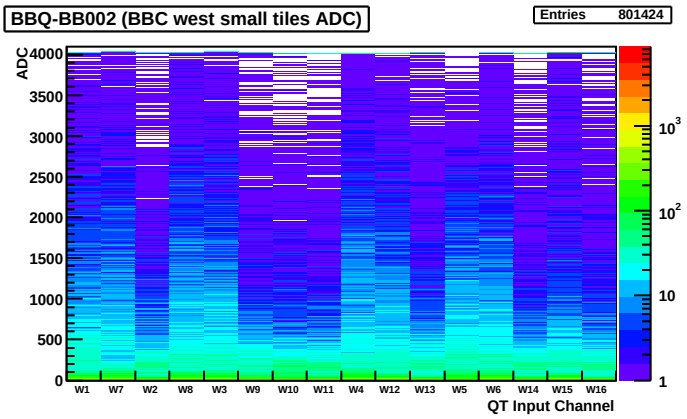

MIX-TF101
Entries 300534
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

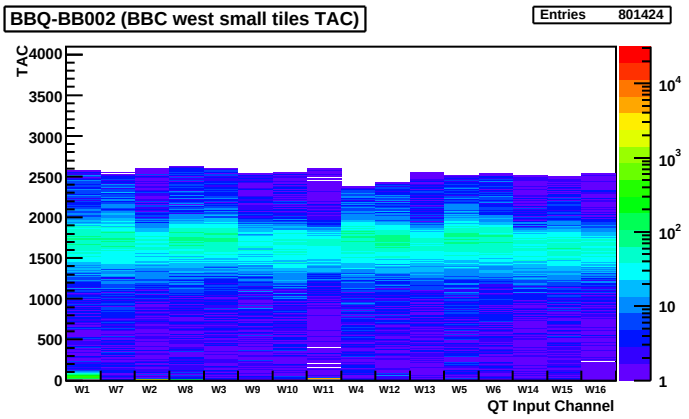

L1-TF201
Entries 50089
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

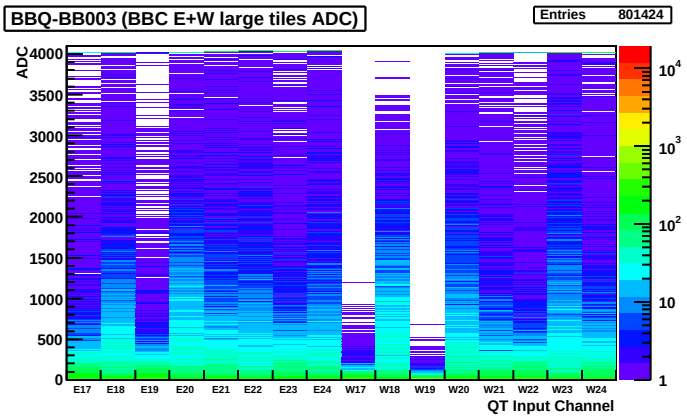

L1-TF201
Entries 300534
Threshold bits
1
0
3561
3663
3359
3140
3574
3160
46528
46426
46730
46949
46515
46929
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

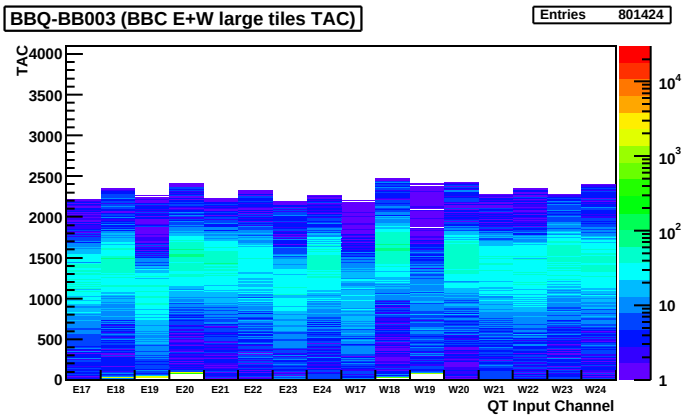

BBQ-BB001 (BBC east small tiles ADC)
Entries 801424
ADC
QT Input Channel

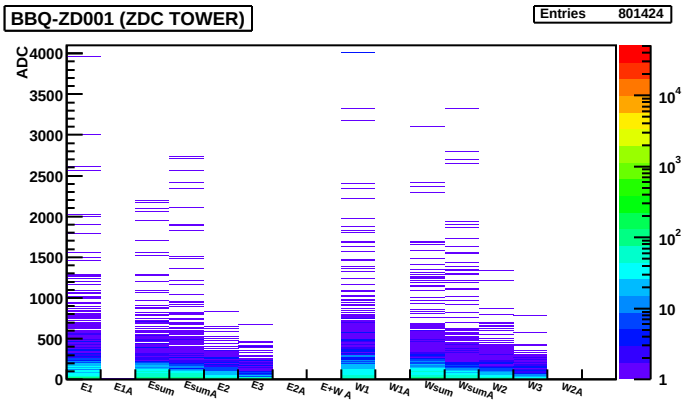

BBQ-BB001 (BBC east small tiles TAC)
Entries 801424
TAC
QT Input Channel

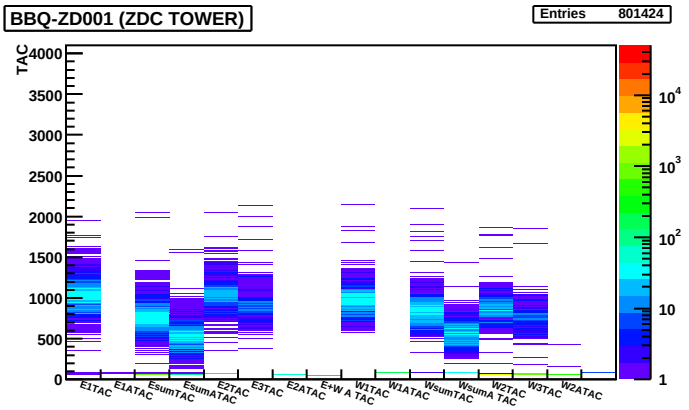

BBQ-BB002 (BBC west small tiles ADC)
Entries 801424
ADC
QT Input Channel

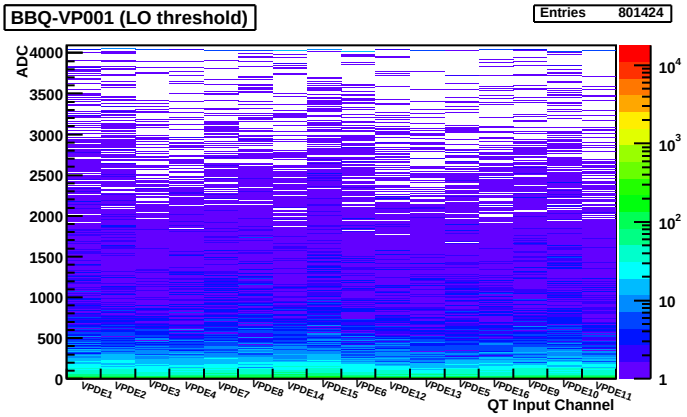

BBQ-BB002 (BBC west small tiles TAC)
Entries 801424
TAC
QT Input Channel

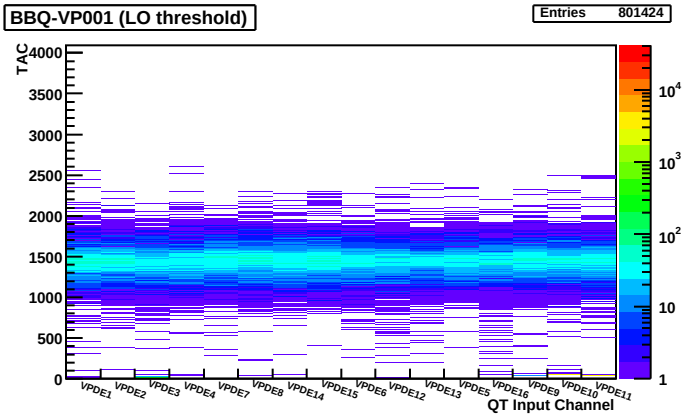

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 801424
ADC
QT Input Channel

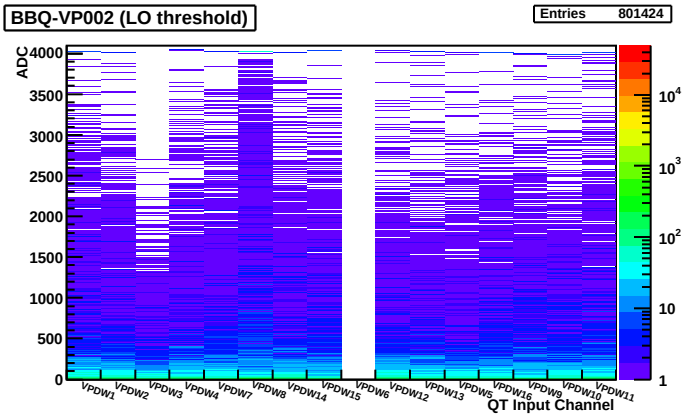

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 801424
TAC
QT Input Channel

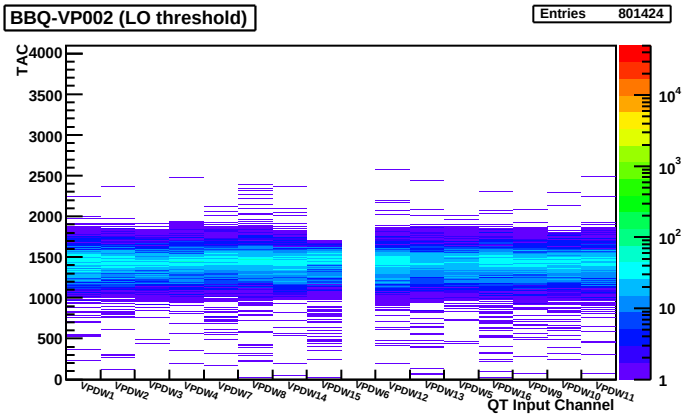

BBQ-ZD001 (ZDC TOWER)
Entries 801424
ADC

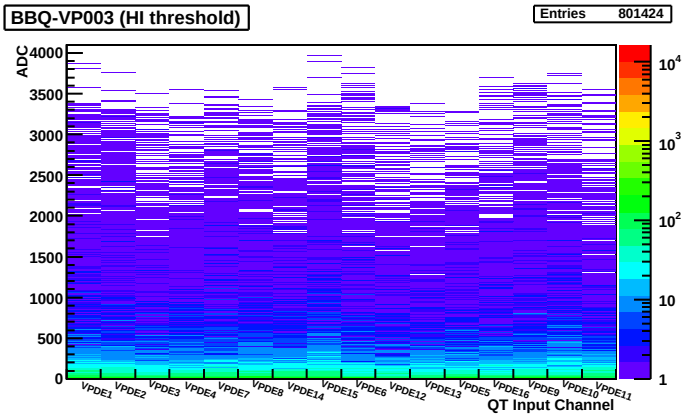

BBQ-ZD001 (ZDC TOWER)
Entries 801424
TAC

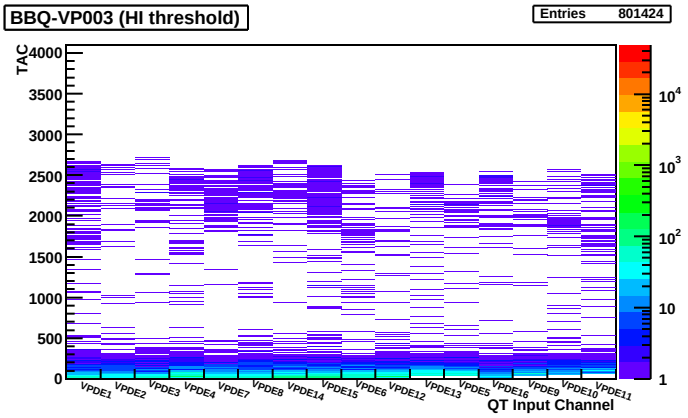

BBQ-VP001 (LO threshold)
Entries 801424
ADC
QT Input Channel

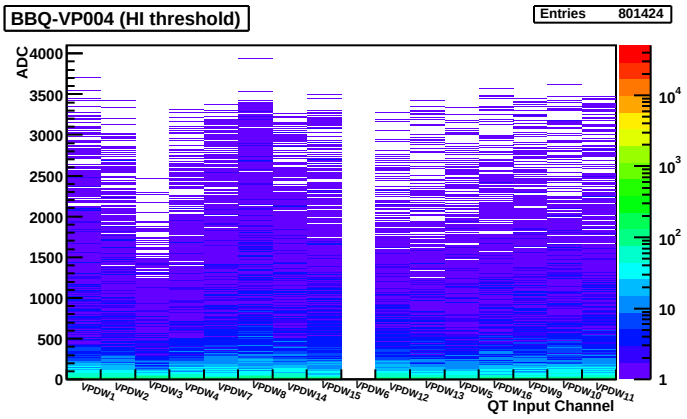

BBQ-VP001 (LO threshold)
Entries 801424
TAC
QT Input Channel

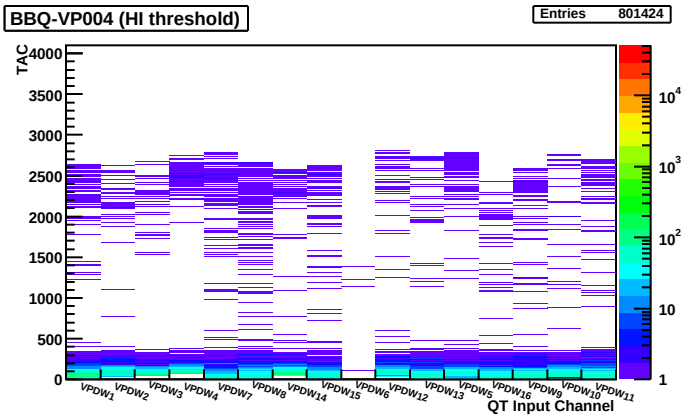

BBQ-VP002 (LO threshold)
Entries 801424
ADC
QT Input Channel

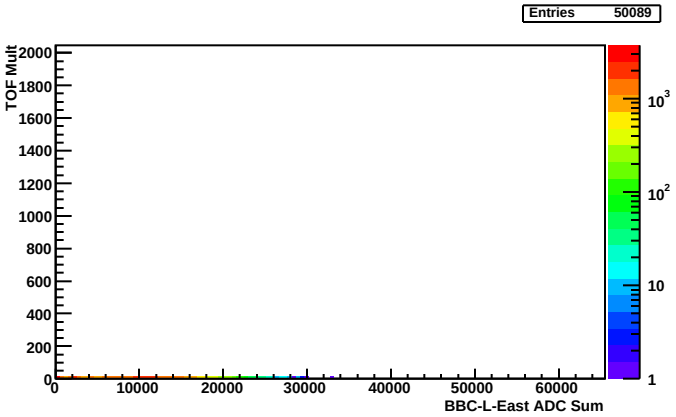

BBQ-VP002 (LO threshold)
Entries 801424
TAC
QT Input Channel

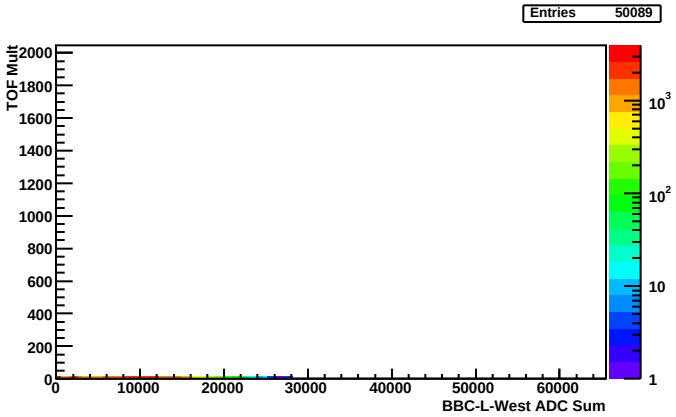

BBQ-VP003 (HI threshold)
Entries 801424
ADC
QT Input Channel

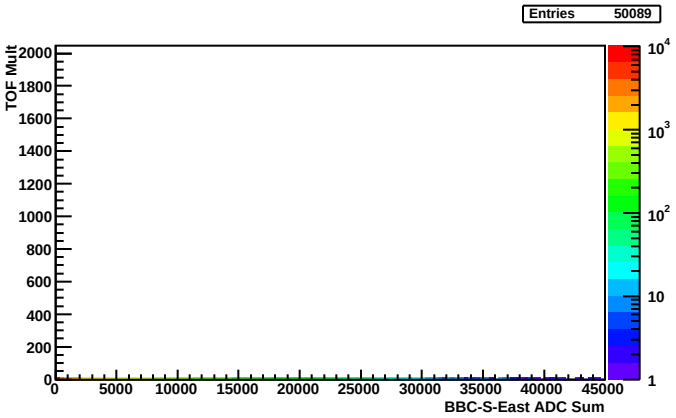

BBQ-VP003 (HI threshold)
Entries 801424
TAC
QT Input Channel

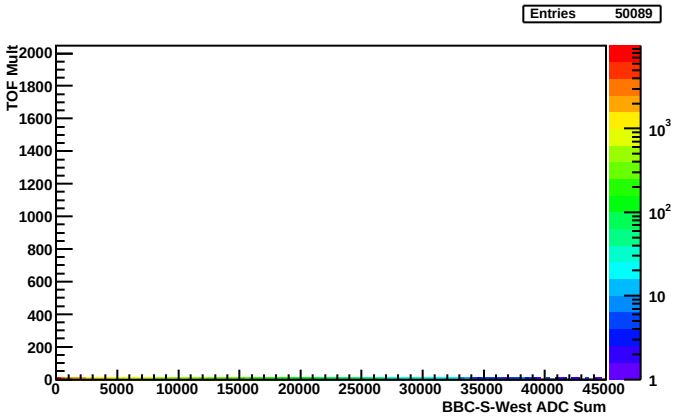

BBQ-VP004 (HI threshold)
Entries 801424
ADC
QT Input Channel

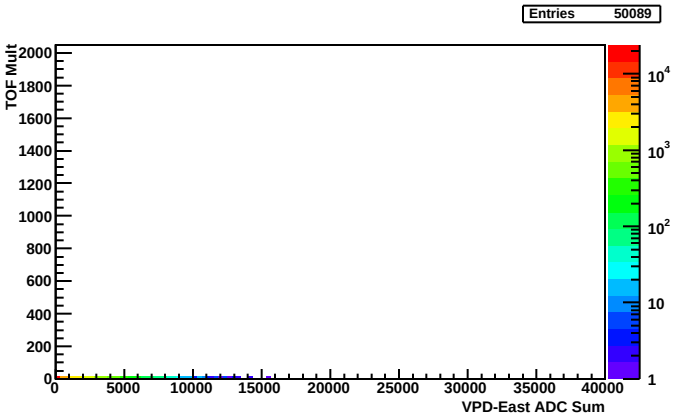

BBQ-VP004 (HI threshold)
Entries 801424
TAC
QT Input Channel

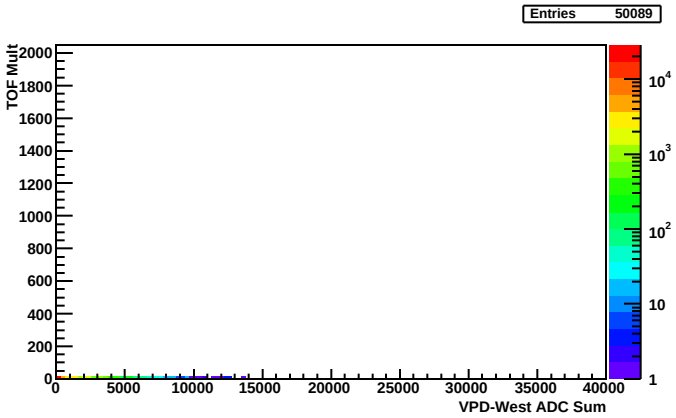

Entries 50089
TOF Mult
BBC-L-East ADC Sum

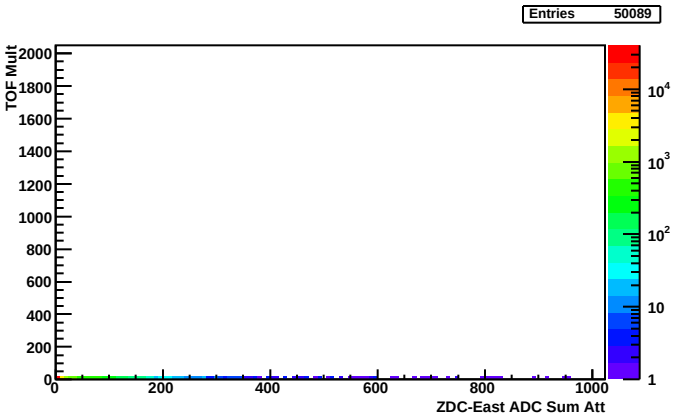

Entries 50089
TOF Mult
BBC-L-West ADC Sum

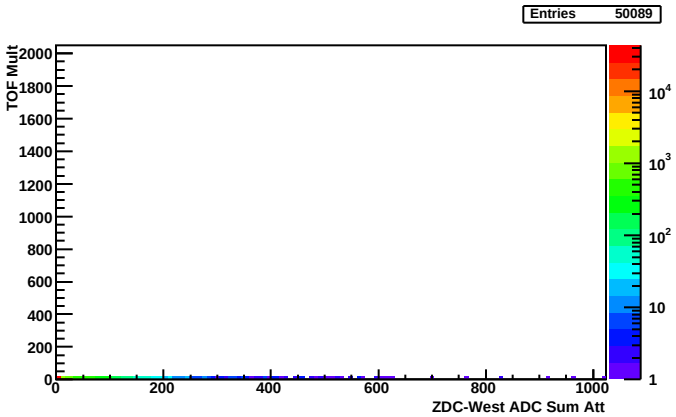

Entries 50089
TOF Mult
BBC-S-East ADC Sum

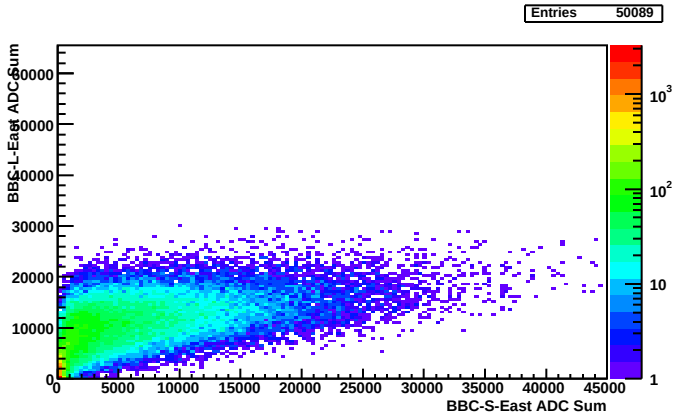

Entries 50089
TOF Mult
BBC-S-West ADC Sum

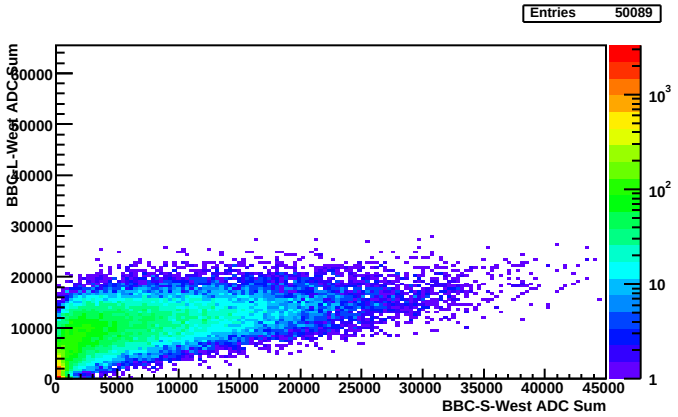

Entries 50089
TOF Mult
VPD-East ADC Sum

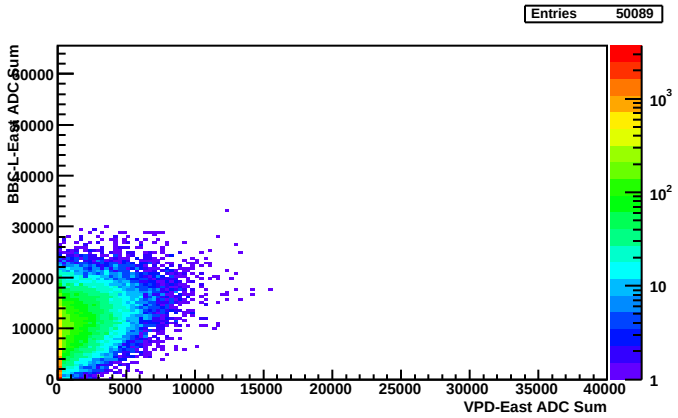

Entries 50089
TOF Mult
VPD-West ADC Sum

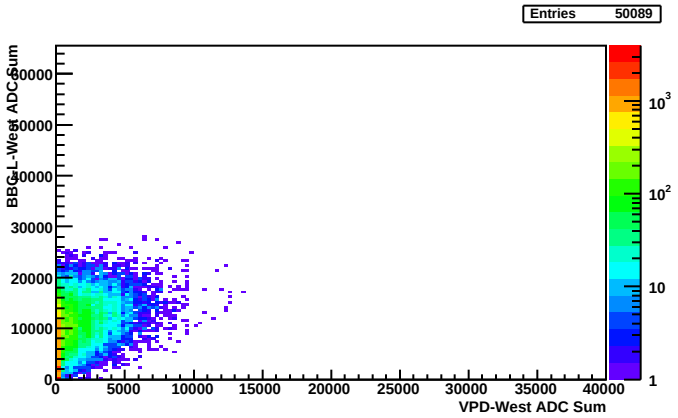

Entries 50089
TOF Mult
ZDC-East ADC Sum Att

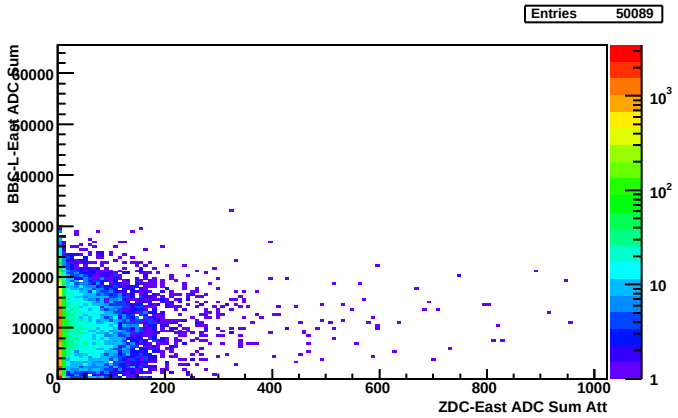

Entries 50089
TOF Mult
ZDC-West ADC Sum Att

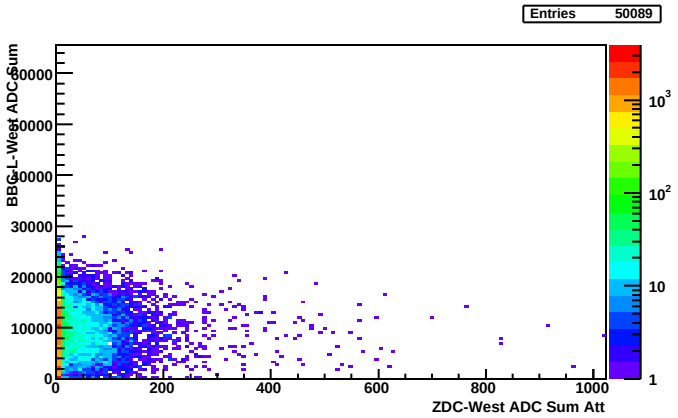

Entries 50089
BBC-L-East ADC Sum
BBC-S-East ADC Sum

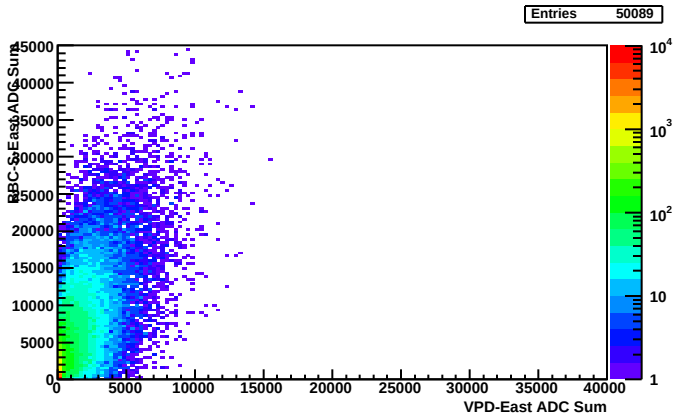

Entries 50089
BBC-L-West ADC Sum
BBC-S-West ADC Sum

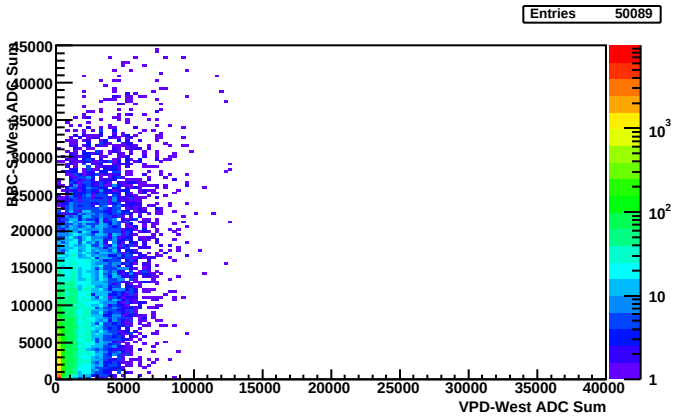

Entries 50089
BBC-L-East ADC Sum
VPD-East ADC Sum

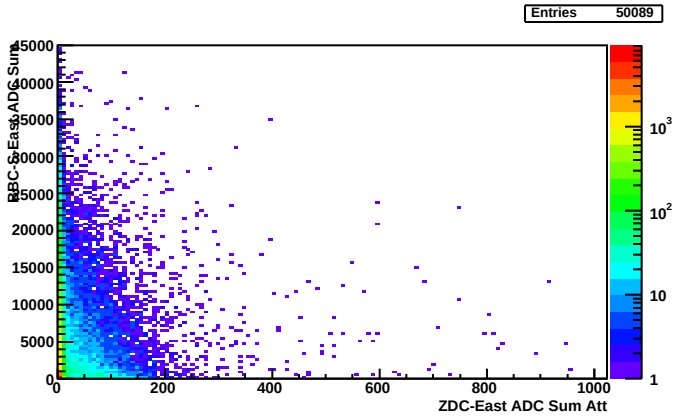

Entries 50089
BBC-L-West ADC Sum
VPD-West ADC Sum

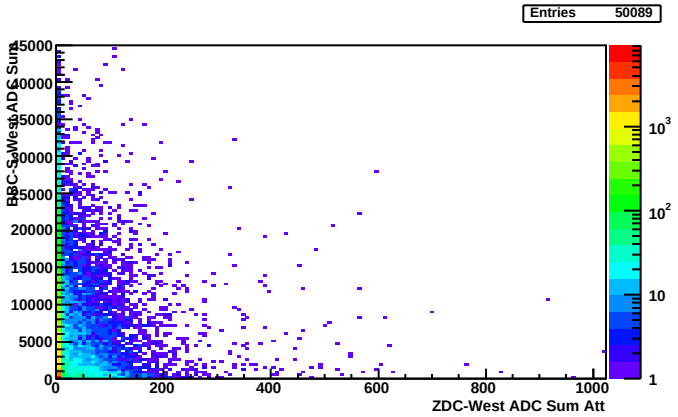

Entries 50089
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

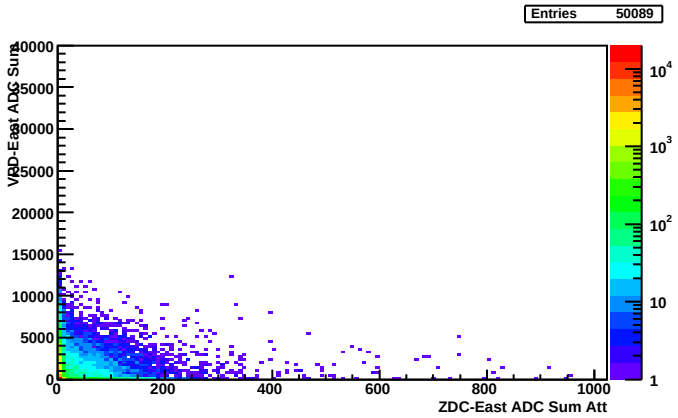

Entries 50089
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

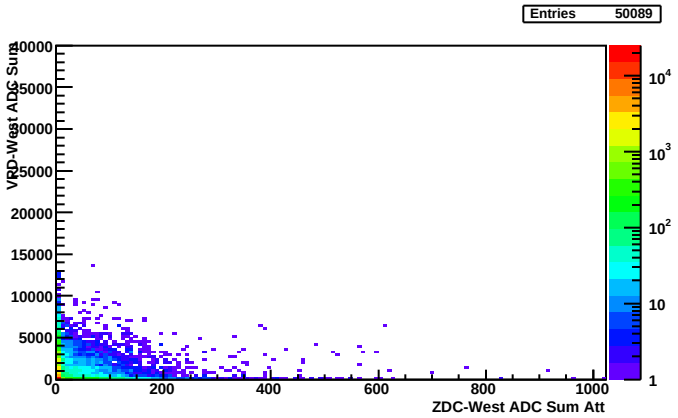

Entries 50089
BBC-S-East ADC Sum
VPD-East ADC Sum

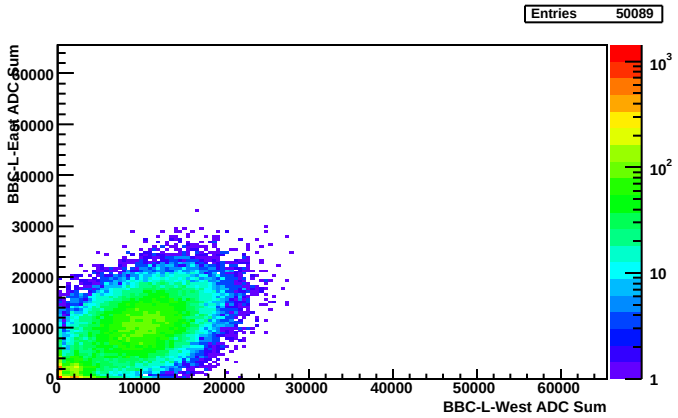

Entries 50089
BBC-S-West ADC Sum
VPD-West ADC Sum

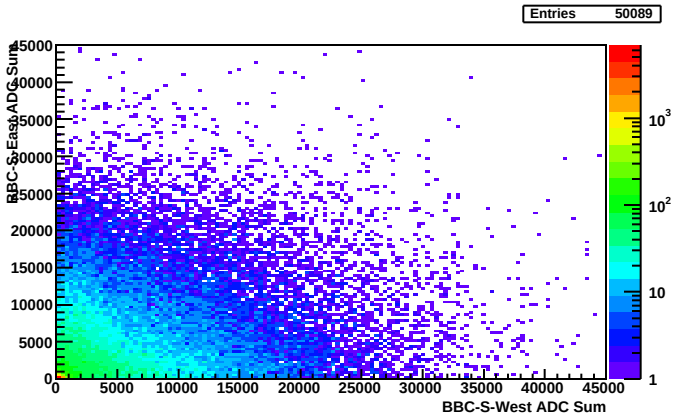

Entries 50089
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

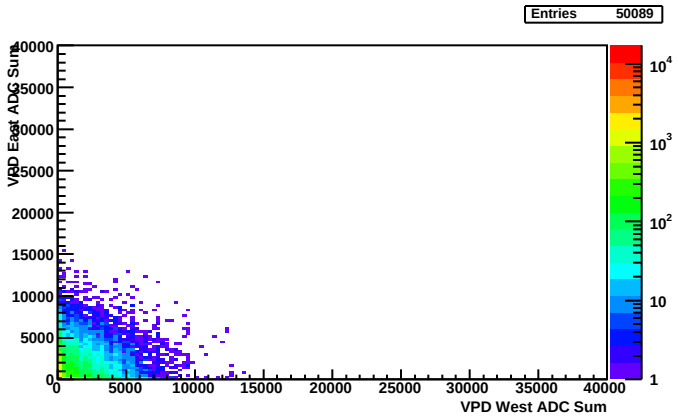

Entries 50089
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

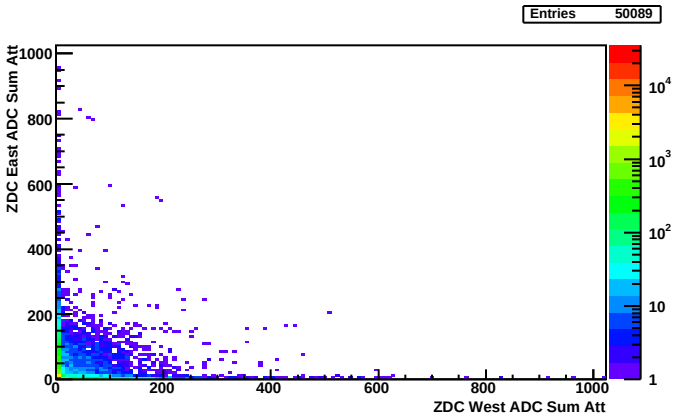

Entries 50089
VPD-East ADC Sum
ZDC-East ADC Sum Att

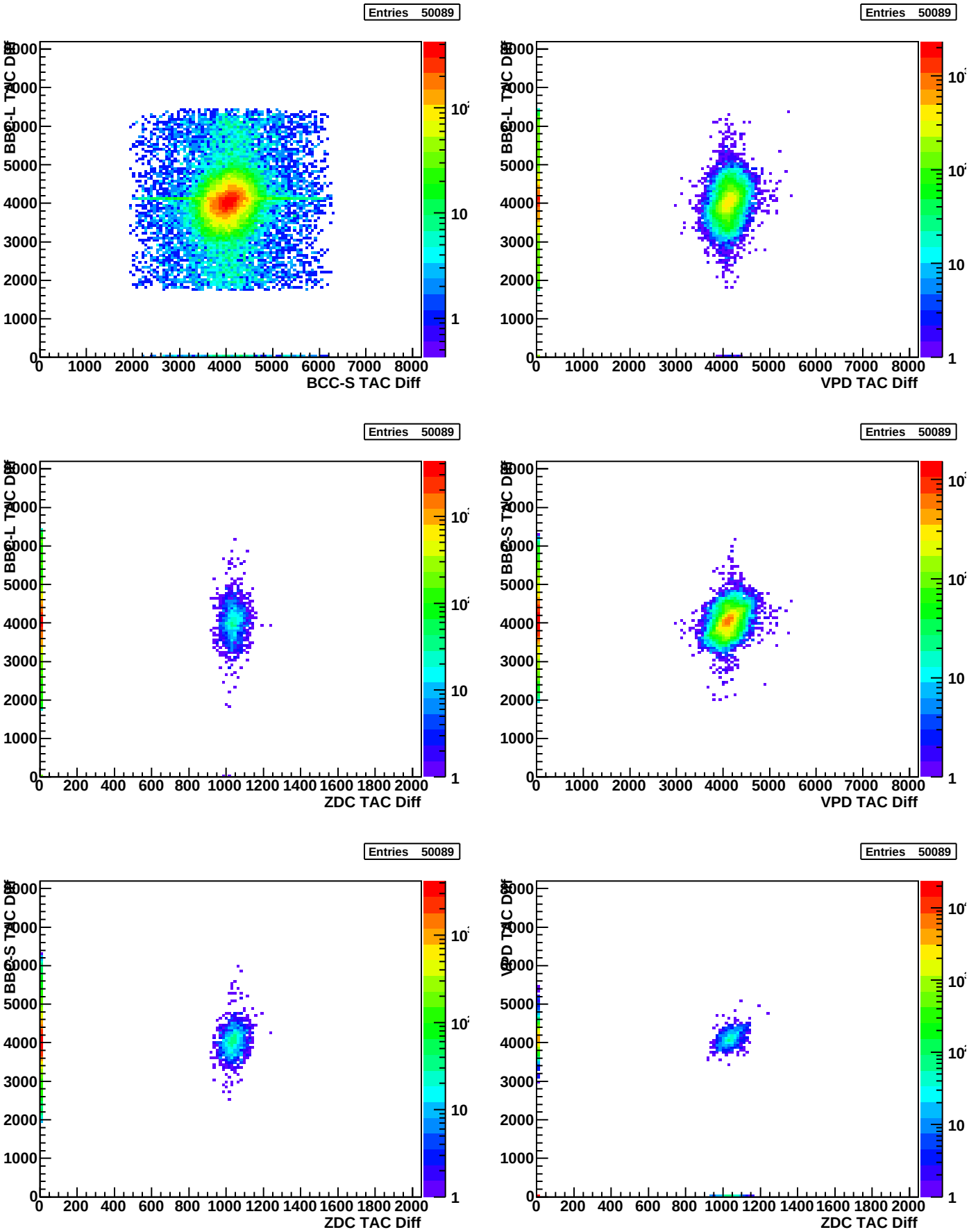

Entries 50089
VPD-West ADC Sum
ZDC-West ADC Sum Att

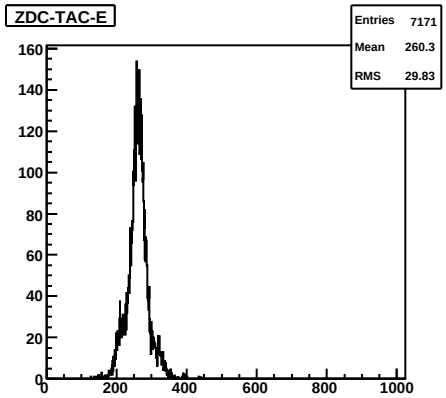

Entries 50089
BBC-L-East ADC Sum
BBC-L-West ADC Sum

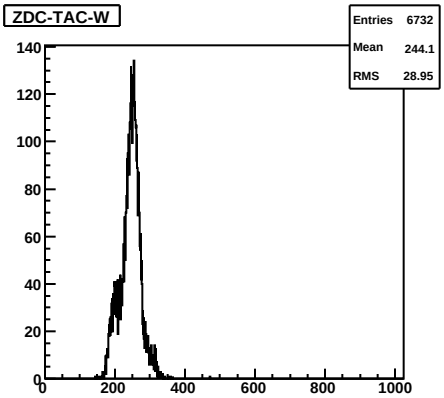

Entries 50089
BBC-S-East ADC Sum
BBC-S-West ADC Sum

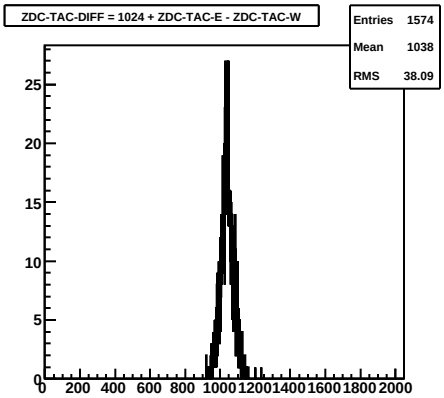

Entries 50089
VPD East ADC Sum
VPD West ADC Sum

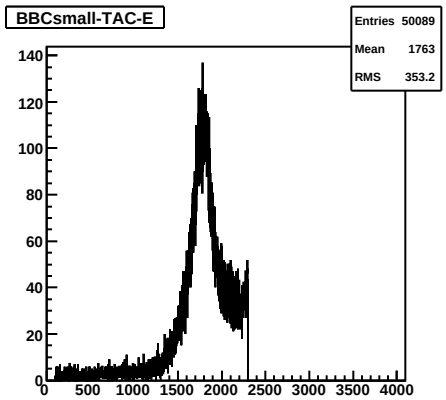

Entries 50089
ZDC East ADC Sum Att
ZDC West ADC Sum Att

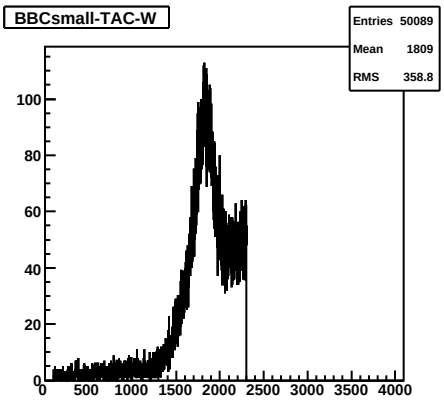

Entries 50089
BBC-L TAC Diff
BCC-S TAC Diff
Entries 50089
BBC-L TAC Diff
VPD TAC Diff
Entries 50089
BBC-L TAC Diff
ZDC TAC Diff
Entries 50089
BBC-S TAC Diff
VPD TAC Diff
Entries 50089
BBC-S TAC Diff
ZDC TAC Diff
Entries 50089
VPD TAC Diff
ZDC TAC Diff

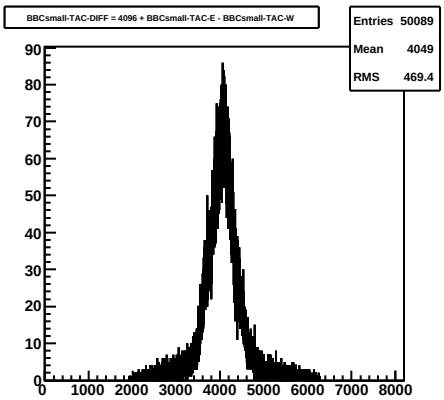

ZDC-TAC-E
Entries 7171
Mean 260.3
RMS 29.83

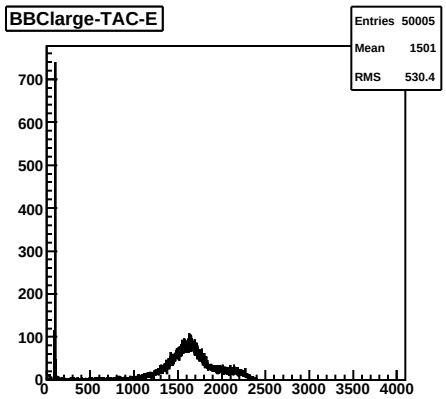

ZDC-TAC-W
Entries 6732
Mean 244.1
RMS 28.95

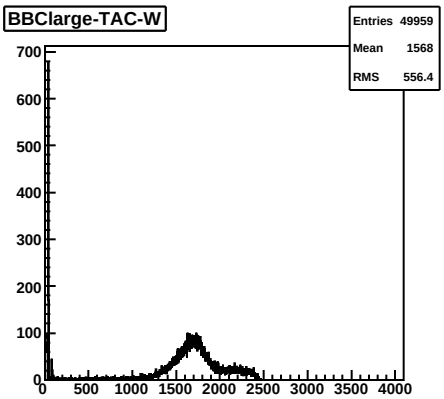

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1574
Mean 1038
RMS 38.09

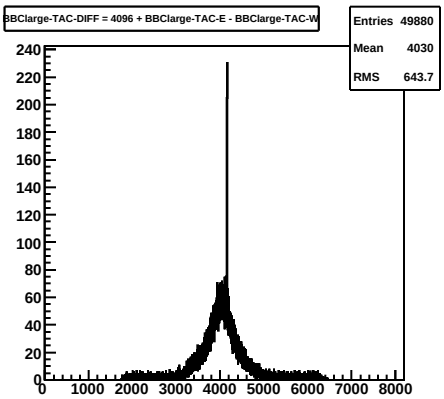

BBCsmall-TAC-E
Entries 50089
Mean 1763
RMS 353.2

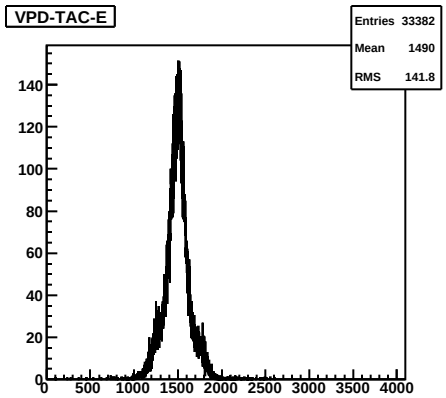

BBCsmall-TAC-W
Entries 50089
Mean 1809
RMS 358.8

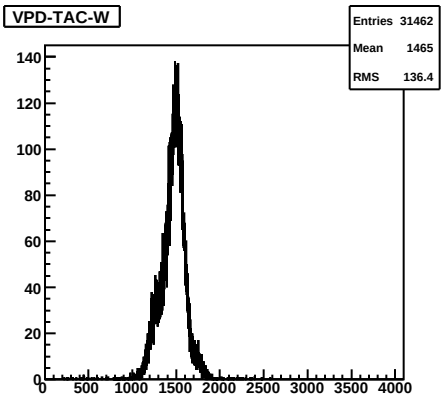

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 50089
Mean 4049
RMS 469.4

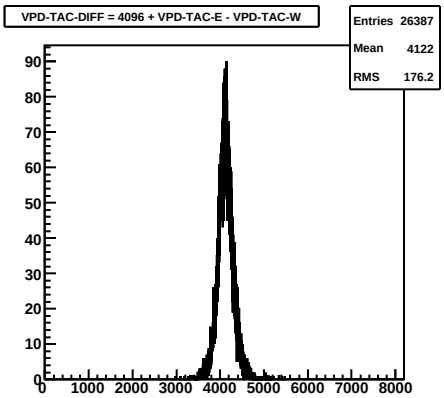

BBClarge-TAC-E
Entries 50005
Mean 1501
RMS 530.4

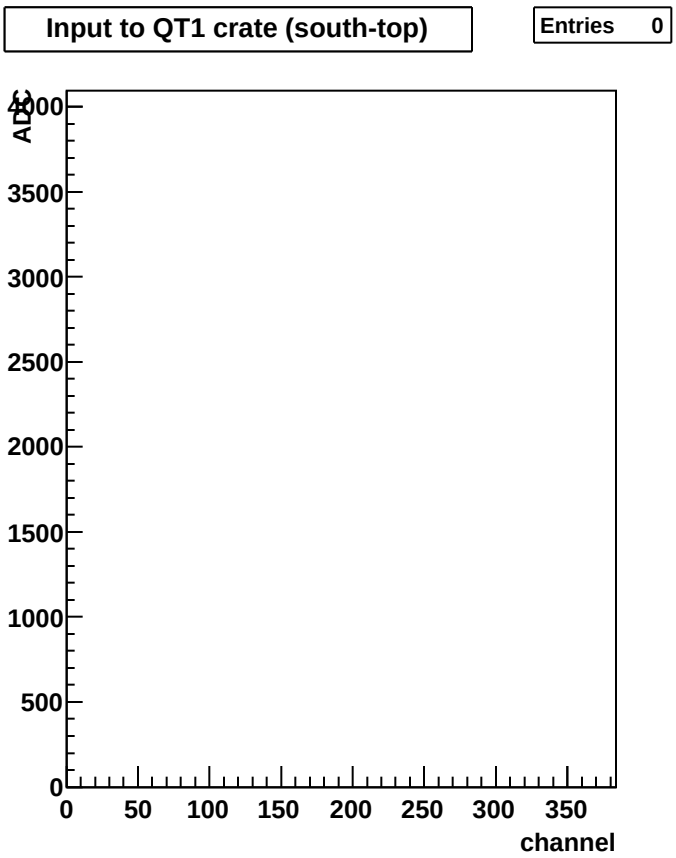

BBClarge-TAC-W
Entries 49959
Mean 1568
RMS 556.4

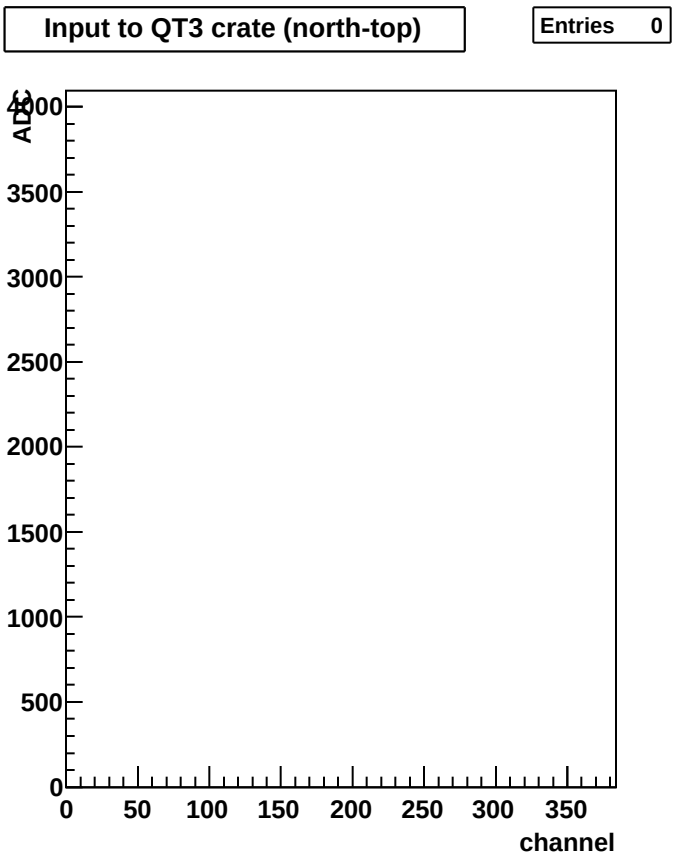

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 49880
Mean 4030
RMS 643.7

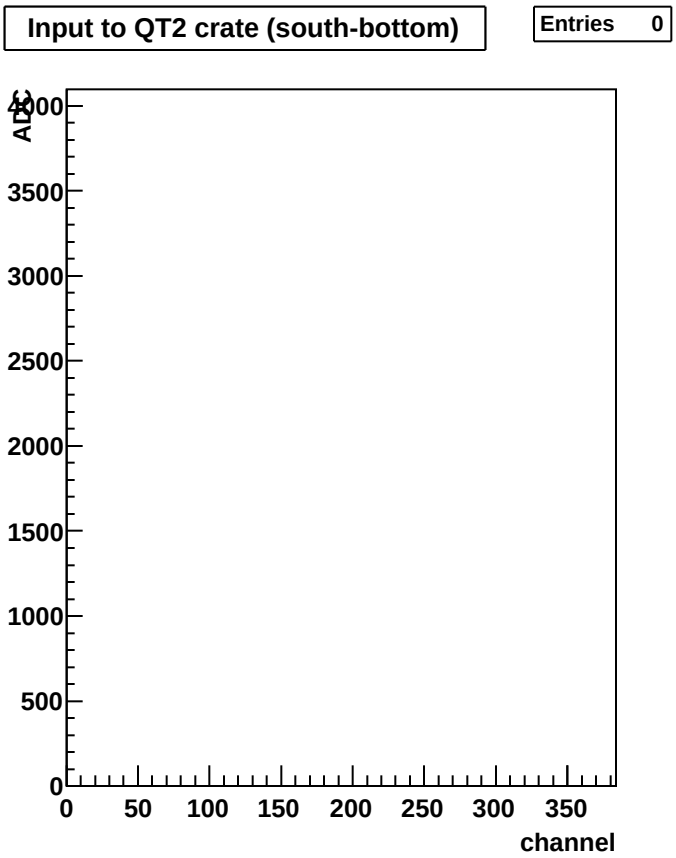

VPD-TAC-E
Entries 33382
Mean 1490
RMS 141.8

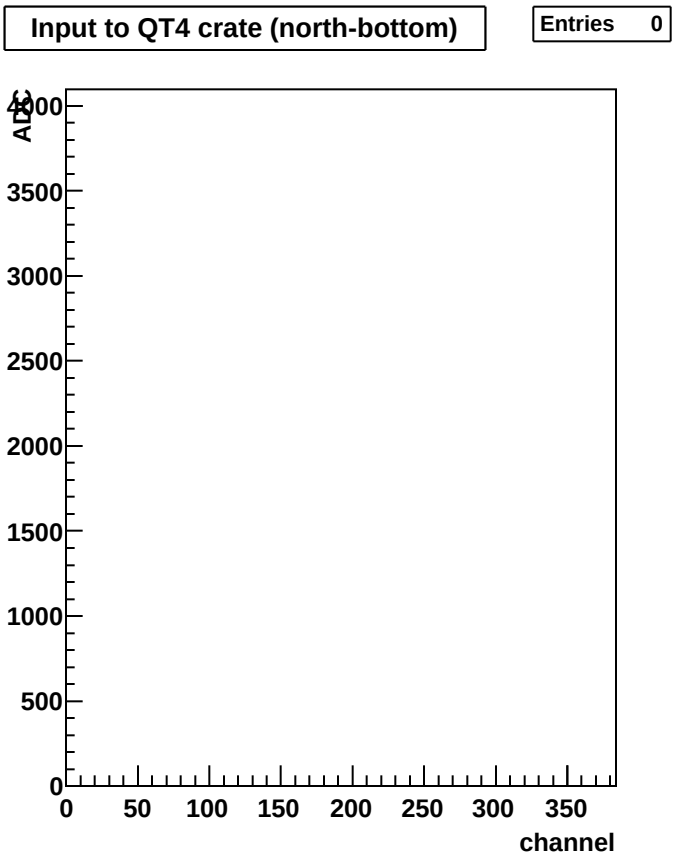

VPD-TAC-W
Entries 31462
Mean 1465
RMS 136.4

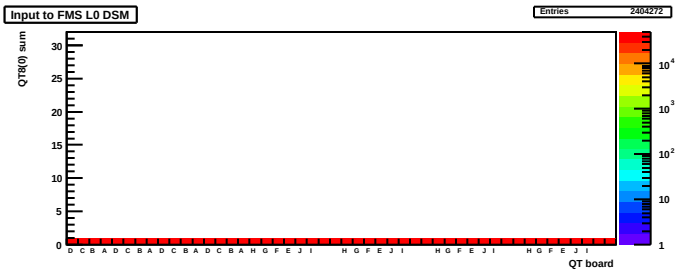

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 26387
Mean 4122
RMS 176.2

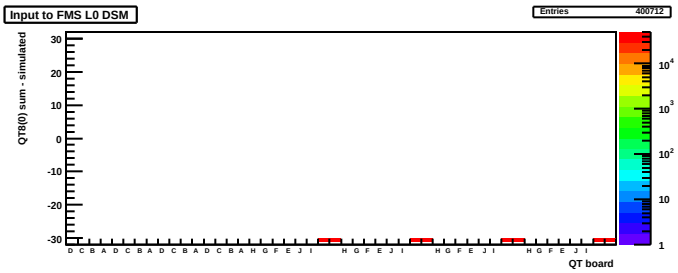

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

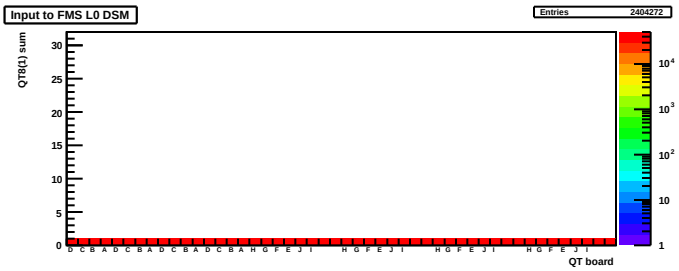

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

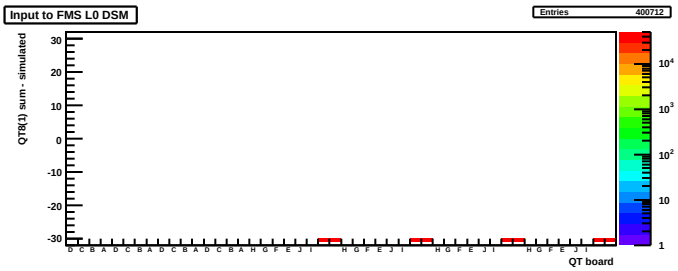

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

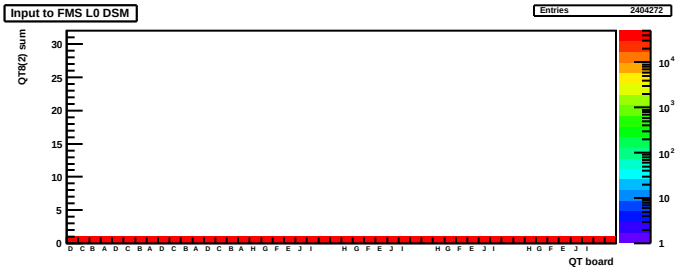

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

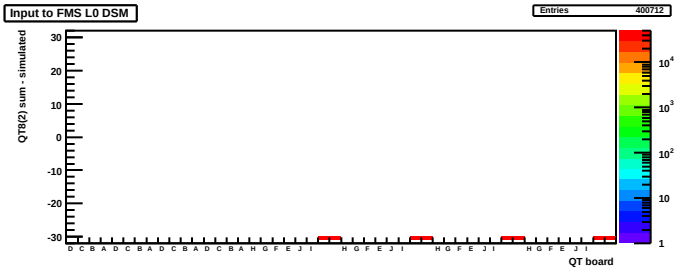

Input to FMS L0 DSM
Entries 2404272
QT8(0) sum
QT board

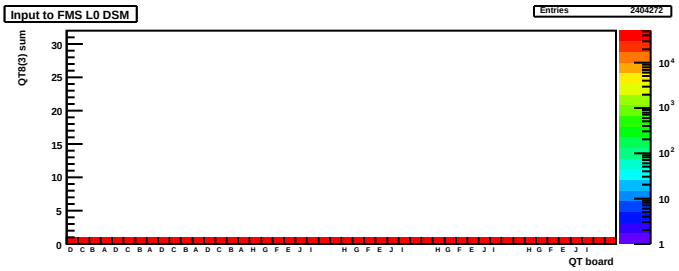

Input to FMS L0 DSM
Entries 400712
QT8(0) sum - simulated
QT board

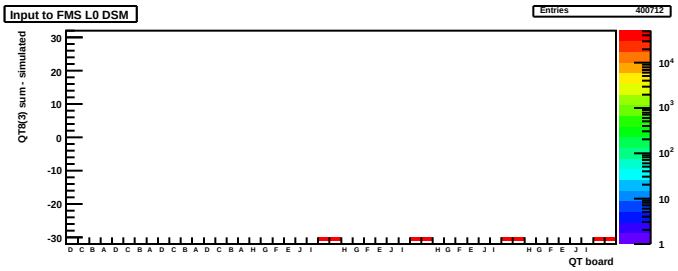

Input to FMS L0 DSM
Entries 2404272
QT8(1) sum
QT board

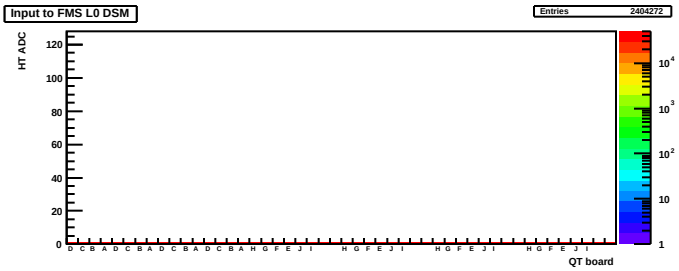

Input to FMS L0 DSM
Entries 400712
QT8(1) sum - simulated
QT board

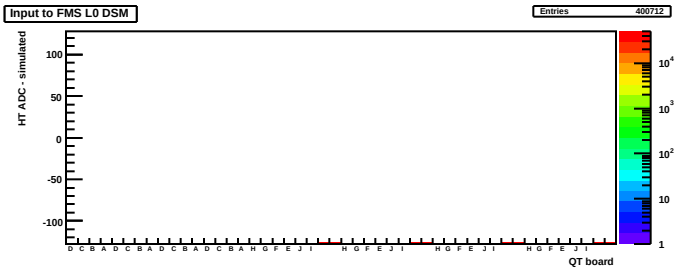

Input to FMS L0 DSM
Entries 2404272
QT8(2) sum
QT board

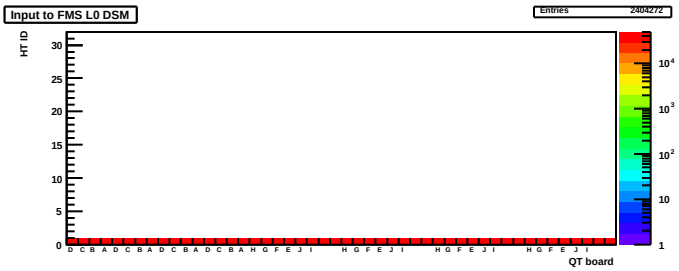

Input to FMS L0 DSM
Entries 400712
QT8(2) sum - simulated
QT board

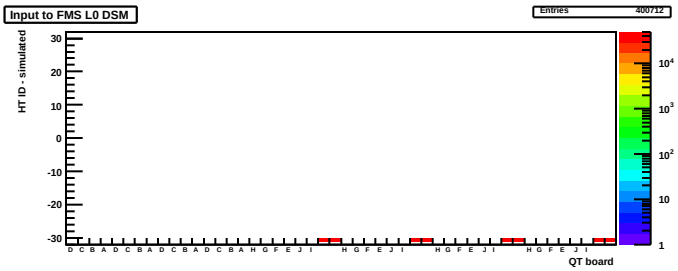

Input to FMS L0 DSM
Entries 2404272
QT8(3) sum
QT board

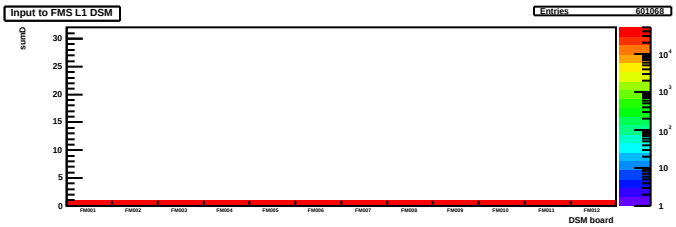

Input to FMS L0 DSM
Entries 400712
QT8(3) sum - simulated
QT board

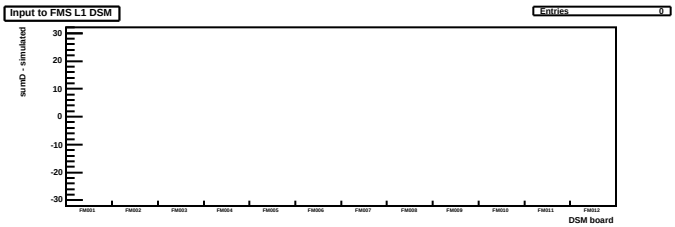

Input to FMS L0 DSM
Entries 2404272
HT ADC
QT board

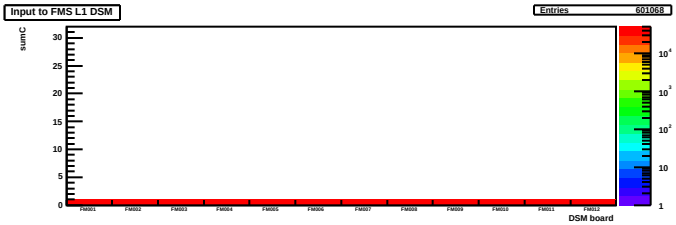

Input to FMS L0 DSM
Entries 400712
HT ADC - simulated
QT board

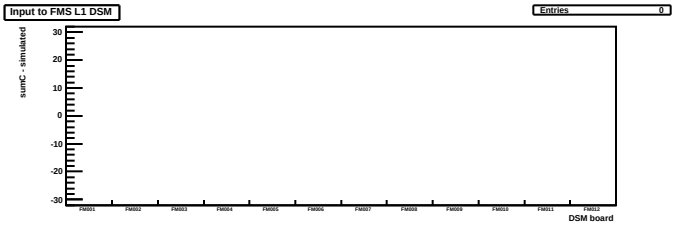

Input to FMS L0 DSM
Entries 2404272
HT ID
QT board

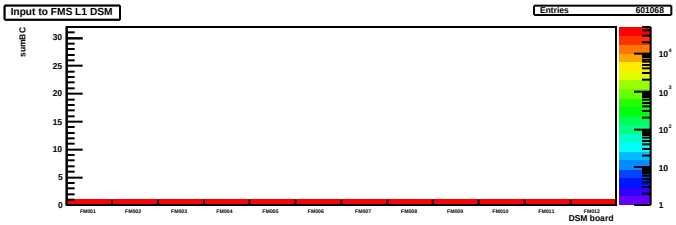

Input to FMS L0 DSM
Entries 400712
HT ID - simulated
QT board

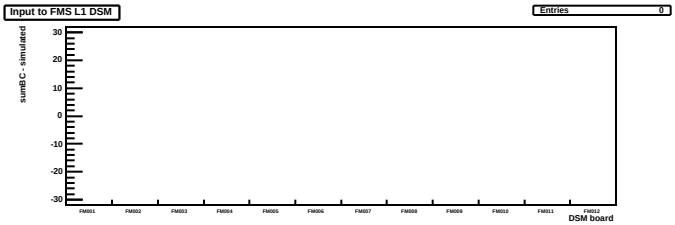

Input to FMS L1 DSM
Entries 601068
sumD
DSM board

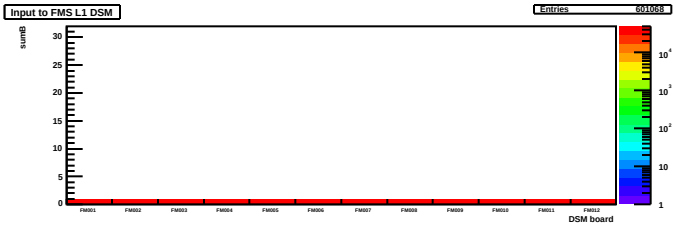

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

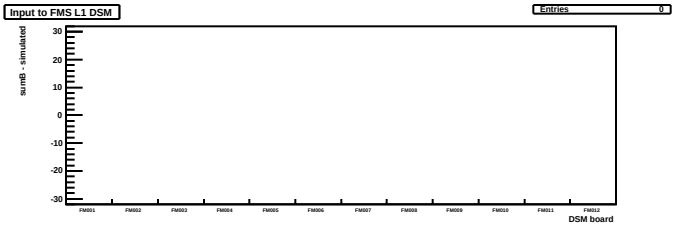

Input to FMS L1 DSM
Entries 601068
sumC
DSM board

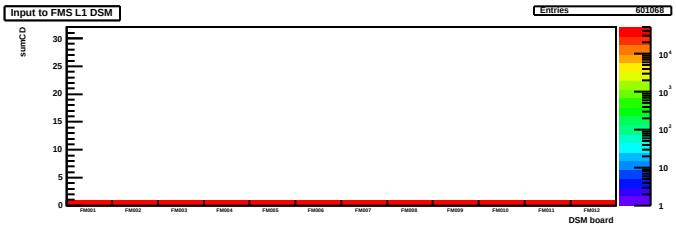

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

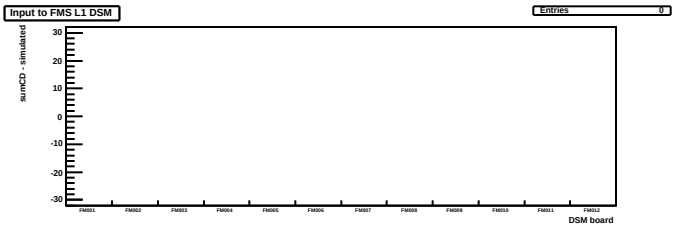

Input to FMS L1 DSM
Entries 601068
sumBC
DSM board

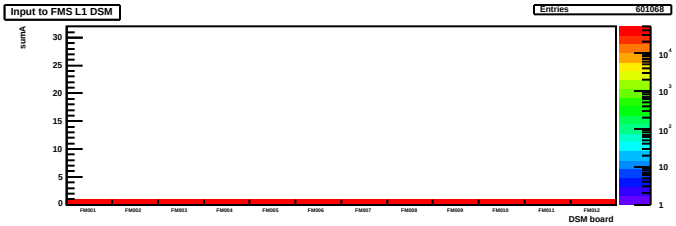

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

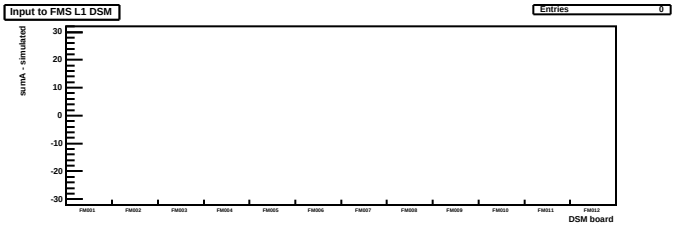

Input to FMS L1 DSM
Entries 601068
sumB
DSM board

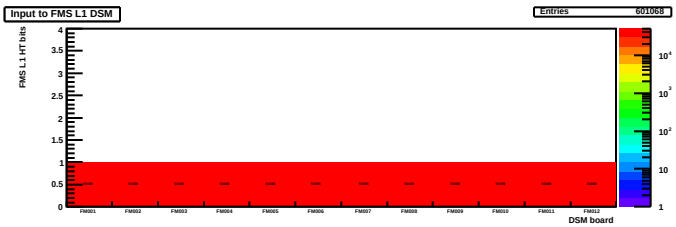

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

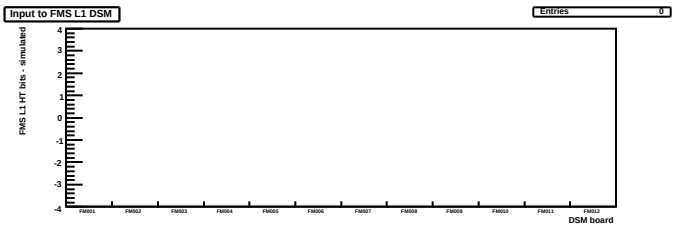

Input to FMS L1 DSM
Entries 601068
sumCD
DSM board

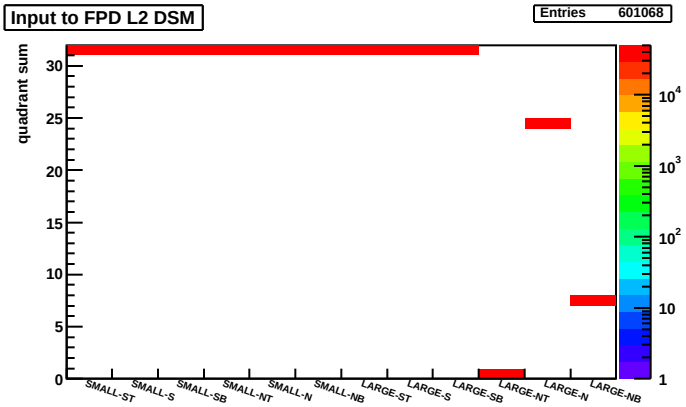

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

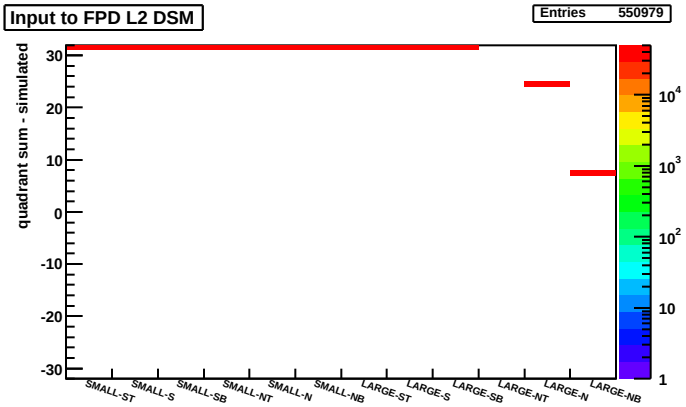

Input to FMS L1 DSM
Entries 601068
sumA
DSM board

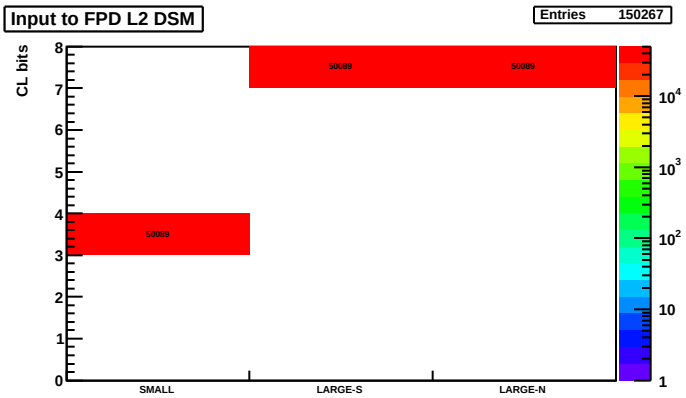

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

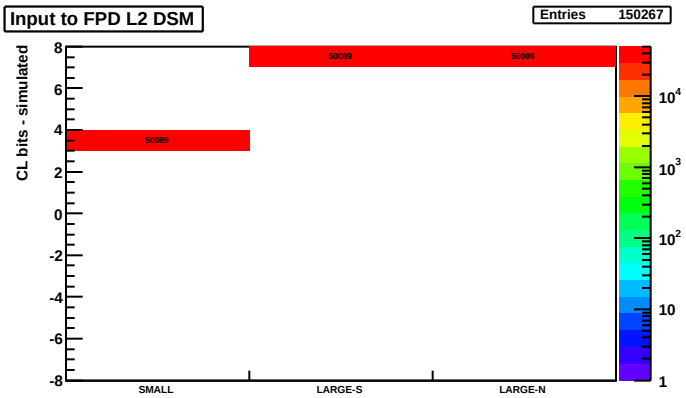

Input to FMS L1 DSM
Entries 601068
FMS L1 HT bits
DSM board

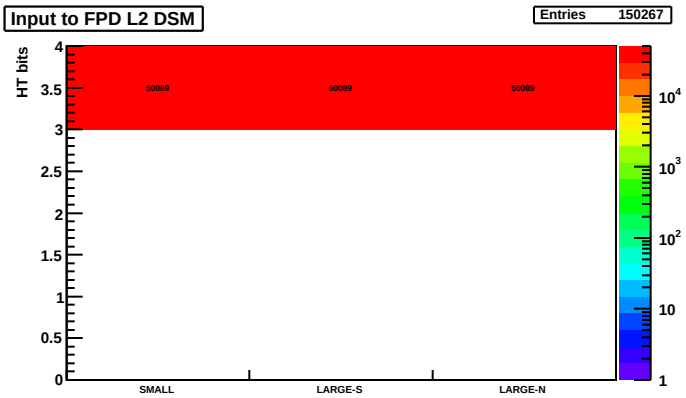

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

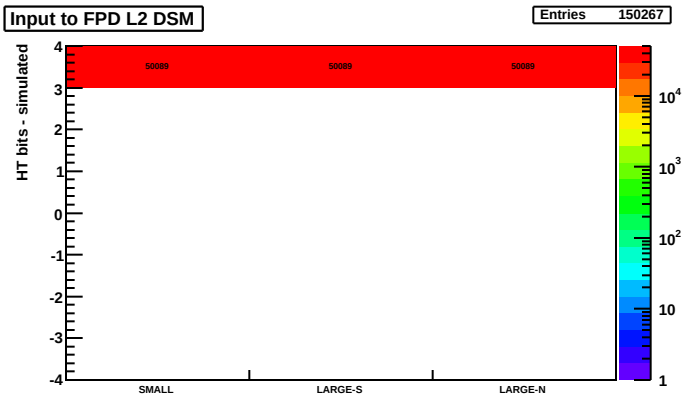

Input to FPD L2 DSM
Entries 601068
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

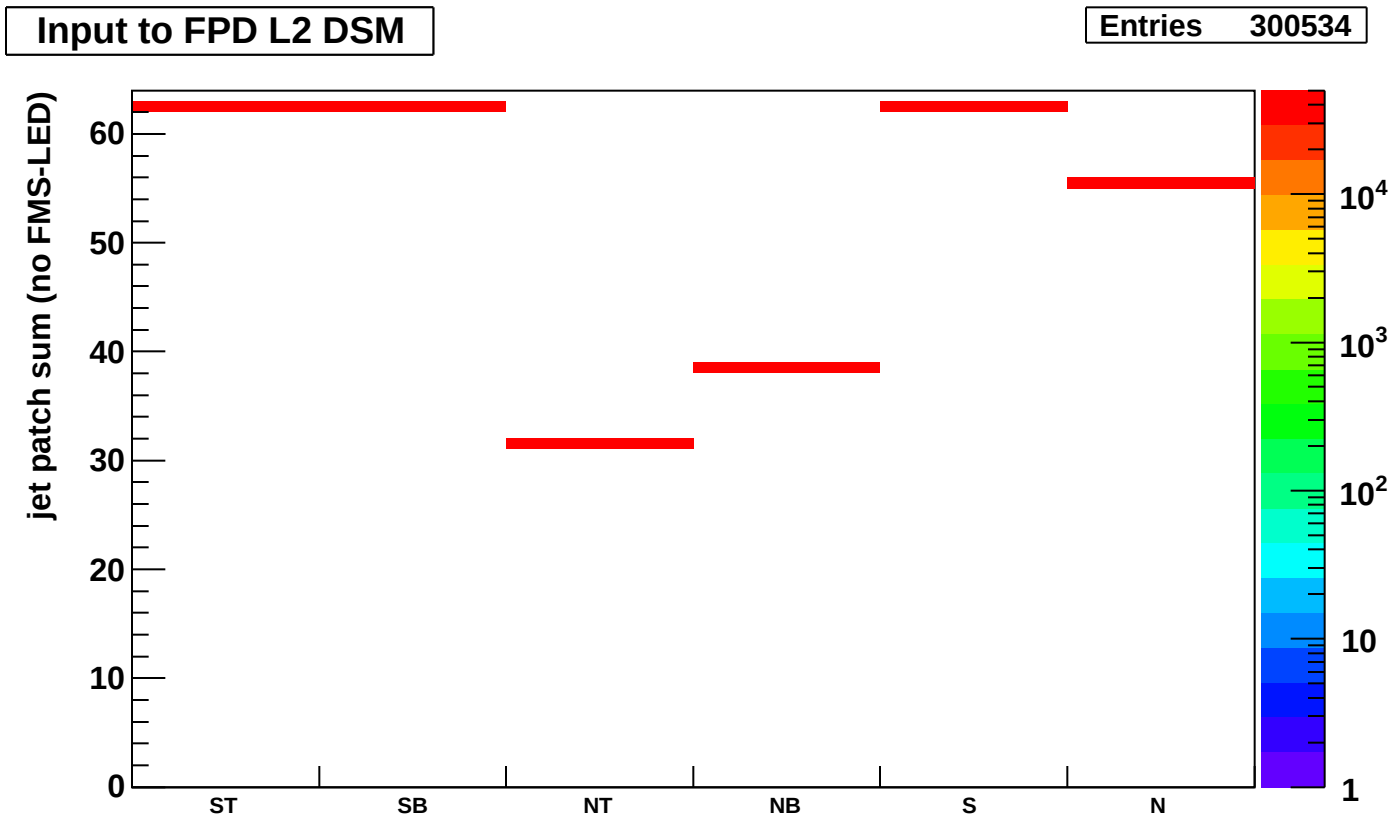

Input to FPD L2 DSM
Entries 550979
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

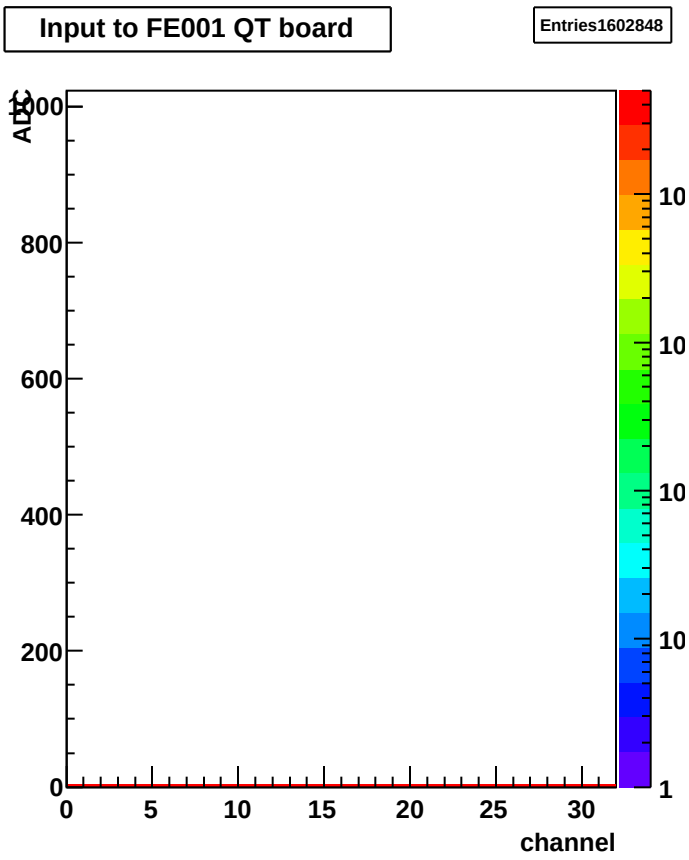

Input to FPD L2 DSM
Entries 150267
CL bits
50089
50089
50089
SMALL
LARGE-S
LARGE-N

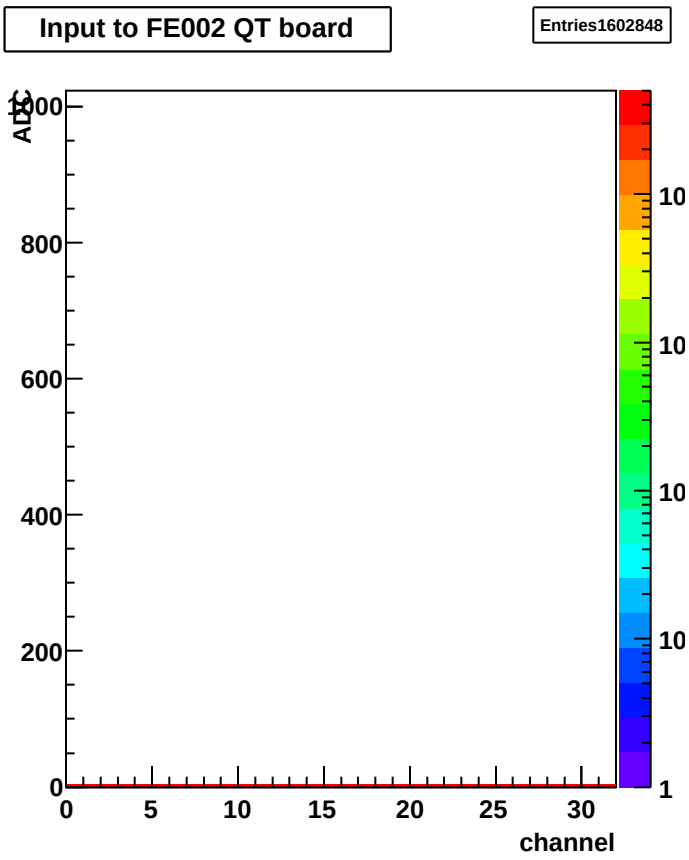

Input to FPD L2 DSM
Entries 150267
CL bits - simulated
50089
50089
50089
SMALL
LARGE-S
LARGE-N

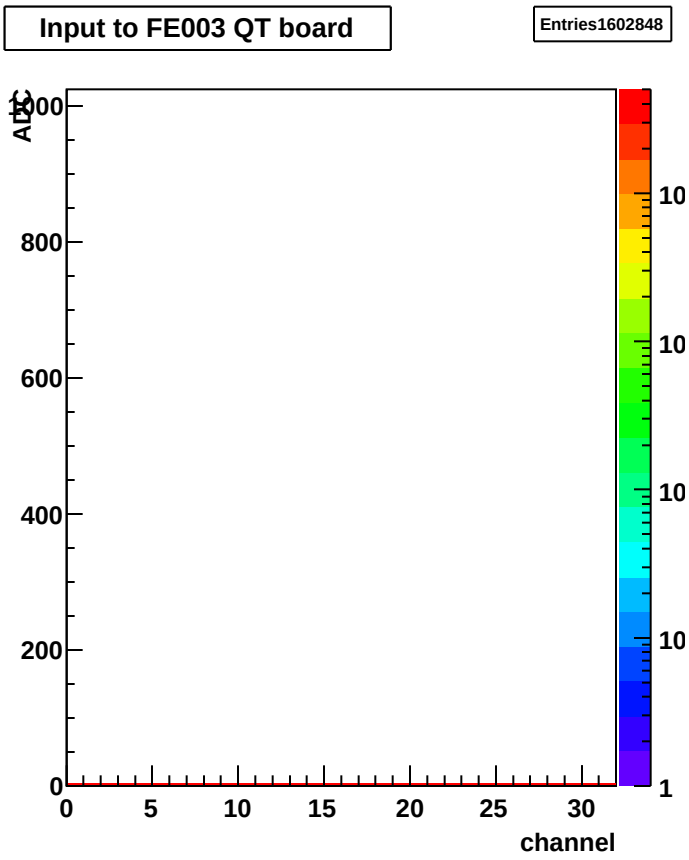

Input to FPD L2 DSM
Entries 150267
HT bits
50089
50089
50089
SMALL
LARGE-S
LARGE-N

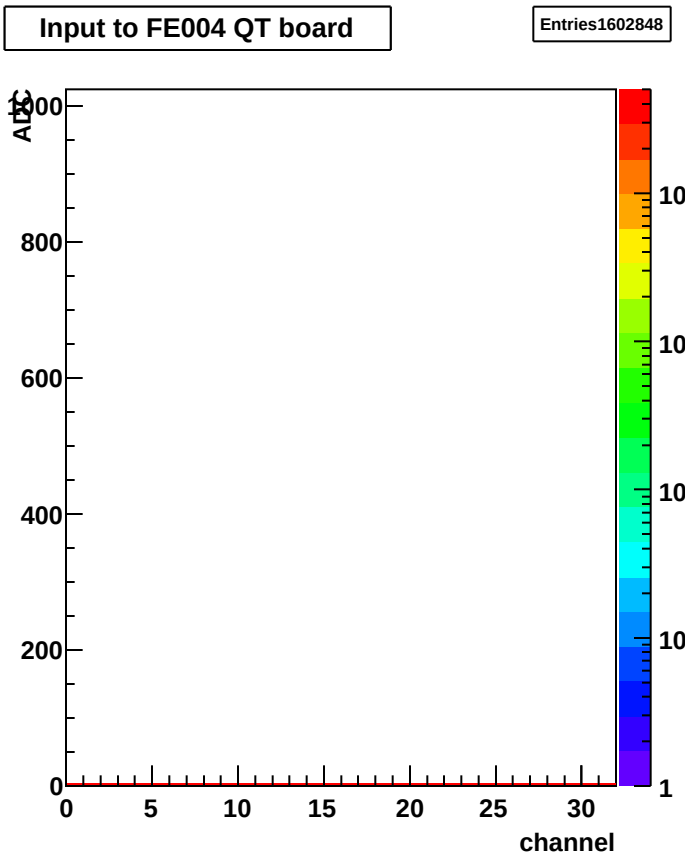

Input to FPD L2 DSM
Entries 150267
HT bits - simulated
50089
50089
50089
SMALL
LARGE-S
LARGE-N

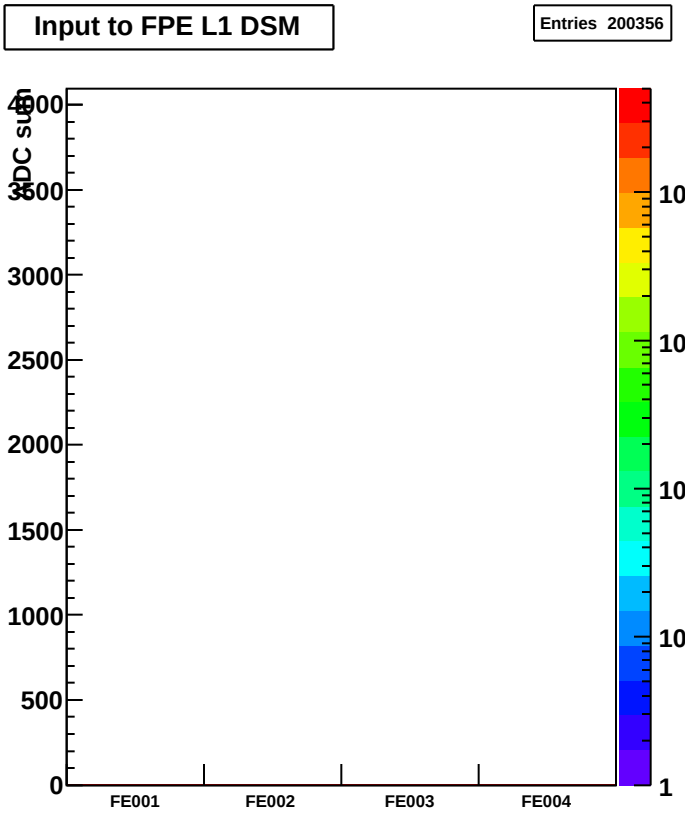

Input to FPD L2 DSM
Entries 300534
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

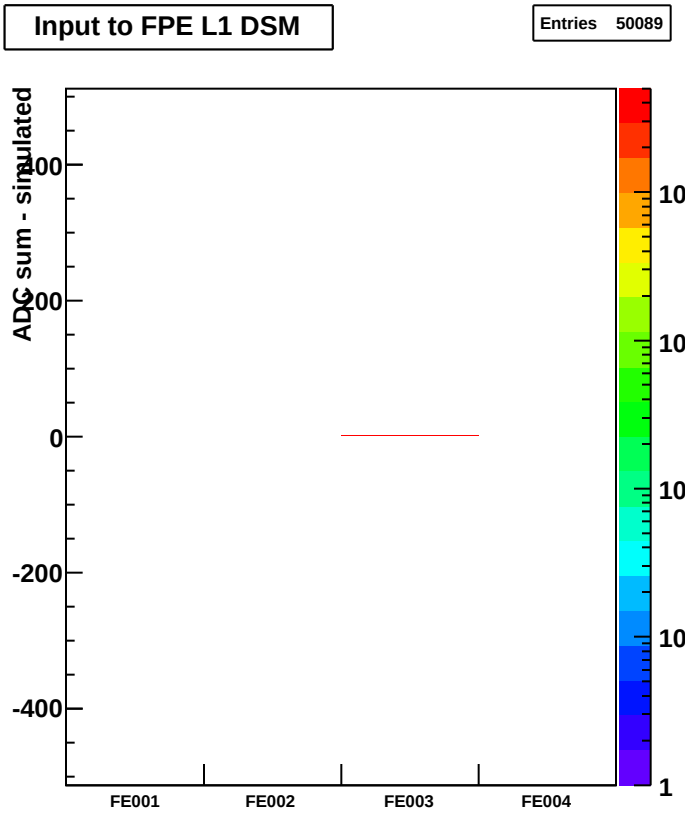

Input to FE001 QT board
Entries1602848
ADC
channel


Input to FE002 QT board
Entries1602848
ADC
channel

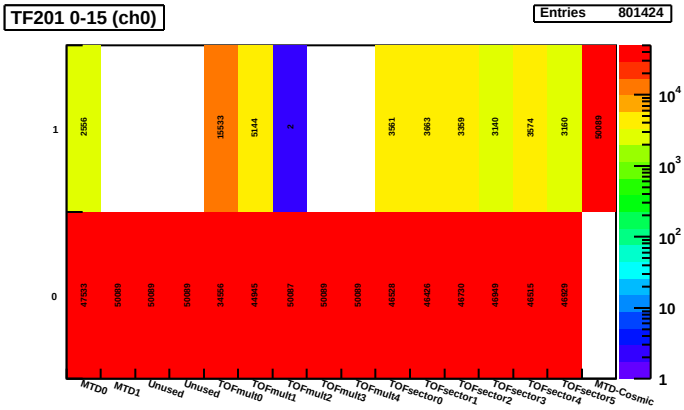

Input to FE003 QT board
Entries1602848
ADC
channel


Input to FE004 QT board
Entries1602848
ADC
channel

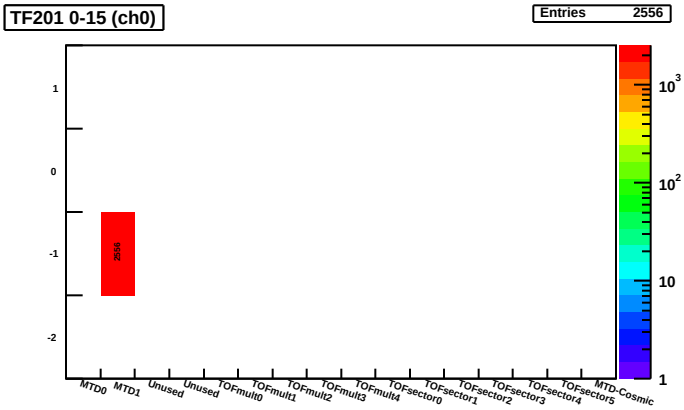

Input to FPE L1 DSM
Entries 200356
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 50089
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

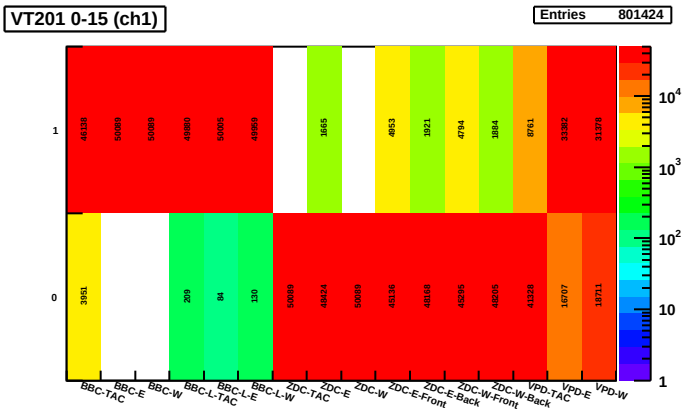
TF201 0-15 (ch0)



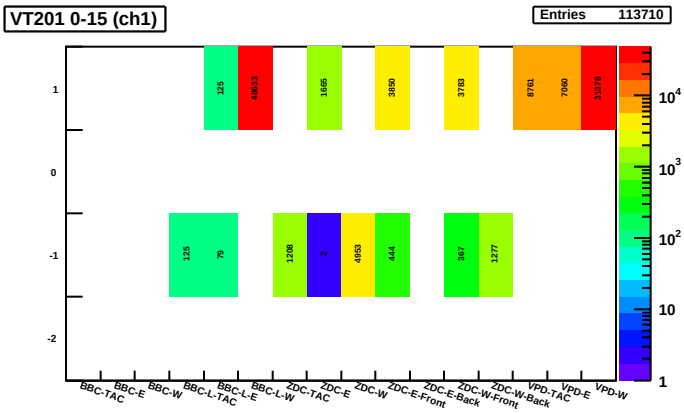
TF201 0-15 (ch0)



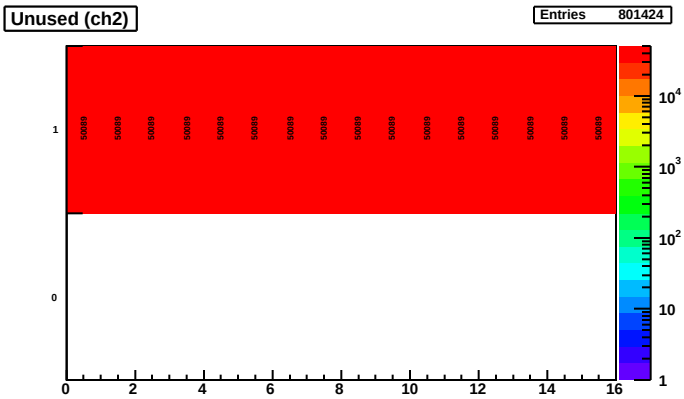
VT201 0-15 (ch1)

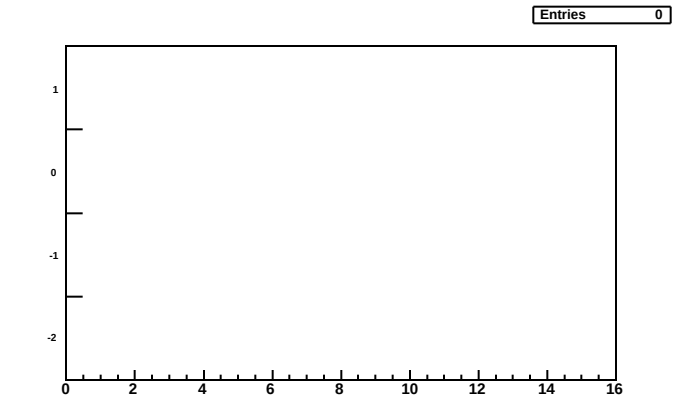


VT201 0-15 (ch1)

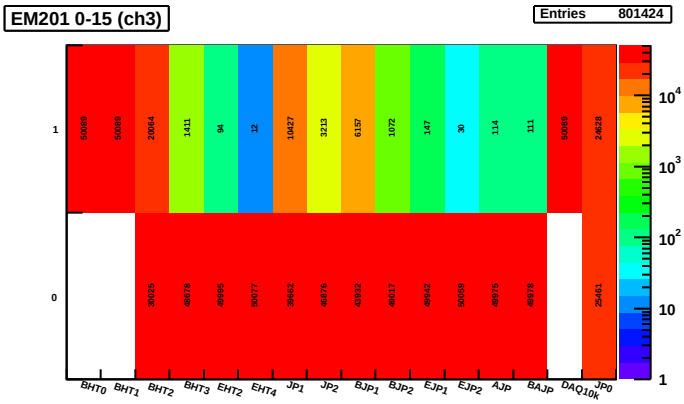


Unused (ch2)





EM201 0-15 (ch3)



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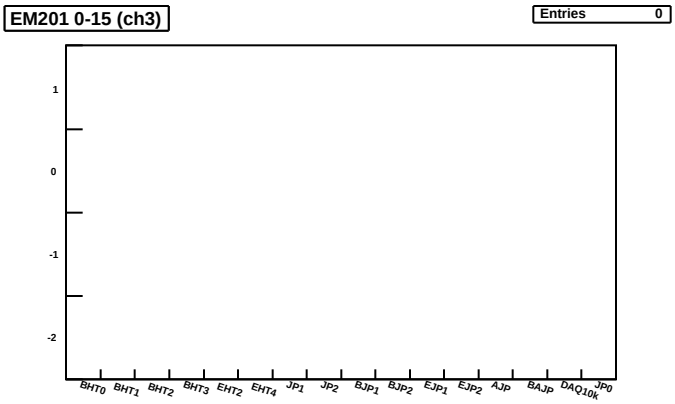
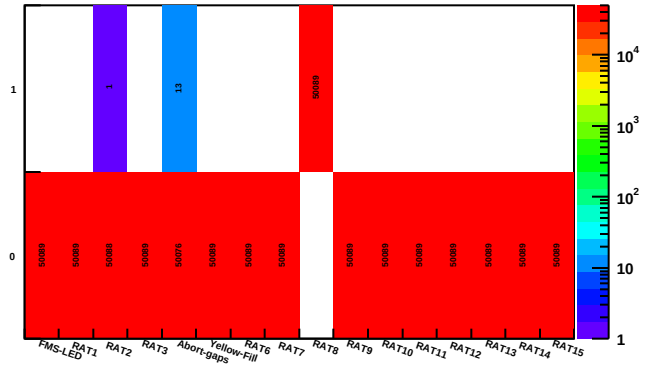
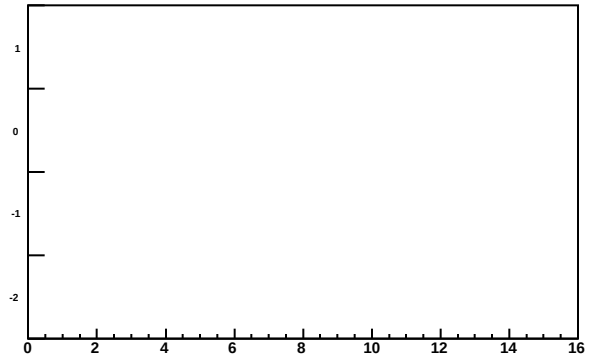


RAT board (ch4)





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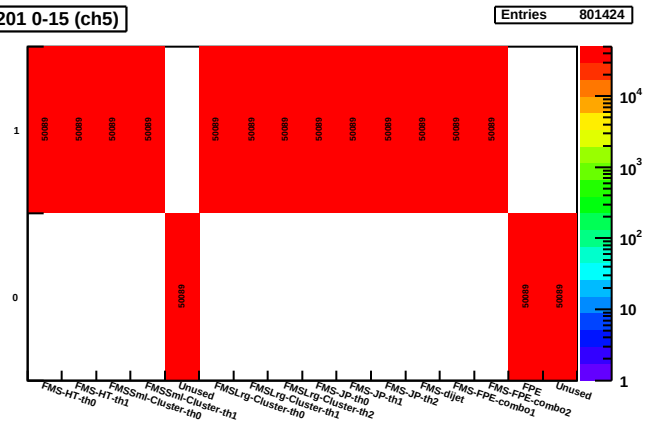

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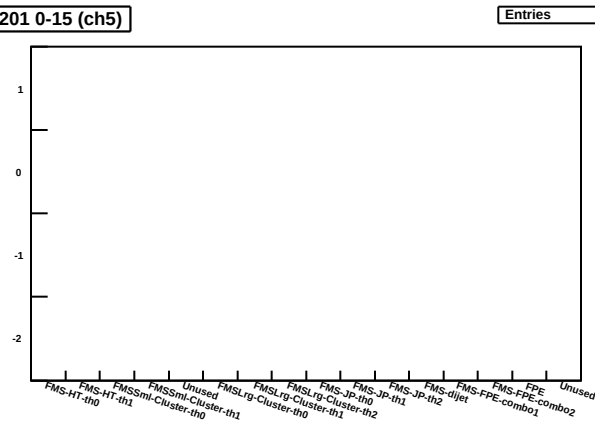

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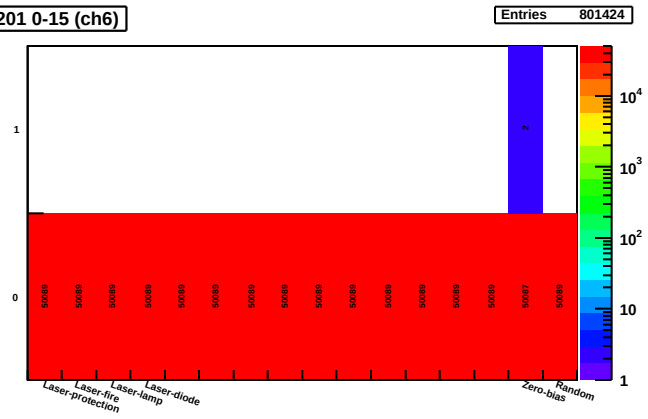

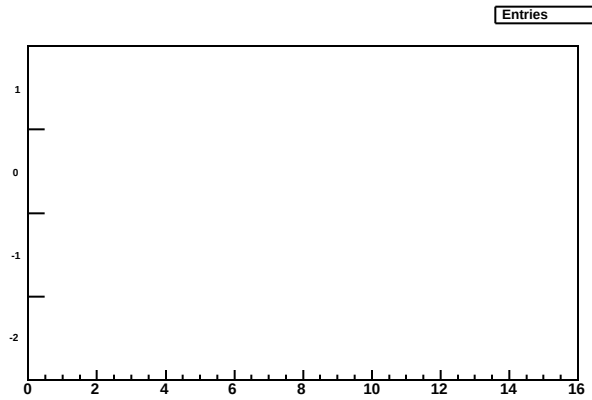
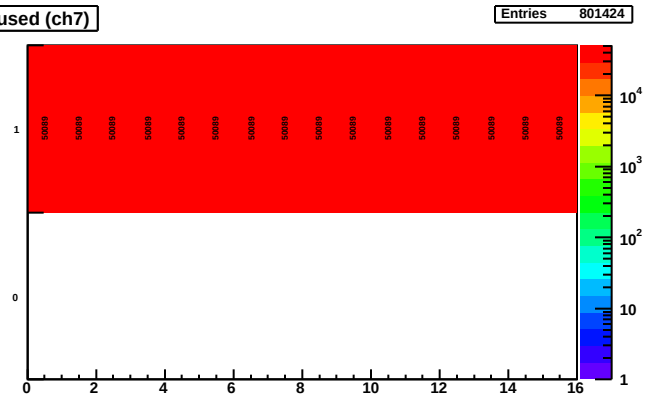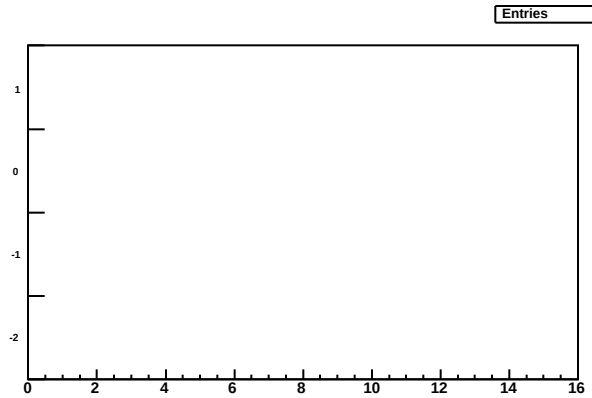
Unused (ch7)