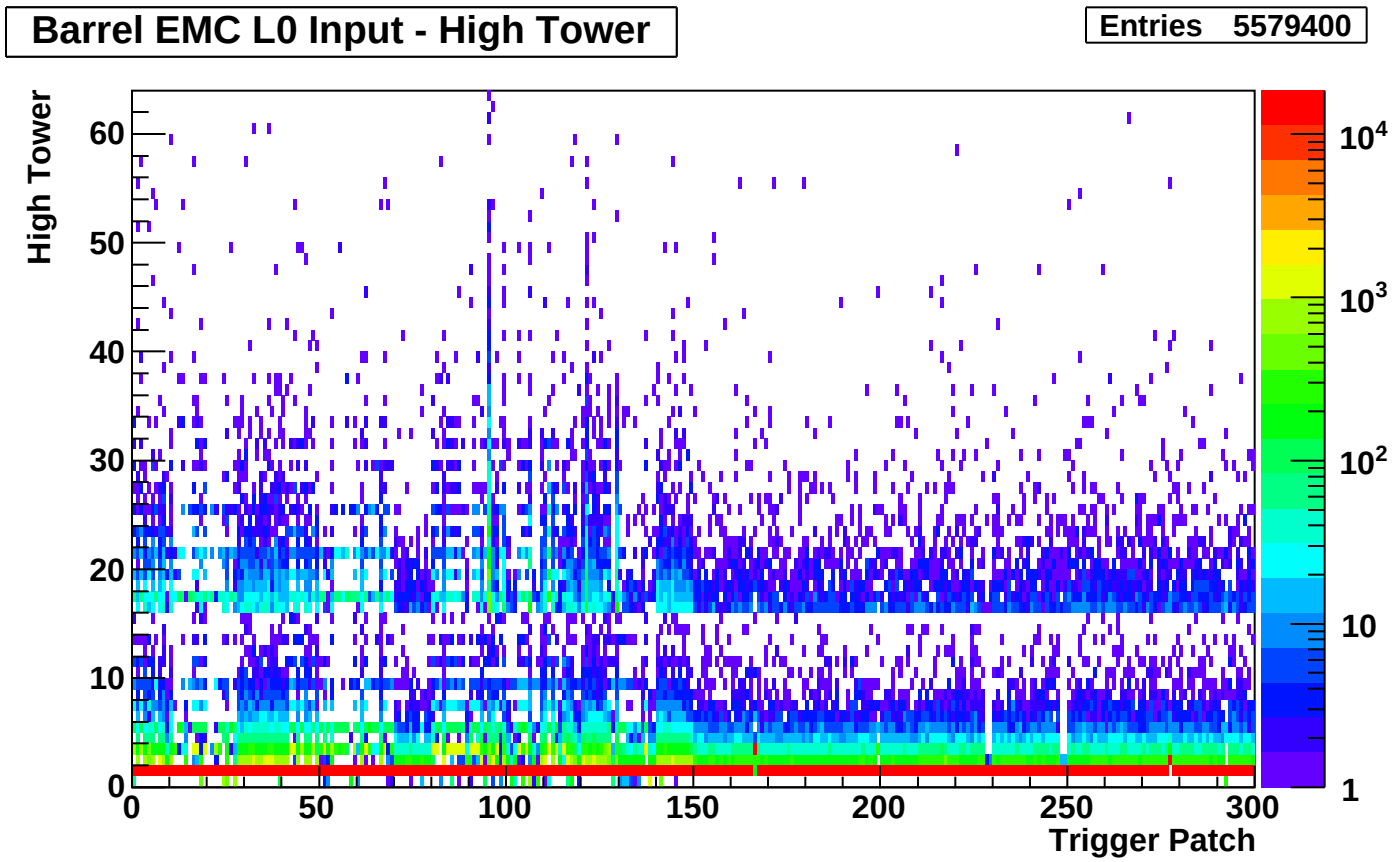
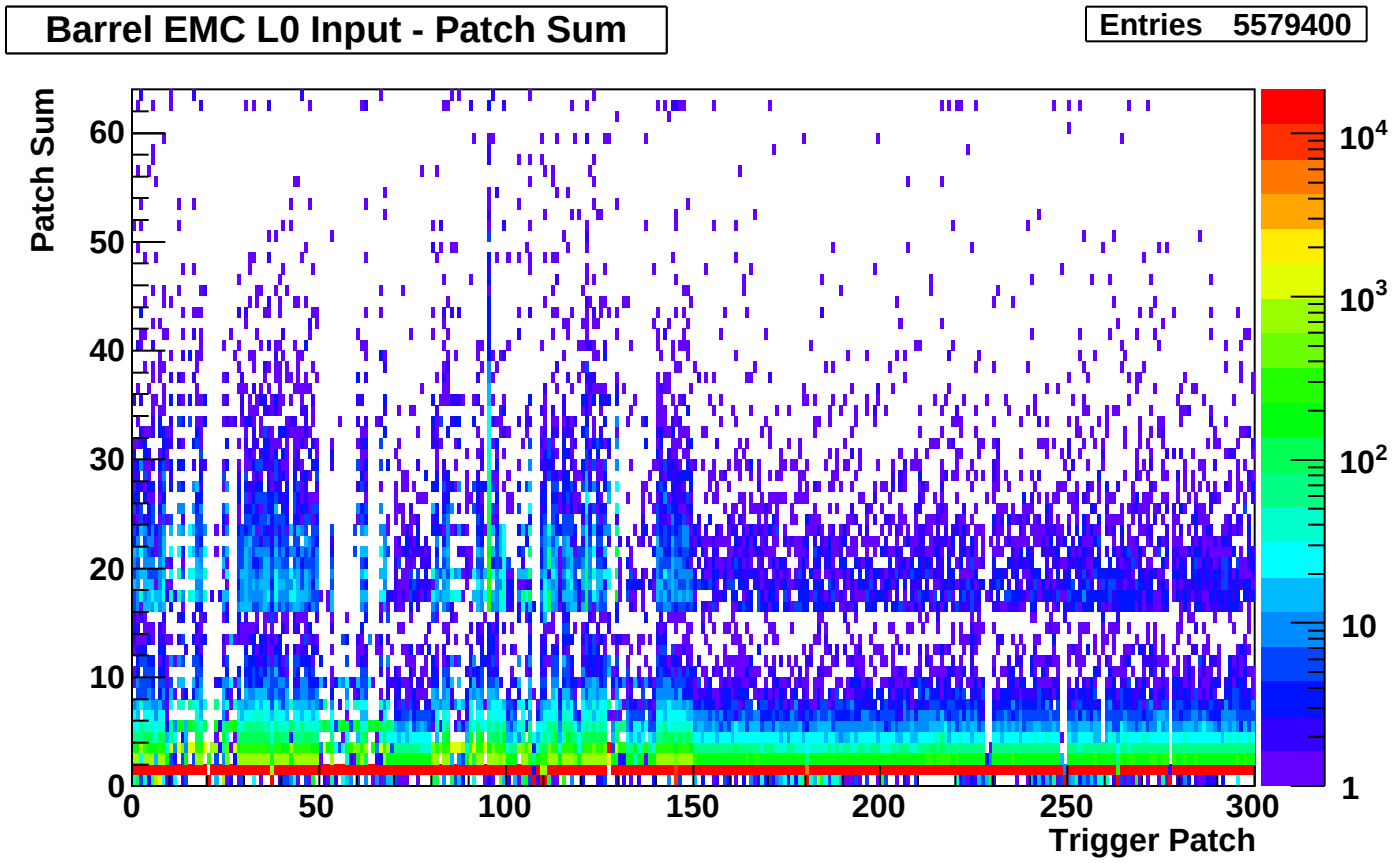
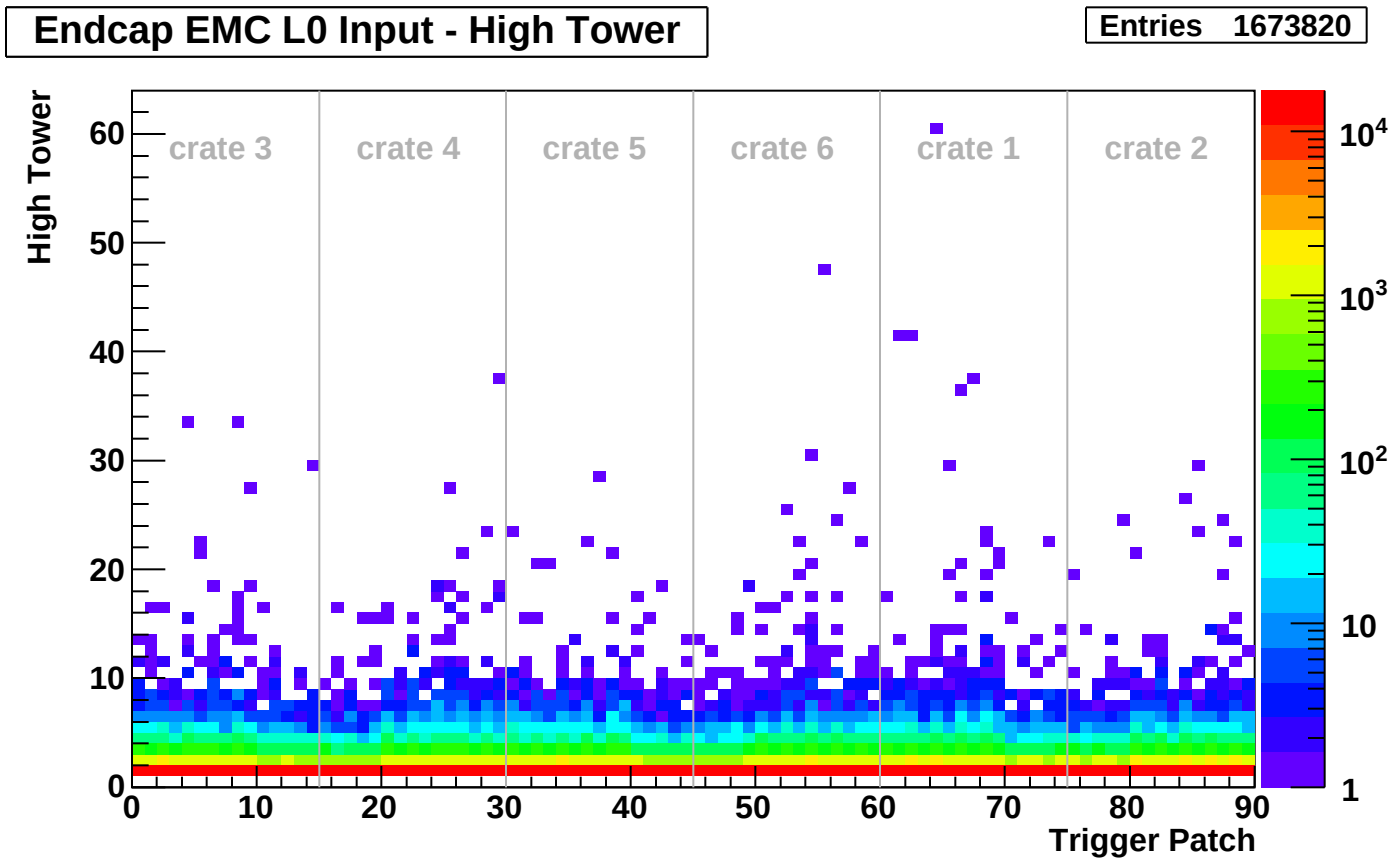
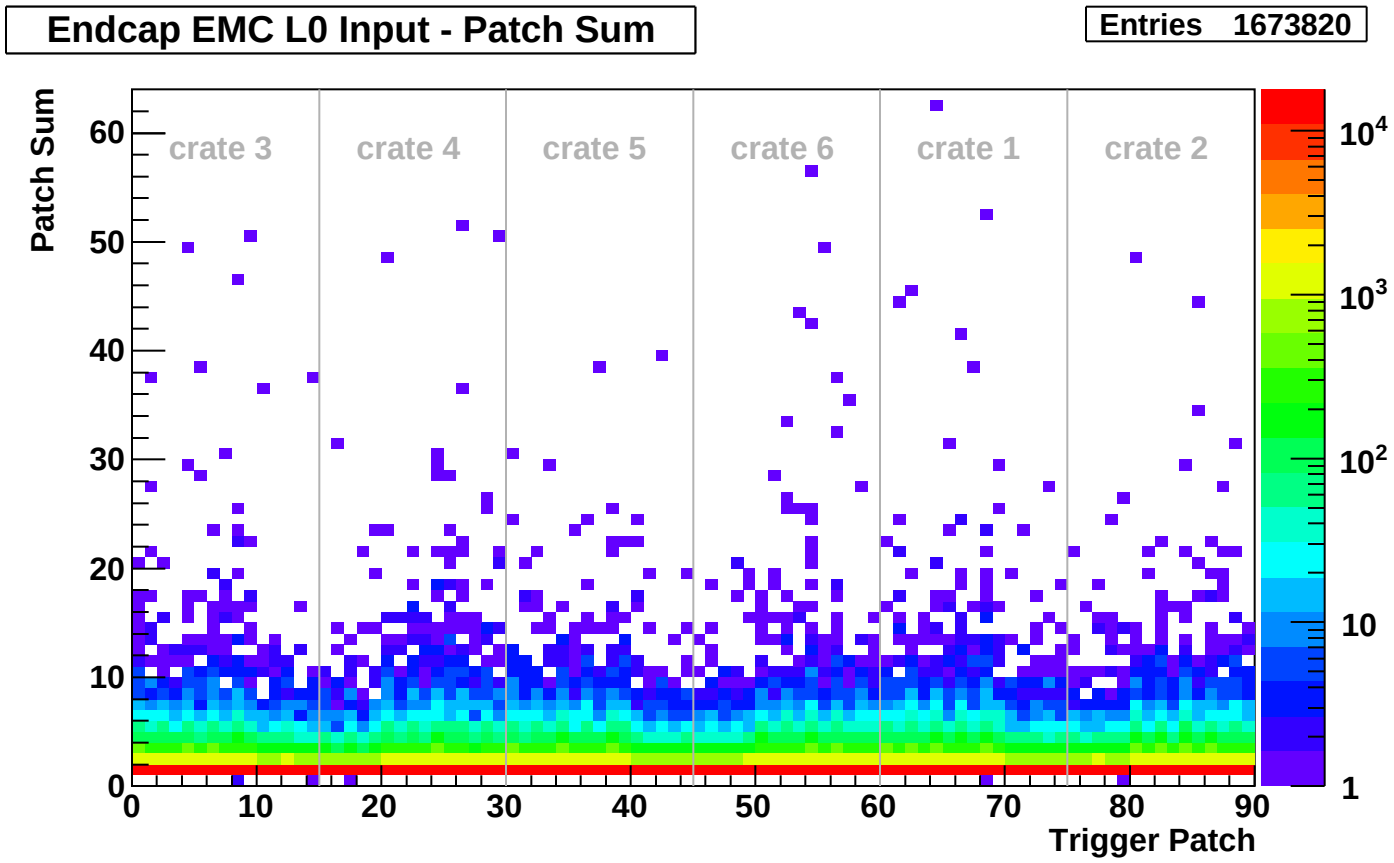
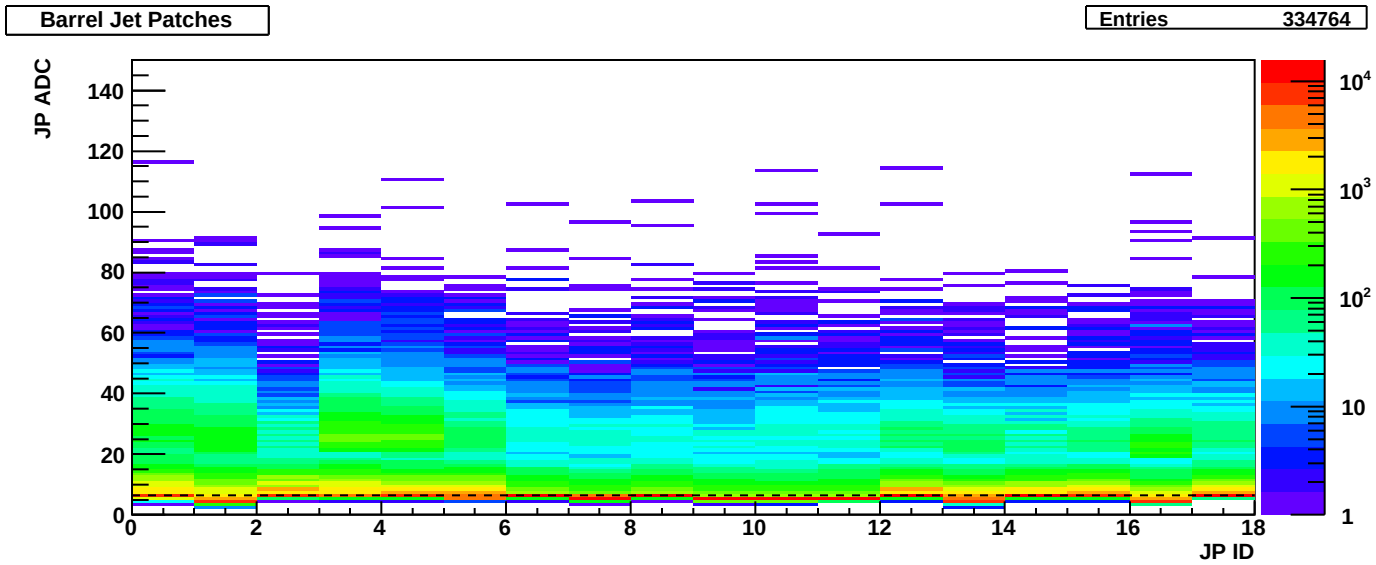
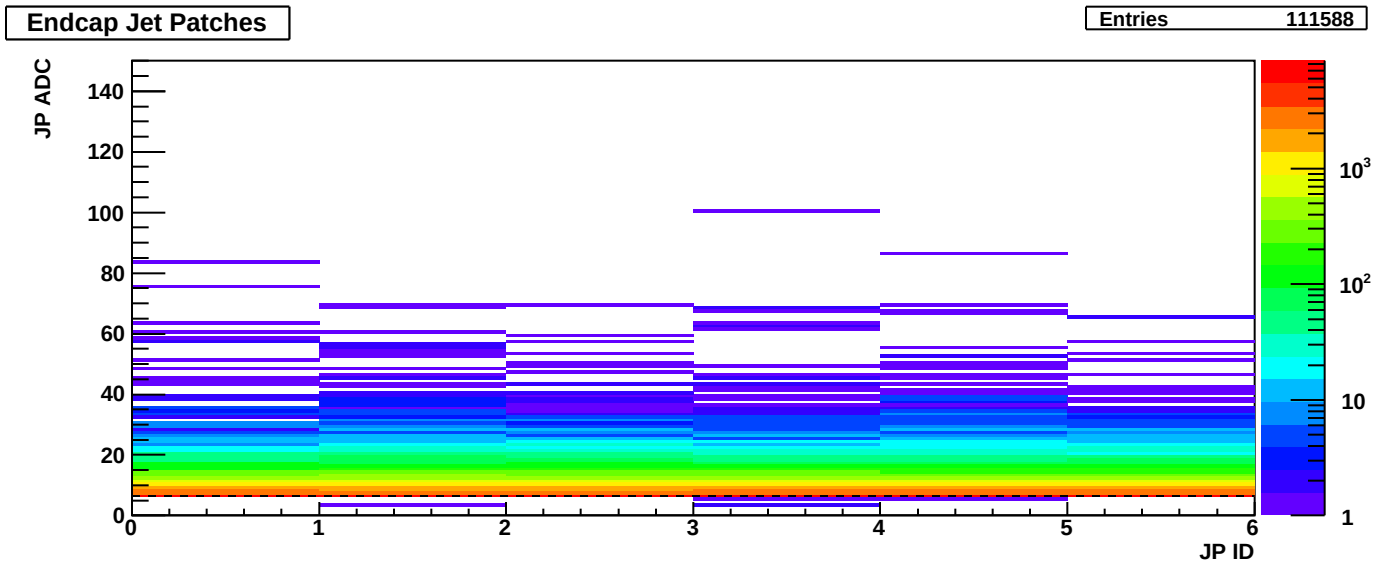

Barrel EMC L0 Input - High Tower
Entries 5579400
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

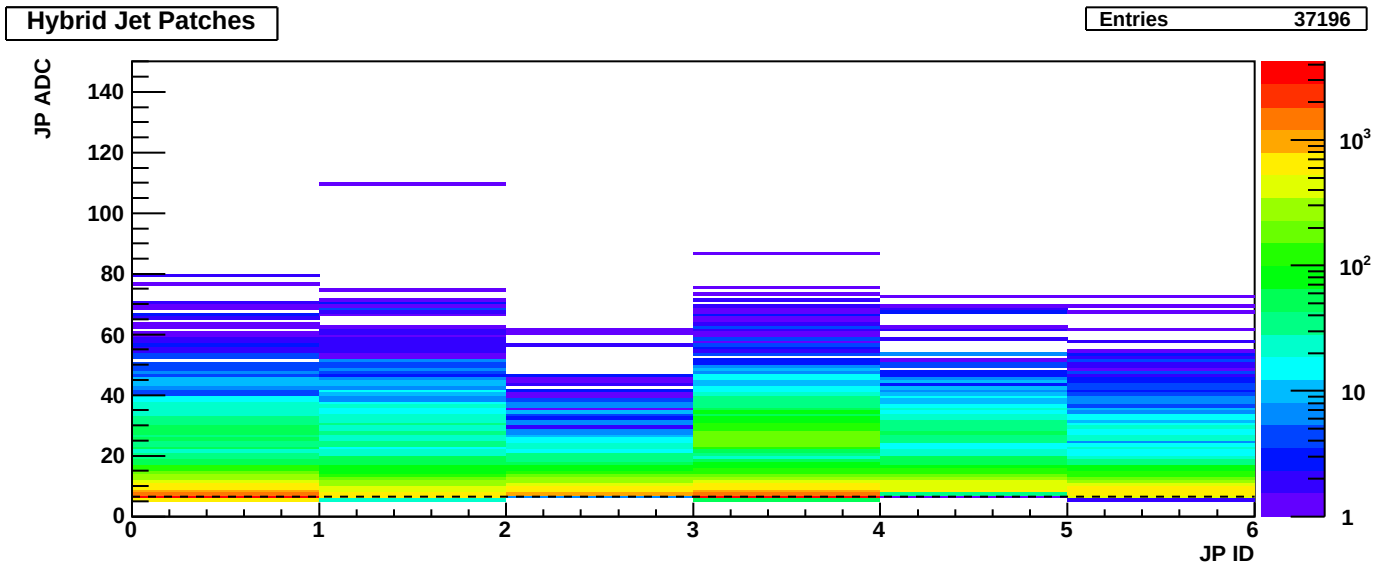

Barrel EMC L0 Input - Patch Sum
Entries 5579400
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

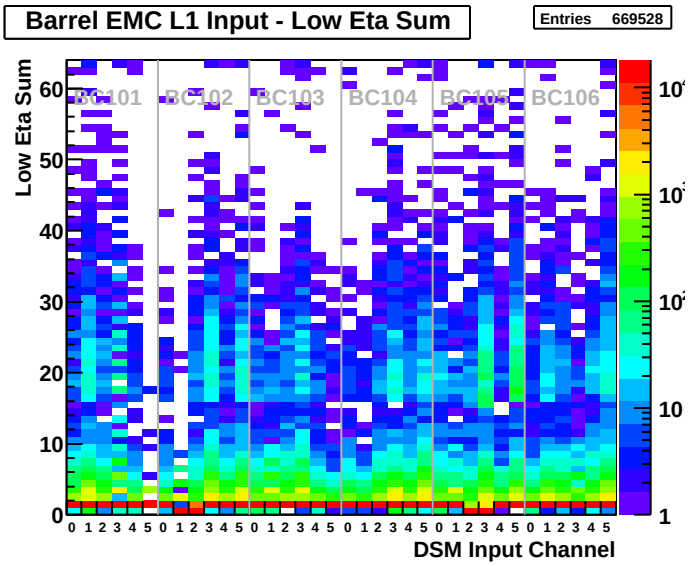

Endcap EMC L0 Input - High Tower
Entries 1673820
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

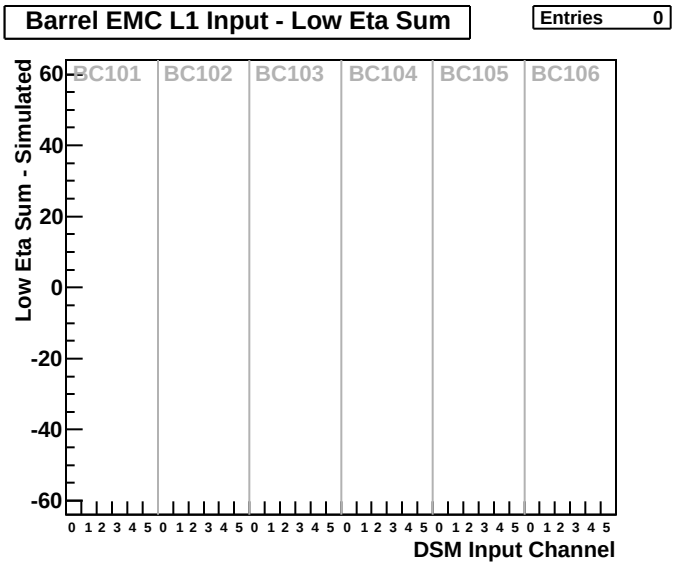

Endcap EMC L0 Input - Patch Sum
Entries 1673820
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

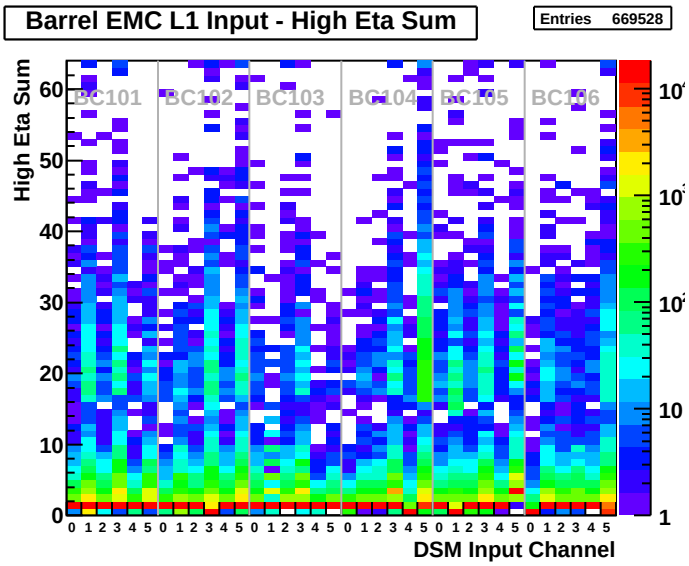

Barrel Jet Patches
Entries 334764
JP ADC
JP ID

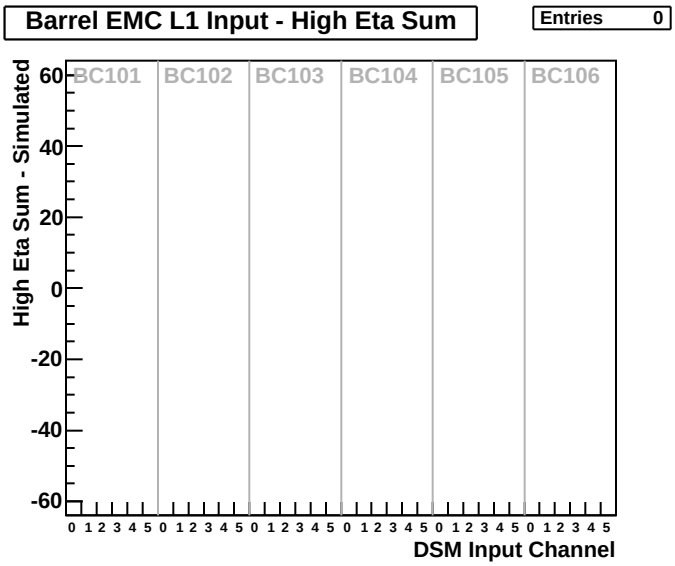

Endcap Jet Patches
Entries 111588
JP ADC
JP ID

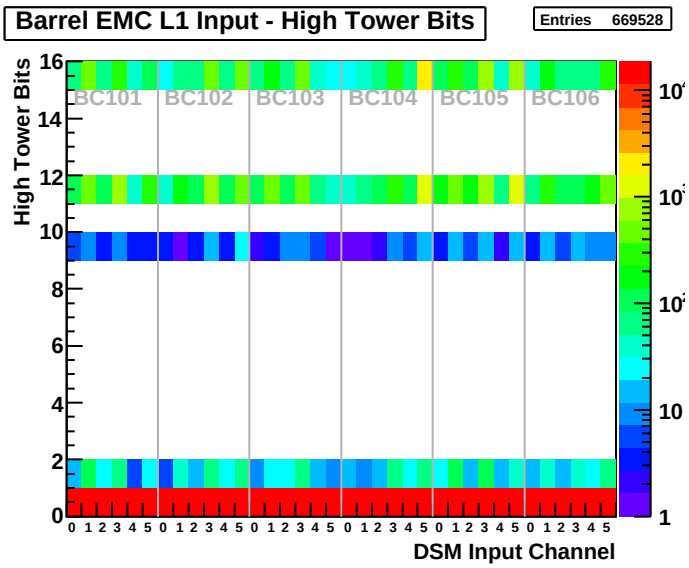

Hybrid Jet Patches
Entries 37196
JP ADC
JP ID

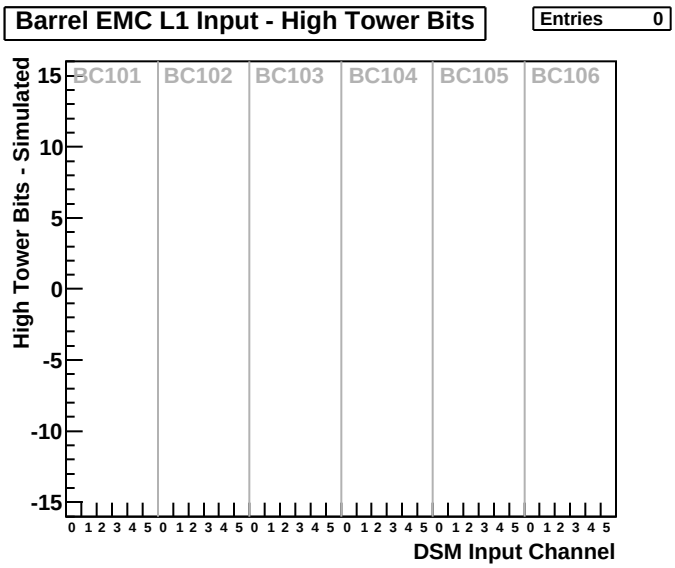

Barrel EMC L1 Input - Low Eta Sum
Entries 669528
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

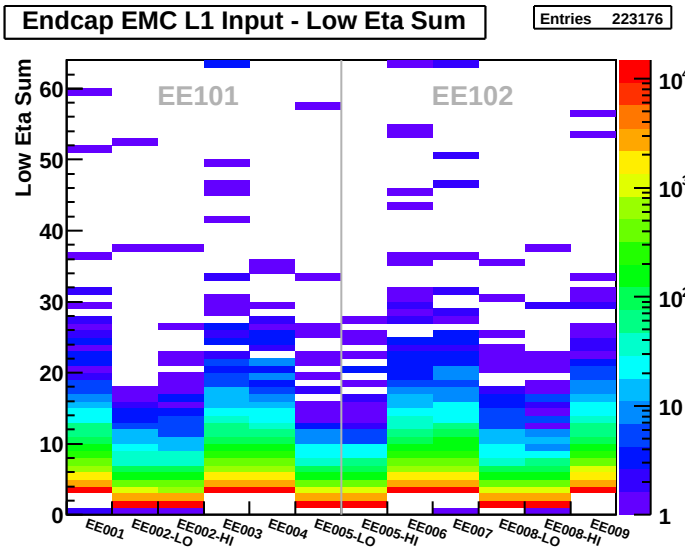

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

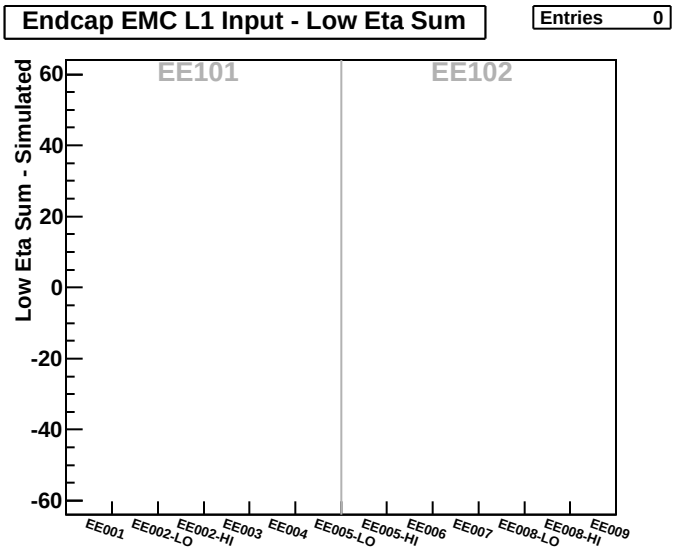

Barrel EMC L1 Input - High Eta Sum
Entries 669528
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

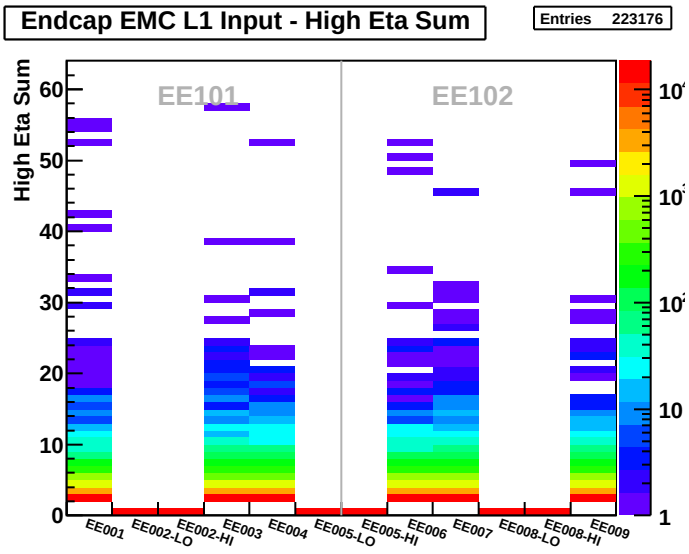

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

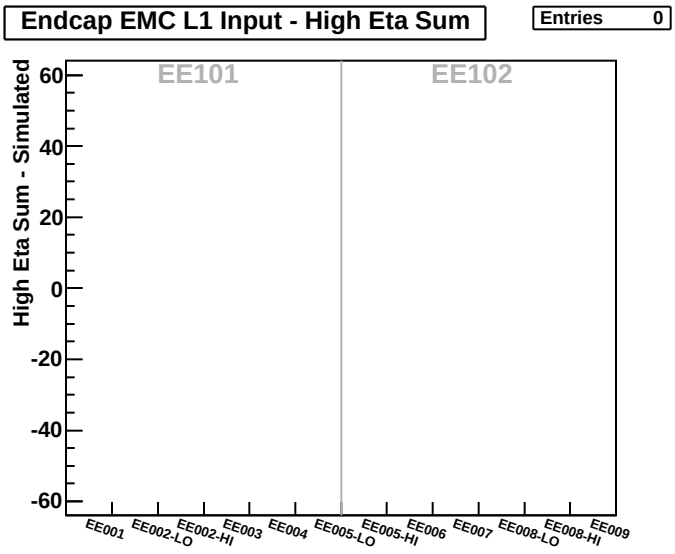

Barrel EMC L1 Input - High Tower Bits
Entries 669528
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

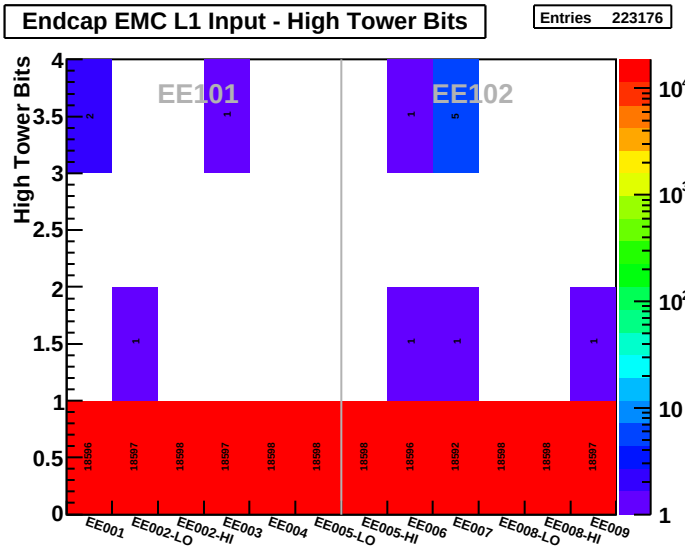

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

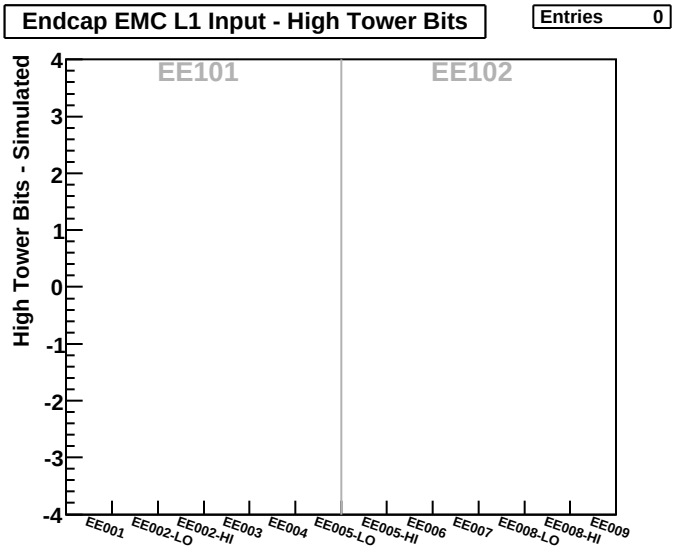

Endcap EMC L1 Input - Low Eta Sum
Entries 223176
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

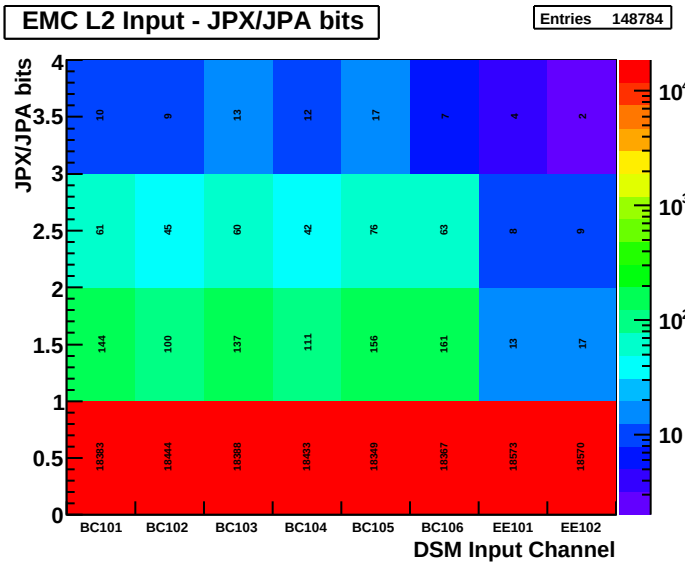

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

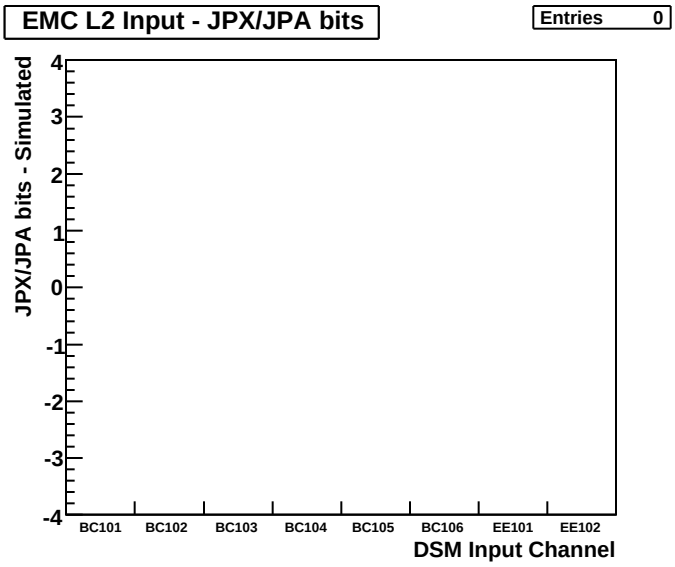

Endcap EMC L1 Input - High Eta Sum
Entries 223176
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

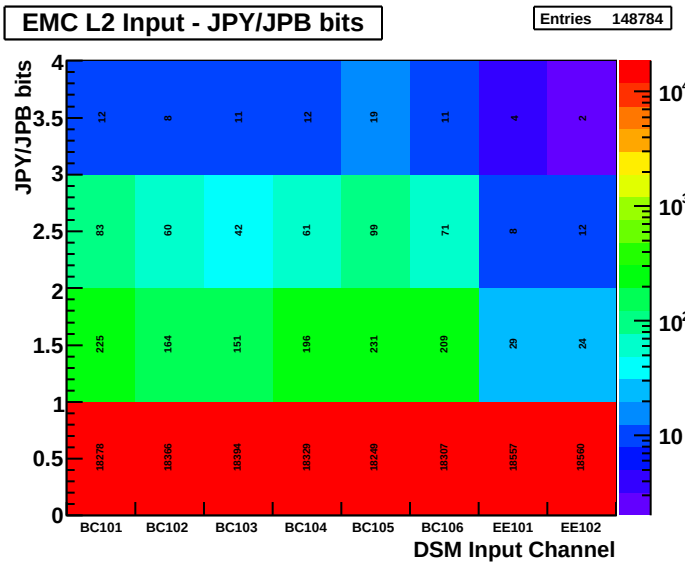

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

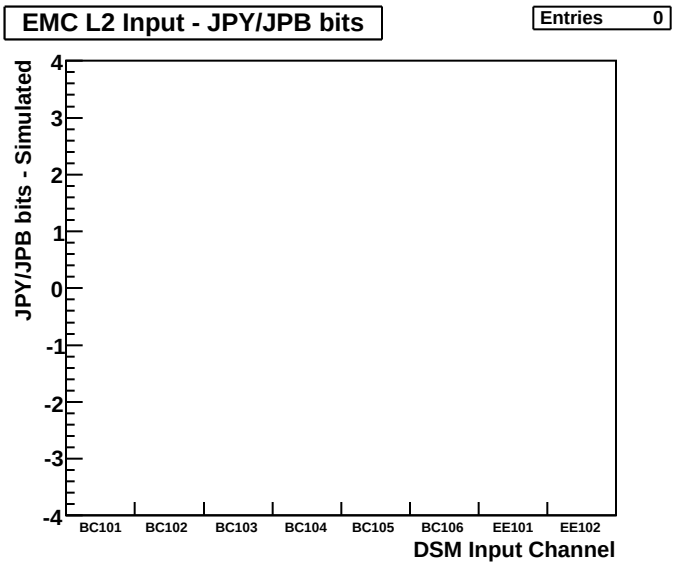

Endcap EMC L1 Input - High Tower Bits
Entries 223176
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

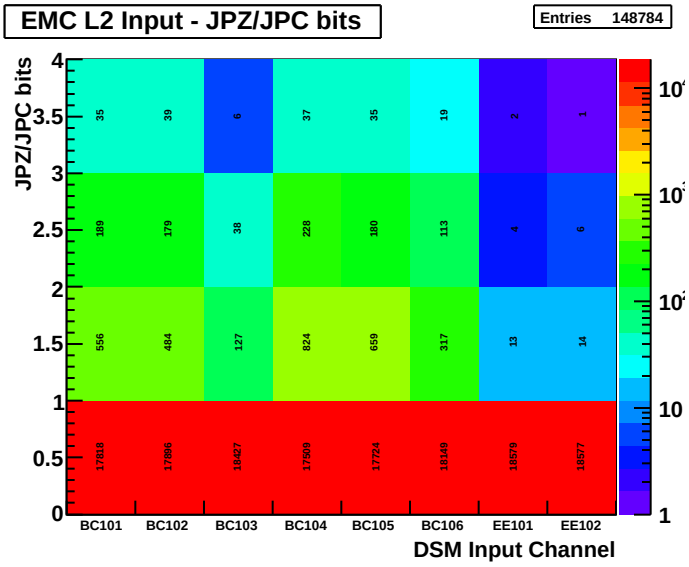

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

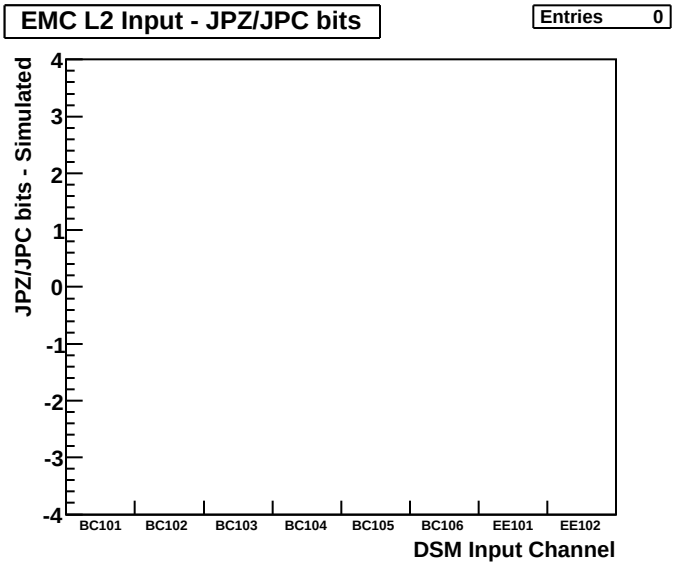

EMC L2 Input - JPX/JPA bits
Entries 148784
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
10 9 13 12 17 7 4 2
61 45 60 42 76 63 8 9
144 100 137 111 156 161 13 17
18383 18444 18388 18433 18349 18367 18573 18570

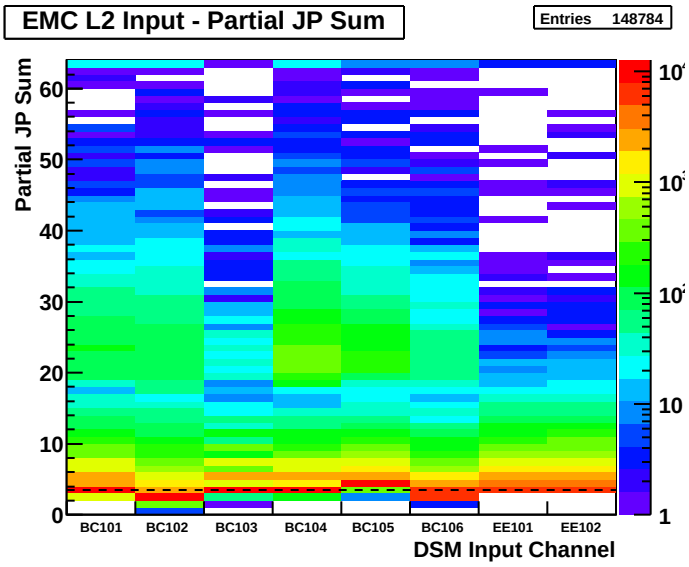

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

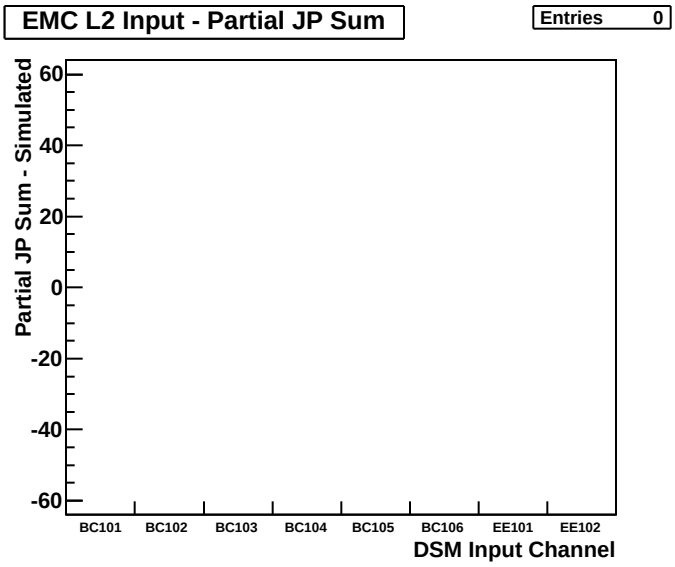

EMC L2 Input - JPY/JPB bits
Entries 148784
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
12 8 11 12 19 11 4 2
83 60 42 61 99 71 8 12
225 164 151 196 231 209 29 24
18278 18366 18394 18329 18249 18307 18557 18560

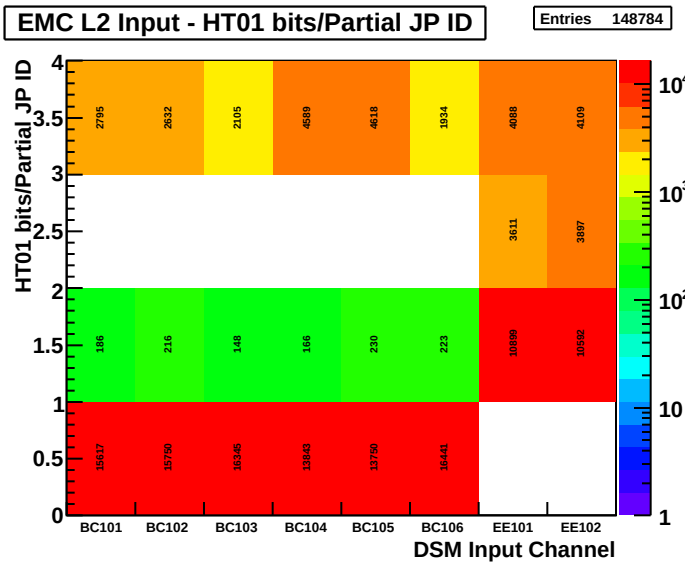

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

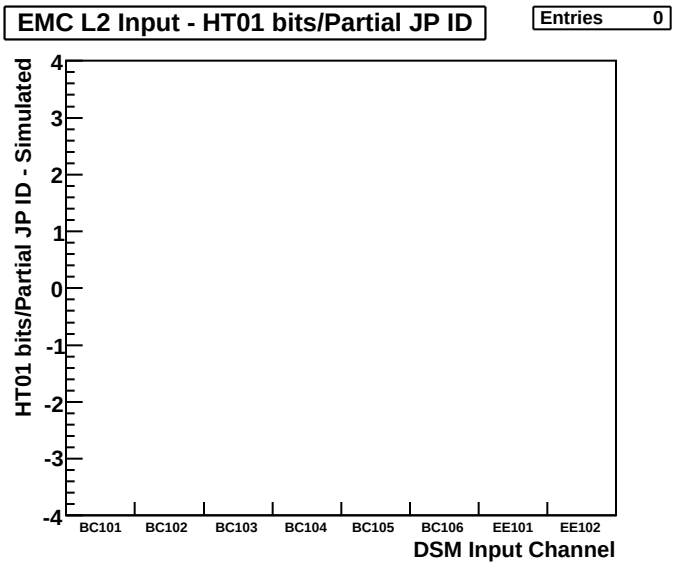

EMC L2 Input - JPZ/JPC bits
Entries 148784
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
35 39 6 37 35 19 2 1
189 179 38 228 180 113 4 6
556 484 127 824 659 317 13 14
17818 17886 18427 17509 17724 18149 18579 18577

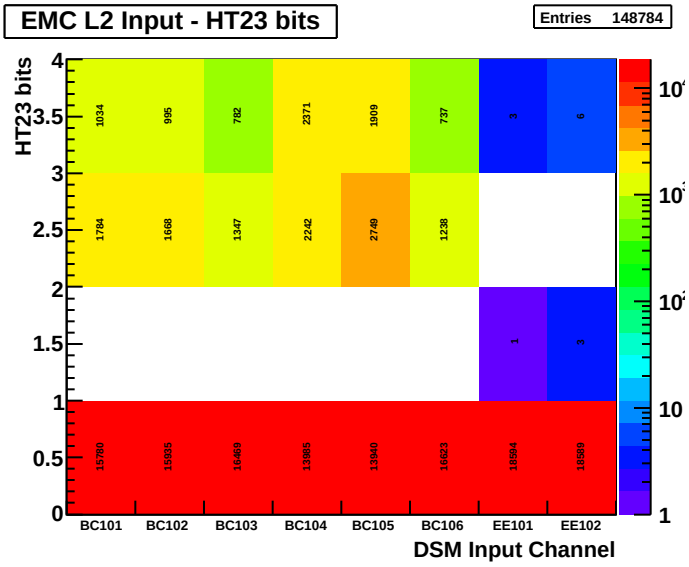

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

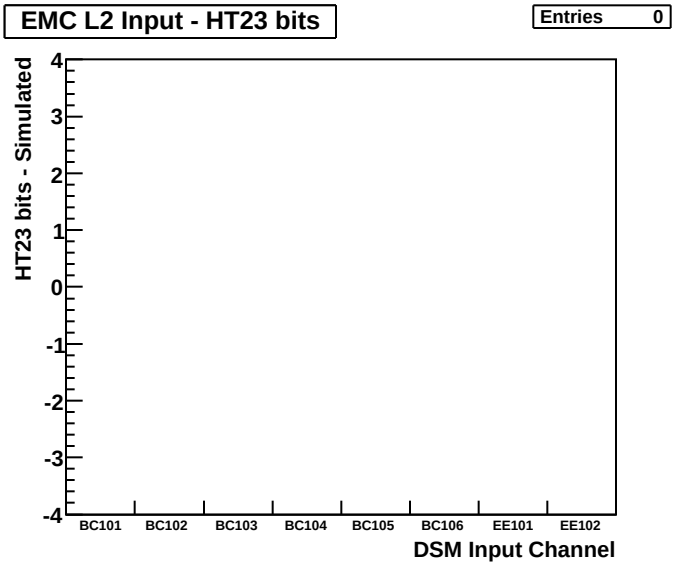

EMC L2 Input - Partial JP Sum
Entries 148784
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

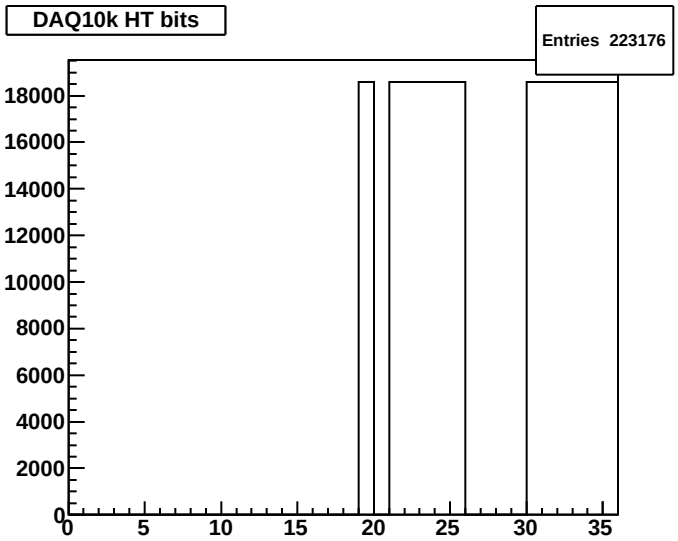

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

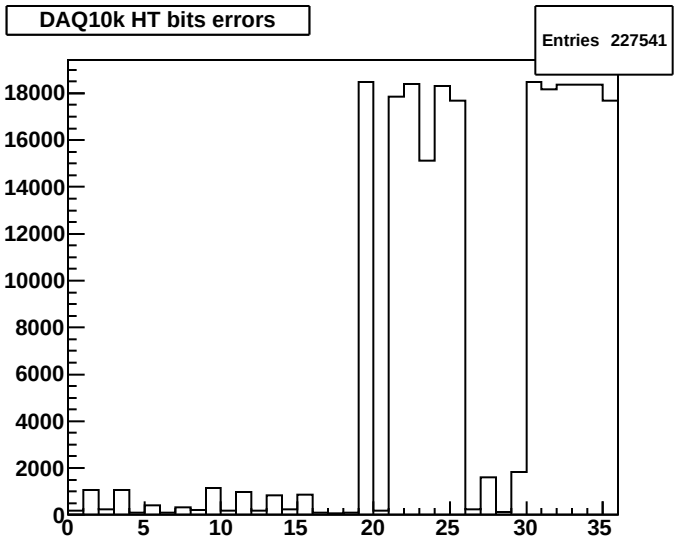

EMC L2 Input - HT01 bits/Partial JP ID
Entries 148784
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

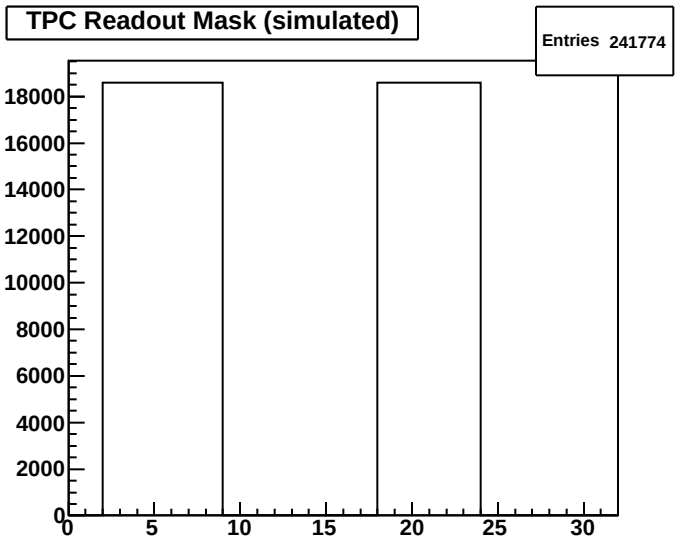

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

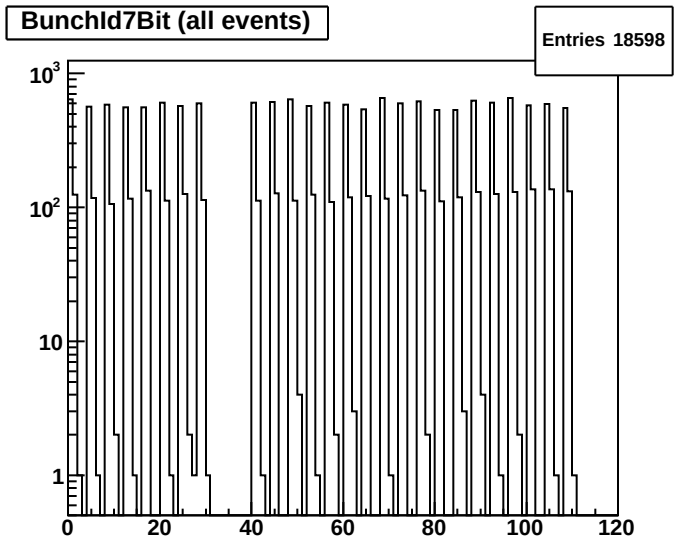

EMC L2 Input - HT23 bits
Entries 148784
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

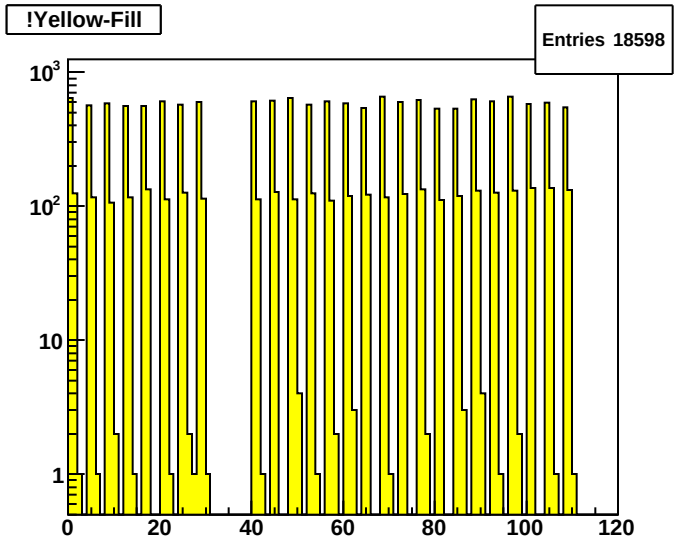

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

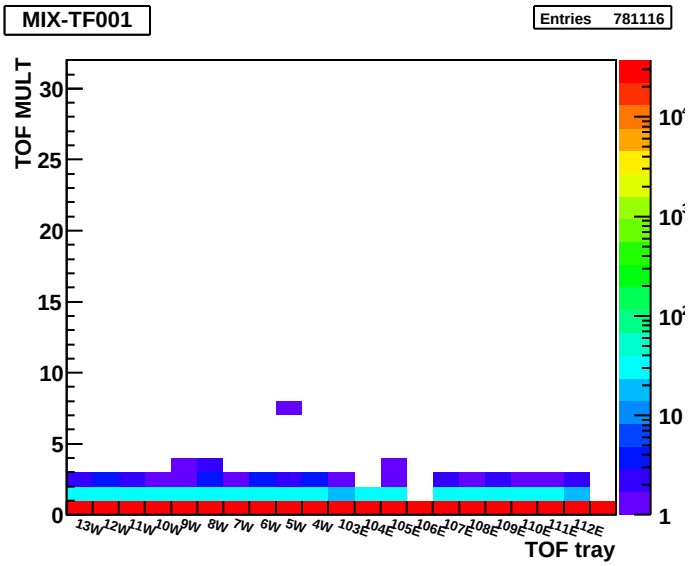

DAQ10k HT bits
Entries 223176
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

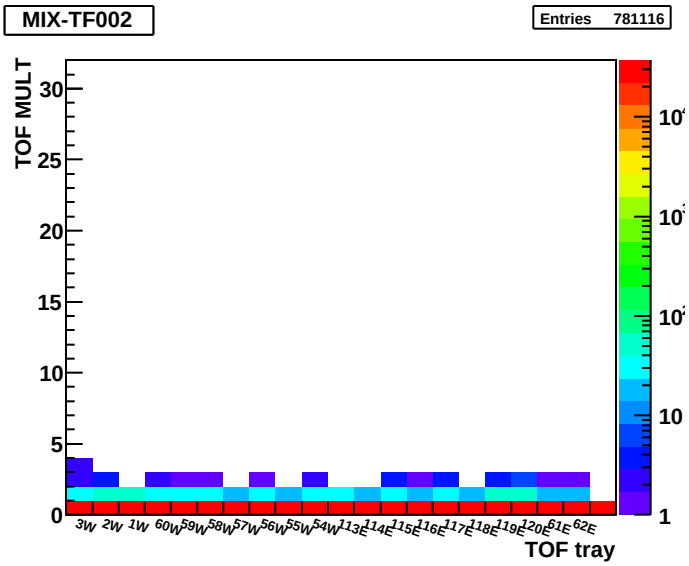

DAQ10k HT bits errors
Entries 227541
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

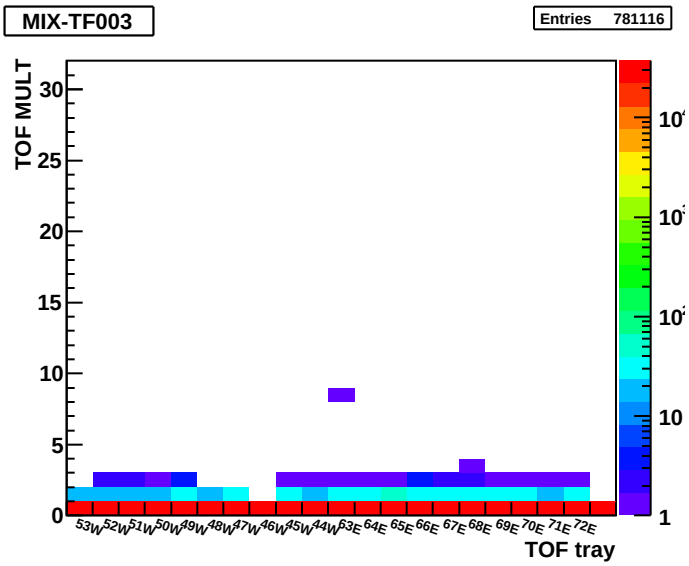

TPC Readout Mask (simulated)
Entries 241774
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

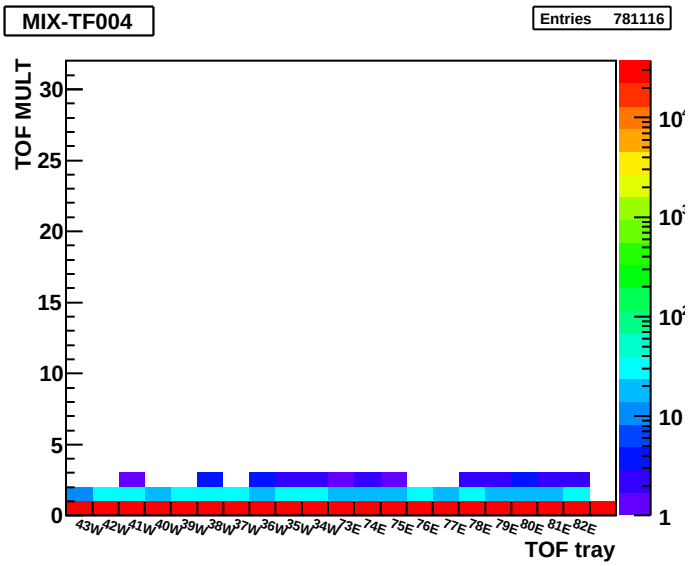

BunchId7Bit (all events)
Entries 18598
10^3
10^2
10
1
0 20 40 60 80 100 120

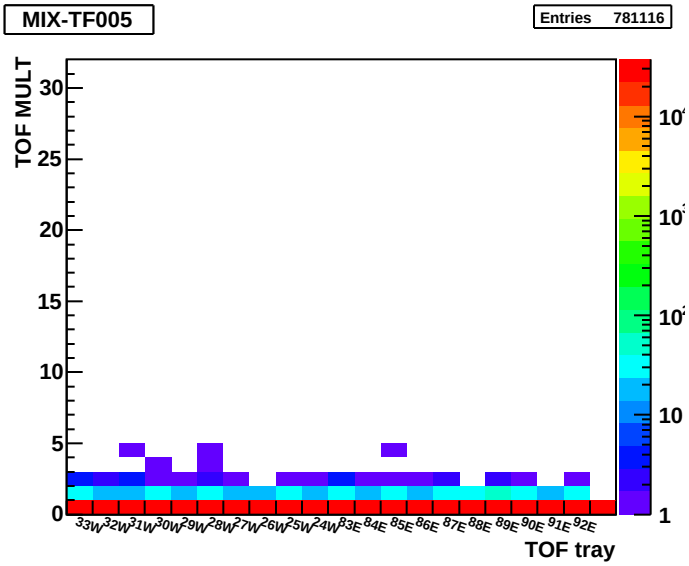

!Yellow-Fill
Entries 18598
10^3
10^2
10
1
0 20 40 60 80 100 120

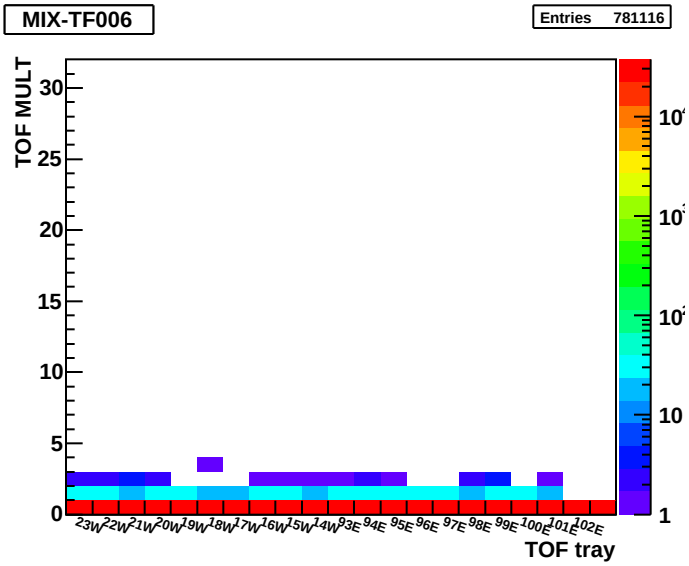

MIX-TF001
Entries 781116
TOF MULT
TOF tray

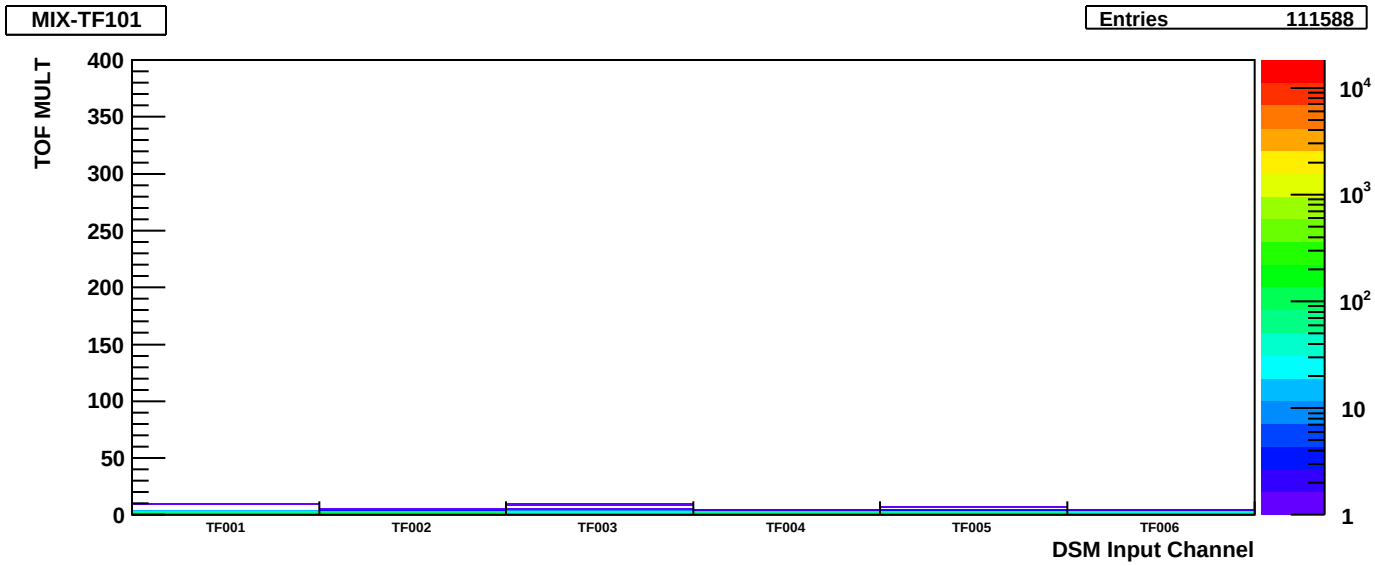

MIX-TF002
Entries 781116
TOF MULT
TOF tray

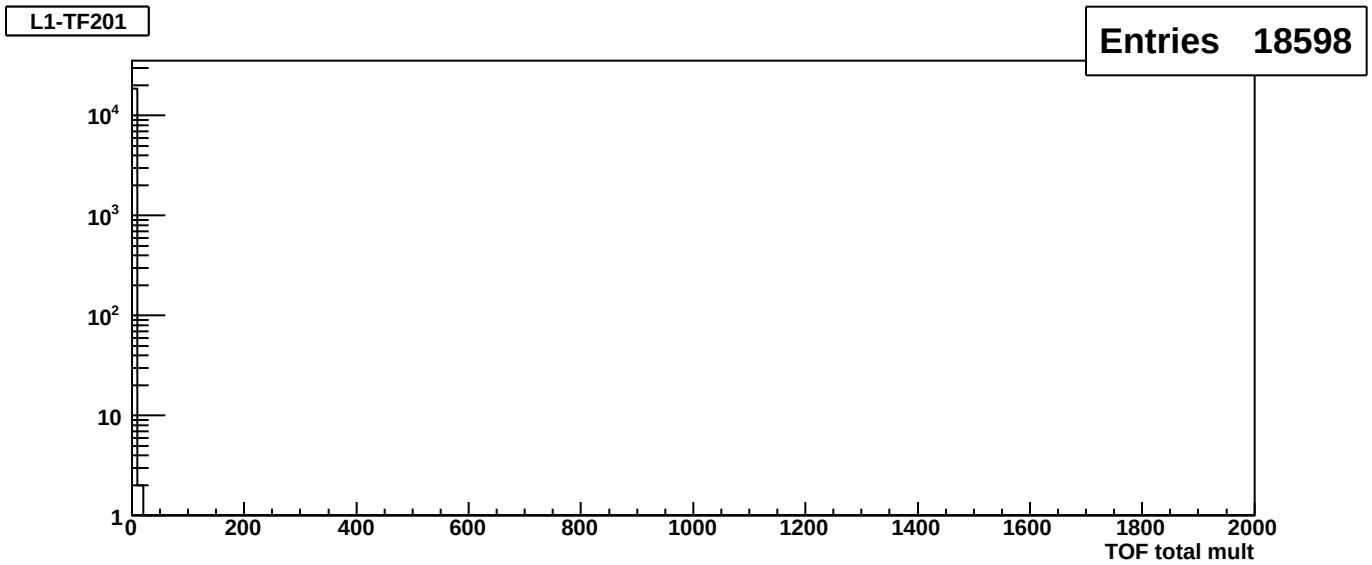

MIX-TF003
Entries 781116
TOF MULT
TOF tray

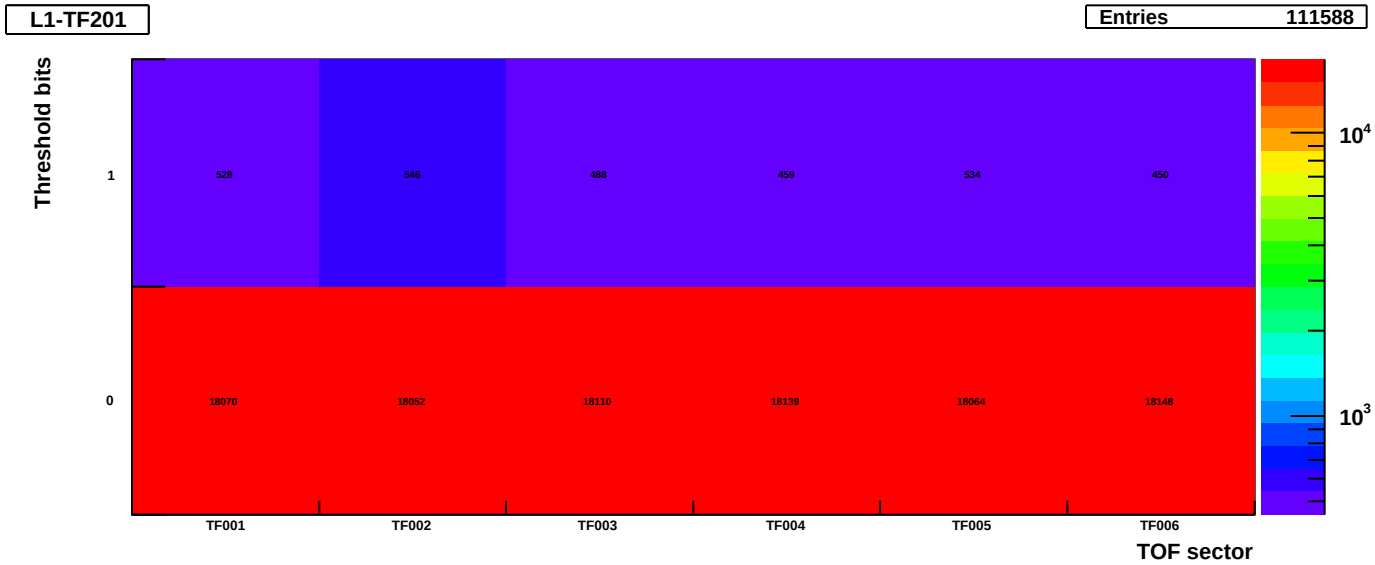

MIX-TF004
Entries 781116
TOF MULT
TOF tray

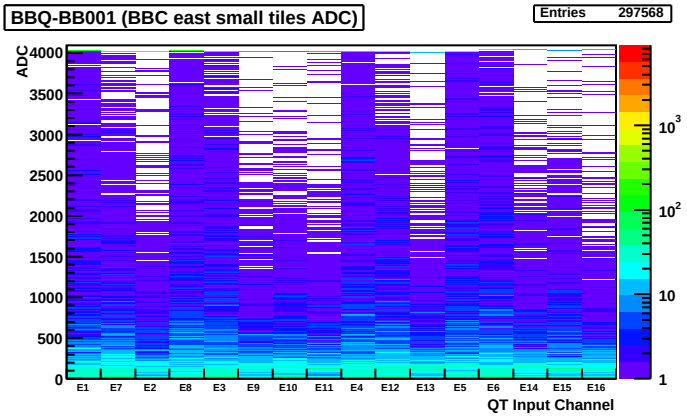

MIX-TF005
Entries 781116
TOF MULT
TOF tray

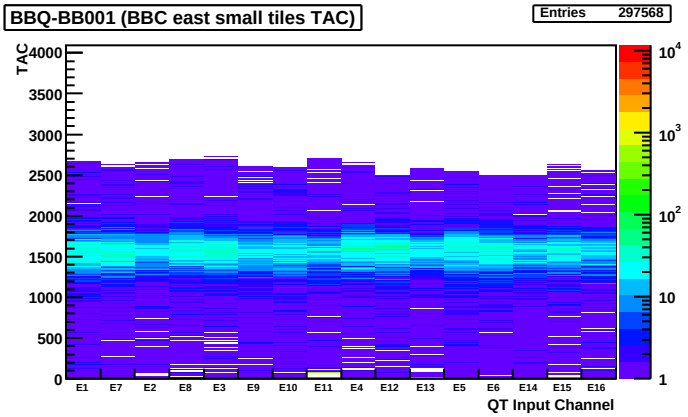

MIX-TF006
Entries 781116
TOF MULT
TOF tray

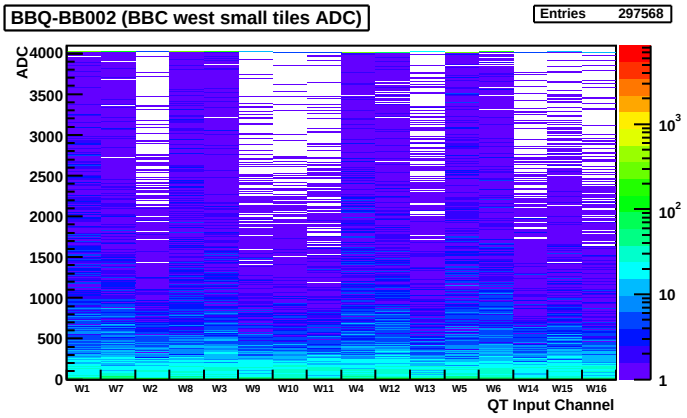

MIX-TF101
Entries 111588
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

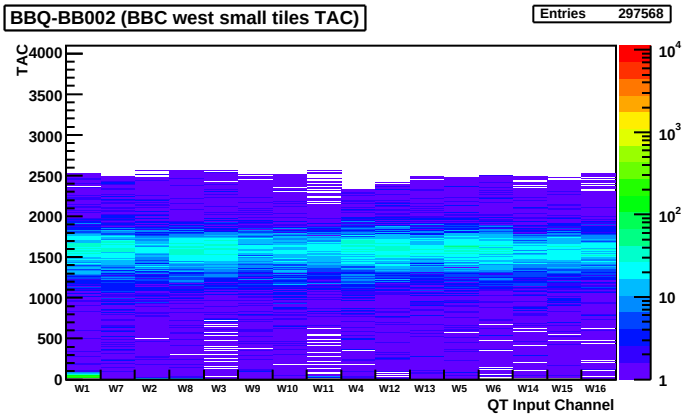

L1-TF201
Entries 18598
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

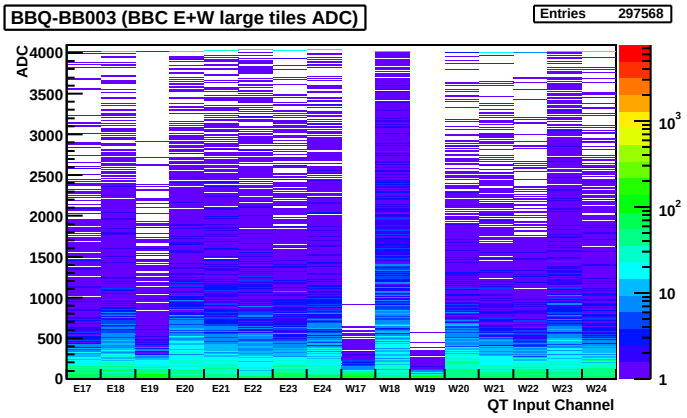

L1-TF201
Entries 111588
Threshold bits
1
0
528
546
488
459
534
450
18070
18052
18110
18139
18064
18148
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

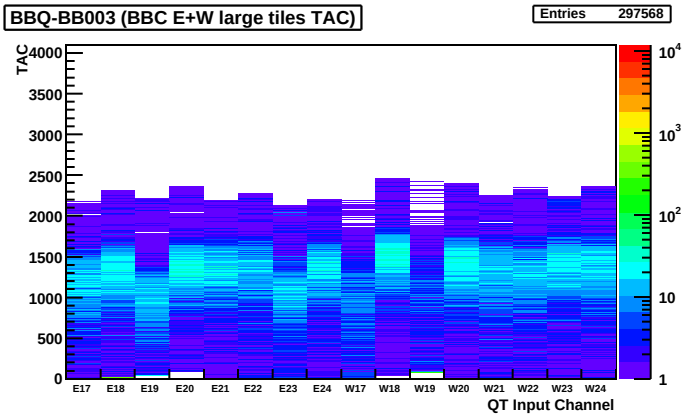

BBQ-BB001 (BBC east small tiles ADC)
Entries 297568
ADC
QT Input Channel

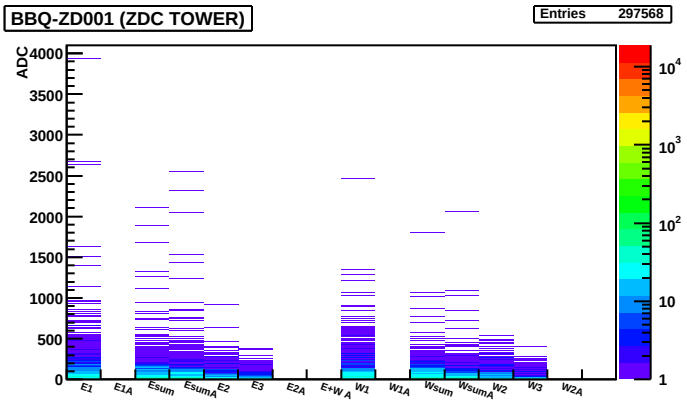

BBQ-BB001 (BBC east small tiles TAC)
Entries 297568
TAC
QT Input Channel

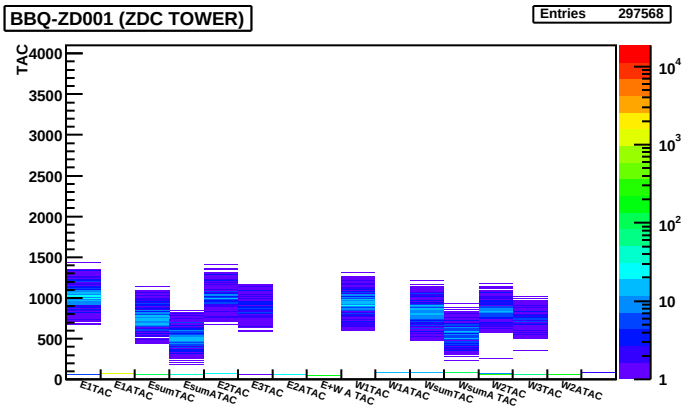

BBQ-BB002 (BBC west small tiles ADC)
Entries 297568
ADC
QT Input Channel

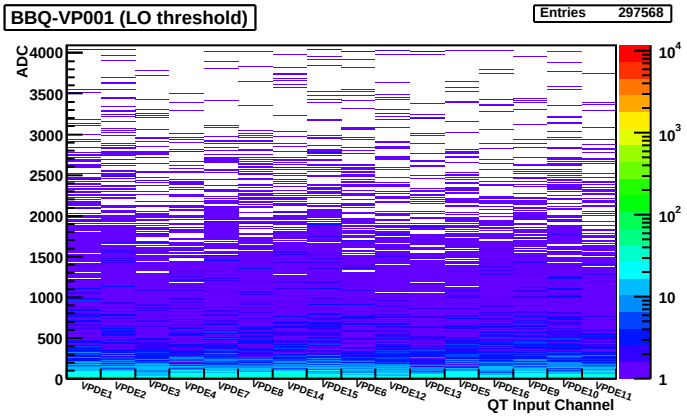

BBQ-BB002 (BBC west small tiles TAC)
Entries 297568
TAC
QT Input Channel

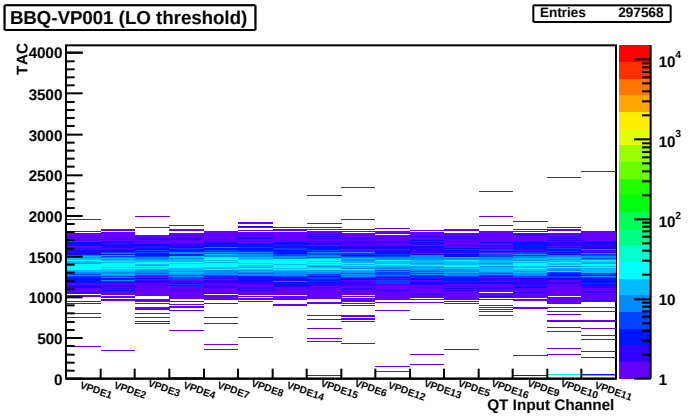

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 297568
ADC
QT Input Channel

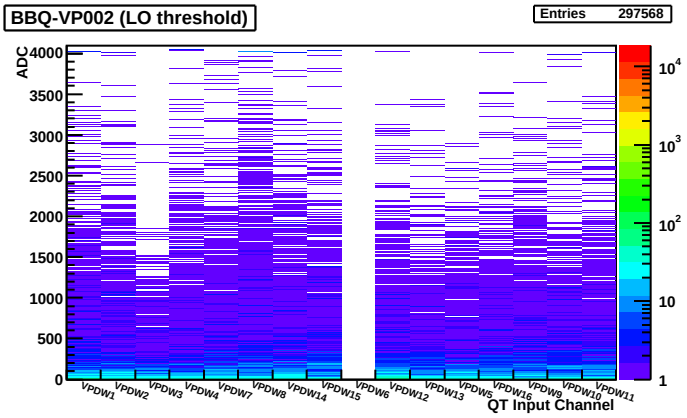

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 297568
TAC
QT Input Channel

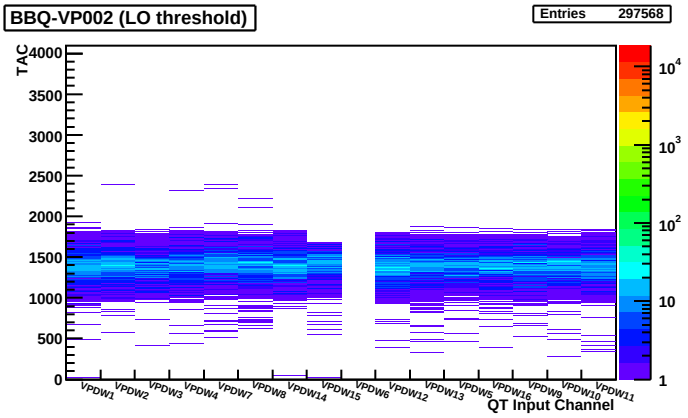

BBQ-ZD001 (ZDC TOWER)
Entries 297568
ADC

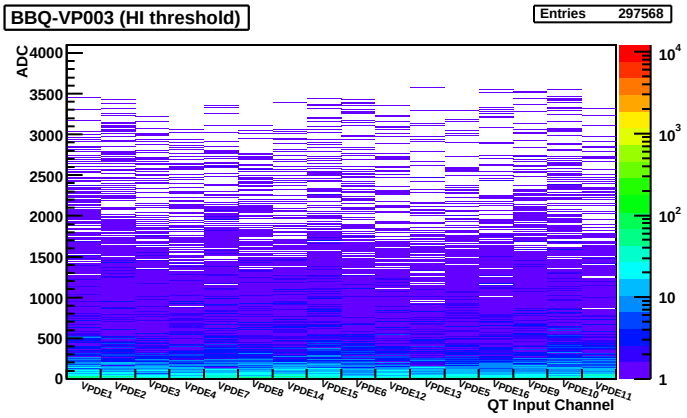

BBQ-ZD001 (ZDC TOWER)
Entries 297568
TAC

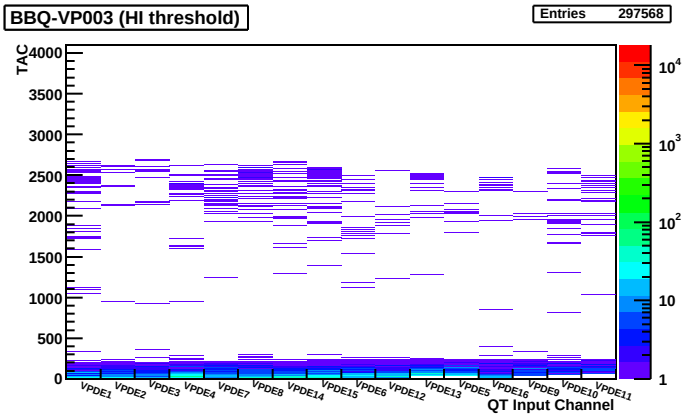

BBQ-VP001 (LO threshold)
Entries 297568
ADC
QT Input Channel

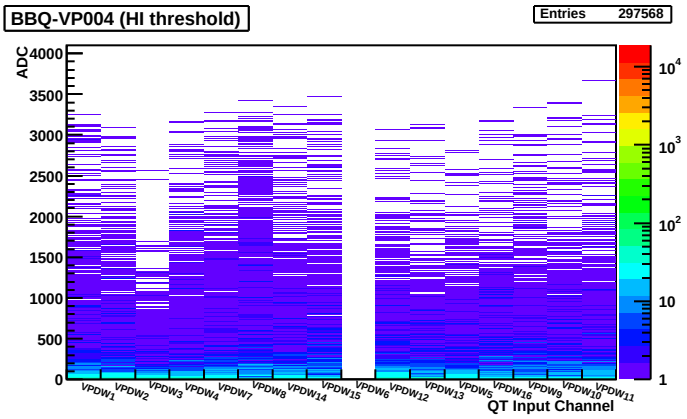

BBQ-VP001 (LO threshold)
Entries 297568
TAC
QT Input Channel

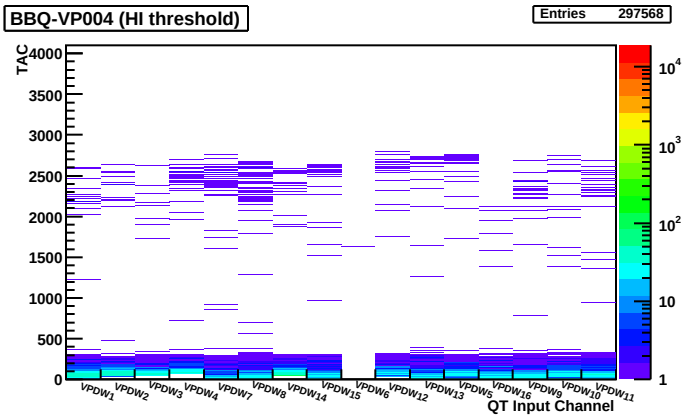

BBQ-VP002 (LO threshold)
Entries 297568
ADC
QT Input Channel

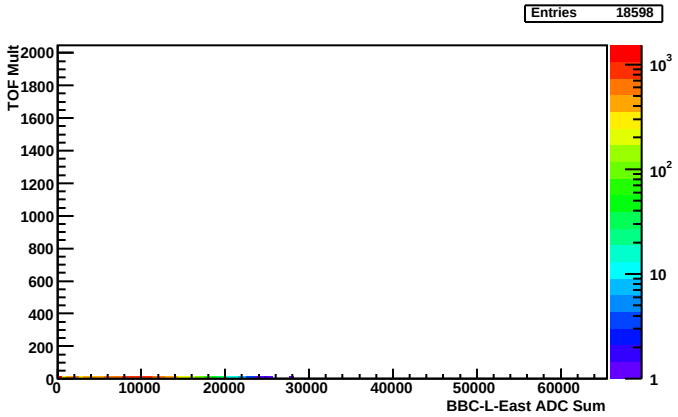

BBQ-VP002 (LO threshold)
Entries 297568
TAC
QT Input Channel

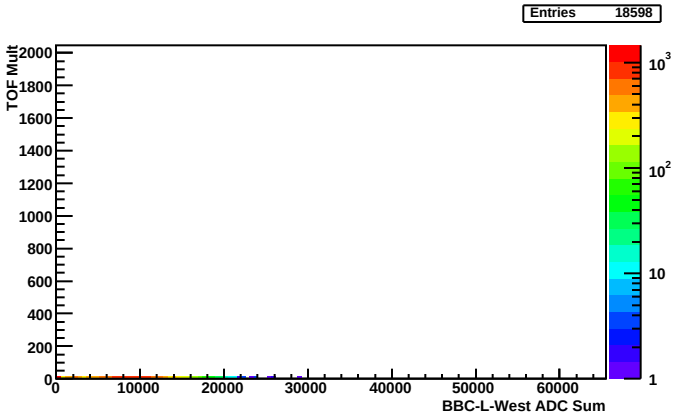

BBQ-VP003 (HI threshold)
Entries 297568
ADC
QT Input Channel

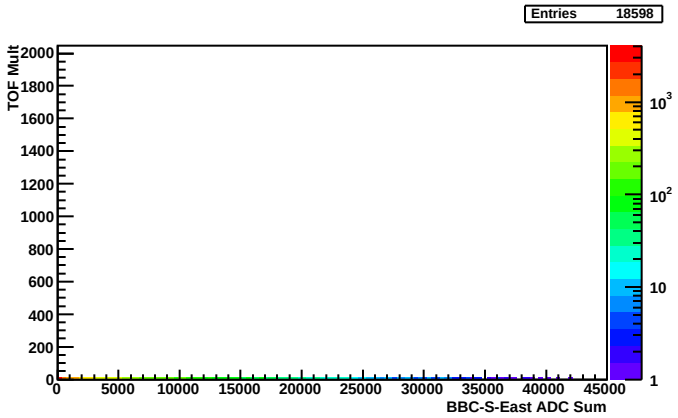

BBQ-VP003 (HI threshold)
Entries 297568
TAC
QT Input Channel

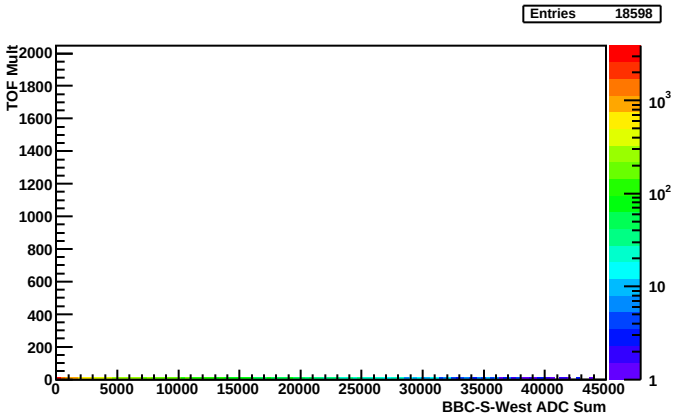

BBQ-VP004 (HI threshold)
Entries 297568
ADC
QT Input Channel

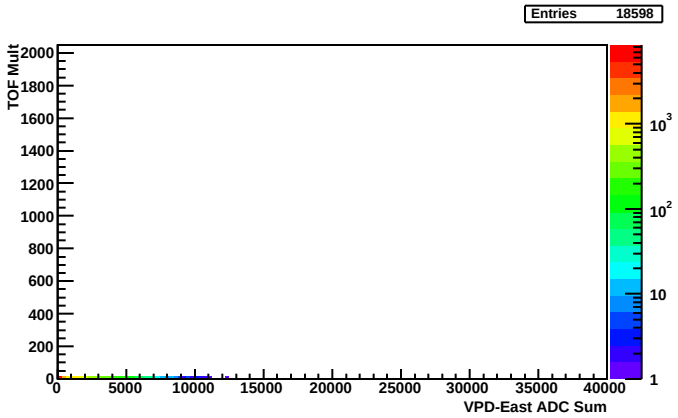

BBQ-VP004 (HI threshold)
Entries 297568
TAC
QT Input Channel

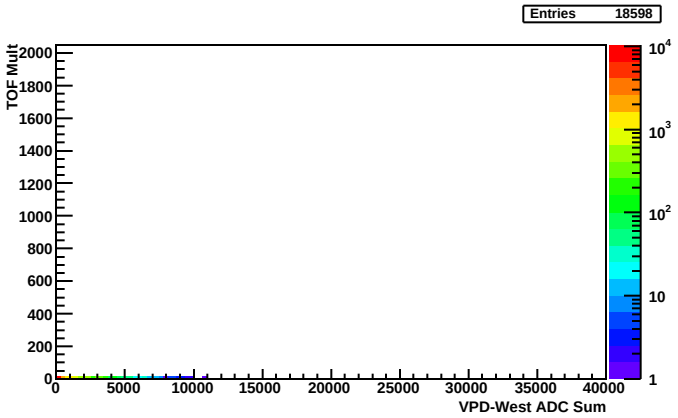

Entries 18598
TOF Mult
BBC-L-East ADC Sum

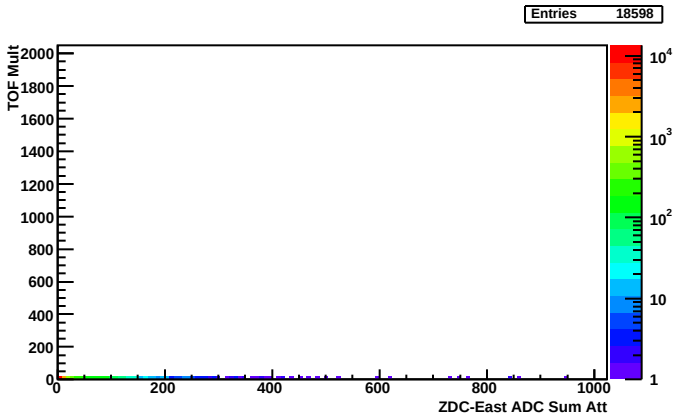

Entries 18598
TOF Mult
BBC-L-West ADC Sum

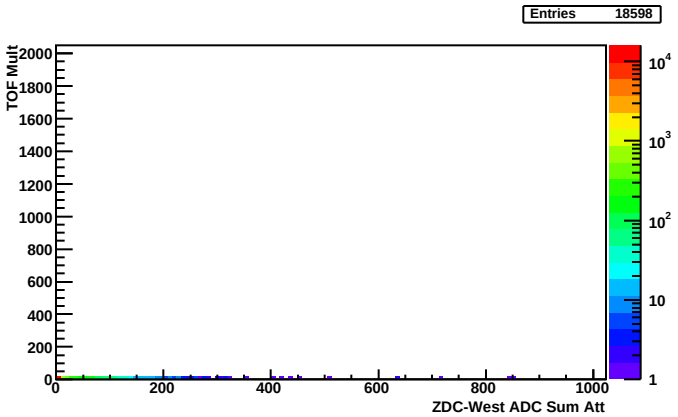

Entries 18598
TOF Mult
BBC-S-East ADC Sum

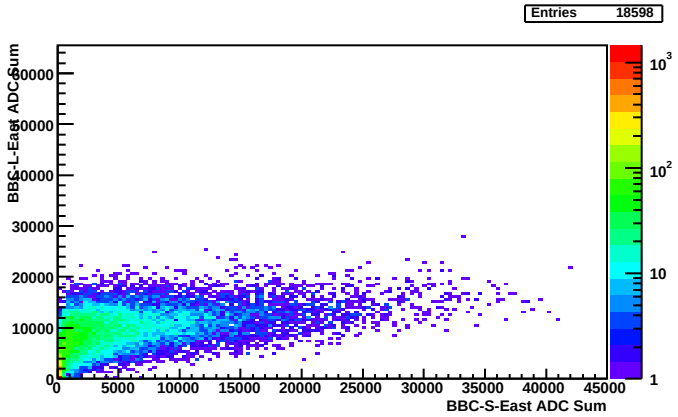

Entries 18598
TOF Mult
BBC-S-West ADC Sum

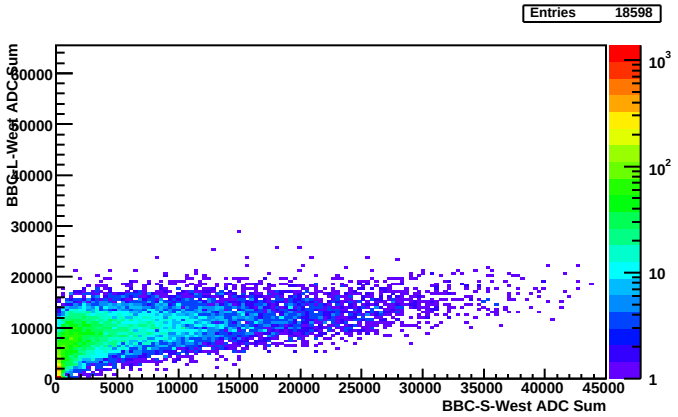

Entries 18598
TOF Mult
VPD-East ADC Sum

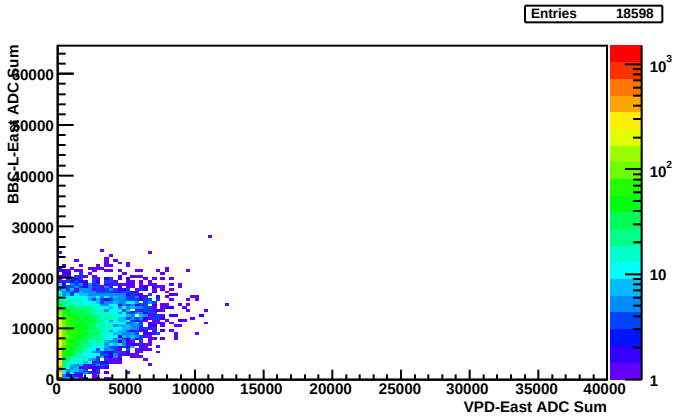

Entries 18598
TOF Mult
VPD-West ADC Sum

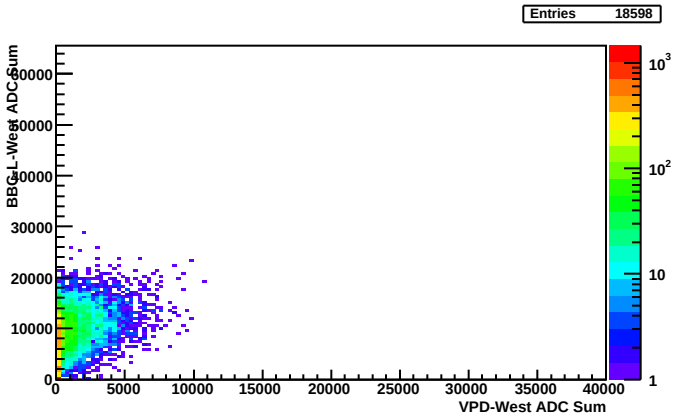

Entries 18598
TOF Mult
ZDC-East ADC Sum Att

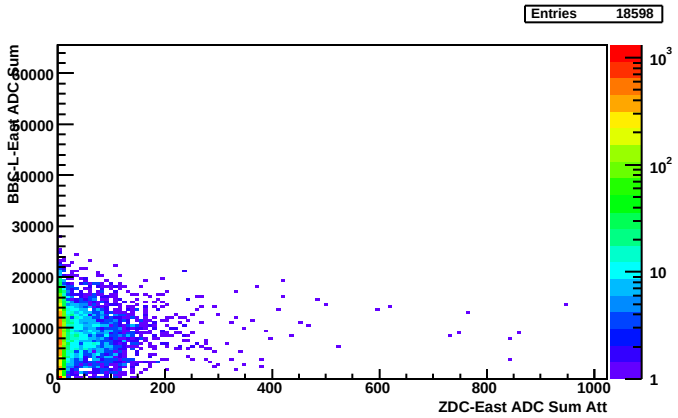

Entries 18598
TOF Mult
ZDC-West ADC Sum Att

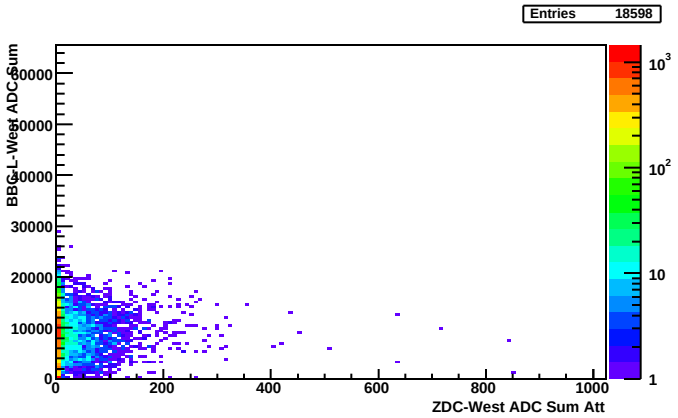

Entries 18598
BBC-L-East ADC Sum
BBC-S-East ADC Sum

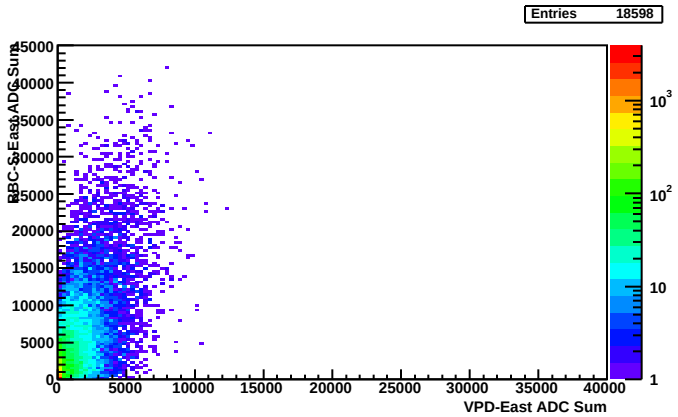

Entries 18598
BBC-L-West ADC Sum
BBC-S-West ADC Sum

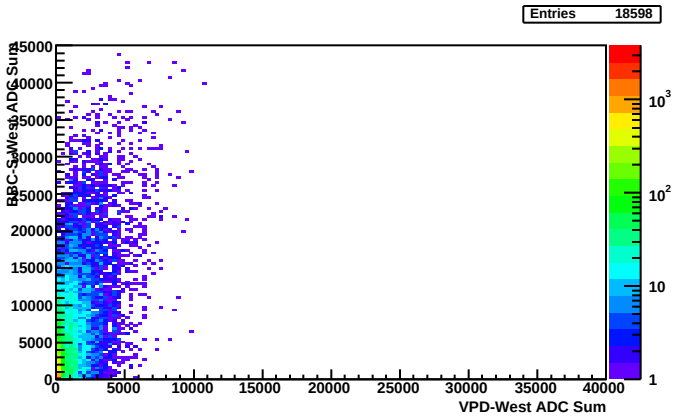

Entries 18598
BBC-L-East ADC Sum
VPD-East ADC Sum

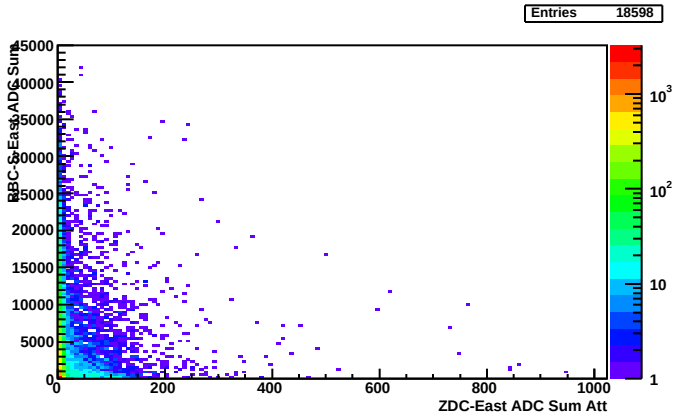

Entries 18598
BBC-L-West ADC Sum
VPD-West ADC Sum

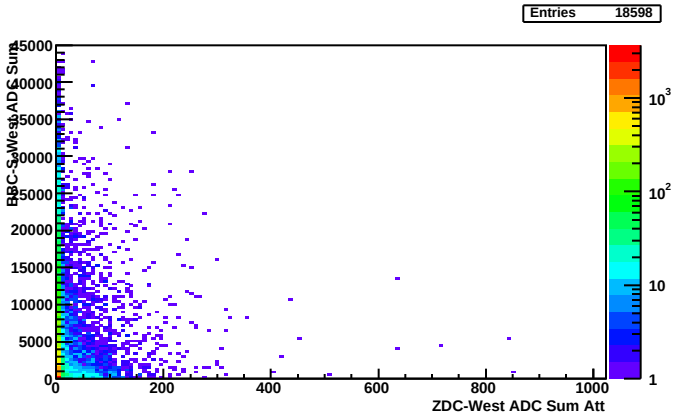

Entries 18598
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

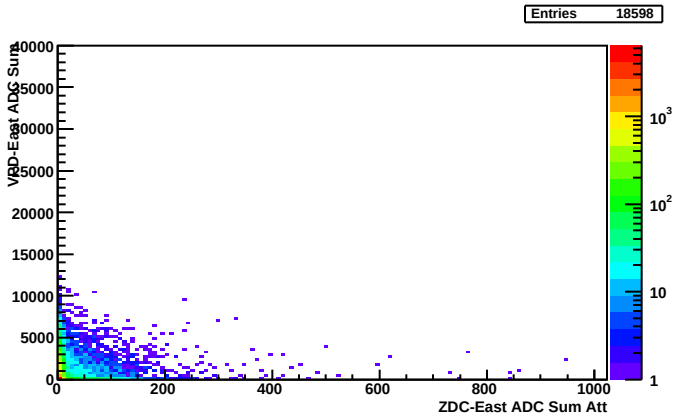

Entries 18598
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

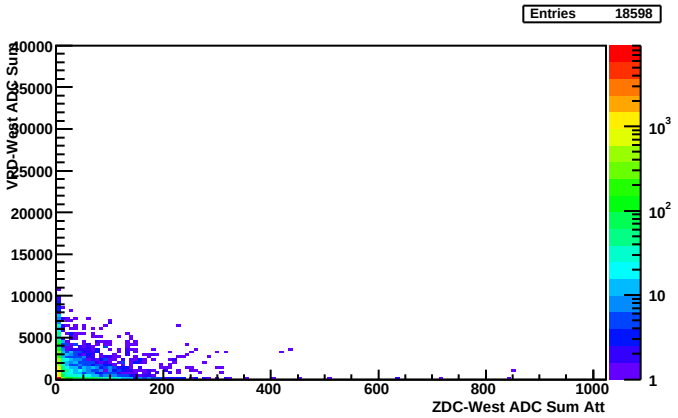

Entries 18598
BBC-S-East ADC Sum
VPD-East ADC Sum

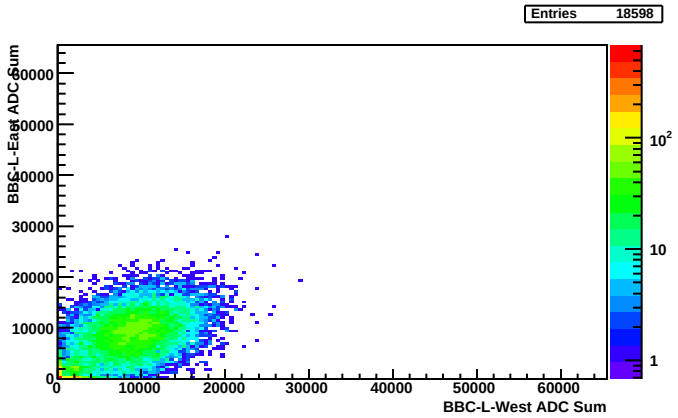

Entries 18598
BBC-S-West ADC Sum
VPD-West ADC Sum

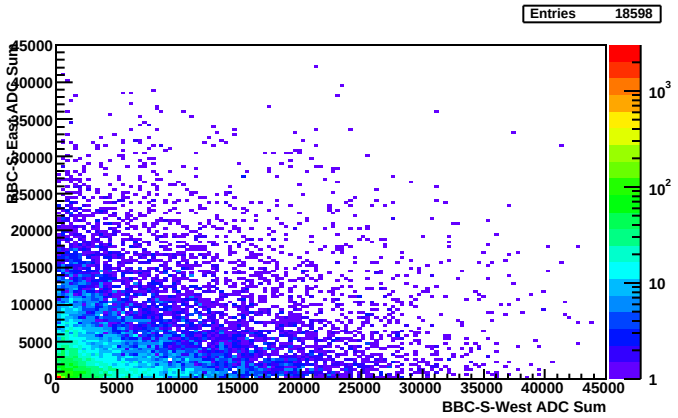

Entries 18598
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

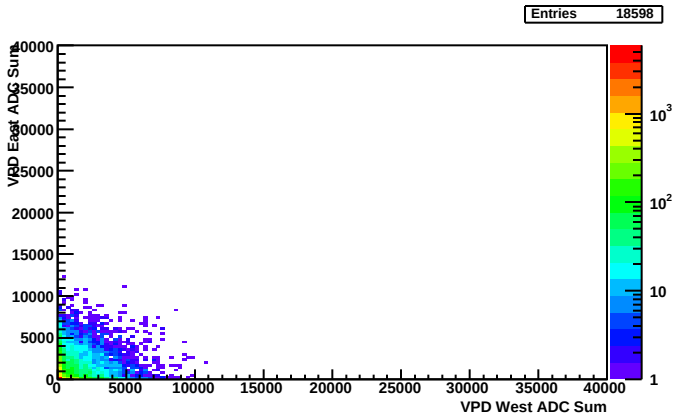

Entries 18598
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

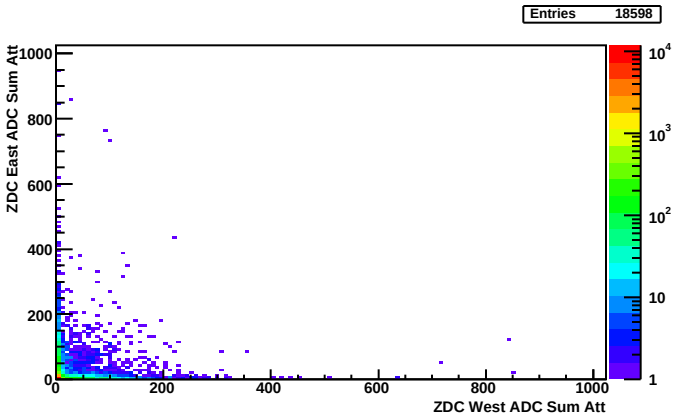

Entries 18598
VPD-East ADC Sum
ZDC-East ADC Sum Att

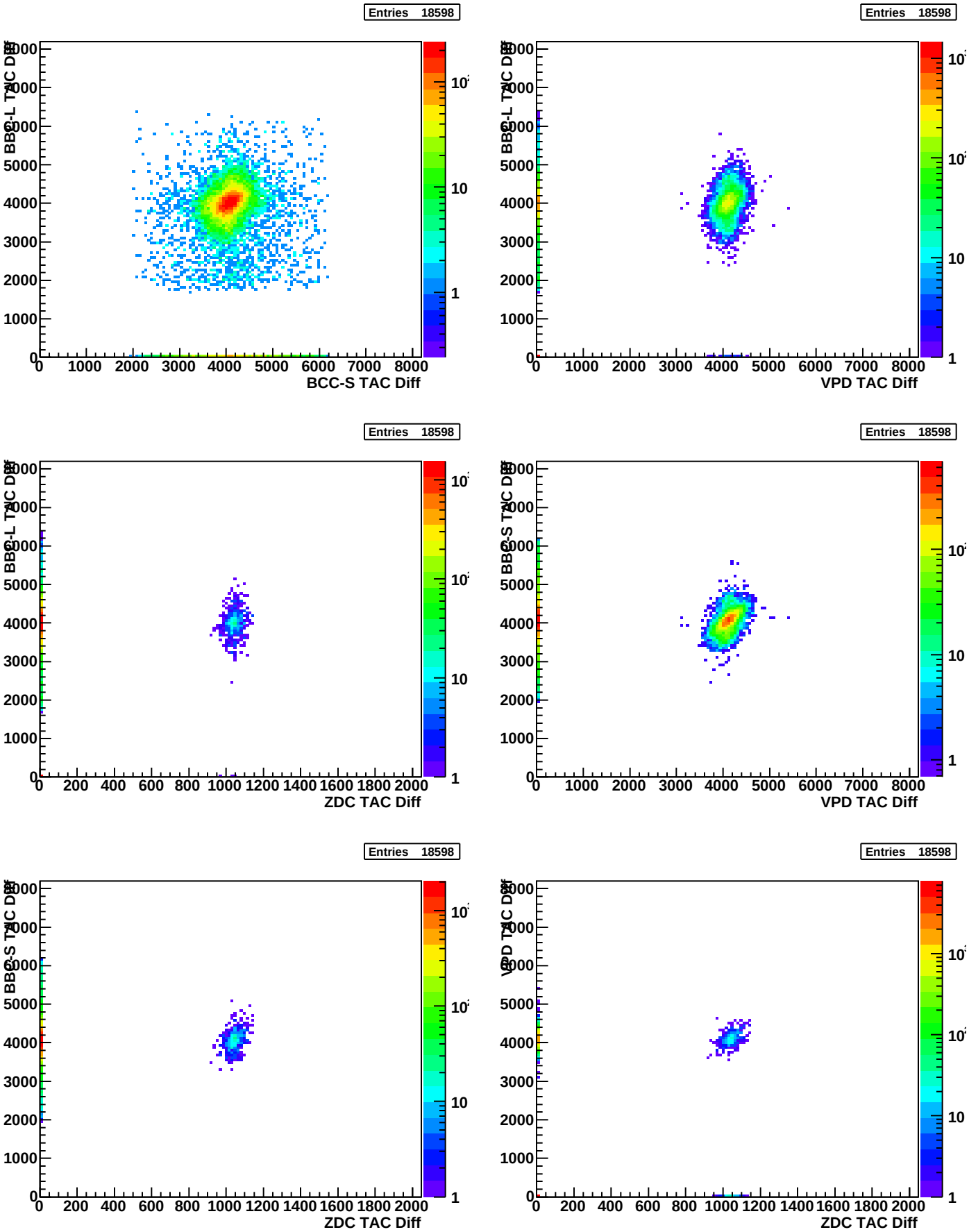

Entries 18598
VPD-West ADC Sum
ZDC-West ADC Sum Att

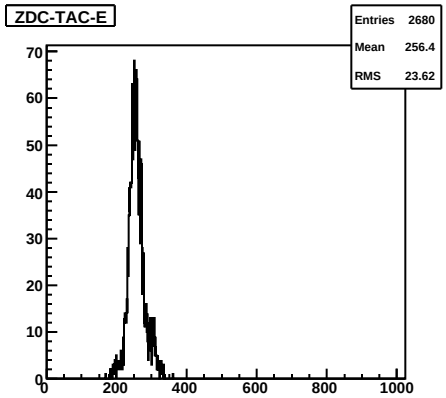

Entries 18598
BBC-L-East ADC Sum
BBC-L-West ADC Sum

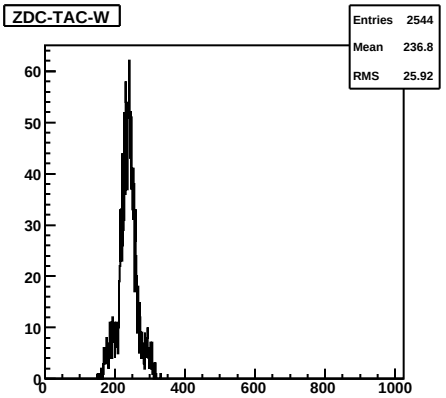

Entries 18598
BBC-S-East ADC Sum
BBC-S-West ADC Sum

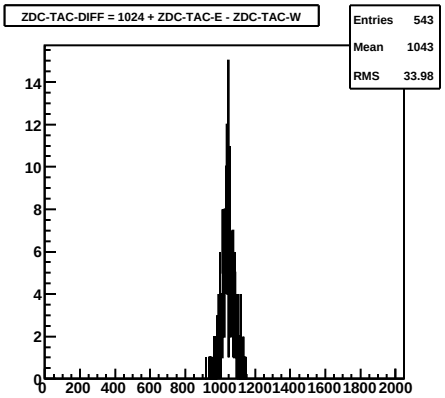

Entries 18598
VPD East ADC Sum
VPD West ADC Sum

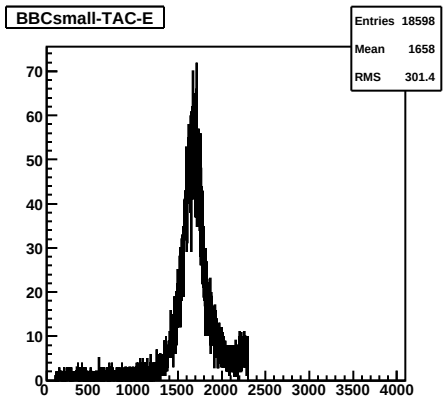

Entries 18598
ZDC East ADC Sum Att
ZDC West ADC Sum Att

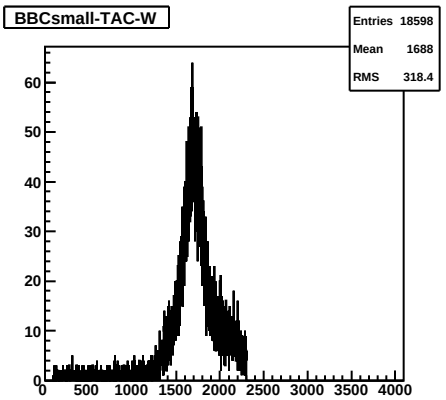

Entries 18598
BBC-L TAC Diff
BCC-S TAC Diff
Entries 18598
BBC-L TAC Diff
VPD TAC Diff
Entries 18598
BBC-L TAC Diff
ZDC TAC Diff
Entries 18598
BBC-S TAC Diff
VPD TAC Diff
Entries 18598
BBC-S TAC Diff
ZDC TAC Diff
Entries 18598
VPD TAC Diff
ZDC TAC Diff

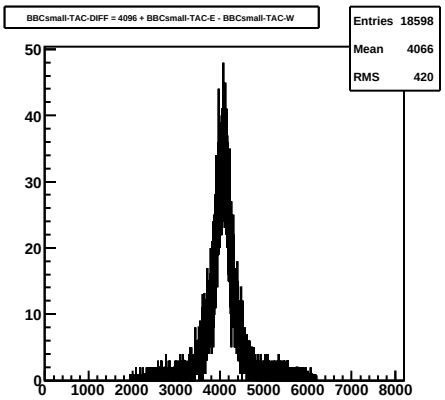

ZDC-TAC-E
Entries 2680
Mean 256.4
RMS 23.62

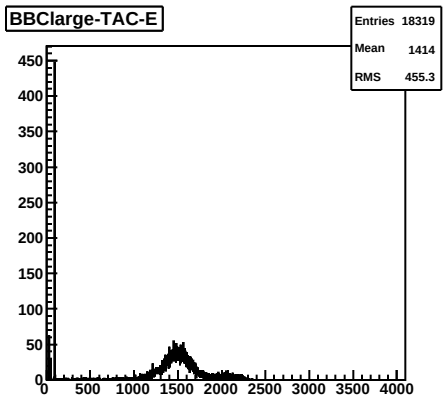

ZDC-TAC-W
Entries 2544
Mean 236.8
RMS 25.92

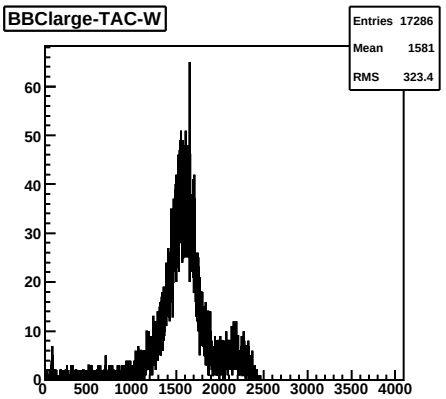

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 543
Mean 1043
RMS 33.98

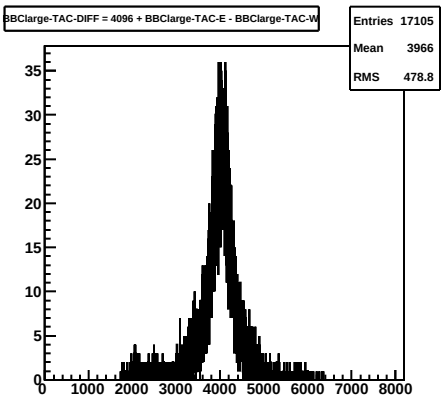

BBCsmall-TAC-E
Entries 18598
Mean 1658
RMS 301.4

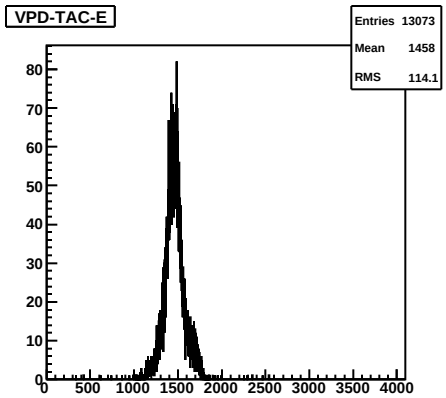

BBCsmall-TAC-W
Entries 18598
Mean 1688
RMS 318.4

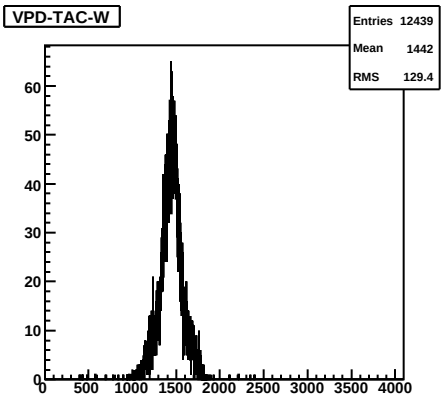

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 18598
Mean 4066
RMS 420

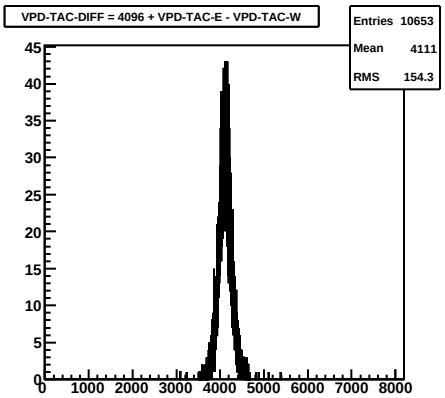

BBClarge-TAC-E
Entries 18319
Mean 1414
RMS 455.3

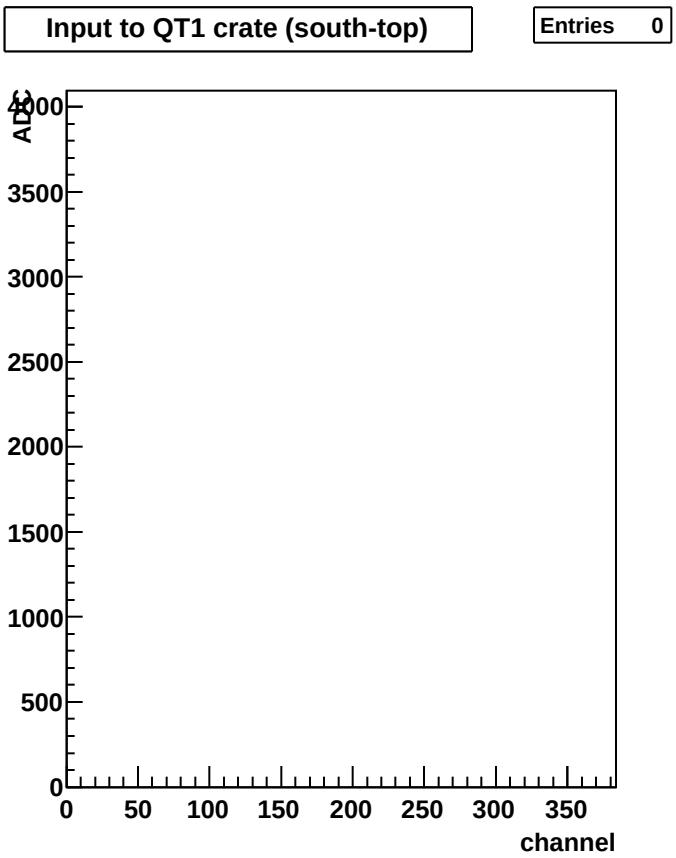

BBClarge-TAC-W
Entries 17286
Mean 1581
RMS 323.4

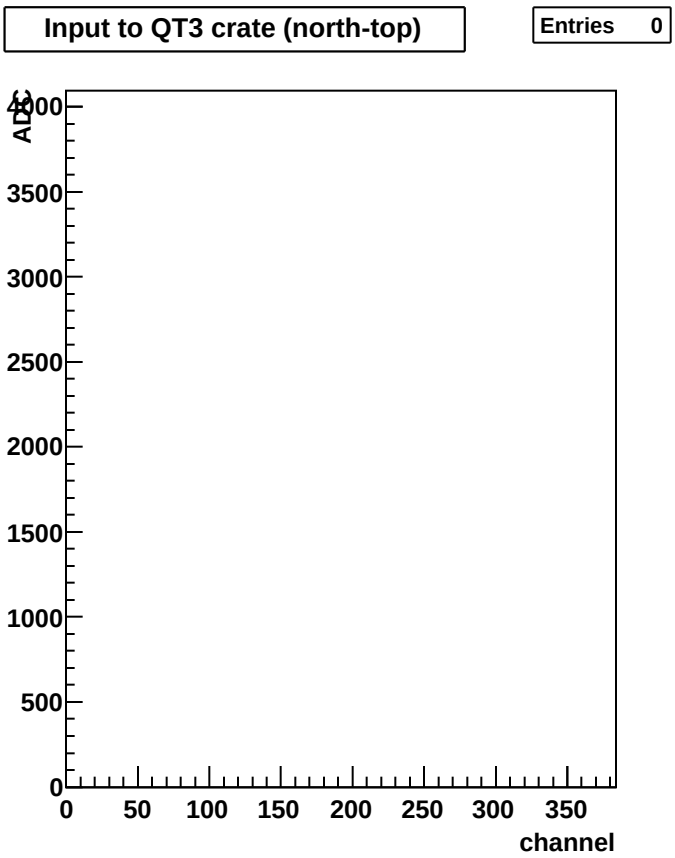

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 17105
Mean 3966
RMS 478.8

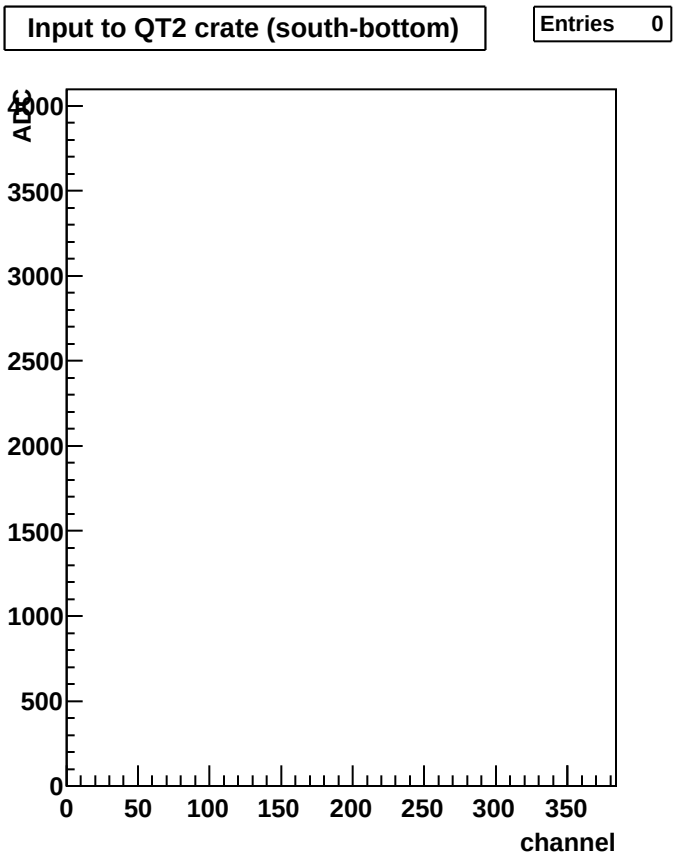

VPD-TAC-E
Entries 13073
Mean 1458
RMS 114.1

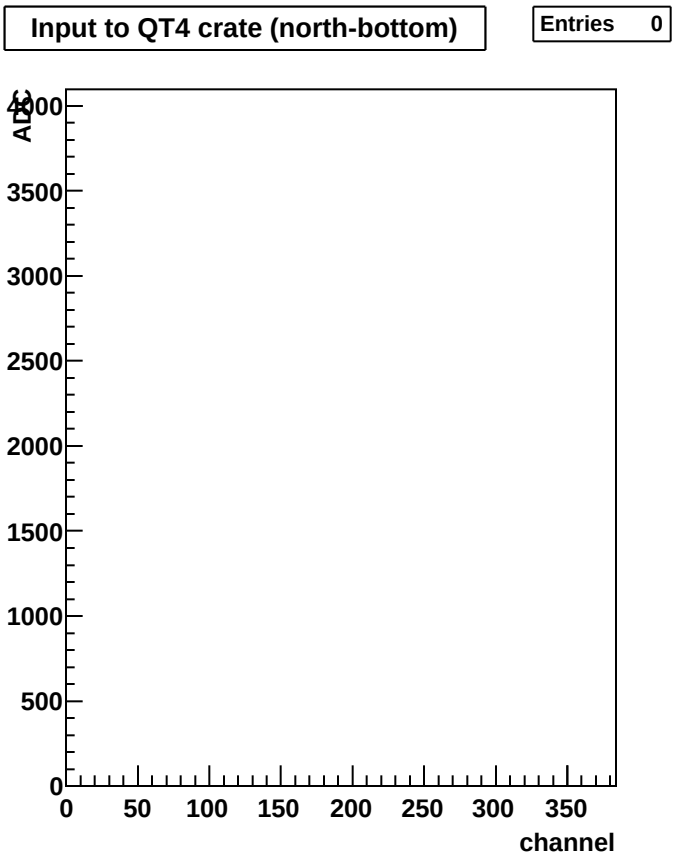

VPD-TAC-W
Entries 12439
Mean 1442
RMS 129.4

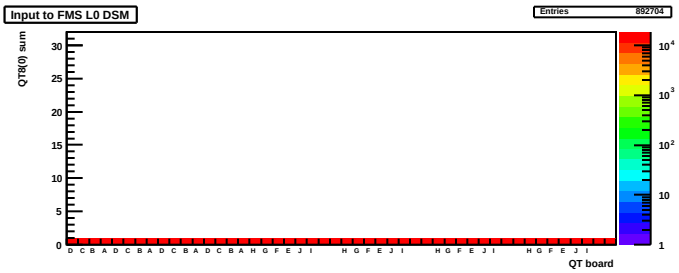

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 10653
Mean 4111
RMS 154.3

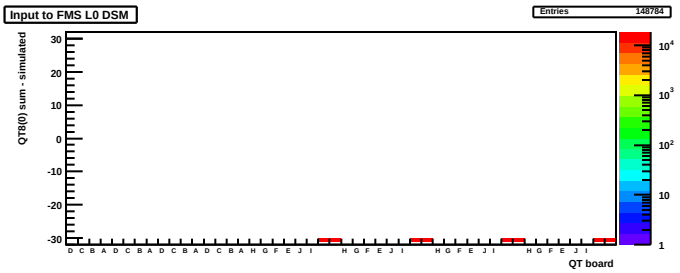

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

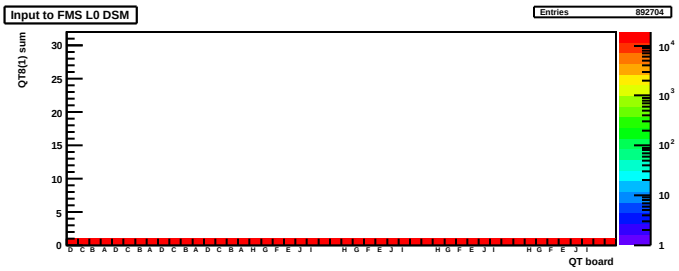

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

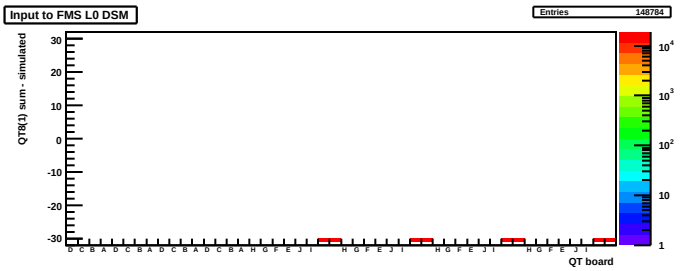

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

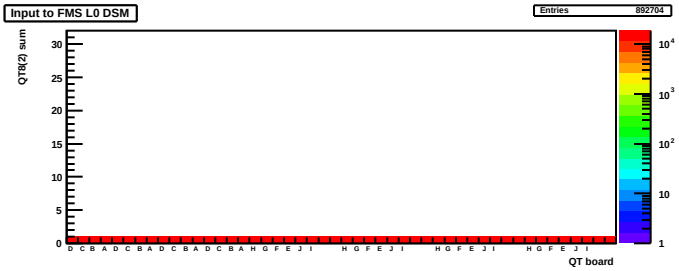

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

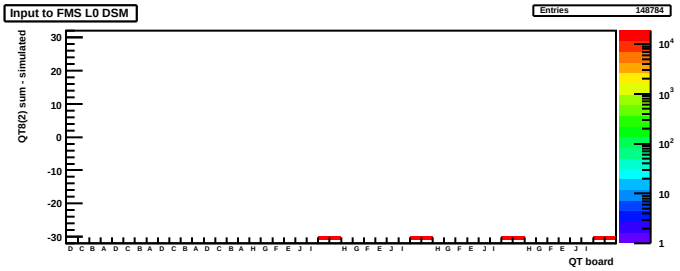

Input to FMS L0 DSM
Entries 892704
QT8(0) sum
QT board

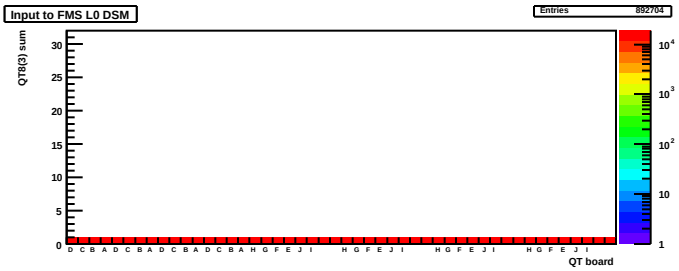

Input to FMS L0 DSM
Entries 148784
QT8(0) sum - simulated
QT board

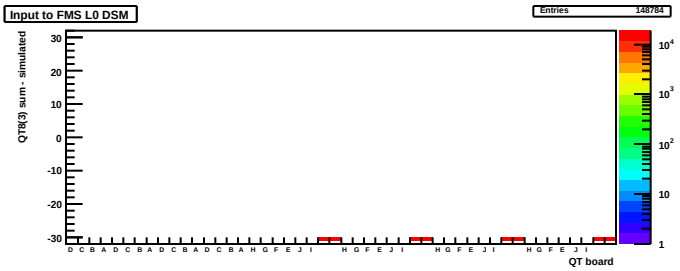

Input to FMS L0 DSM
Entries 892704
QT8(1) sum
QT board

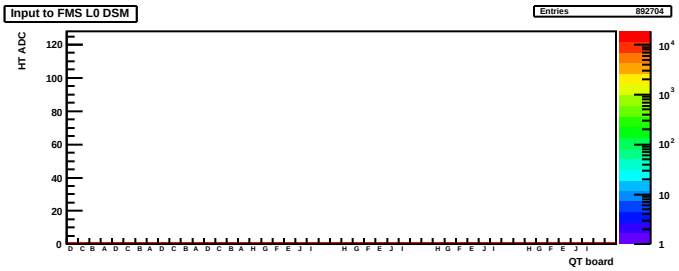

Input to FMS L0 DSM
Entries 148784
QT8(1) sum - simulated
QT board

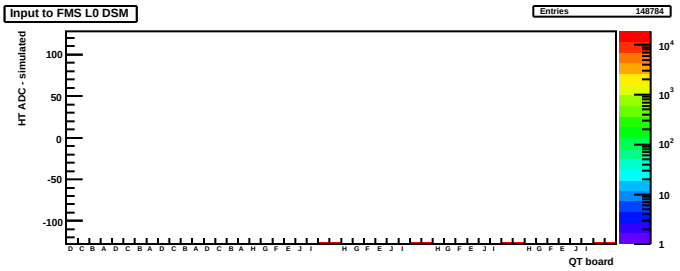

Input to FMS L0 DSM
Entries 892704
QT8(2) sum
QT board

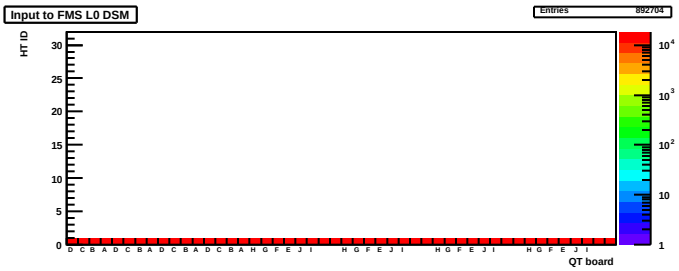

Input to FMS L0 DSM
Entries 148784
QT8(2) sum - simulated
QT board

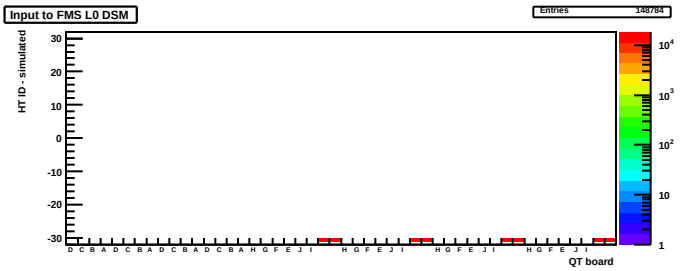

Input to FMS L0 DSM
Entries 892704
QT8(3) sum
QT board

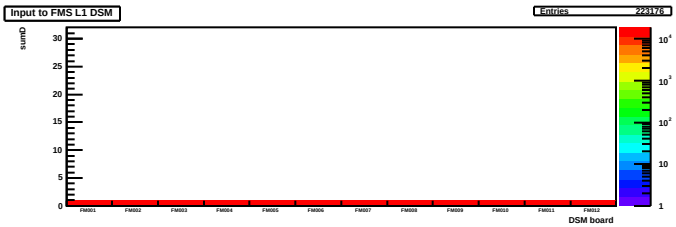

Input to FMS L0 DSM
Entries 148784
QT8(3) sum - simulated
QT board

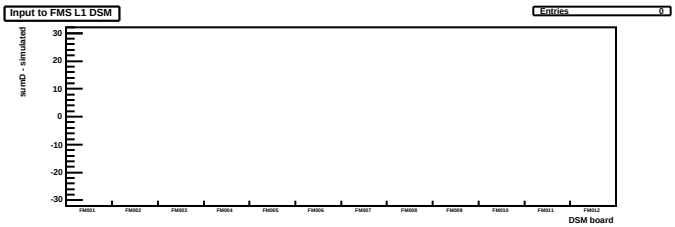

Input to FMS L0 DSM
Entries 892704
HT ADC
QT board

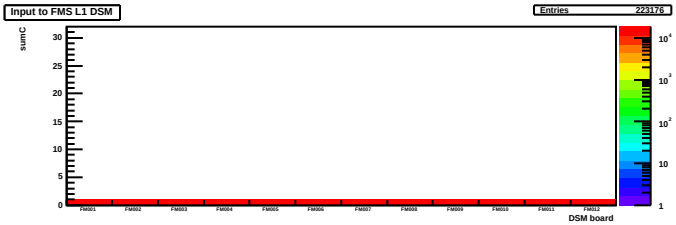

Input to FMS L0 DSM
Entries 148784
HT ADC - simulated
QT board

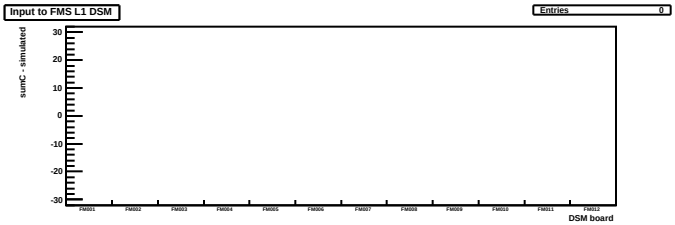

Input to FMS L0 DSM
Entries 892704
HT ID
QT board

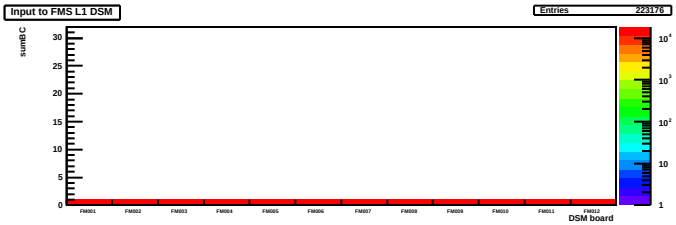

Input to FMS L0 DSM
Entries 148784
HT ID - simulated
QT board

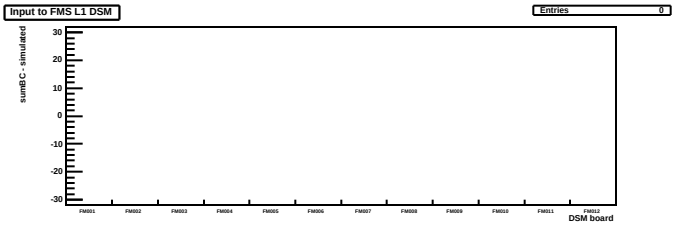

Input to FMS L1 DSM
Entries 223176
sumD
DSM board

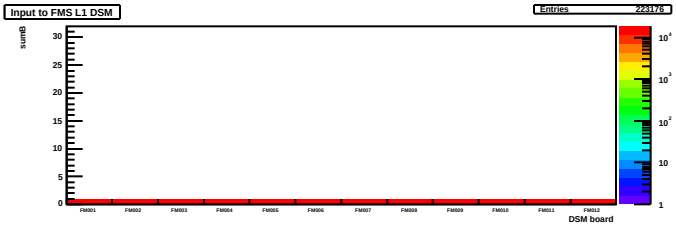

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

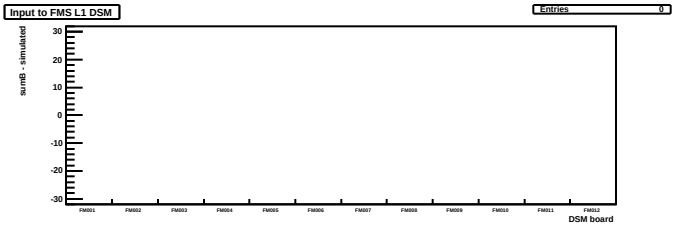

Input to FMS L1 DSM
Entries 223176
sumC
DSM board

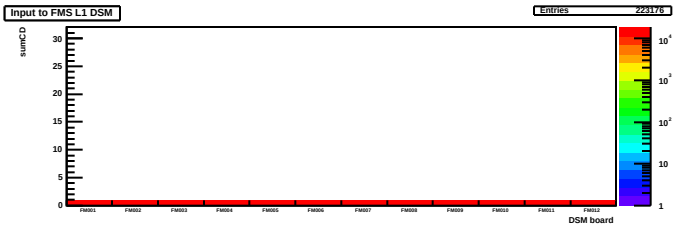

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

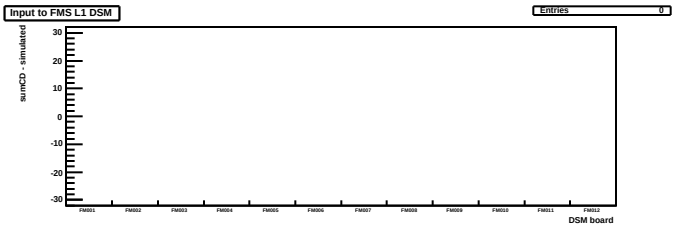

Input to FMS L1 DSM
Entries 223176
sumBC
DSM board

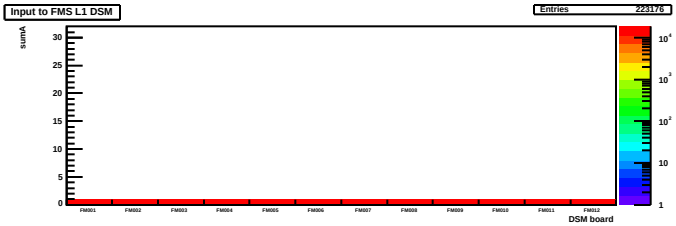

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

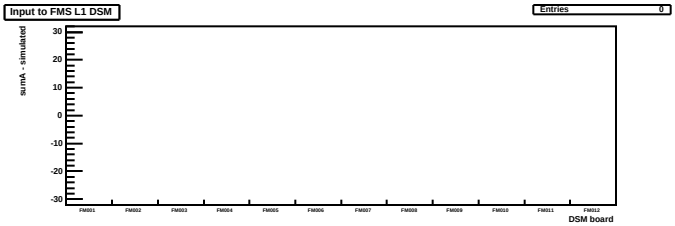

Input to FMS L1 DSM
Entries 223176
sumB
DSM board

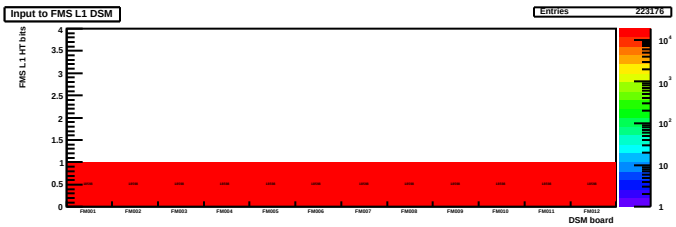

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

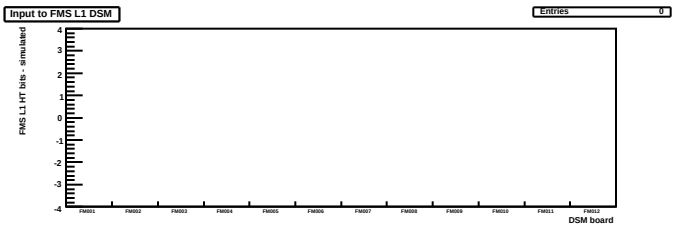

Input to FMS L1 DSM
Entries 223176
sumCD
DSM board

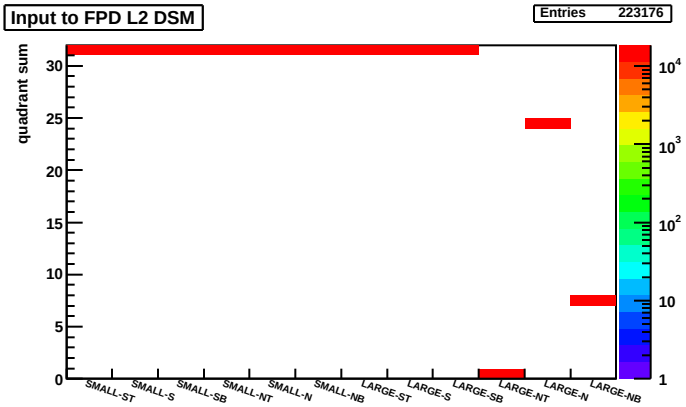

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

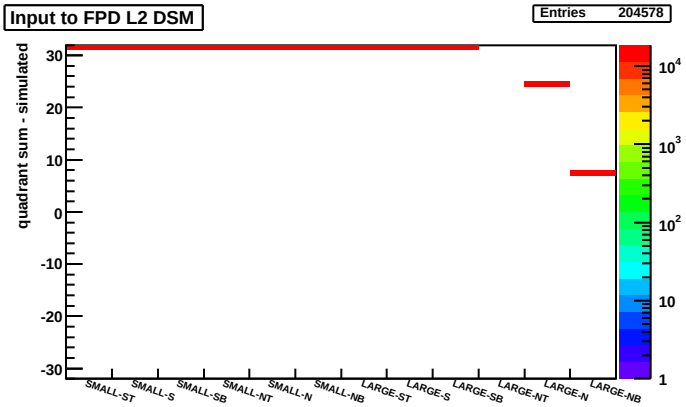

Input to FMS L1 DSM
Entries 223176
sumA
DSM board

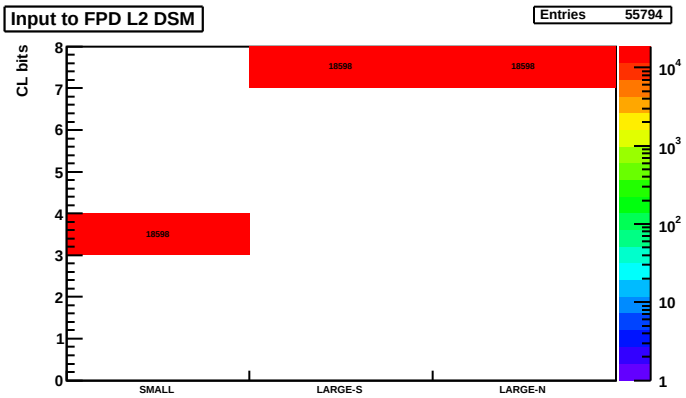

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

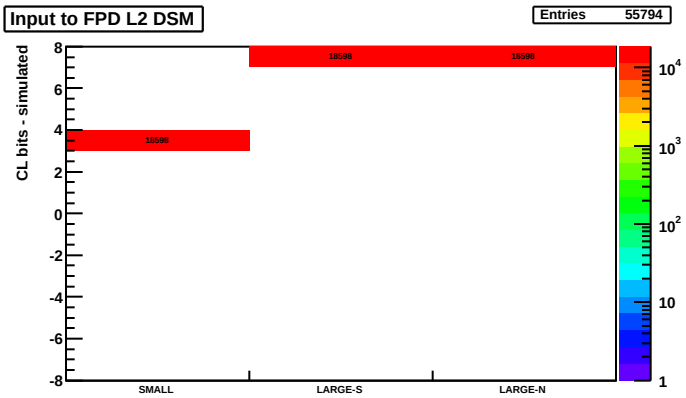

Input to FMS L1 DSM
Entries 223176
FMS L1 HT bits
DSM board

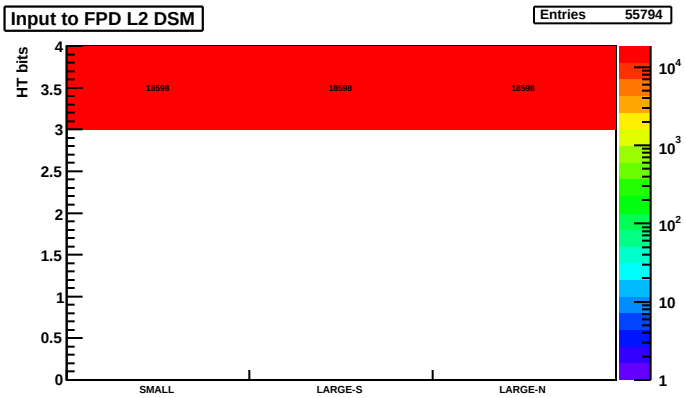

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

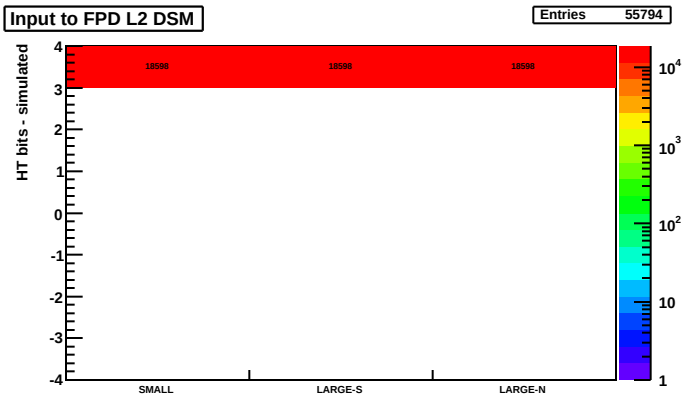

Input to FPD L2 DSM
Entries 223176
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

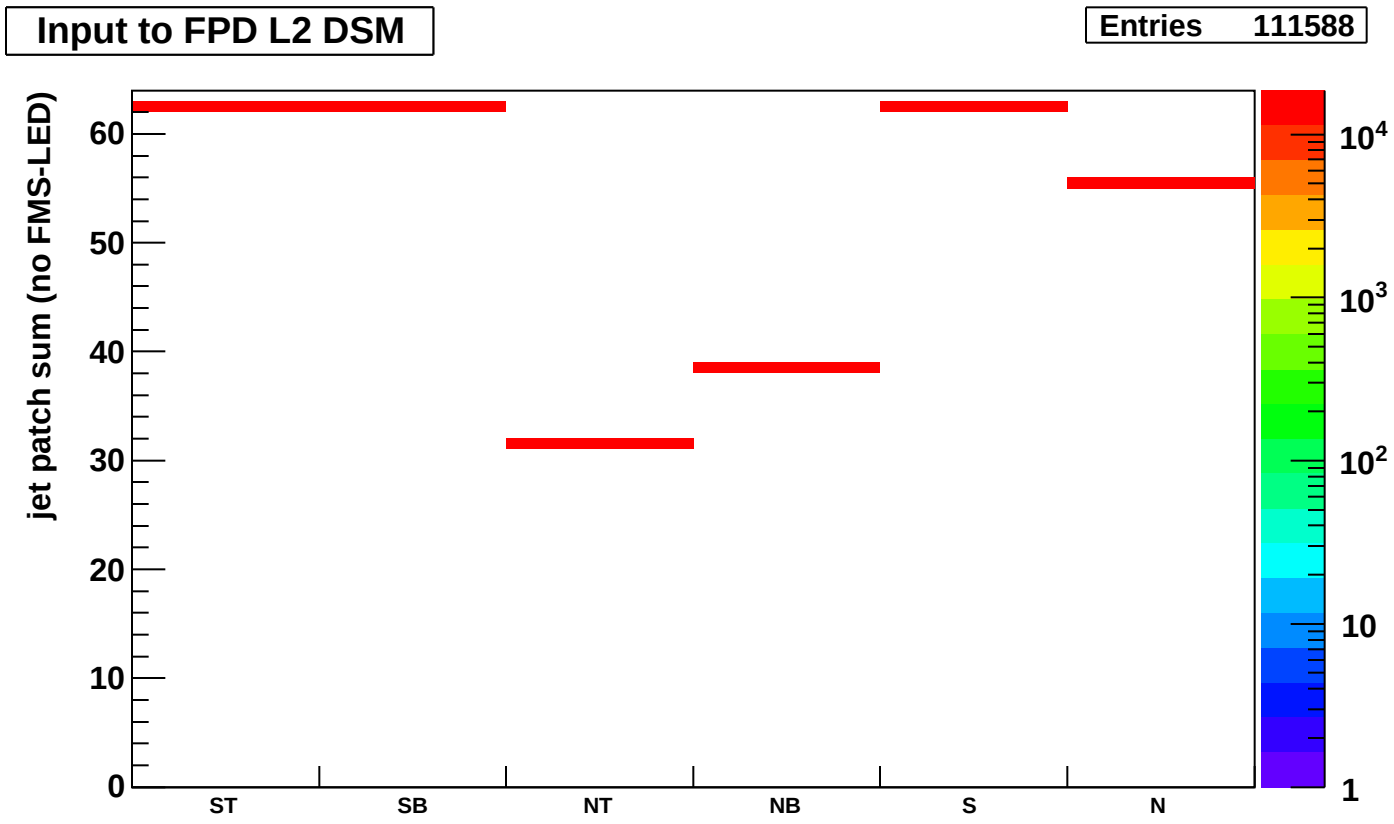

Input to FPD L2 DSM
Entries 204578
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

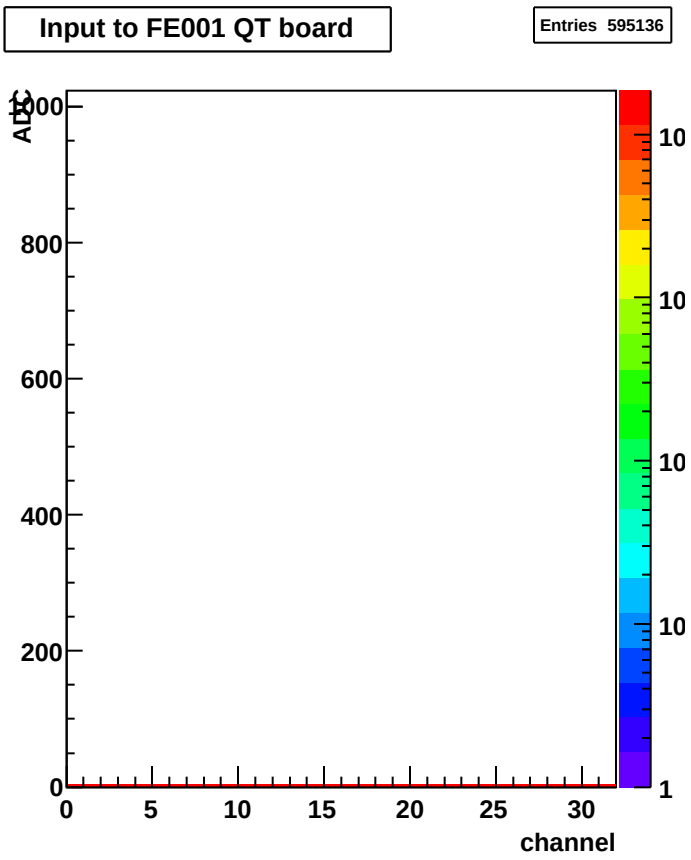

Input to FPD L2 DSM
Entries 55794
CL bits
18598
SMALL
LARGE-S
LARGE-N

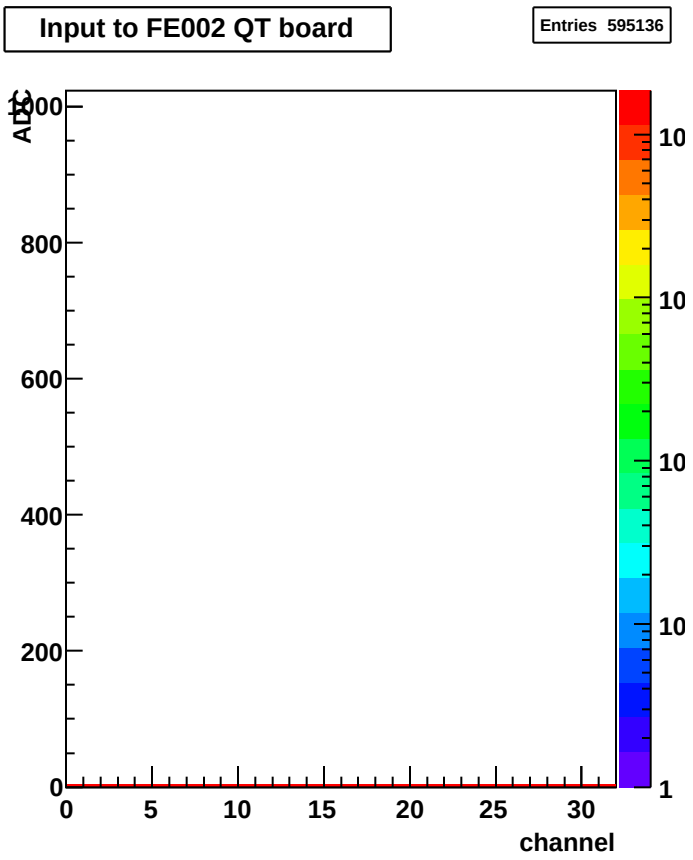

Input to FPD L2 DSM
Entries 55794
CL bits - simulated
18598
SMALL
LARGE-S
LARGE-N

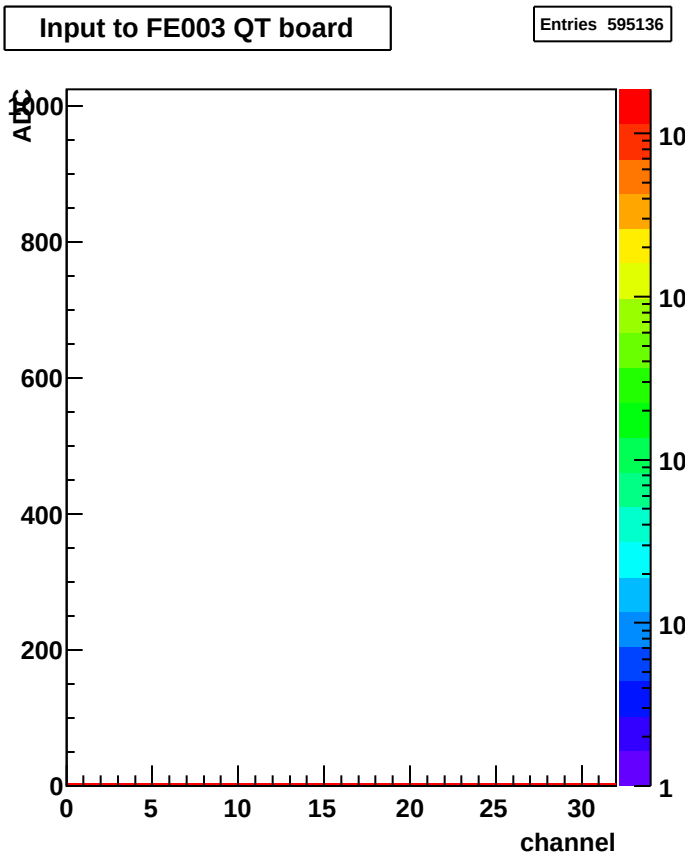

Input to FPD L2 DSM
Entries 55794
HT bits
18598
SMALL
LARGE-S
LARGE-N

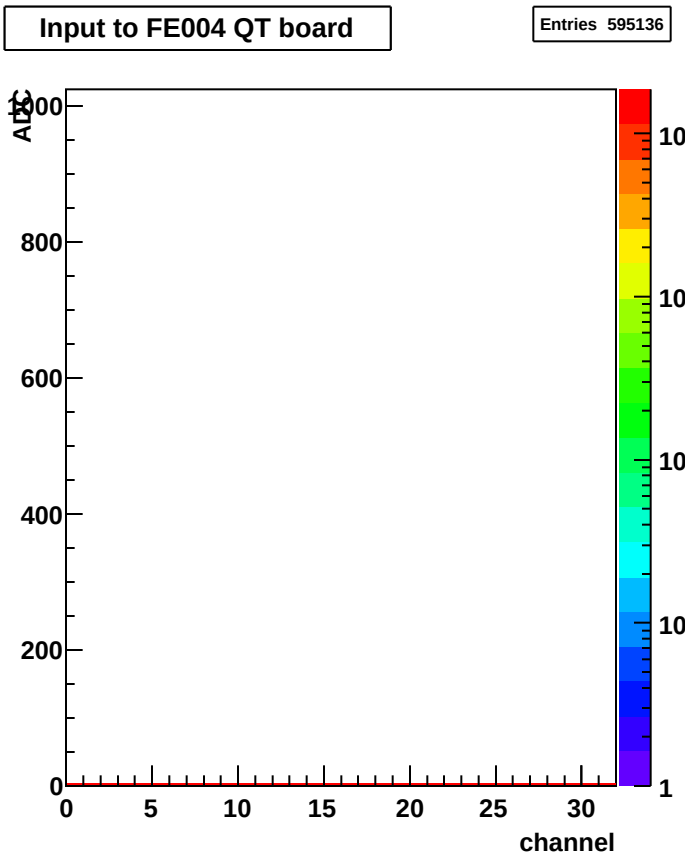

Input to FPD L2 DSM
Entries 55794
HT bits - simulated
18598
SMALL
LARGE-S
LARGE-N

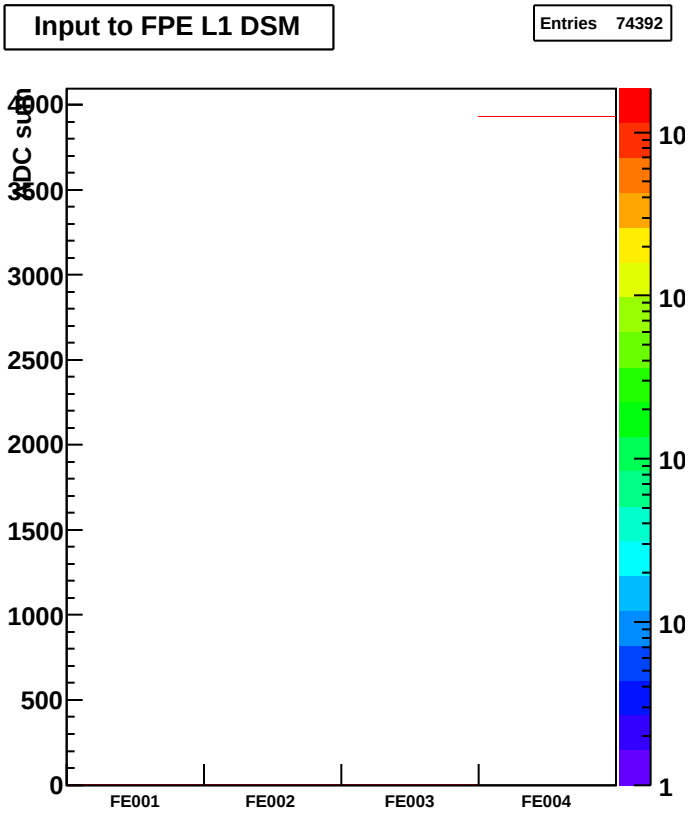

Input to FPD L2 DSM
Entries 111588
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

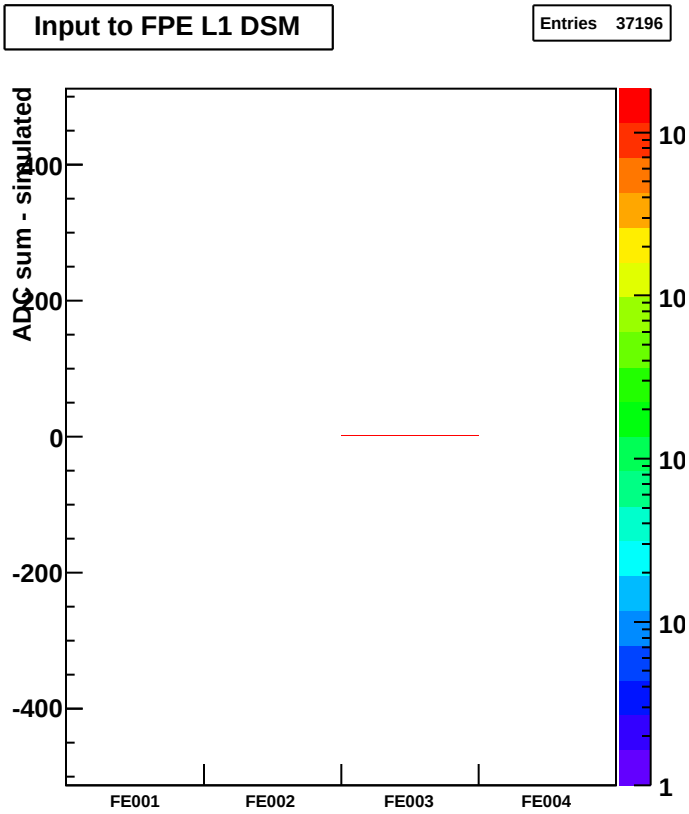

Input to FE001 QT board
Entries 595136
ADC
channel

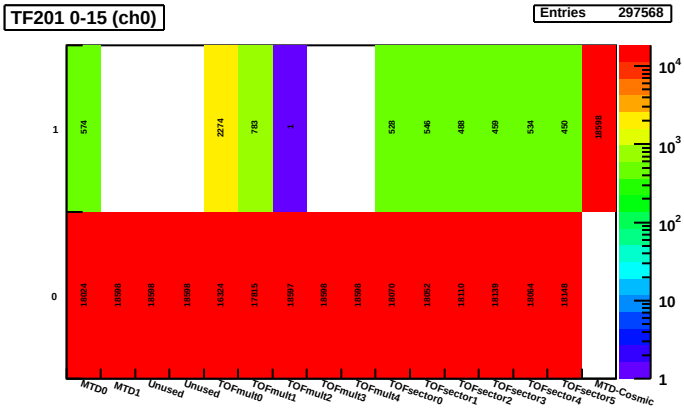

Input to FE002 QT board
Entries 595136
ADC
channel

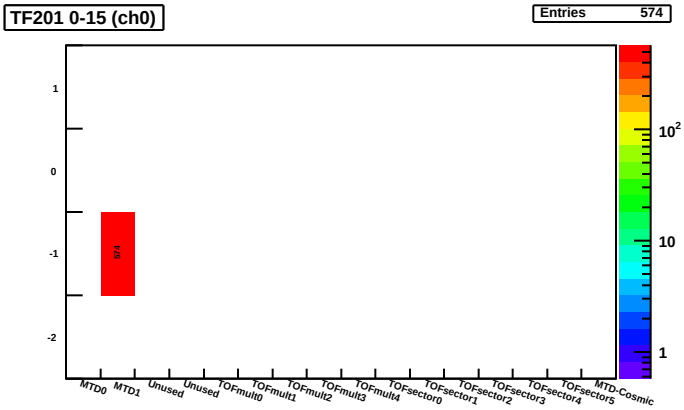

Input to FE003 QT board
Entries 595136
ADC
channel

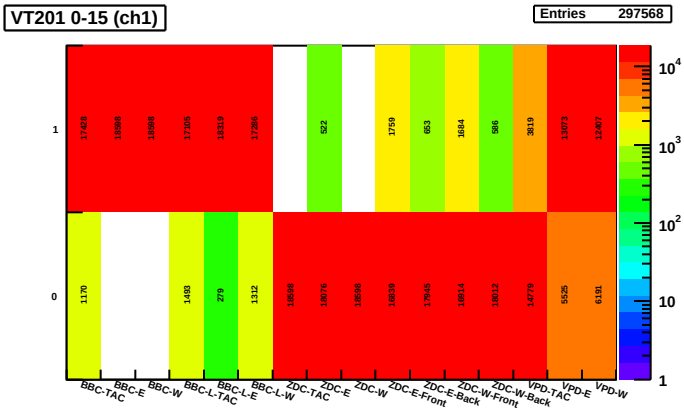

Input to FE004 QT board
Entries 595136
ADC
channel

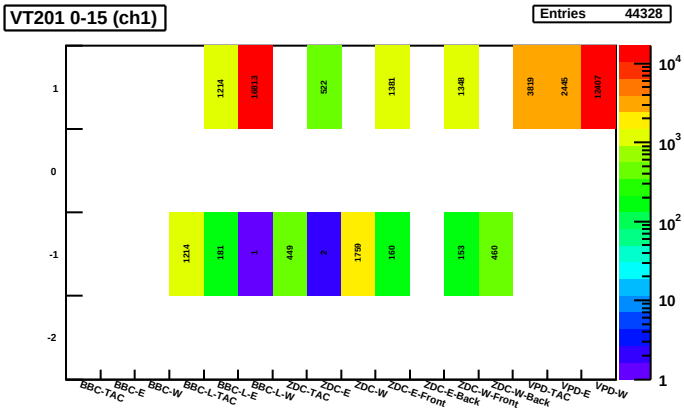

Input to FPE L1 DSM
Entries 74392
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

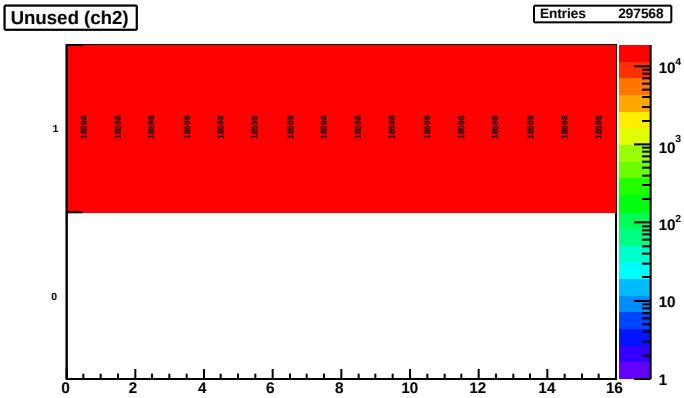

Input to FPE L1 DSM
Entries 37196
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 297568
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 574
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 297568
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 44328
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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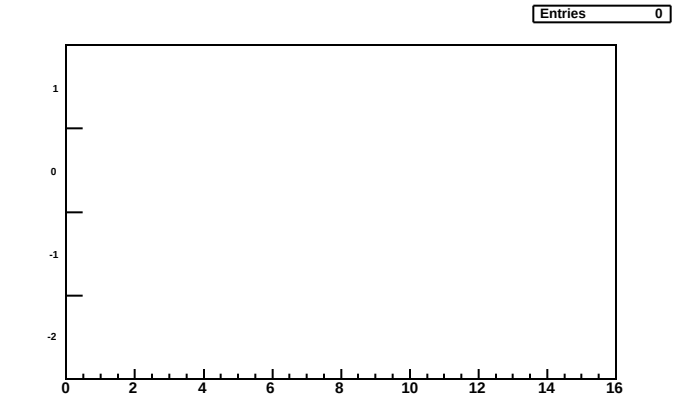
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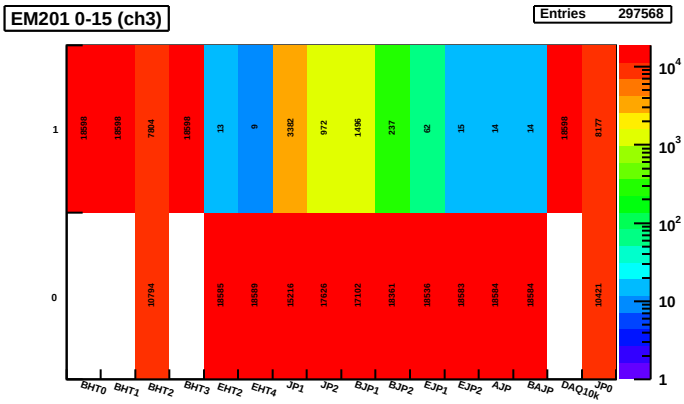
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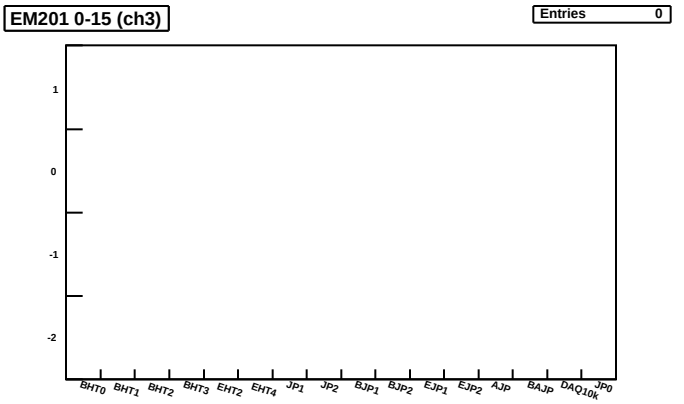
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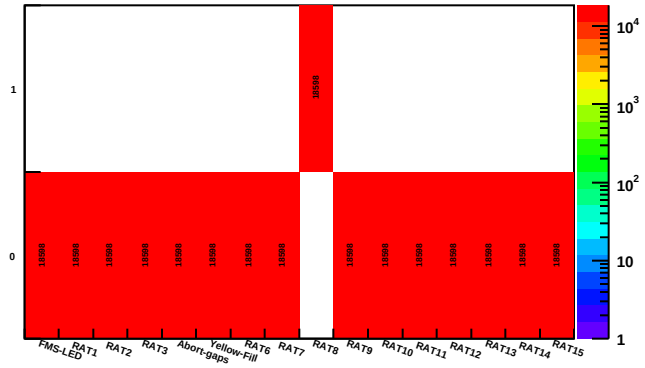
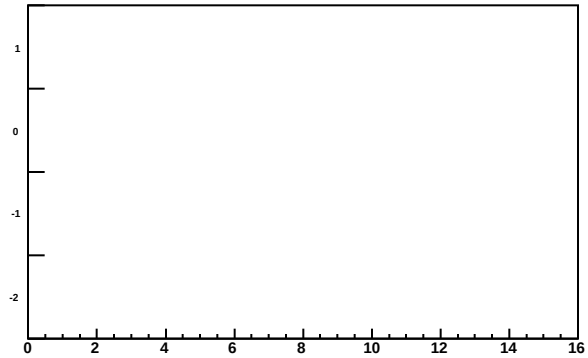
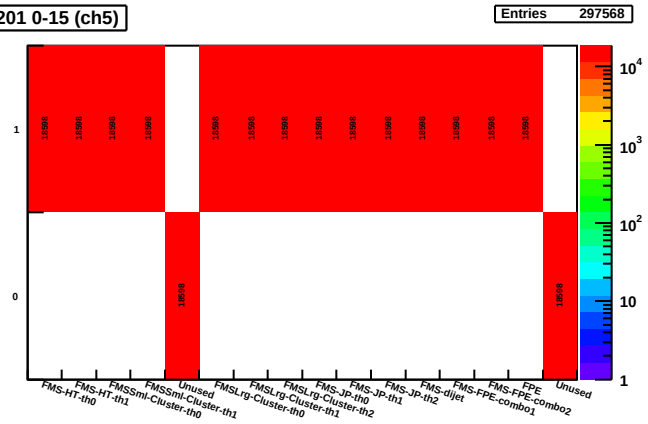
RAT board (ch4)





FP201 0-15 (ch5)



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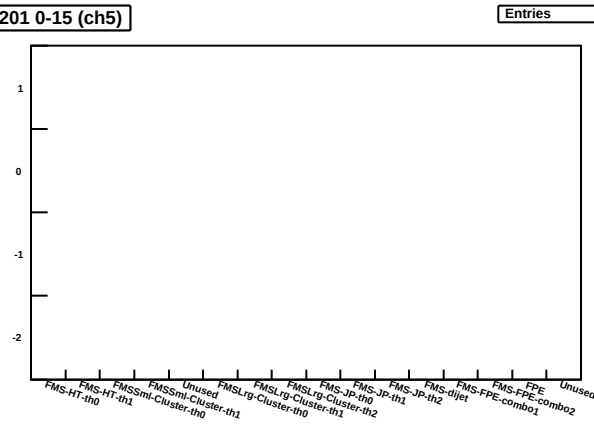
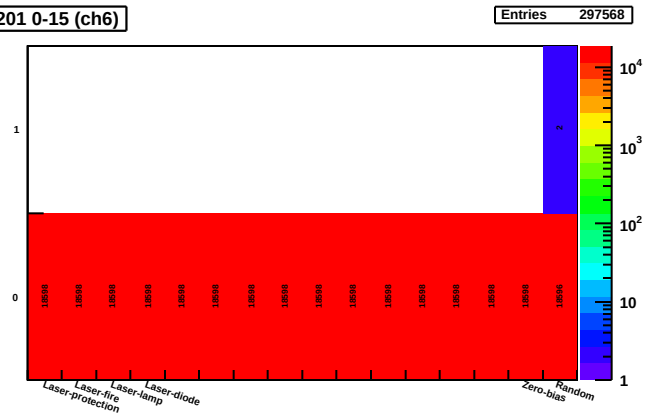
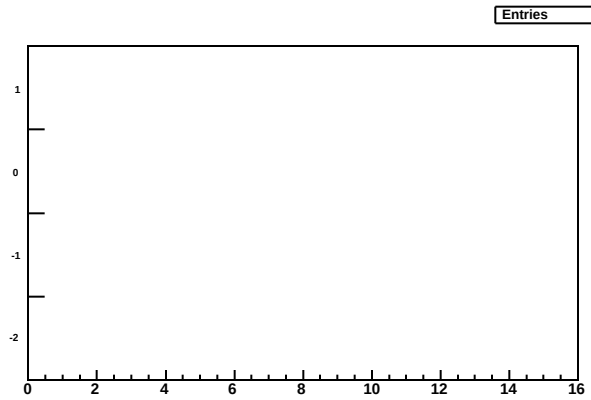
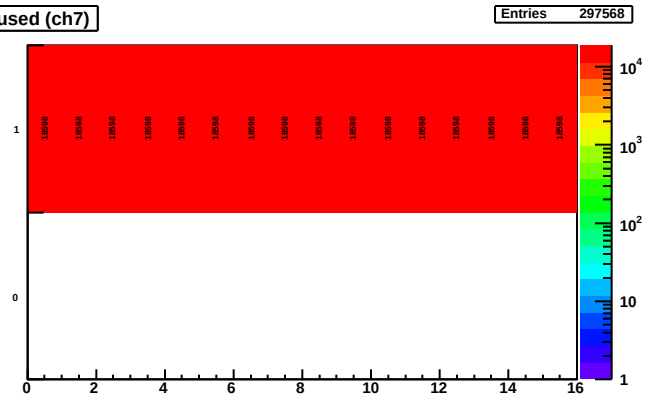
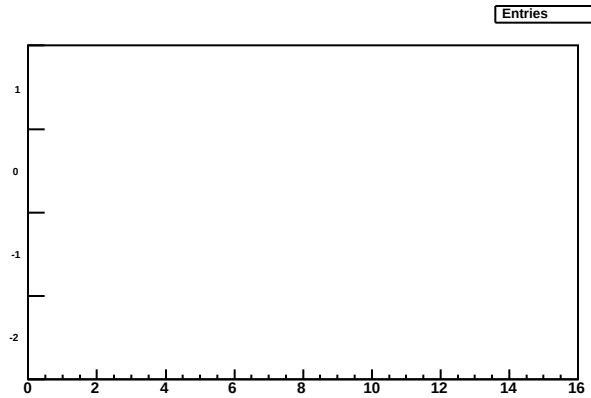


ST201 0-15 (ch6)





Unused (ch7)