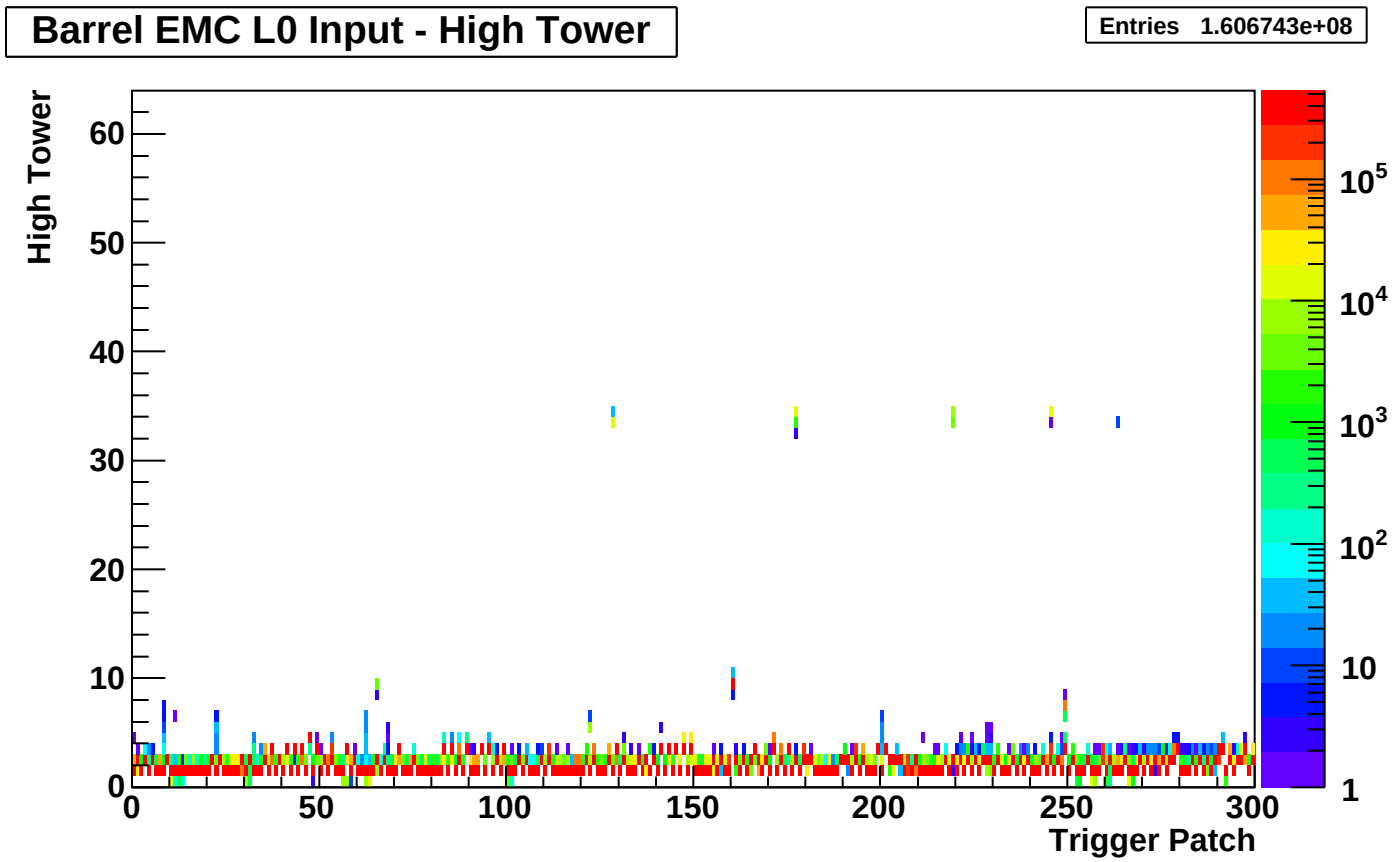
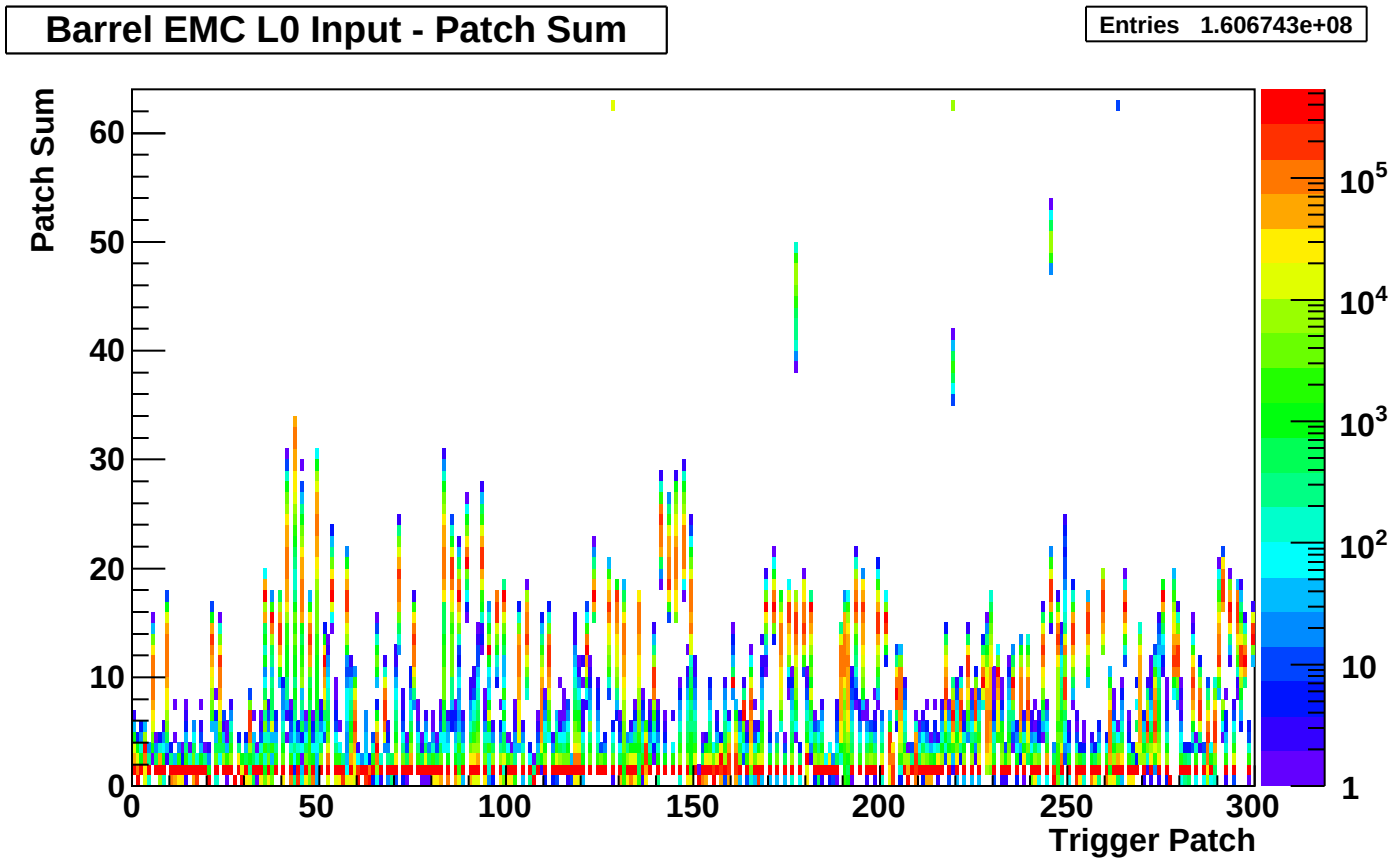
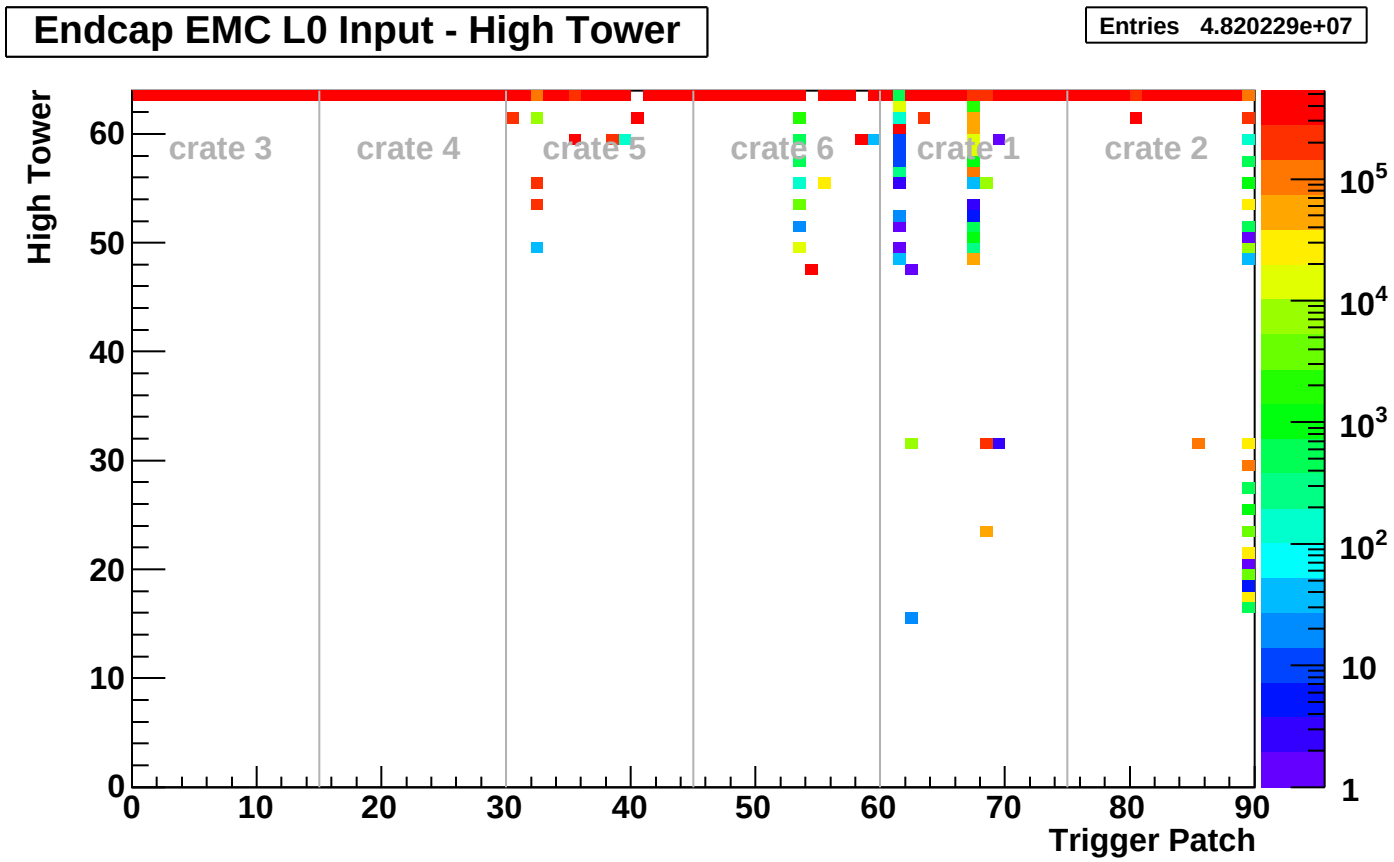
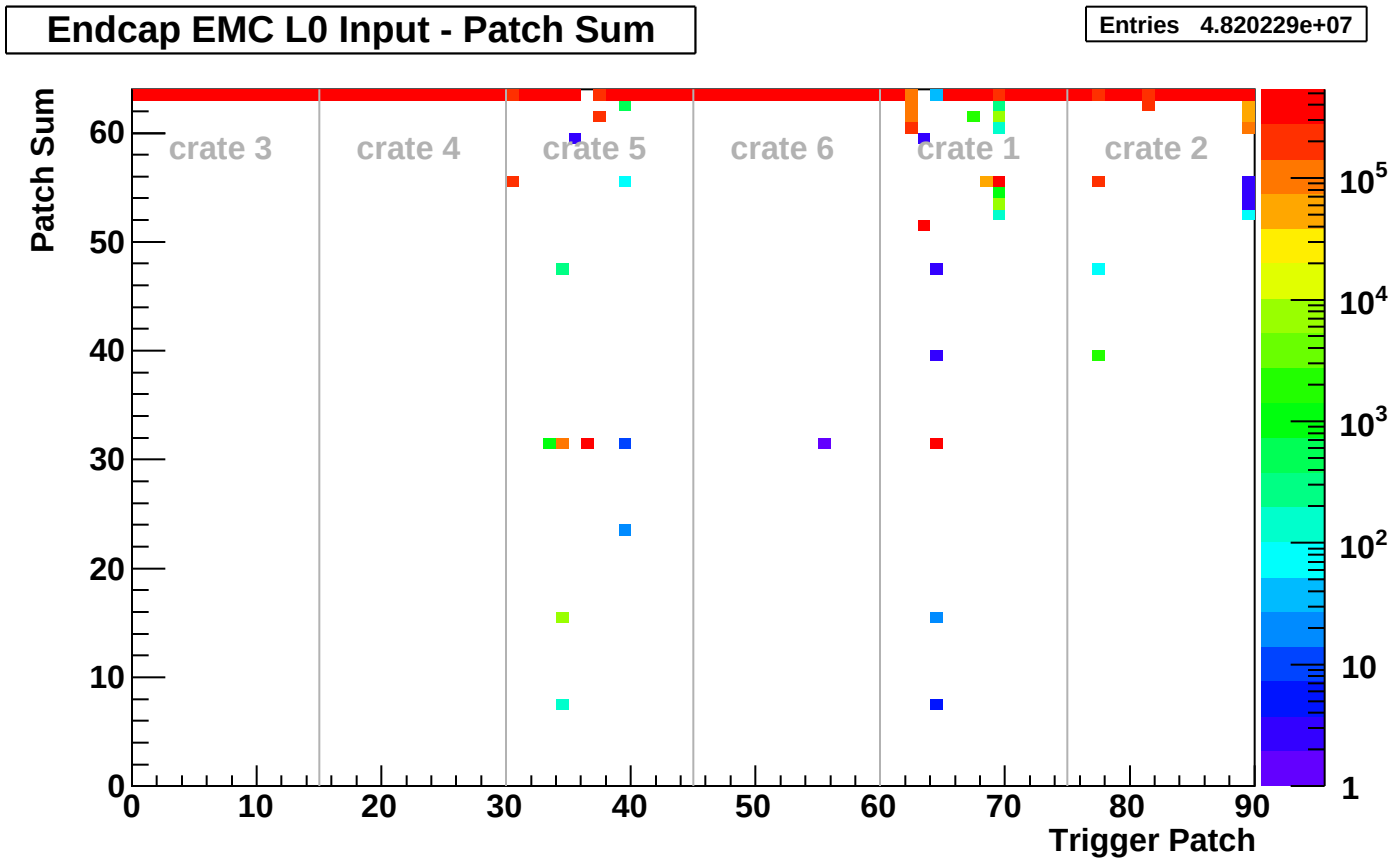
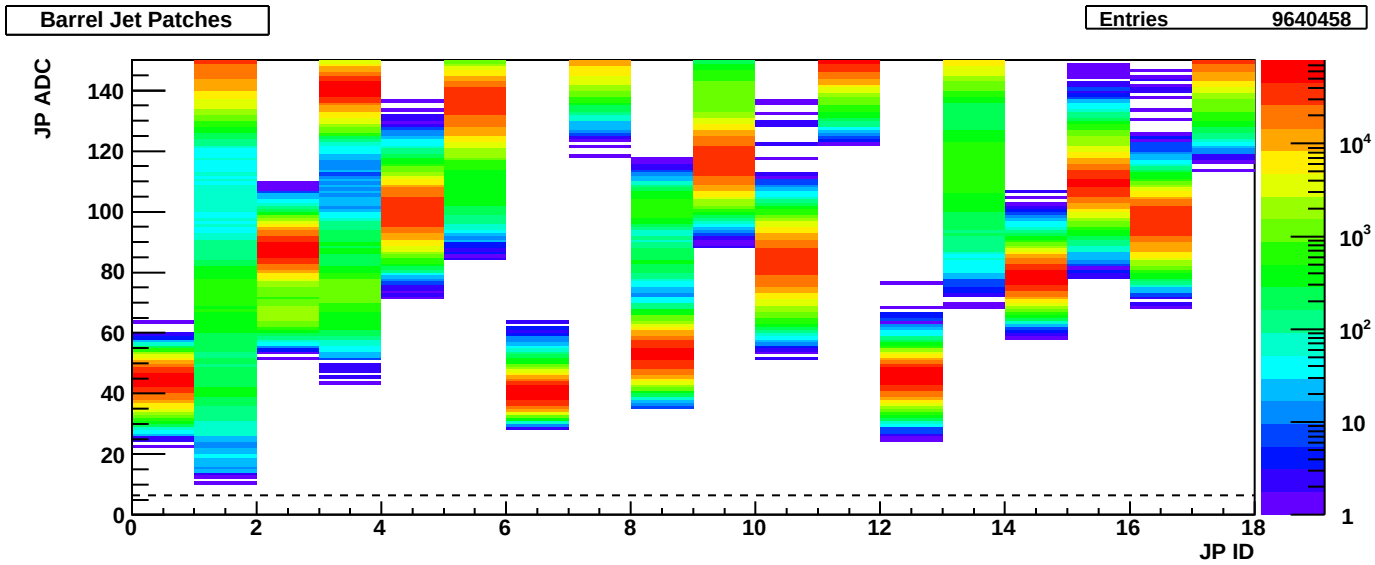
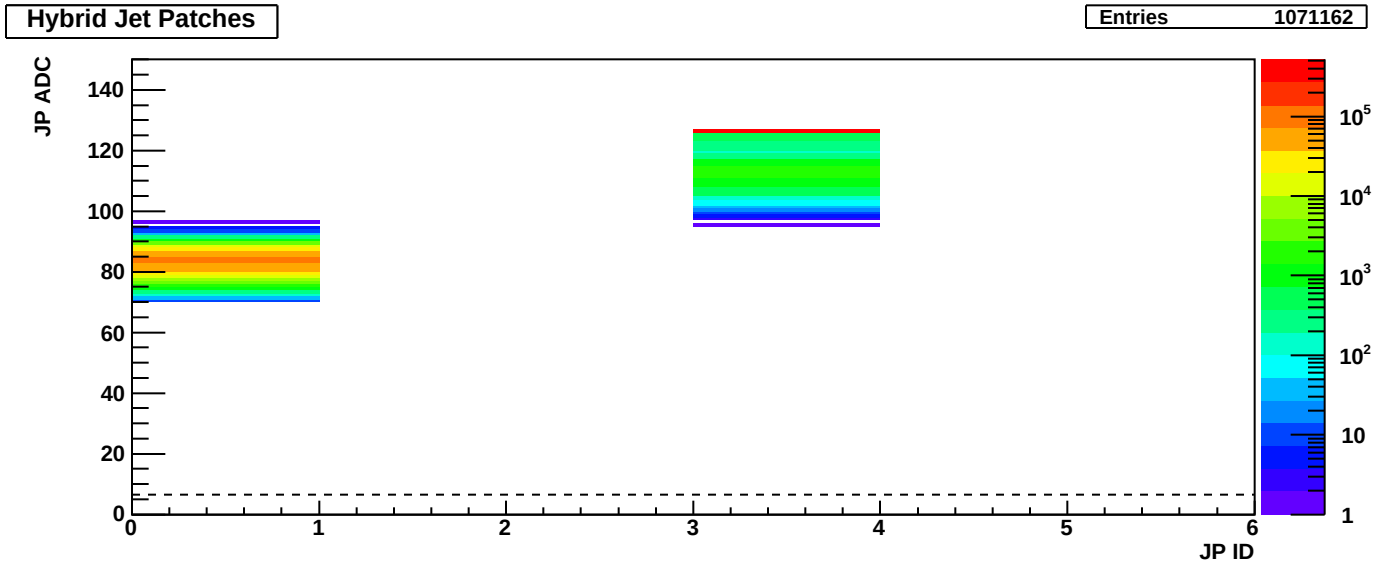

Barrel EMC L0 Input - High Tower
Entries 1.606743e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

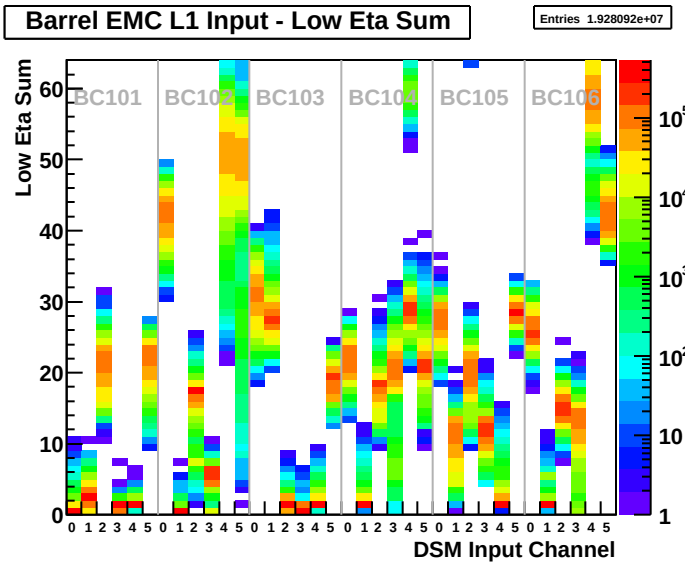

Barrel EMC L0 Input - Patch Sum
Entries 1.606743e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

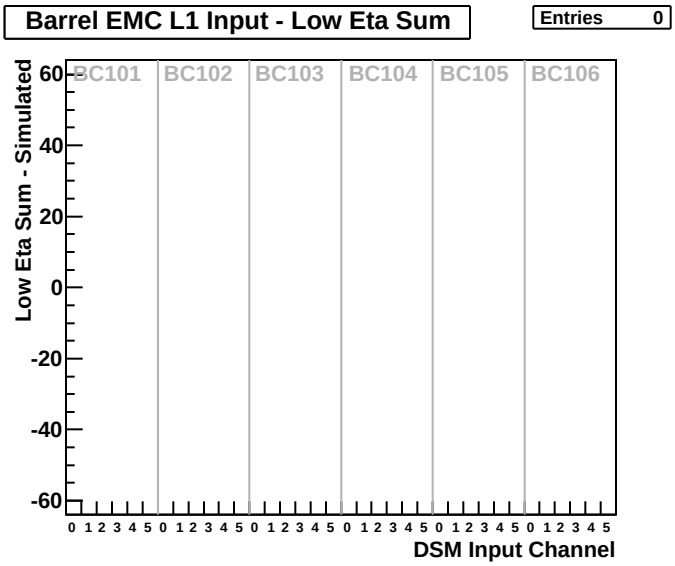

Endcap EMC L0 Input - High Tower
Entries 4.820229e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

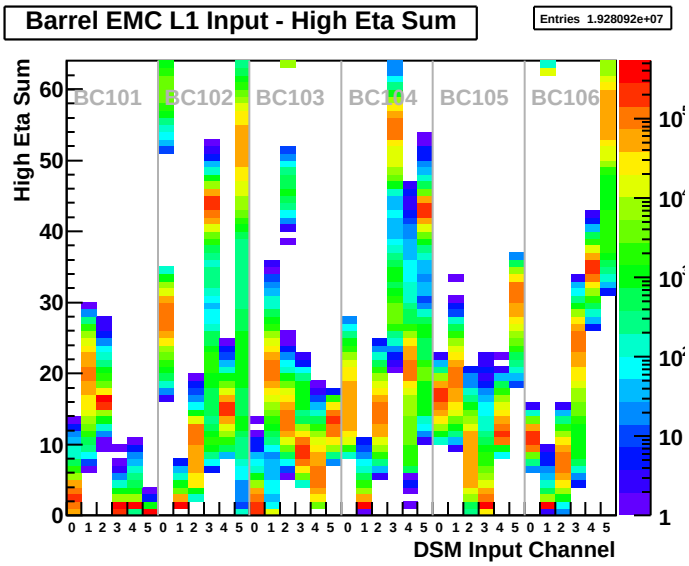

Endcap EMC L0 Input - Patch Sum
Entries 4.820229e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

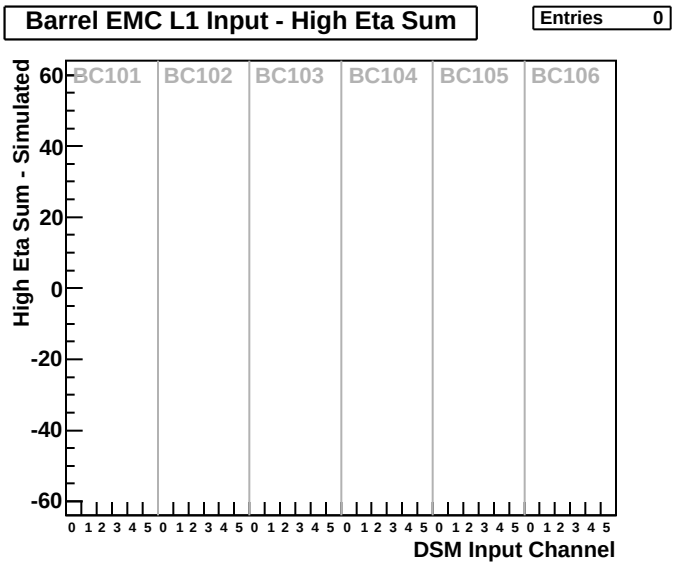

Barrel Jet Patches
Entries 9640458
JP ADC
JP ID

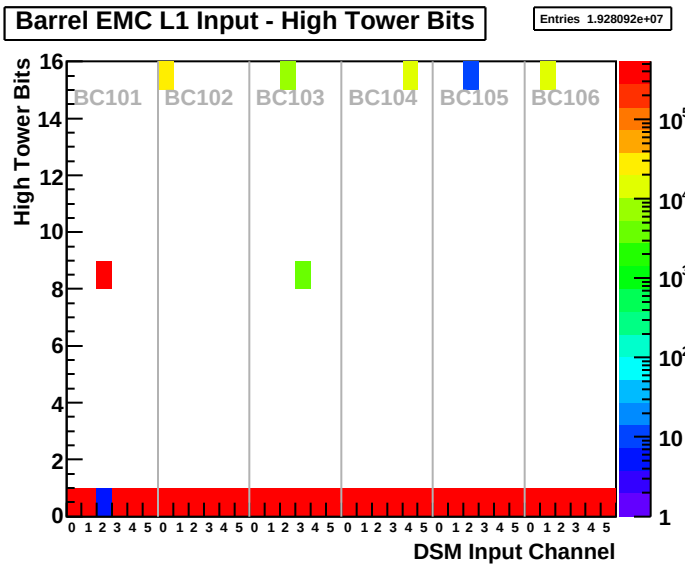

Hybrid Jet Patches
Entries 1071162
JP ADC
JP ID

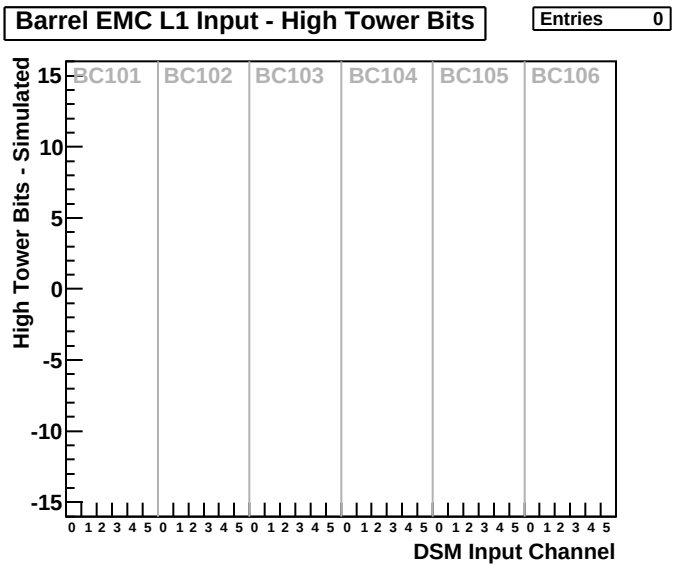

Barrel EMC L1 Input - Low Eta Sum
Entries 1.928092e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

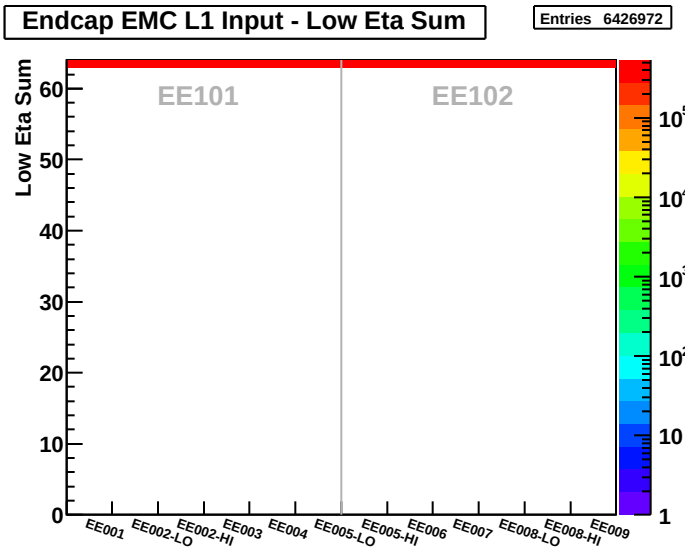

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

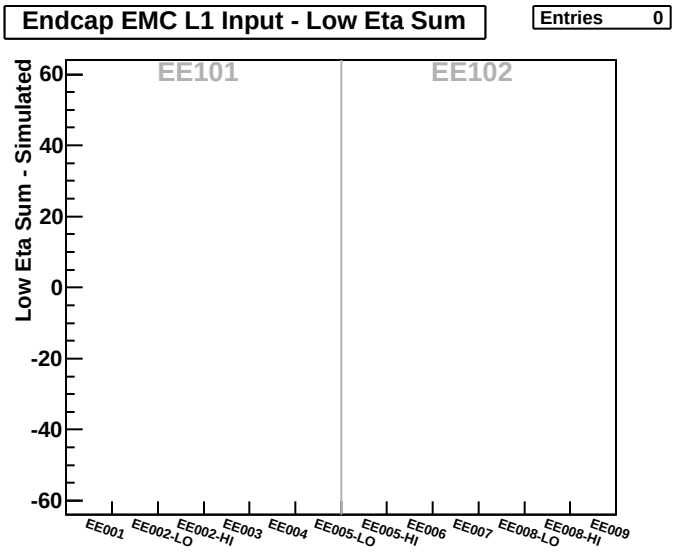

Barrel EMC L1 Input - High Eta Sum
Entries 1.928092e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

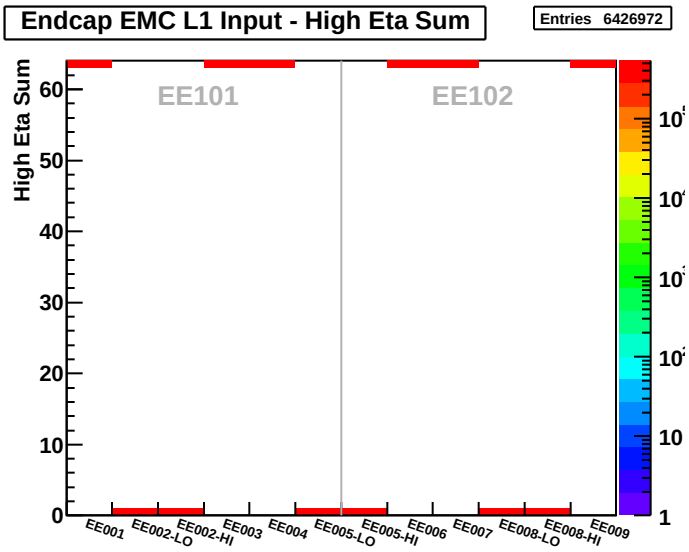

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

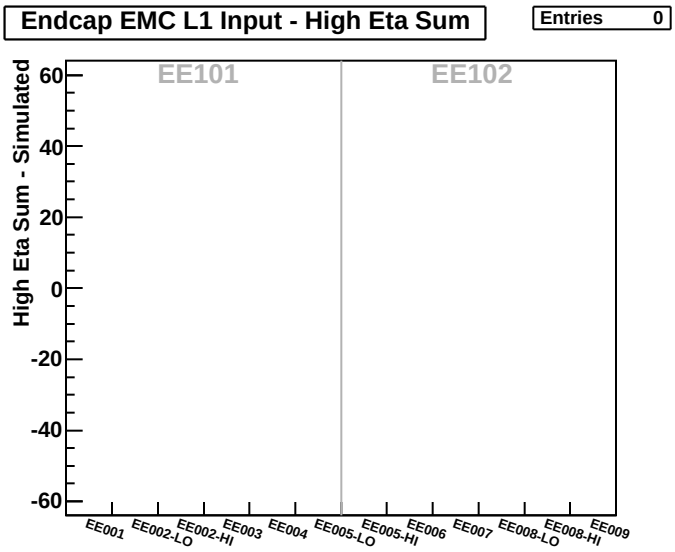

Barrel EMC L1 Input - High Tower Bits
Entries 1.928092e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

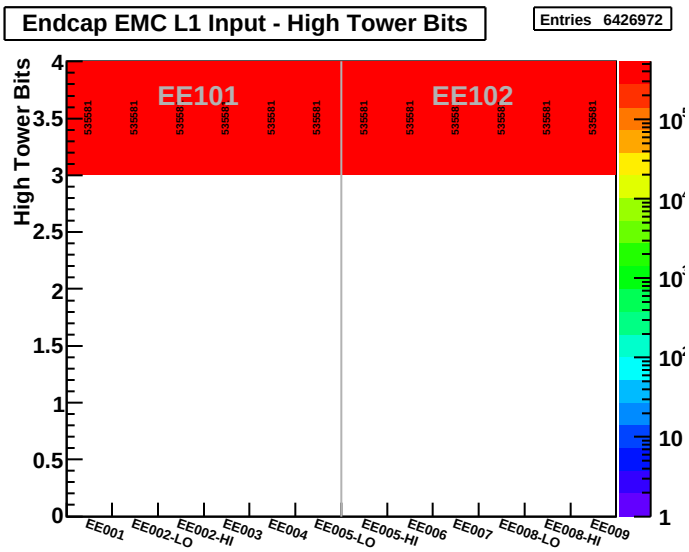

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

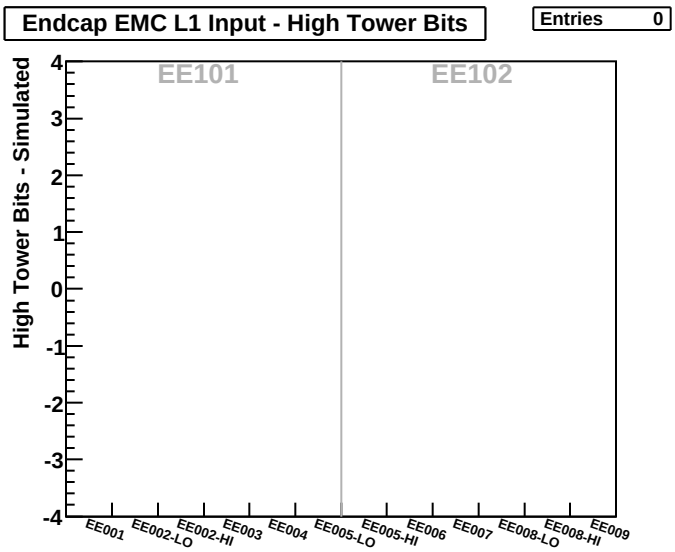

Endcap EMC L1 Input - Low Eta Sum
Entries 6426972
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

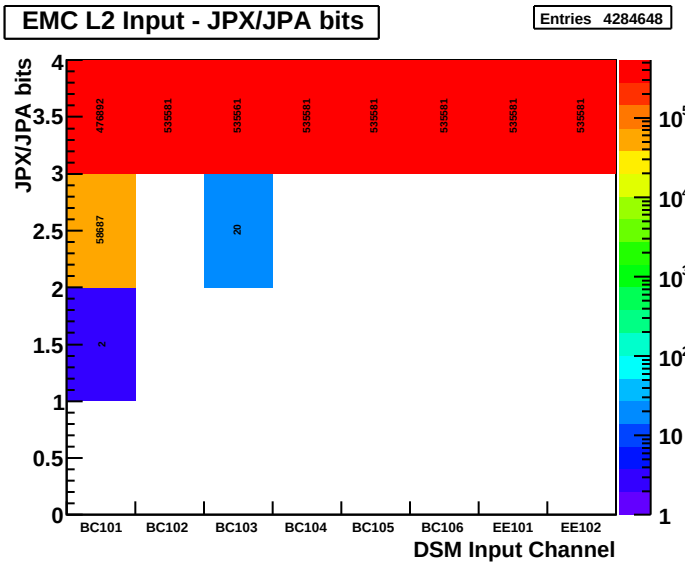

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

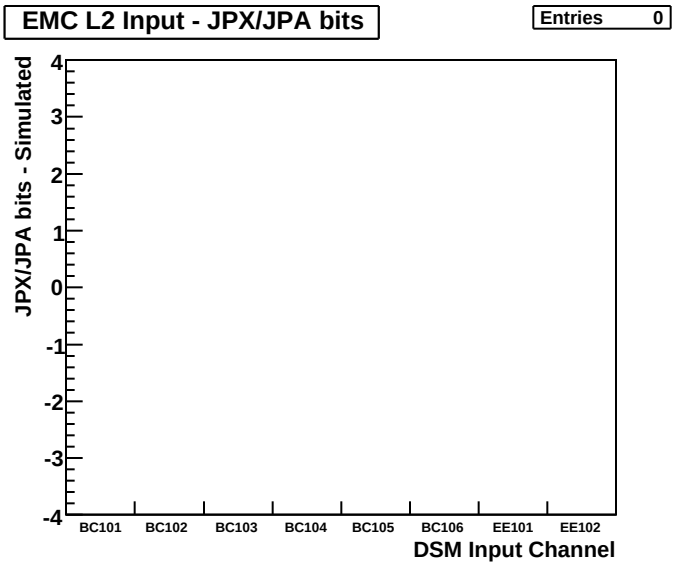

Endcap EMC L1 Input - High Eta Sum
Entries 6426972
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

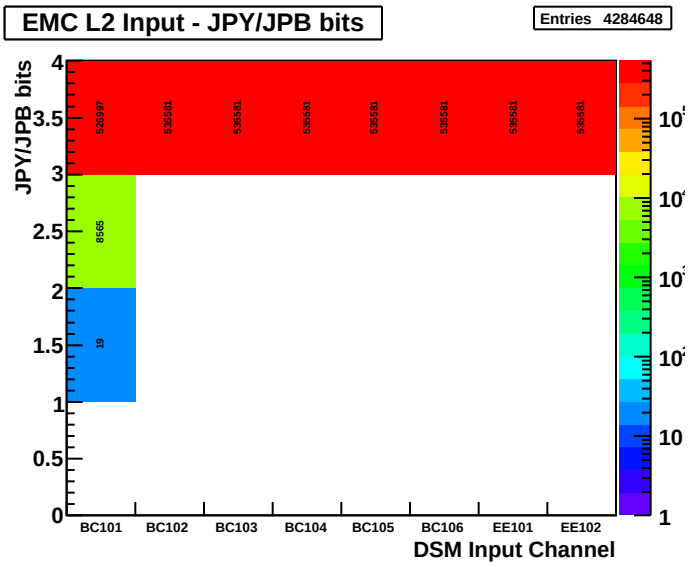

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

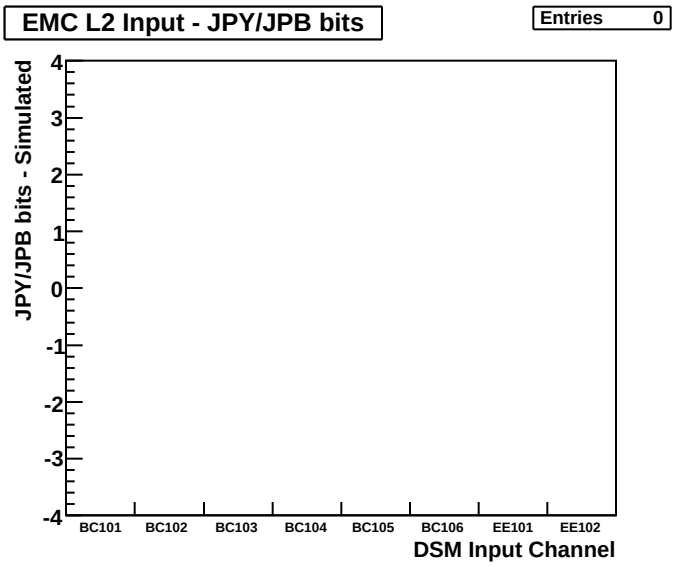

Endcap EMC L1 Input - High Tower Bits
Entries 6426972
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

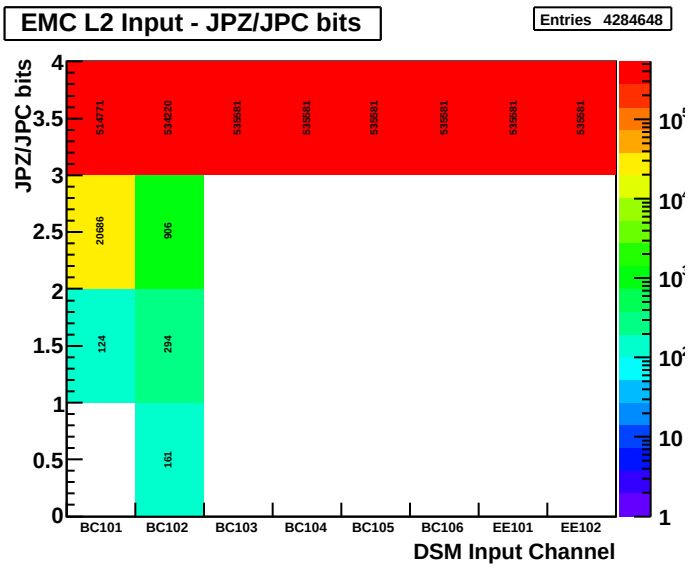

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

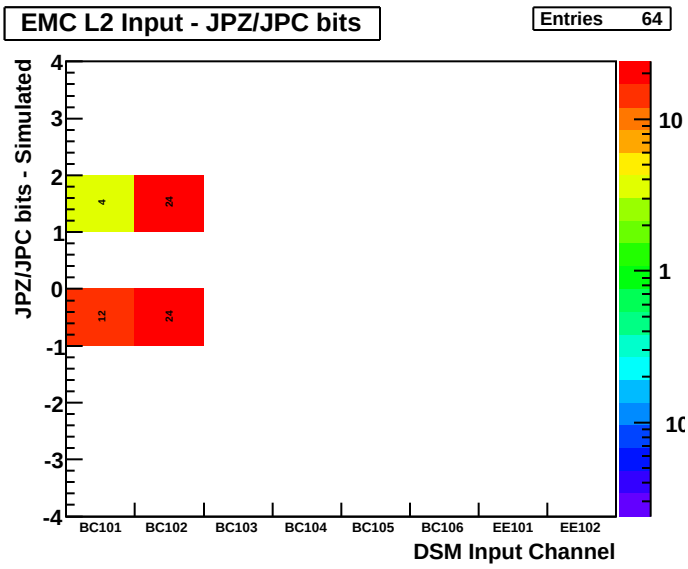

EMC L2 Input - JPX/JPA bits
Entries 4284648
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
476892 535581 535561 535581 535581 535581 535581 535581
58687 20
2

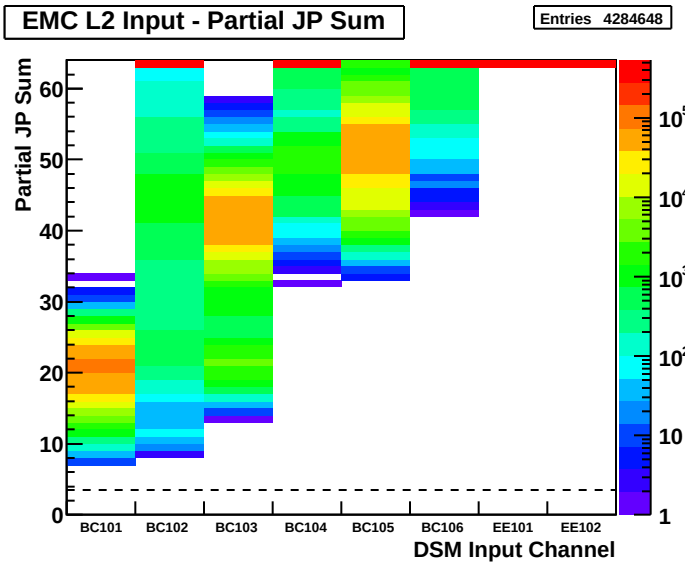

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

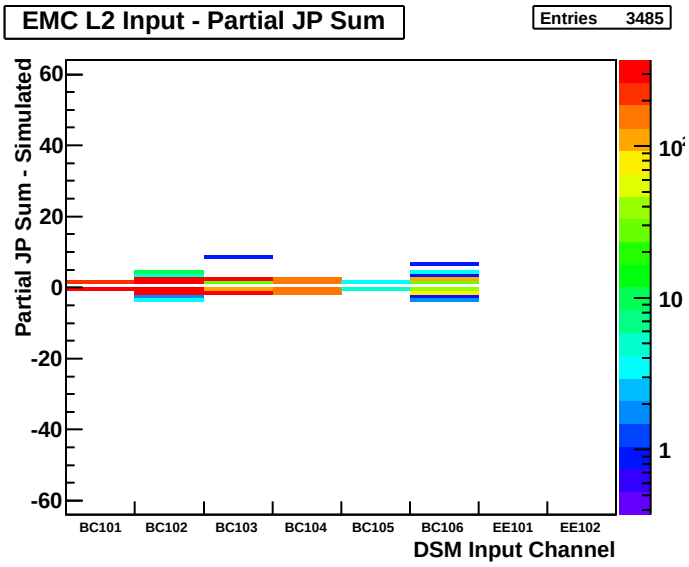

EMC L2 Input - JPY/JPB bits
Entries 4284648
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
525997 535581 535581 535581 535581 535581 535581 535581
8565
19

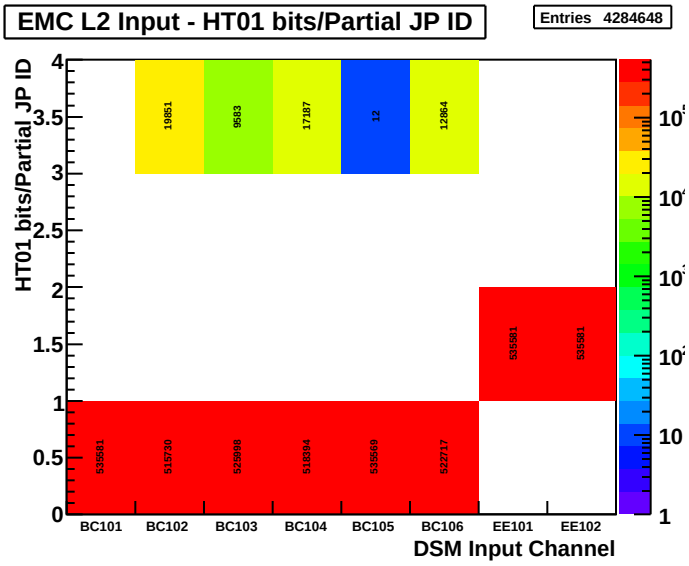

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

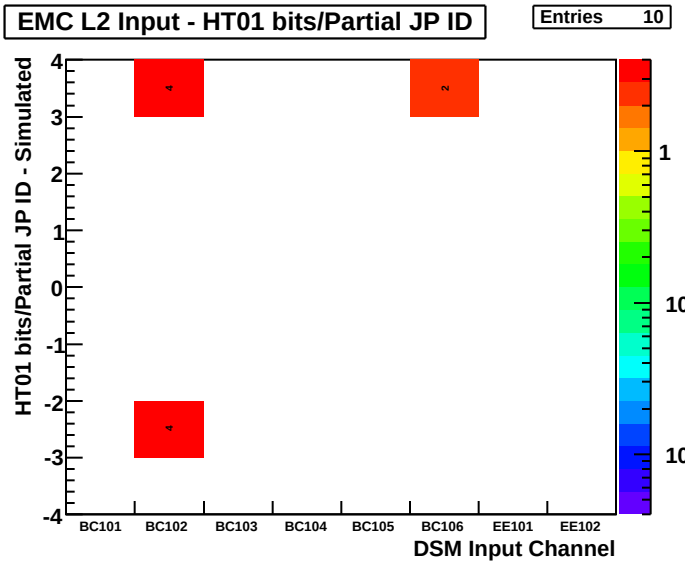

EMC L2 Input - JPZ/JPC bits
Entries 4284648
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
514771 534220 535581 535581 535581 535581 535581 535581
20686 906
124 294
161

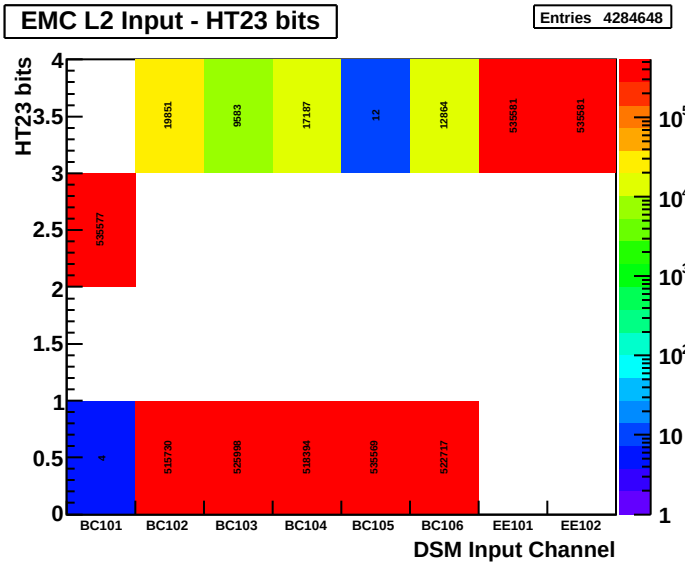

EMC L2 Input - JPZ/JPC bits
Entries 64
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4 24
12 24

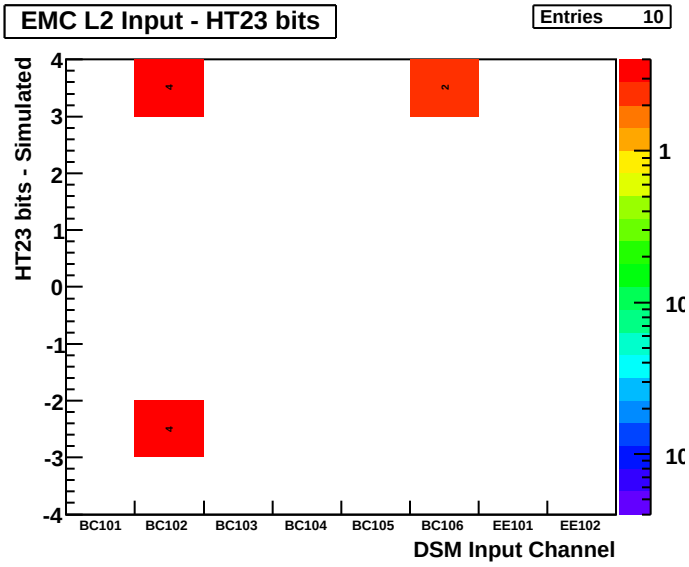

EMC L2 Input - Partial JP Sum
Entries 4284648
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

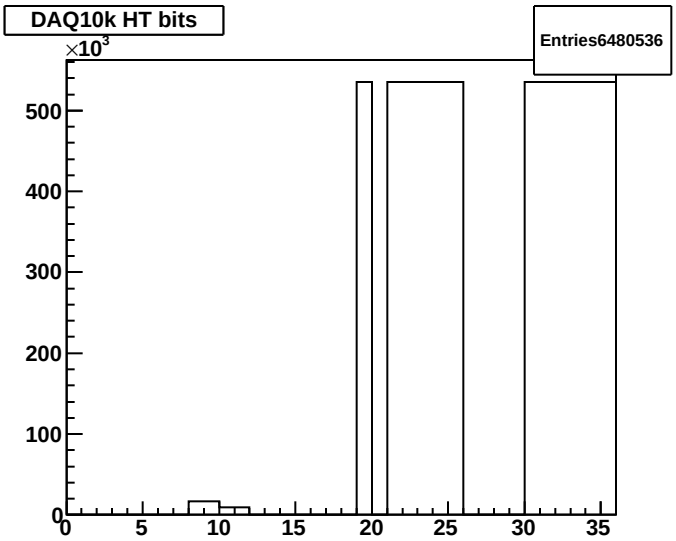

EMC L2 Input - Partial JP Sum
Entries 3485
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

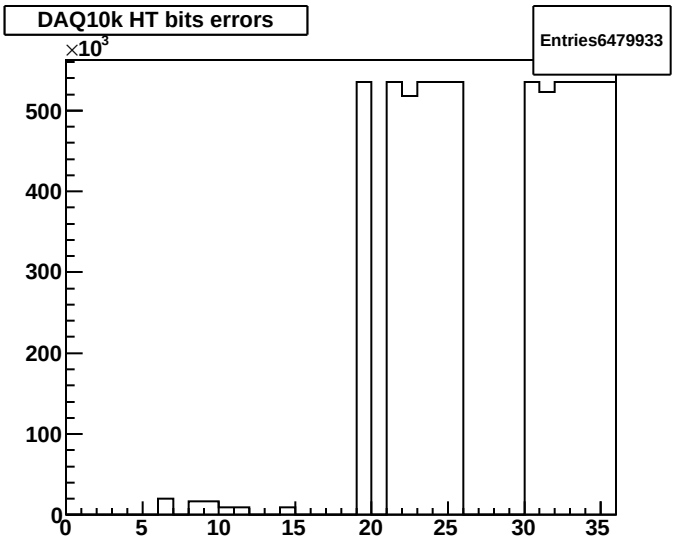

EMC L2 Input - HT01 bits/Partial JP ID
Entries 4284648
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

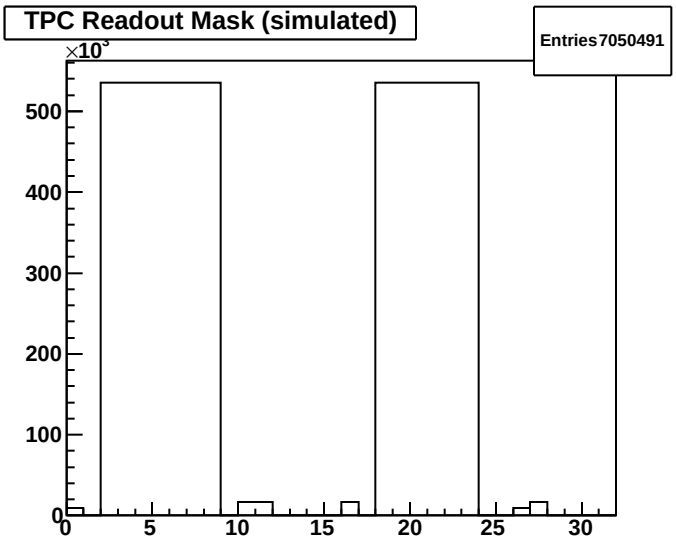

EMC L2 Input - HT01 bits/Partial JP ID
Entries 10
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

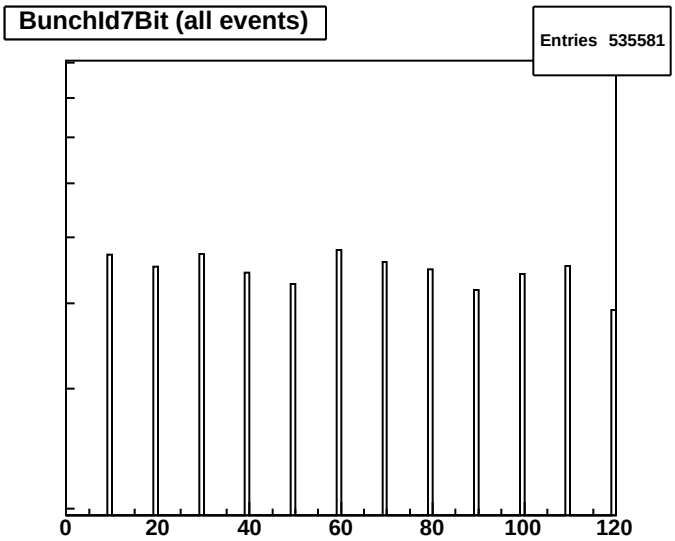

EMC L2 Input - HT23 bits
Entries 4284648
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

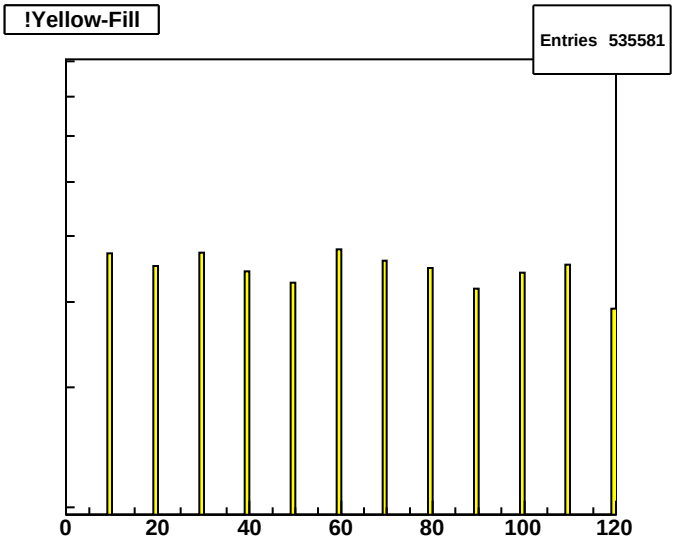

EMC L2 Input - HT23 bits
Entries 10
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

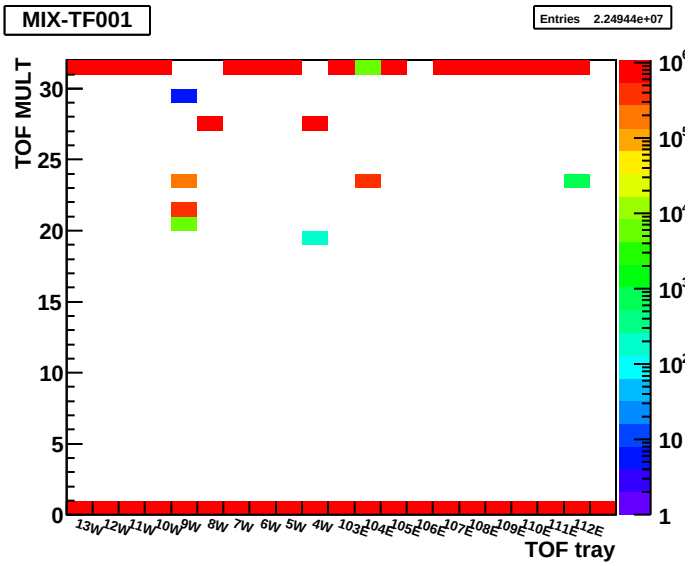

DAQ10k HT bits
Entries6480536
×10^3
500
400
300
200
100
0
0 5 10 15 20 25 30 35

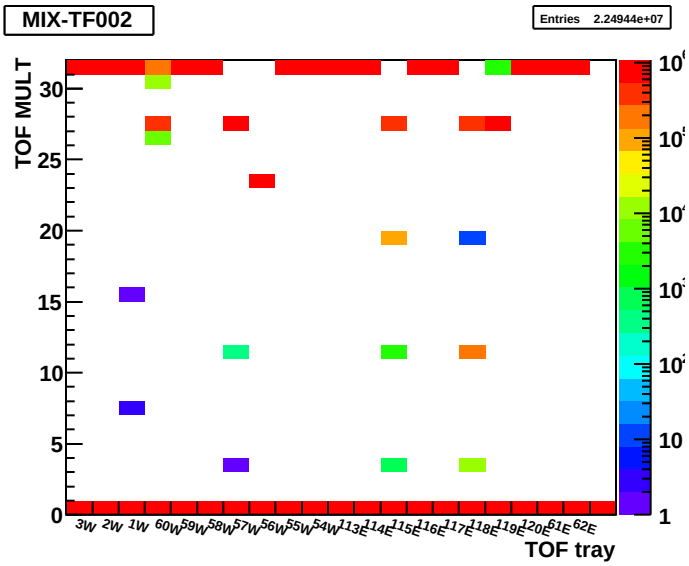

DAQ10k HT bits errors
Entries6479933
×10^3
500
400
300
200
100
0
0 5 10 15 20 25 30 35

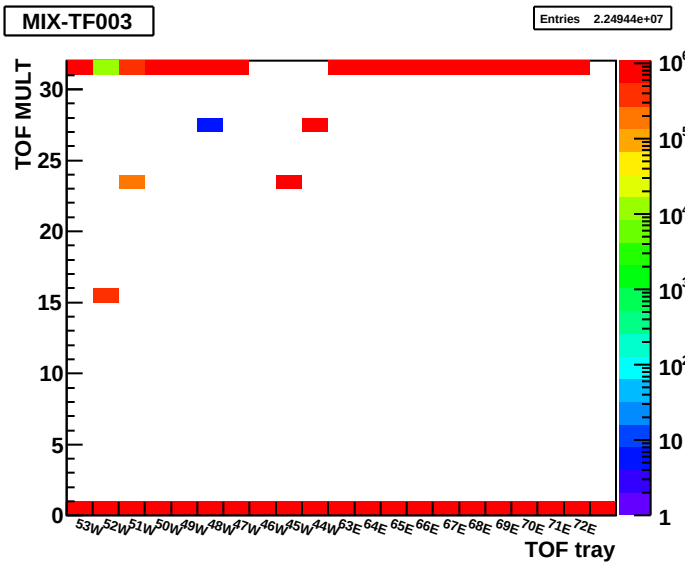

TPC Readout Mask (simulated)
Entries7050491
×10^3
500
400
300
200
100
0
0 5 10 15 20 25 30

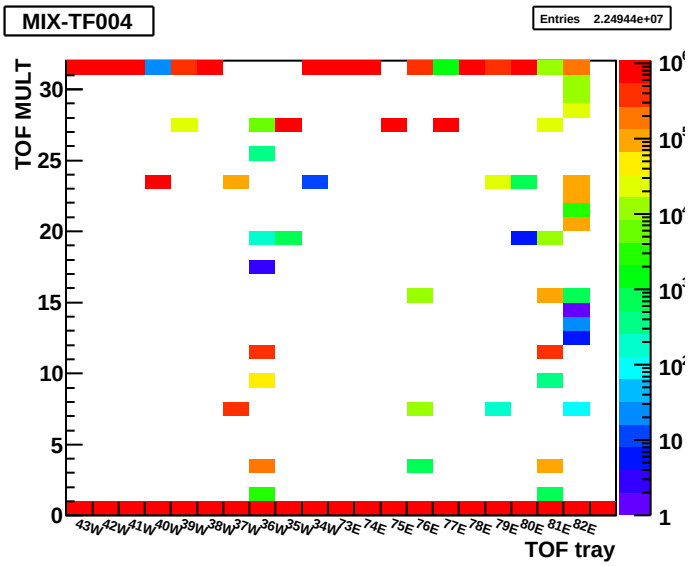

BunchId7Bit (all events)
Entries 535581
0 20 40 60 80 100 120

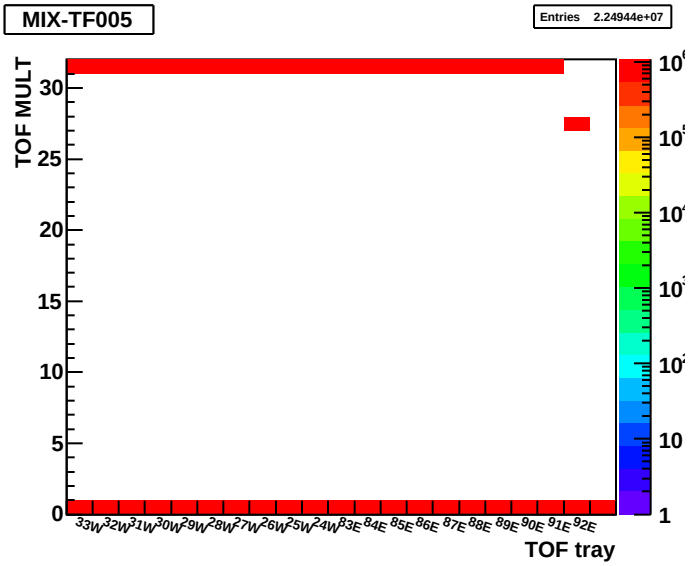

!Yellow-Fill
Entries 535581
0 20 40 60 80 100 120

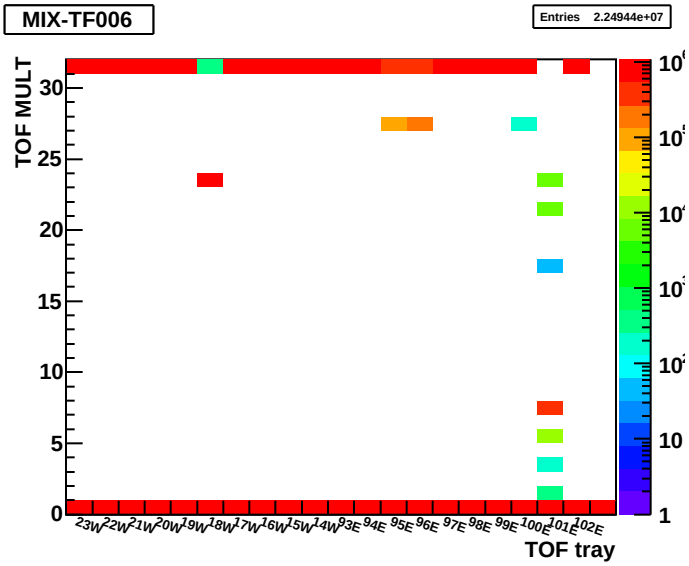

MIX-TF001
Entries 2.24944e+07
TOF MULT
TOF tray

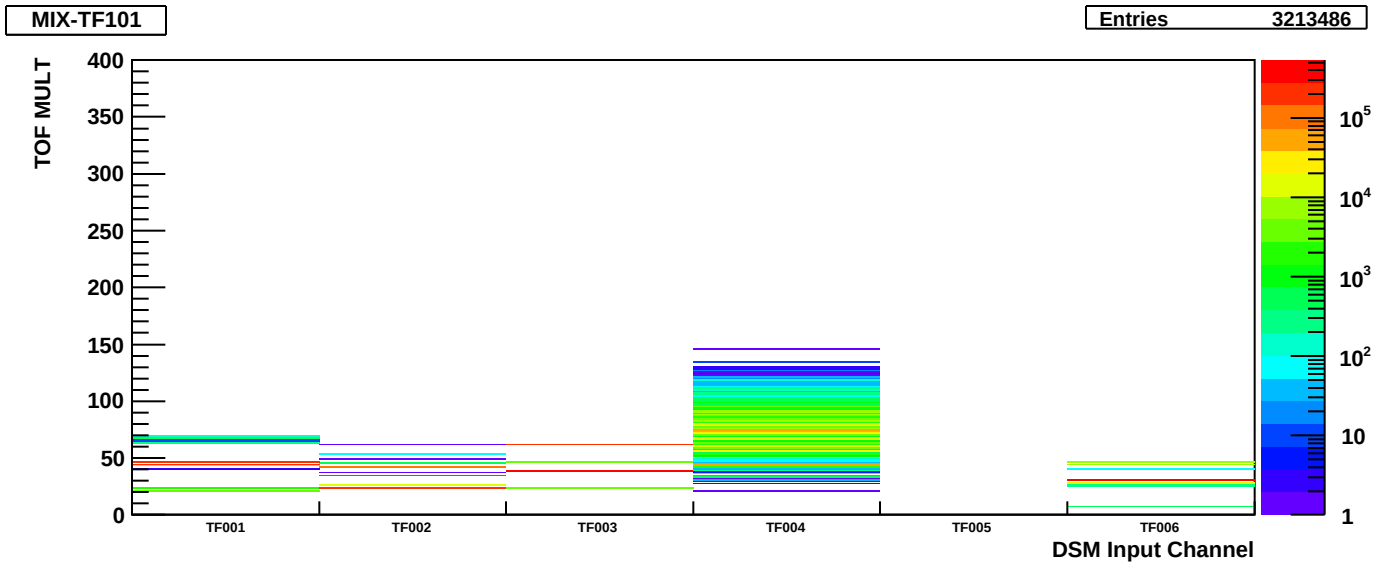

MIX-TF002
Entries 2.24944e+07
TOF MULT
TOF tray

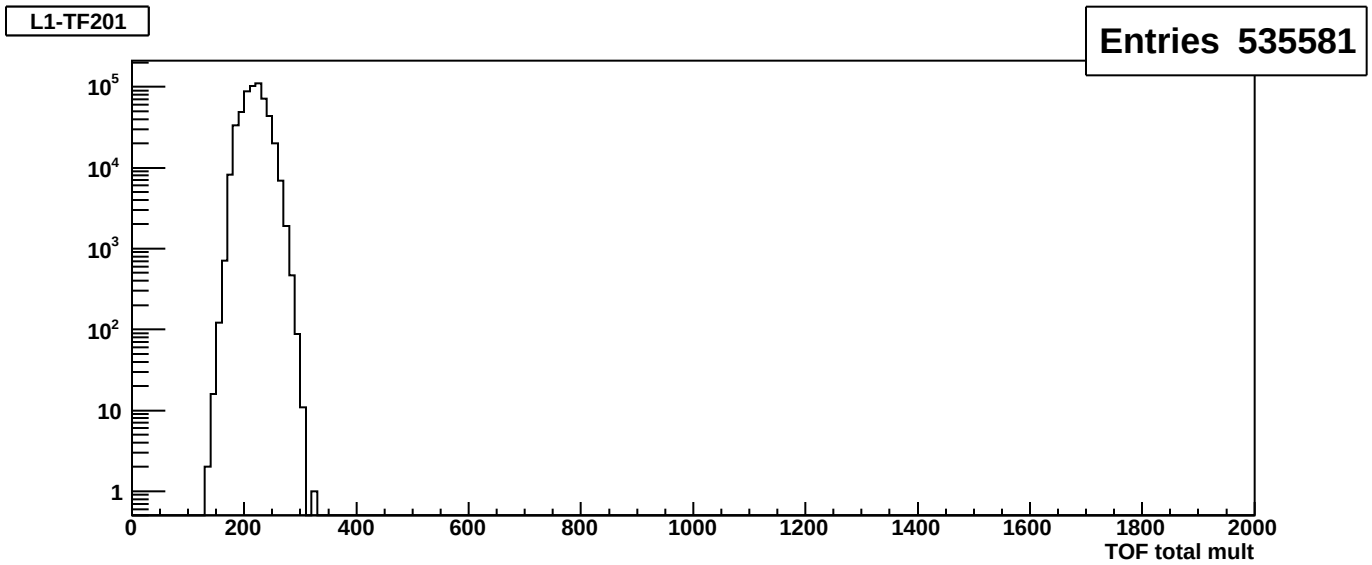

MIX-TF003
Entries 2.24944e+07
TOF MULT
TOF tray

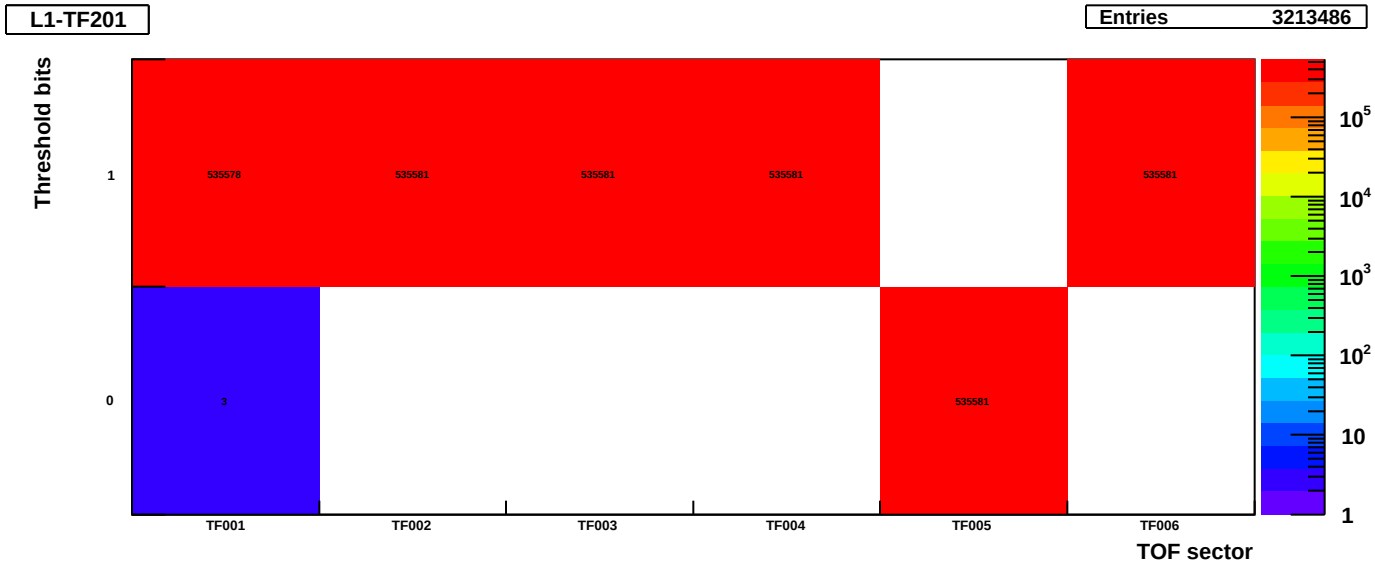

MIX-TF004
Entries 2.24944e+07
TOF MULT
TOF tray

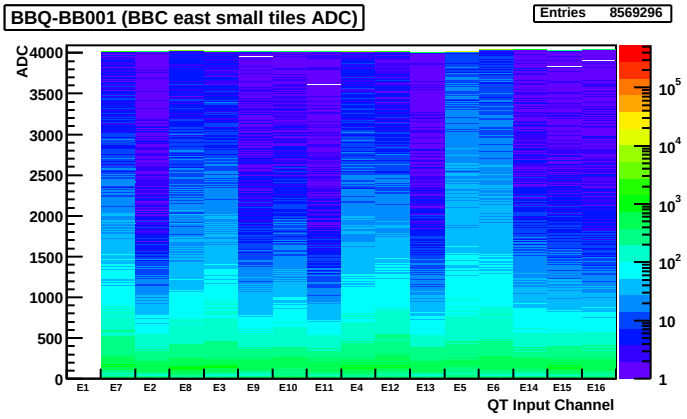

MIX-TF005
Entries 2.24944e+07
TOF MULT
TOF tray

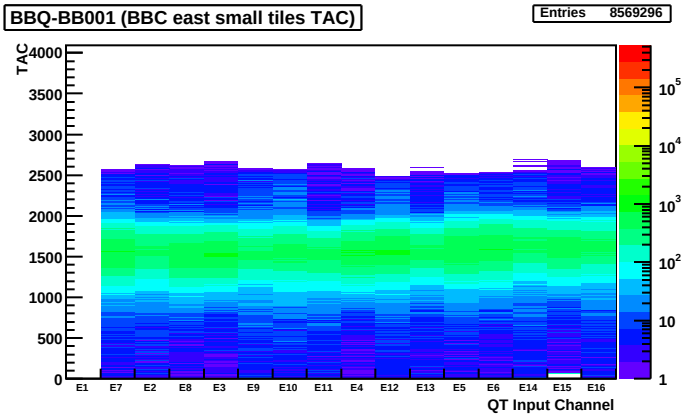

MIX-TF006
Entries 2.24944e+07
TOF MULT
TOF tray

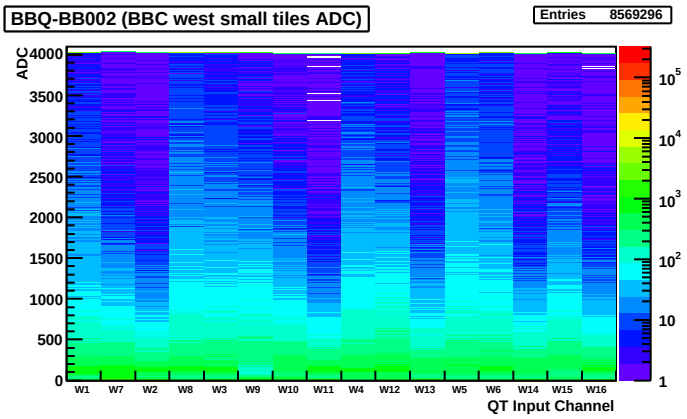

MIX-TF101
Entries 3213486
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
$10^5$
$10^4$
$10^3$
$10^2$
10
1

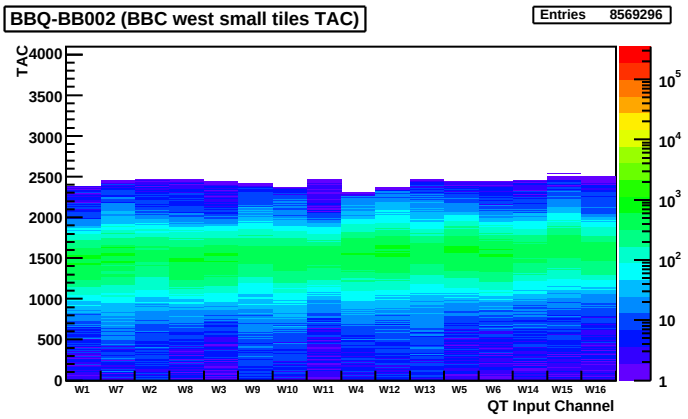

L1-TF201
Entries 535581
$10^5$
$10^4$
$10^3$
$10^2$
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

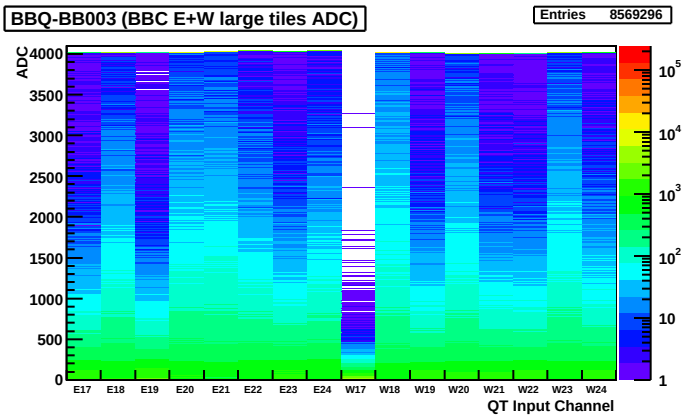

L1-TF201
Entries 3213486
Threshold bits
1
0
535578
535581
535581
535581
535581
3
535581
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
$10^5$
$10^4$
$10^3$
$10^2$
10
1

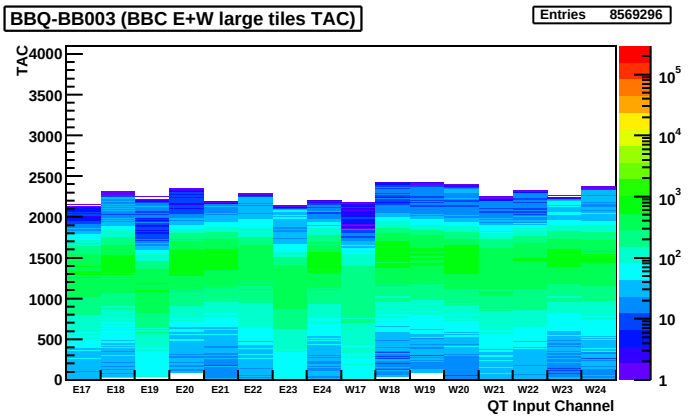

BBQ-BB001 (BBC east small tiles ADC)
Entries 8569296
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

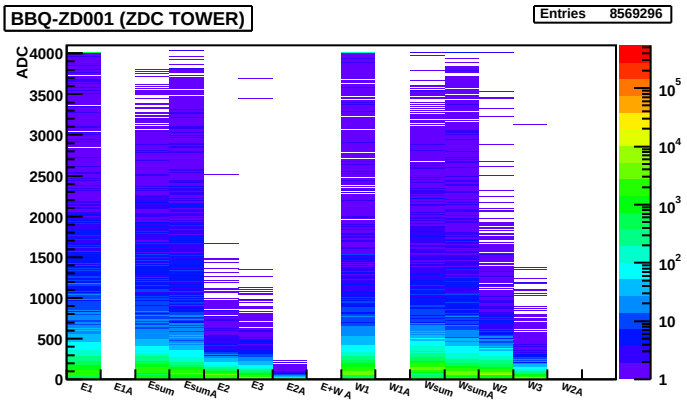

BBQ-BB001 (BBC east small tiles TAC)
Entries 8569296
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

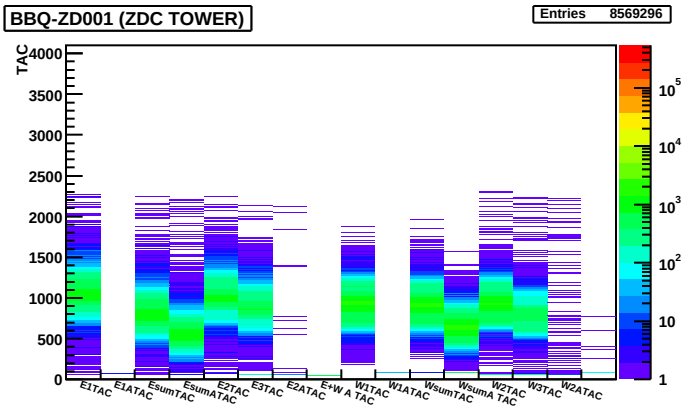

BBQ-BB002 (BBC west small tiles ADC)
Entries 8569296
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

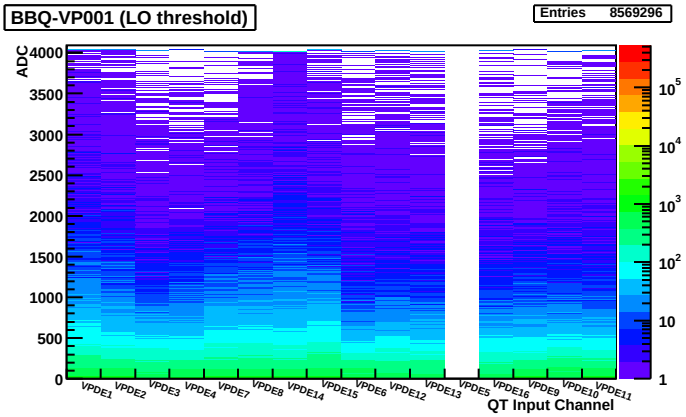

BBQ-BB002 (BBC west small tiles TAC)
Entries 8569296
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

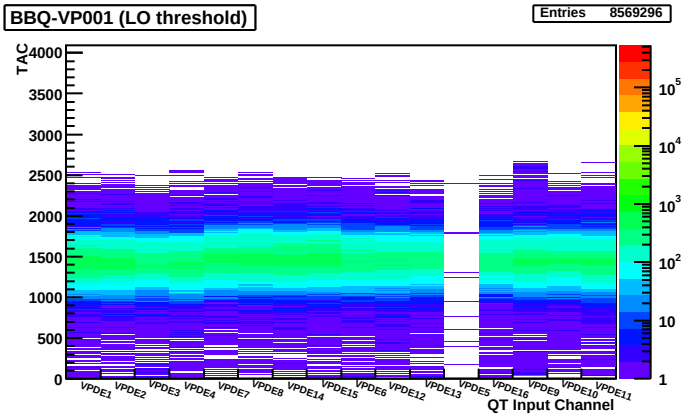

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 8569296
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

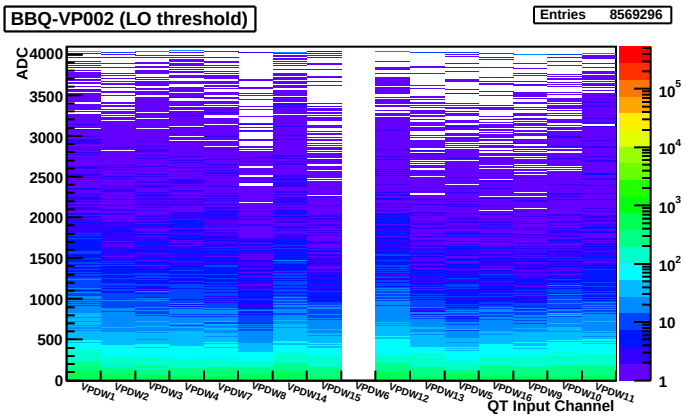

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 8569296
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

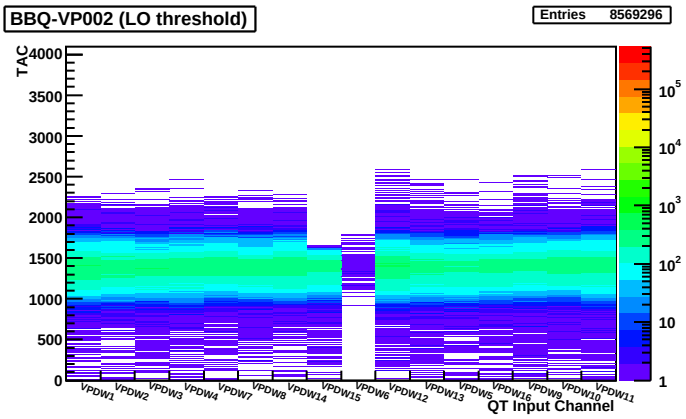

BBQ-ZD001 (ZDC TOWER)
Entries 8569296
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

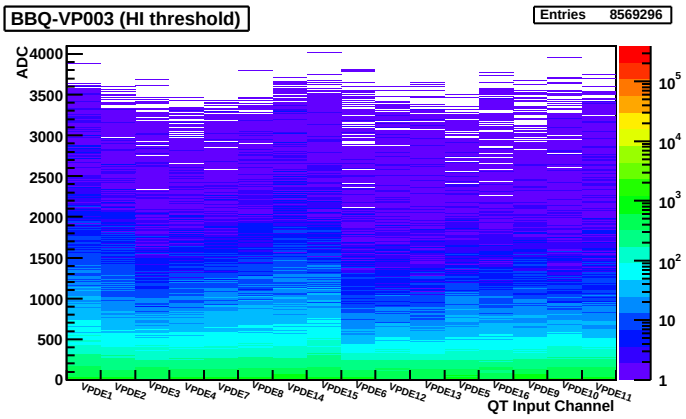

BBQ-ZD001 (ZDC TOWER)
Entries 8569296
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

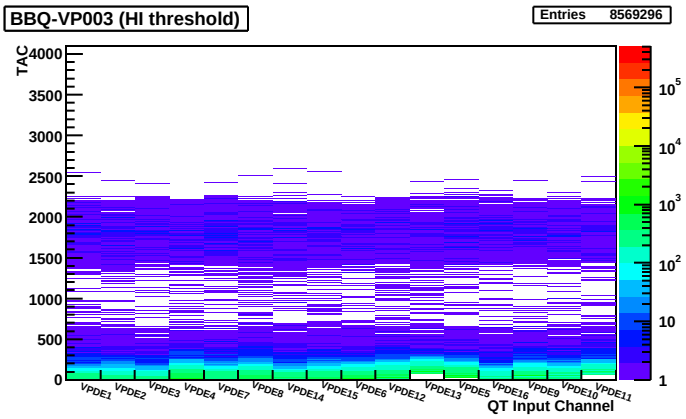

BBQ-VP001 (LO threshold)
Entries 8569296
ADC
QT Input Channel

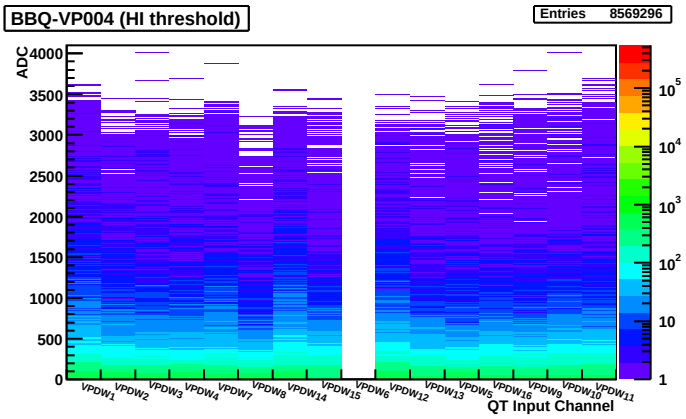

BBQ-VP001 (LO threshold)
Entries 8569296
TAC
QT Input Channel

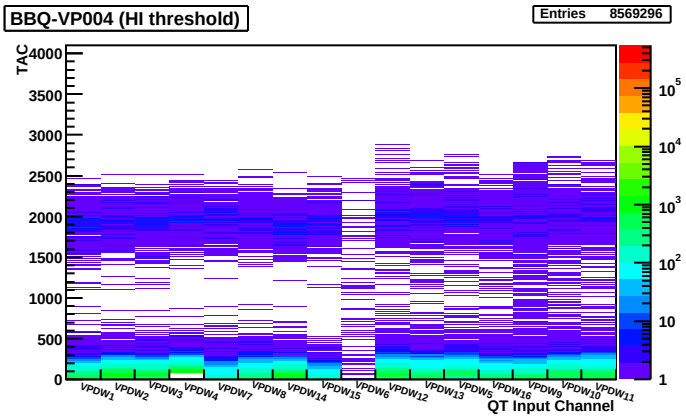

BBQ-VP002 (LO threshold)
Entries 8569296
ADC
QT Input Channel

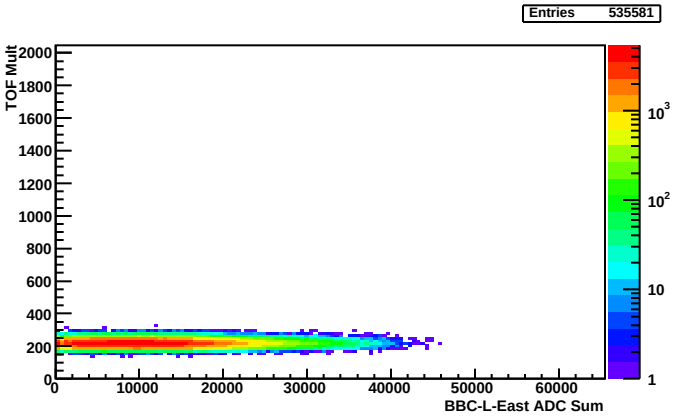

BBQ-VP002 (LO threshold)
Entries 8569296
TAC
QT Input Channel

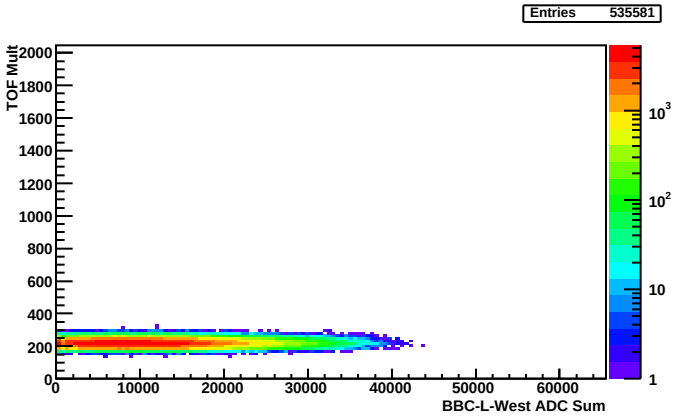

BBQ-VP003 (HI threshold)
Entries 8569296
ADC
QT Input Channel

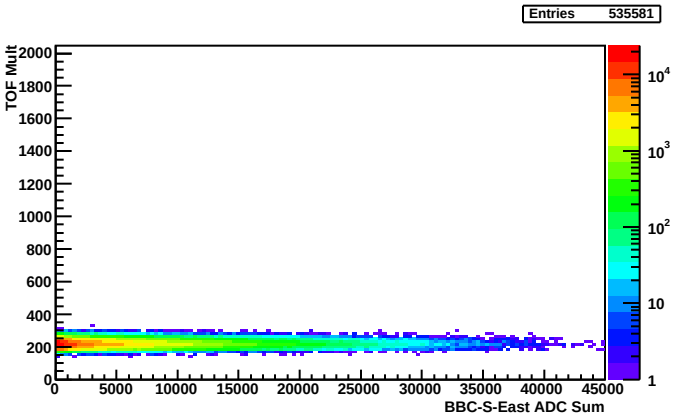

BBQ-VP003 (HI threshold)
Entries 8569296
TAC
QT Input Channel

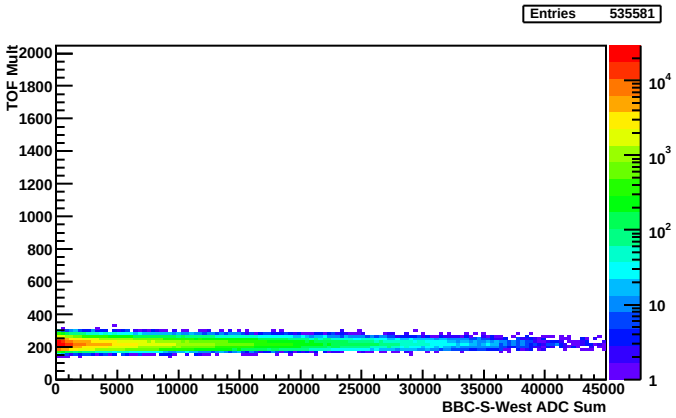

BBQ-VP004 (HI threshold)
Entries 8569296
ADC
QT Input Channel

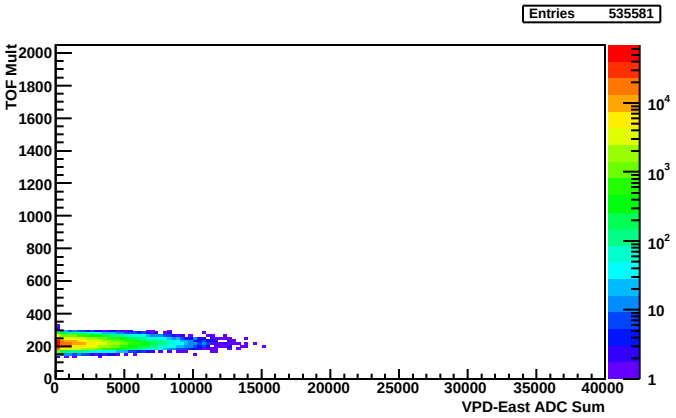

BBQ-VP004 (HI threshold)
Entries 8569296
TAC
QT Input Channel

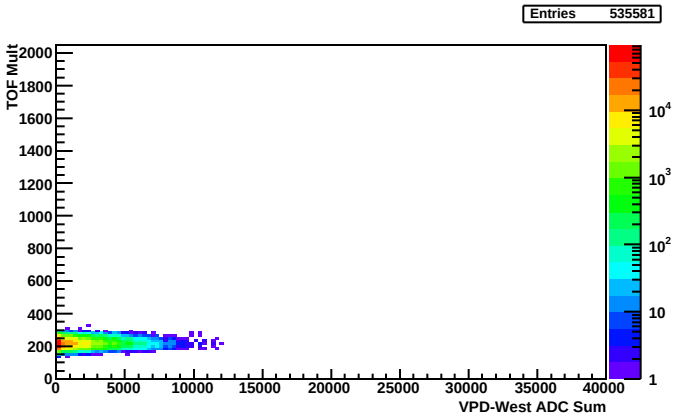

Entries 535581
TOF Mult
BBC-L-East ADC Sum

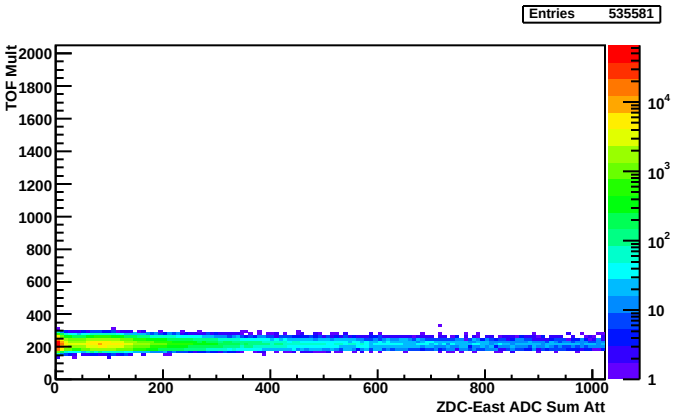

Entries 535581
TOF Mult
BBC-L-West ADC Sum

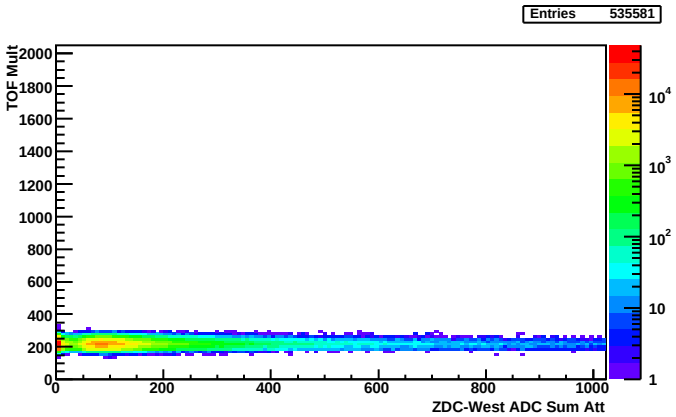

Entries 535581
TOF Mult
BBC-S-East ADC Sum

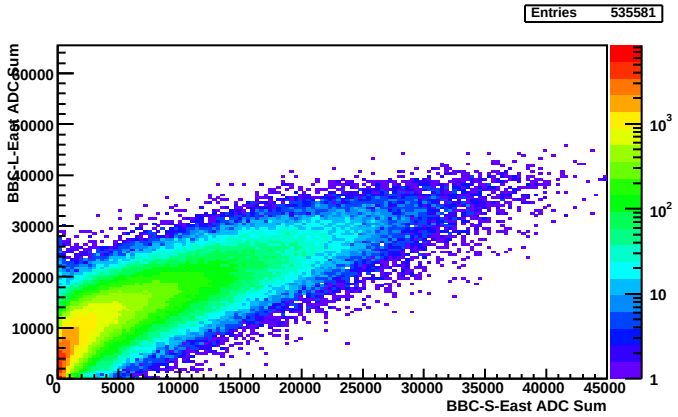

Entries 535581
TOF Mult
BBC-S-West ADC Sum

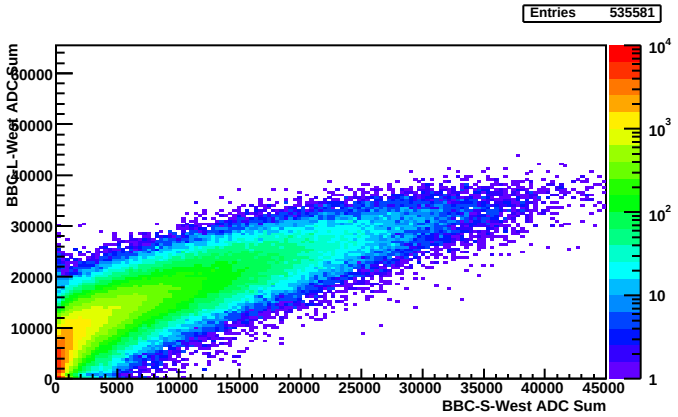

Entries 535581
TOF Mult
VPD-East ADC Sum

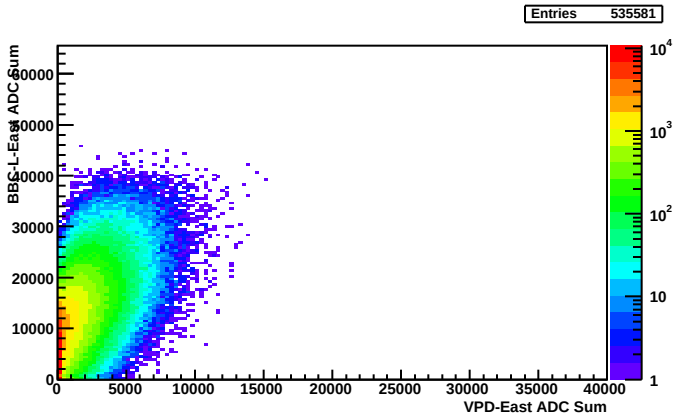

Entries 535581
TOF Mult
VPD-West ADC Sum

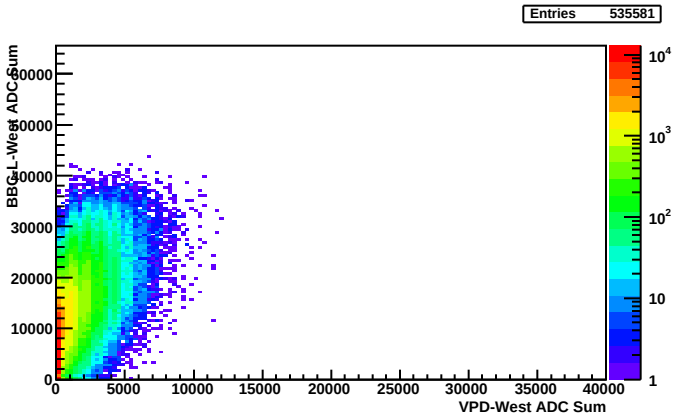

Entries 535581
TOF Mult
ZDC-East ADC Sum Att

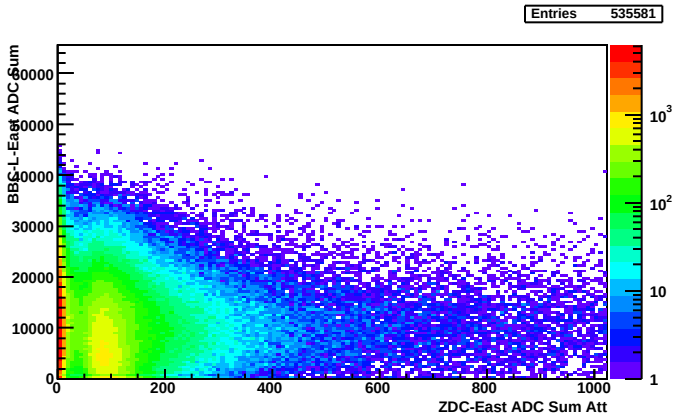

Entries 535581
TOF Mult
ZDC-West ADC Sum Att

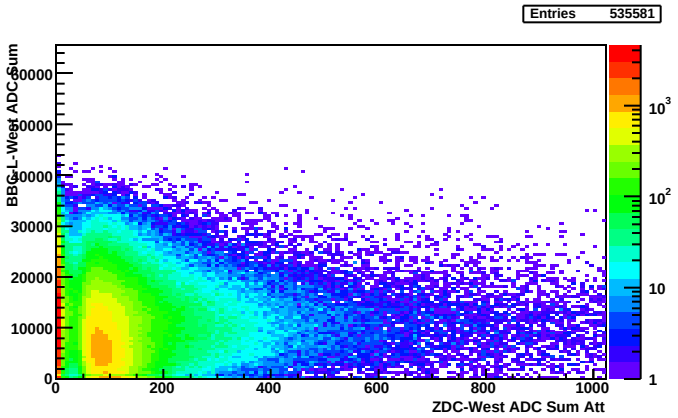

Entries 535581
BBC-L-East ADC Sum
BBC-S-East ADC Sum

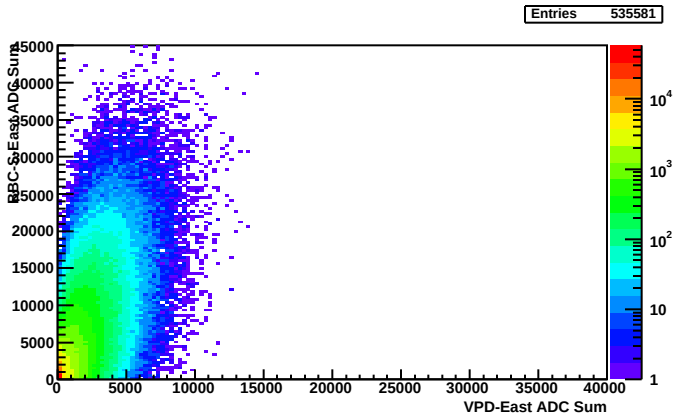

Entries 535581
BBC-L-West ADC Sum
BBC-S-West ADC Sum

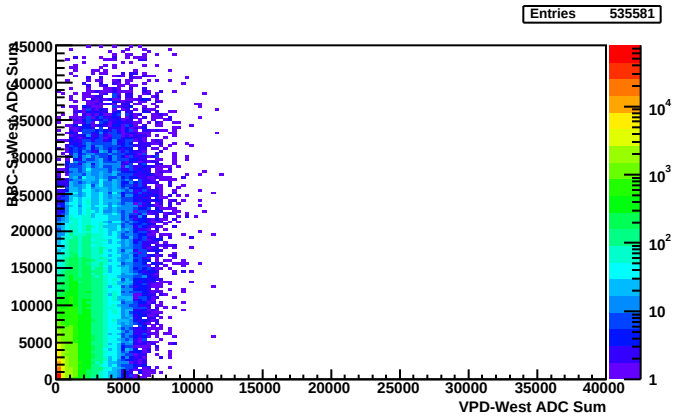

Entries 535581
BBC-L-East ADC Sum
VPD-East ADC Sum

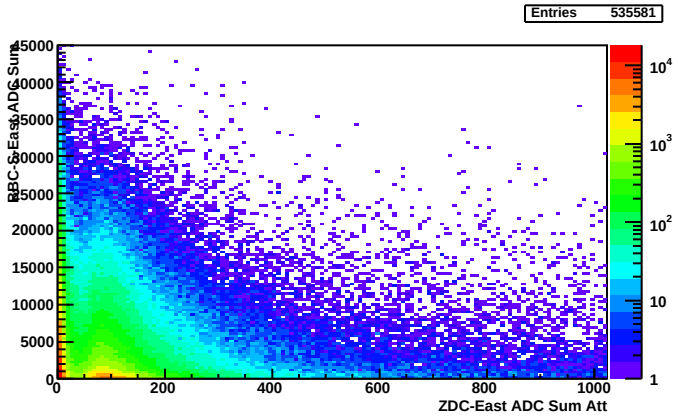

Entries 535581
BBC-L-West ADC Sum
VPD-West ADC Sum

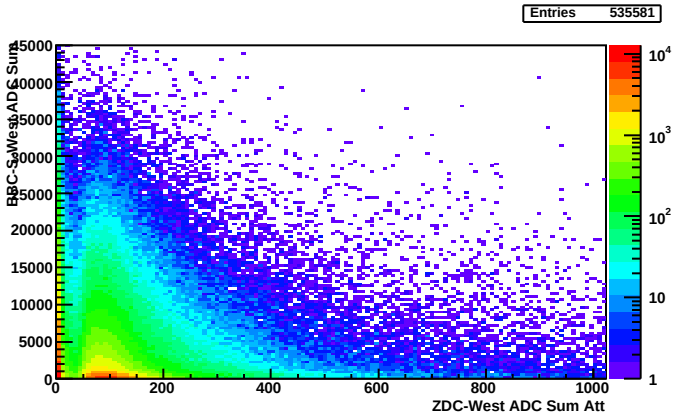

Entries 535581
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

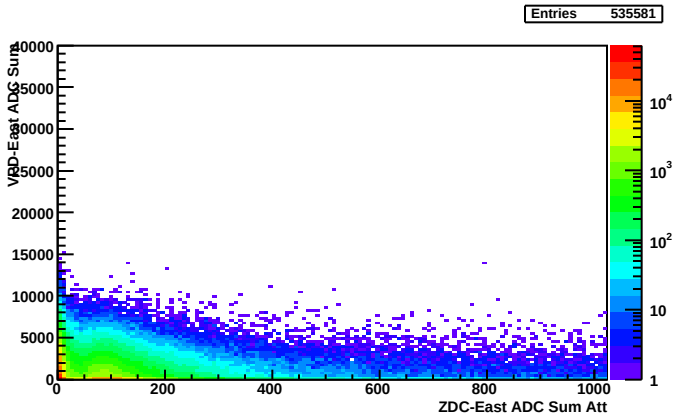

Entries 535581
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

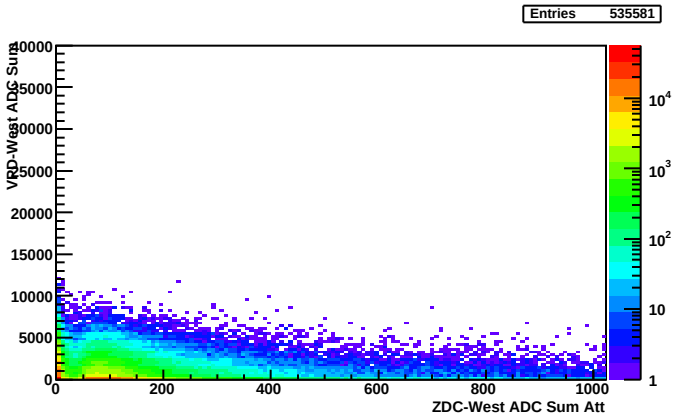

Entries 535581
BBC-S-East ADC Sum
VPD-East ADC Sum

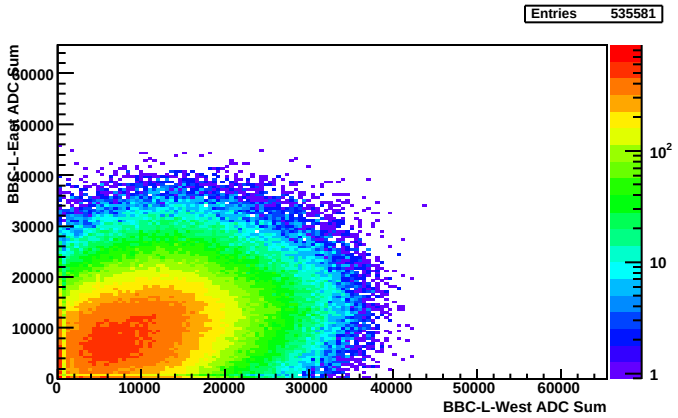

Entries 535581
BBC-S-West ADC Sum
VPD-West ADC Sum

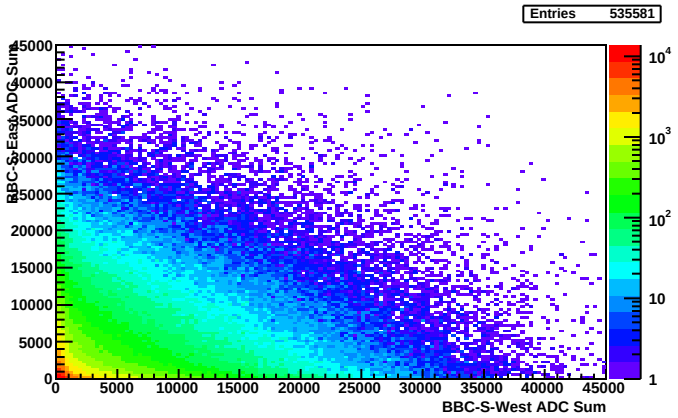

Entries 535581
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

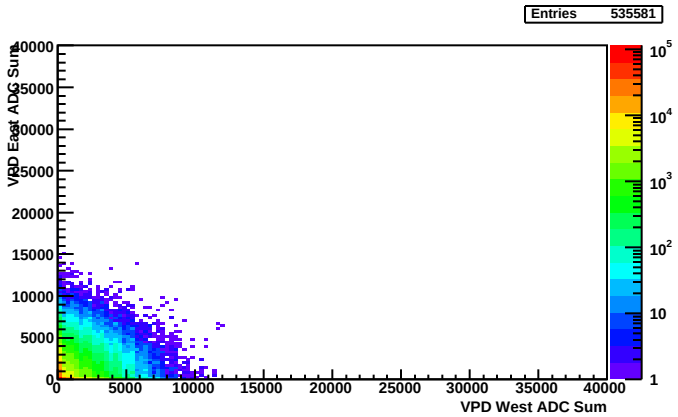

Entries 535581
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

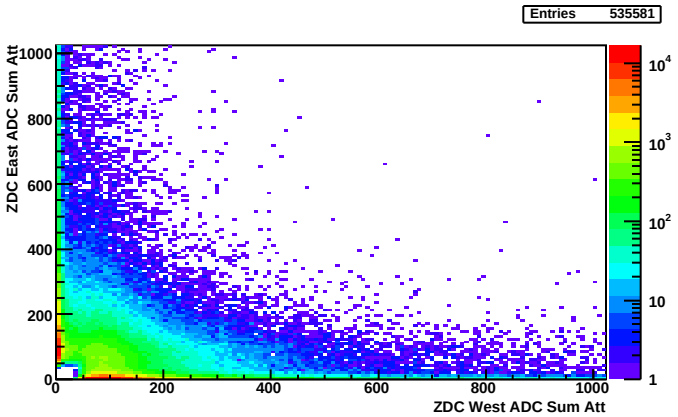

Entries 535581
VPD-East ADC Sum
ZDC-East ADC Sum Att

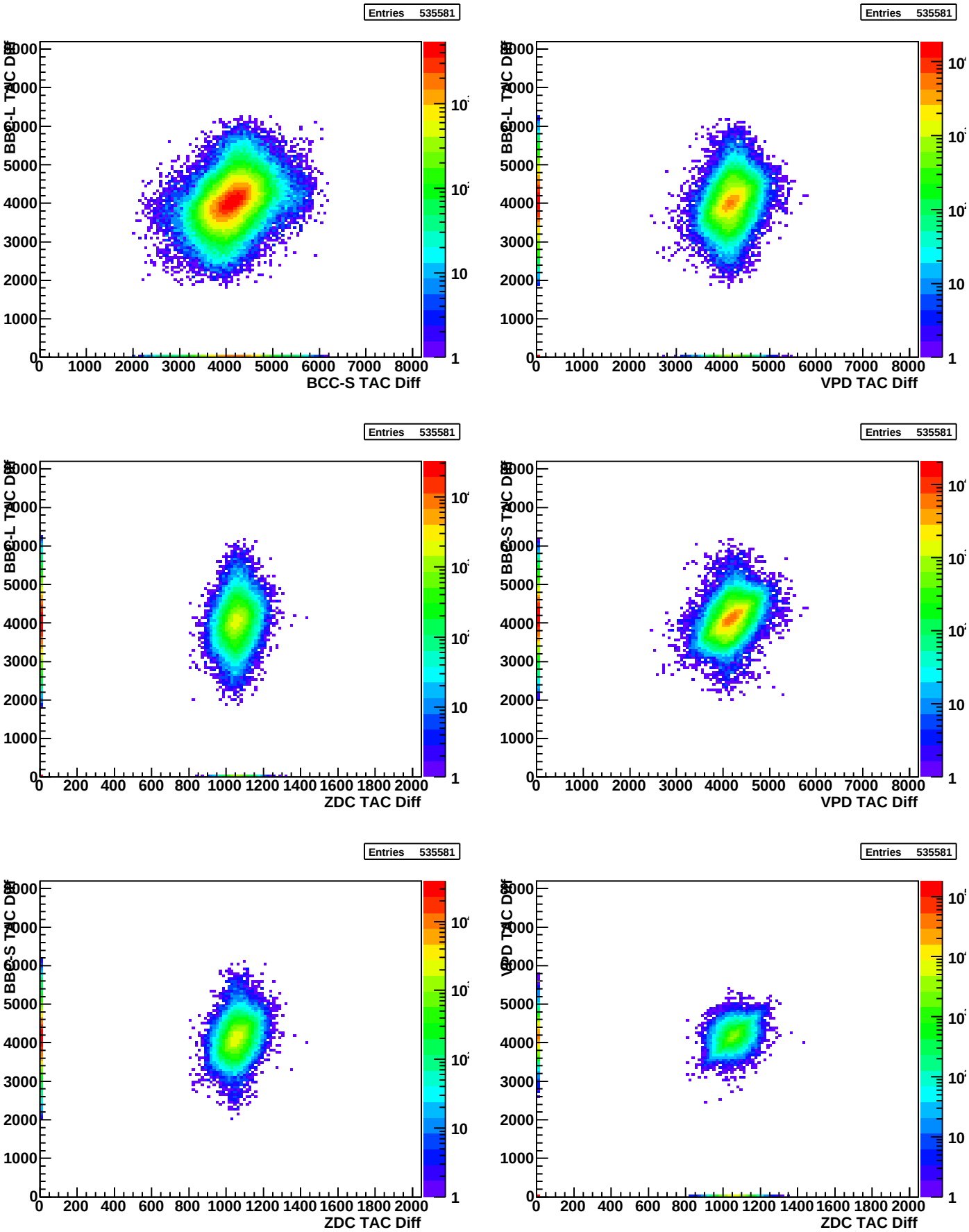

Entries 535581
VPD-West ADC Sum
ZDC-West ADC Sum Att

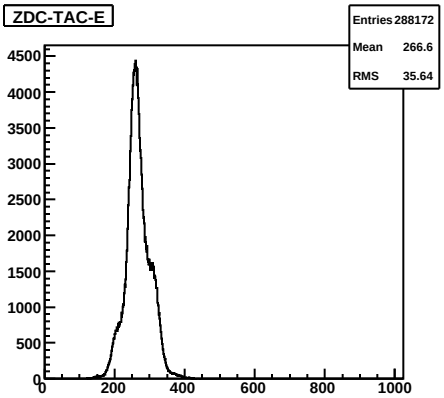

Entries 535581
BBC-L-East ADC Sum
BBC-L-West ADC Sum

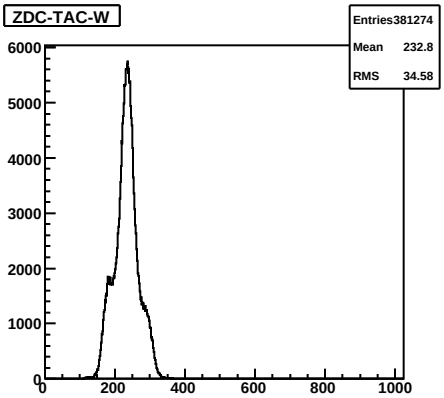

Entries 535581
BBC-S-East ADC Sum
BBC-S-West ADC Sum

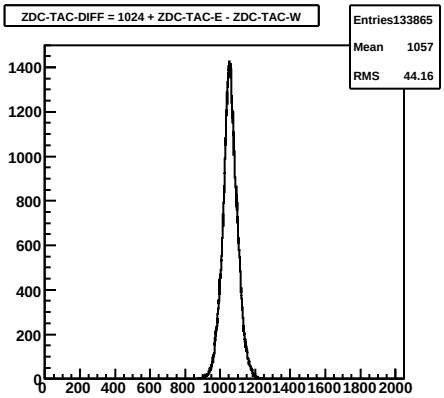

Entries 535581
VPD East ADC Sum
VPD West ADC Sum

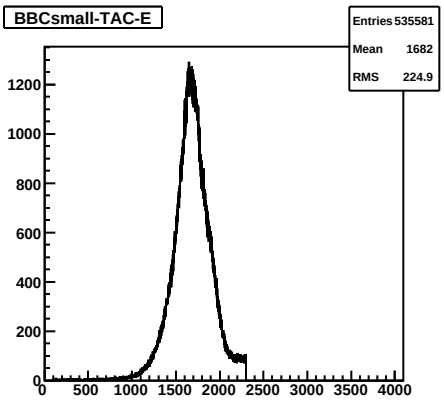

Entries 535581
ZDC East ADC Sum Att
ZDC West ADC Sum Att

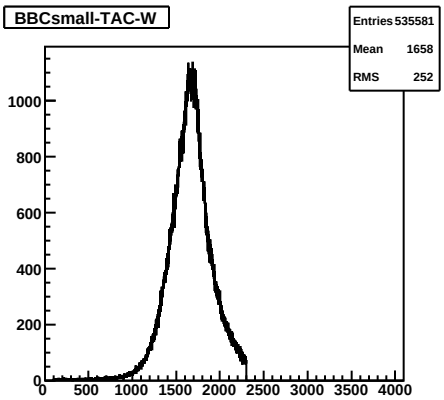

Entries 535581
BBC-L TAC Diff
BCC-S TAC Diff
Entries 535581
BBC-L TAC Diff
VPD TAC Diff
Entries 535581
BBC-L TAC Diff
ZDC TAC Diff
Entries 535581
BBC-S TAC Diff
VPD TAC Diff
Entries 535581
BBC-S TAC Diff
ZDC TAC Diff
Entries 535581
VPD TAC Diff
ZDC TAC Diff

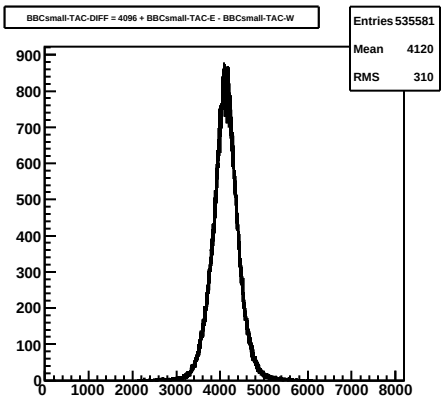

ZDC-TAC-E
Entries 288172
Mean 266.6
RMS 35.64

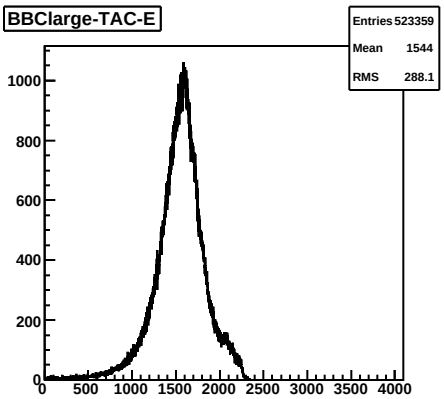

ZDC-TAC-W
Entries 381274
Mean 232.8
RMS 34.58

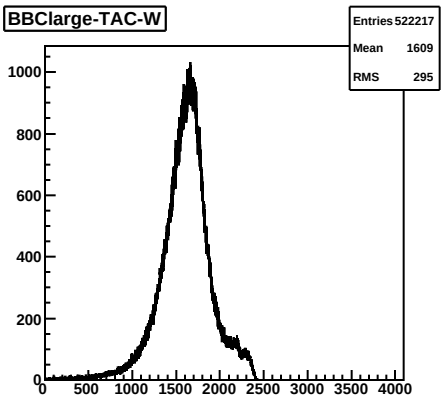

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 133865
Mean 1057
RMS 44.16

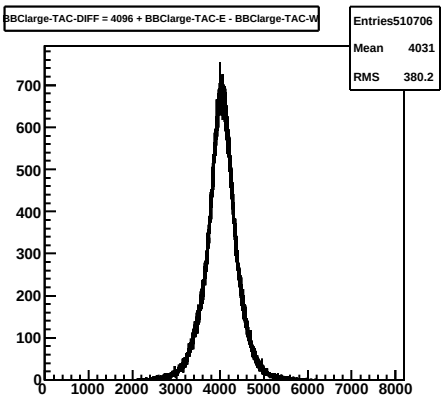

BBCsmall-TAC-E
Entries 535581
Mean 1682
RMS 224.9

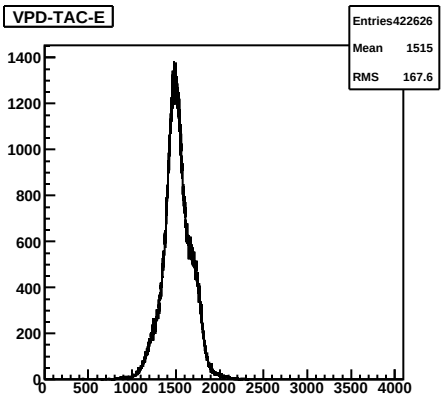

BBCsmall-TAC-W
Entries 535581
Mean 1658
RMS 252

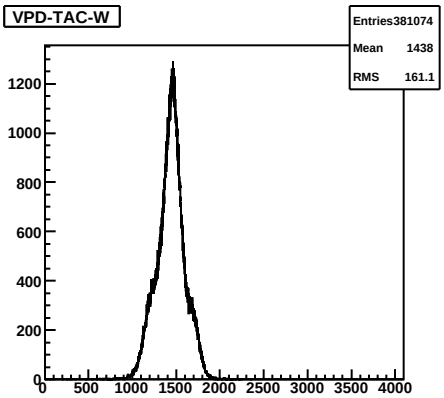

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 535581
Mean 4120
RMS 310

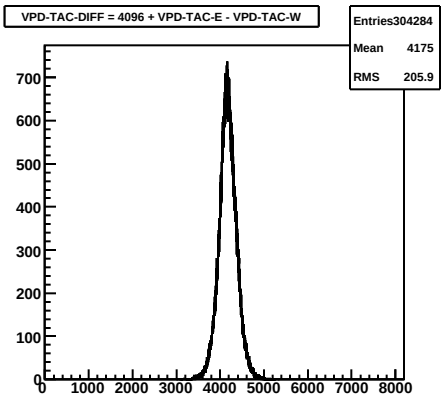

BBClarge-TAC-E
Entries 523359
Mean 1544
RMS 288.1

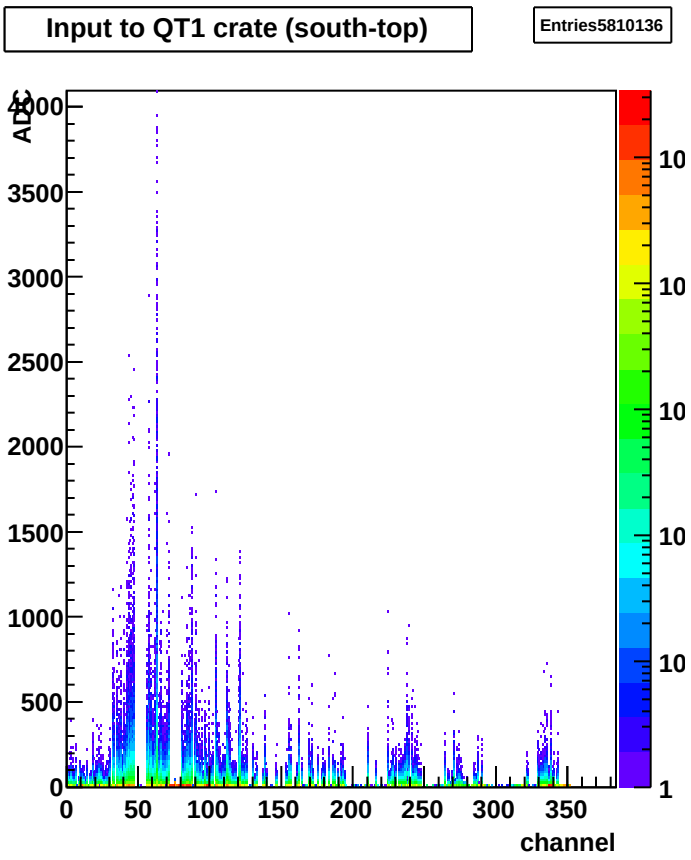

BBClarge-TAC-W
Entries 522217
Mean 1609
RMS 295

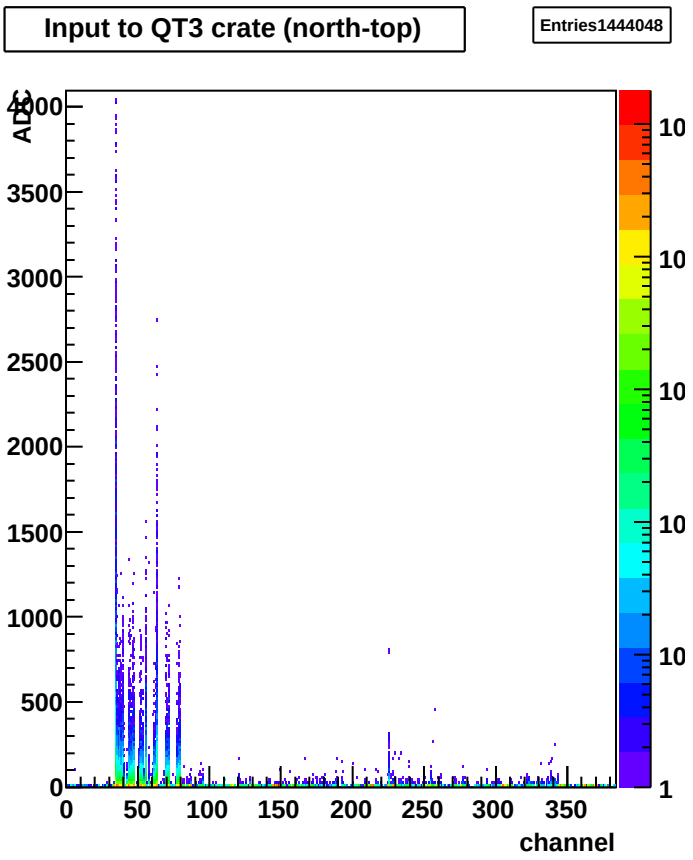

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 510706
Mean 4031
RMS 380.2

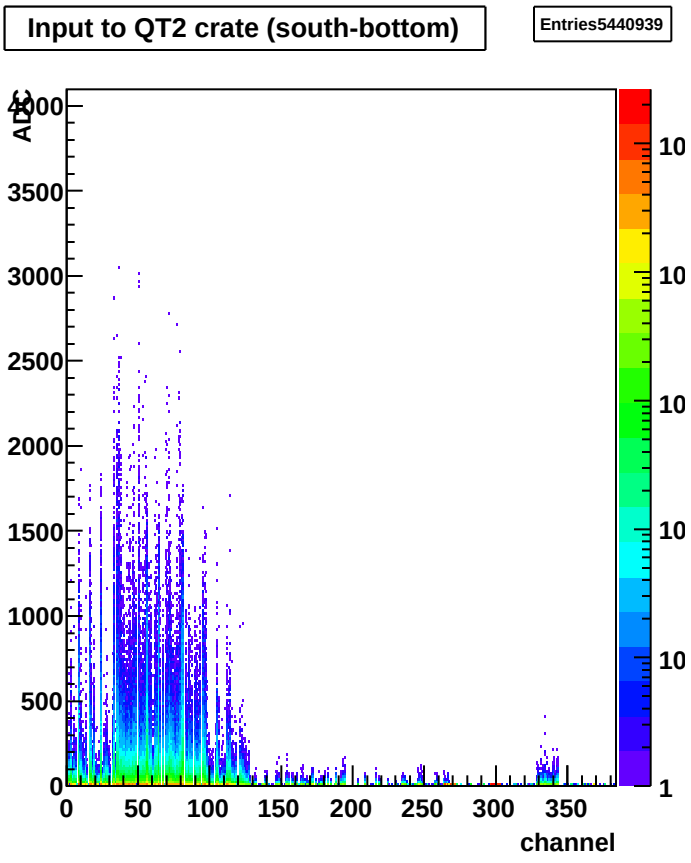

VPD-TAC-E
Entries 422626
Mean 1515
RMS 167.6

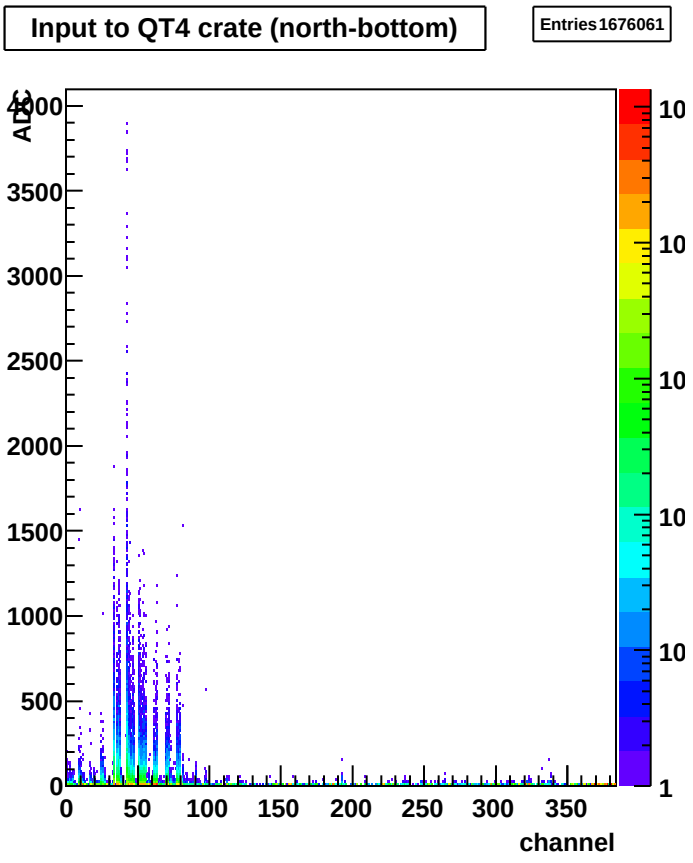

VPD-TAC-W
Entries 381074
Mean 1438
RMS 161.1

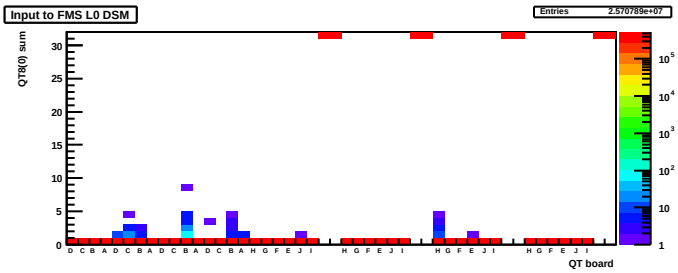

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 304284
Mean 4175
RMS 205.9

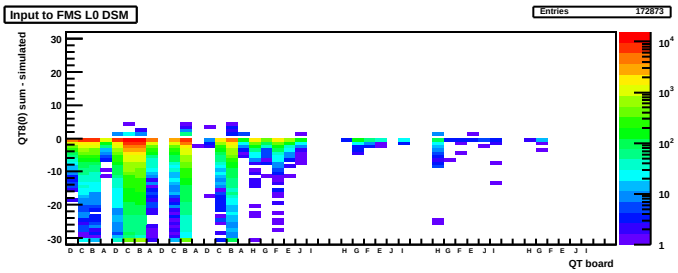

Input to QT1 crate (south-top)
Entries5810136
ADC
channel

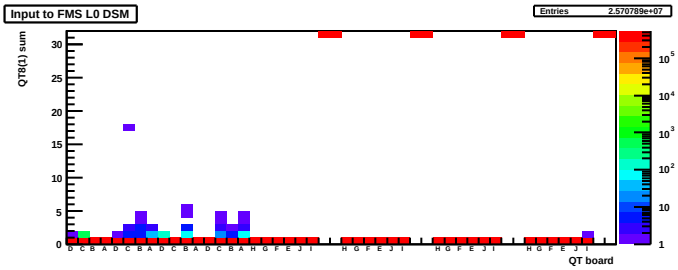

Input to QT3 crate (north-top)
Entries1444048
ADC
channel

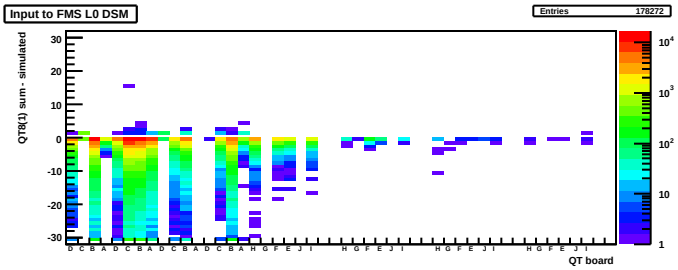

Input to QT2 crate (south-bottom)
Entries5440939
ADC
channel

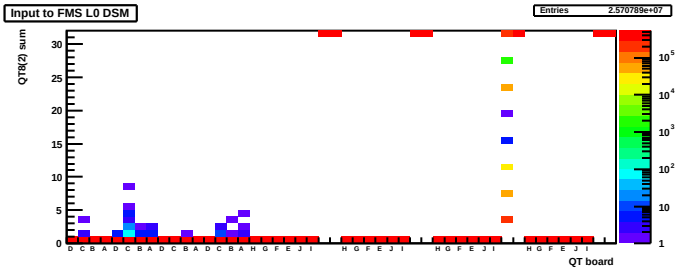

Input to QT4 crate (north-bottom)
Entries1676061
ADC
channel

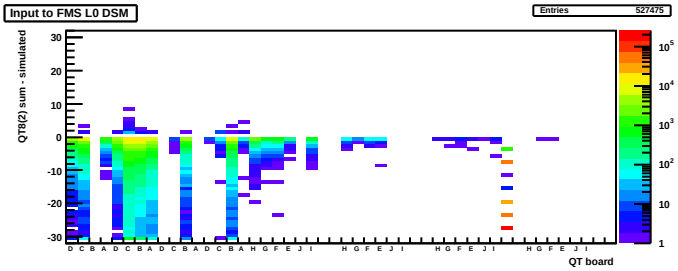

Input to FMS L0 DSM
Entries 2.570789e+07
QT8(0) sum
QT board

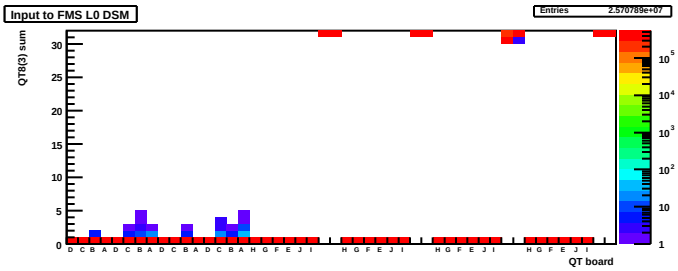

Input to FMS L0 DSM
Entries 172873
QT8(0) sum - simulated
QT board

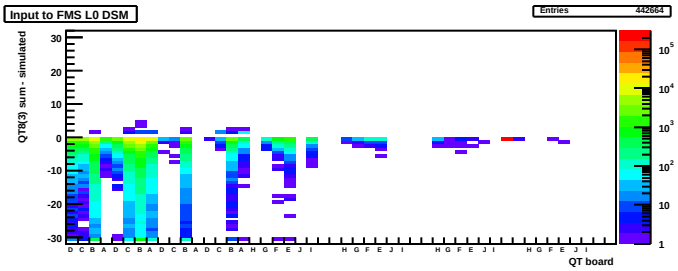

Input to FMS L0 DSM
Entries 2.570789e+07
QT8(1) sum
QT board

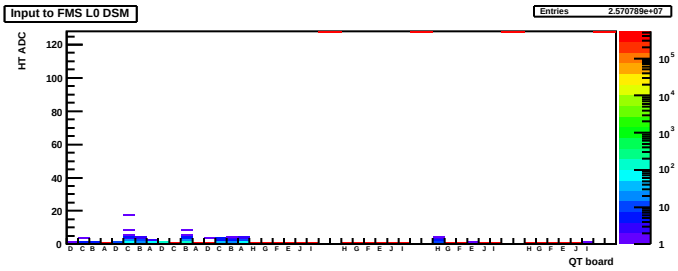

Input to FMS L0 DSM
Entries 178272
QT8(1) sum - simulated
QT board

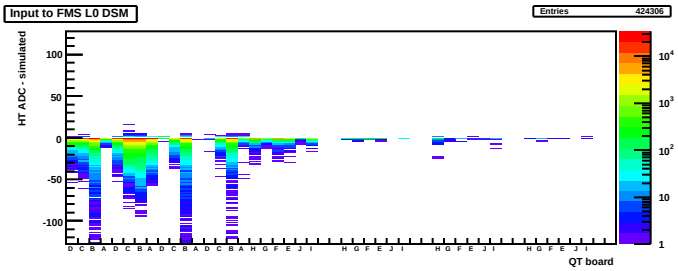

Input to FMS L0 DSM
Entries 2.570789e+07
QT8(2) sum
QT board

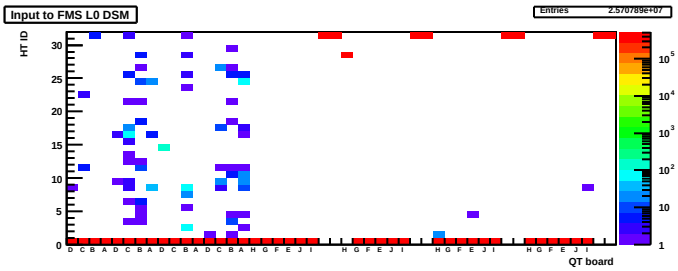

Input to FMS L0 DSM
Entries 527475
QT8(2) sum - simulated
QT board

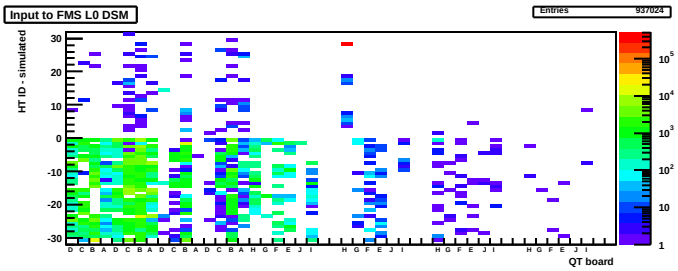

Input to FMS L0 DSM
Entries 2.570789e+07
QT8(3) sum
QT board

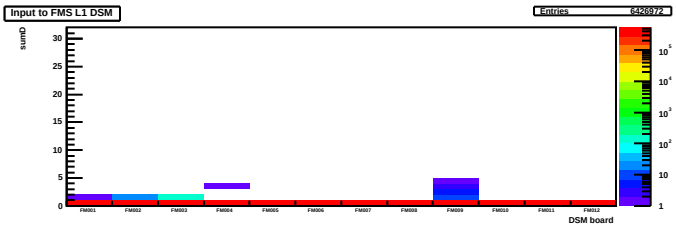

Input to FMS L0 DSM
Entries 442664
QT8(3) sum - simulated
QT board

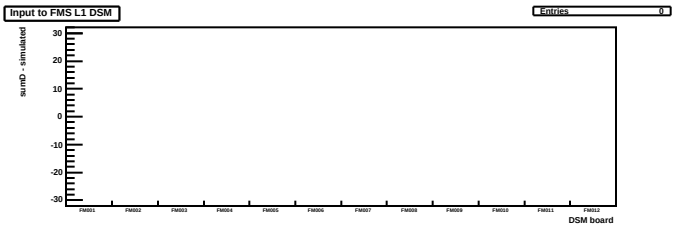

Input to FMS L0 DSM
Entries 2.570789e+07
HT ADC
QT board

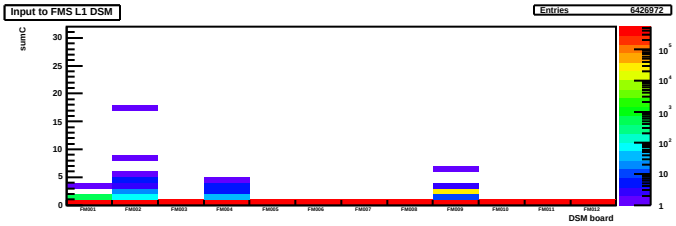

Input to FMS L0 DSM
Entries 424306
HT ADC - simulated
QT board

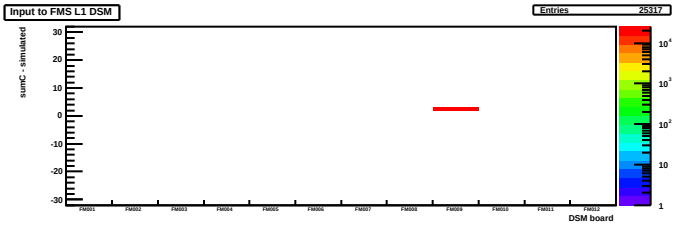

Input to FMS L0 DSM
Entries 2.570789e+07
HT ID
QT board

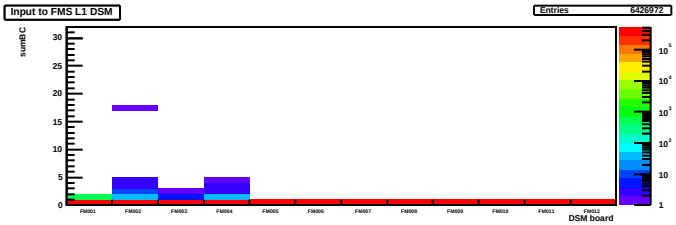

Input to FMS L0 DSM
Entries 937024
HT ID - simulated
QT board

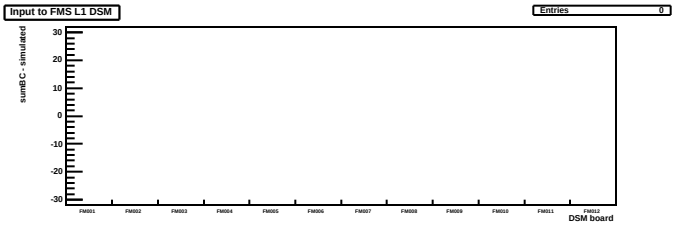

Input to FMS L1 DSM
Entries 6426972
sumD
DSM board

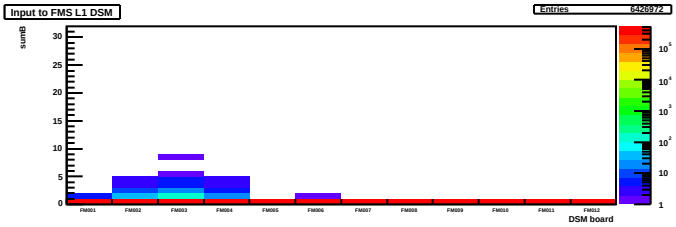

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

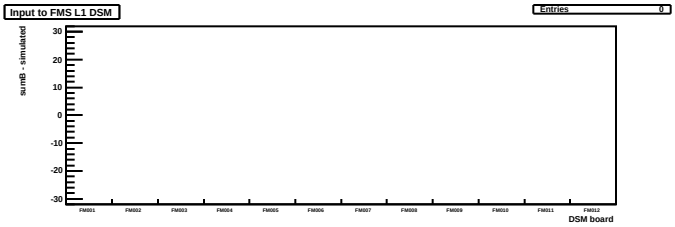

Input to FMS L1 DSM
Entries 6426972
sumC
DSM board

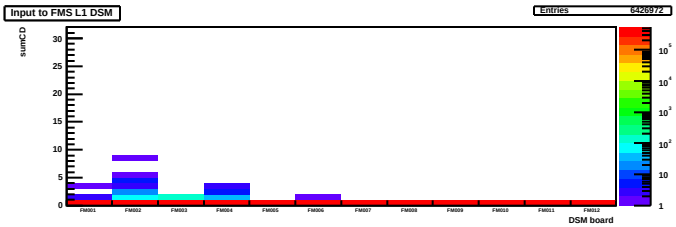

Input to FMS L1 DSM
Entries 25317
sumC - simulated
DSM board

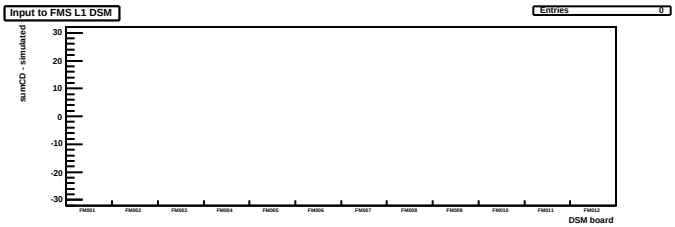

Input to FMS L1 DSM
Entries 6426972
sumBC
DSM board

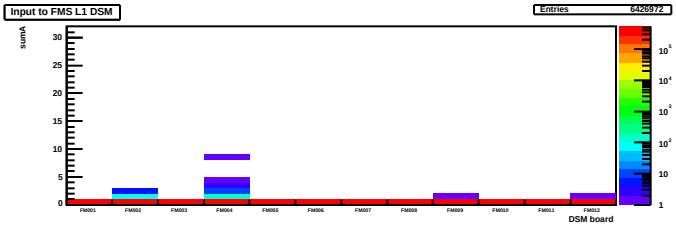

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

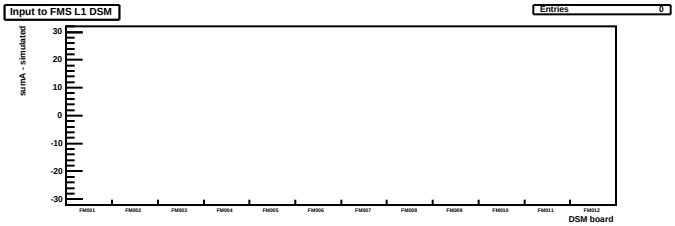

Input to FMS L1 DSM
Entries 6426972
sumB
DSM board

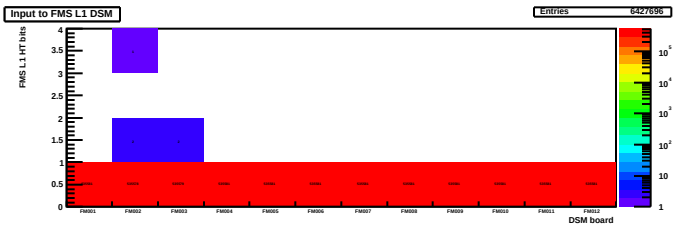

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

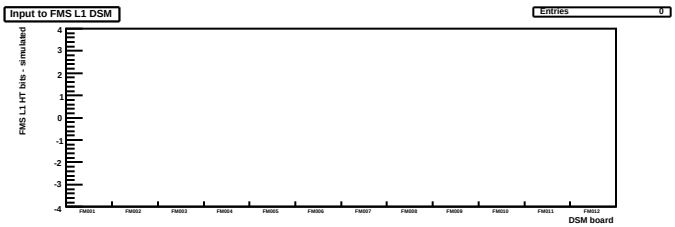

Input to FMS L1 DSM
Entries 6426972
sumCD
DSM board

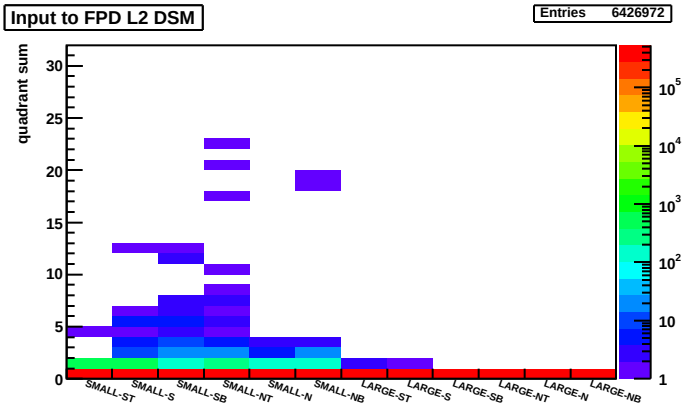

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

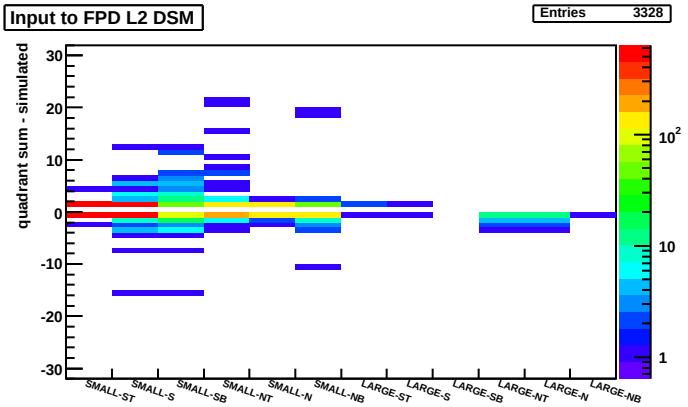

Input to FMS L1 DSM
Entries 6426972
sumA
DSM board

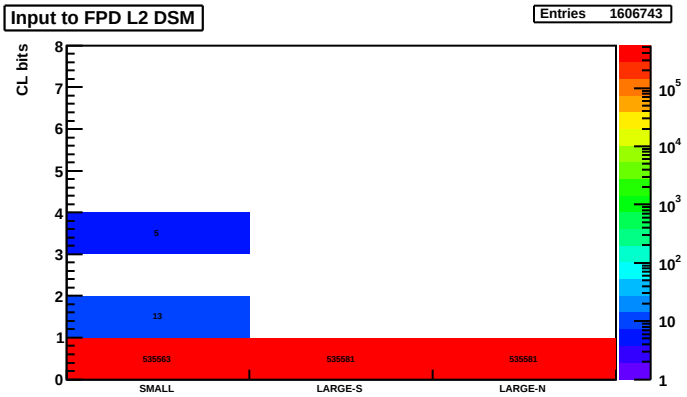

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

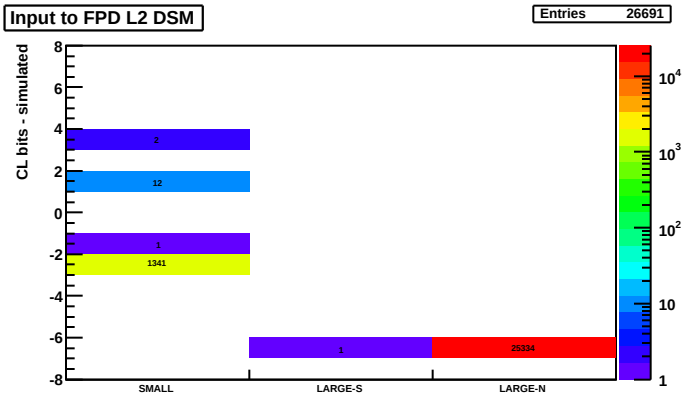

Input to FMS L1 DSM
Entries 6427696
FMS L1 HT bits
DSM board

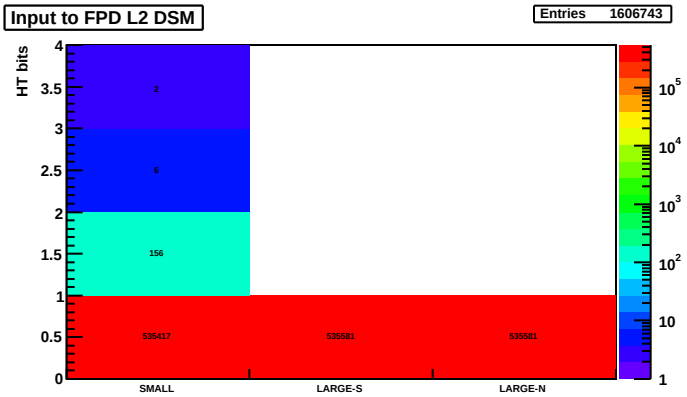

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

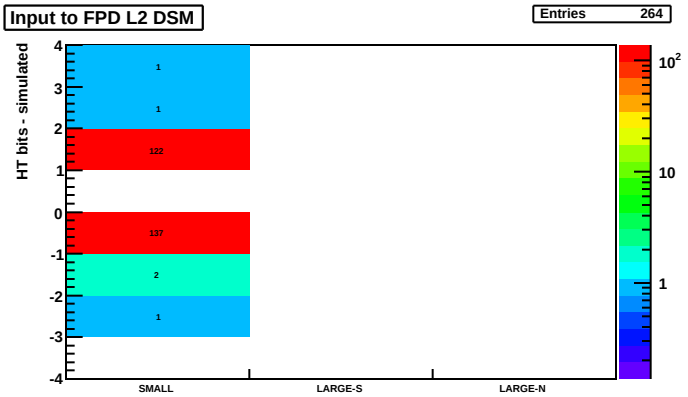

Input to FPD L2 DSM
Entries 6426972
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

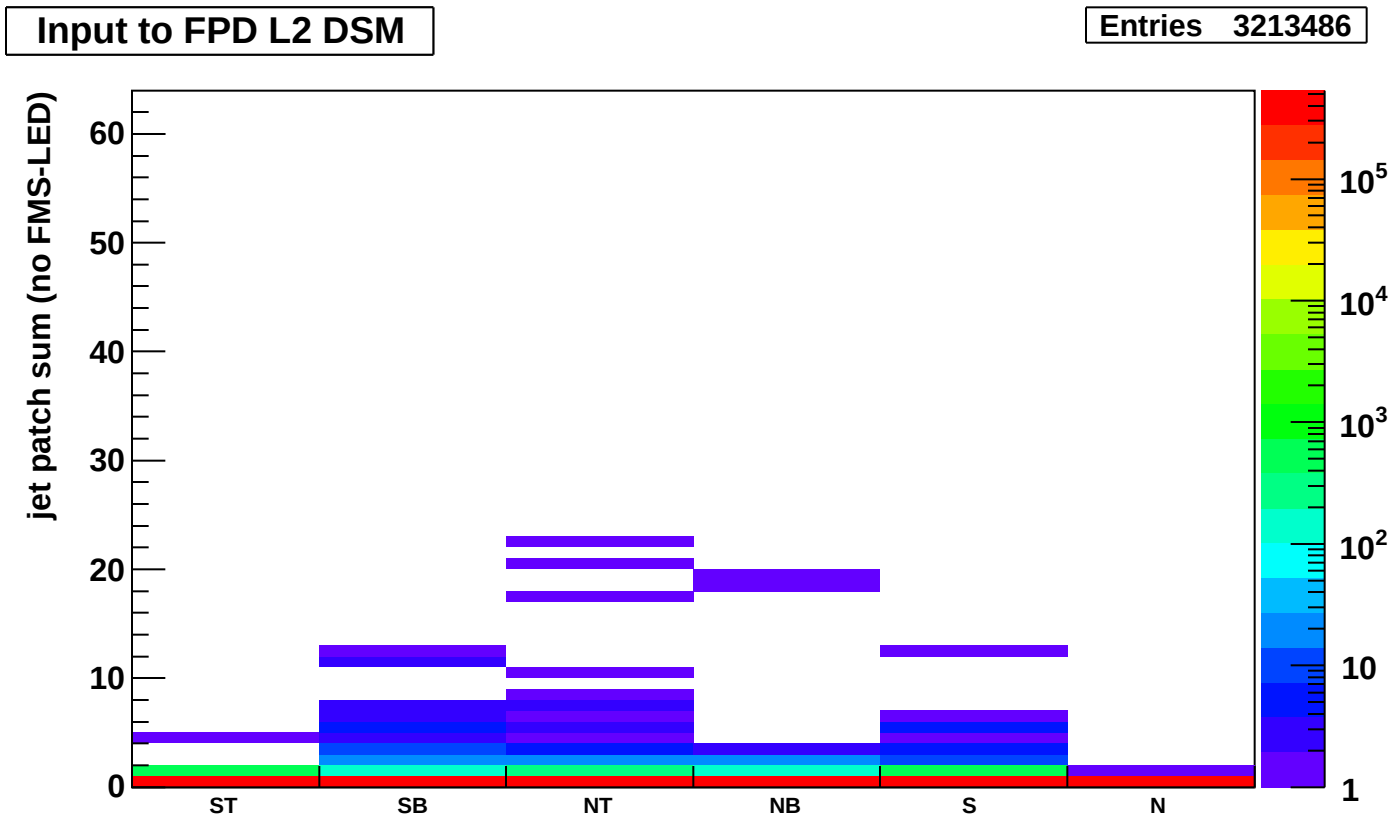

Input to FPD L2 DSM
Entries 3328
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

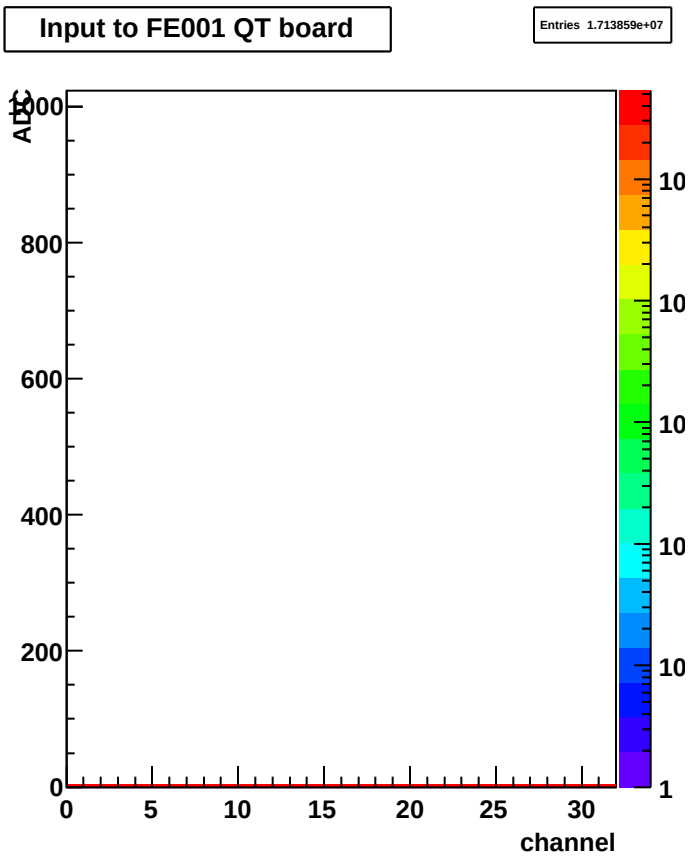

Input to FPD L2 DSM
Entries 1606743
CL bits
5
13
535563
535581
535581
SMALL
LARGE-S
LARGE-N

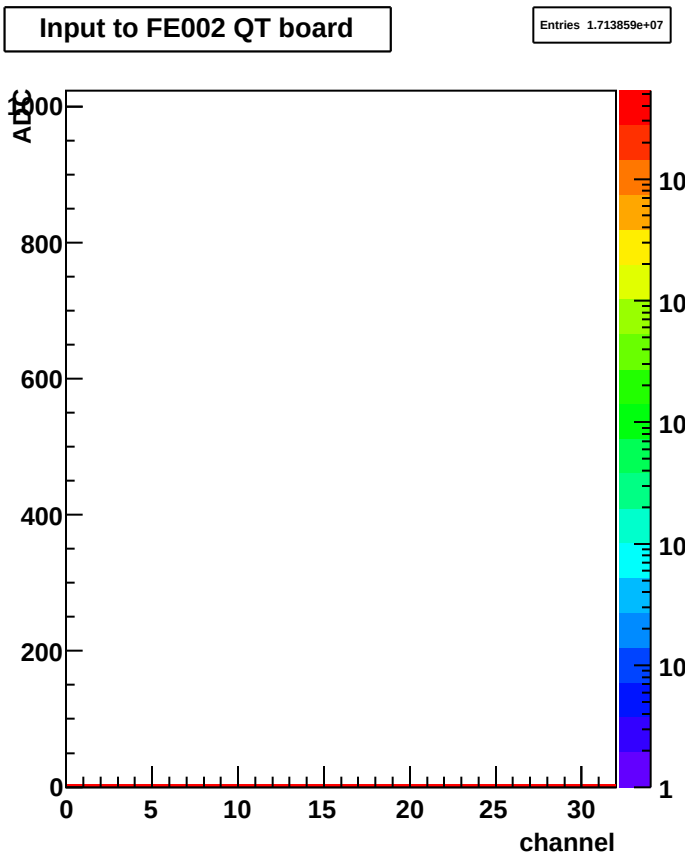

Input to FPD L2 DSM
Entries 26691
CL bits - simulated
2
12
1
1341
1
25334
SMALL
LARGE-S
LARGE-N

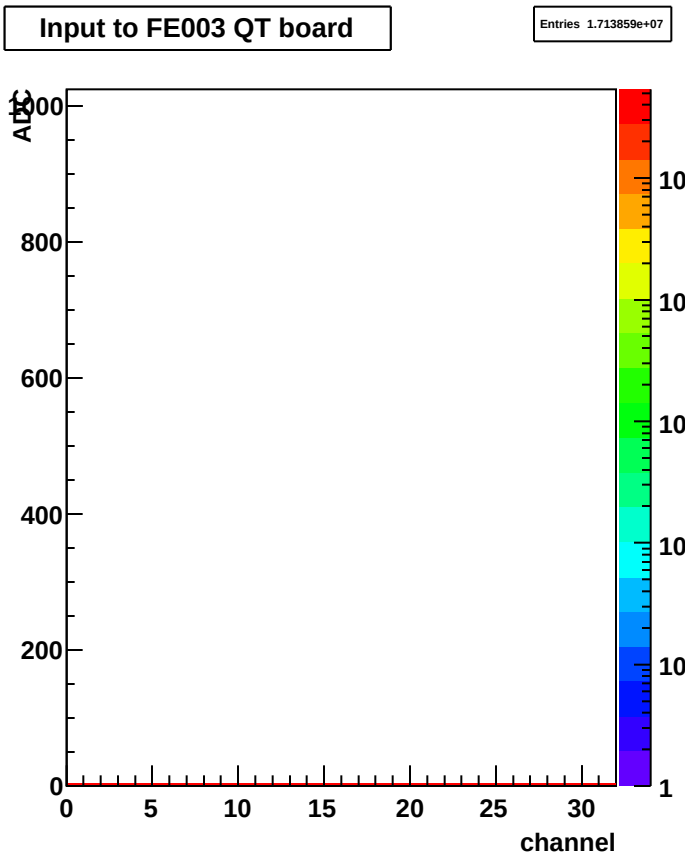

Input to FPD L2 DSM
Entries 1606743
HT bits
2
6
156
535417
535581
535581
SMALL
LARGE-S
LARGE-N

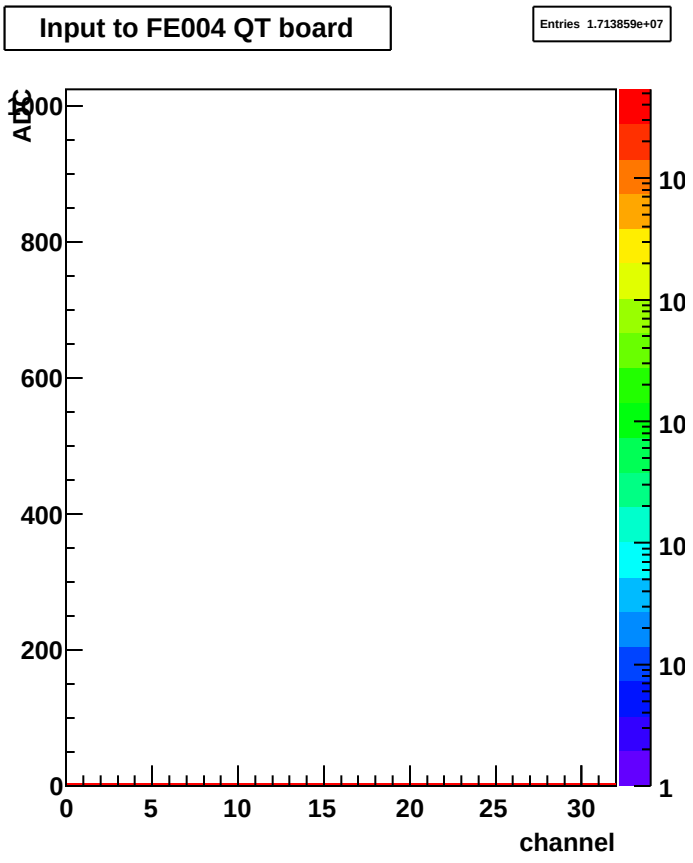

Input to FPD L2 DSM
Entries 264
HT bits - simulated
1
1
122
137
2
1
SMALL
LARGE-S
LARGE-N

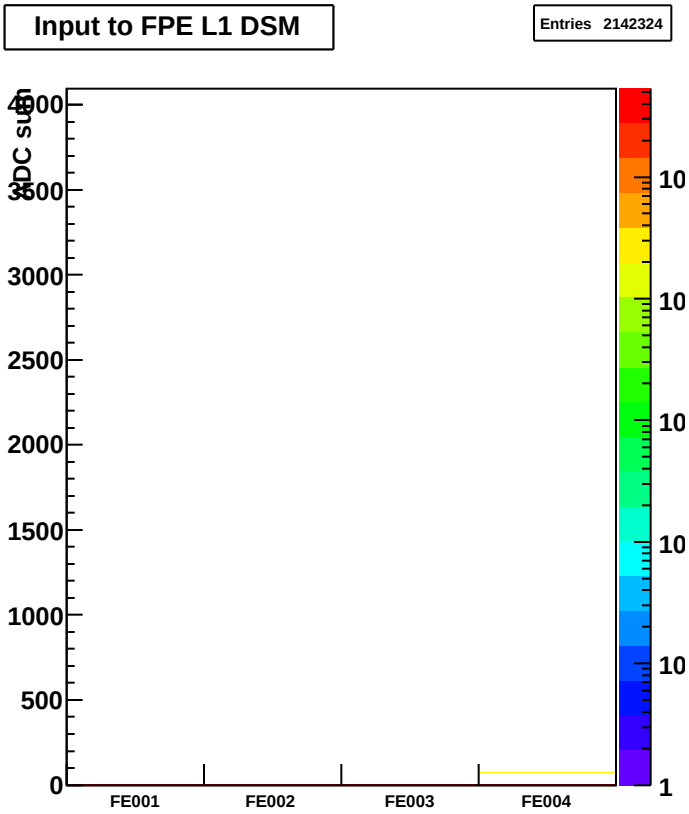

Input to FPD L2 DSM
Entries 3213486
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$
$10^5$

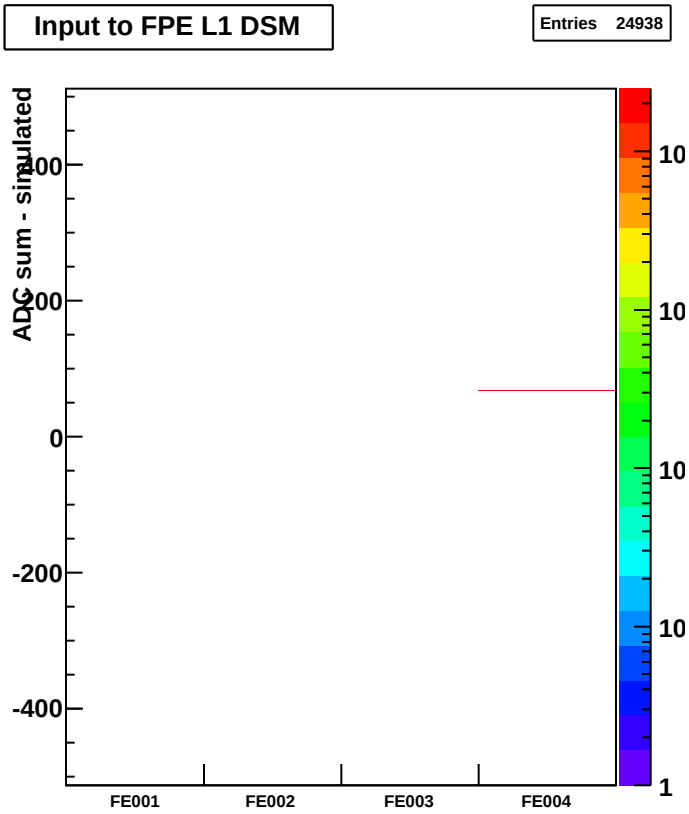

Input to FE001 QT board
Entries 1.713859e+07
ADC
channel


Input to FE002 QT board
Entries 1.713859e+07
ADC
channel

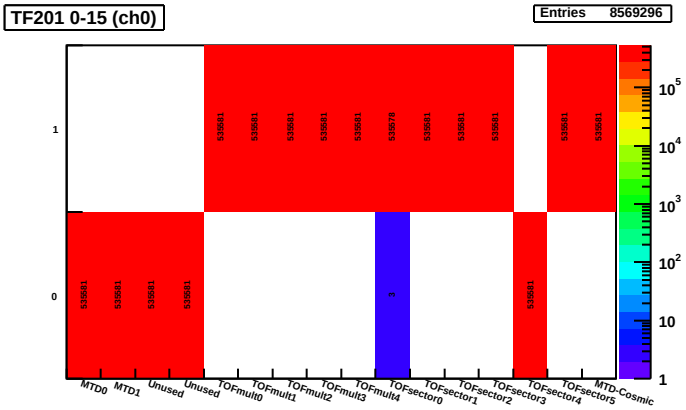

Input to FE003 QT board
Entries 1.713859e+07
ADC
channel


Input to FE004 QT board
Entries 1.713859e+07
ADC
channel

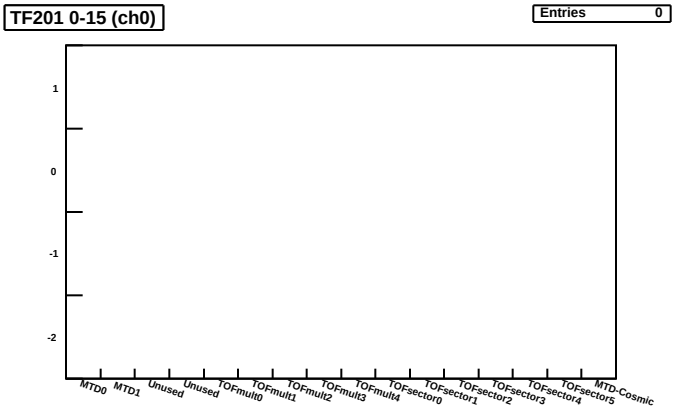

Input to FPE L1 DSM
Entries 2142324
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 24938
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

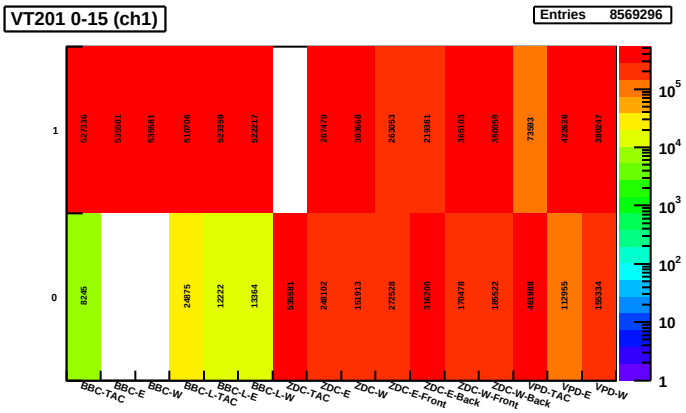
TF201 0-15 (ch0)



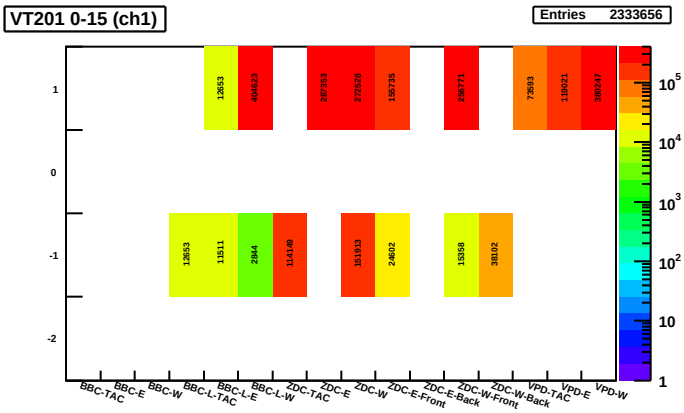

TF201 0-15 (ch0)



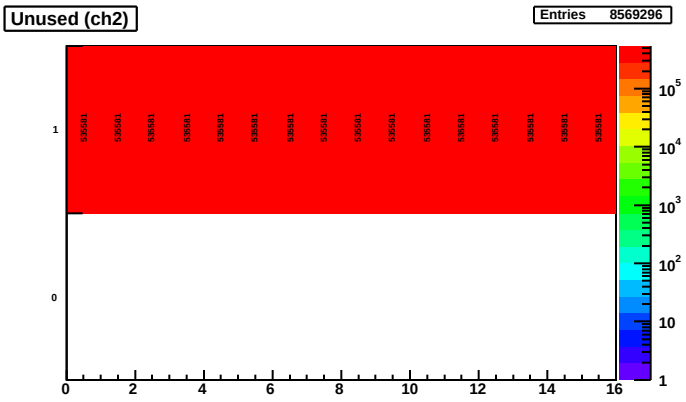

VT201 0-15 (ch1)

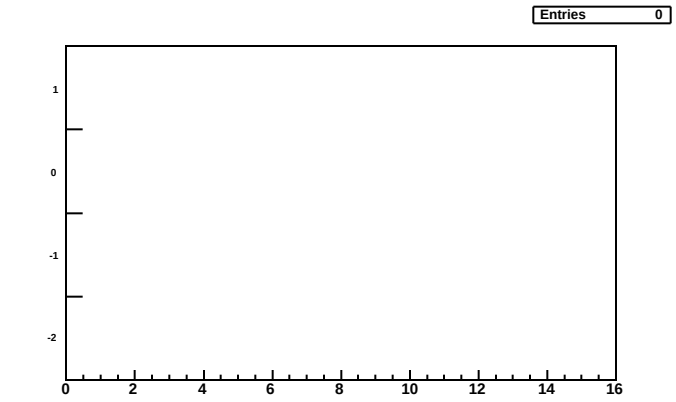



VT201 0-15 (ch1)




Unused (ch2)

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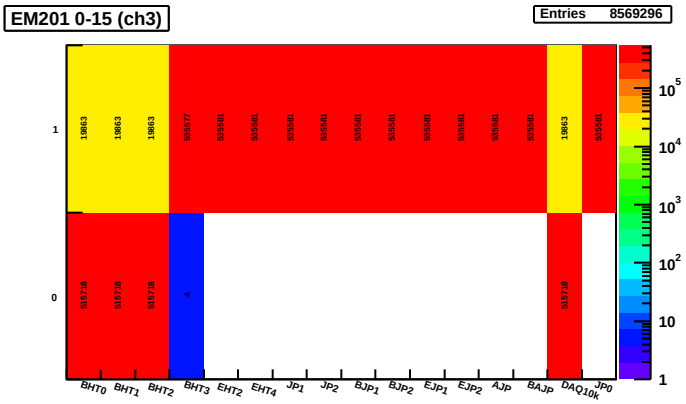


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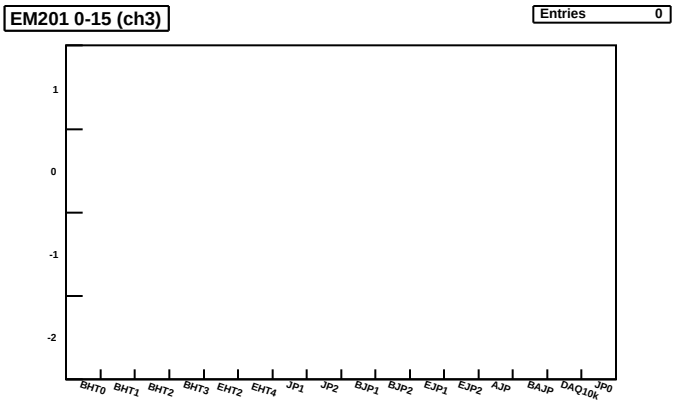
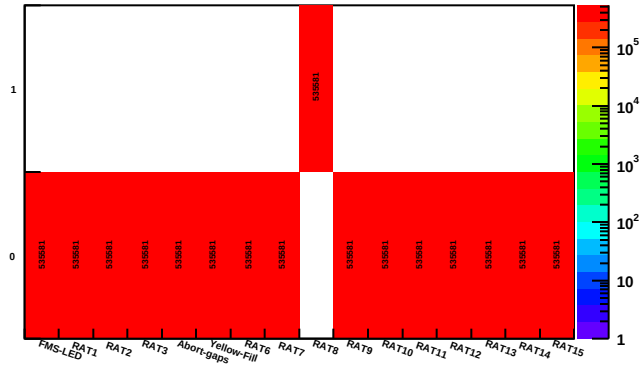
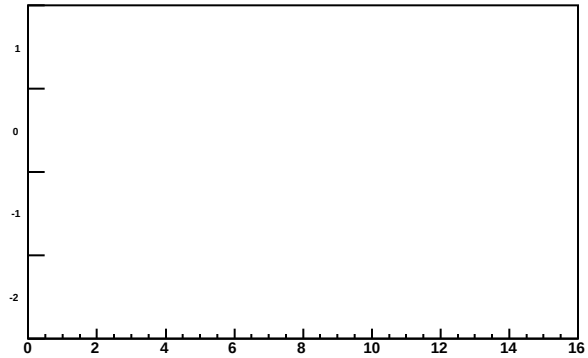
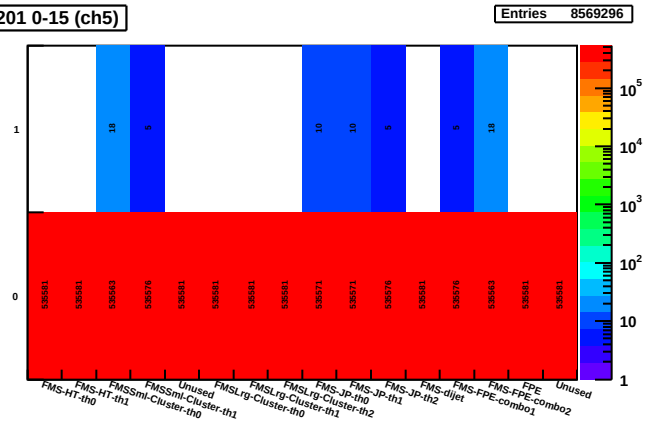


**RAT board (ch4)**

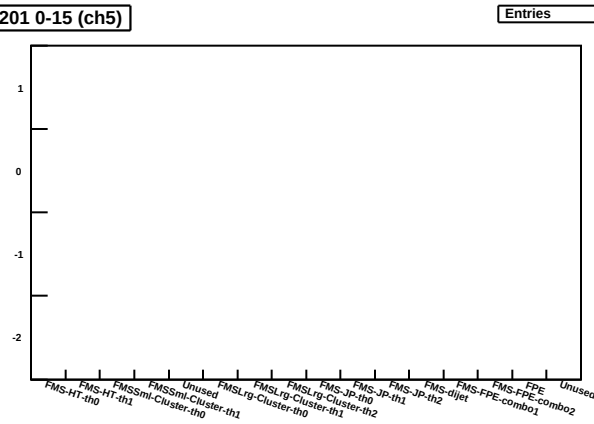


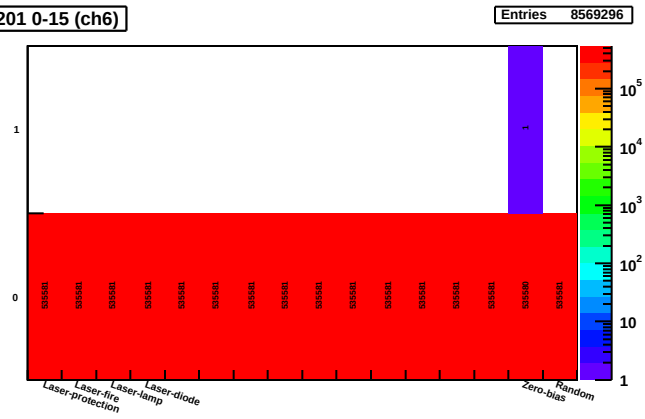

**FP201 0-15 (ch5)**

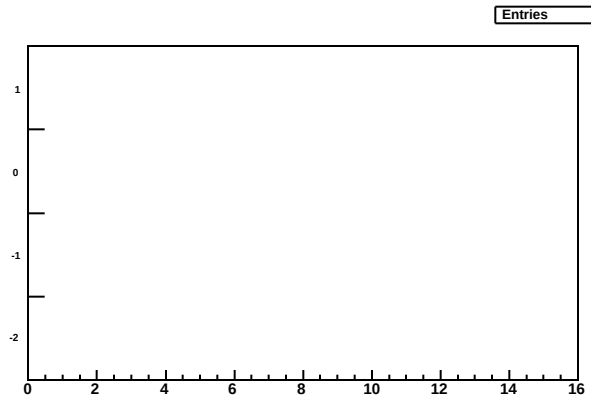


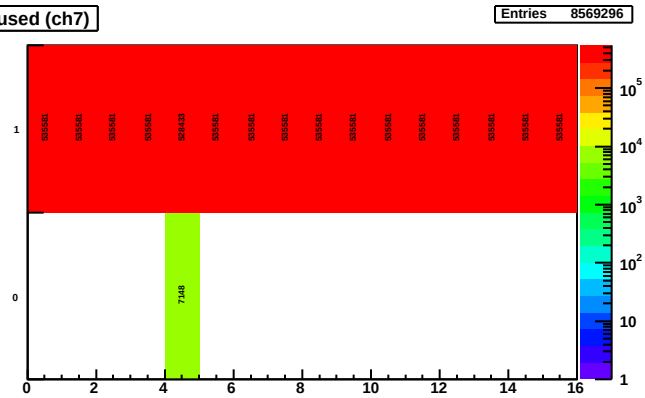
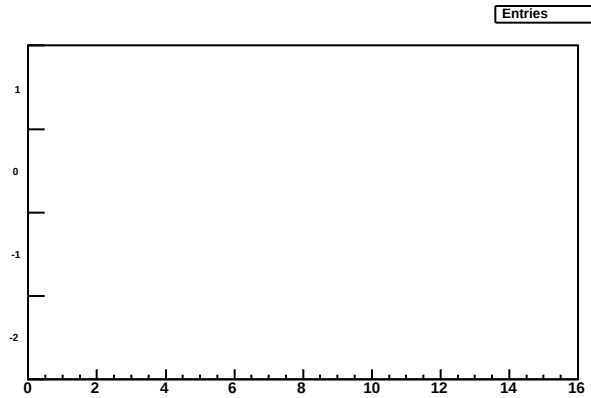

**FP201 0-15 (ch5)**




**ST201 0-15 (ch6)**




**Unused (ch7)**