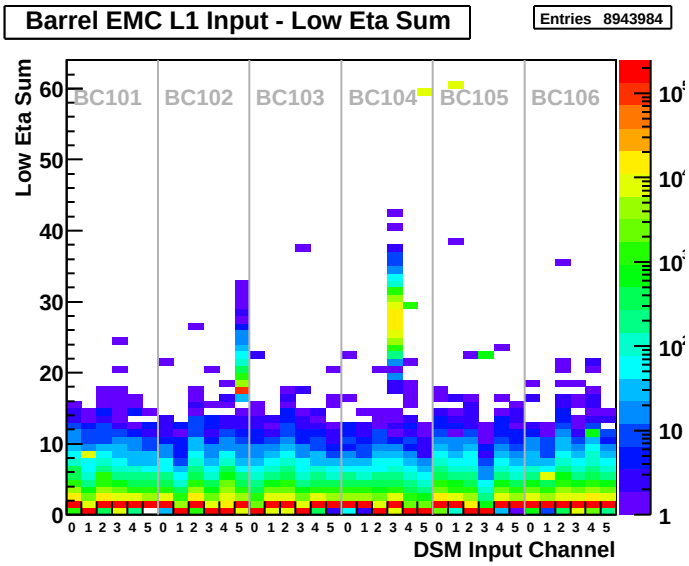
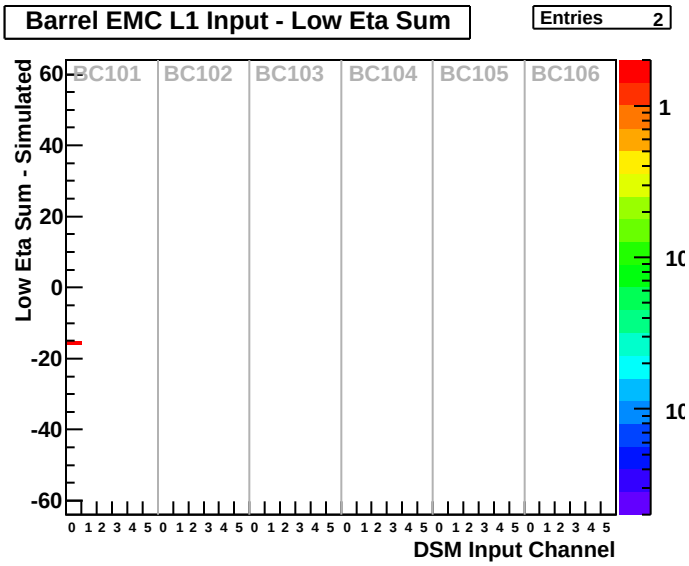
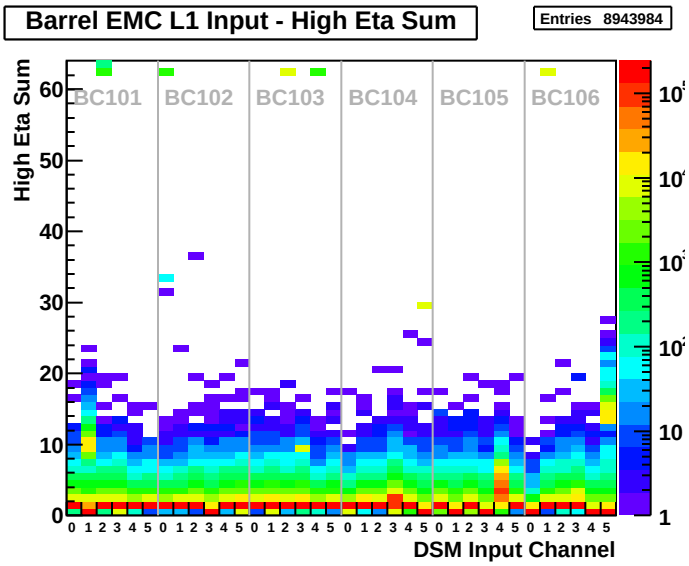
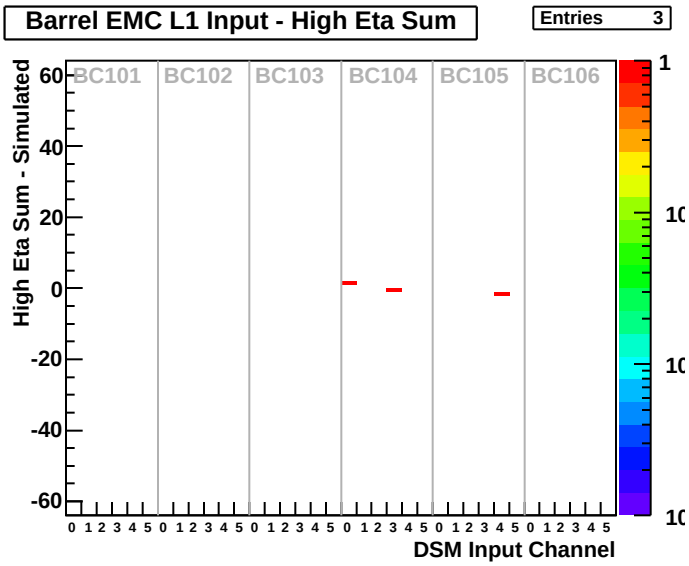
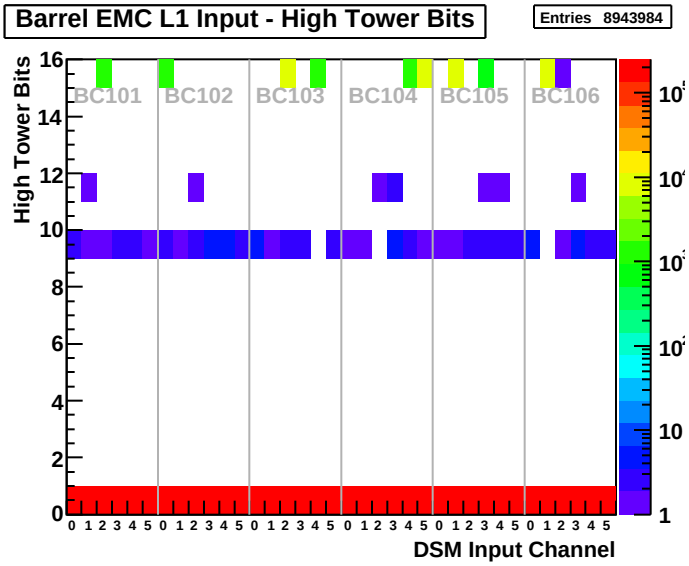
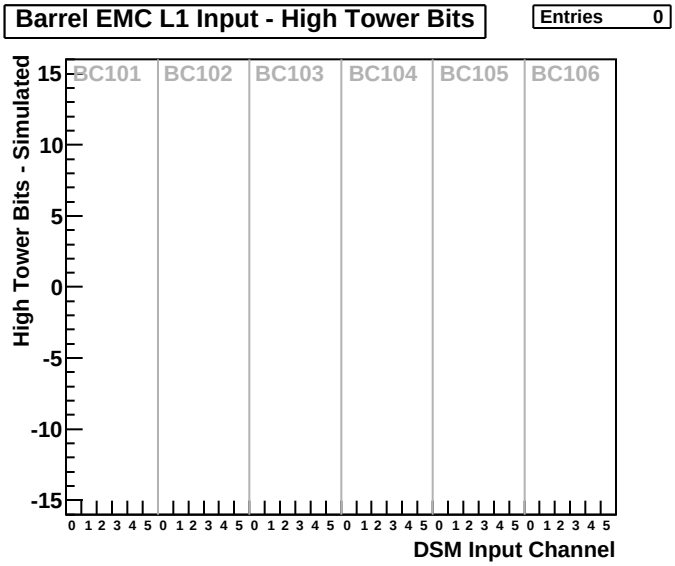

Barrel EMC L1 Input - Low Eta Sum
Entries 8943984
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

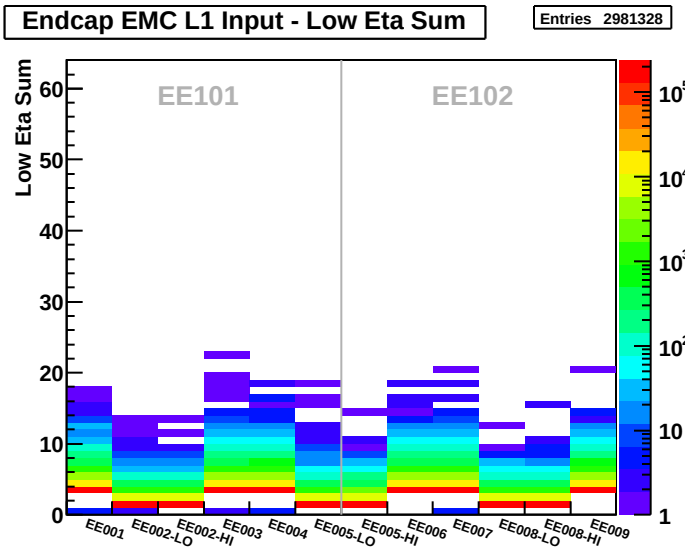

Barrel EMC L1 Input - Low Eta Sum
Entries 2
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

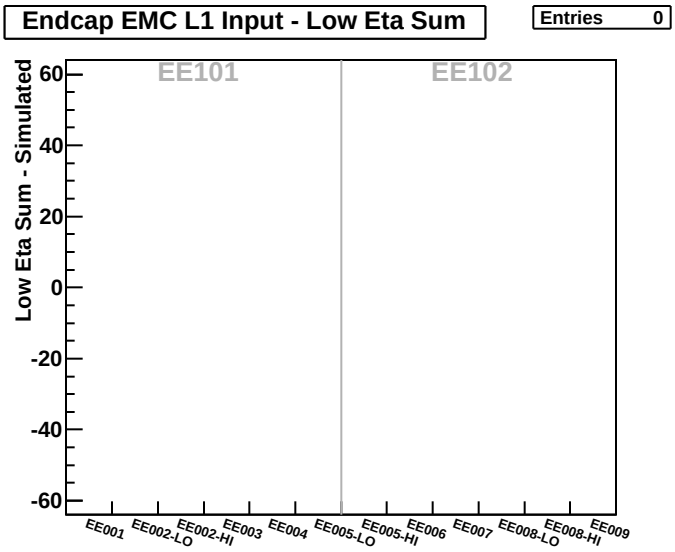

Barrel EMC L1 Input - High Eta Sum
Entries 8943984
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

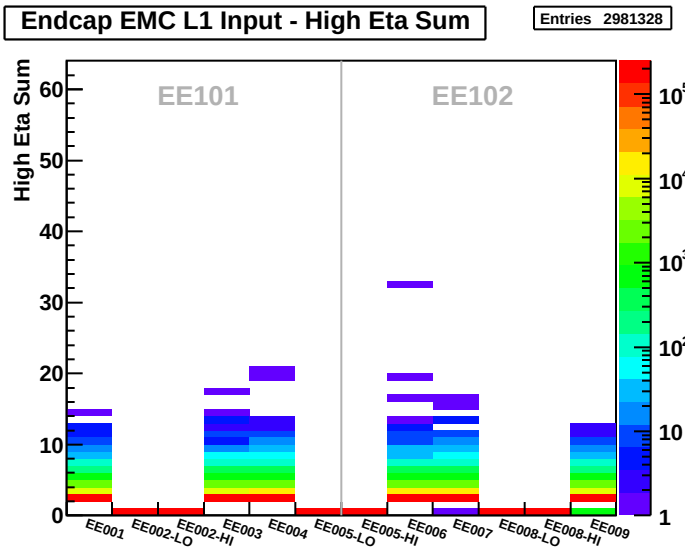

Barrel EMC L1 Input - High Eta Sum
Entries 3
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

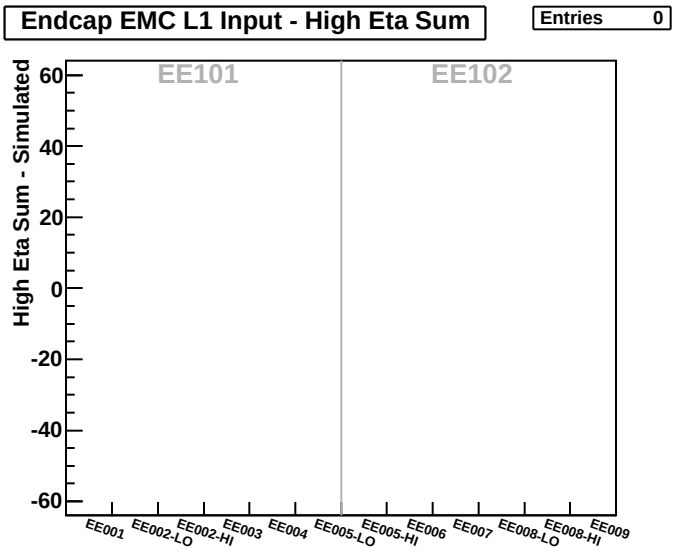

Barrel EMC L1 Input - High Tower Bits
Entries 8943984
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

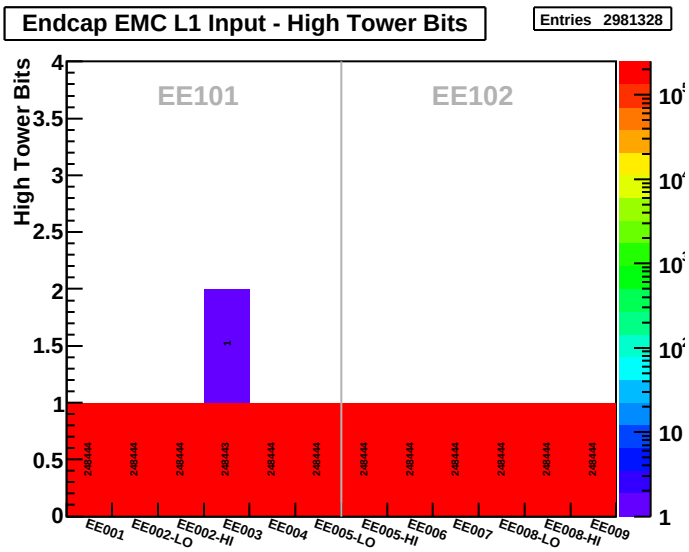

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

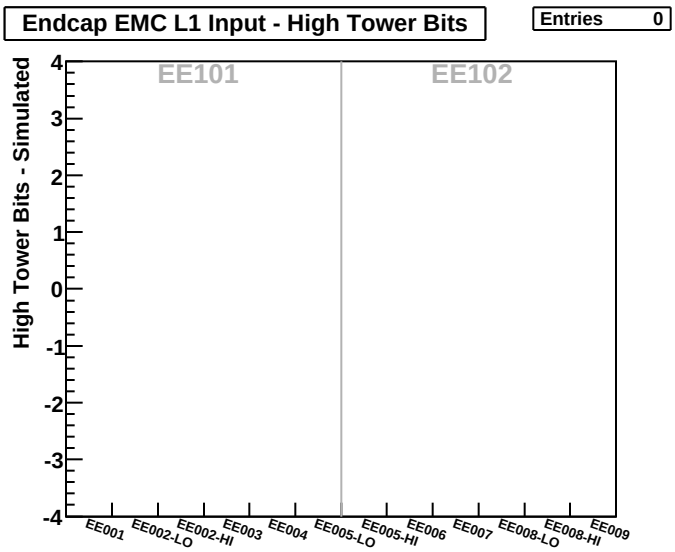

Endcap EMC L1 Input - Low Eta Sum
Entries 2981328
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

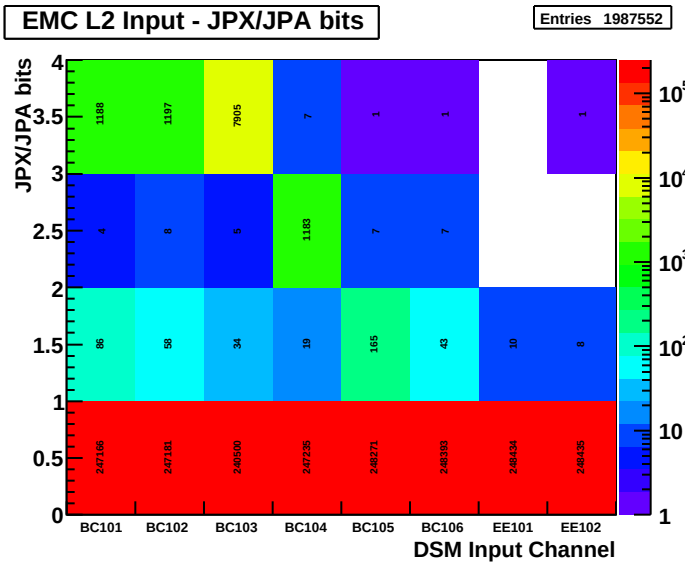

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

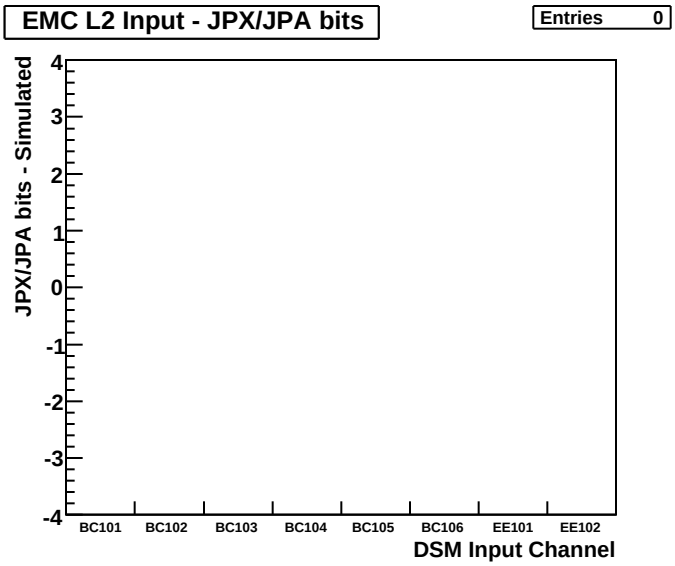

Endcap EMC L1 Input - High Eta Sum
Entries 2981328
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

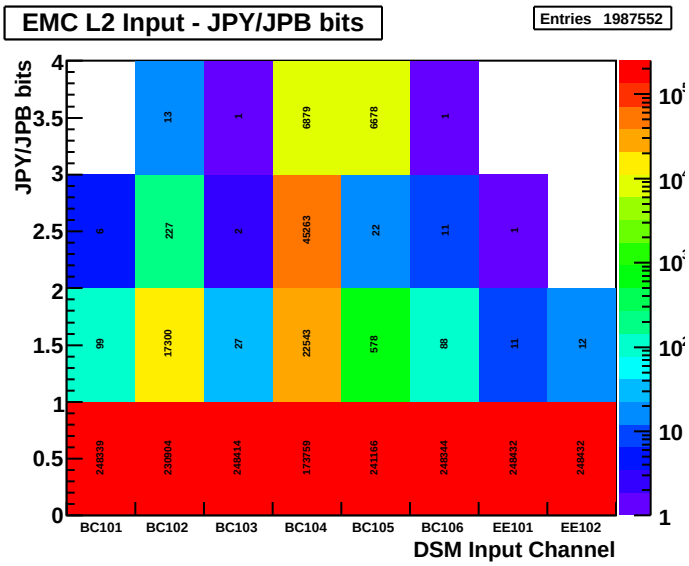

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

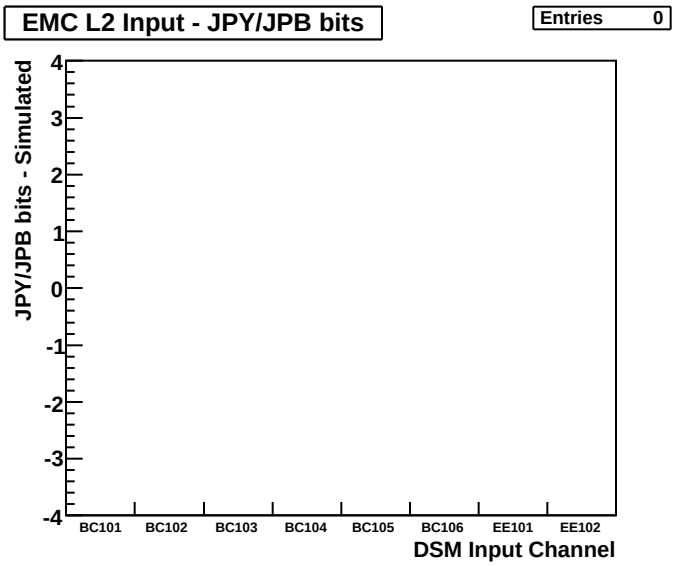

Endcap EMC L1 Input - High Tower Bits
Entries 2981328
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

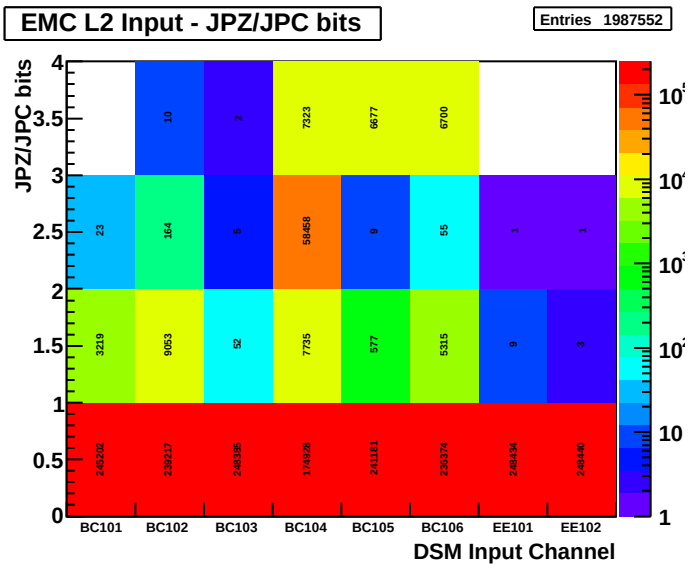

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

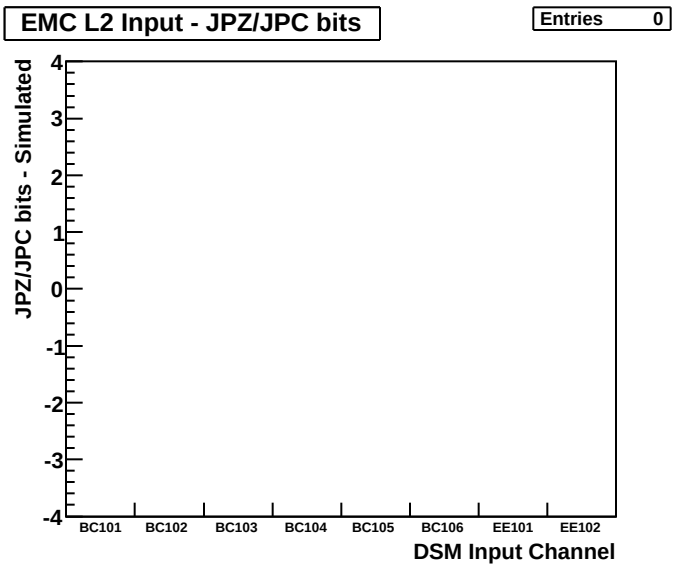

EMC L2 Input - JPX/JPA bits
Entries 1987552
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1188 1197 7905 7 1 1 1
4 8 5 1183 7 7
86 58 34 19 165 43 10 8
247166 247181 240500 247235 248271 248393 248434 248435

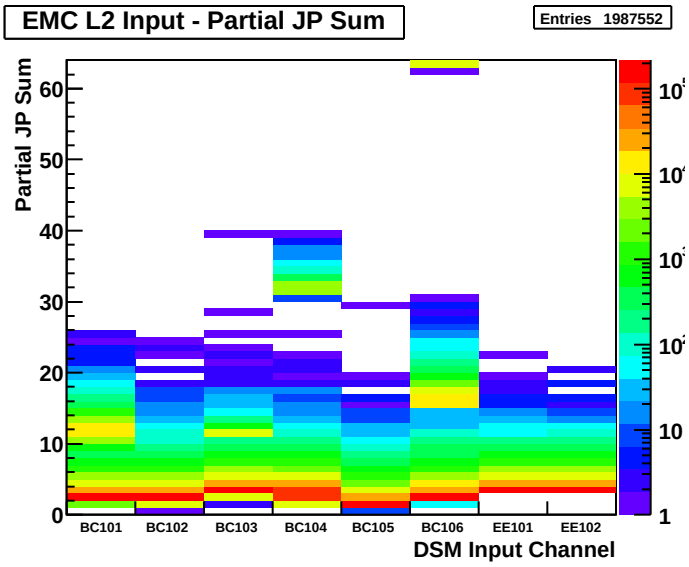

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

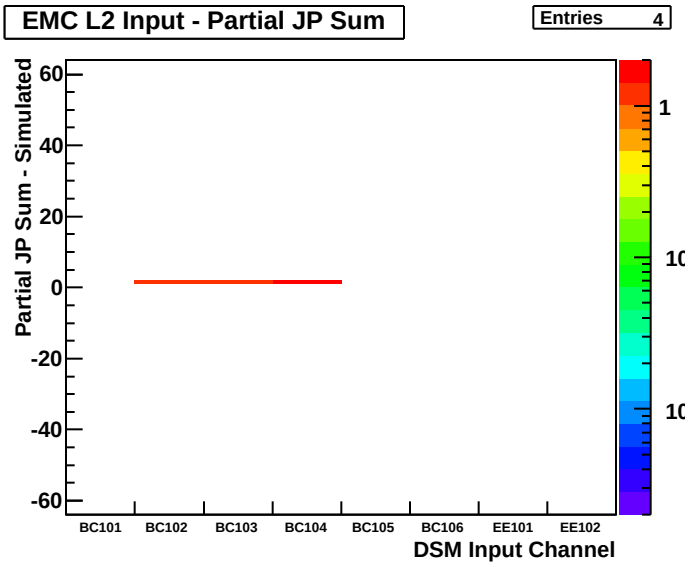

EMC L2 Input - JPY/JPB bits
Entries 1987552
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
13 1 6879 6678 1
6 227 2 45263 22 11 1
99 17300 27 22543 578 88 11 12
248339 230804 248414 173759 241166 248344 248432 248432

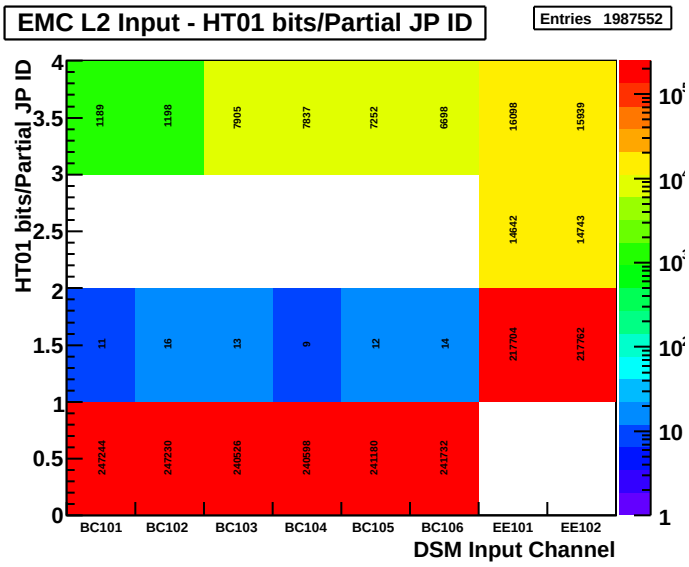

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

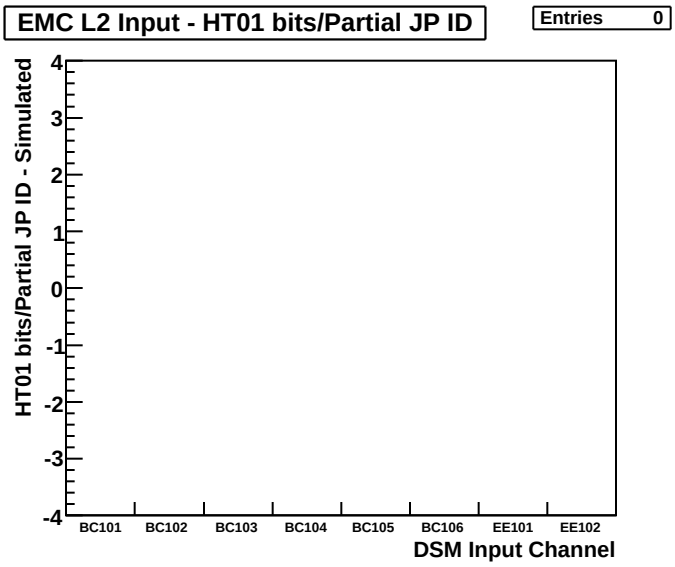

EMC L2 Input - JPZ/JPC bits
Entries 1987552
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
10 2 7323 6677 6700
23 164 5 58458 9 55 1 1
3219 9053 52 7735 577 5315 9 3
245202 239217 248385 174928 241181 236374 248434 248440

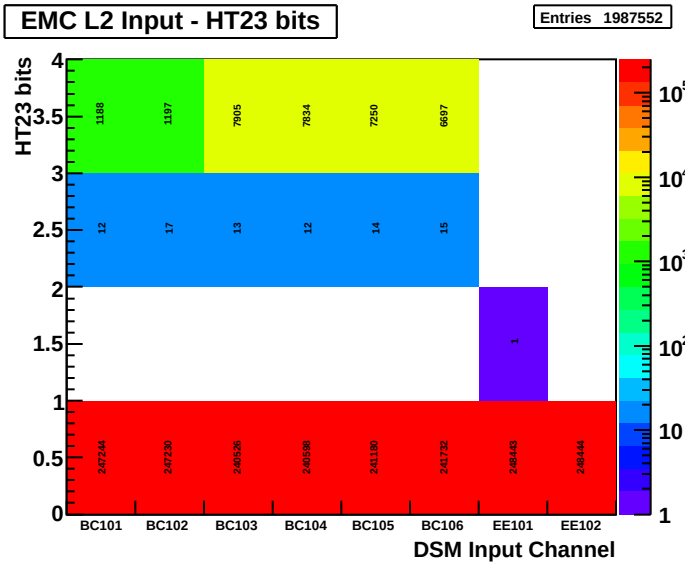

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

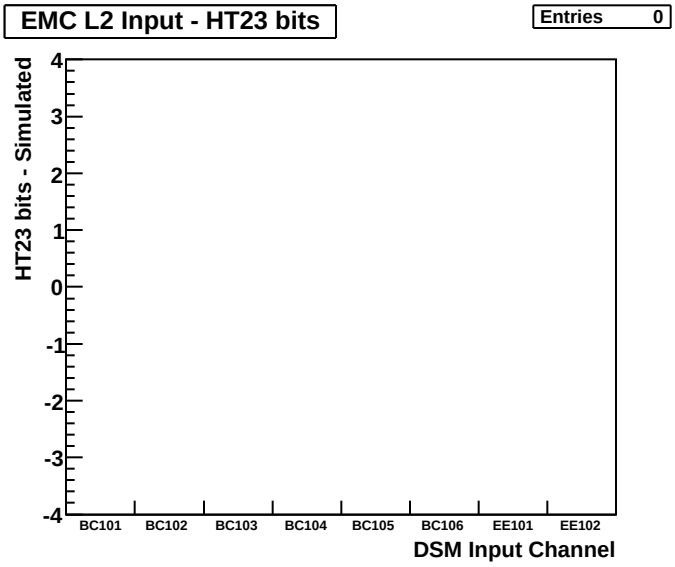

EMC L2 Input - Partial JP Sum
Entries 1987552
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

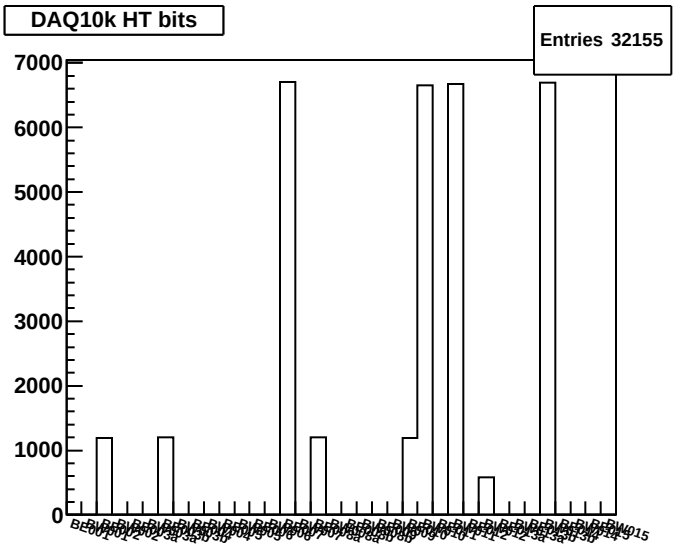

EMC L2 Input - Partial JP Sum
Entries 4
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

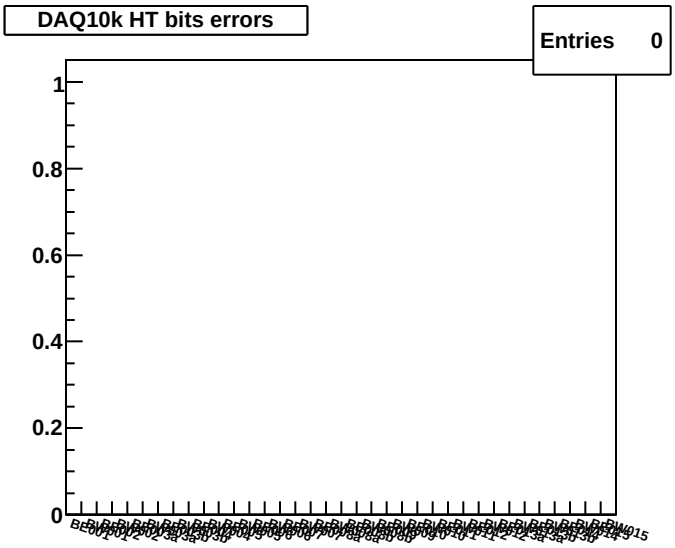

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1987552
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

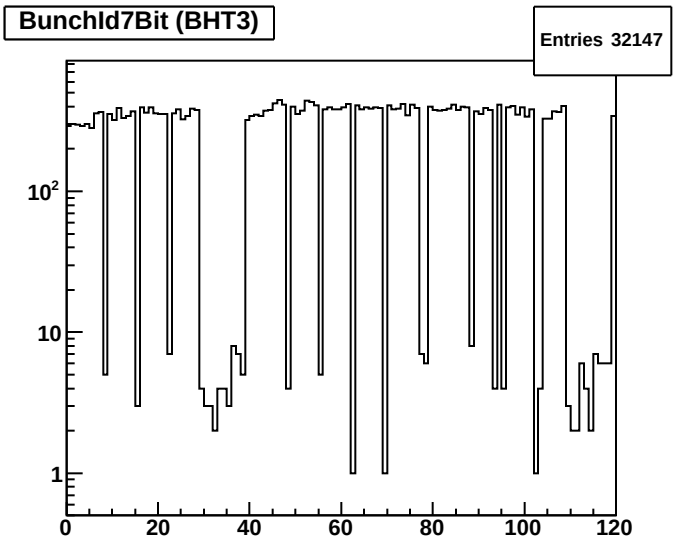

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

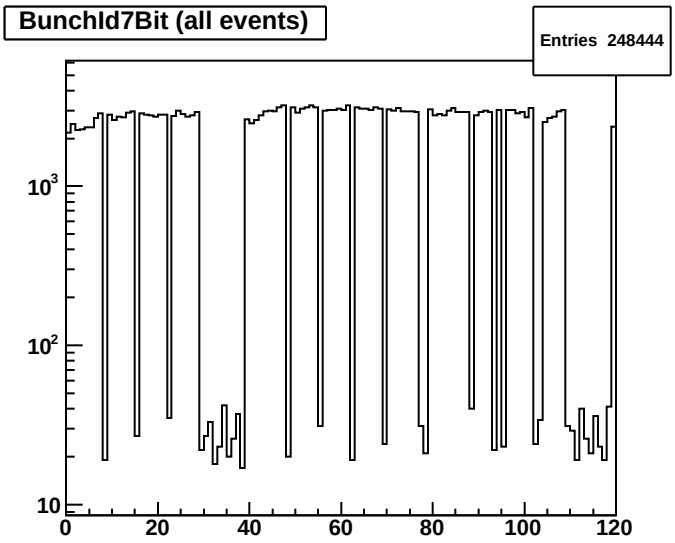

EMC L2 Input - HT23 bits
Entries 1987552
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

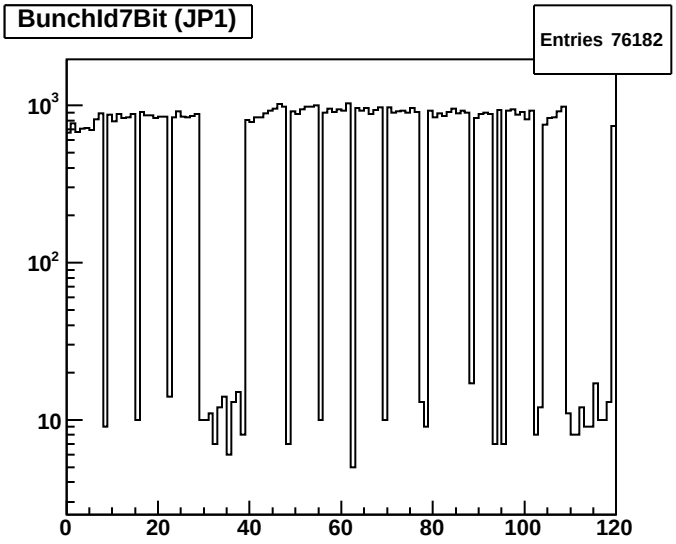

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

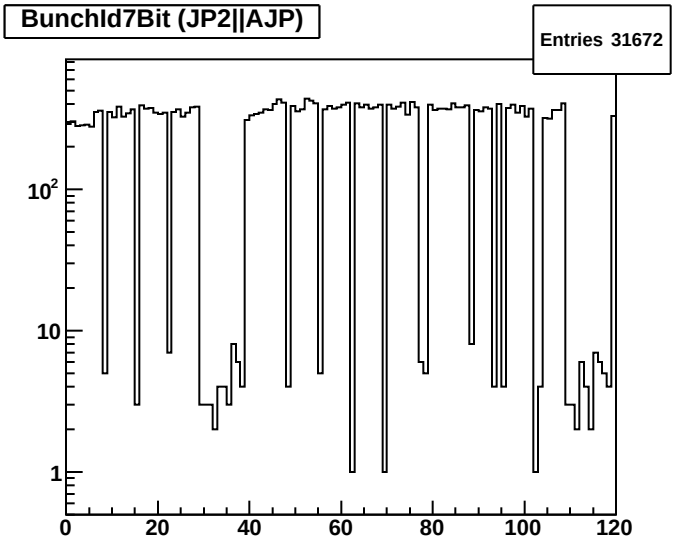

DAQ10k HT bits
Entries 32155
7000
6000
5000
4000
3000
2000
1000
0

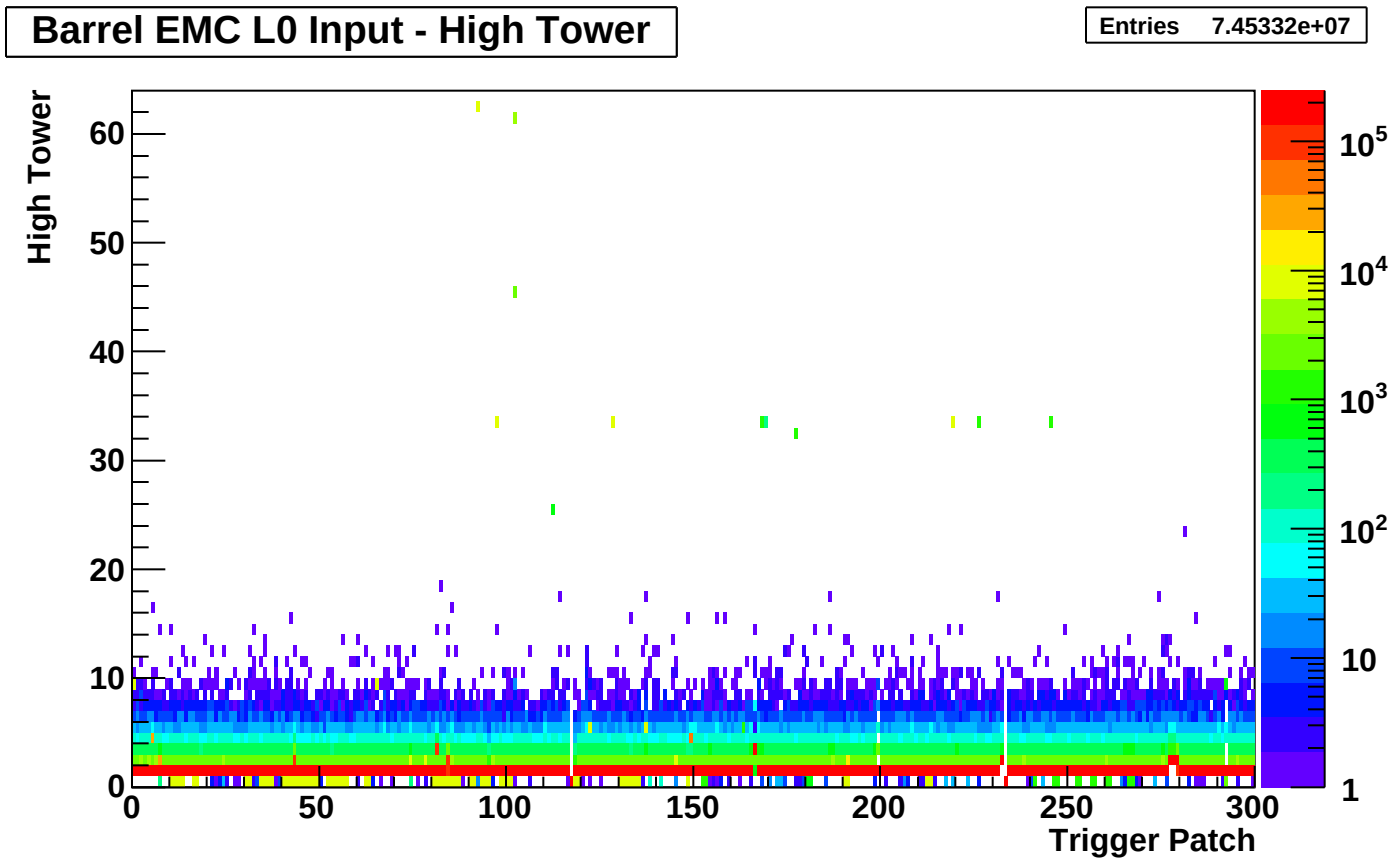

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0

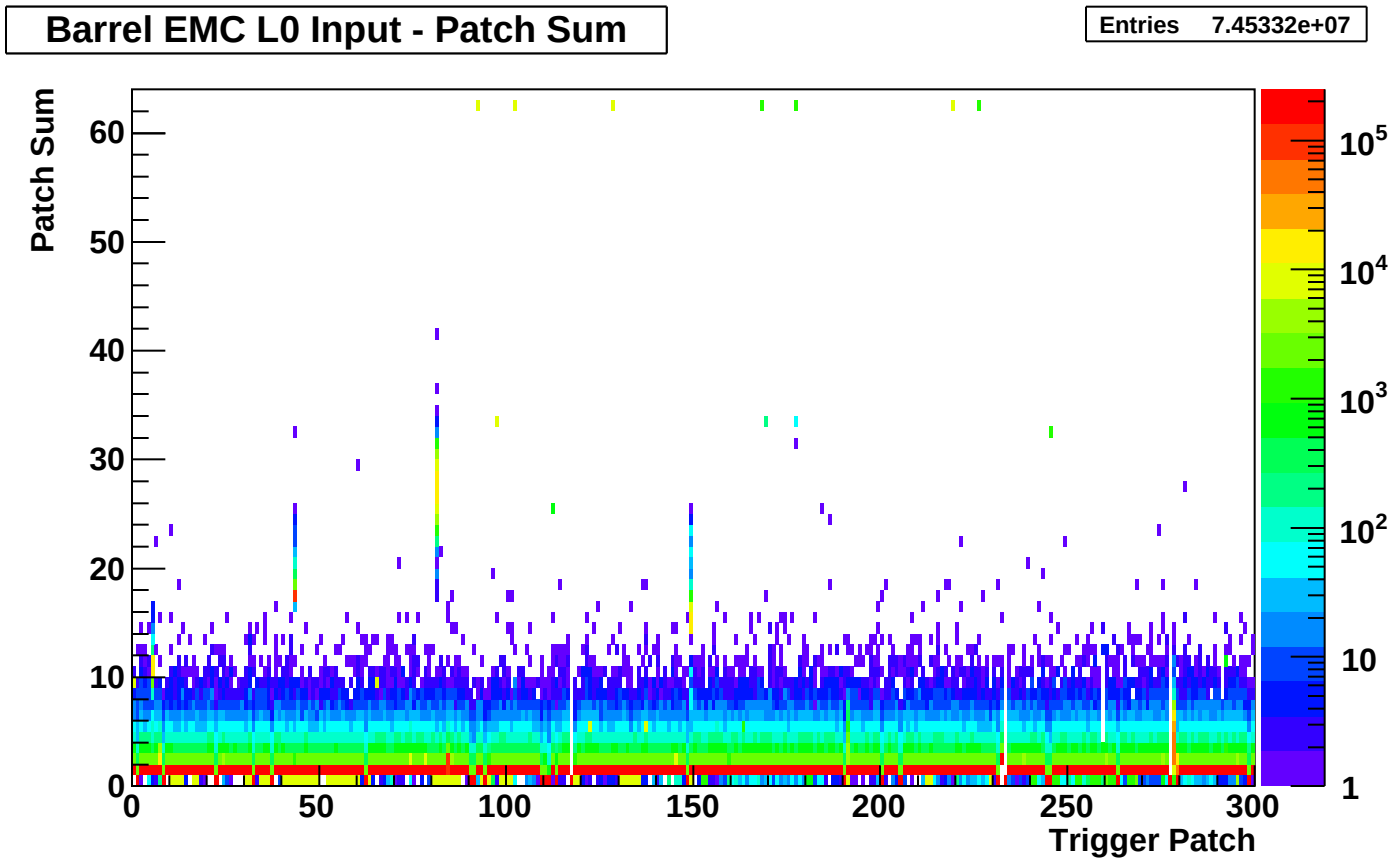

BunchId7Bit (BHT3)
Entries 32147
10^2
10
1
0
20
40
60
80
100
120

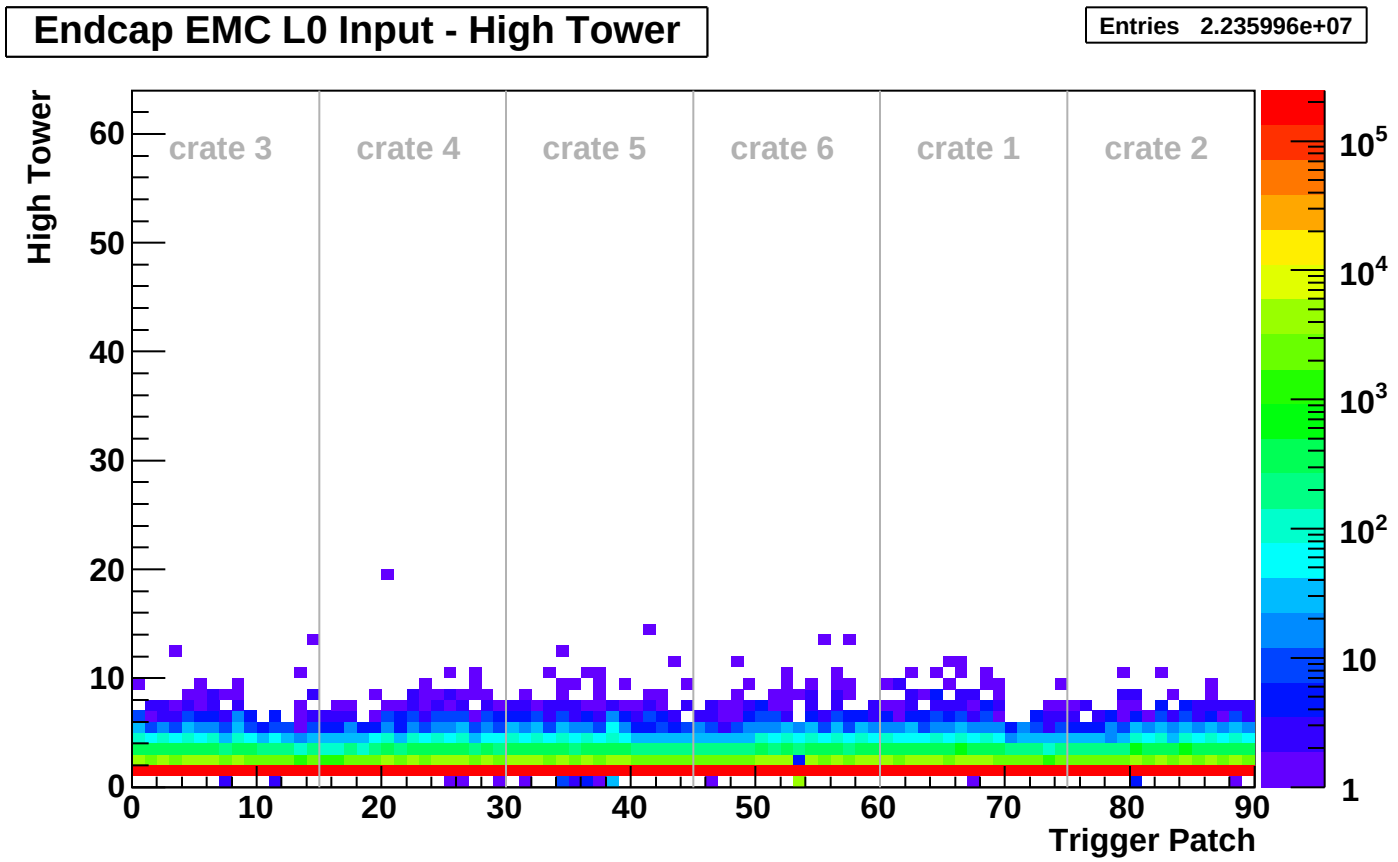

BunchId7Bit (all events)
Entries 248444
10^3
10^2
10
0
20
40
60
80
100
120

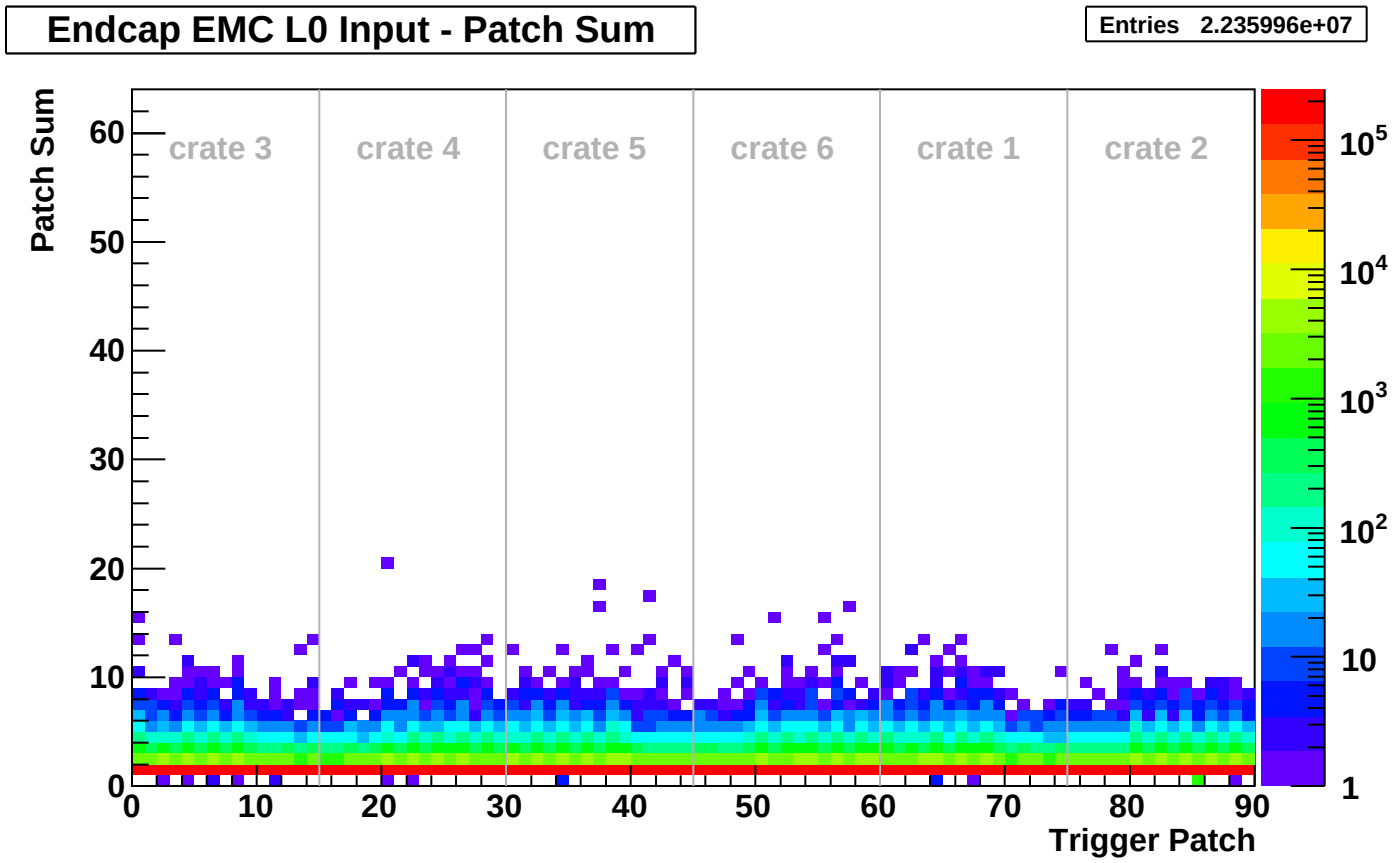

BunchId7Bit (JP1)
Entries 76182
10^3
10^2
10
0
20
40
60
80
100
120

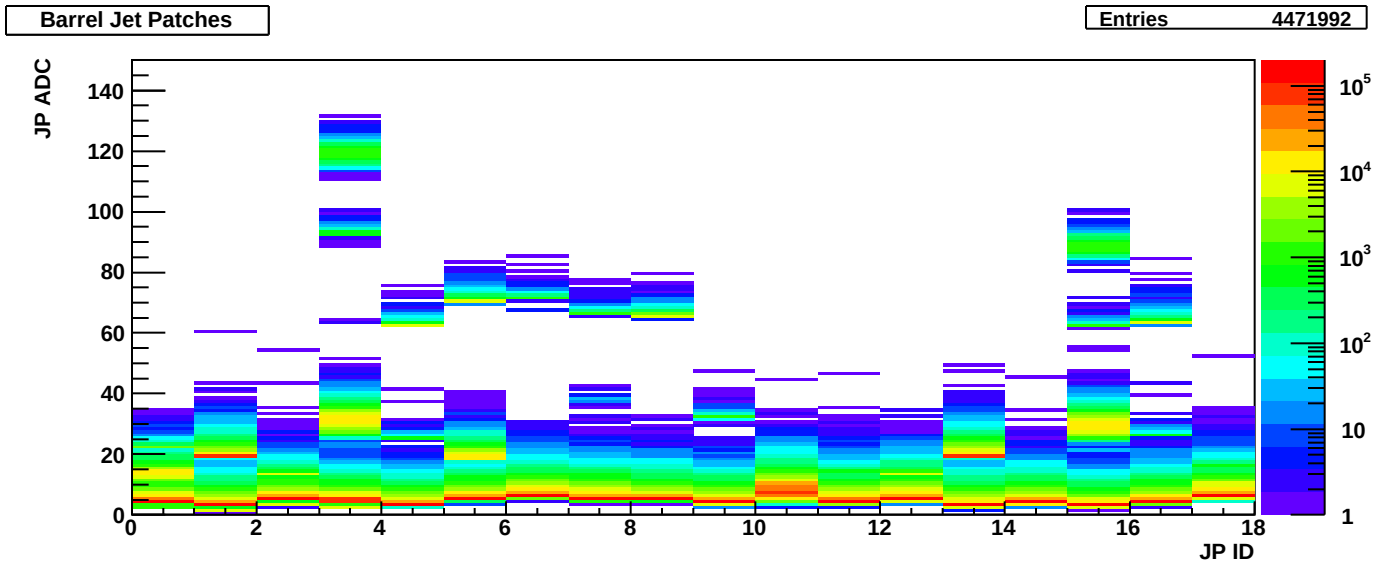

BunchId7Bit (JP2||AJP)
Entries 31672
10^2
10
1
0
20
40
60
80
100
120

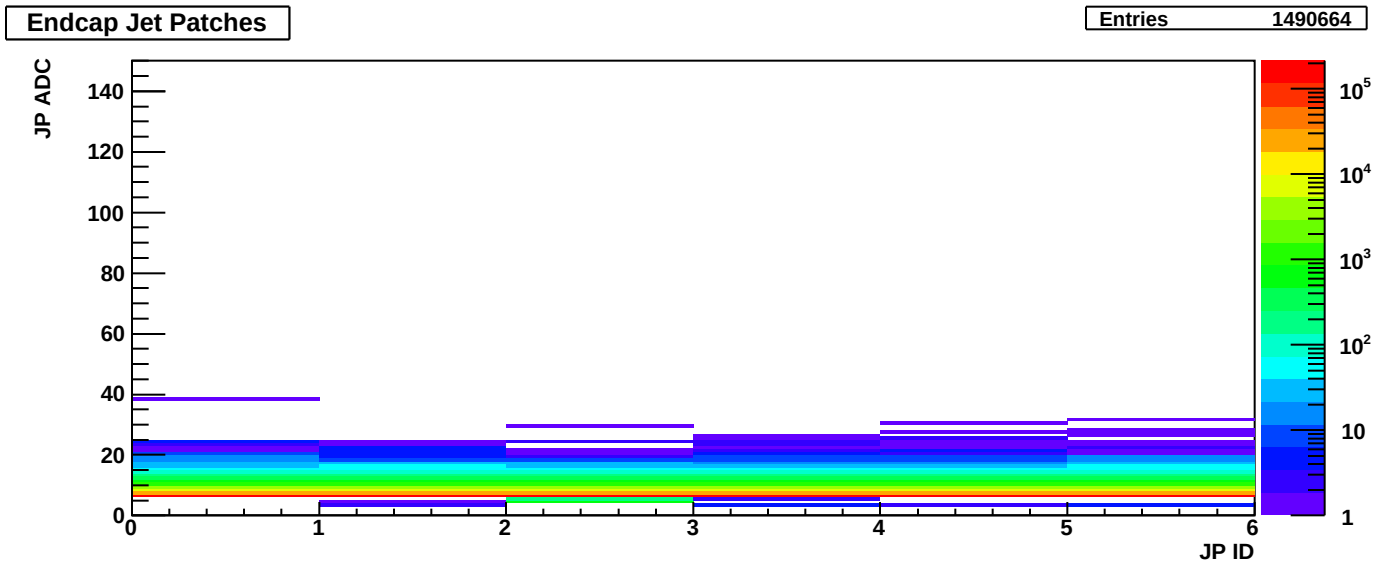

Barrel EMC L0 Input - High Tower
Entries 7.45332e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

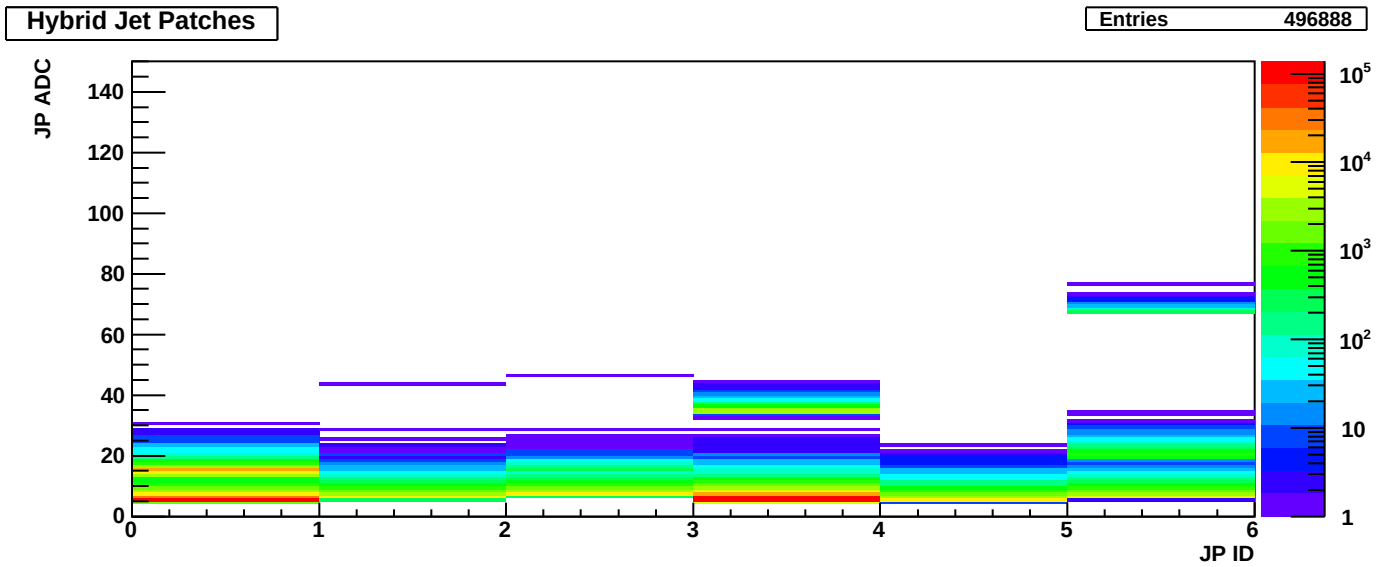

Barrel EMC L0 Input - Patch Sum
Entries 7.45332e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

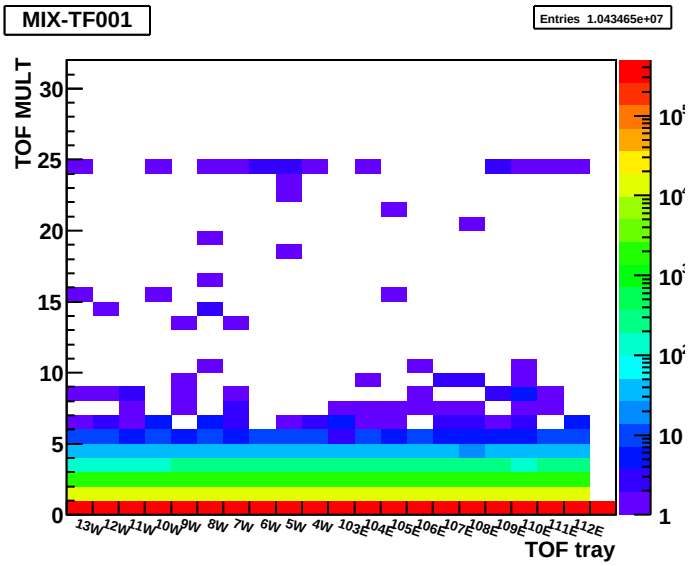

Endcap EMC L0 Input - High Tower
Entries 2.235996e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

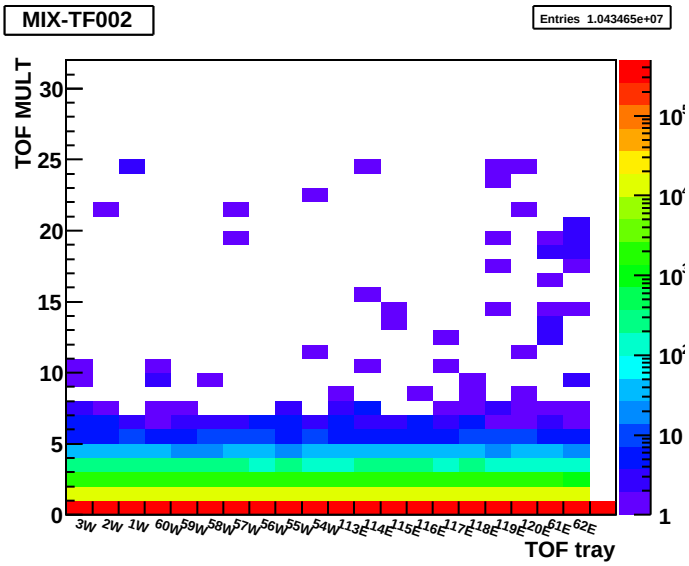

Endcap EMC L0 Input - Patch Sum
Entries 2.235996e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

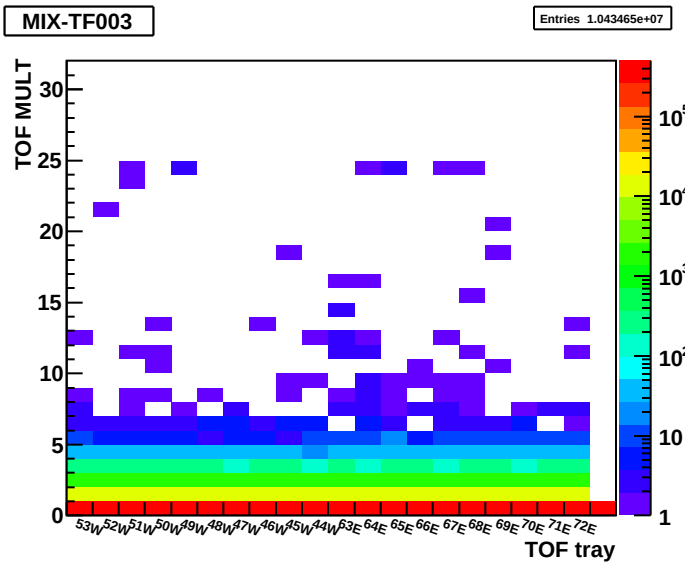

Barrel Jet Patches
Entries 4471992
JP ADC
JP ID

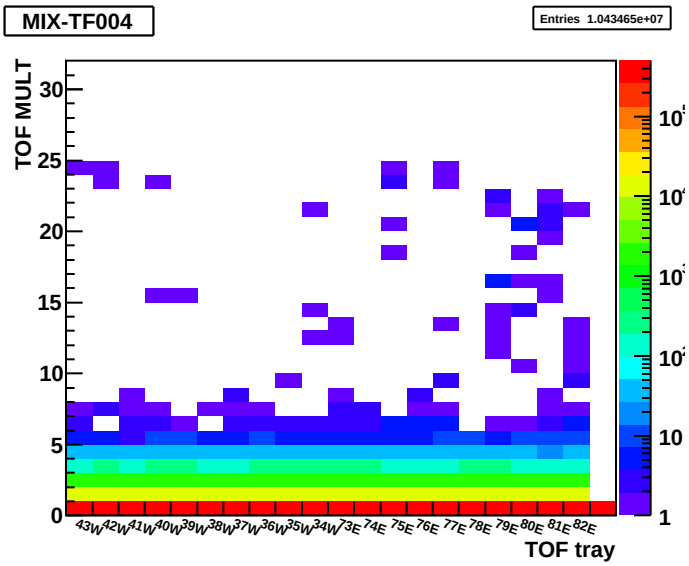

Endcap Jet Patches
Entries 1490664
JP ADC
JP ID

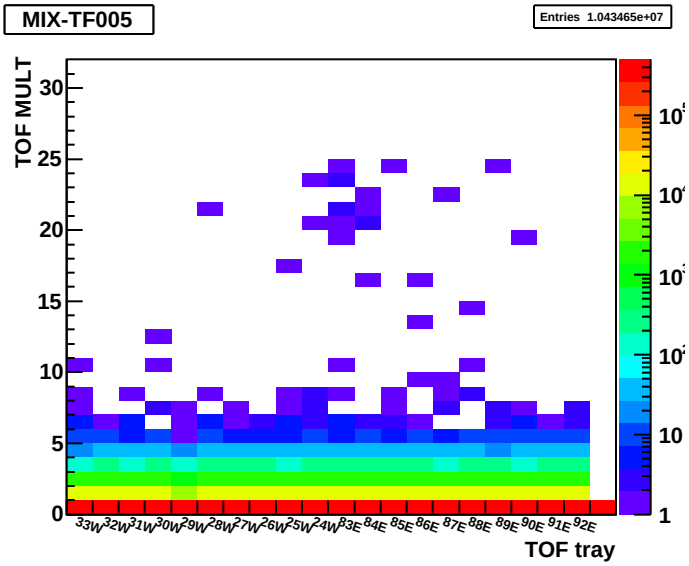

Hybrid Jet Patches
Entries 496888
JP ADC
JP ID

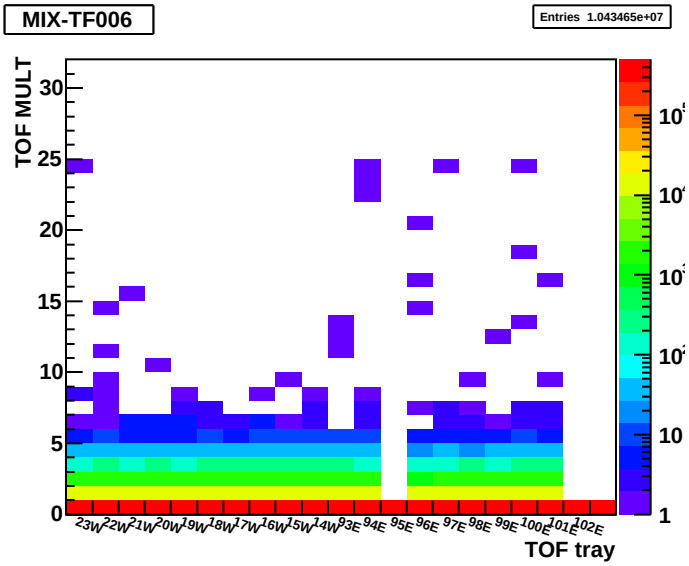

MIX-TF001
Entries 1.043465e+07
TOF MULT
TOF tray

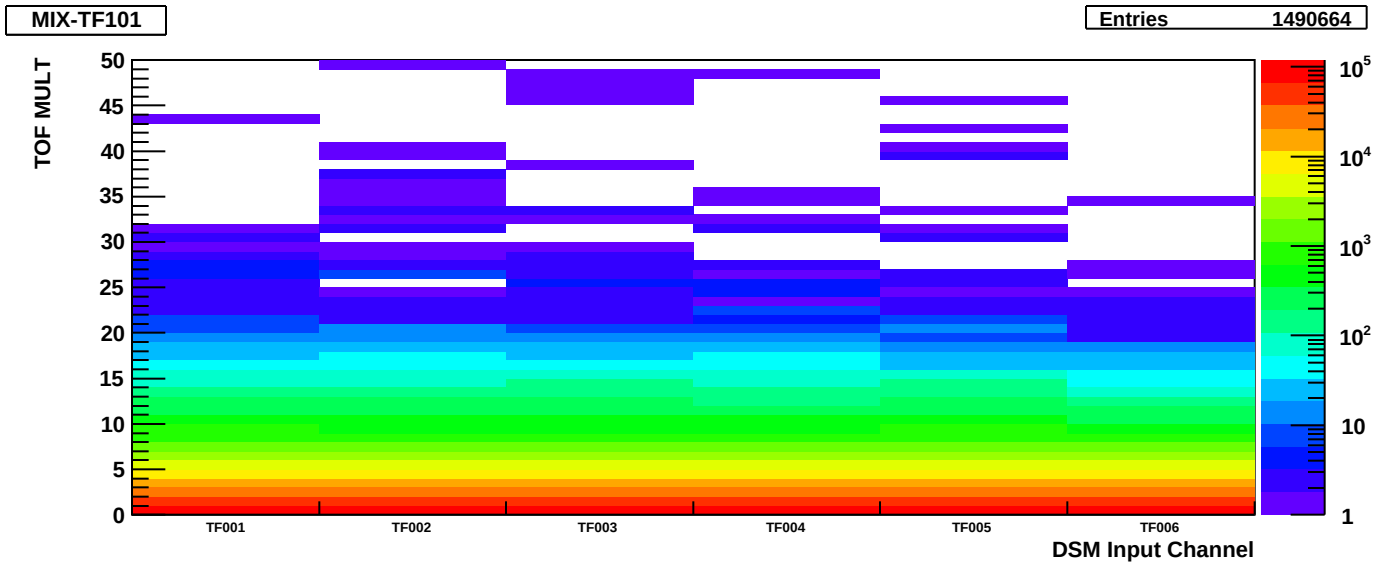

MIX-TF002
Entries 1.043465e+07
TOF MULT
TOF tray

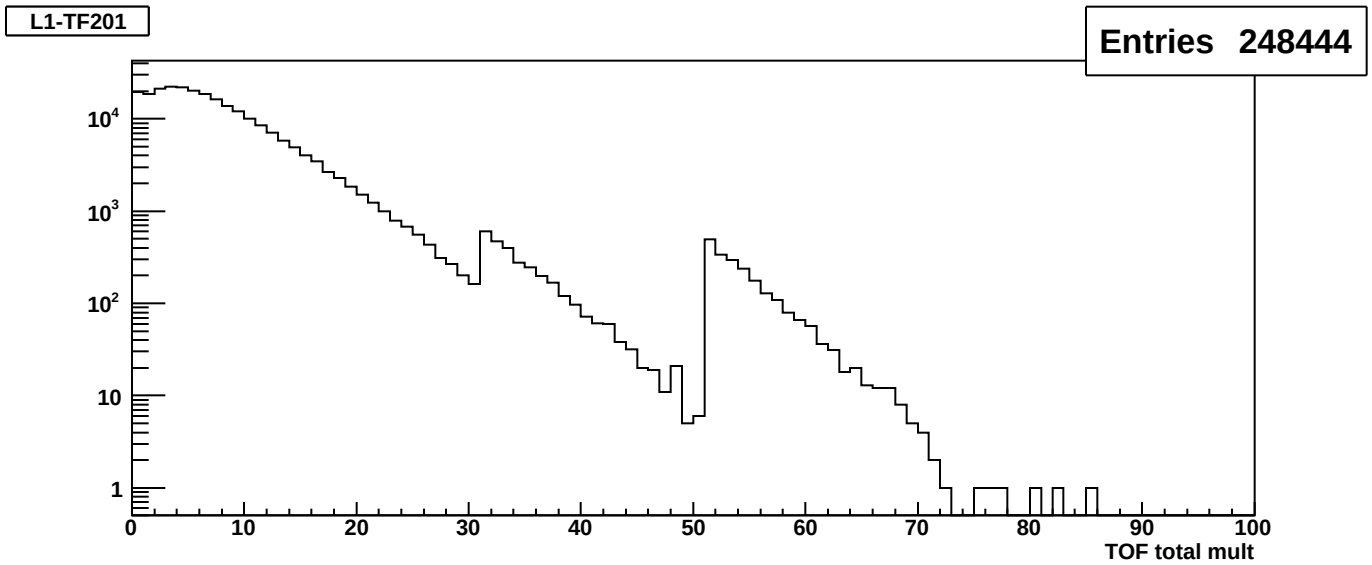

MIX-TF003
Entries 1.043465e+07
TOF MULT
TOF tray

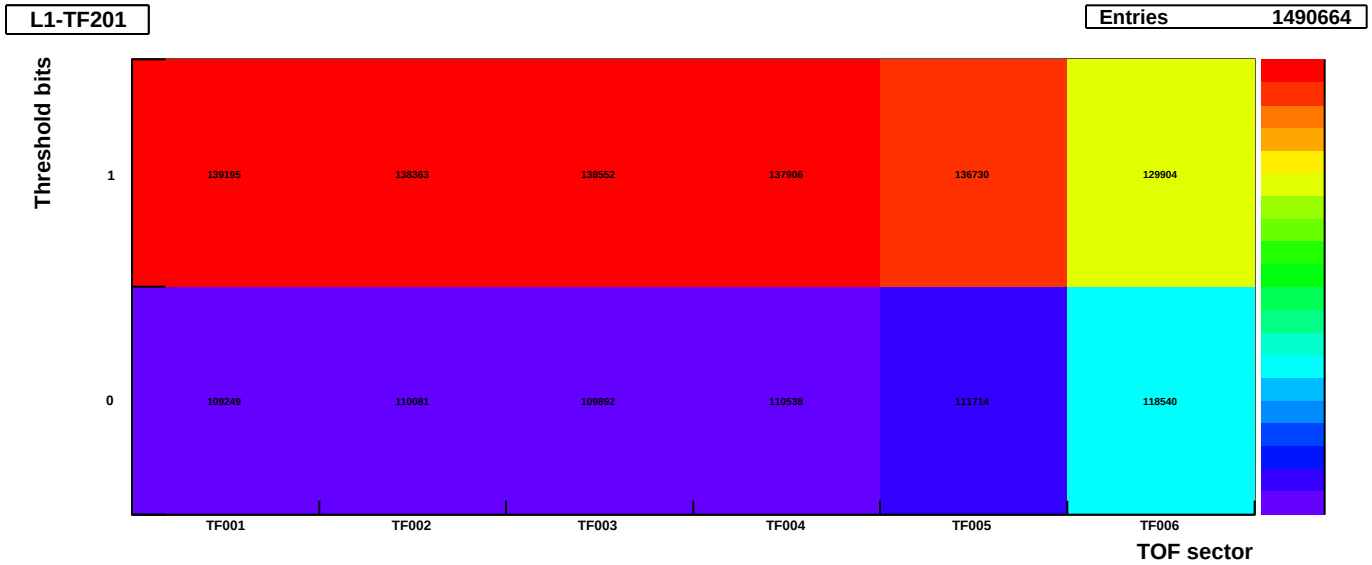

MIX-TF004
Entries 1.043465e+07
TOF MULT
TOF tray

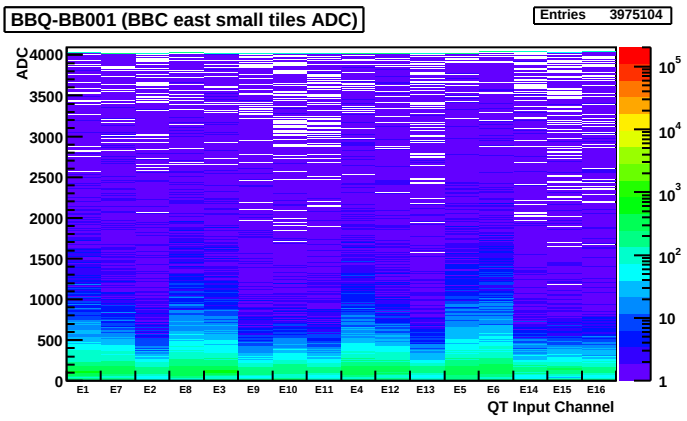

MIX-TF005
Entries 1.043465e+07
TOF MULT
TOF tray

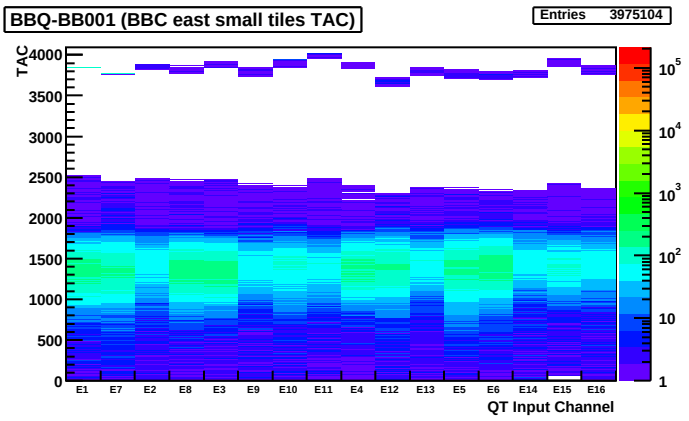

MIX-TF006
Entries 1.043465e+07
TOF MULT
TOF tray

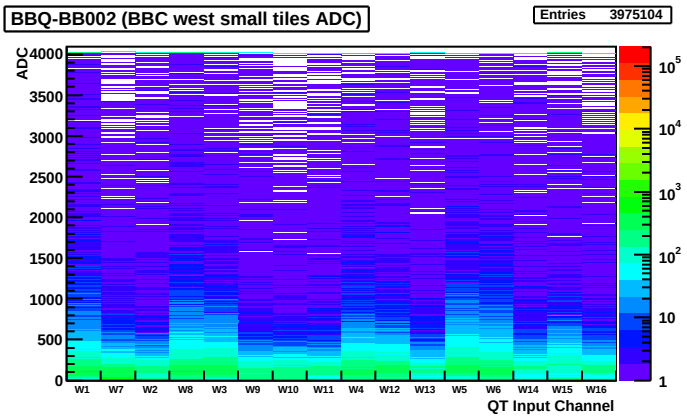

MIX-TF101
Entries 1490664
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

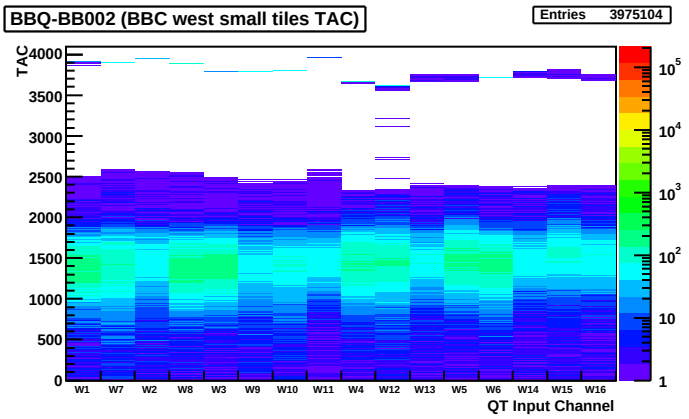

L1-TF201
Entries 248444
TOF total mult

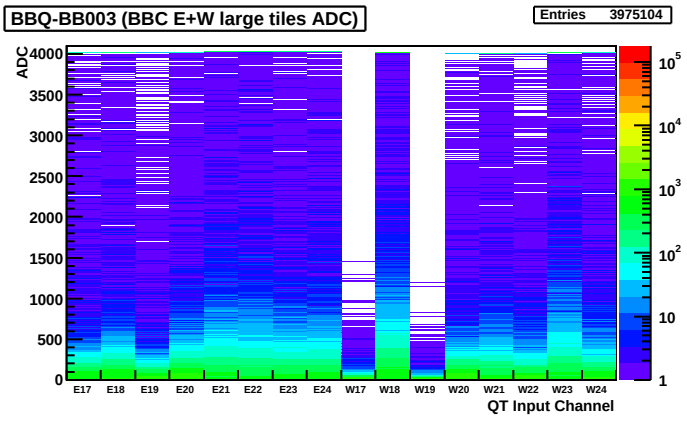

L1-TF201
Entries 1490664
Threshold bits
139195
138363
138552
137906
136730
129904
109249
110081
109892
110538
111714
118540
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

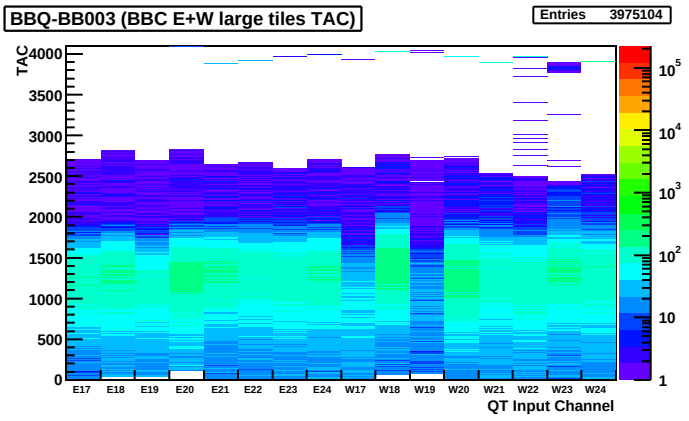

BBQ-BB001 (BBC east small tiles ADC)
Entries 3975104
ADC
QT Input Channel

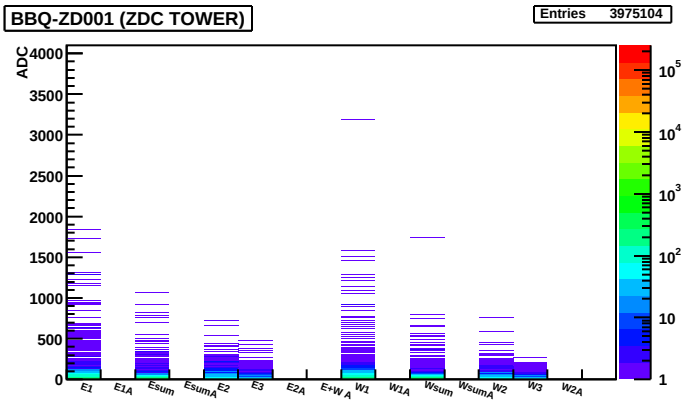

BBQ-BB001 (BBC east small tiles TAC)
Entries 3975104
TAC
QT Input Channel

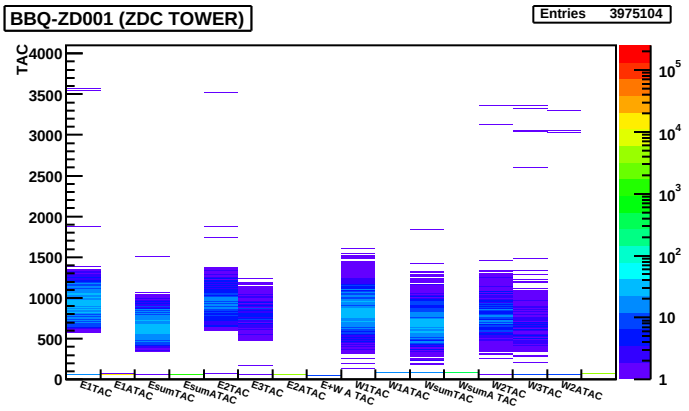

BBQ-BB002 (BBC west small tiles ADC)
Entries 3975104
ADC
QT Input Channel

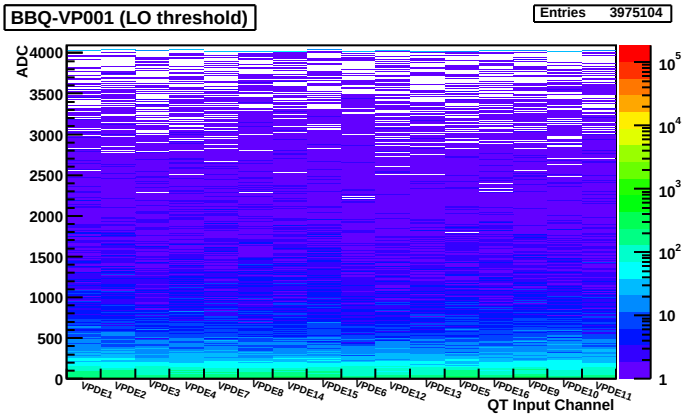

BBQ-BB002 (BBC west small tiles TAC)
Entries 3975104
TAC
QT Input Channel

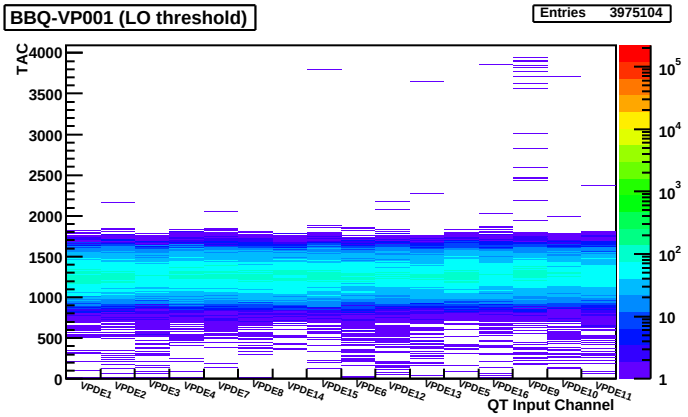

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3975104
ADC
QT Input Channel

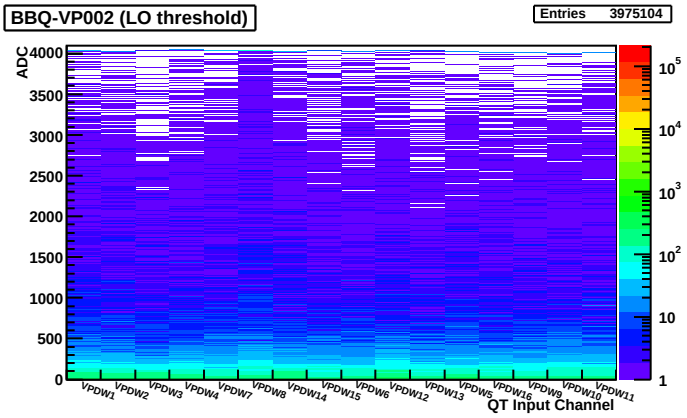

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3975104
TAC
QT Input Channel

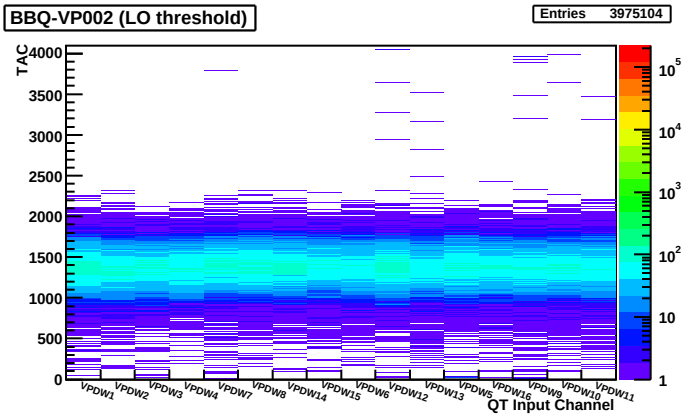

BBQ-ZD001 (ZDC TOWER)
Entries 3975104
ADC

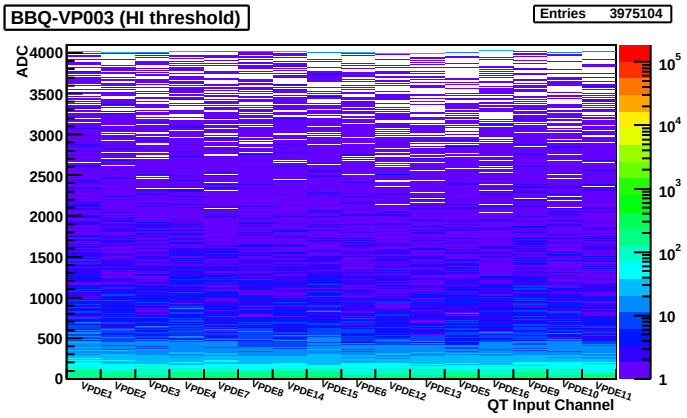

BBQ-ZD001 (ZDC TOWER)
Entries 3975104
TAC

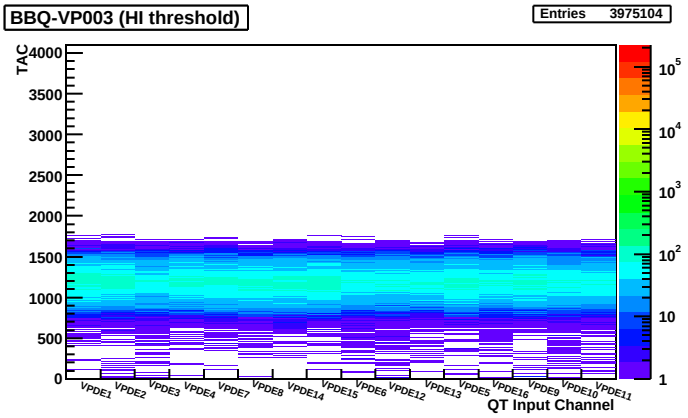

BBQ-VP001 (LO threshold)
Entries 3975104
ADC
QT Input Channel

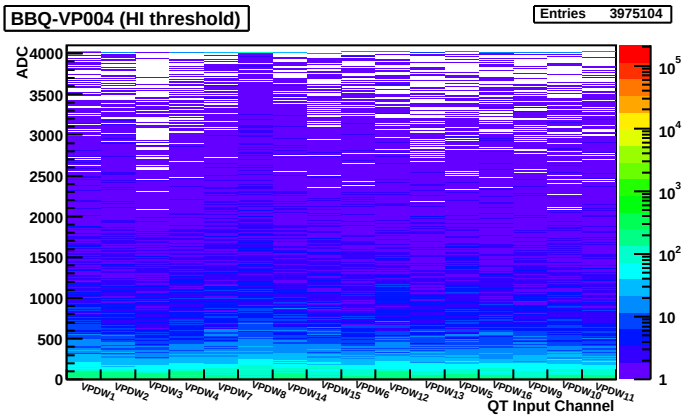

BBQ-VP001 (LO threshold)
Entries 3975104
TAC
QT Input Channel

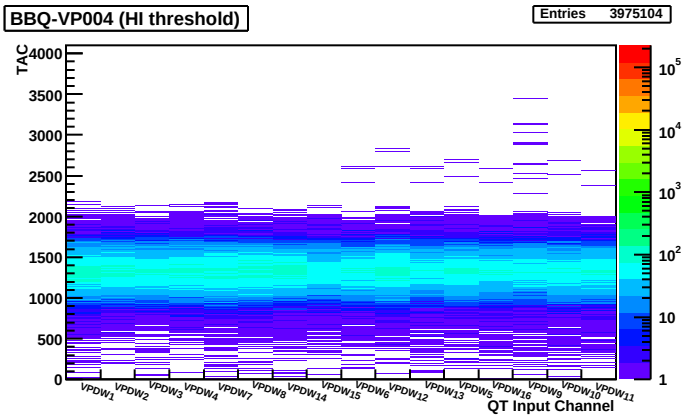

BBQ-VP002 (LO threshold)
Entries 3975104
ADC
QT Input Channel

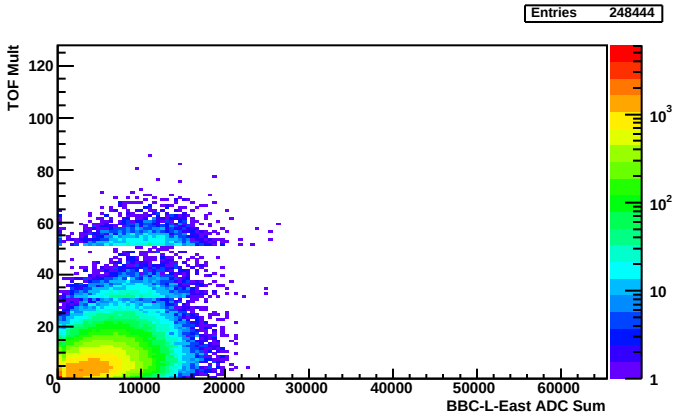

BBQ-VP002 (LO threshold)
Entries 3975104
TAC
QT Input Channel

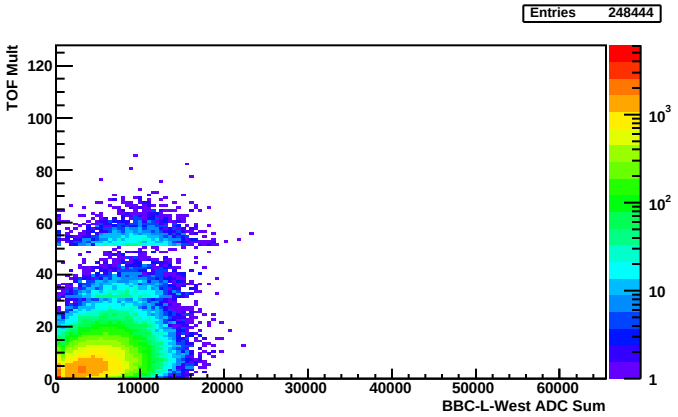

BBQ-VP003 (HI threshold)
Entries 3975104
ADC
QT Input Channel

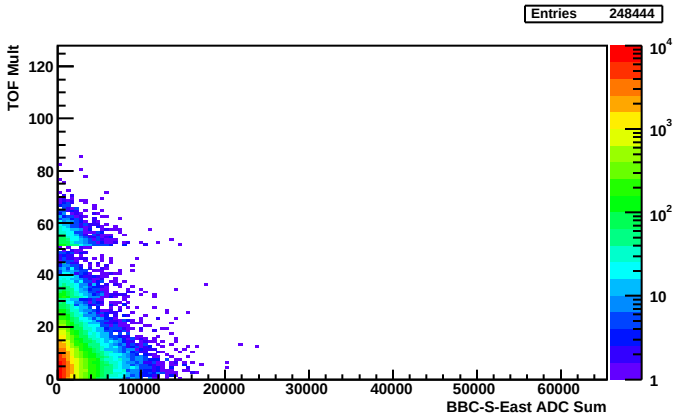

BBQ-VP003 (HI threshold)
Entries 3975104
TAC
QT Input Channel

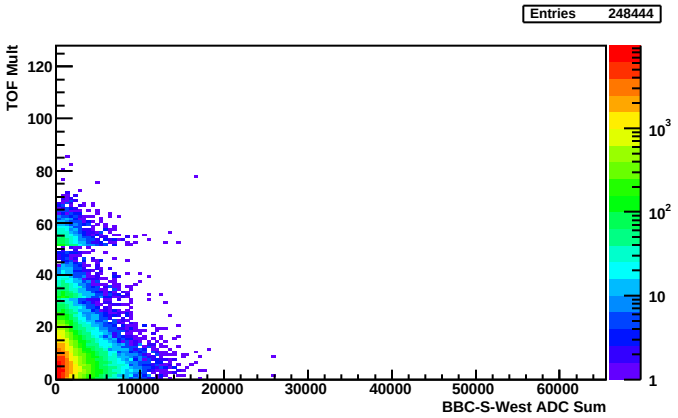

BBQ-VP004 (HI threshold)
Entries 3975104
ADC
QT Input Channel

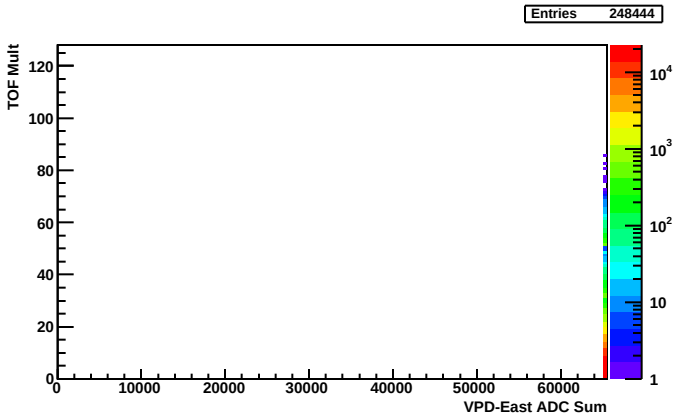

BBQ-VP004 (HI threshold)
Entries 3975104
TAC
QT Input Channel

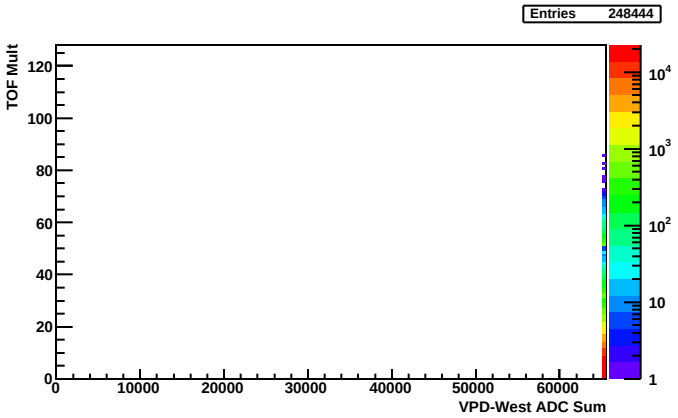

Entries 248444
TOF Mult
BBC-L-East ADC Sum

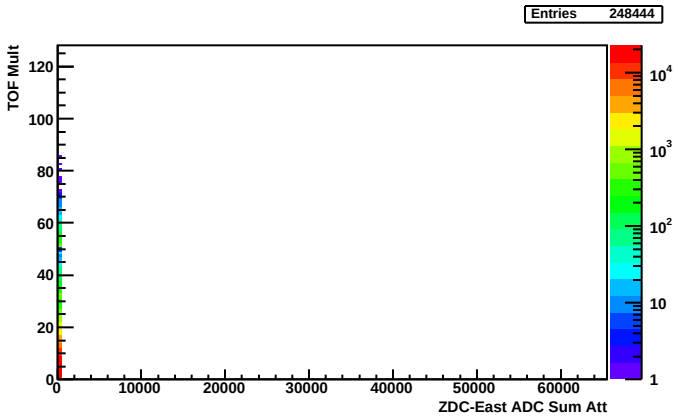

Entries 248444
TOF Mult
BBC-L-West ADC Sum

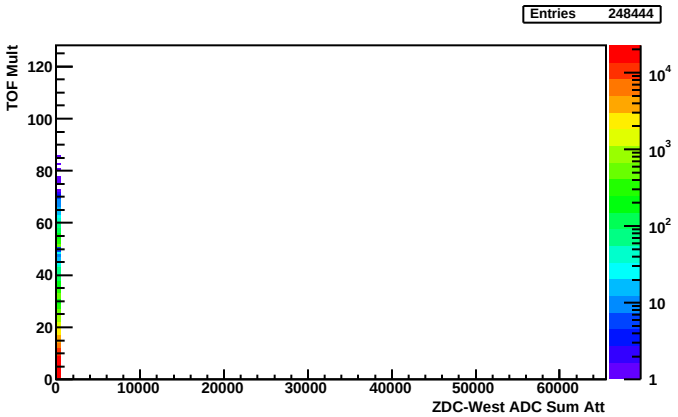

Entries 248444
TOF Mult
BBC-S-East ADC Sum

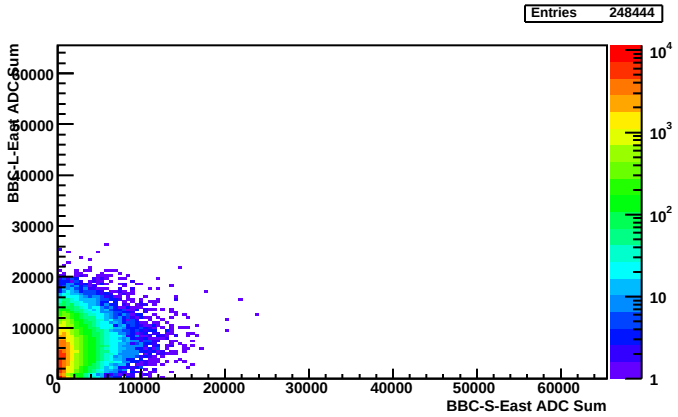

Entries 248444
TOF Mult
BBC-S-West ADC Sum

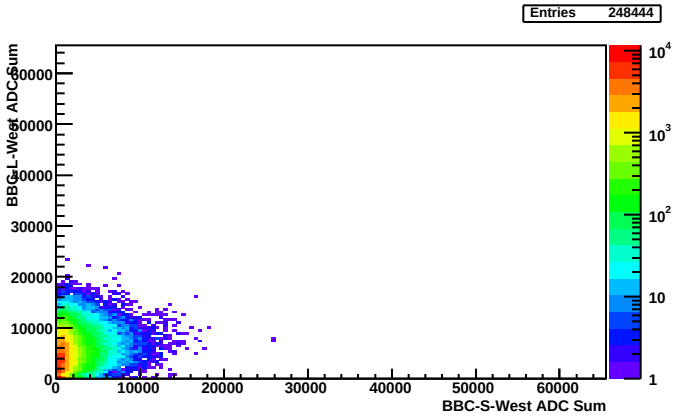

Entries 248444
TOF Mult
VPD-East ADC Sum

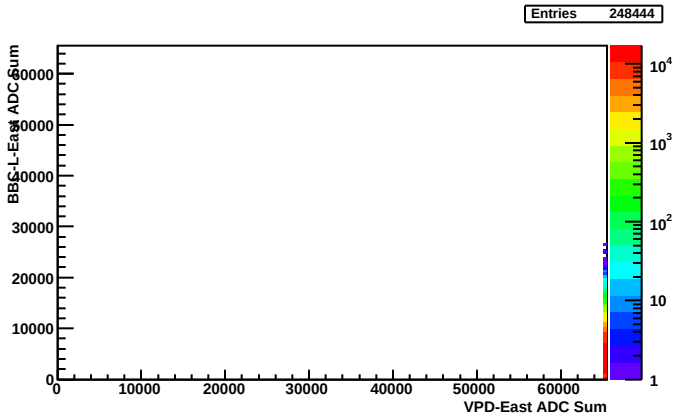

Entries 248444
TOF Mult
VPD-West ADC Sum

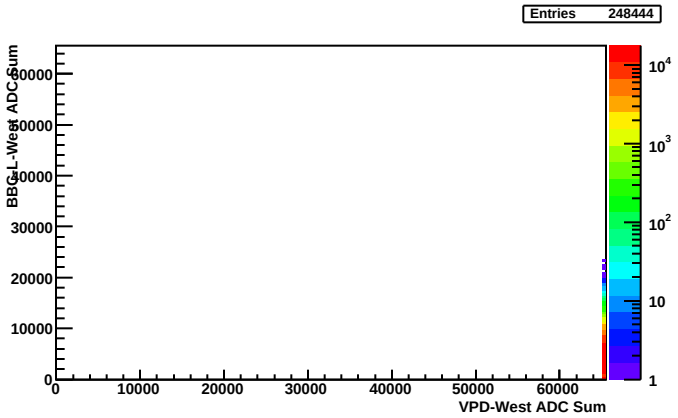

Entries 248444
TOF Mult
ZDC-East ADC Sum Att

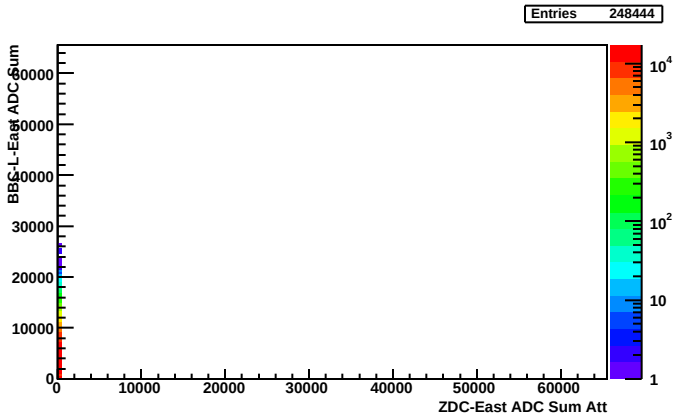

Entries 248444
TOF Mult
ZDC-West ADC Sum Att

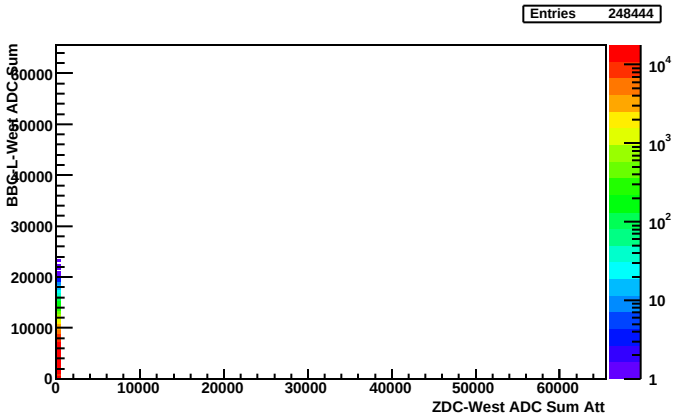

Entries 248444
BBC-L-East ADC Sum
BBC-S-East ADC Sum

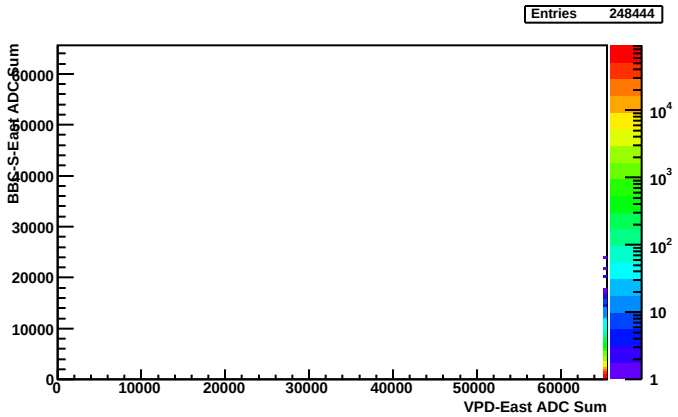

Entries 248444
BBC-L-West ADC Sum
BBC-S-West ADC Sum

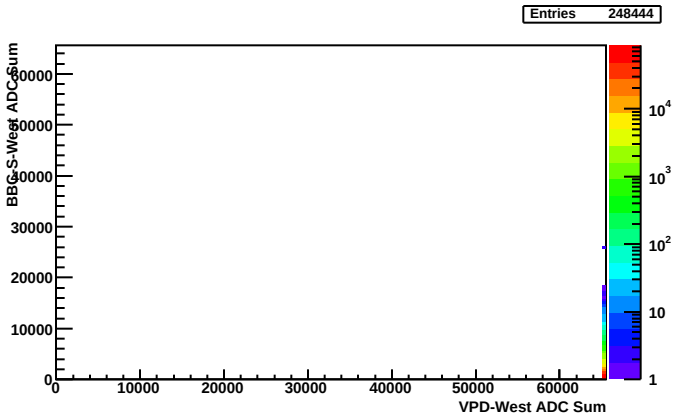

Entries 248444
BBC-L-East ADC Sum
VPD-East ADC Sum

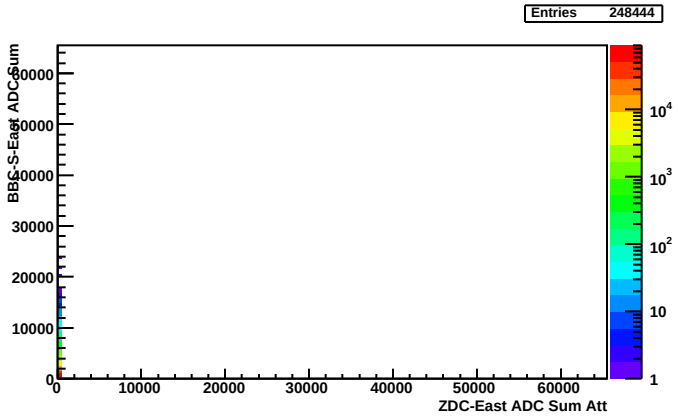

Entries 248444
BBC-L-West ADC Sum
VPD-West ADC Sum

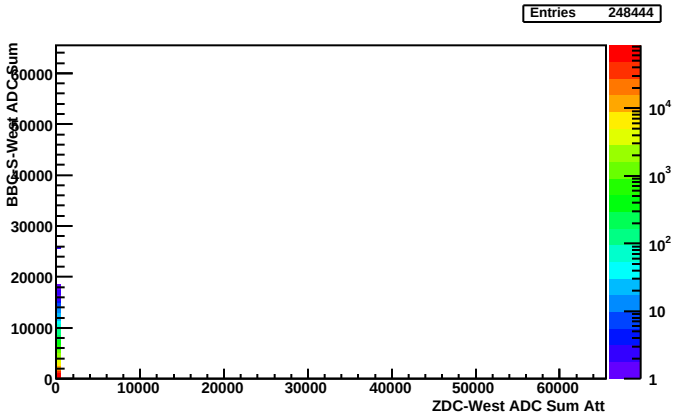

Entries 248444
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

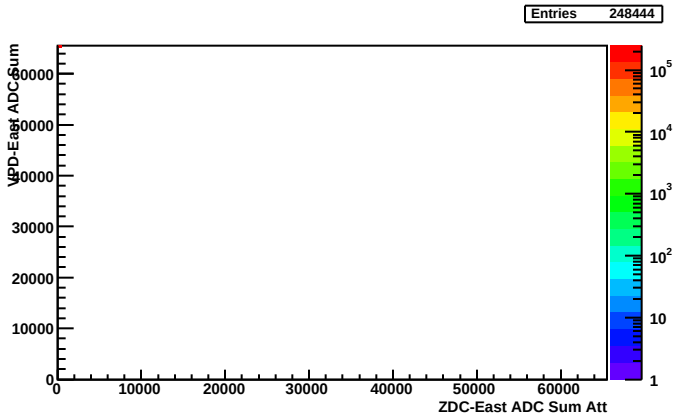

Entries 248444
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

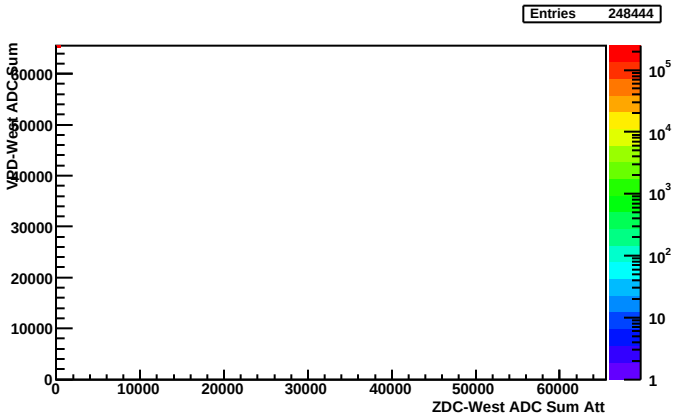

Entries 248444
BBC-S-East ADC Sum
VPD-East ADC Sum

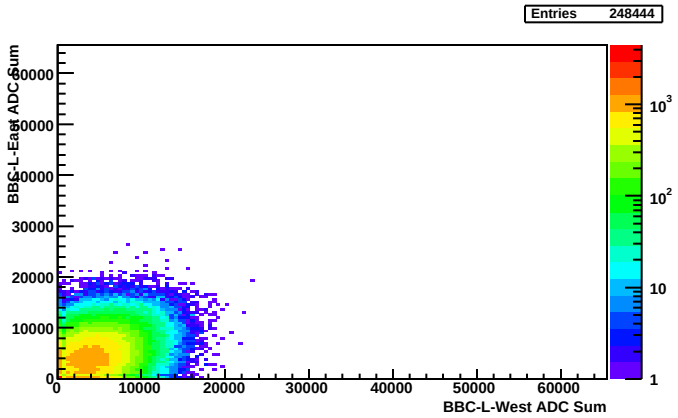

Entries 248444
BBC-S-West ADC Sum
VPD-West ADC Sum

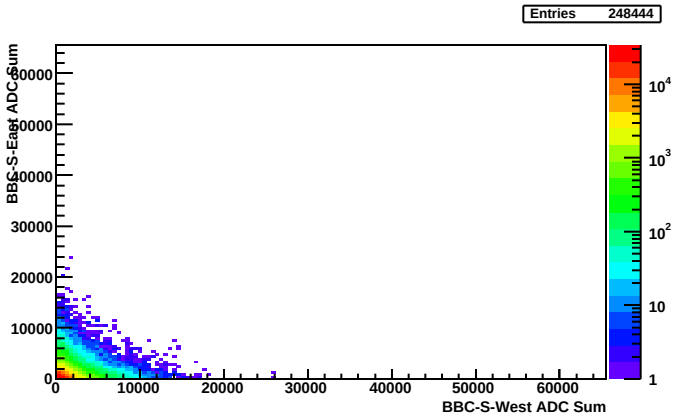

Entries 248444
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

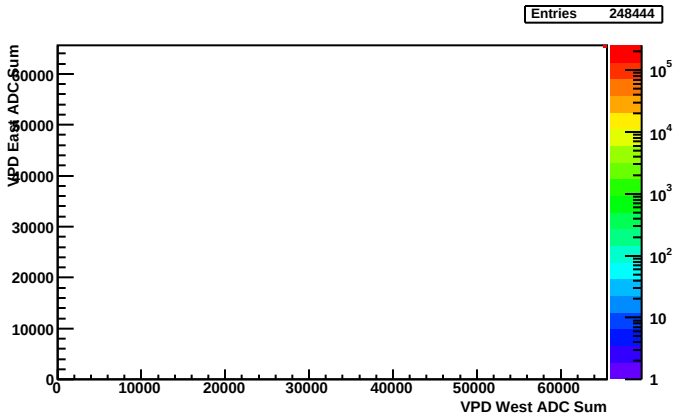

Entries 248444
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

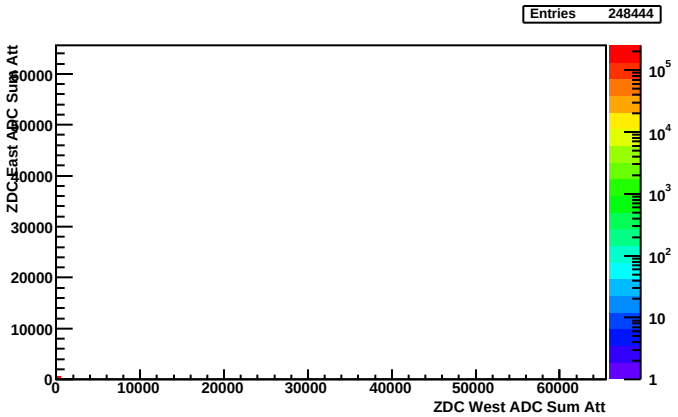

Entries 248444
VPD-East ADC Sum
ZDC-East ADC Sum Att

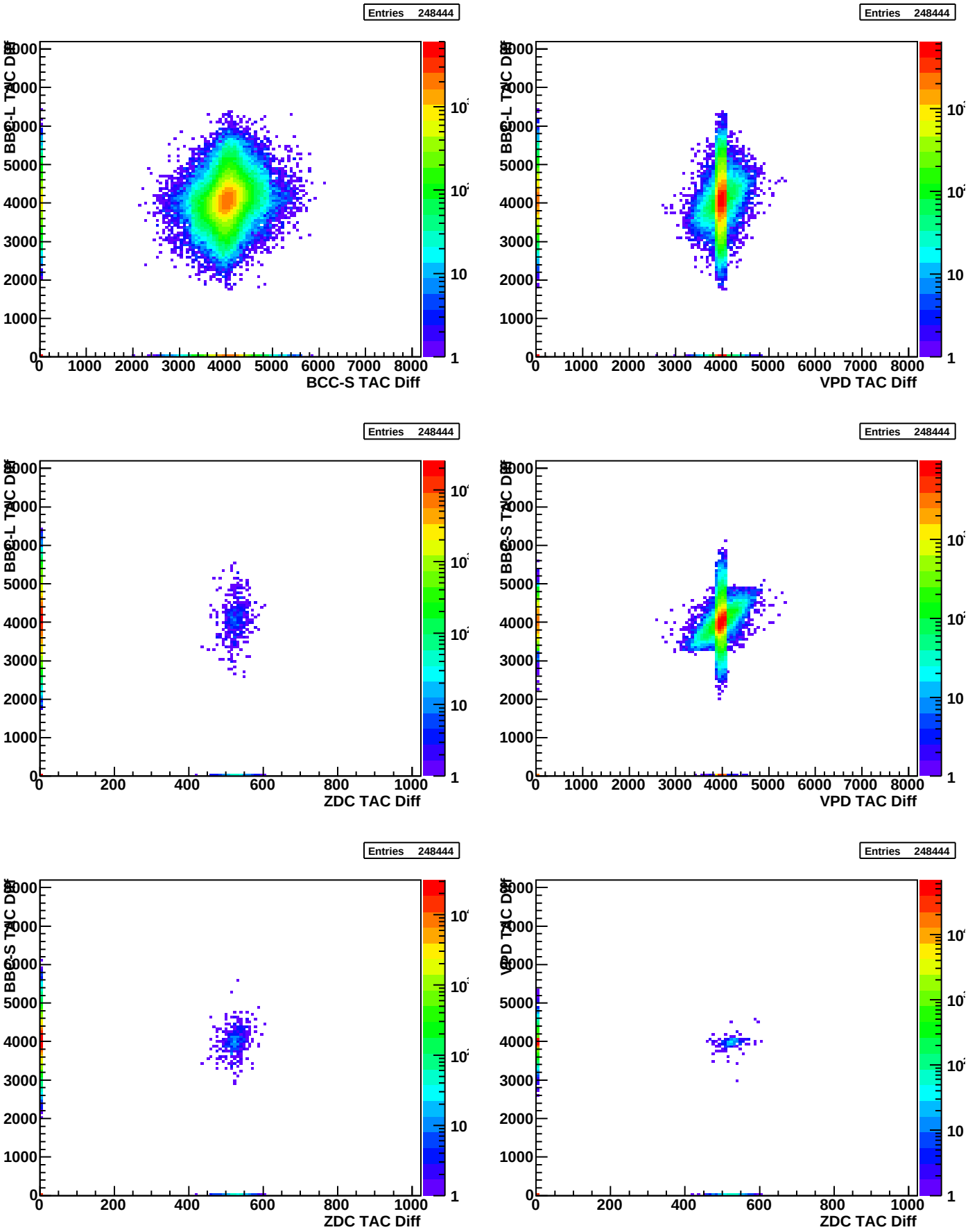

Entries 248444
VPD-West ADC Sum
ZDC-West ADC Sum Att

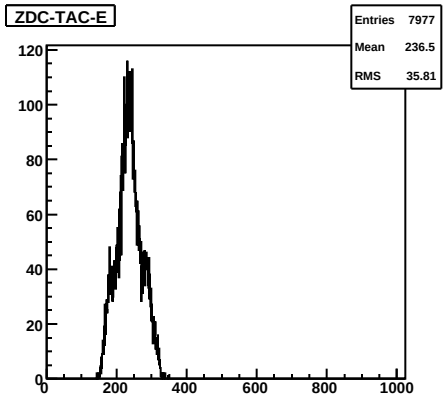

Entries 248444
BBC-L-East ADC Sum
BBC-L-West ADC Sum

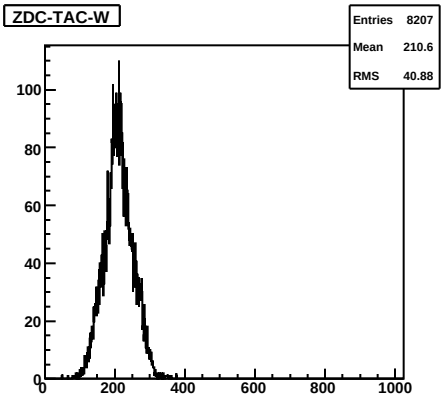

Entries 248444
BBC-S-East ADC Sum
BBC-S-West ADC Sum

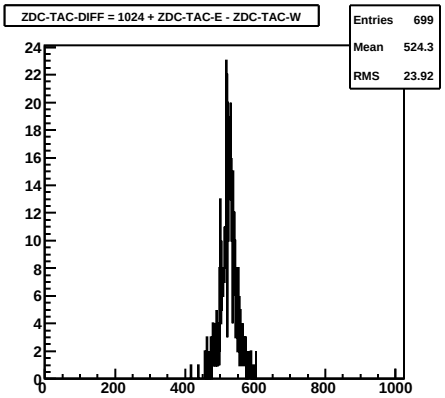

Entries 248444
VPD East ADC Sum
VPD West ADC Sum

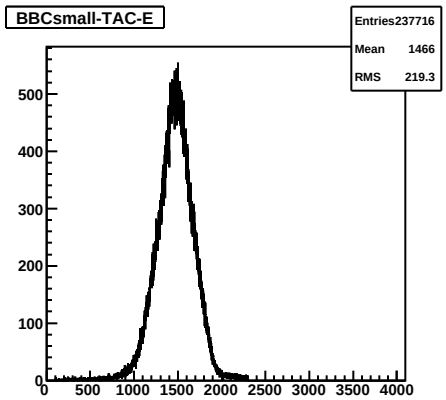

Entries 248444
ZDC East ADC Sum Att
ZDC West ADC Sum Att

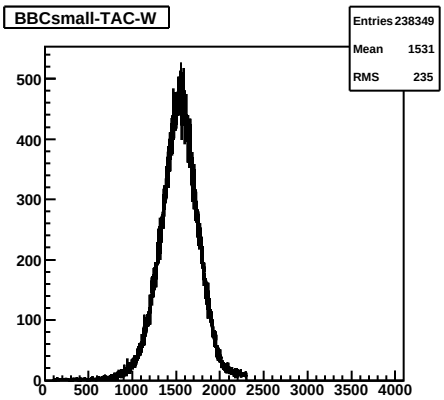

Entries 248444
BBC-L TAC Diff
BCC-S TAC Diff
Entries 248444
BBC-L TAC Diff
VPD TAC Diff
Entries 248444
BBC-L TAC Diff
ZDC TAC Diff
Entries 248444
BBC-S TAC Diff
VPD TAC Diff
Entries 248444
BBC-S TAC Diff
ZDC TAC Diff
Entries 248444
VPD TAC Diff
ZDC TAC Diff

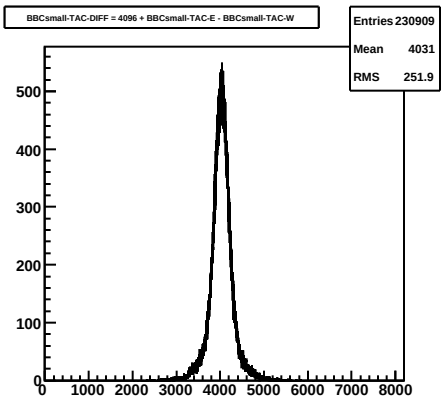

ZDC-TAC-E
Entries 7977
Mean 236.5
RMS 35.81

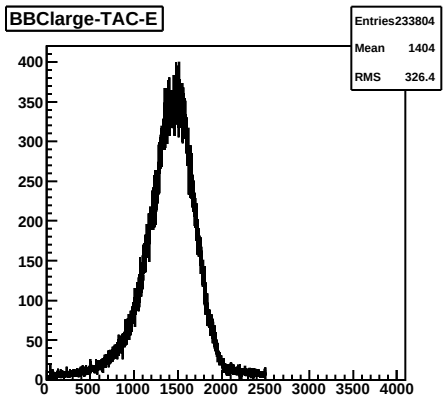

ZDC-TAC-W
Entries 8207
Mean 210.6
RMS 40.88

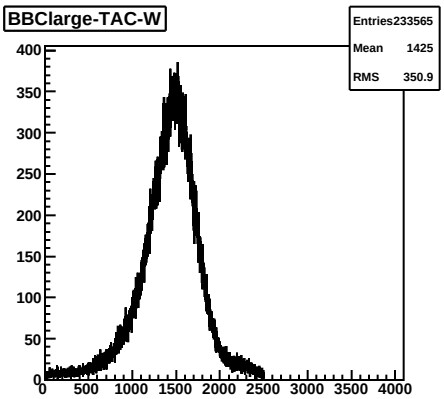

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 699
Mean 524.3
RMS 23.92

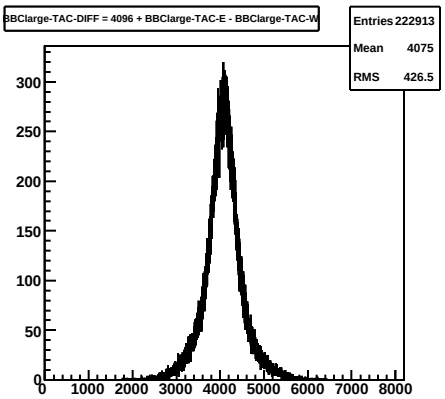

BBCsmall-TAC-E
Entries 237716
Mean 1466
RMS 219.3

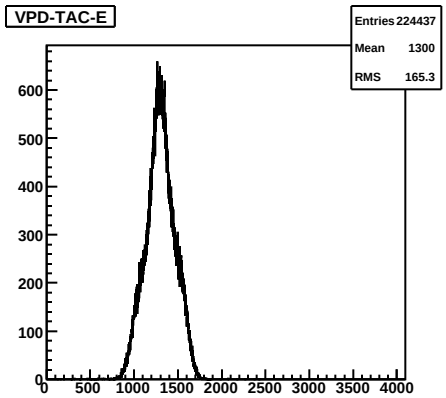

BBCsmall-TAC-W
Entries 238349
Mean 1531
RMS 235

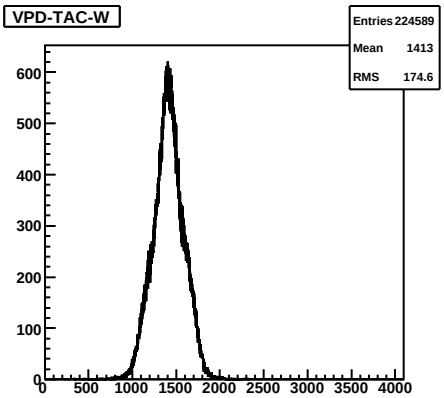

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 230909
Mean 4031
RMS 251.9

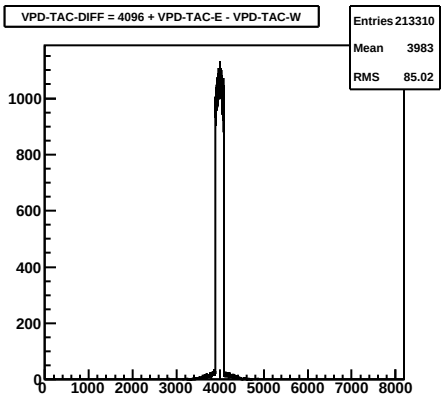

BBClarge-TAC-E
Entries 233804
Mean 1404
RMS 326.4

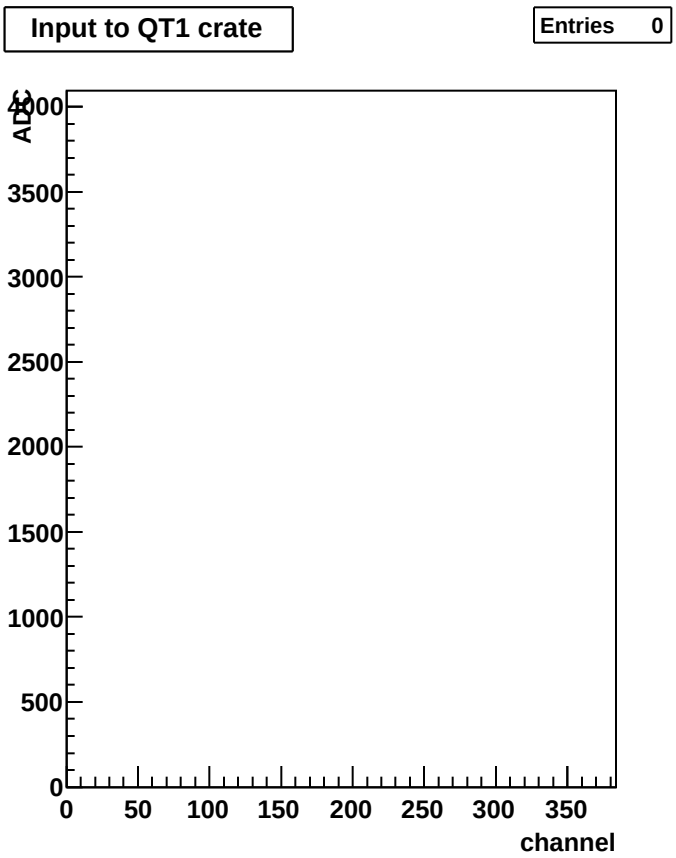

BBClarge-TAC-W
Entries 233565
Mean 1425
RMS 350.9

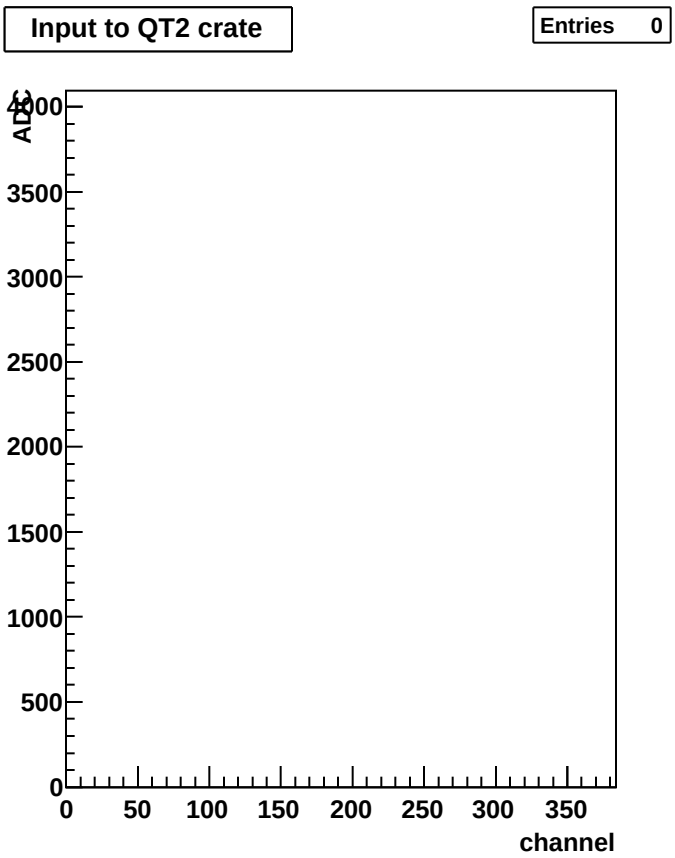

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 222913
Mean 4075
RMS 426.5

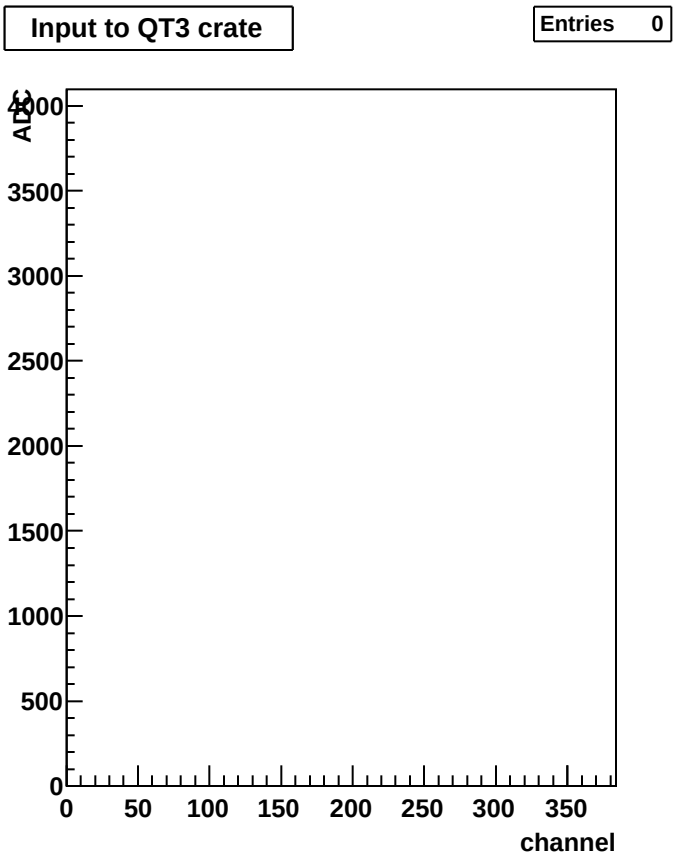

VPD-TAC-E
Entries 224437
Mean 1300
RMS 165.3

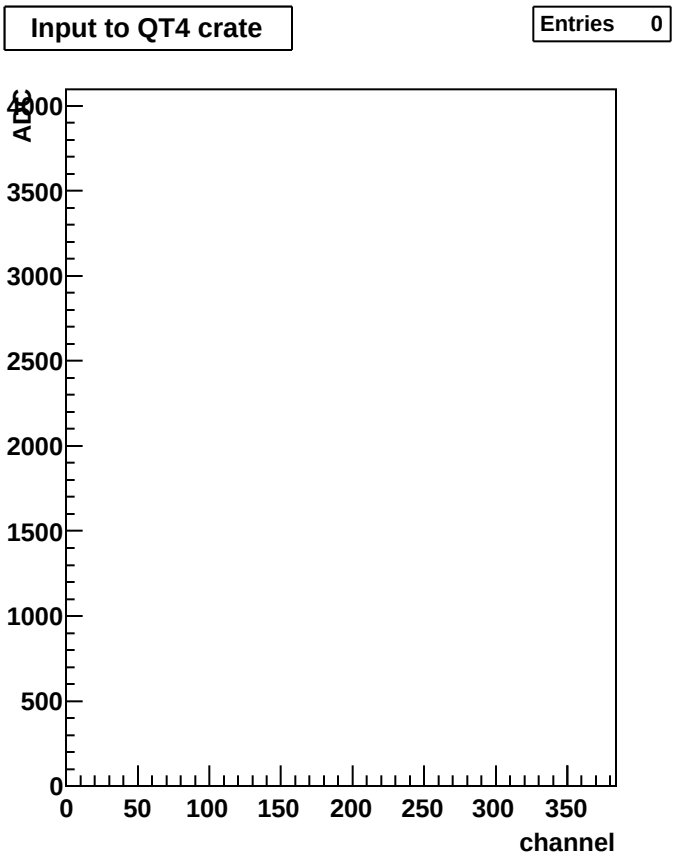

VPD-TAC-W
Entries 224589
Mean 1413
RMS 174.6

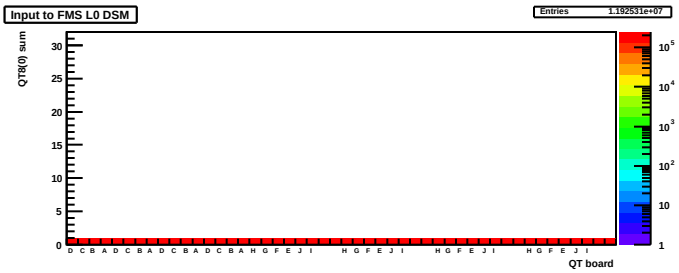

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 213310
Mean 3983
RMS 85.02

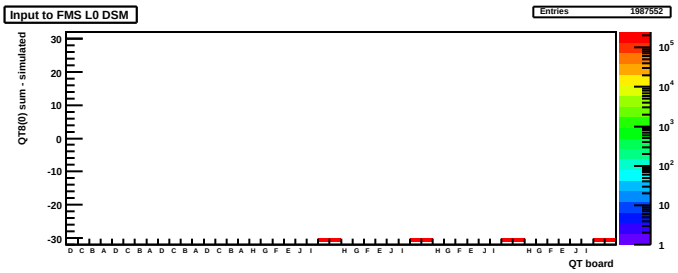

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

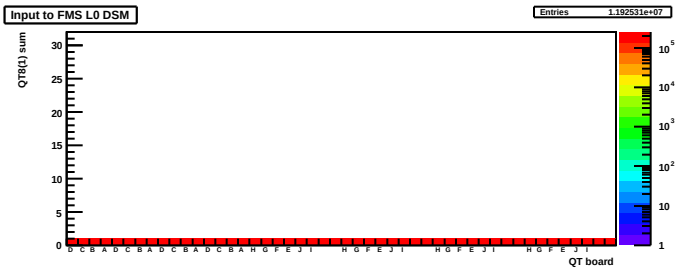

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

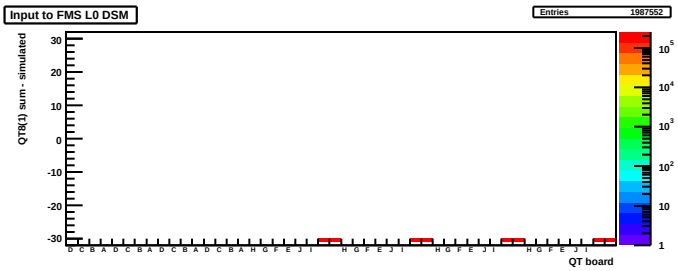

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

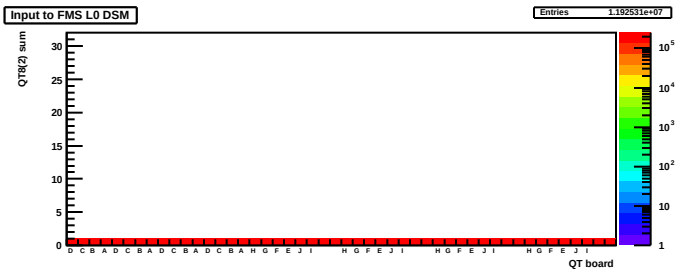

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

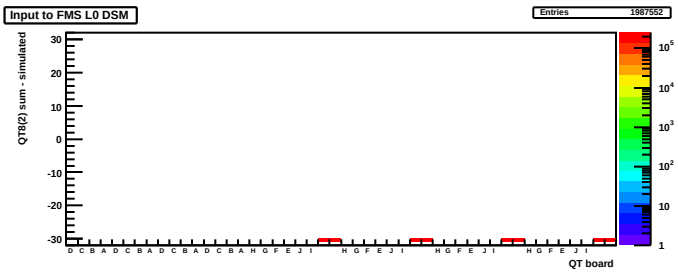

Input to FMS L0 DSM
Entries 1.192531e+07
QT8(0) sum
QT board

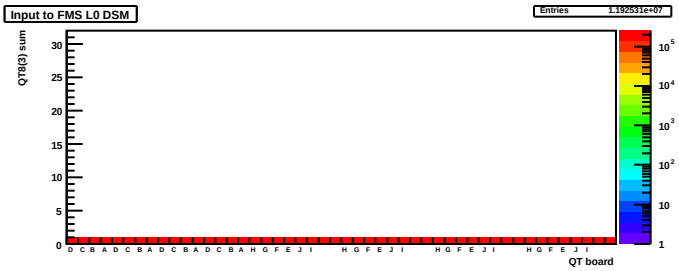

Input to FMS L0 DSM
Entries 1987552
QT8(0) sum - simulated
QT board

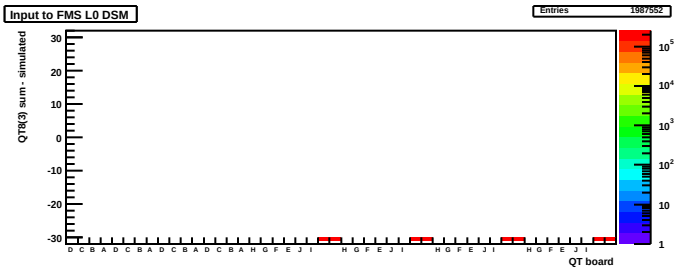

Input to FMS L0 DSM
Entries 1.192531e+07
QT8(1) sum
QT board

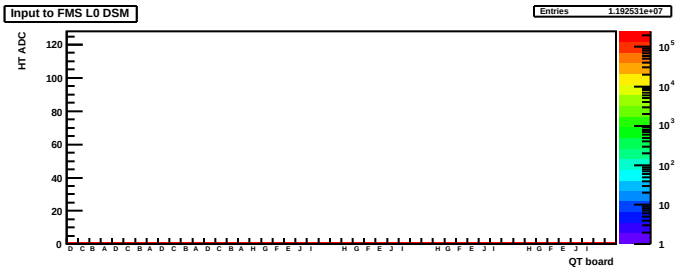

Input to FMS L0 DSM
Entries 1987552
QT8(1) sum - simulated
QT board

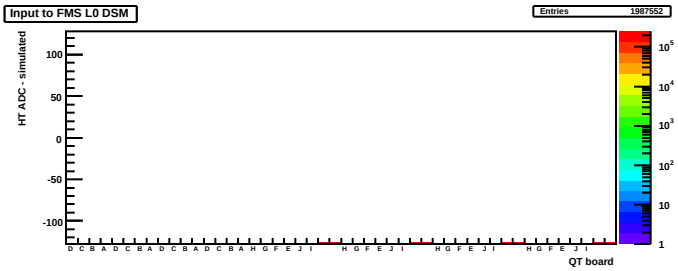

Input to FMS L0 DSM
Entries 1.192531e+07
QT8(2) sum
QT board

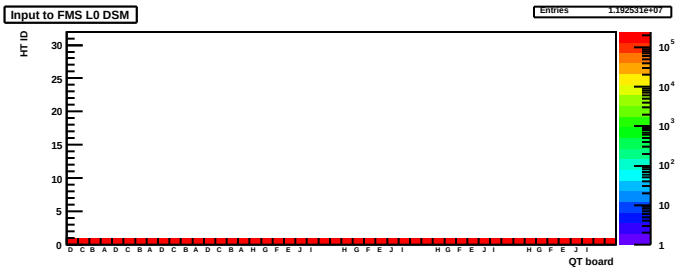

Input to FMS L0 DSM
Entries 1987552
QT8(2) sum - simulated
QT board

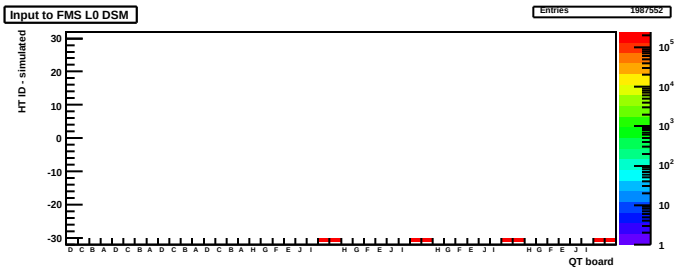

Input to FMS L0 DSM
Entries 1.192531e+07
QT8(3) sum
QT board

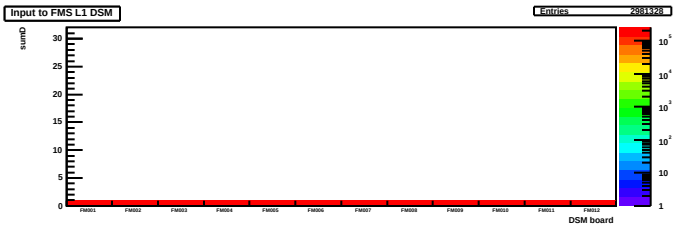

Input to FMS L0 DSM
Entries 1987552
QT8(3) sum - simulated
QT board

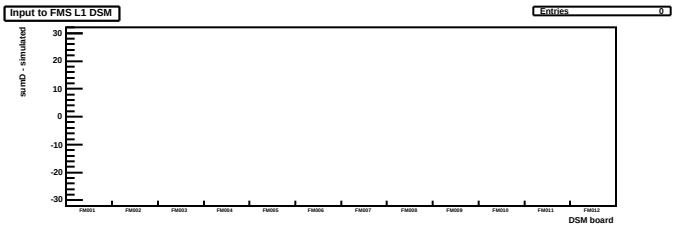

Input to FMS L0 DSM
Entries 1.192531e+07
HT ADC
QT board

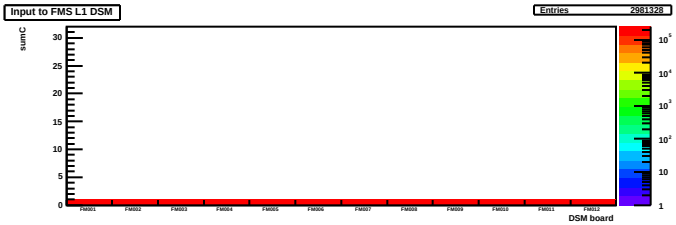

Input to FMS L0 DSM
Entries 1987552
HT ADC - simulated
QT board

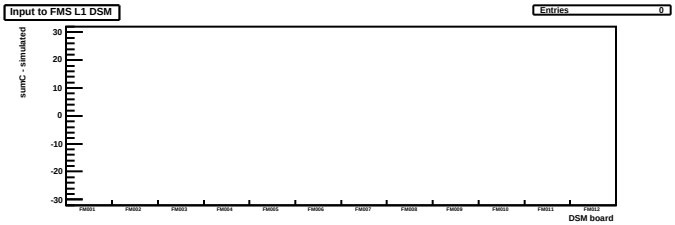

Input to FMS L0 DSM
Entries 1.192531e+07
HT ID
QT board

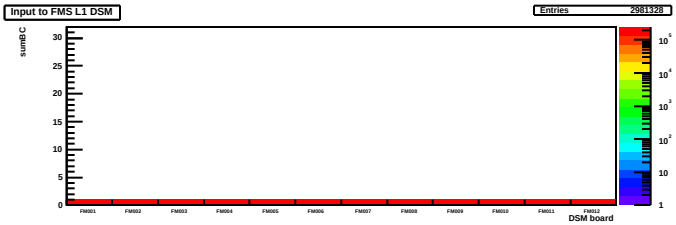

Input to FMS L0 DSM
Entries 1987552
HT ID - simulated
QT board

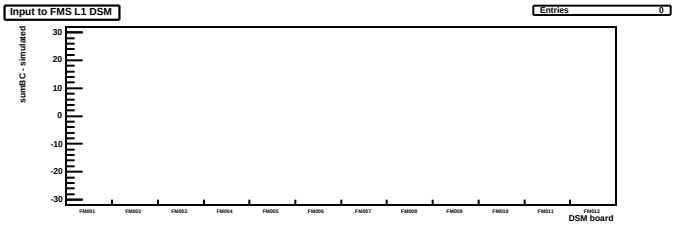

Input to FMS L1 DSM
Entries 2981328
sumD
DSM board

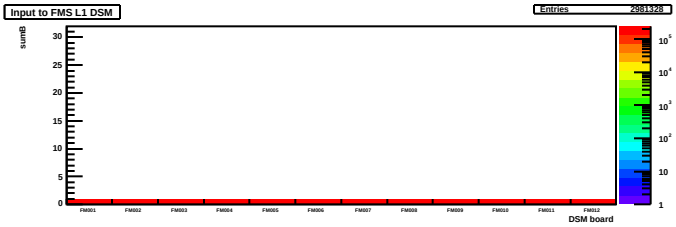

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

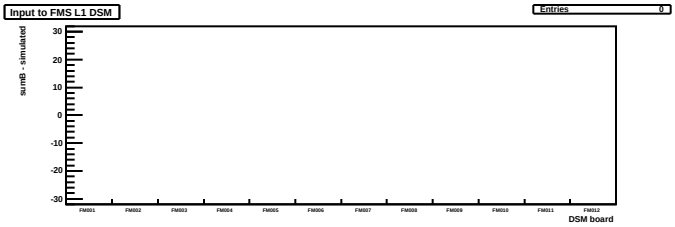

Input to FMS L1 DSM
Entries 2981328
sumC
DSM board

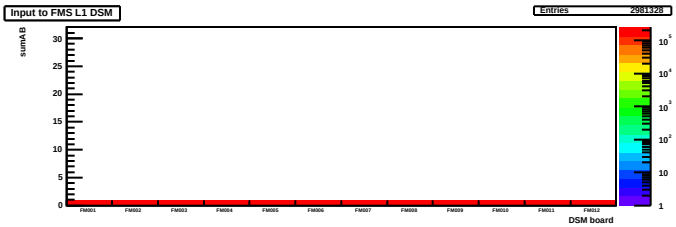

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

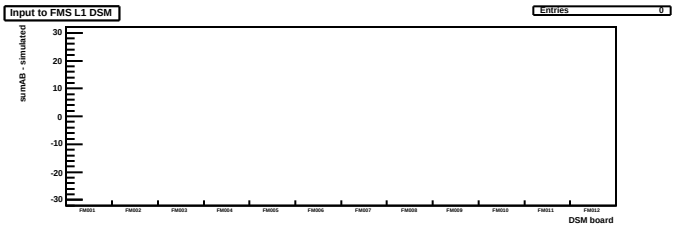

Input to FMS L1 DSM
Entries 2981328
sumBC
DSM board

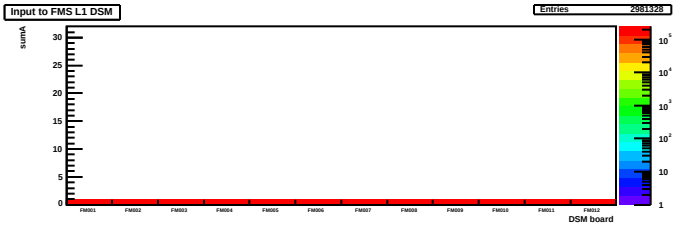

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

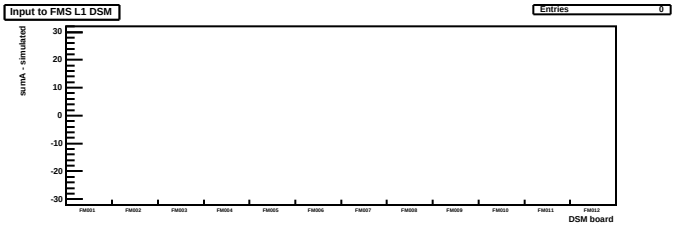

Input to FMS L1 DSM
Entries 2981328
sumB
DSM board

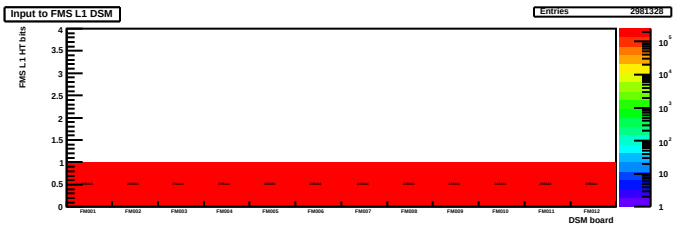

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

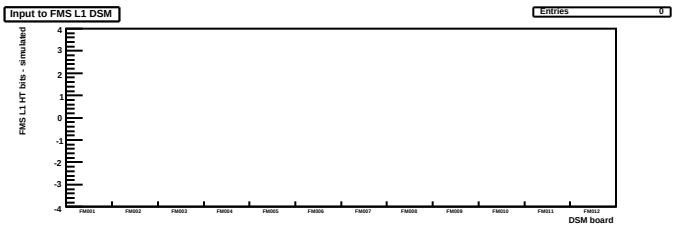

Input to FMS L1 DSM
Entries 2981328
sumAB
DSM board

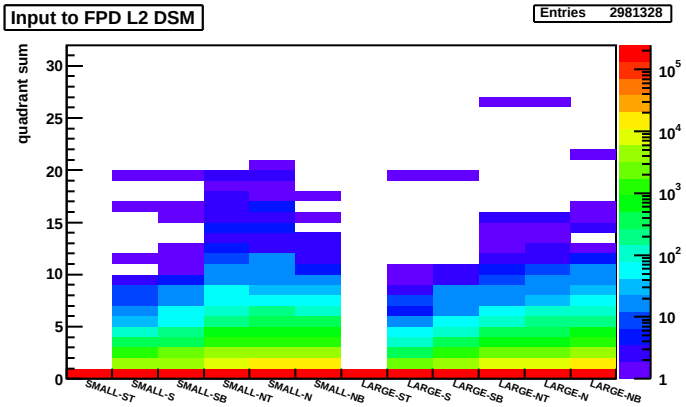

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

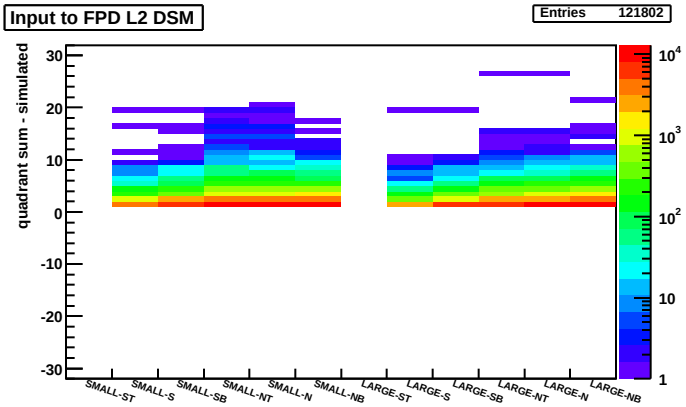

Input to FMS L1 DSM
Entries 2981328
sumA
DSM board

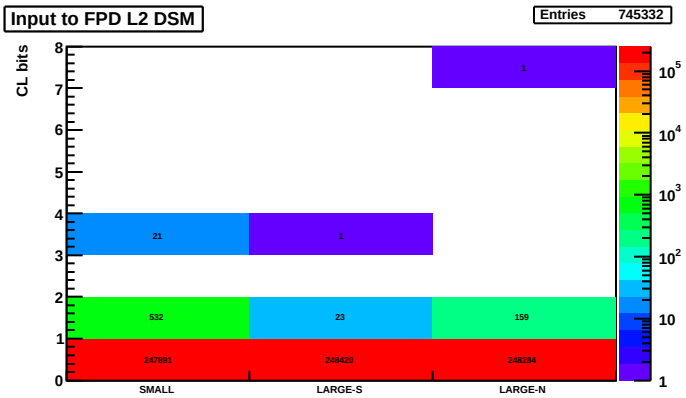

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

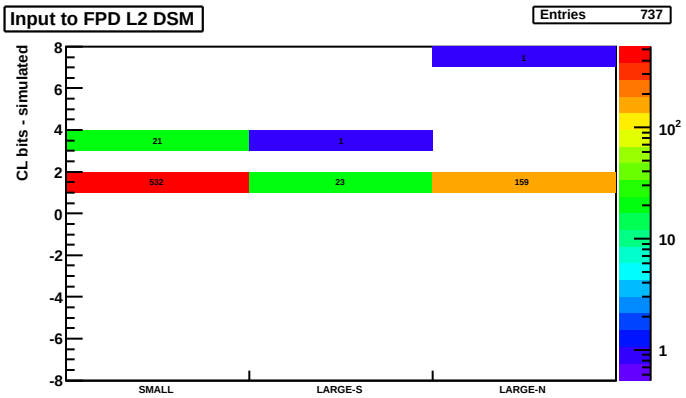

Input to FMS L1 DSM
Entries 2981328
FMS L1 HT bits
DSM board

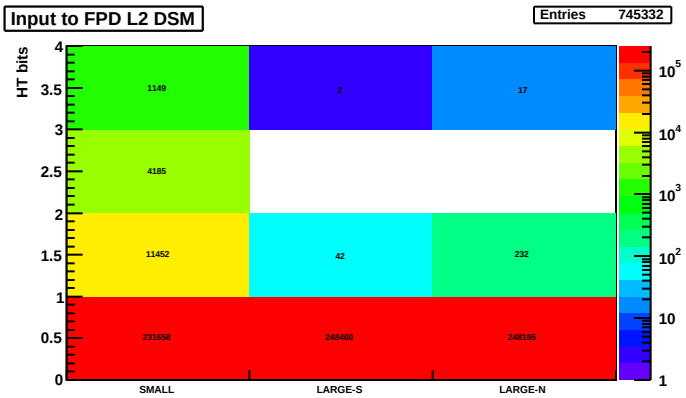

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

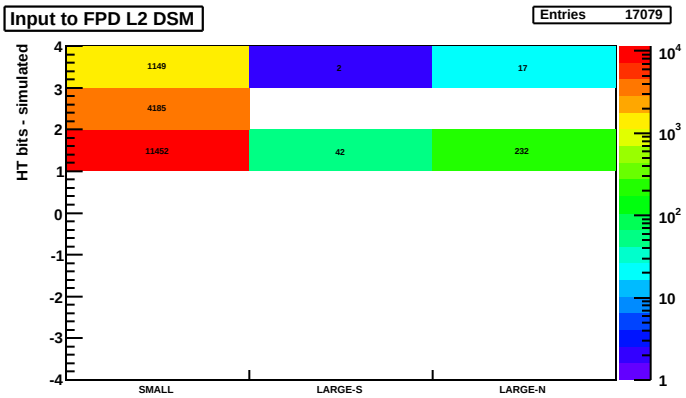

Input to FPD L2 DSM
Entries 2981328
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

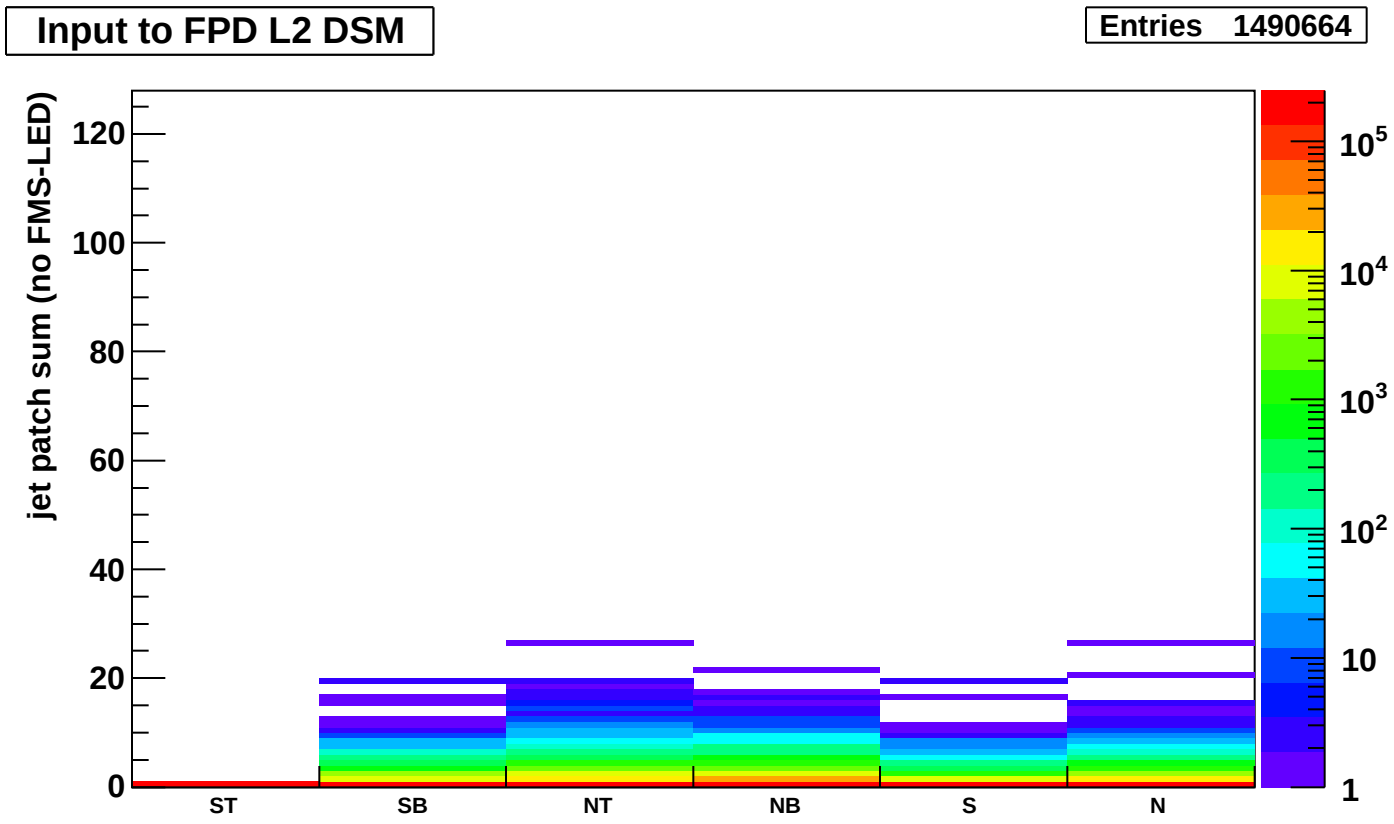

Input to FPD L2 DSM
Entries 121802
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

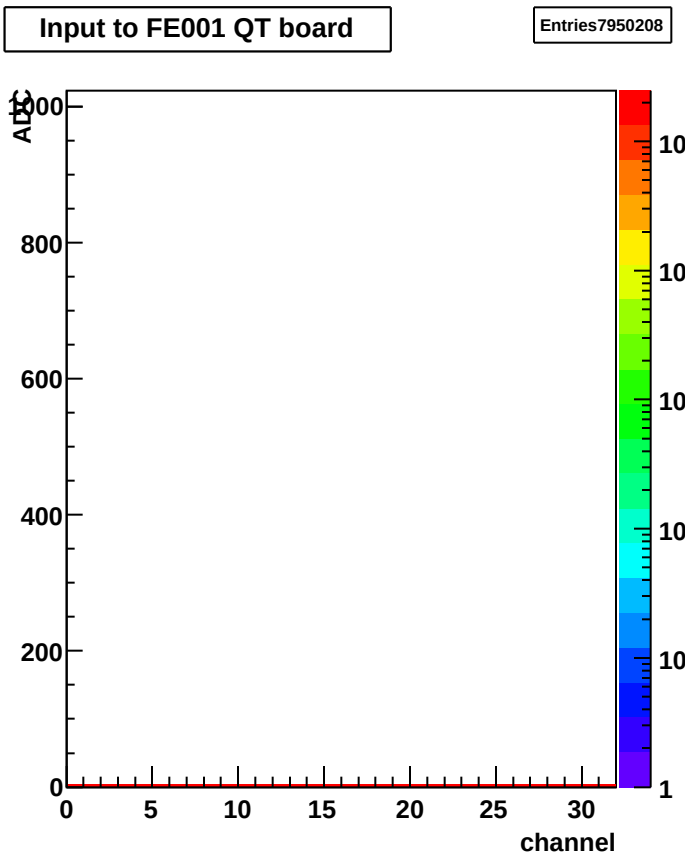

Input to FPD L2 DSM
Entries 745332
CL bits
1
21
1
532
23
159
247891
248420
248284
SMALL
LARGE-S
LARGE-N

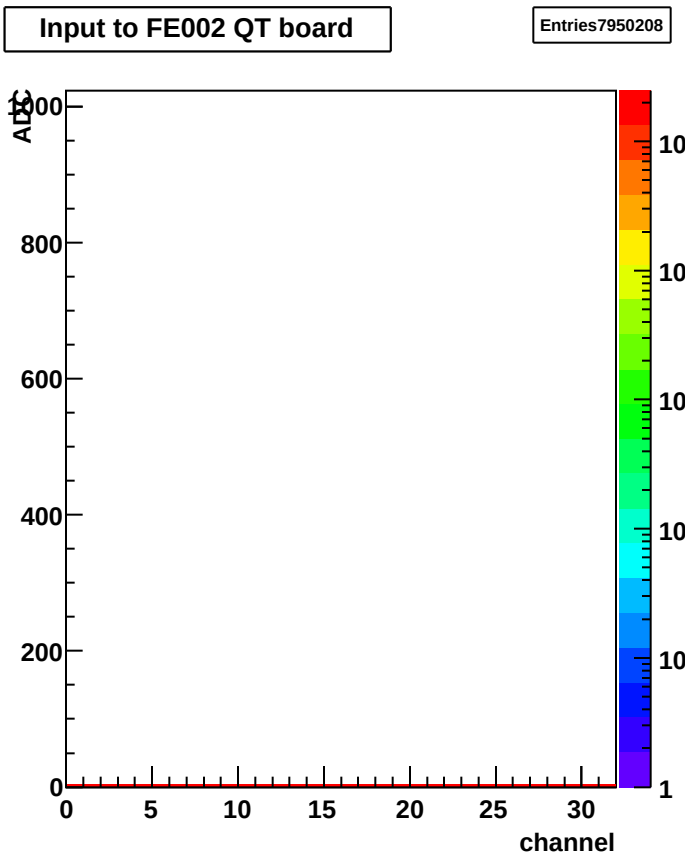

Input to FPD L2 DSM
Entries 737
CL bits - simulated
1
21
1
532
23
159
SMALL
LARGE-S
LARGE-N

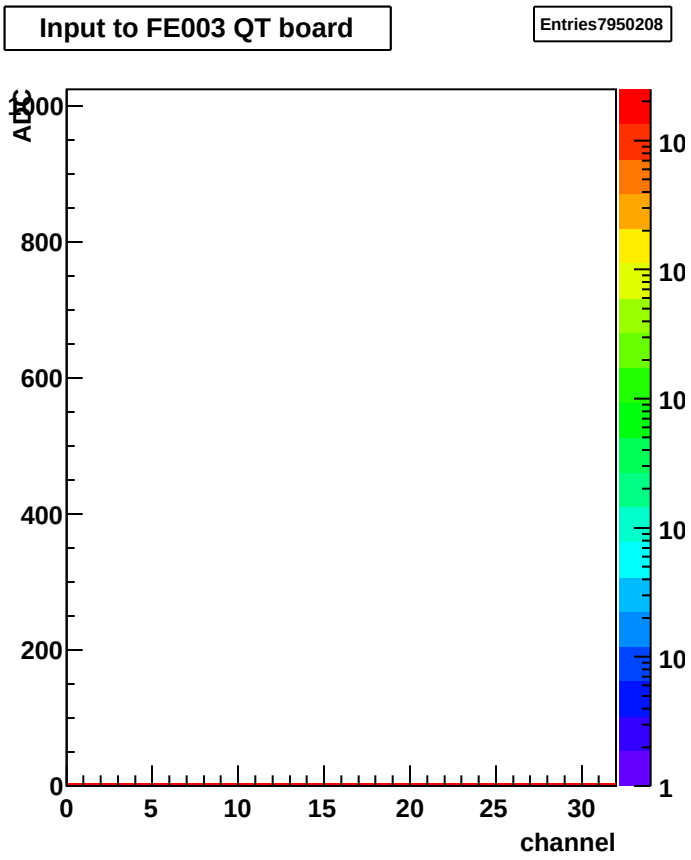

Input to FPD L2 DSM
Entries 745332
HT bits
1149
2
17
4185
11452
42
232
231658
248400
248195
SMALL
LARGE-S
LARGE-N

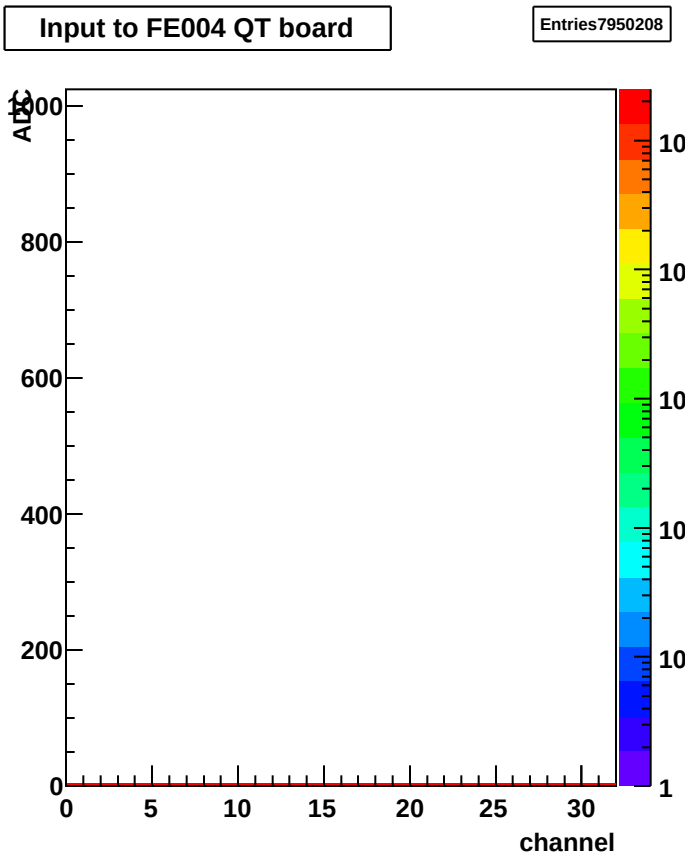

Input to FPD L2 DSM
Entries 17079
HT bits - simulated
1149
2
17
4185
11452
42
232
SMALL
LARGE-S
LARGE-N

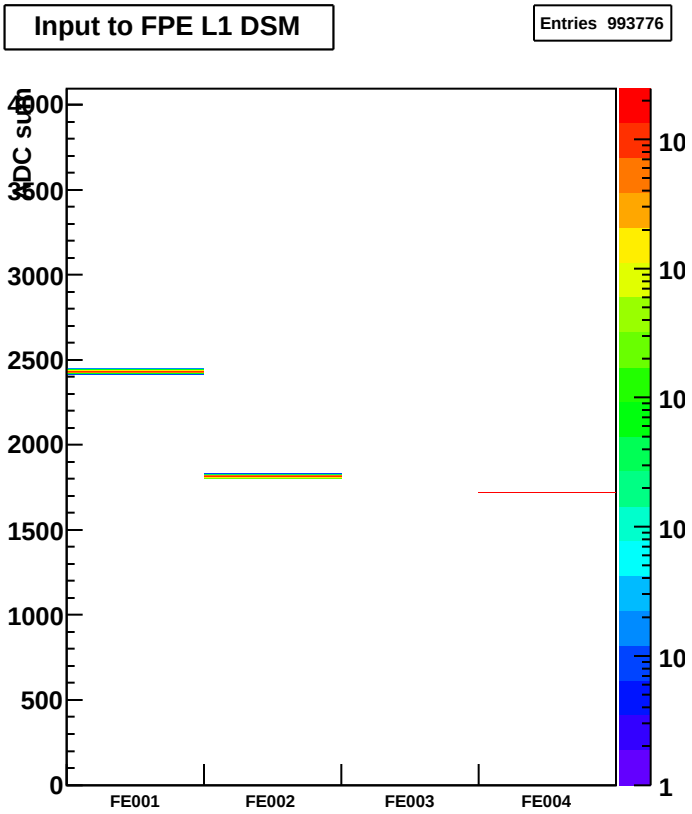

Input to FPD L2 DSM
Entries 1490664
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

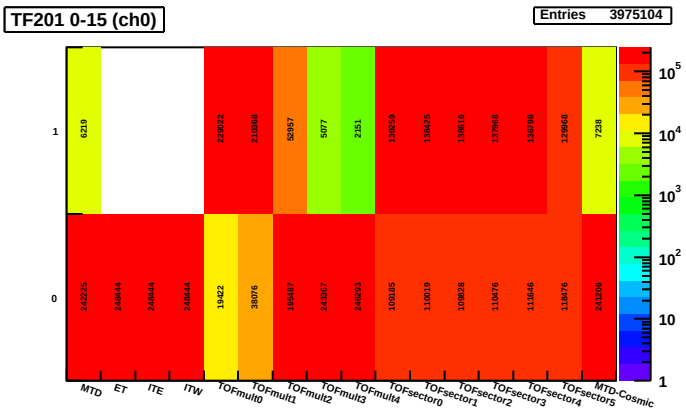

Input to FE001 QT board
Entries7950208
ADC
channel

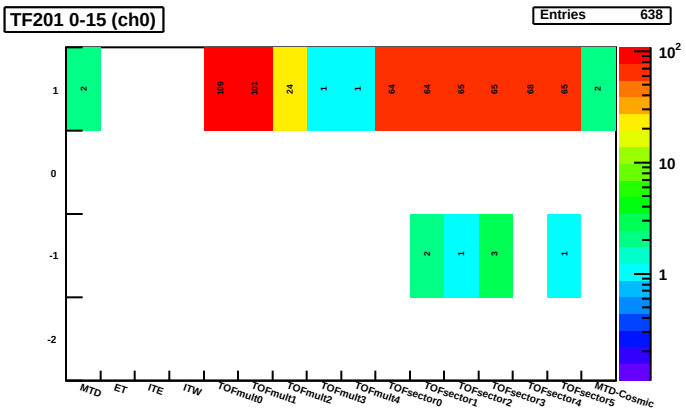

Input to FE002 QT board
Entries7950208
ADC
channel

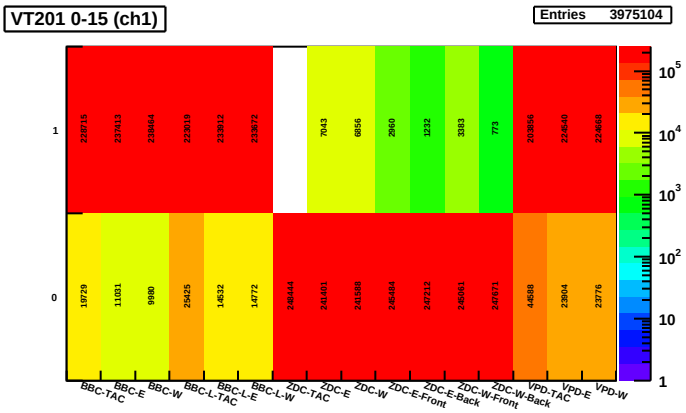

Input to FE003 QT board
Entries7950208
ADC
channel

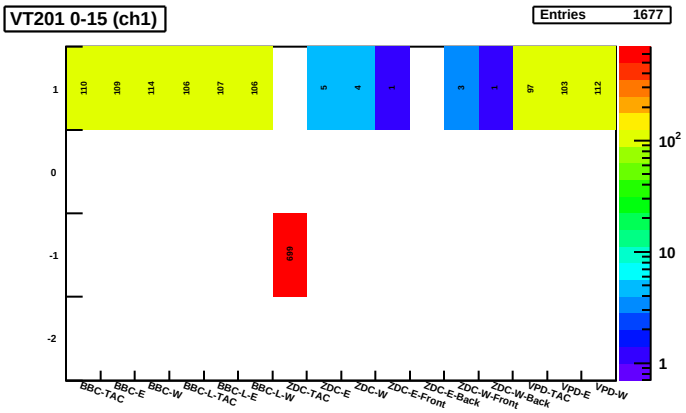

Input to FE004 QT board
Entries7950208
ADC
channel


Input to FPE L1 DSM
Entries 993776
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


TF201 0-15 (ch0)
Entries 3975104
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 638
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 3975104
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 1677
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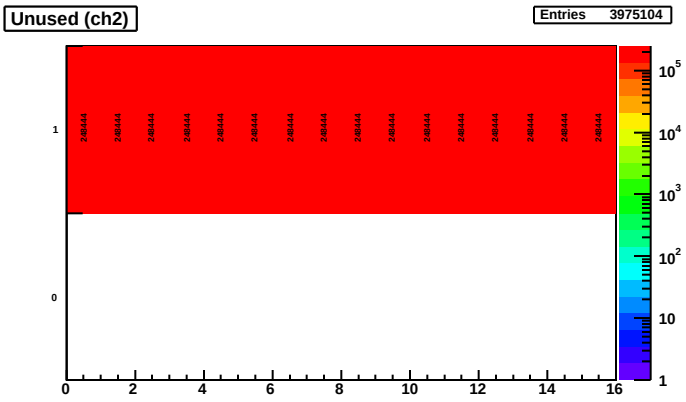
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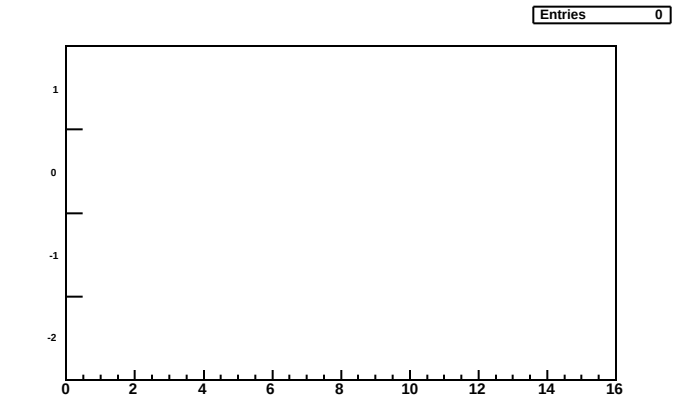
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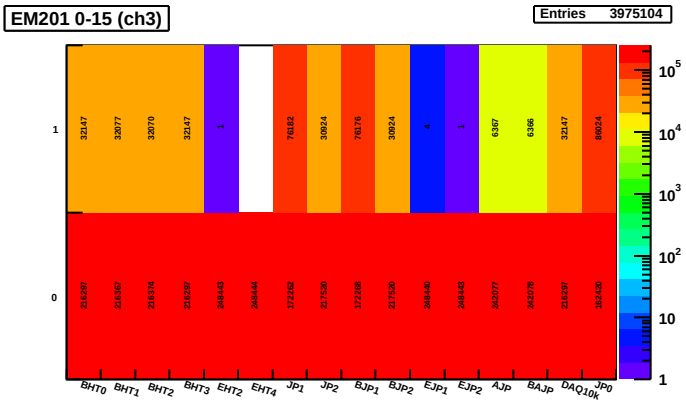
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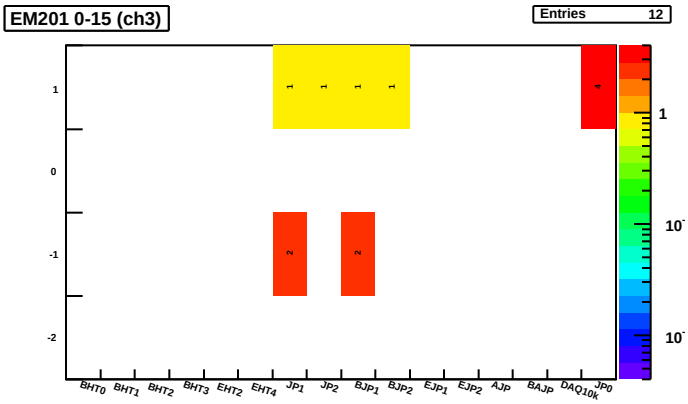
EM201 0-15 (ch3)
Entries 12
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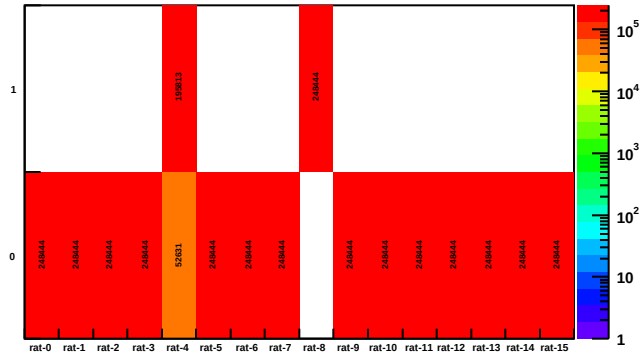
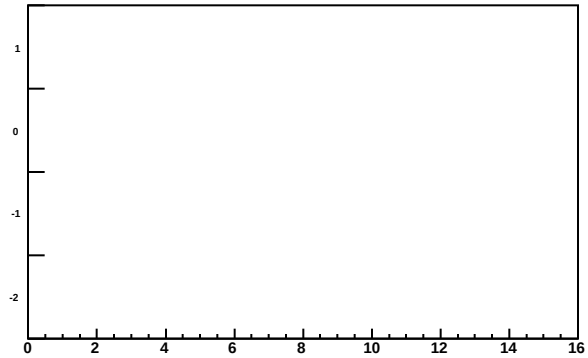
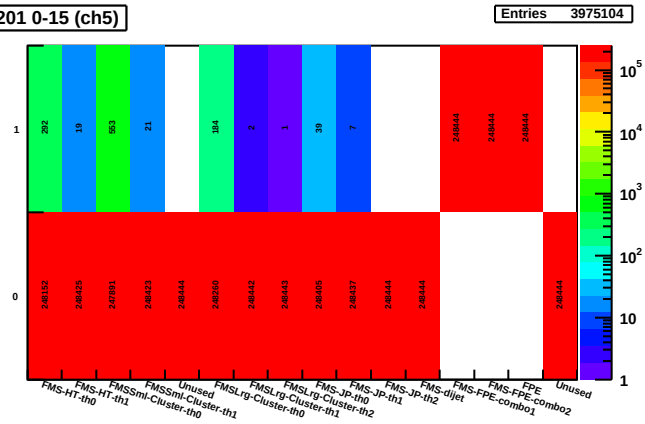
RAT board (ch4)





FP201 0-15 (ch5)



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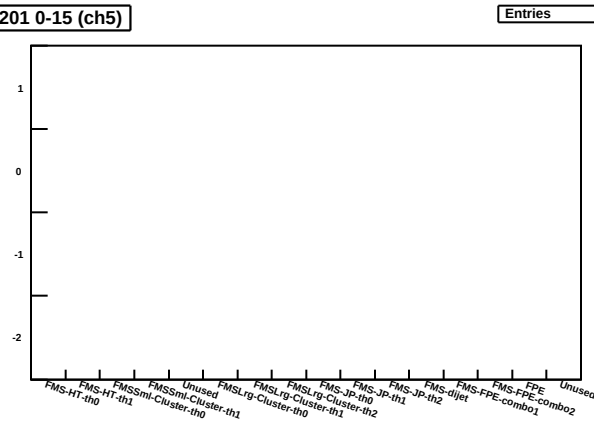
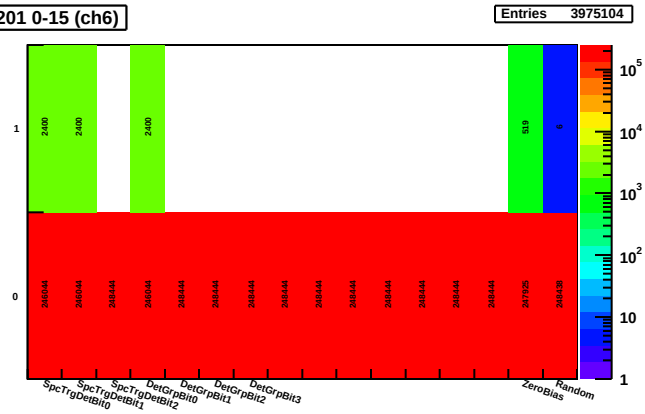
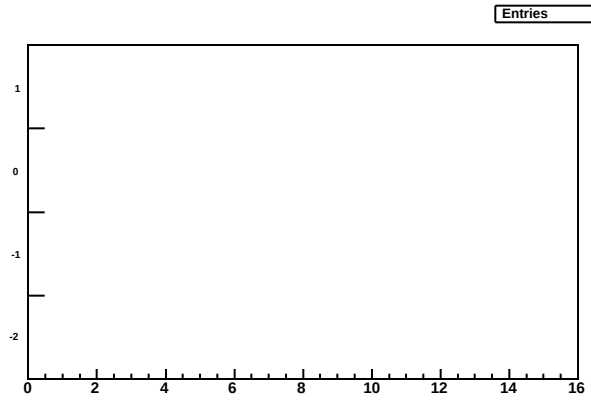
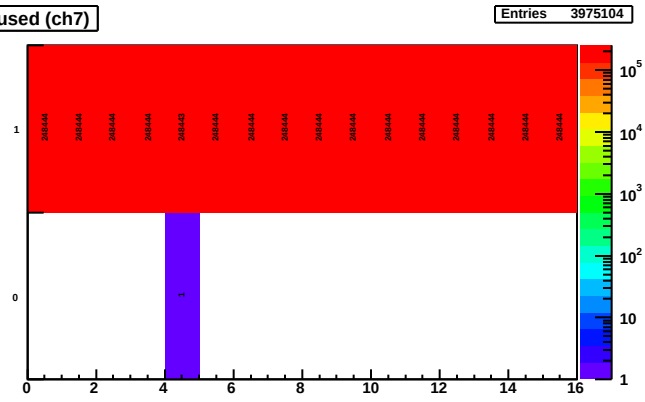
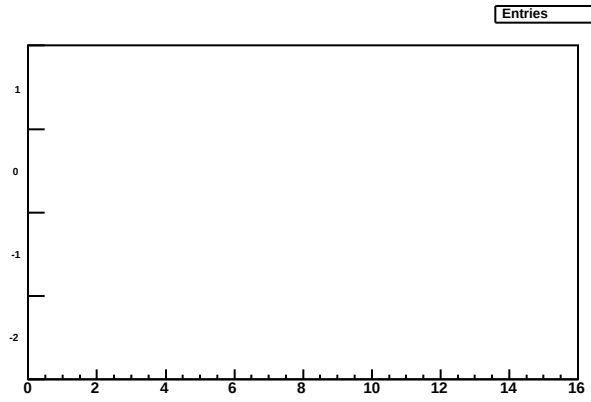


ST201 0-15 (ch6)





Unused (ch7)