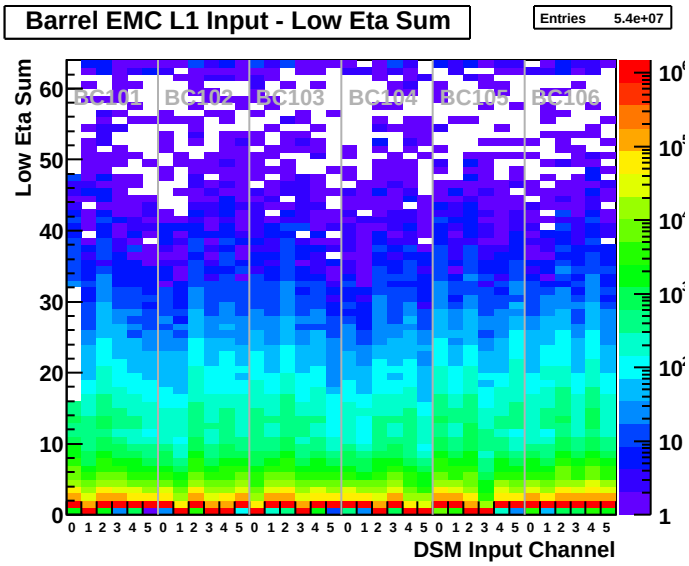
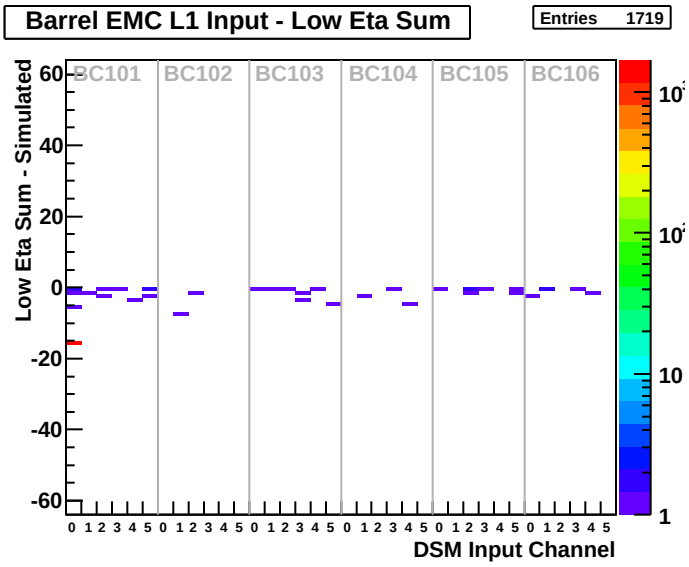
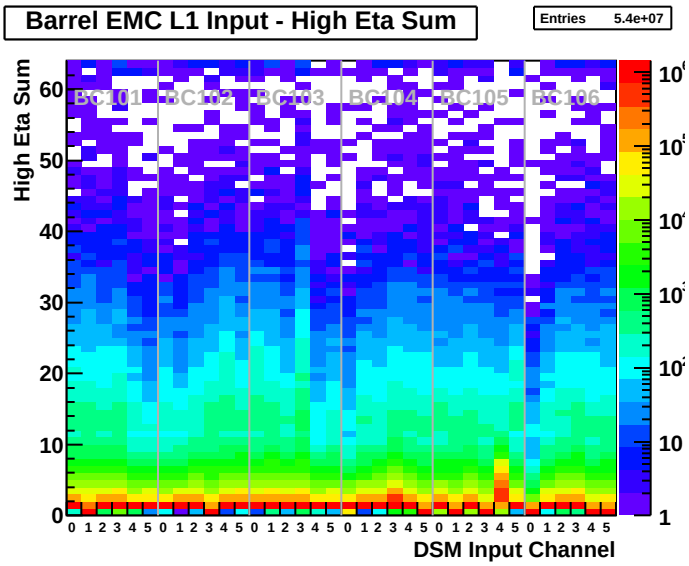
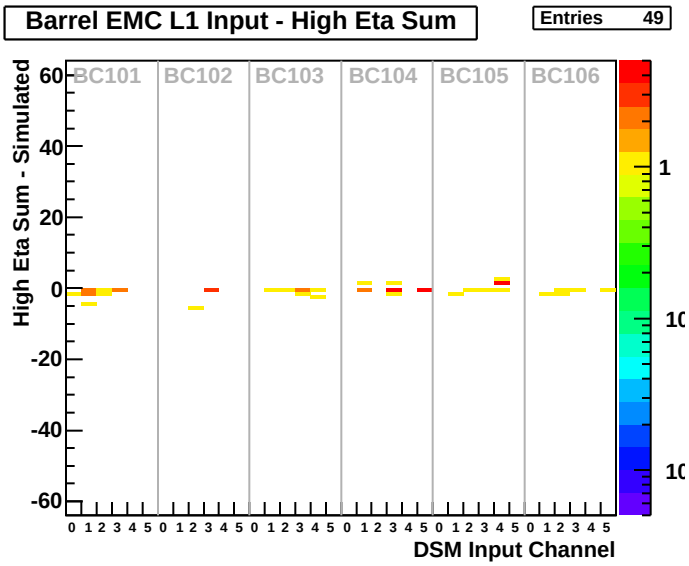
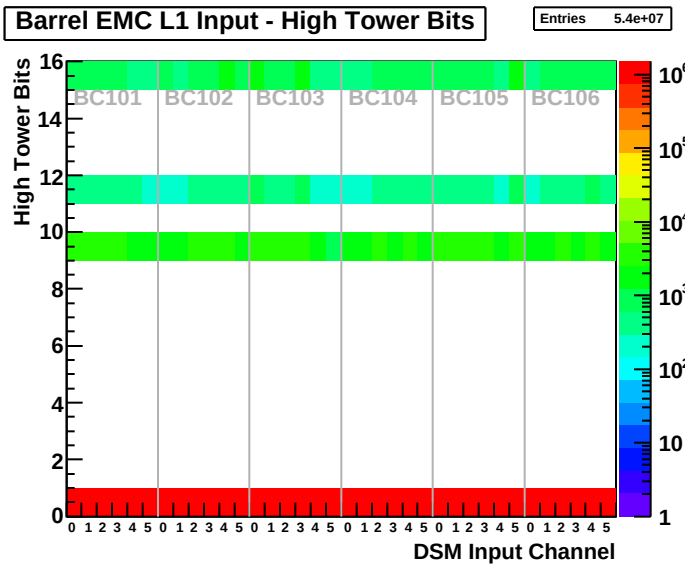
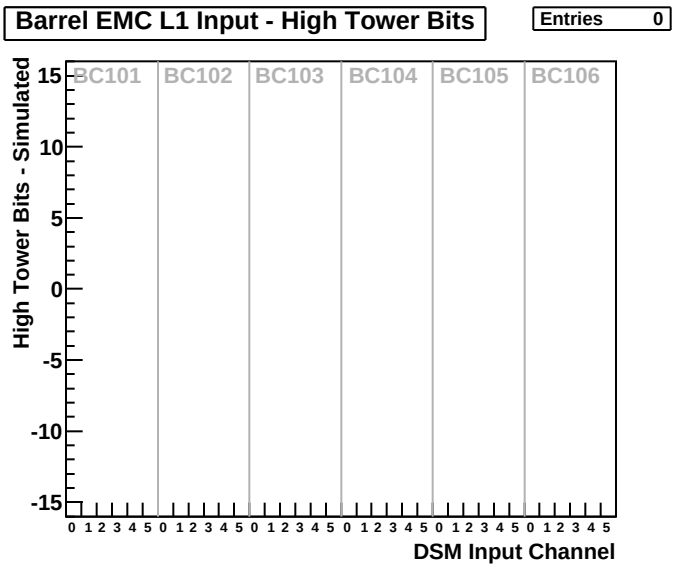

Barrel EMC L1 Input - Low Eta Sum
Entries 5.4e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

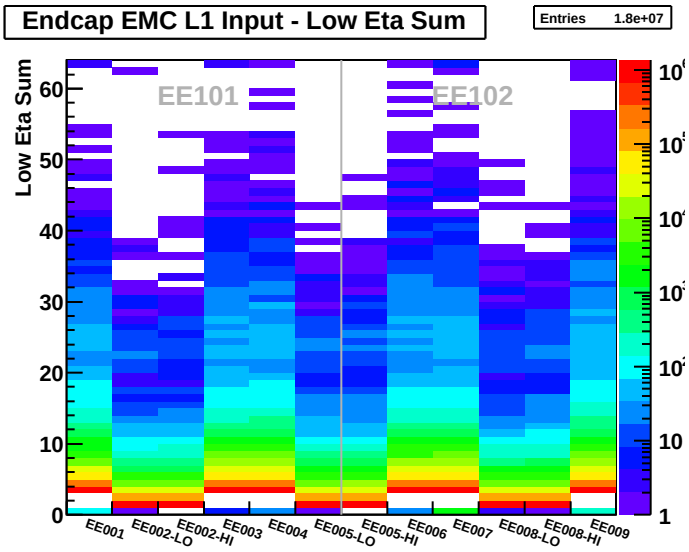

Barrel EMC L1 Input - Low Eta Sum
Entries 1719
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

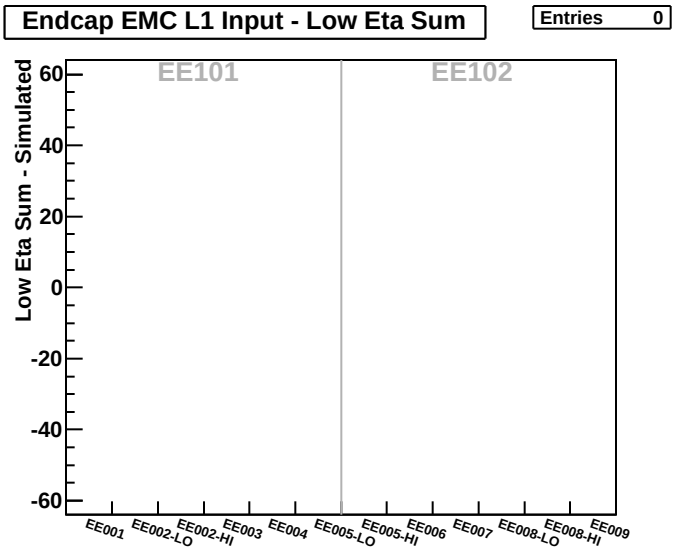

Barrel EMC L1 Input - High Eta Sum
Entries 5.4e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

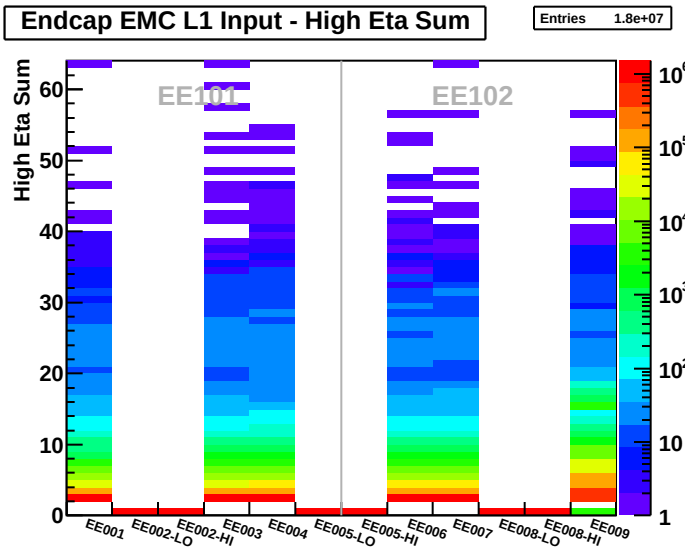

Barrel EMC L1 Input - High Eta Sum
Entries 49
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

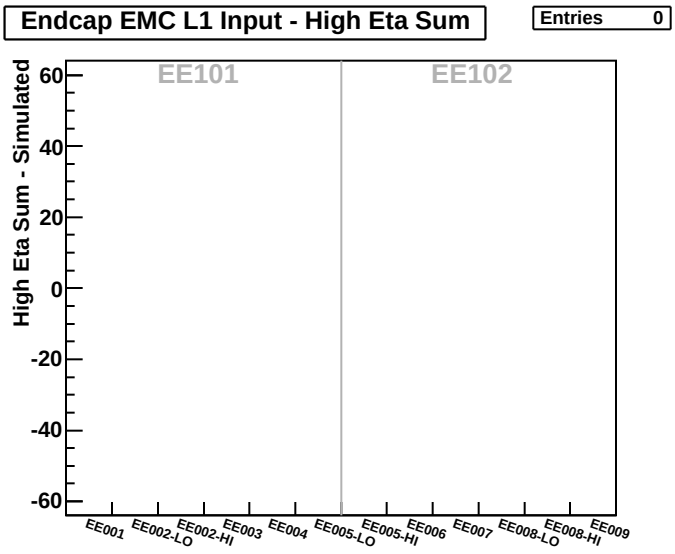

Barrel EMC L1 Input - High Tower Bits
Entries 5.4e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

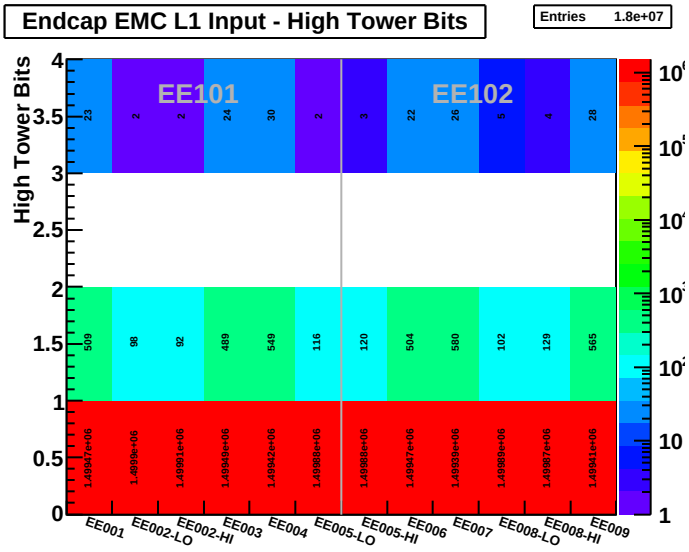

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

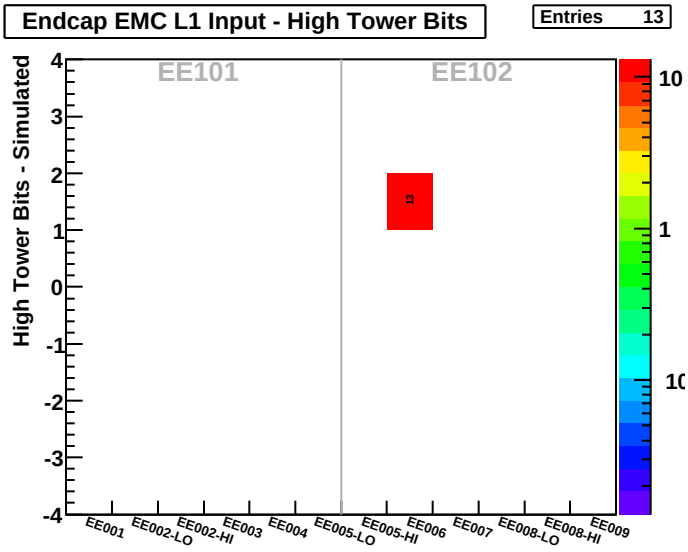

Endcap EMC L1 Input - Low Eta Sum
Entries 1.8e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

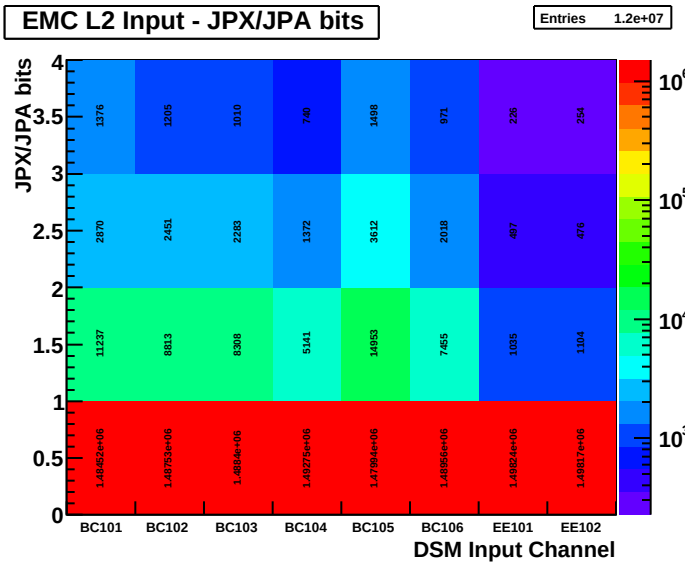

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

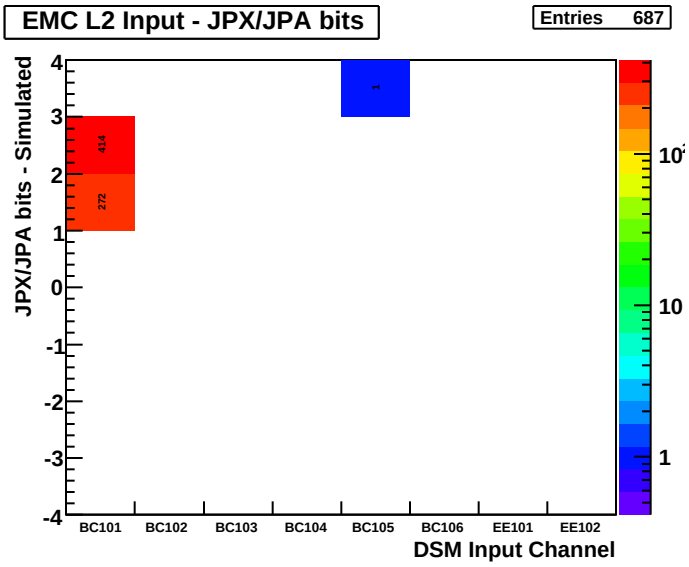

Endcap EMC L1 Input - High Eta Sum
Entries 1.8e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

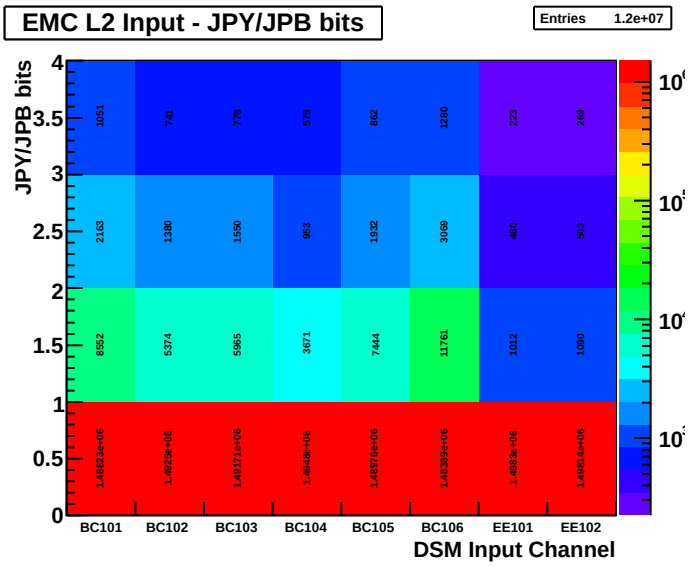

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

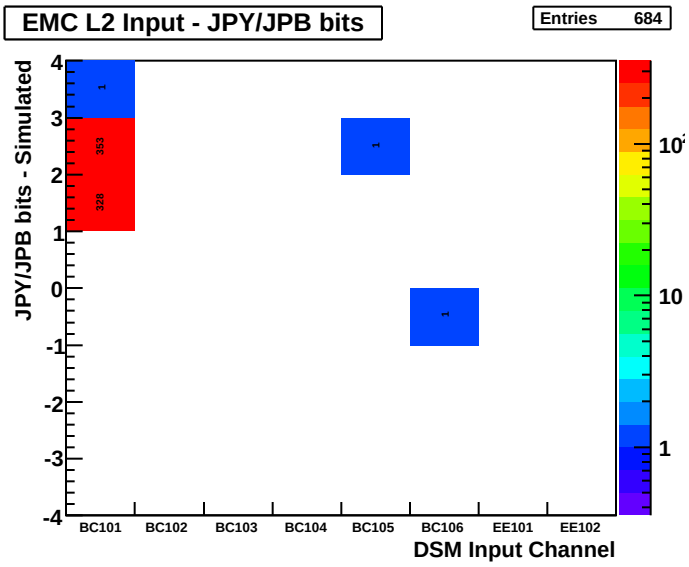

Endcap EMC L1 Input - High Tower Bits
Entries 1.8e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

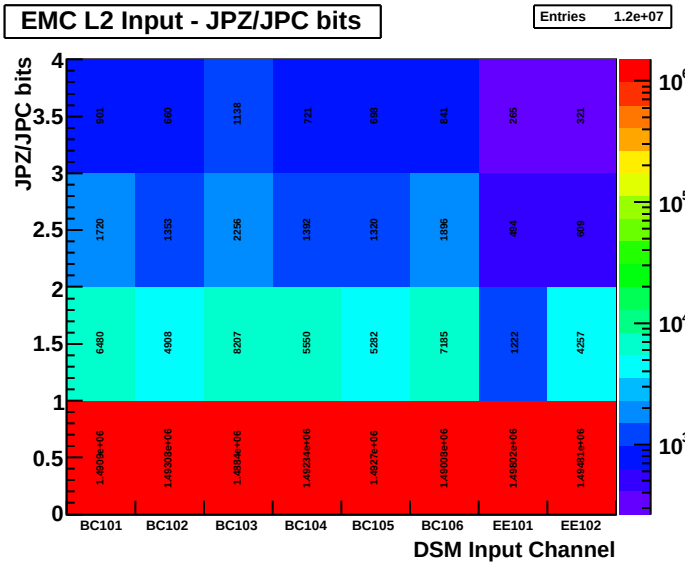

Endcap EMC L1 Input - High Tower Bits
Entries 13
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

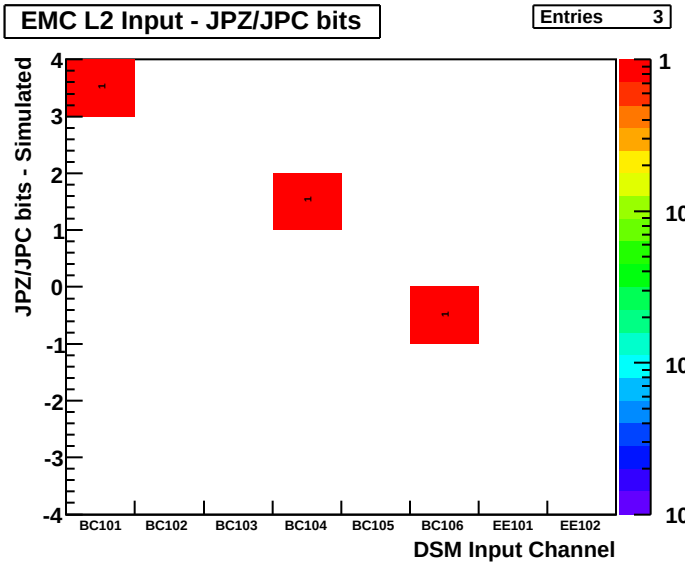

EMC L2 Input - JPX/JPA bits
Entries 1.2e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1376 1205 1010 740 1498 971 226 254
2870 2451 2283 1372 3612 2018 497 476
11237 8813 8308 5141 14953 7455 1035 1104
1.48452e+06 1.48753e+06 1.4884e+06 1.49275e+06 1.47994e+06 1.48956e+06 1.49824e+06 1.49817e+06

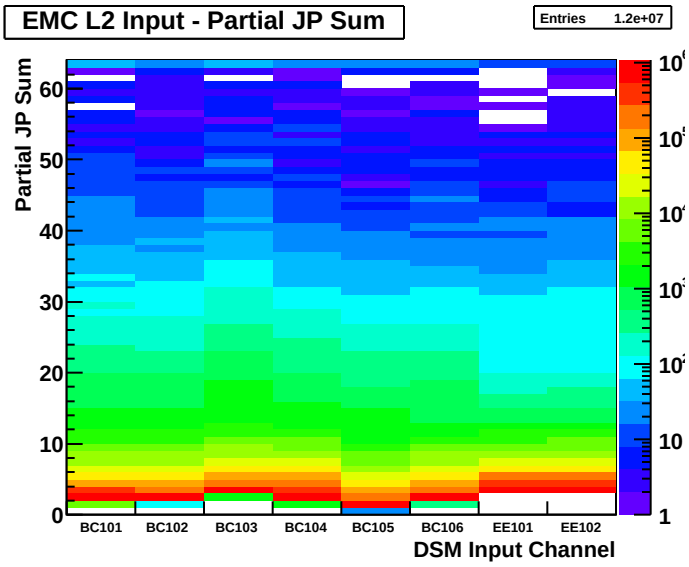

EMC L2 Input - JPX/JPA bits
Entries 687
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
414
272
1

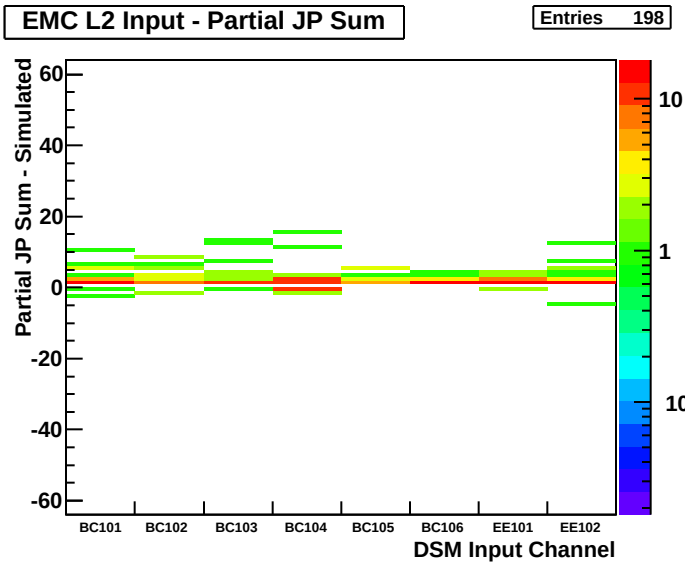

EMC L2 Input - JPY/JPB bits
Entries 1.2e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1051 741 778 576 862 1280 223 269
2163 1380 1550 953 1932 3069 460 503
8552 5374 5965 3671 7444 11761 1012 1030
1.48823e+06 1.4825e+06 1.49171e+06 1.4948e+06 1.48976e+06 1.48399e+06 1.4983e+06 1.49814e+06

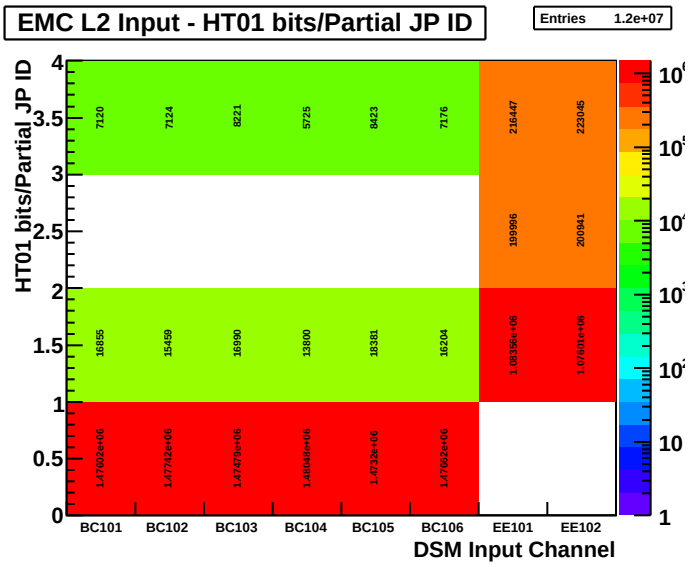

EMC L2 Input - JPY/JPB bits
Entries 684
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1
353
328
1
1

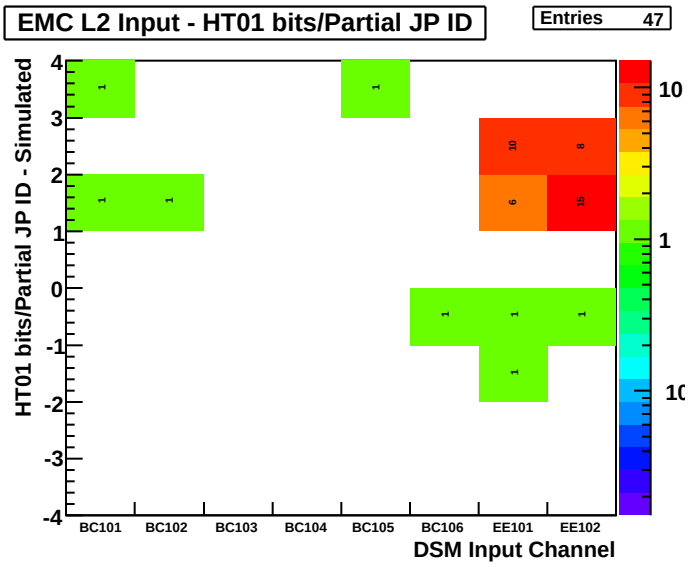

EMC L2 Input - JPZ/JPC bits
Entries 1.2e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
901 660 1138 721 688 841 265 321
1720 1353 2256 1392 1320 1896 494 609
6480 4908 8207 5550 5282 7185 1222 4257
1.4909e+06 1.49308e+06 1.4884e+06 1.49234e+06 1.4927e+06 1.49018e+06 1.49802e+06 1.49481e+06

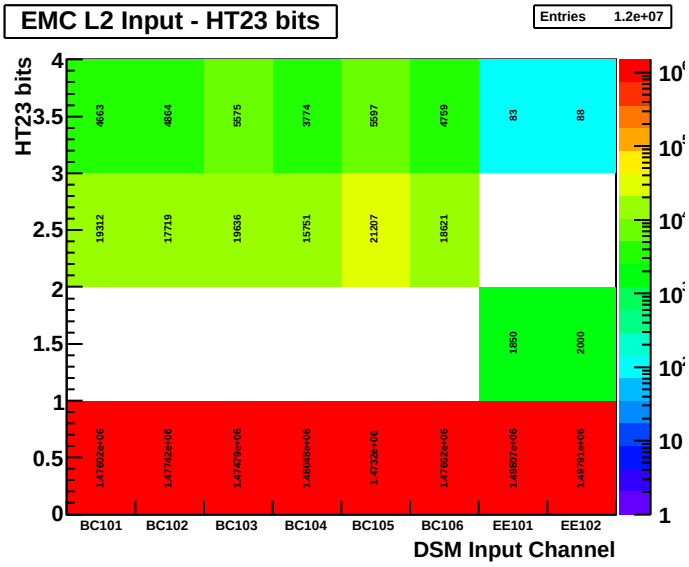

EMC L2 Input - JPZ/JPC bits
Entries 3
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1
1
1

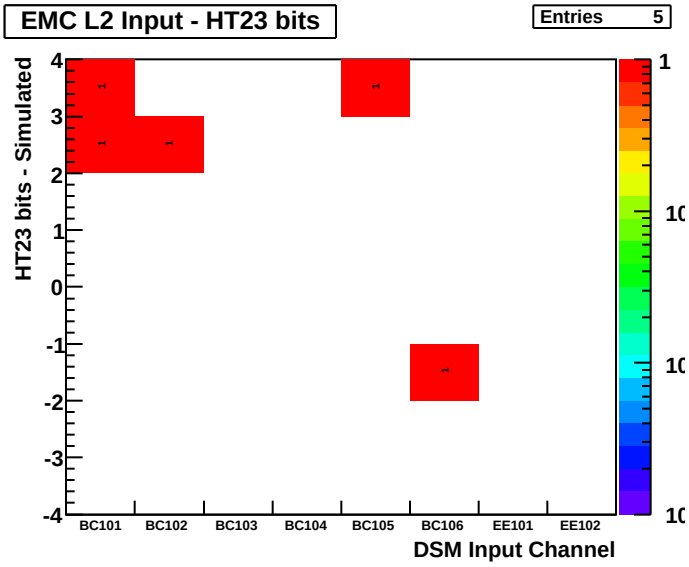

EMC L2 Input - Partial JP Sum
Entries 1.2e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

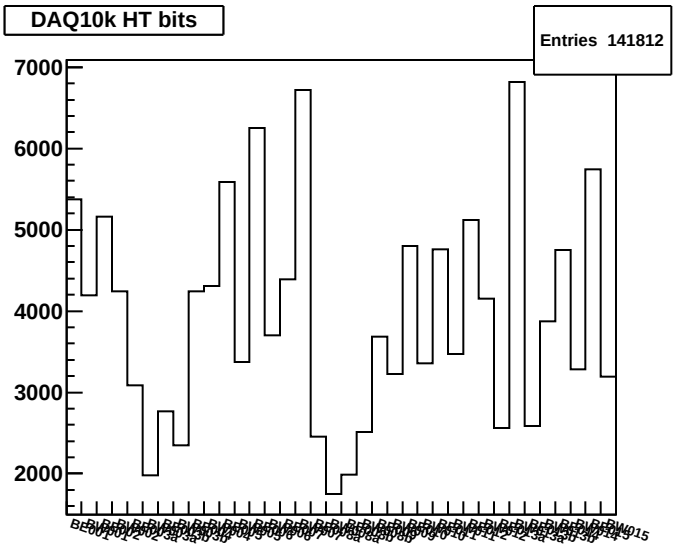

EMC L2 Input - Partial JP Sum
Entries 198
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

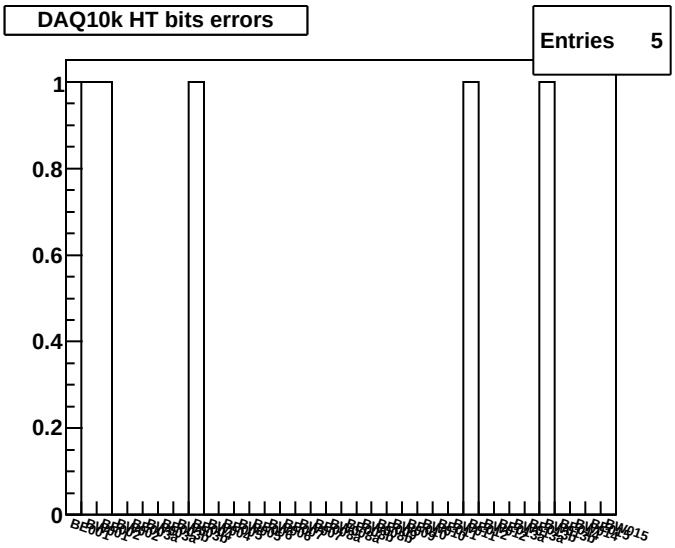

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1.2e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

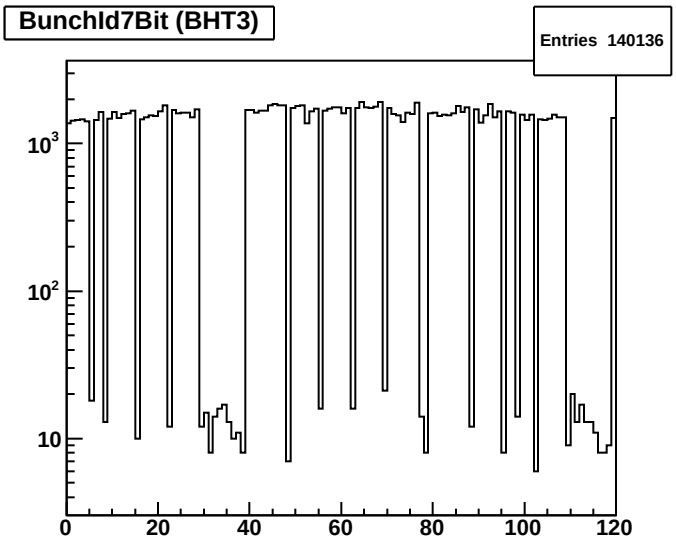

EMC L2 Input - HT01 bits/Partial JP ID
Entries 47
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

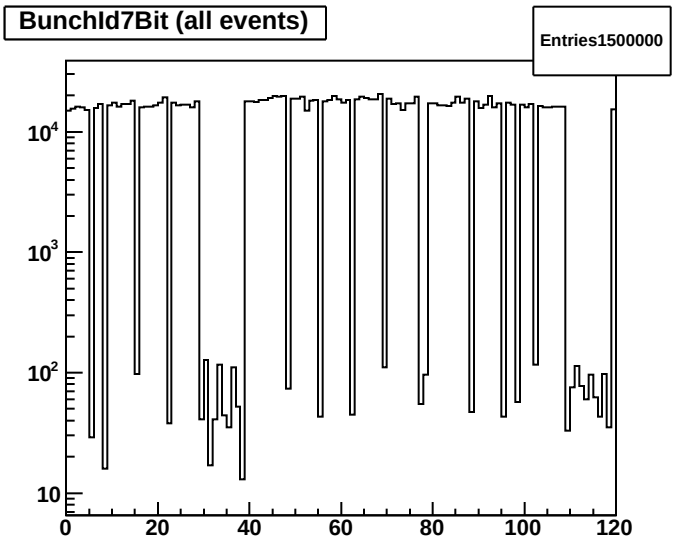

EMC L2 Input - HT23 bits
Entries 1.2e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

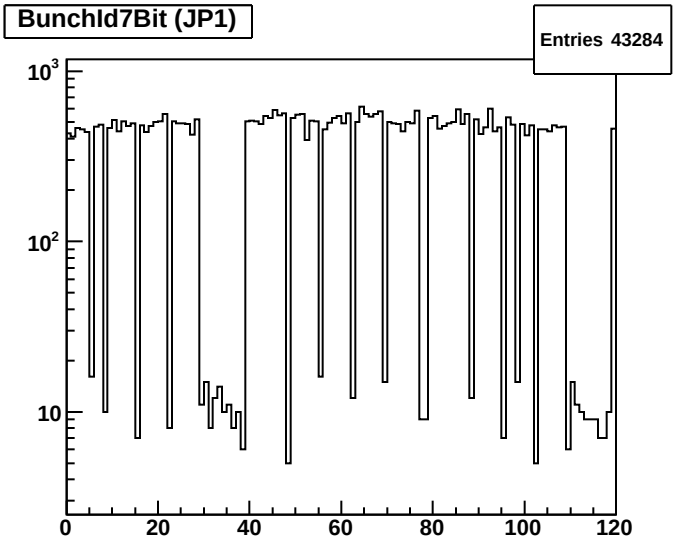

EMC L2 Input - HT23 bits
Entries 5
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

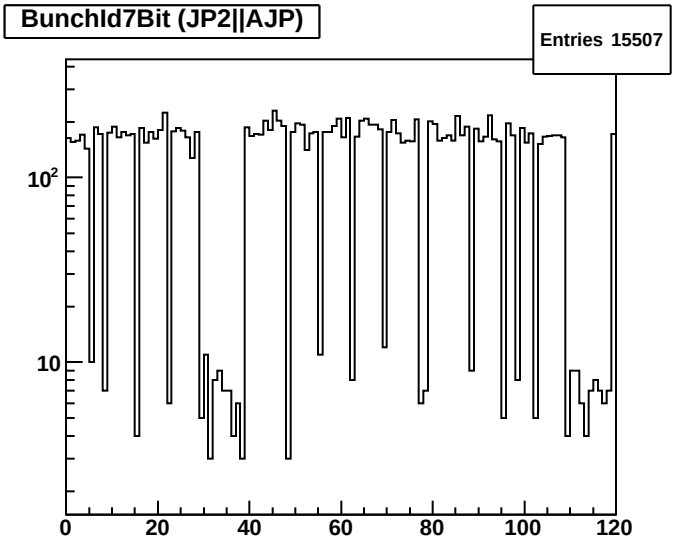

DAQ10k HT bits
Entries 141812
7000
6000
5000
4000
3000
2000

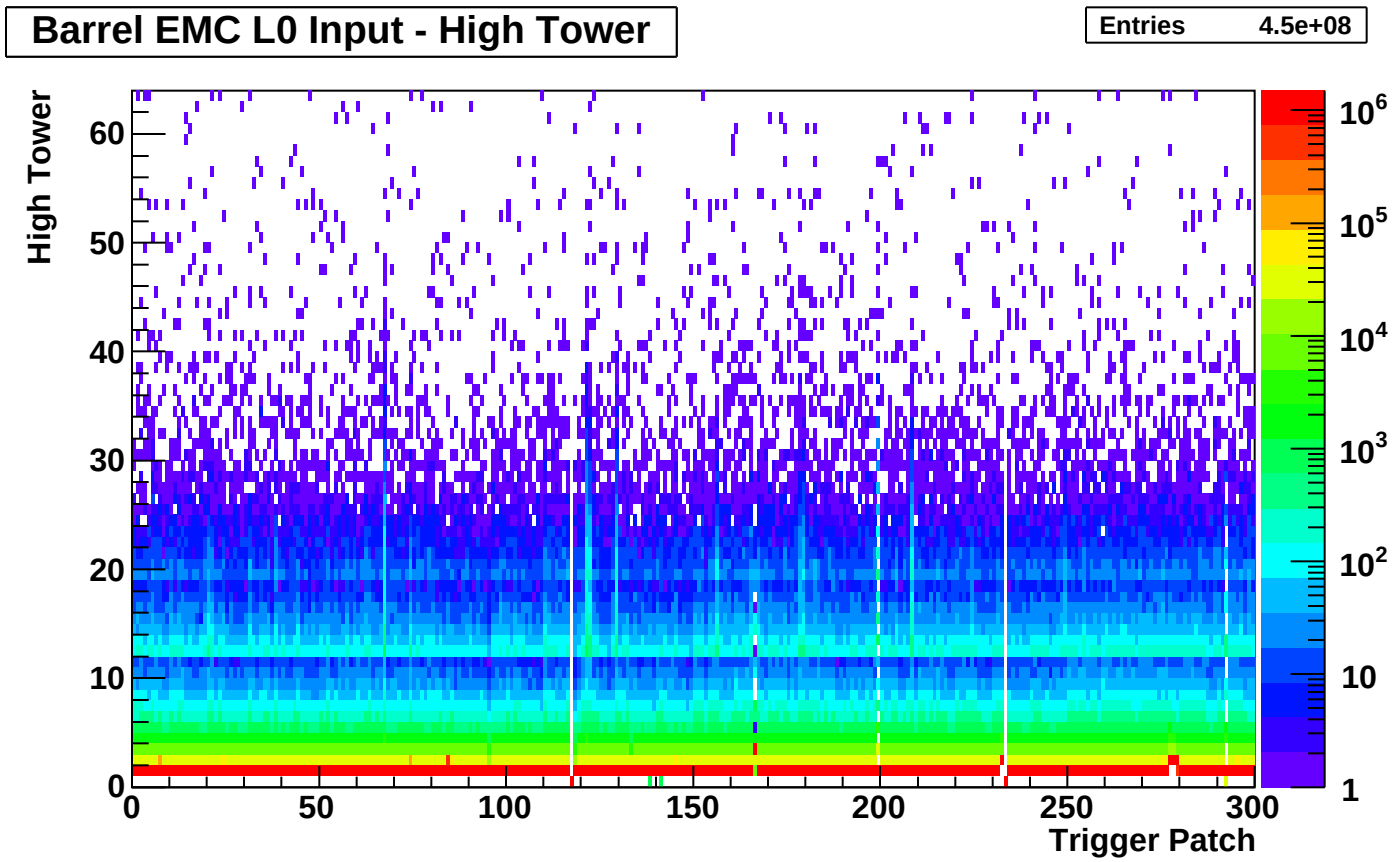

DAQ10k HT bits errors
Entries 5
1
0.8
0.6
0.4
0.2
0

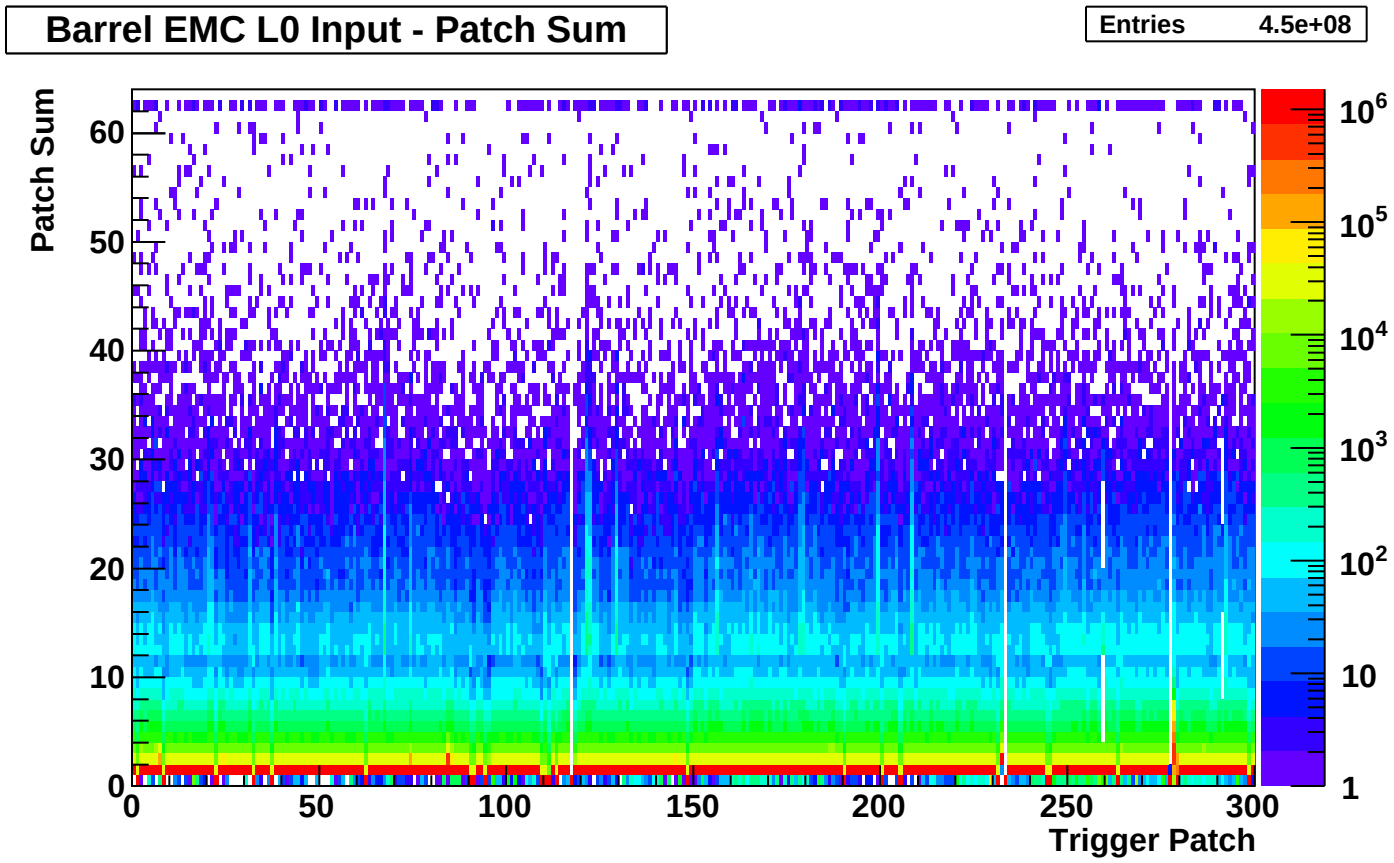

BunchId7Bit (BHT3)
Entries 140136
10^3
10^2
10
0
20
40
60
80
100
120

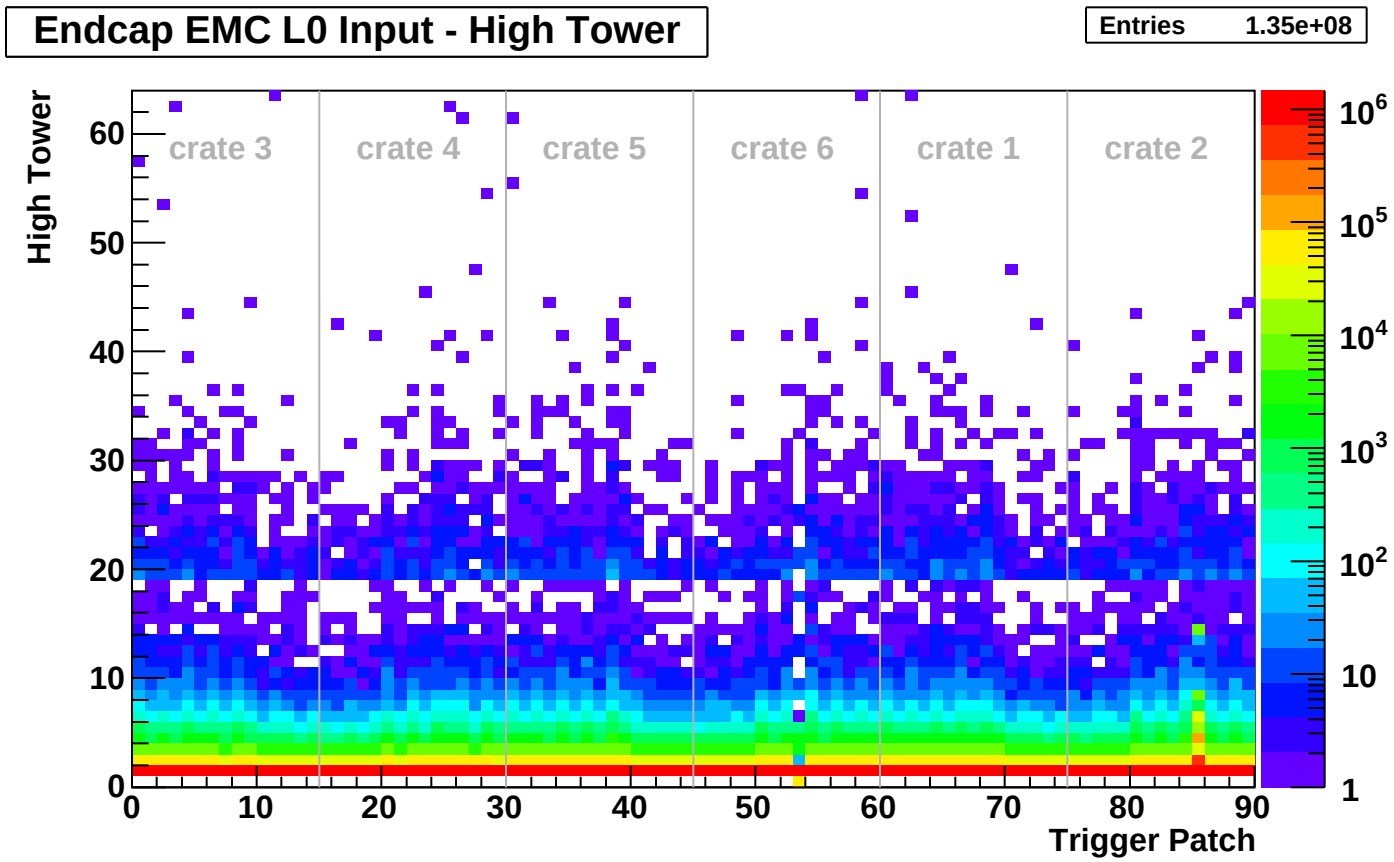

BunchId7Bit (all events)
Entries1500000
10^4
10^3
10^2
10
0
20
40
60
80
100
120

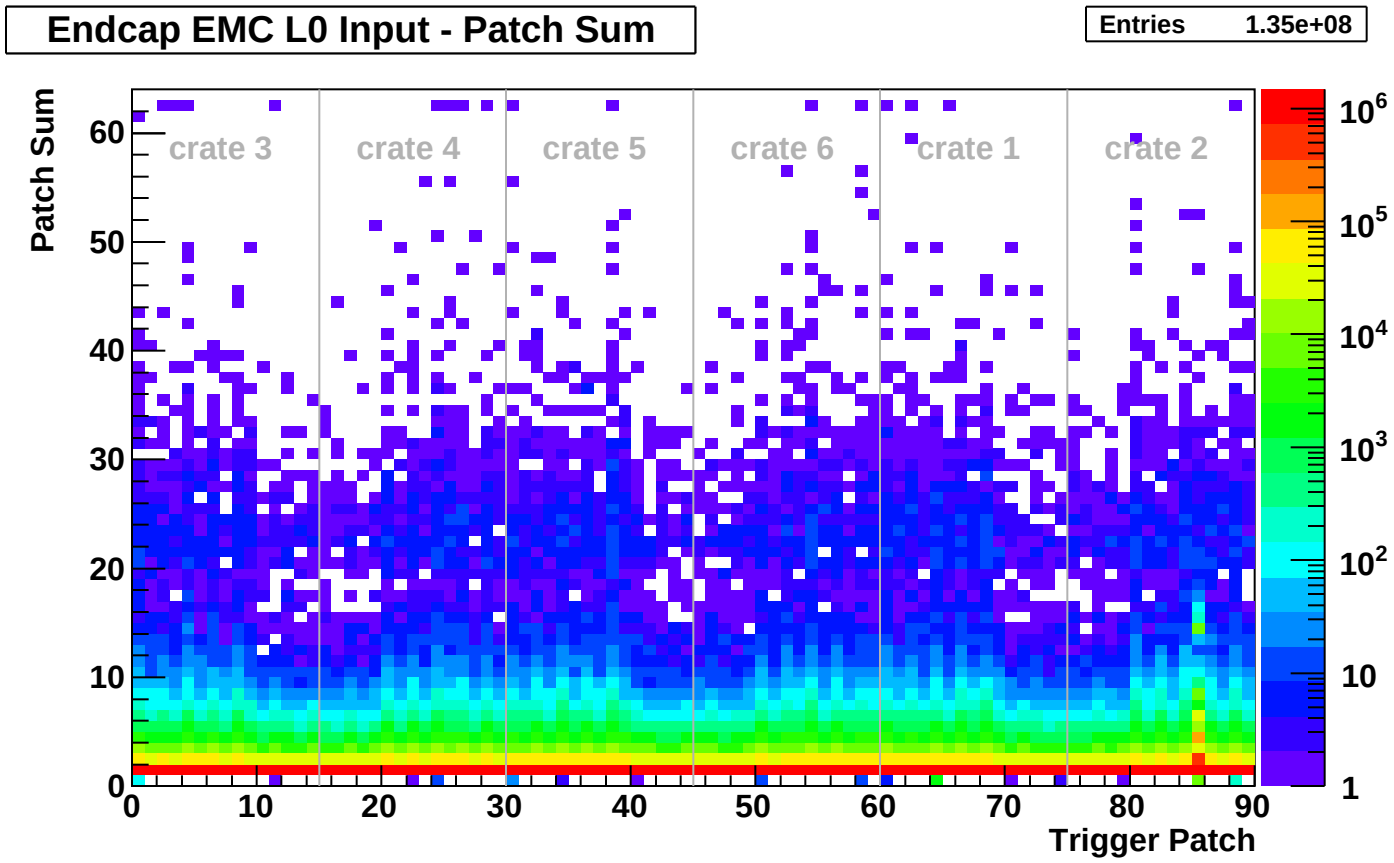

BunchId7Bit (JP1)
Entries 43284
10^3
10^2
10
0
20
40
60
80
100
120

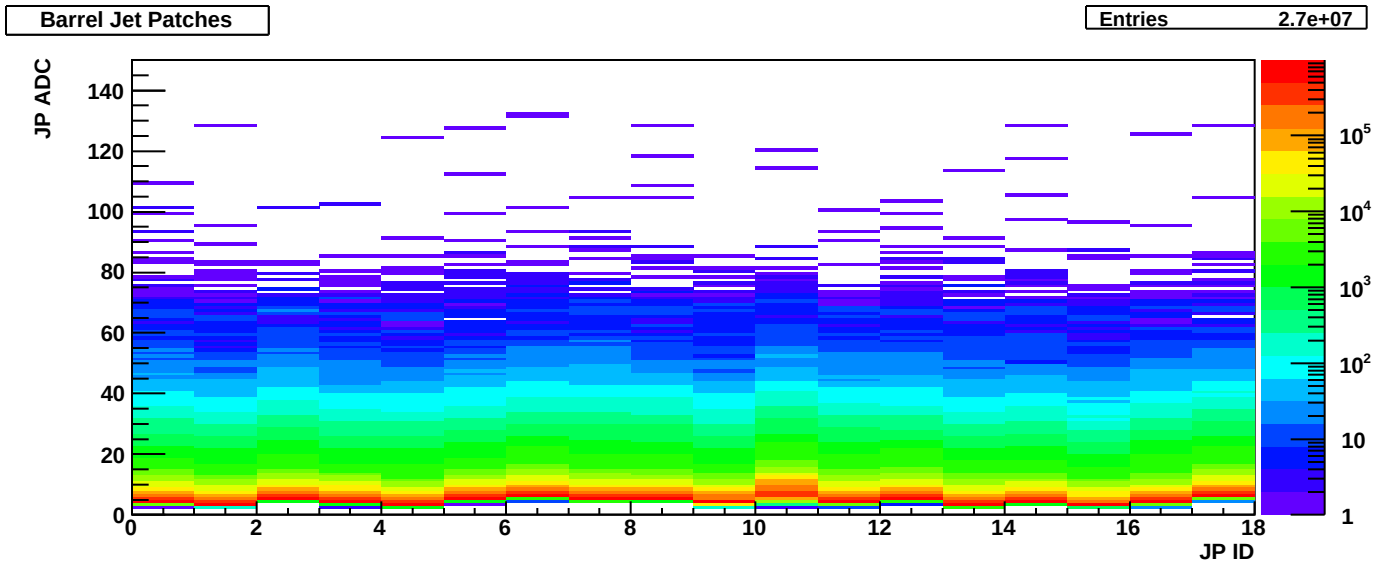

BunchId7Bit (JP2||AJP)
Entries 15507
10^2
10
0
20
40
60
80
100
120

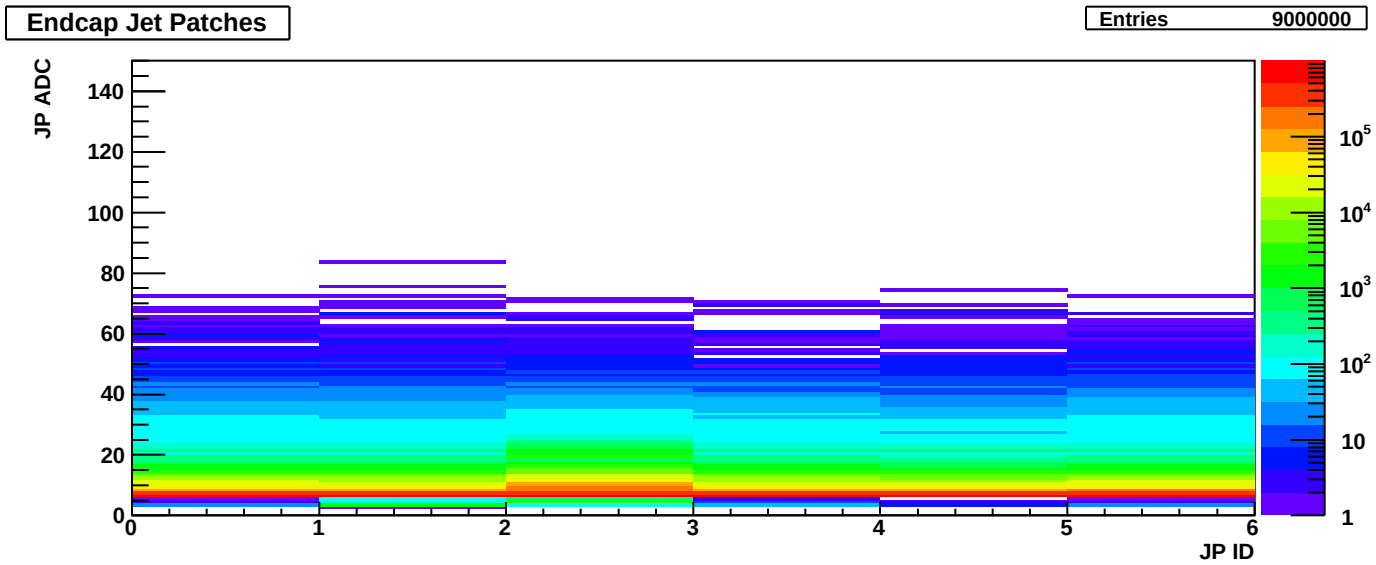

Barrel EMC L0 Input - High Tower
Entries 4.5e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

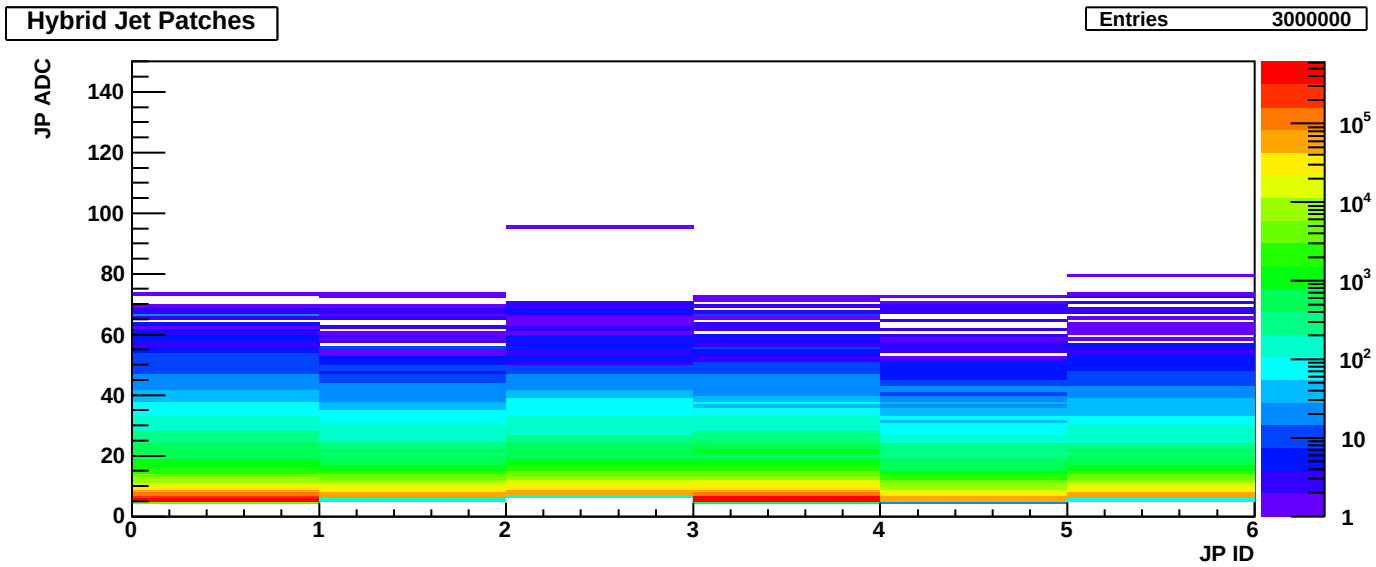

Barrel EMC L0 Input - Patch Sum
Entries 4.5e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

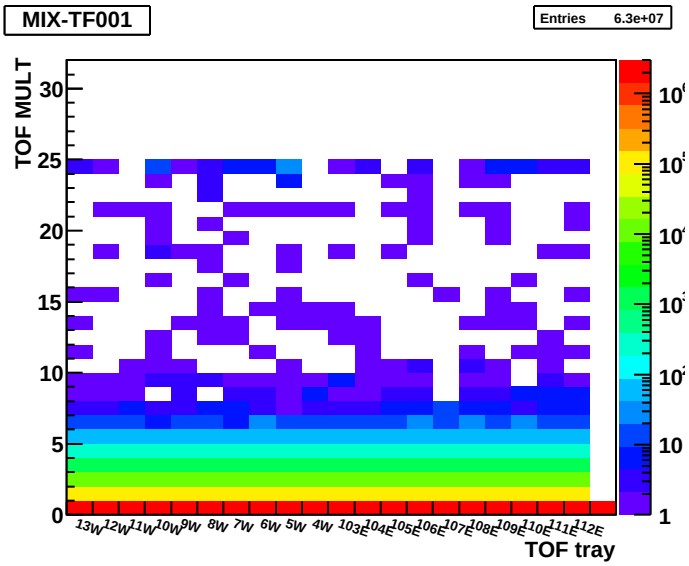

Endcap EMC L0 Input - High Tower
Entries 1.35e+08
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

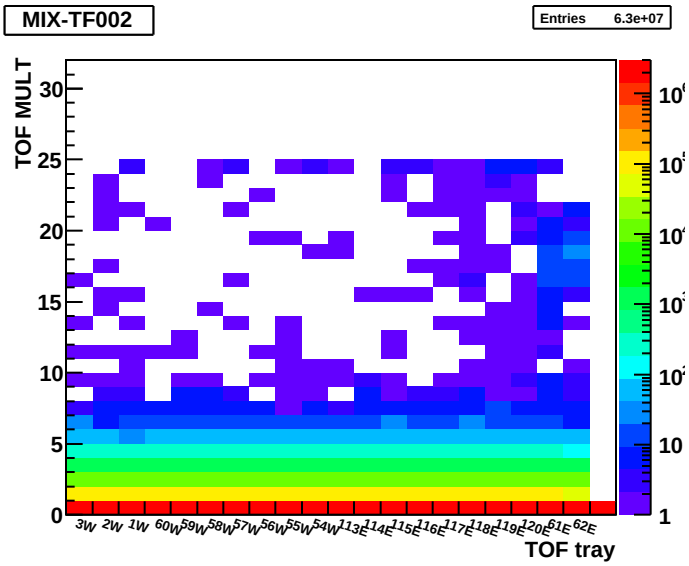

Endcap EMC L0 Input - Patch Sum
Entries 1.35e+08
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

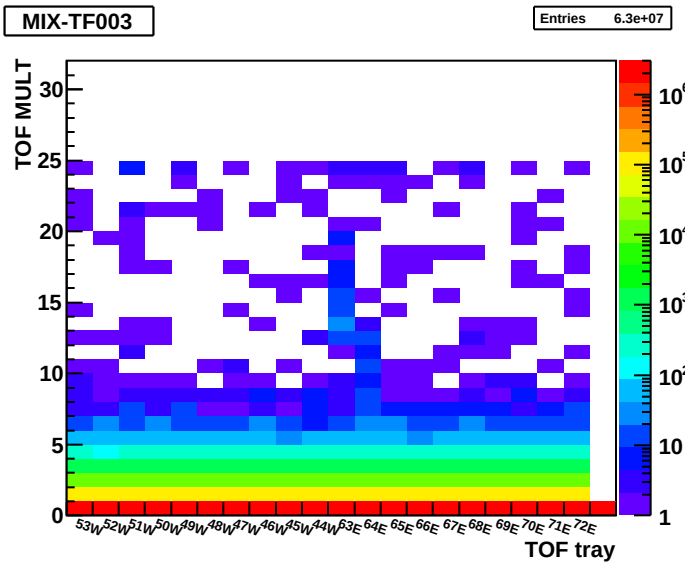

Barrel Jet Patches
Entries 2.7e+07
JP ADC
JP ID

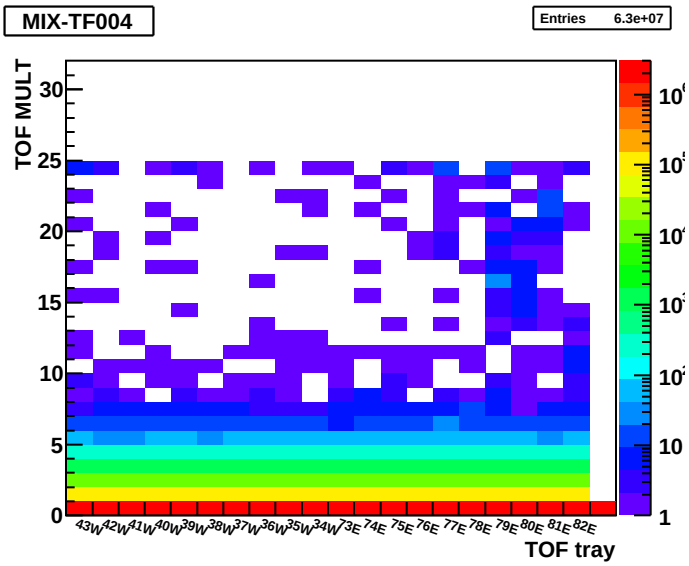

Endcap Jet Patches
Entries 9000000
JP ADC
JP ID

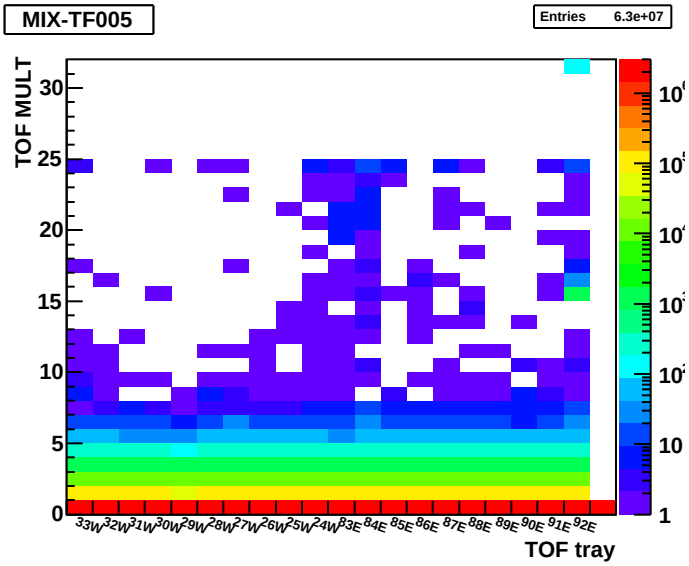

Hybrid Jet Patches
Entries 3000000
JP ADC
JP ID

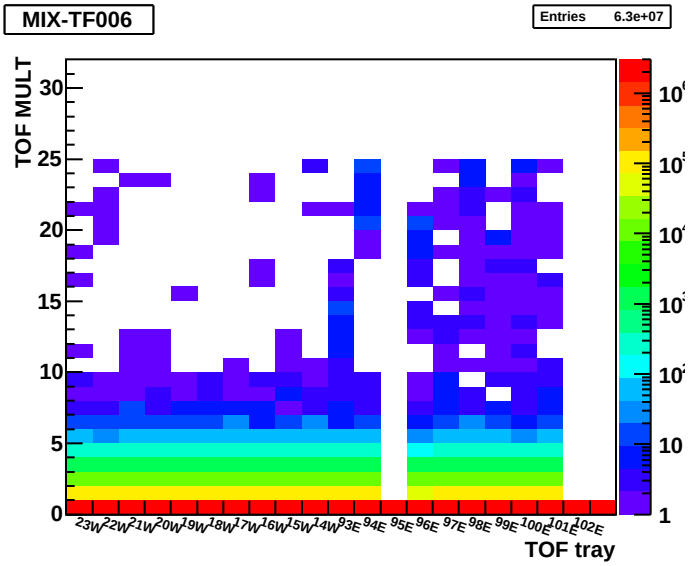

MIX-TF001
Entries 6.3e+07
TOF MULT
TOF tray

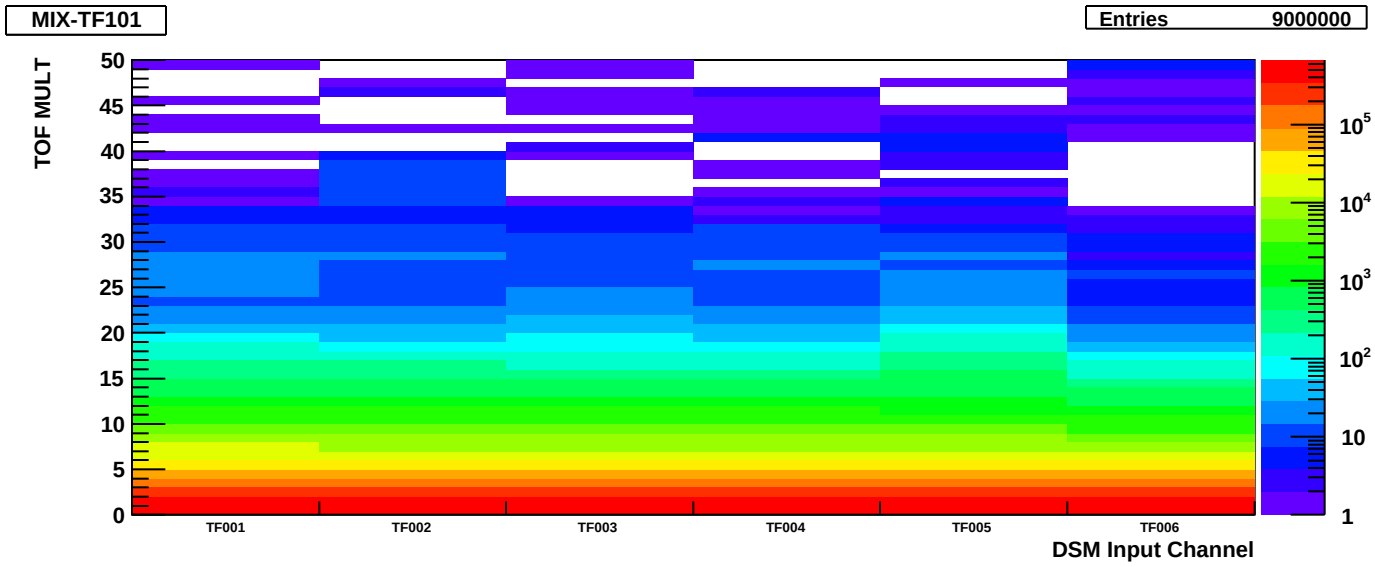

MIX-TF002
Entries 6.3e+07
TOF MULT
TOF tray

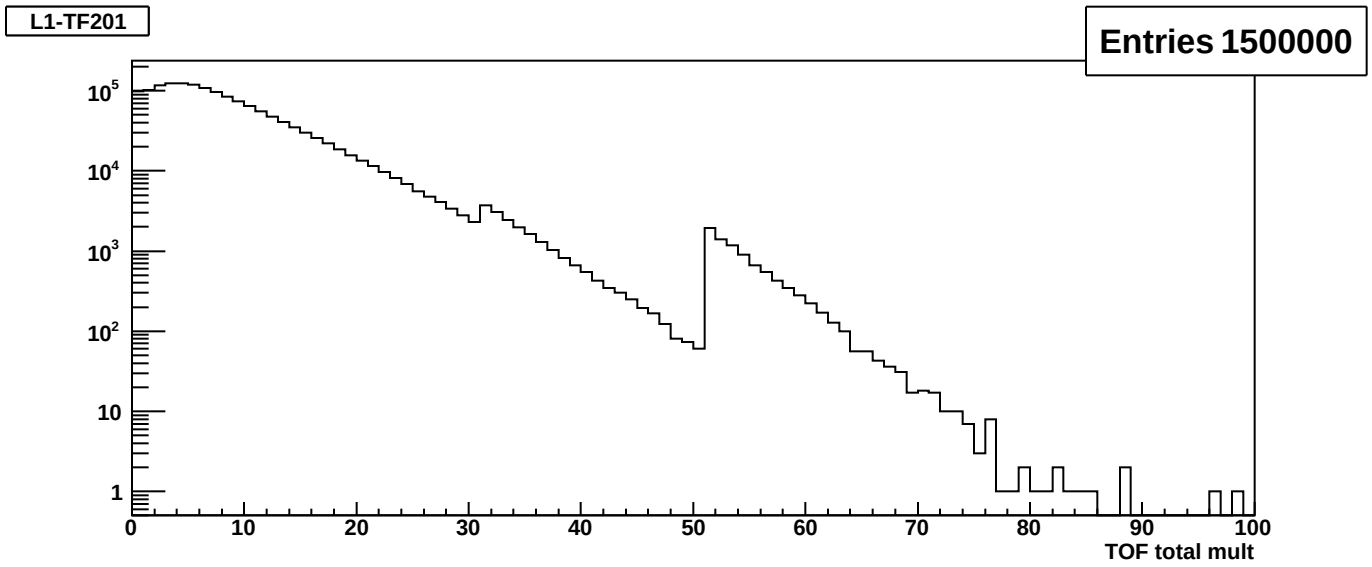

MIX-TF003
Entries 6.3e+07
TOF MULT
TOF tray

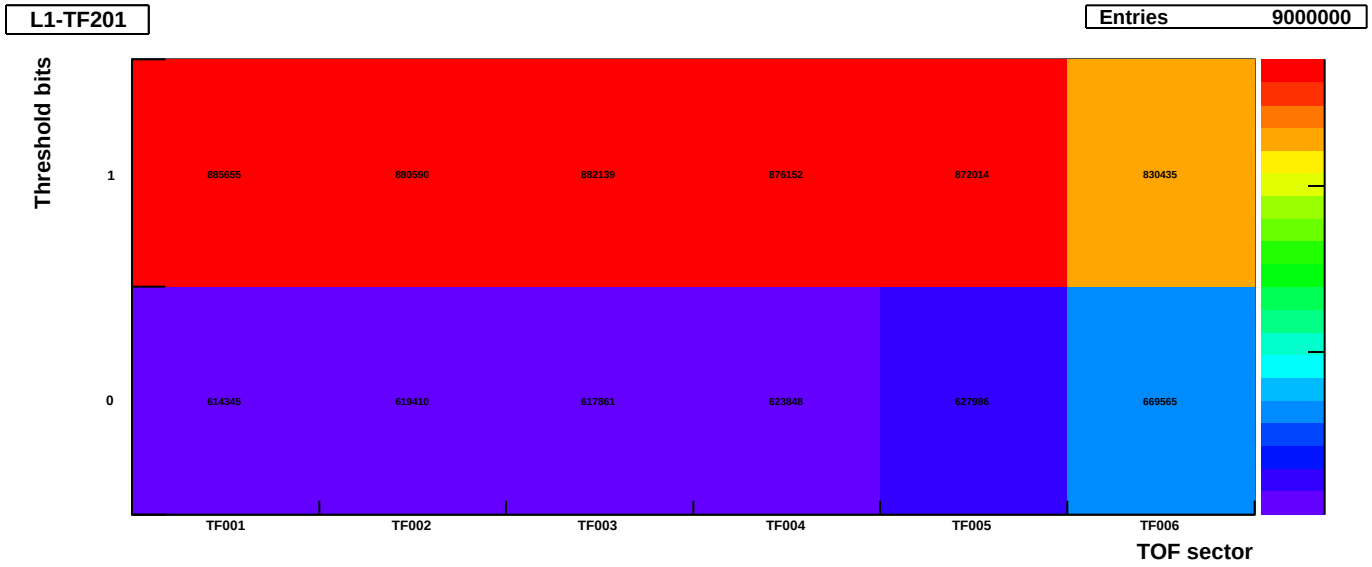

MIX-TF004
Entries 6.3e+07
TOF MULT
TOF tray

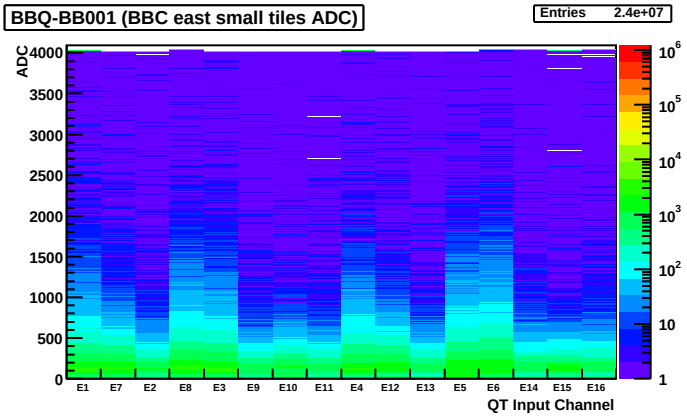

MIX-TF005
Entries 6.3e+07
TOF MULT
TOF tray

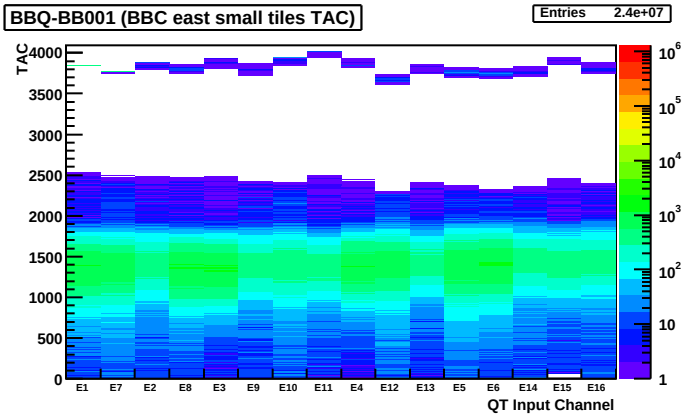

MIX-TF006
Entries 6.3e+07
TOF MULT
TOF tray

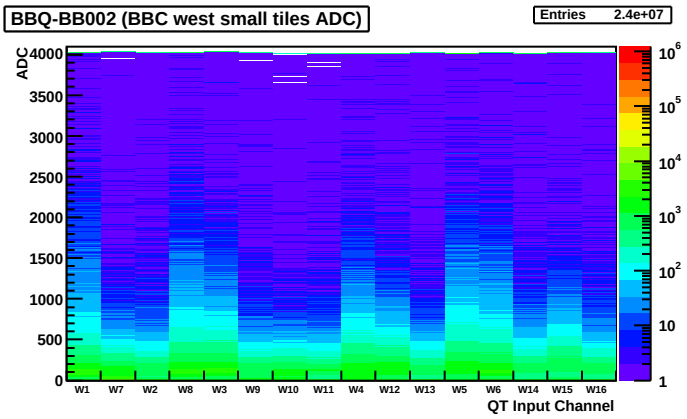

MIX-TF101
Entries 9000000
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

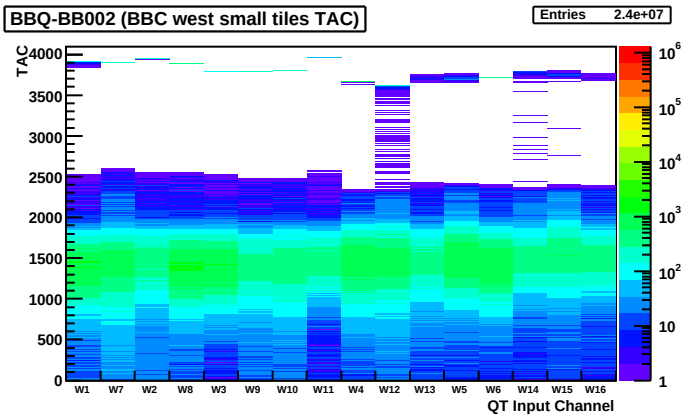

L1-TF201
Entries 1500000
TOF total mult

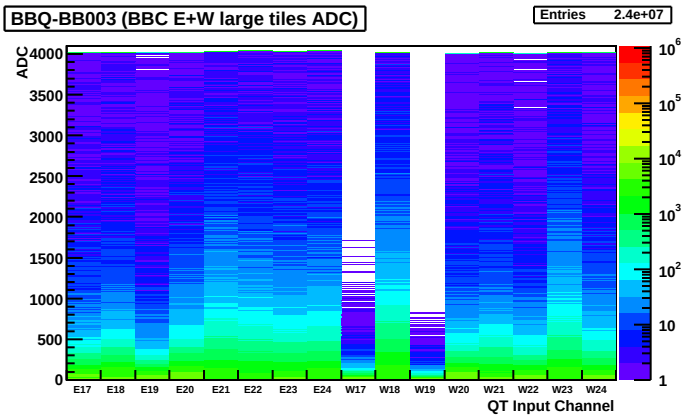

L1-TF201
Entries 9000000
Threshold bits
885655
880590
882139
876152
872014
830435
614345
619410
617861
623848
627986
669565
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

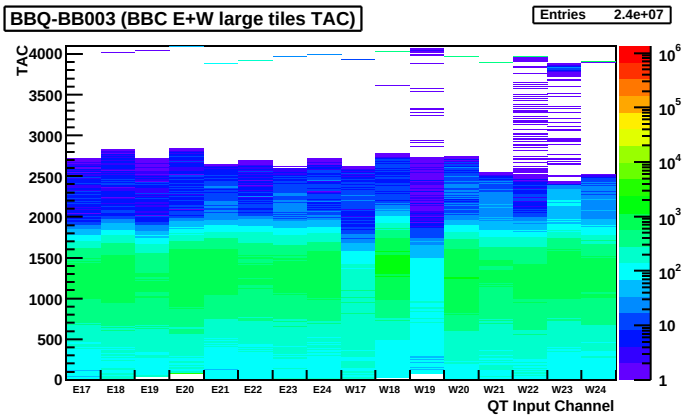

BBQ-BB001 (BBC east small tiles ADC)
Entries 2.4e+07
ADC
QT Input Channel

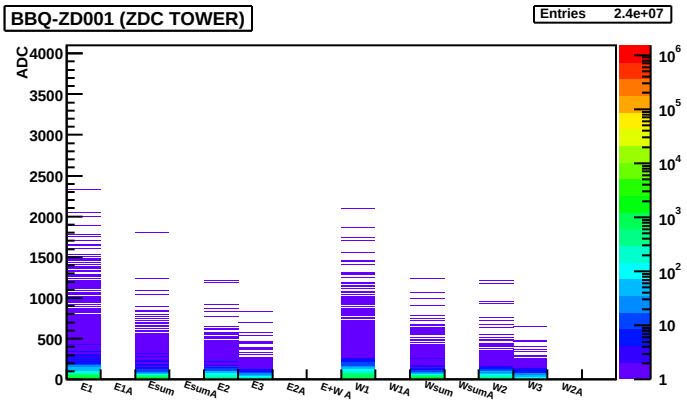

BBQ-BB001 (BBC east small tiles TAC)
Entries 2.4e+07
TAC
QT Input Channel

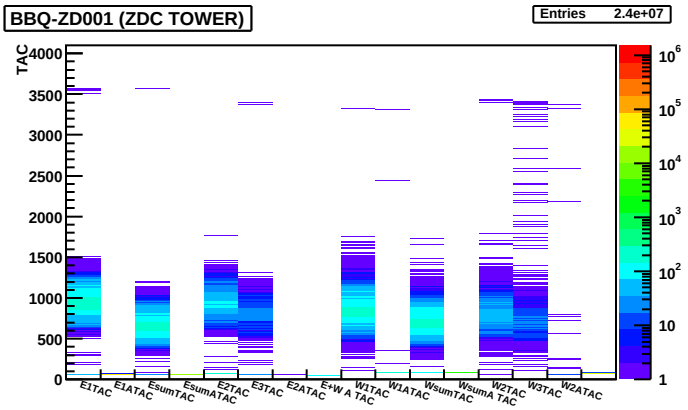

BBQ-BB002 (BBC west small tiles ADC)
Entries 2.4e+07
ADC
QT Input Channel

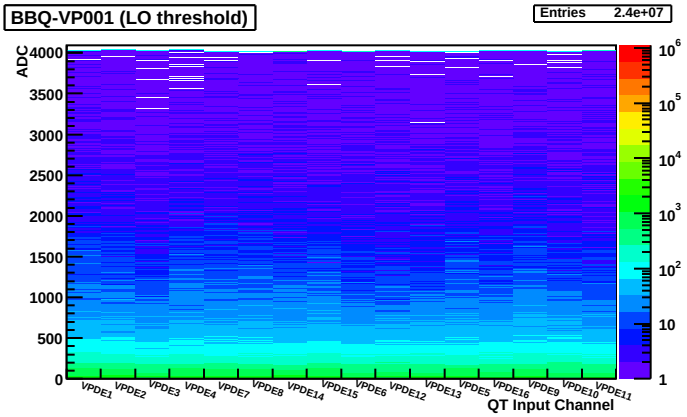

BBQ-BB002 (BBC west small tiles TAC)
Entries 2.4e+07
TAC
QT Input Channel

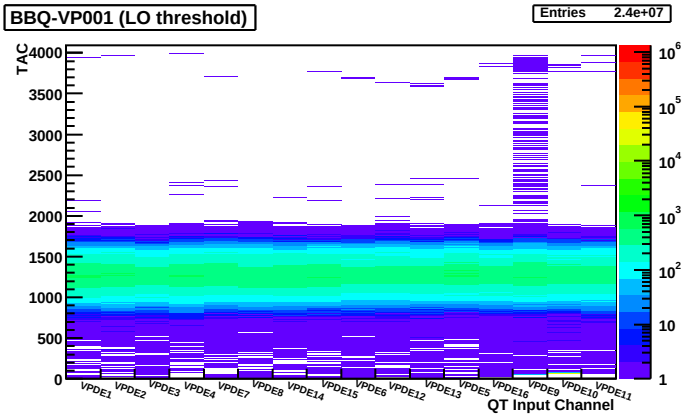

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2.4e+07
ADC
QT Input Channel

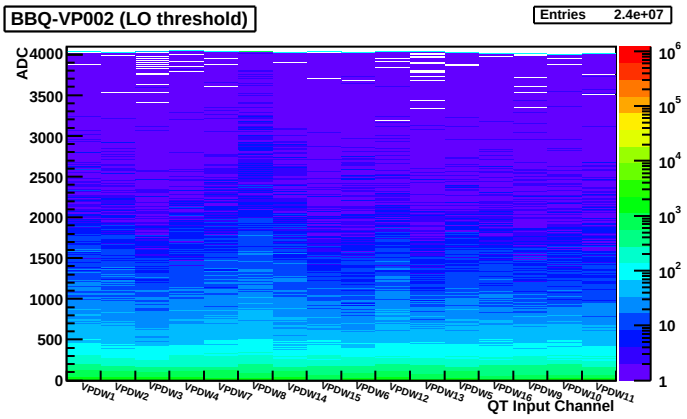

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2.4e+07
TAC
QT Input Channel

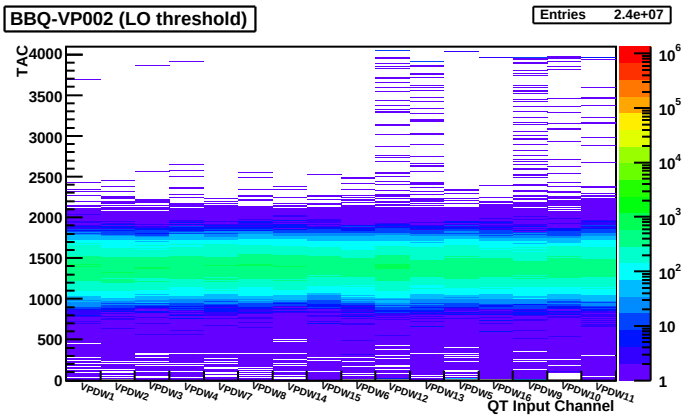

BBQ-ZD001 (ZDC TOWER)
Entries 2.4e+07
ADC

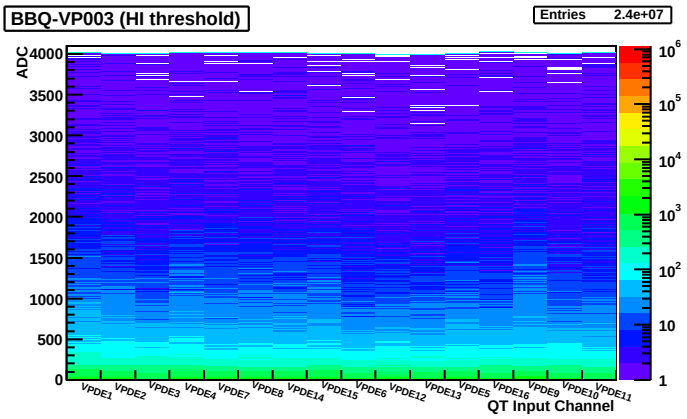

BBQ-ZD001 (ZDC TOWER)
Entries 2.4e+07
TAC

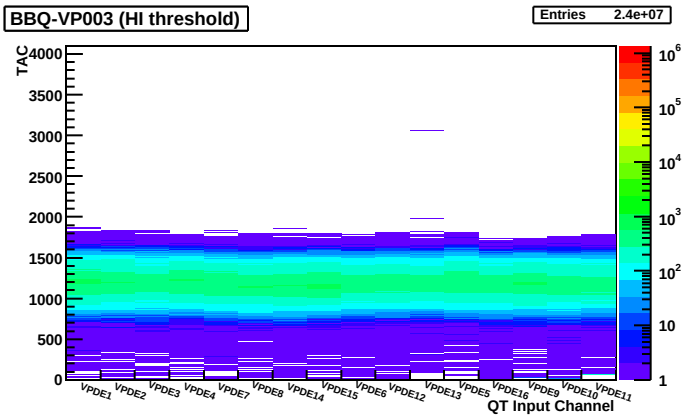

BBQ-VP001 (LO threshold)
Entries 2.4e+07
ADC
QT Input Channel

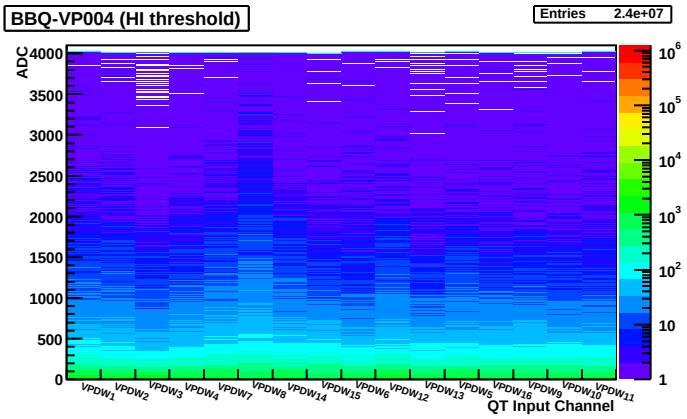

BBQ-VP001 (LO threshold)
Entries 2.4e+07
TAC
QT Input Channel

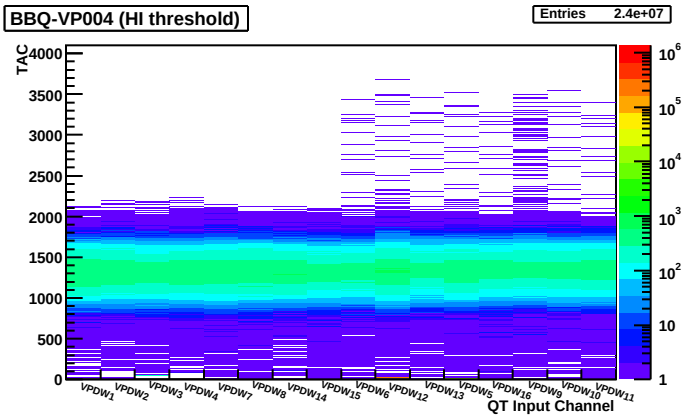

BBQ-VP002 (LO threshold)
Entries 2.4e+07
ADC
QT Input Channel

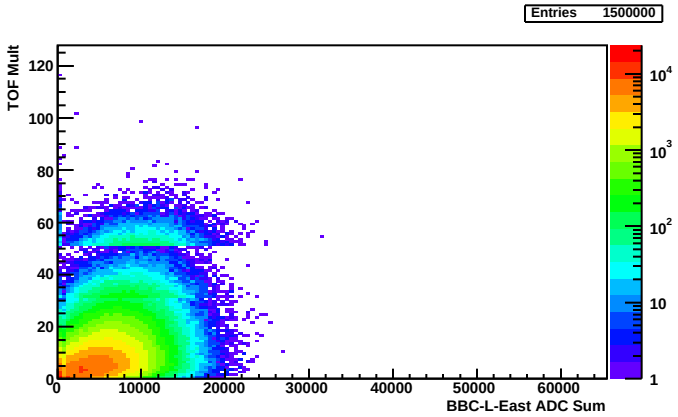

BBQ-VP002 (LO threshold)
Entries 2.4e+07
TAC
QT Input Channel

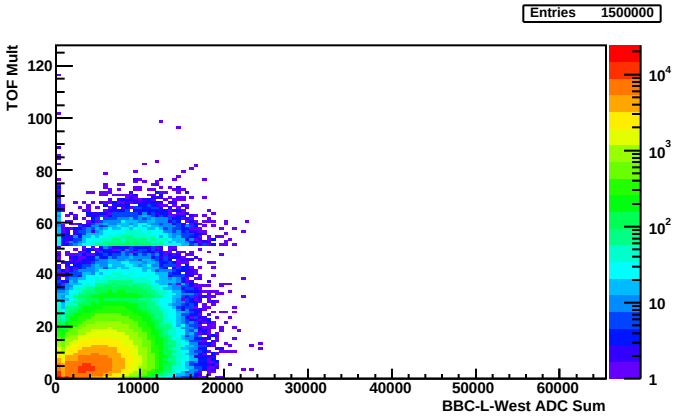

BBQ-VP003 (HI threshold)
Entries 2.4e+07
ADC
QT Input Channel

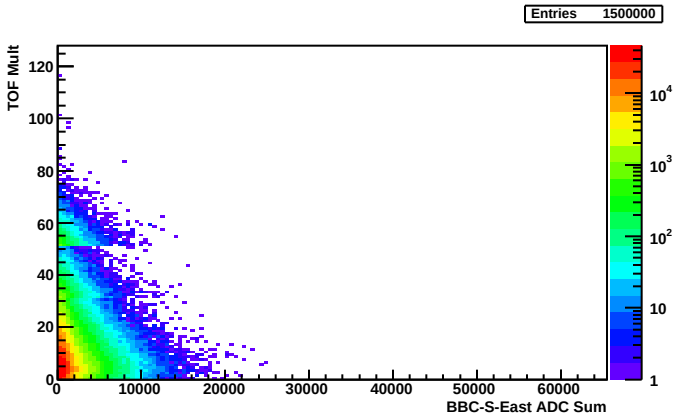

BBQ-VP003 (HI threshold)
Entries 2.4e+07
TAC
QT Input Channel

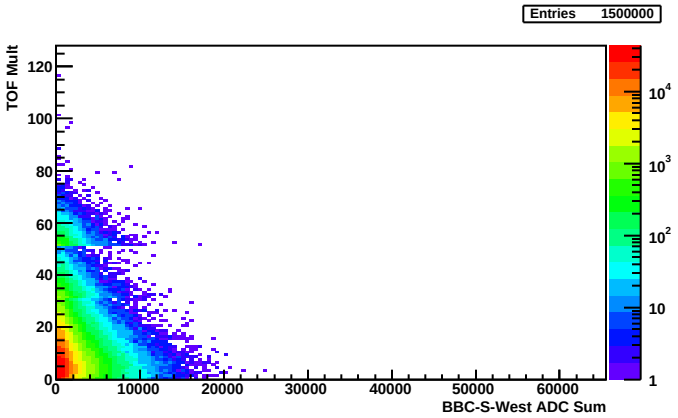

BBQ-VP004 (HI threshold)
Entries 2.4e+07
ADC
QT Input Channel

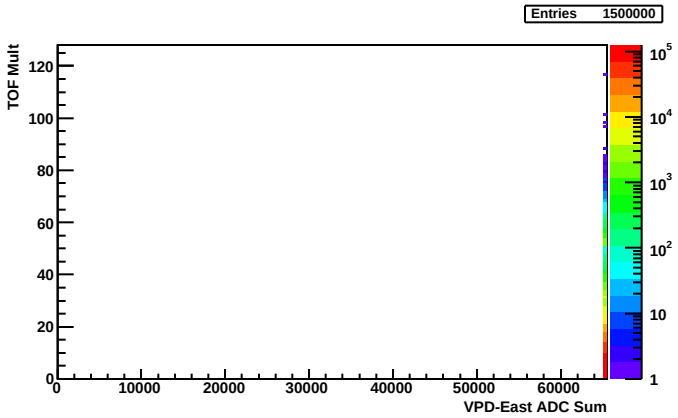

BBQ-VP004 (HI threshold)
Entries 2.4e+07
TAC
QT Input Channel

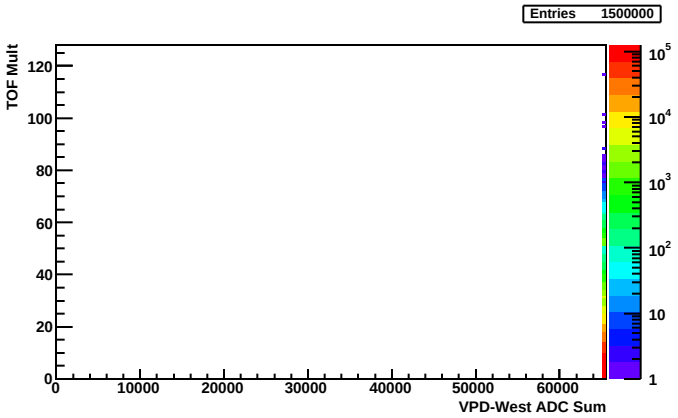

Entries 1500000
TOF Mult
BBC-L-East ADC Sum

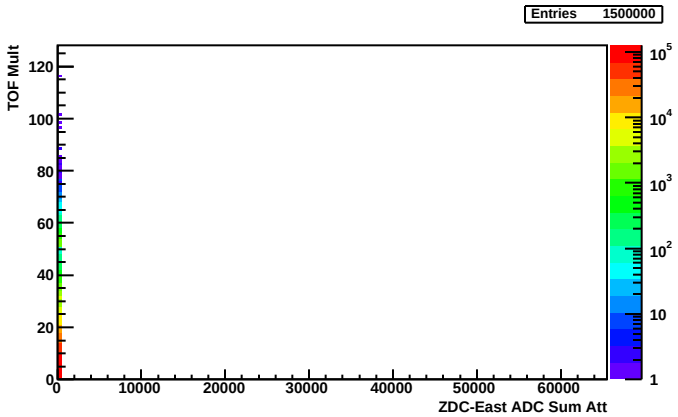

Entries 1500000
TOF Mult
BBC-L-West ADC Sum

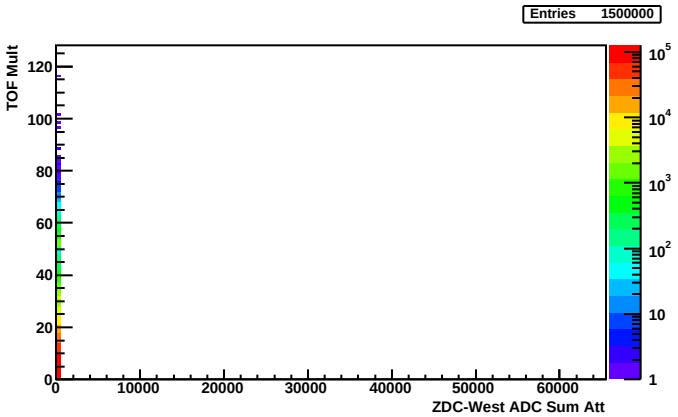

Entries 1500000
TOF Mult
BBC-S-East ADC Sum

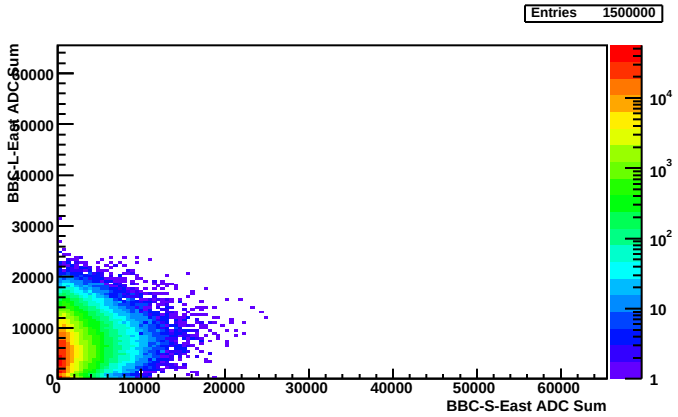

Entries 1500000
TOF Mult
BBC-S-West ADC Sum

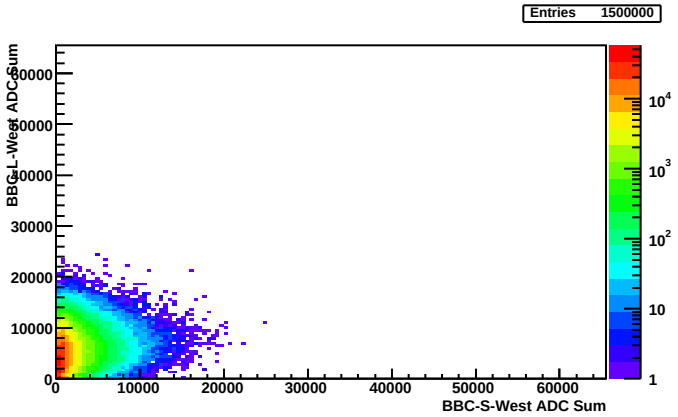

Entries 1500000
TOF Mult
VPD-East ADC Sum

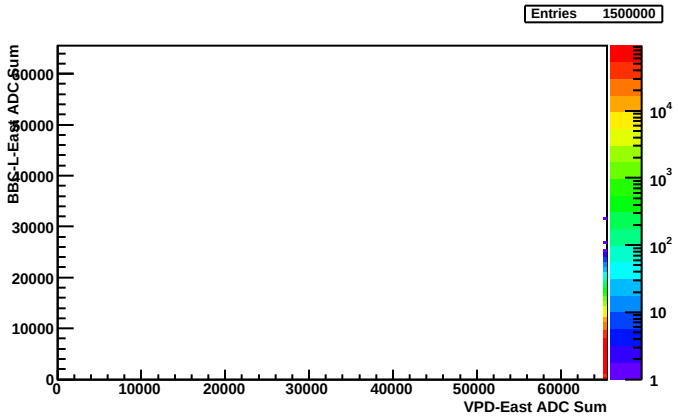

Entries 1500000
TOF Mult
VPD-West ADC Sum

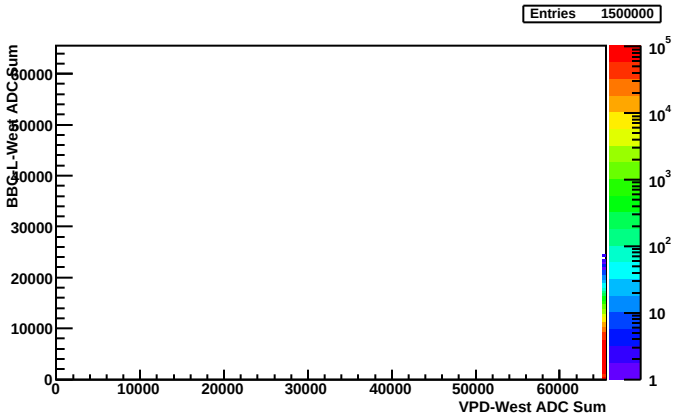

Entries 1500000
TOF Mult
ZDC-East ADC Sum Att

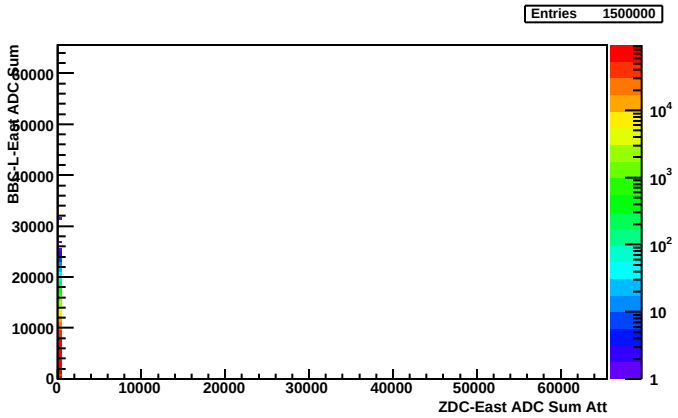

Entries 1500000
TOF Mult
ZDC-West ADC Sum Att

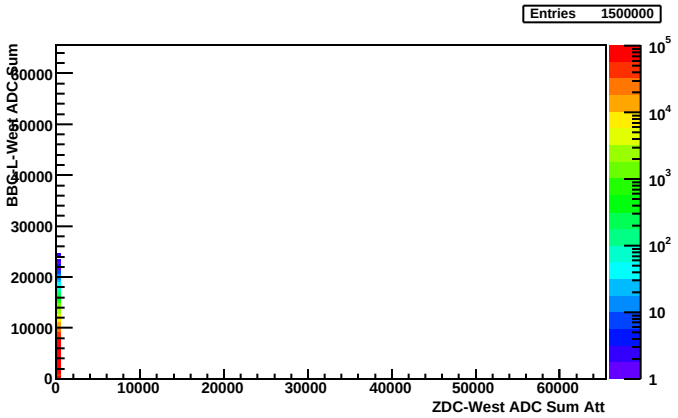

Entries 1500000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

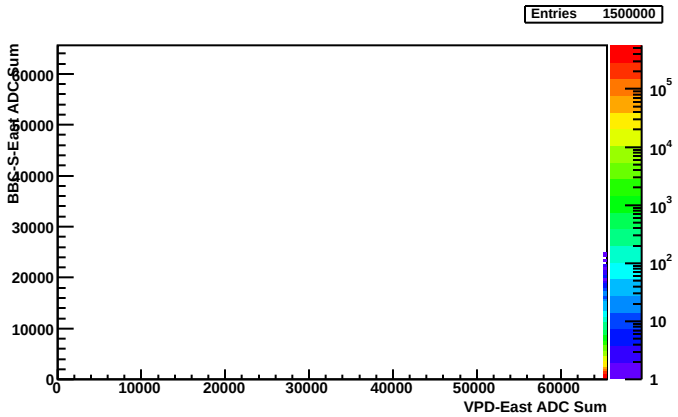

Entries 1500000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

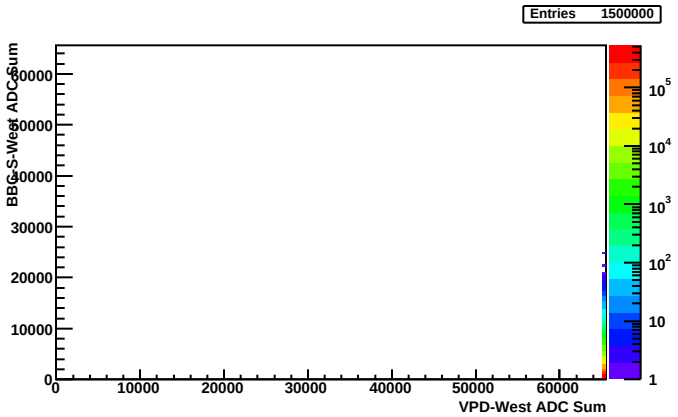

Entries 1500000
BBC-L-East ADC Sum
VPD-East ADC Sum

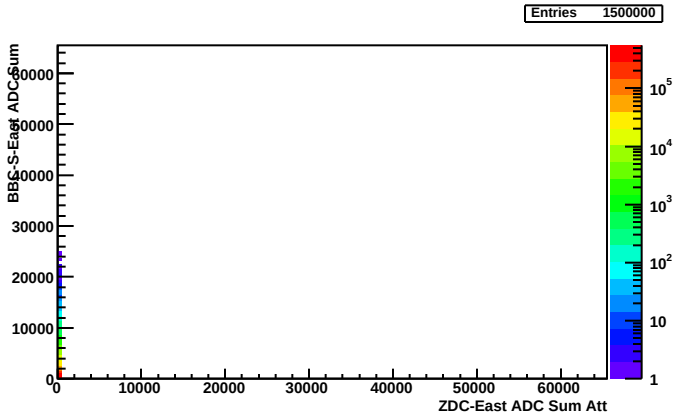

Entries 1500000
BBC-L-West ADC Sum
VPD-West ADC Sum

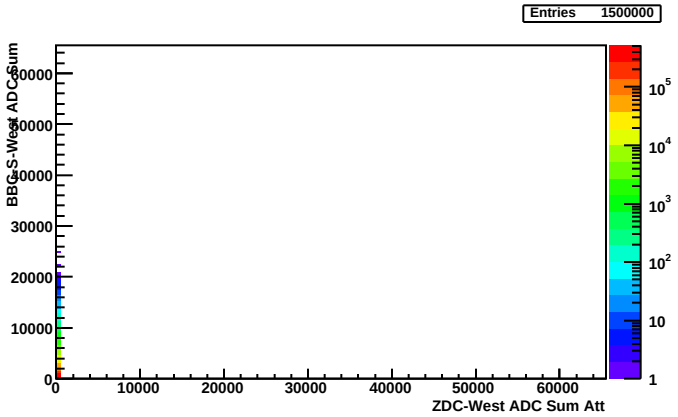

Entries 1500000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

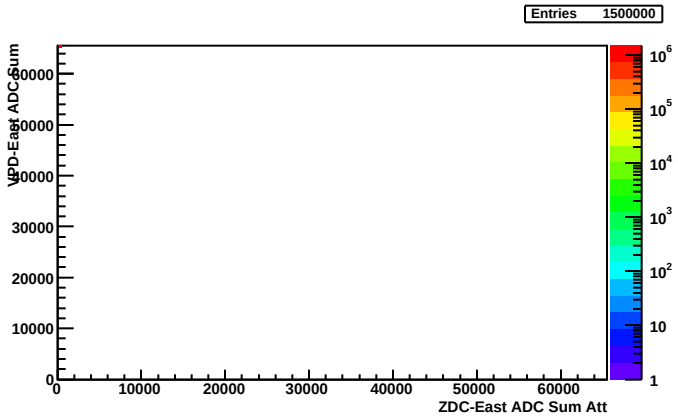

Entries 1500000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

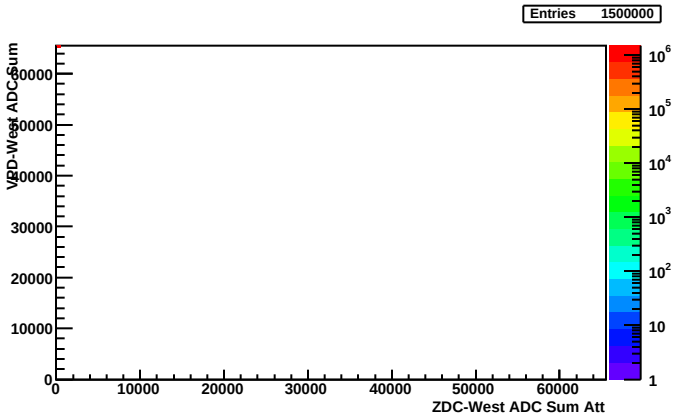

Entries 1500000
BBC-S-East ADC Sum
VPD-East ADC Sum

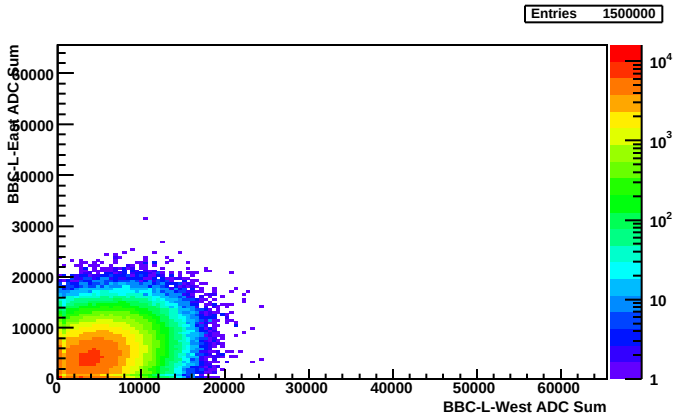

Entries 1500000
BBC-S-West ADC Sum
VPD-West ADC Sum

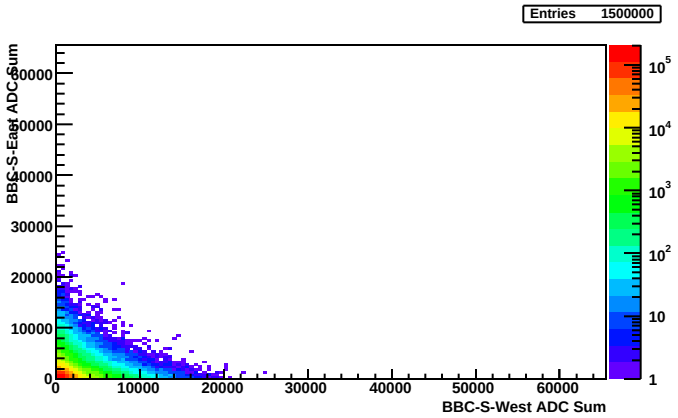

Entries 1500000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

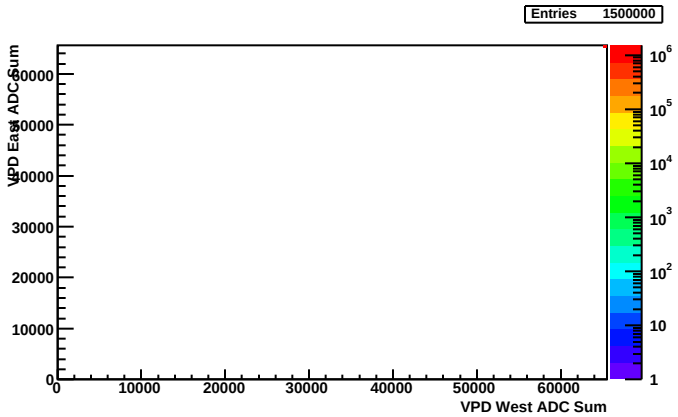

Entries 1500000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

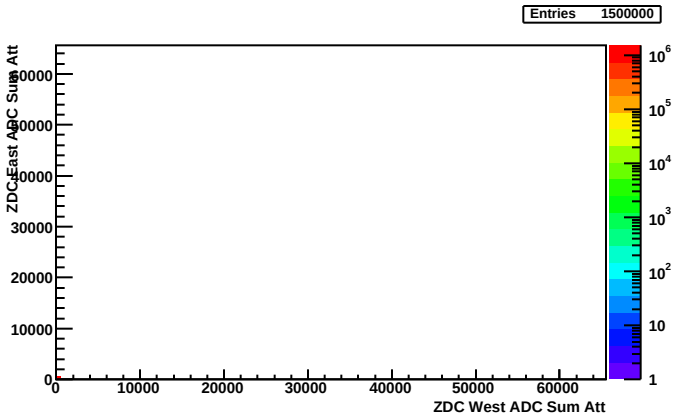

Entries 1500000
VPD-East ADC Sum
ZDC-East ADC Sum Att

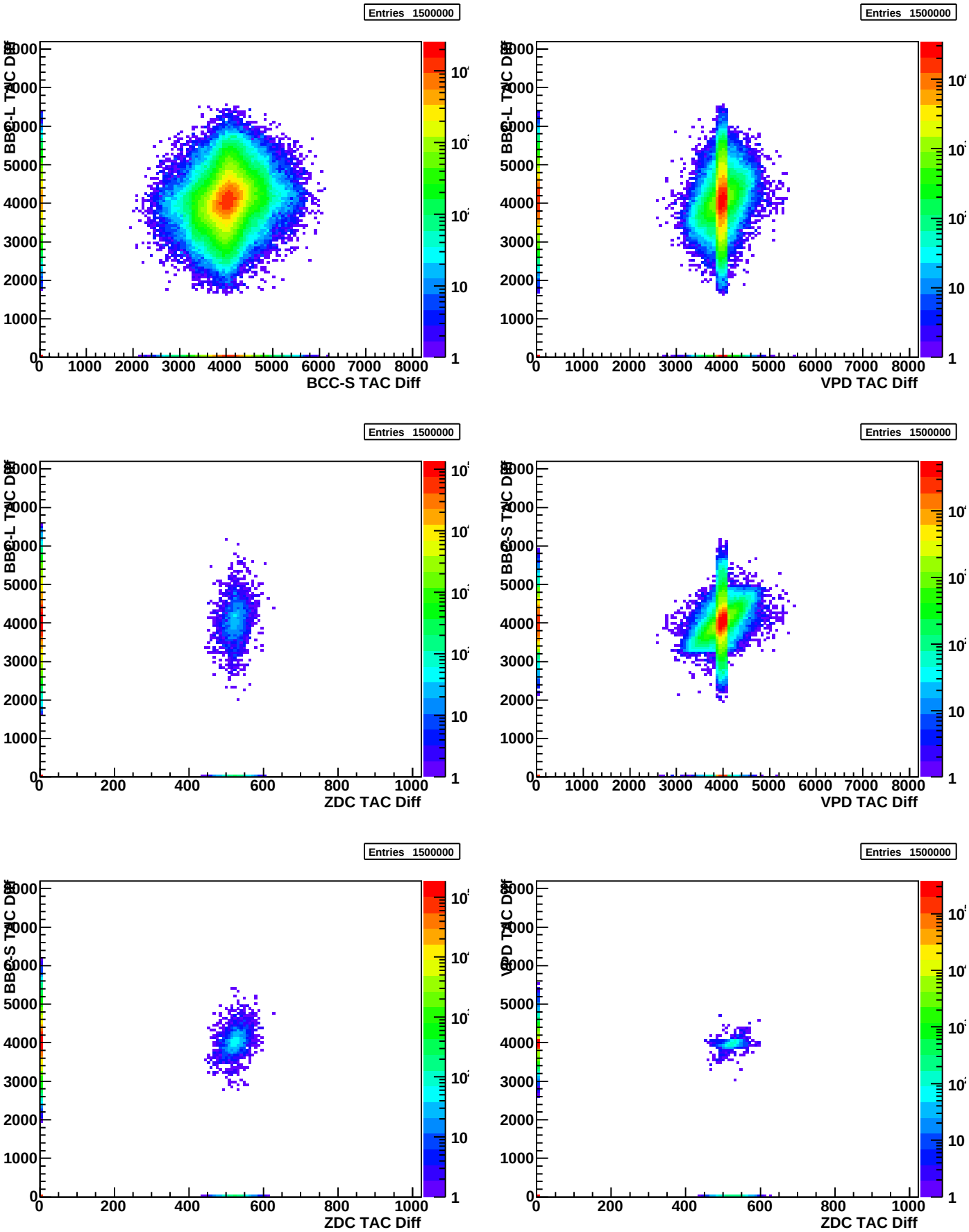

Entries 1500000
VPD-West ADC Sum
ZDC-West ADC Sum Att

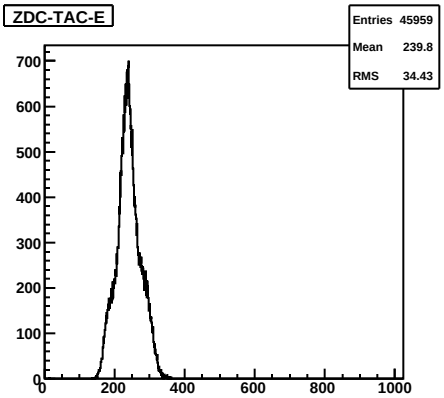

Entries 1500000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

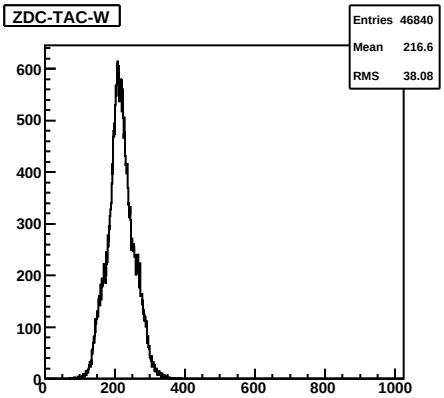

Entries 1500000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

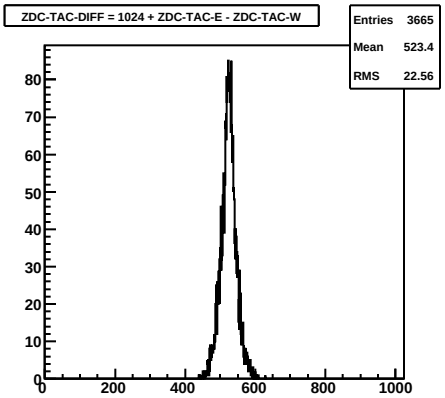

Entries 1500000
VPD East ADC Sum
VPD West ADC Sum

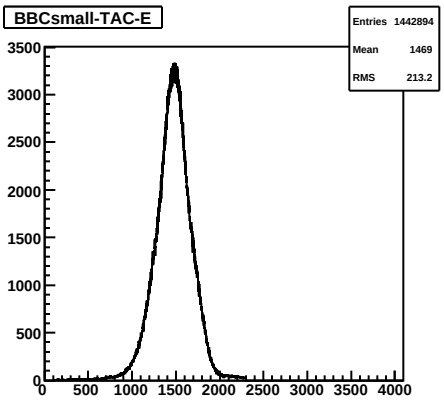

Entries 1500000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

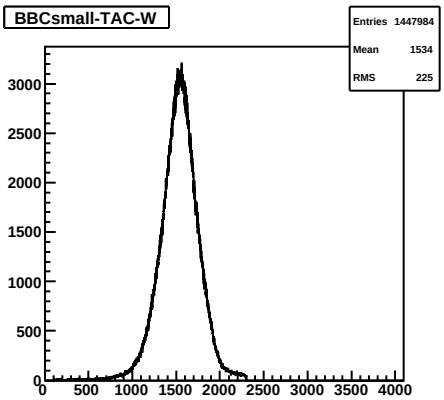

Entries 1500000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1500000
BBC-L TAC Diff
VPD TAC Diff
Entries 1500000
BBC-L TAC Diff
ZDC TAC Diff
Entries 1500000
BBC-S TAC Diff
VPD TAC Diff
Entries 1500000
BBC-S TAC Diff
ZDC TAC Diff
Entries 1500000
VPD TAC Diff
ZDC TAC Diff

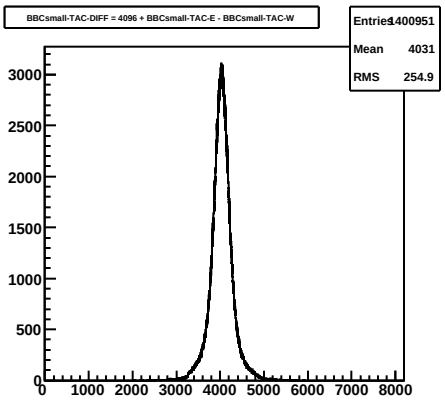

ZDC-TAC-E
Entries 45959
Mean 239.8
RMS 34.43

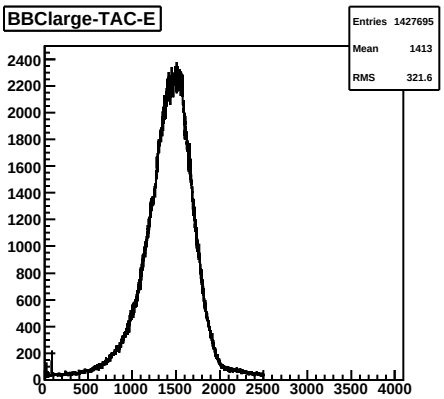

ZDC-TAC-W
Entries 46840
Mean 216.6
RMS 38.08

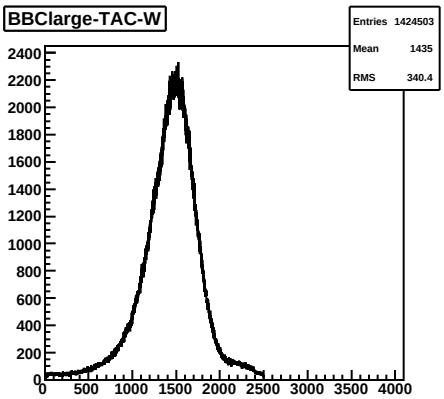

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3665
Mean 523.4
RMS 22.56

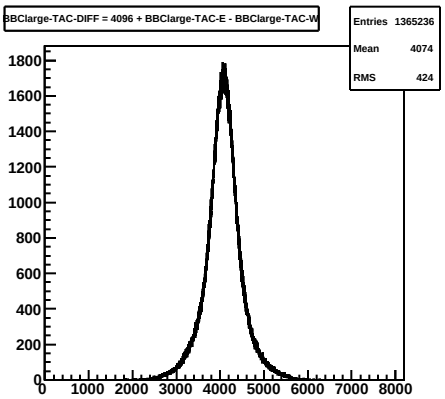

BBCsmall-TAC-E
Entries 1442894
Mean 1469
RMS 213.2

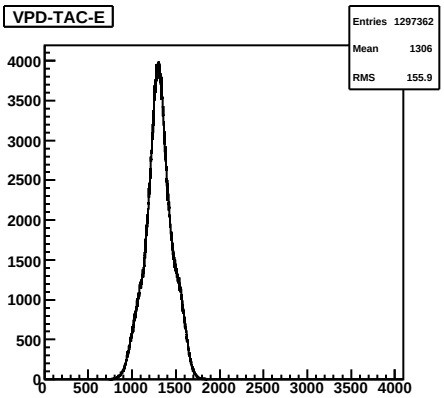

BBCsmall-TAC-W
Entries 1447984
Mean 1534
RMS 225

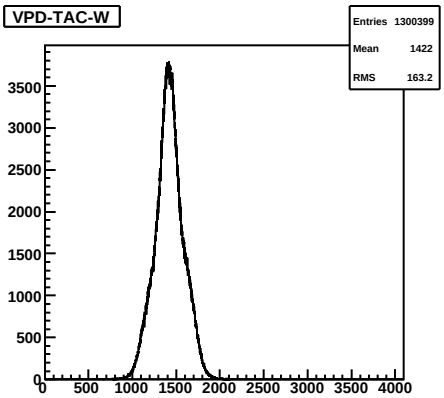

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1400951
Mean 4031
RMS 254.9

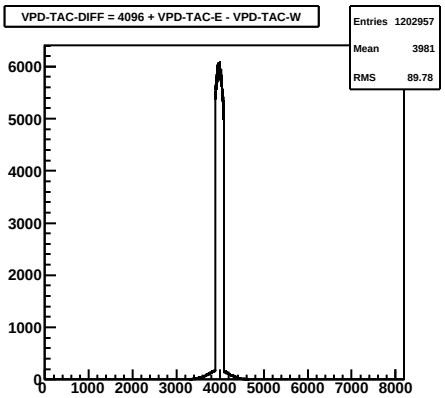

BBClarge-TAC-E
Entries 1427695
Mean 1413
RMS 321.6

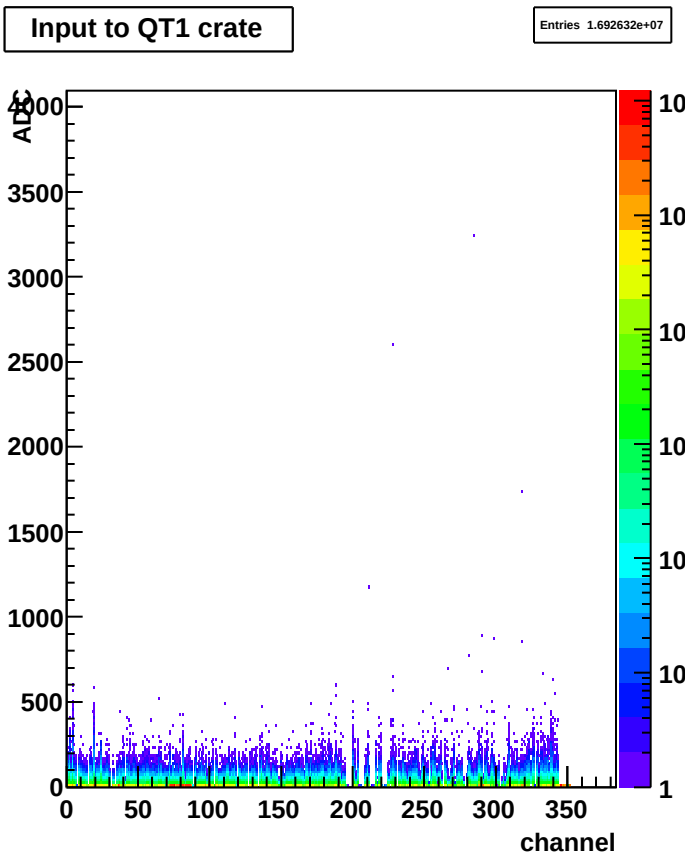

BBClarge-TAC-W
Entries 1424503
Mean 1435
RMS 340.4

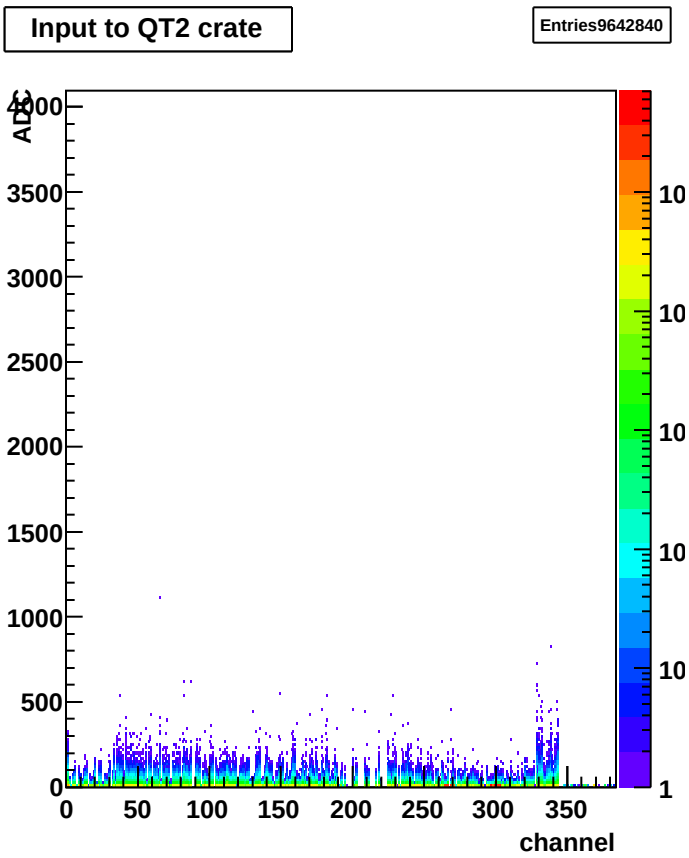

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1365236
Mean 4074
RMS 424

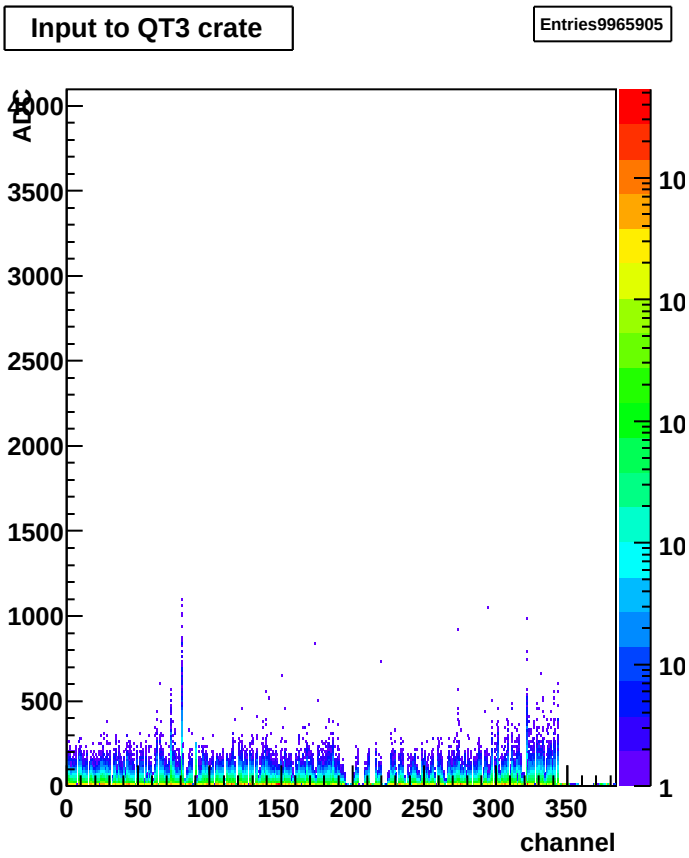

VPD-TAC-E
Entries 1297362
Mean 1306
RMS 155.9

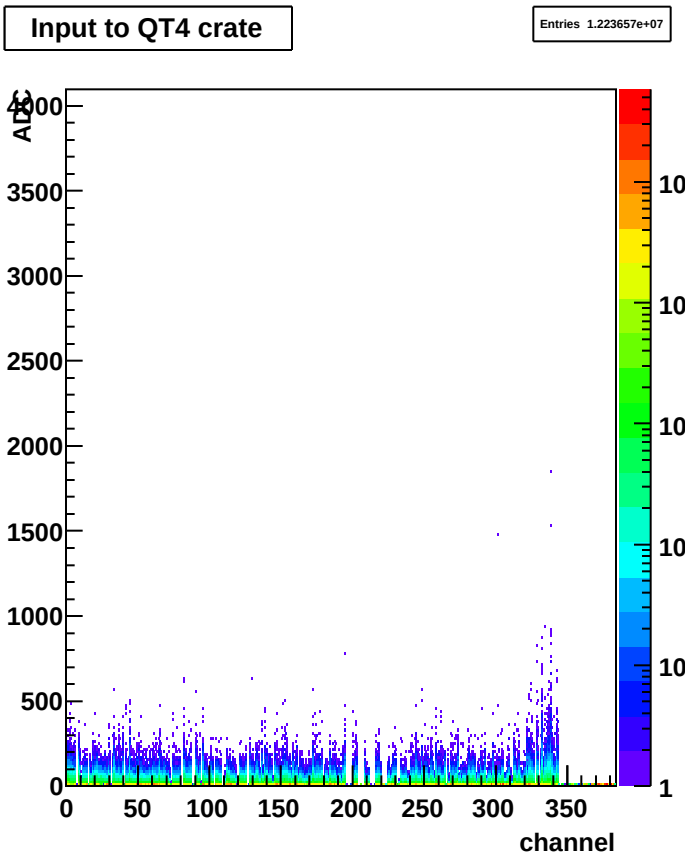

VPD-TAC-W
Entries 1300399
Mean 1422
RMS 163.2

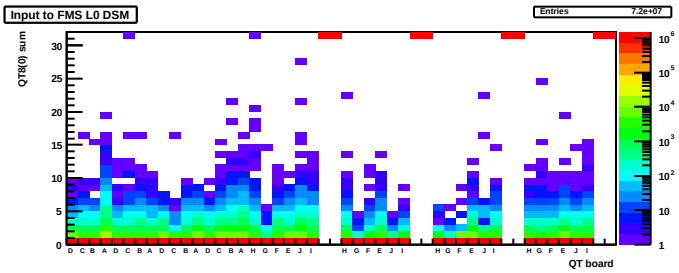

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1202957
Mean 3981
RMS 89.78

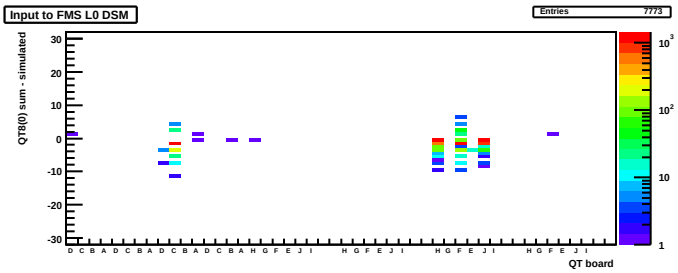

Input to QT1 crate
Entries 1.692632e+07
ADC
channel

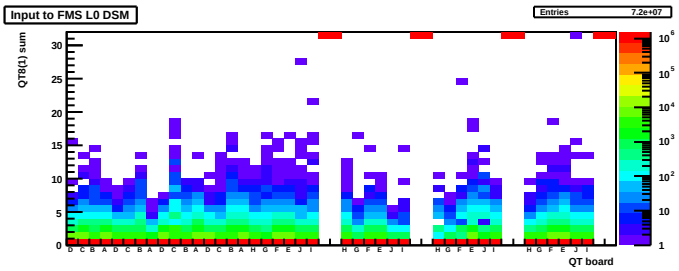

Input to QT2 crate
Entries9642840
ADC
channel

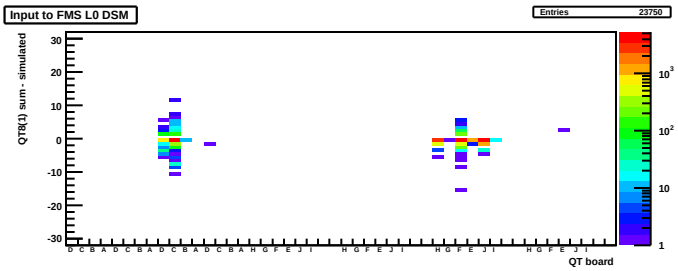

Input to QT3 crate
Entries9965905
ADC
channel

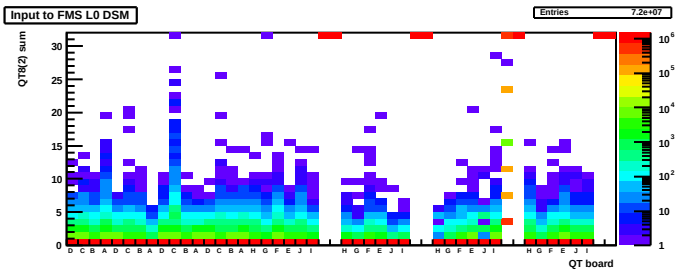

Input to QT4 crate
Entries 1.223657e+07
ADC
channel

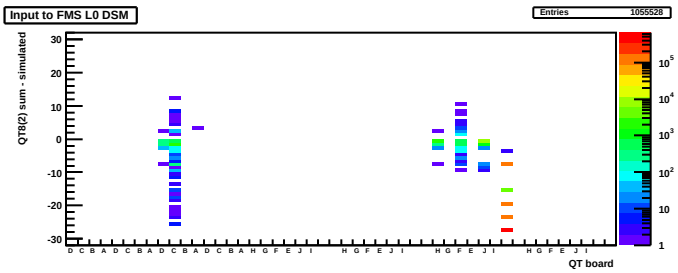

Input to FMS L0 DSM
Entries 7.2e+07
QT8(0) sum
QT board

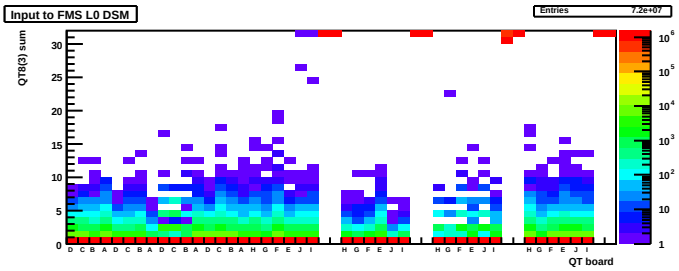

Input to FMS L0 DSM
Entries 7773
QT8(0) sum - simulated
QT board

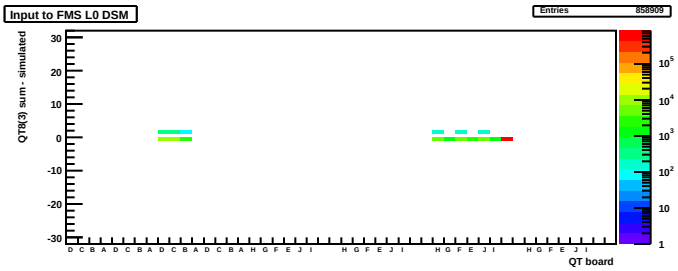

Input to FMS L0 DSM
Entries 7.2e+07
QT8(1) sum
QT board

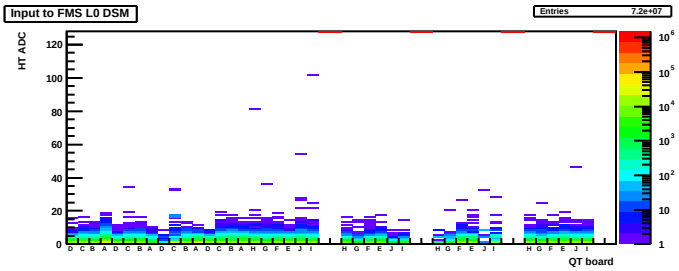

Input to FMS L0 DSM
Entries 23750
QT8(1) sum - simulated
QT board

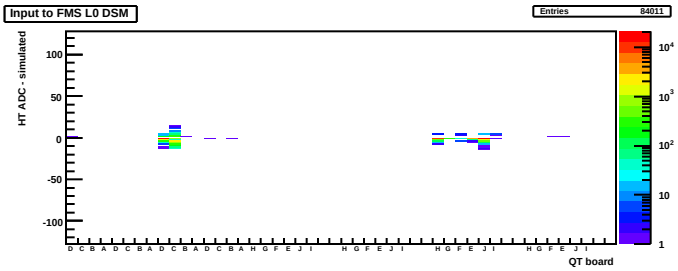

Input to FMS L0 DSM
Entries 7.2e+07
QT8(2) sum
QT board

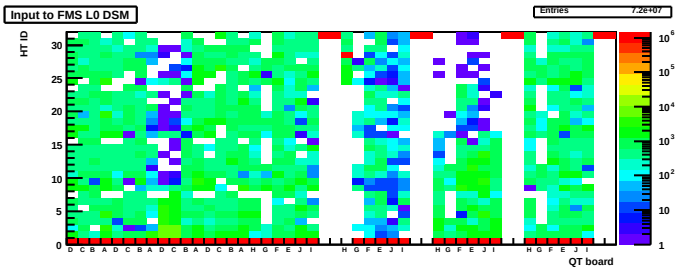

Input to FMS L0 DSM
Entries 1055528
QT8(2) sum - simulated
QT board

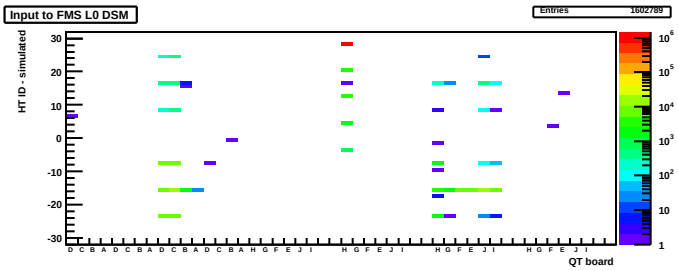

Input to FMS L0 DSM
Entries 7.2e+07
QT8(3) sum
QT board

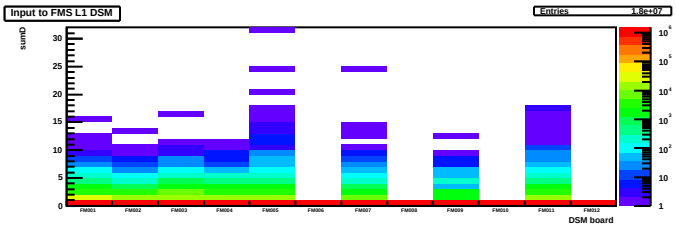

Input to FMS L0 DSM
Entries 858909
QT8(3) sum - simulated
QT board

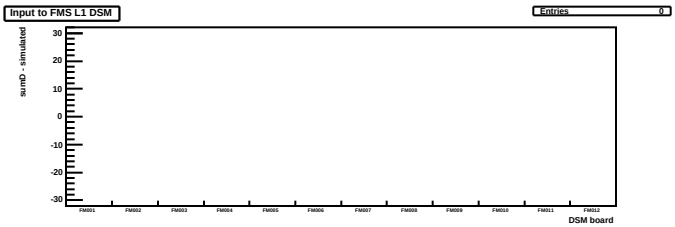

Input to FMS L0 DSM
Entries 7.2e+07
HT ADC
QT board

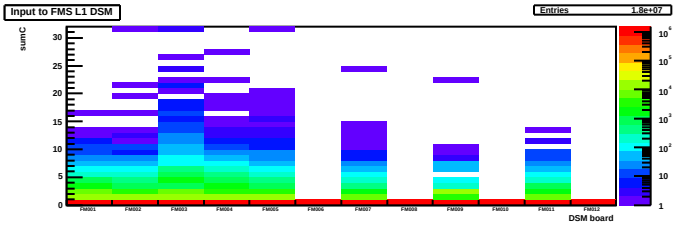

Input to FMS L0 DSM
Entries 84011
HT ADC - simulated
QT board

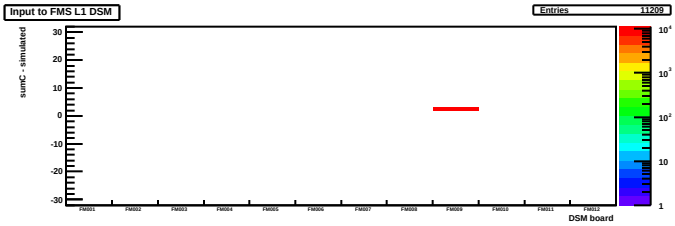

Input to FMS L0 DSM
Entries 7.2e+07
HT ID
QT board

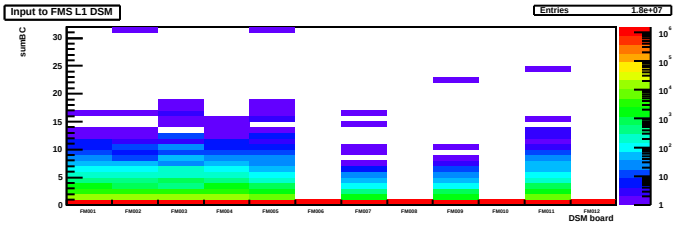

Input to FMS L0 DSM
Entries 1602789
HT ID - simulated
QT board

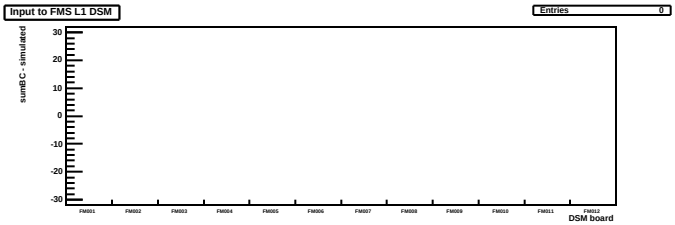

Input to FMS L1 DSM
Entries 1.8e+07
sumD
DSM board

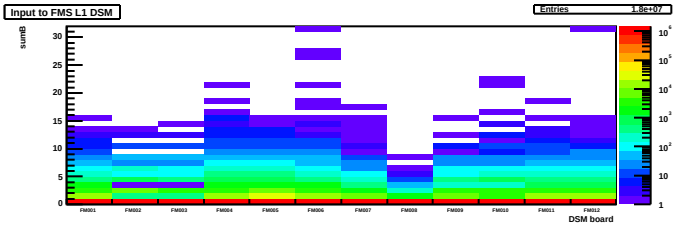

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

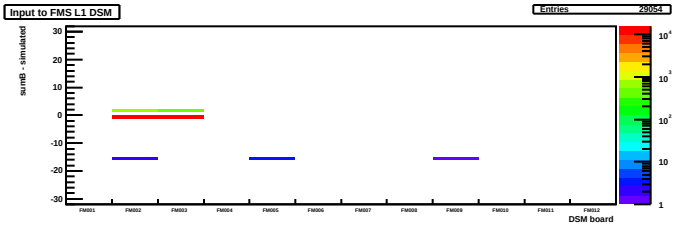

Input to FMS L1 DSM
Entries 1.8e+07
sumC
DSM board

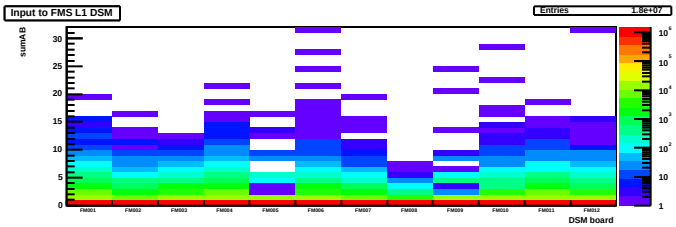

Input to FMS L1 DSM
Entries 11209
sumC - simulated
DSM board

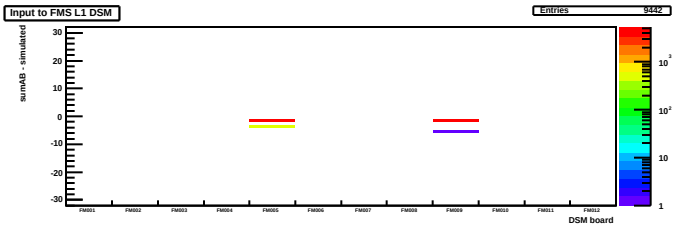

Input to FMS L1 DSM
Entries 1.8e+07
sumBC
DSM board

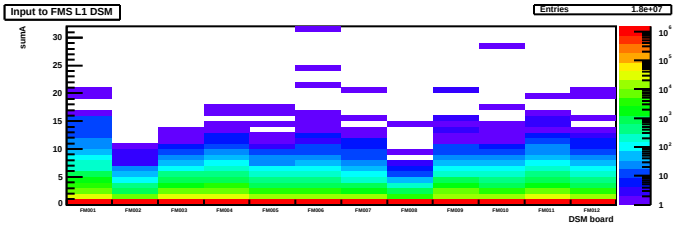

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

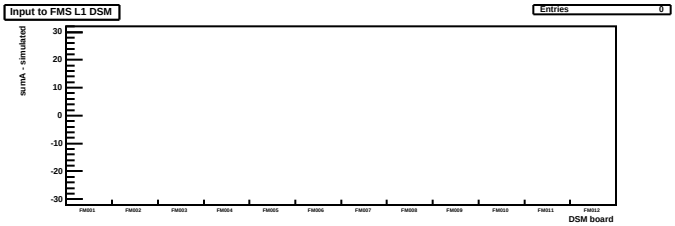

Input to FMS L1 DSM
Entries 1.8e+07
sumB
DSM board

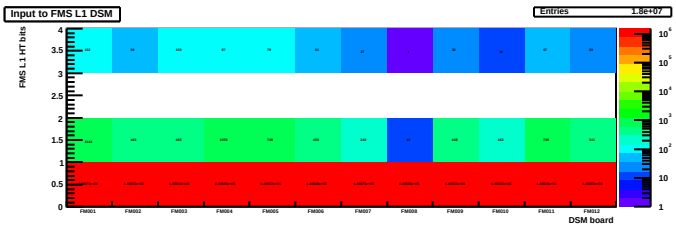

Input to FMS L1 DSM
Entries 29054
sumB - simulated
DSM board

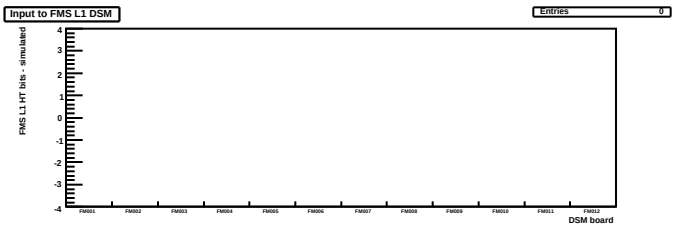

Input to FMS L1 DSM
Entries 1.8e+07
sumAB
DSM board

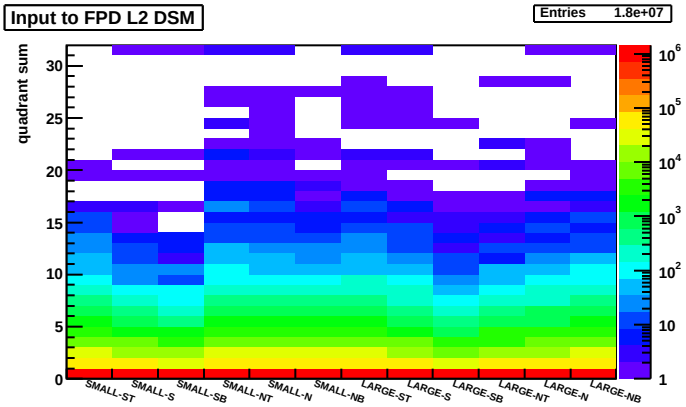

Input to FMS L1 DSM
Entries 9442
sumAB - simulated
DSM board

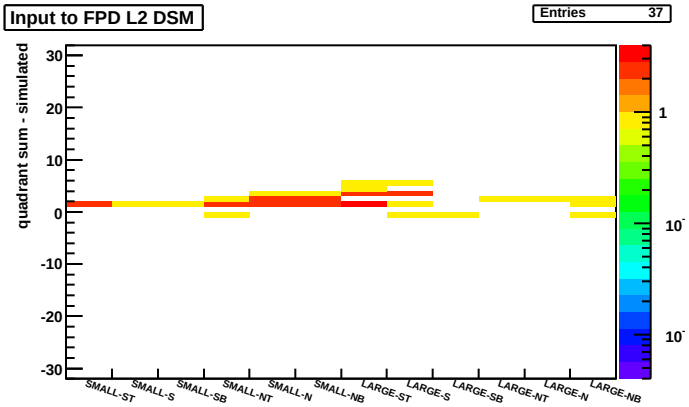

Input to FMS L1 DSM
Entries 1.8e+07
sumA
DSM board

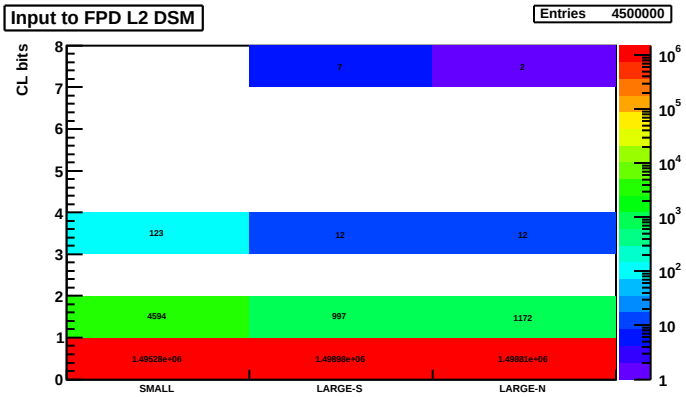

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

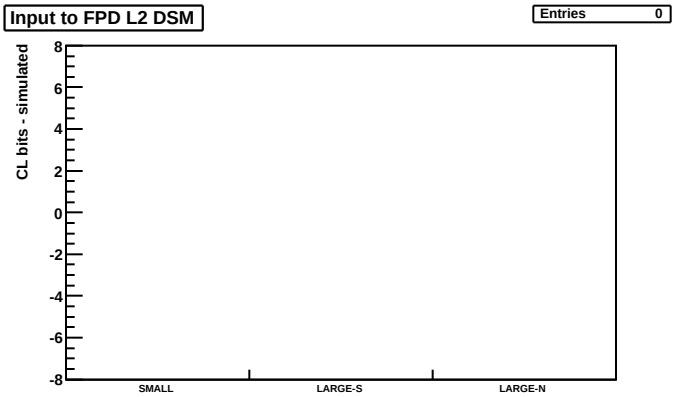

Input to FMS L1 DSM
Entries 1.8e+07
FMS L1 HT bits
DSM board

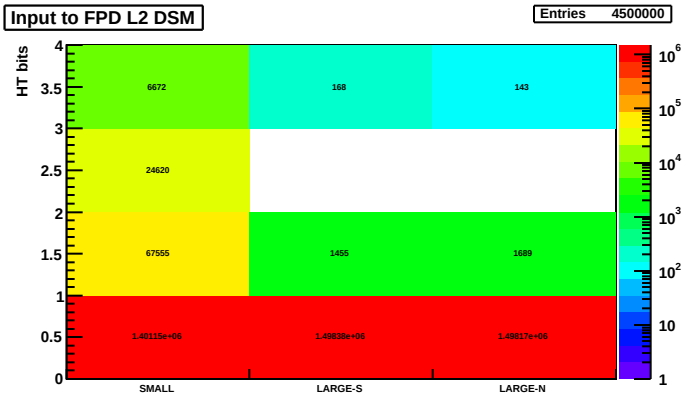

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

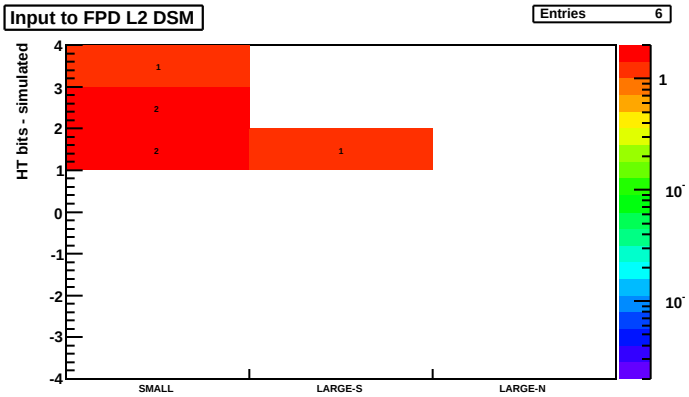

Input to FPD L2 DSM
Entries 1.8e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

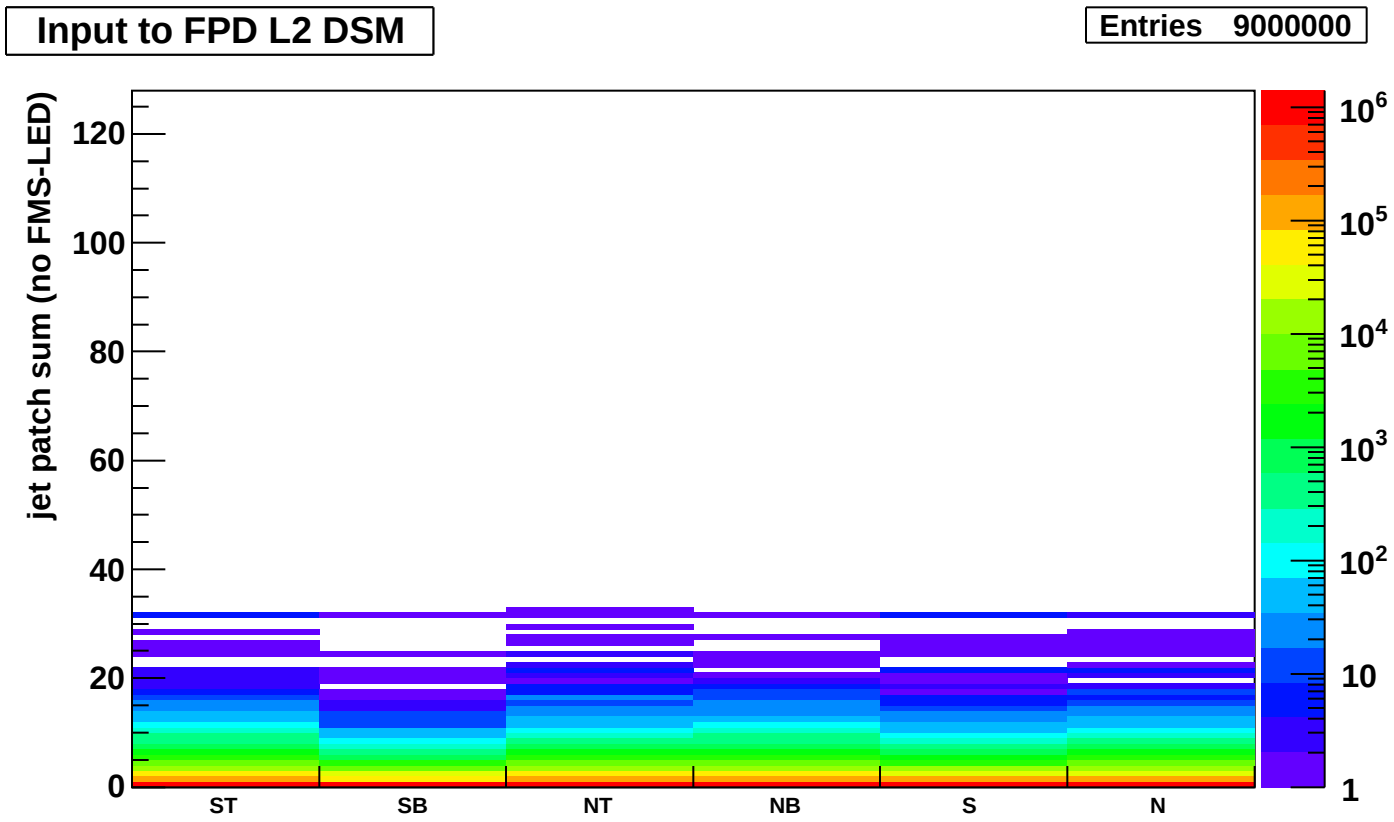

Input to FPD L2 DSM
Entries 37
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

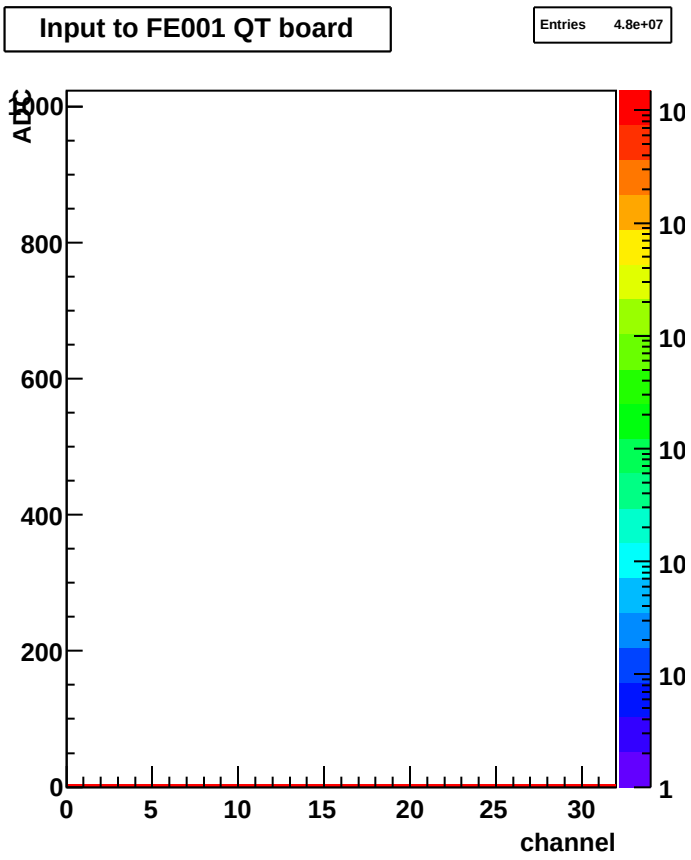

Input to FPD L2 DSM
Entries 4500000
CL bits
7
2
123
12
12
4594
997
1172
1.49528e+06
1.49898e+06
1.49881e+06
SMALL
LARGE-S
LARGE-N

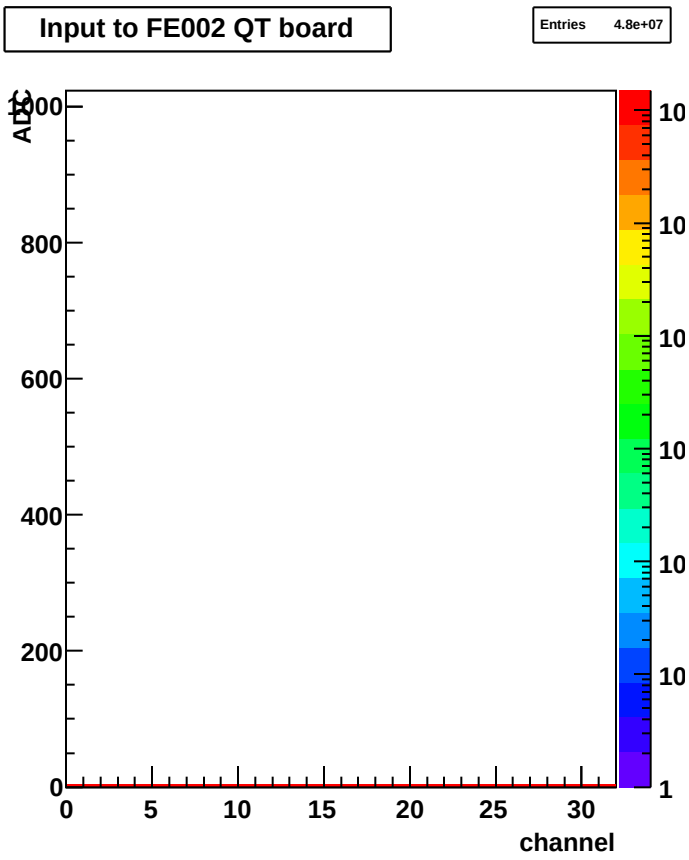

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

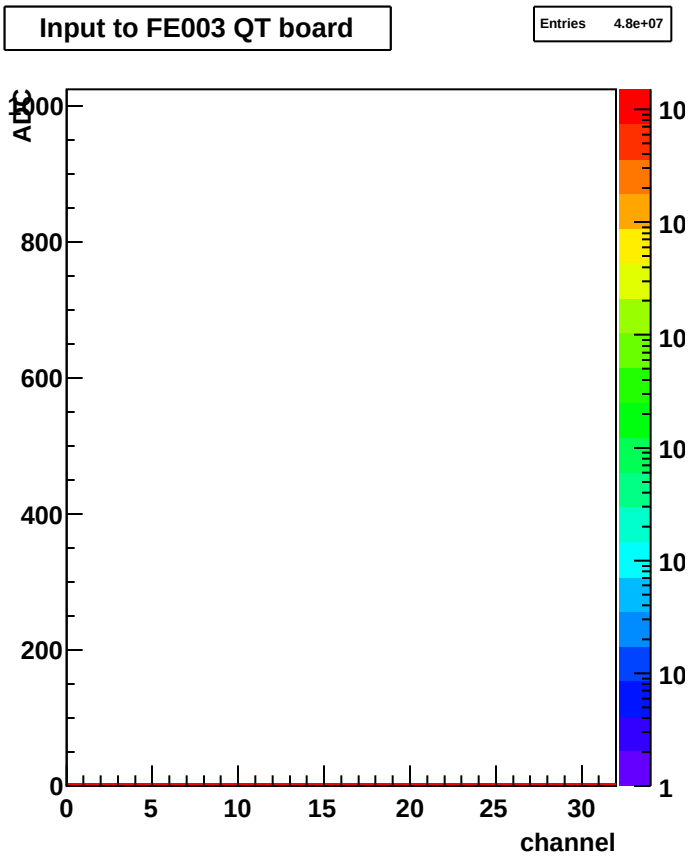

Input to FPD L2 DSM
Entries 4500000
HT bits
6672
168
143
24620
67555
1455
1689
1.40115e+06
1.49838e+06
1.49817e+06
SMALL
LARGE-S
LARGE-N

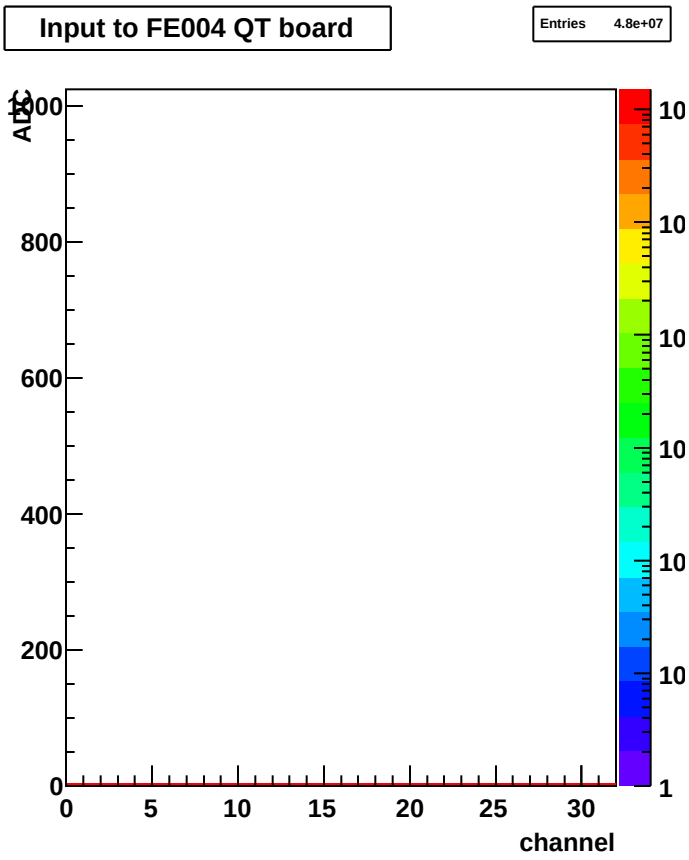

Input to FPD L2 DSM
Entries 6
HT bits - simulated
1
2
2
1
SMALL
LARGE-S
LARGE-N

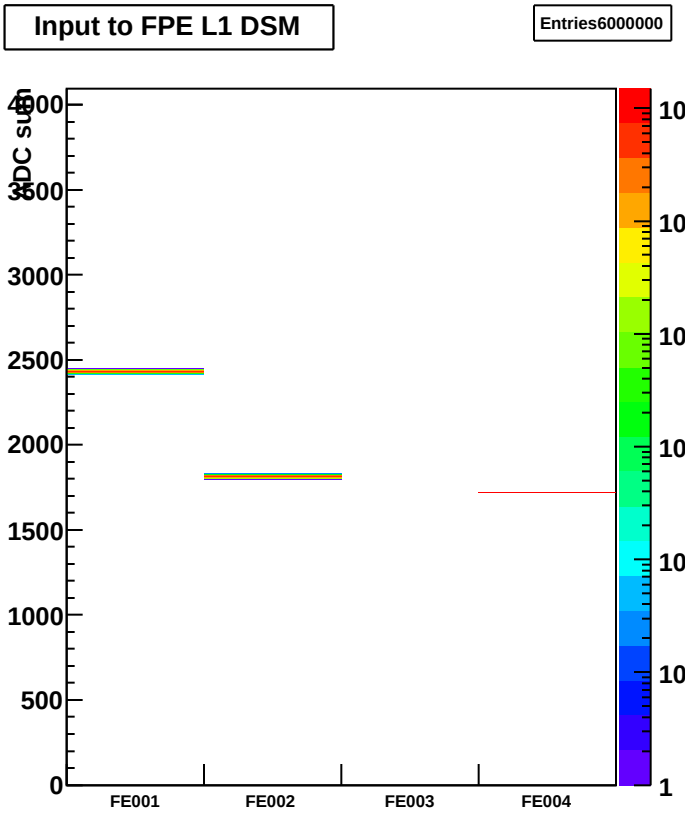

Input to FPD L2 DSM
Entries 9000000
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6


Input to FE001 QT board
Entries 4.8e+07
ADC
channel

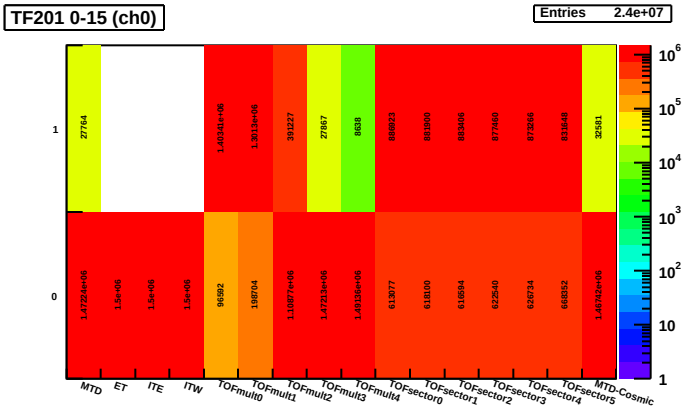

Input to FE002 QT board
Entries 4.8e+07
ADC
channel


Input to FE003 QT board
Entries 4.8e+07
ADC
channel

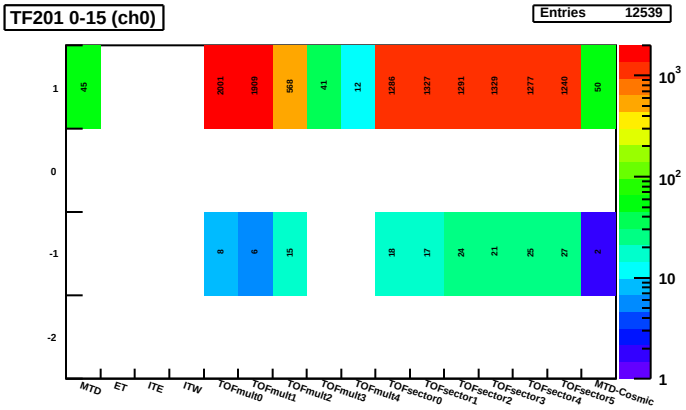

Input to FE004 QT board
Entries 4.8e+07
ADC
channel


Input to FPE L1 DSM
Entries6000000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

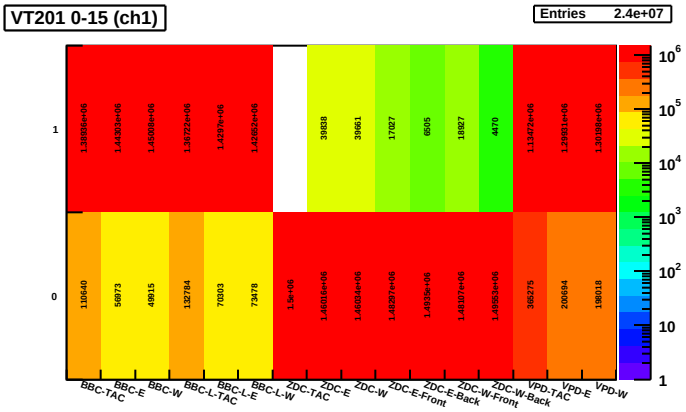
TF201 0-15 (ch0)



TF201 0-15 (ch0)



VT201 0-15 (ch1)



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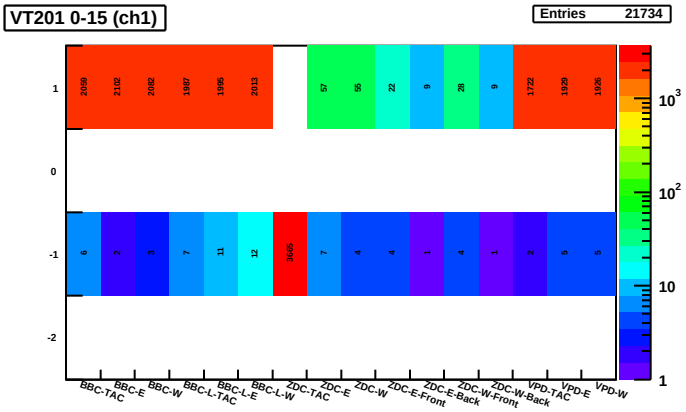
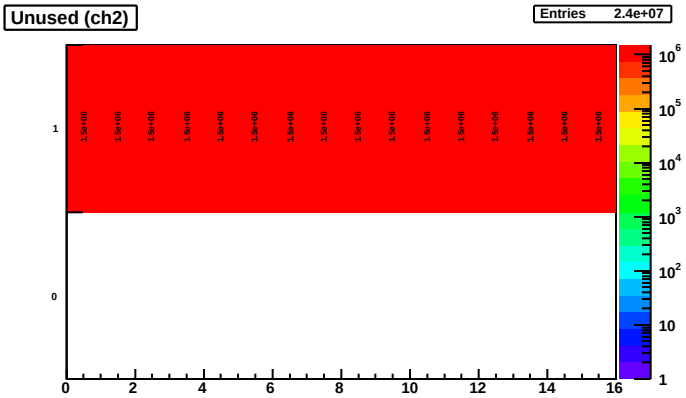
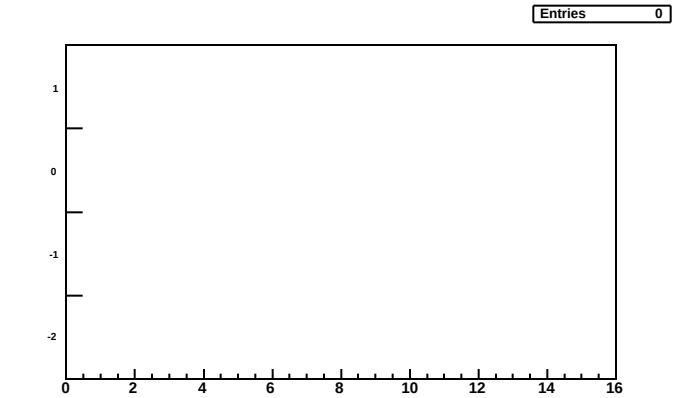


Unused (ch2)





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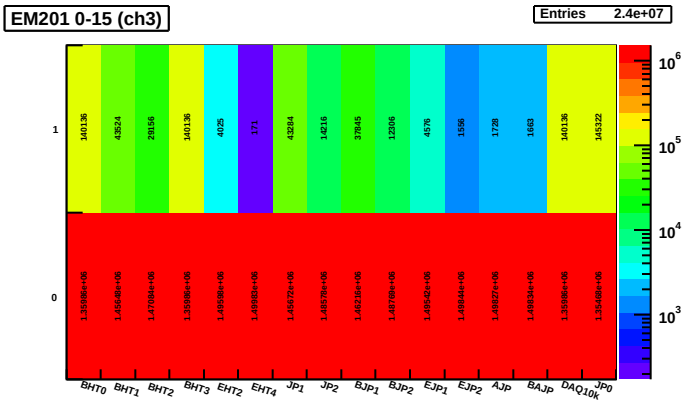

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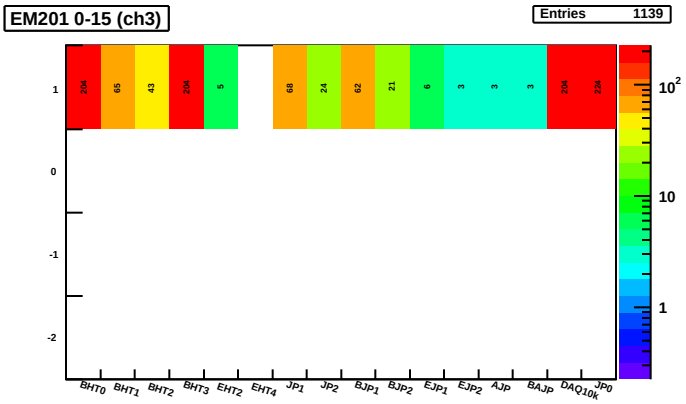
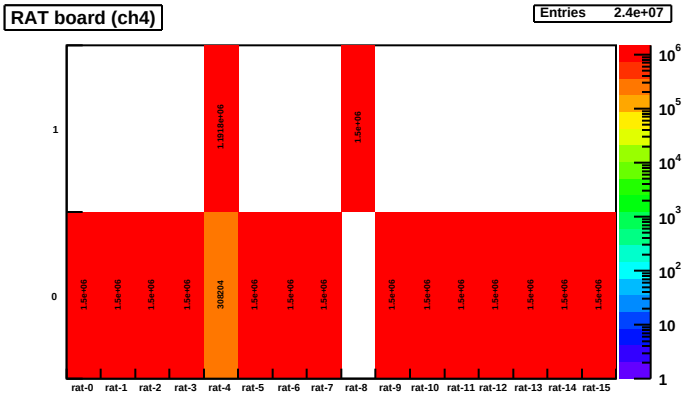
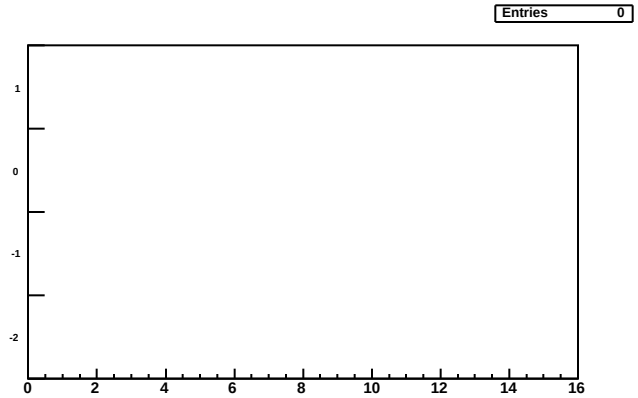
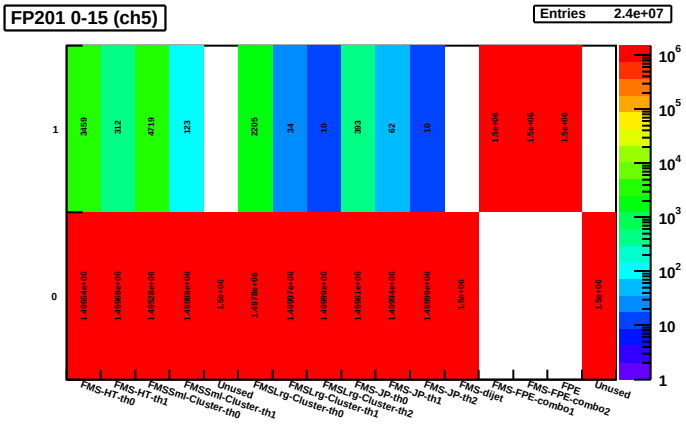


RAT board (ch4)

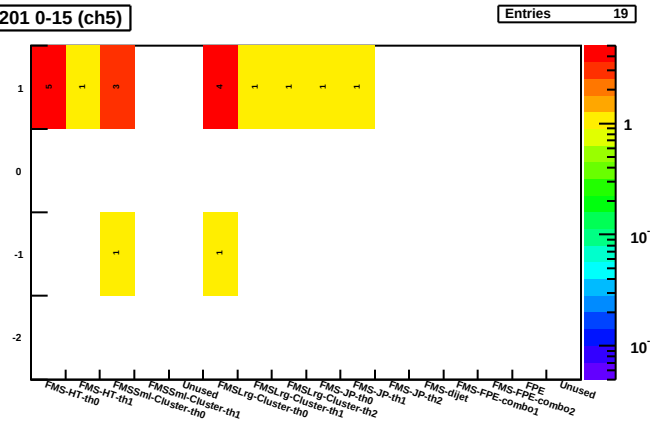




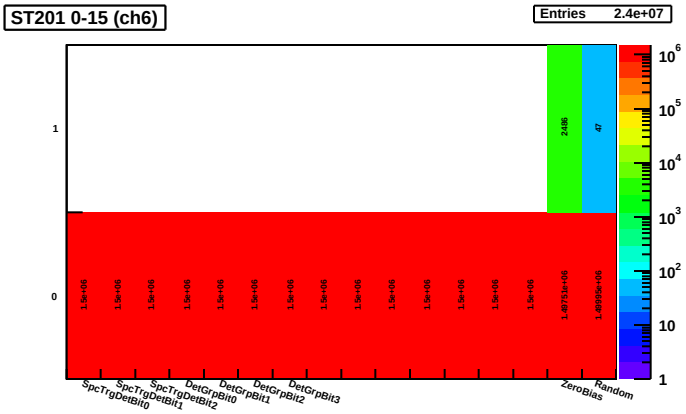
FP201 0-15 (ch5)

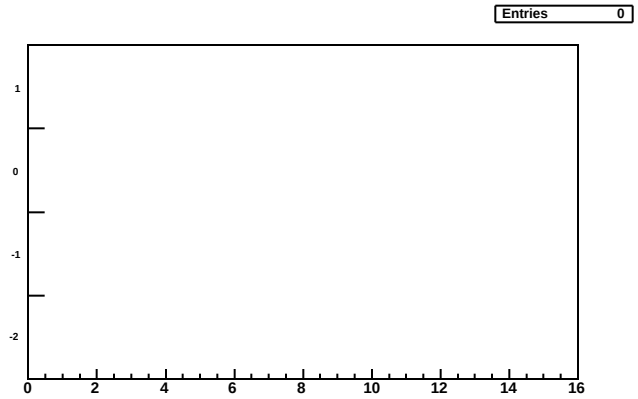
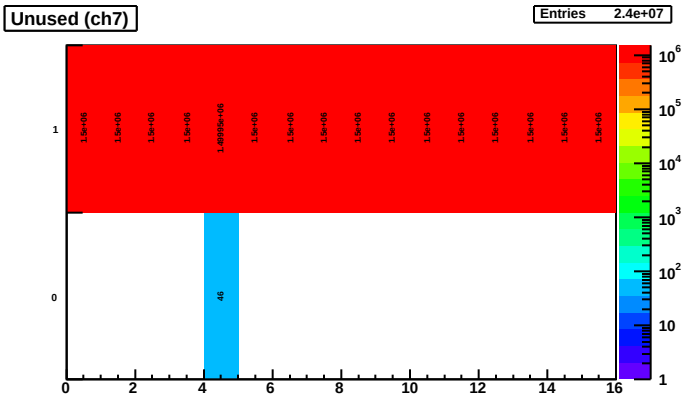
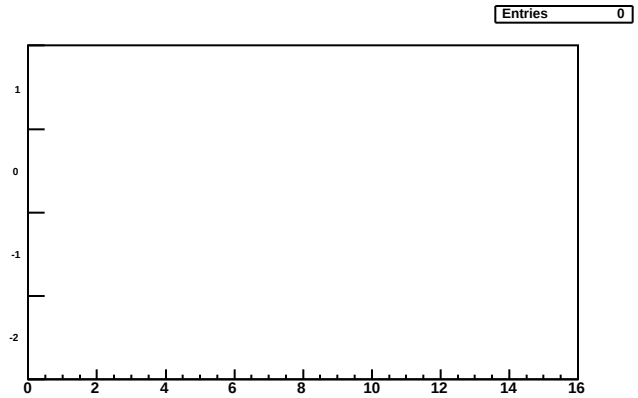


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)