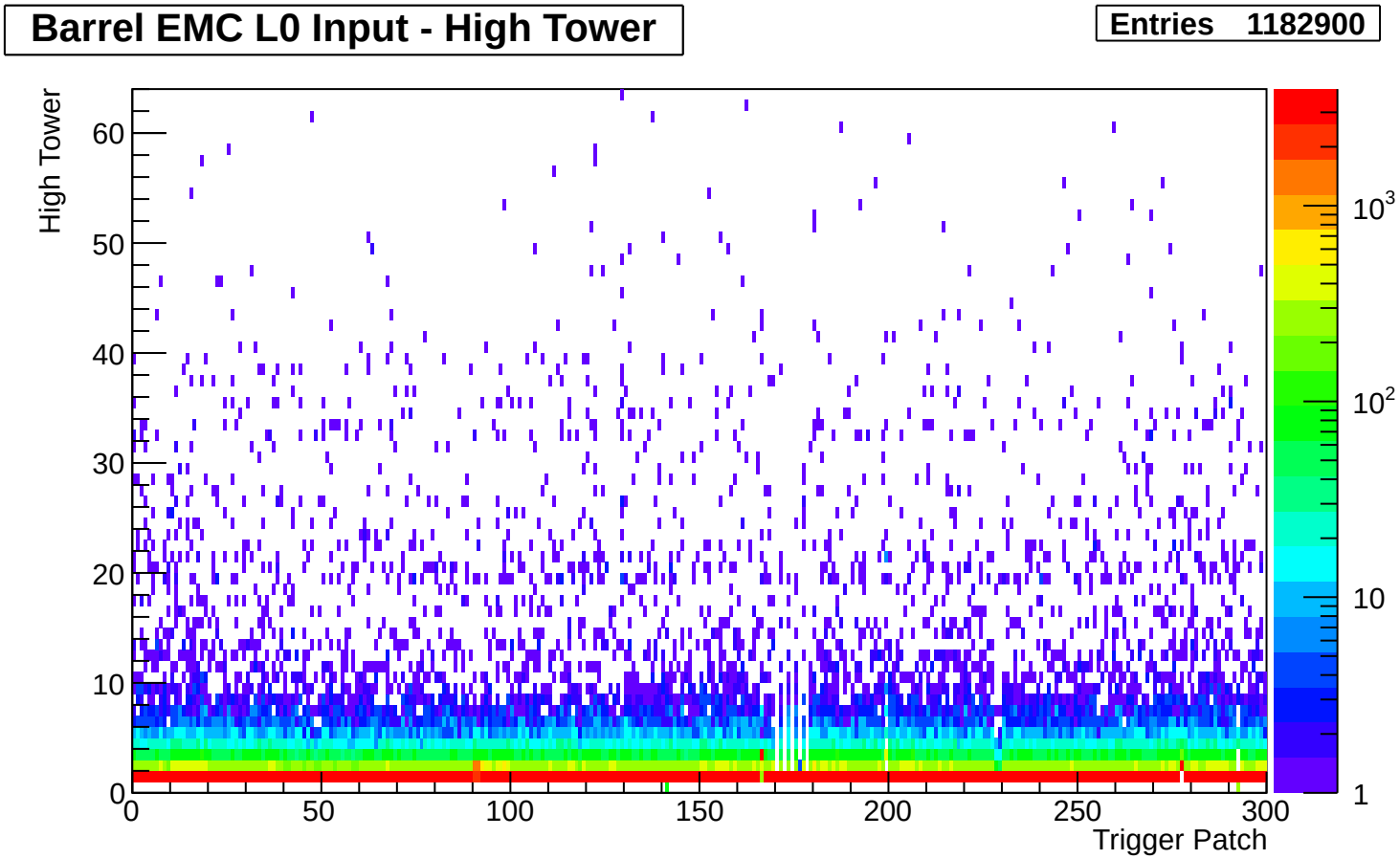
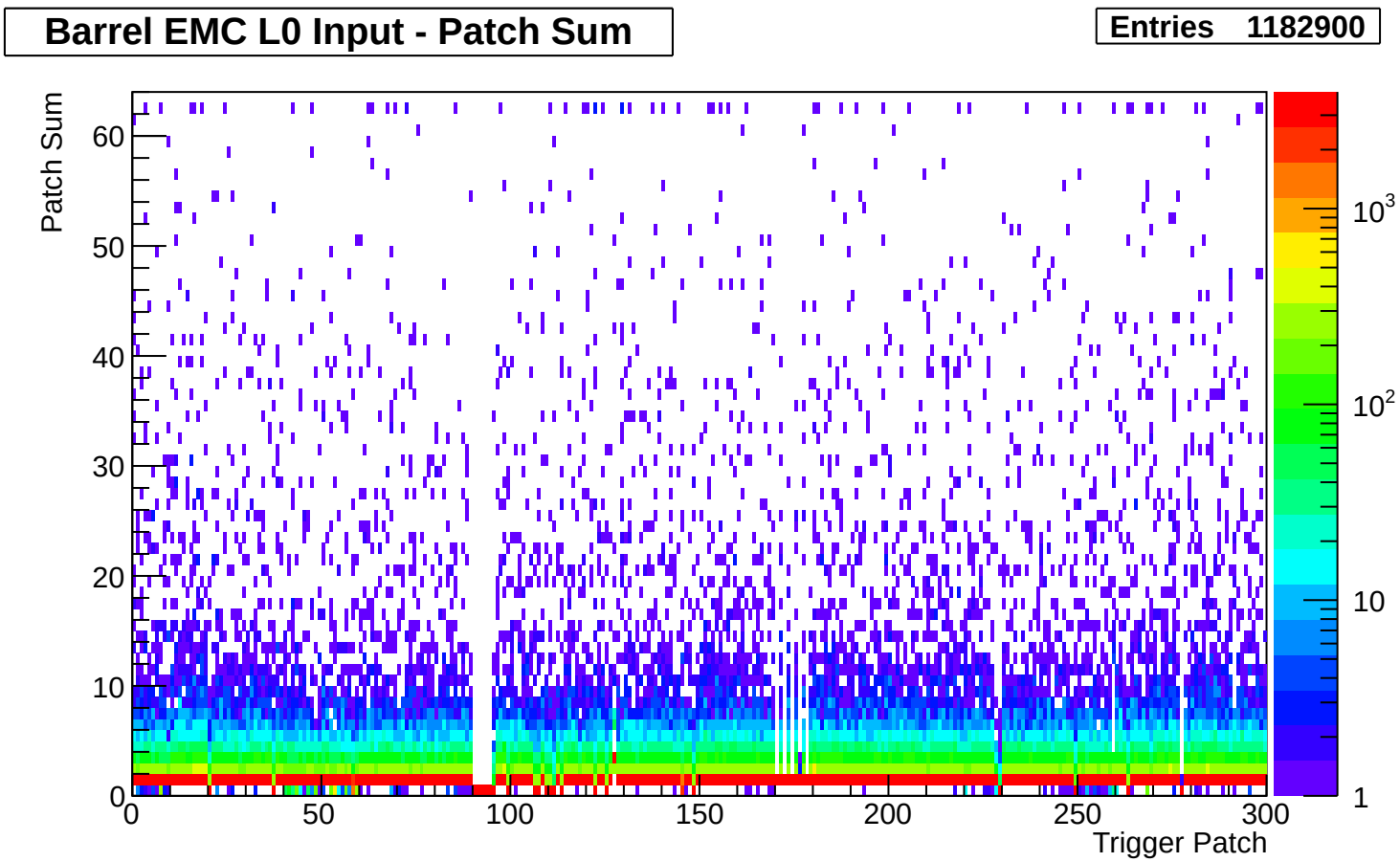
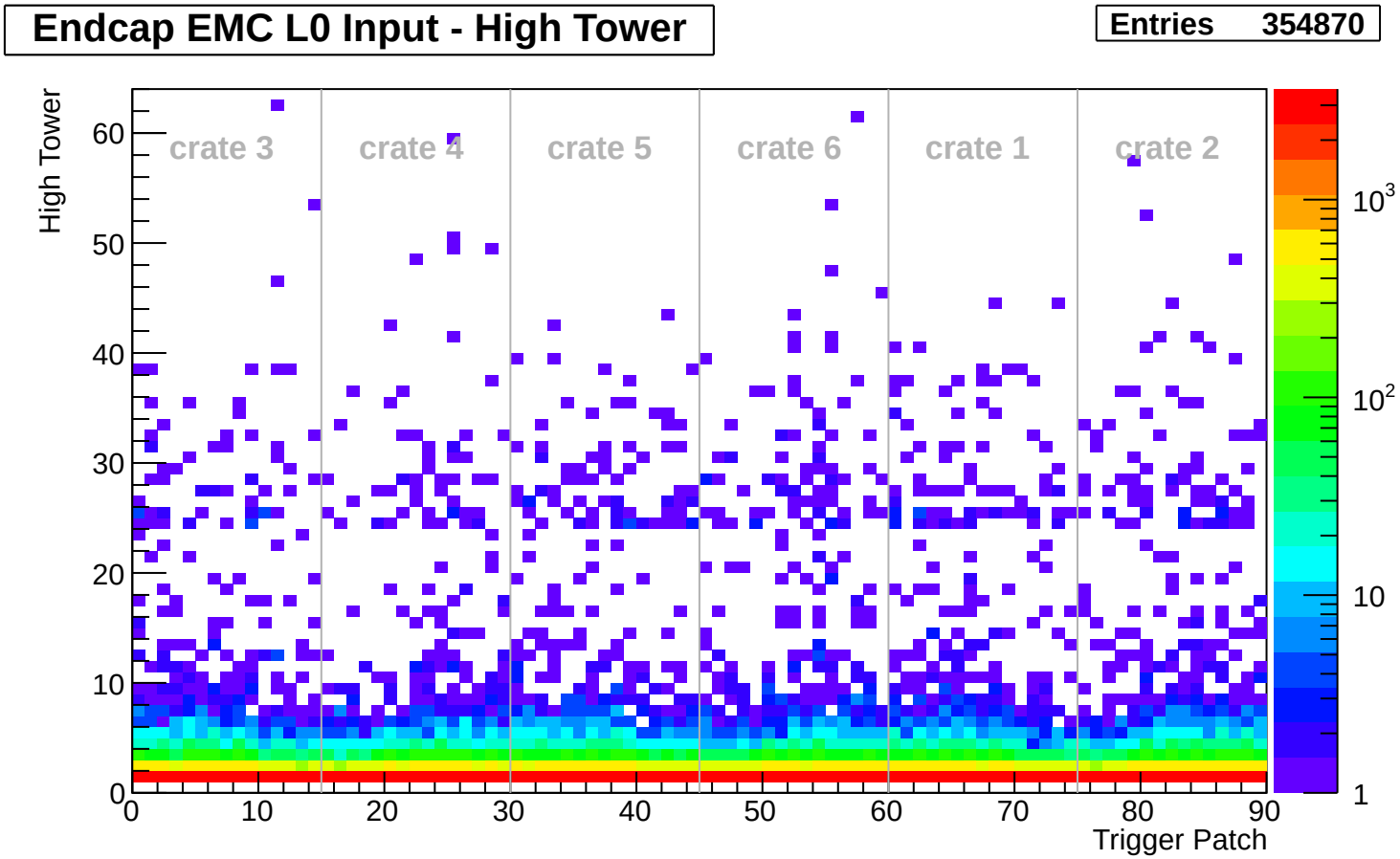
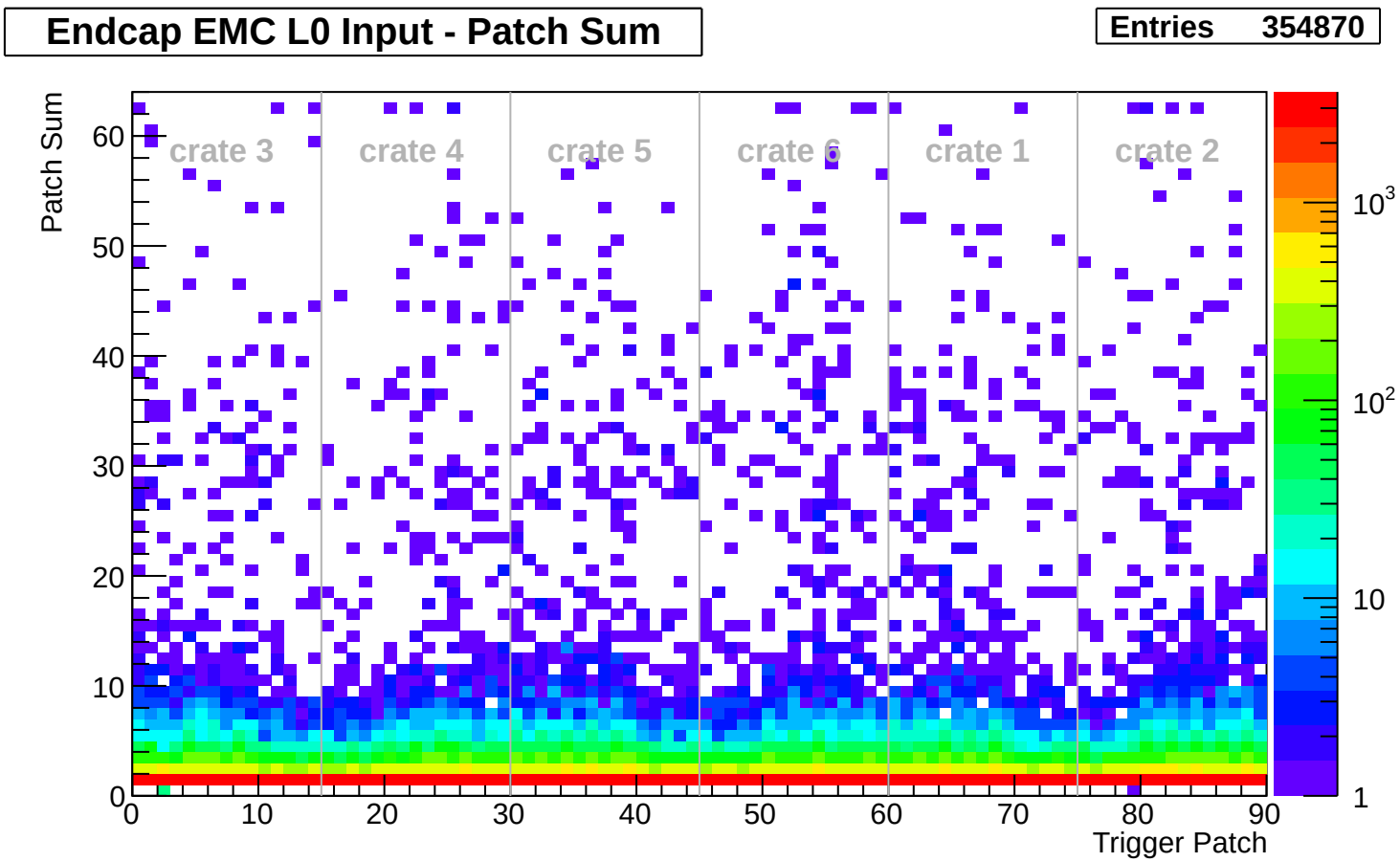
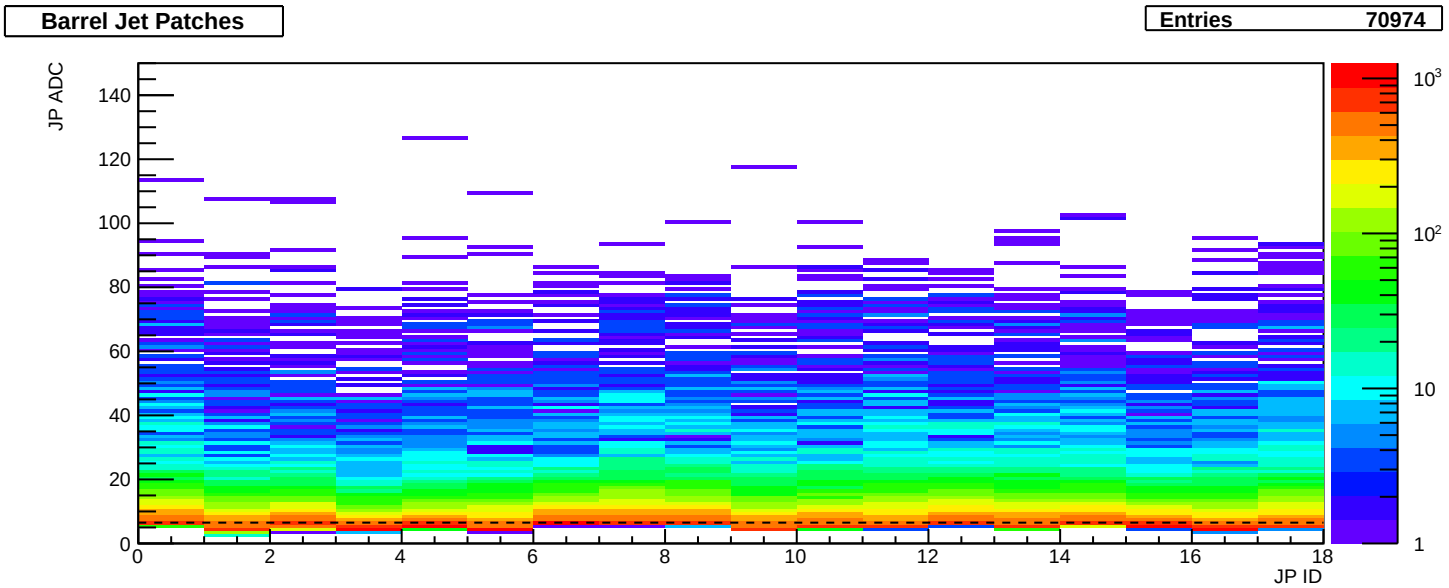
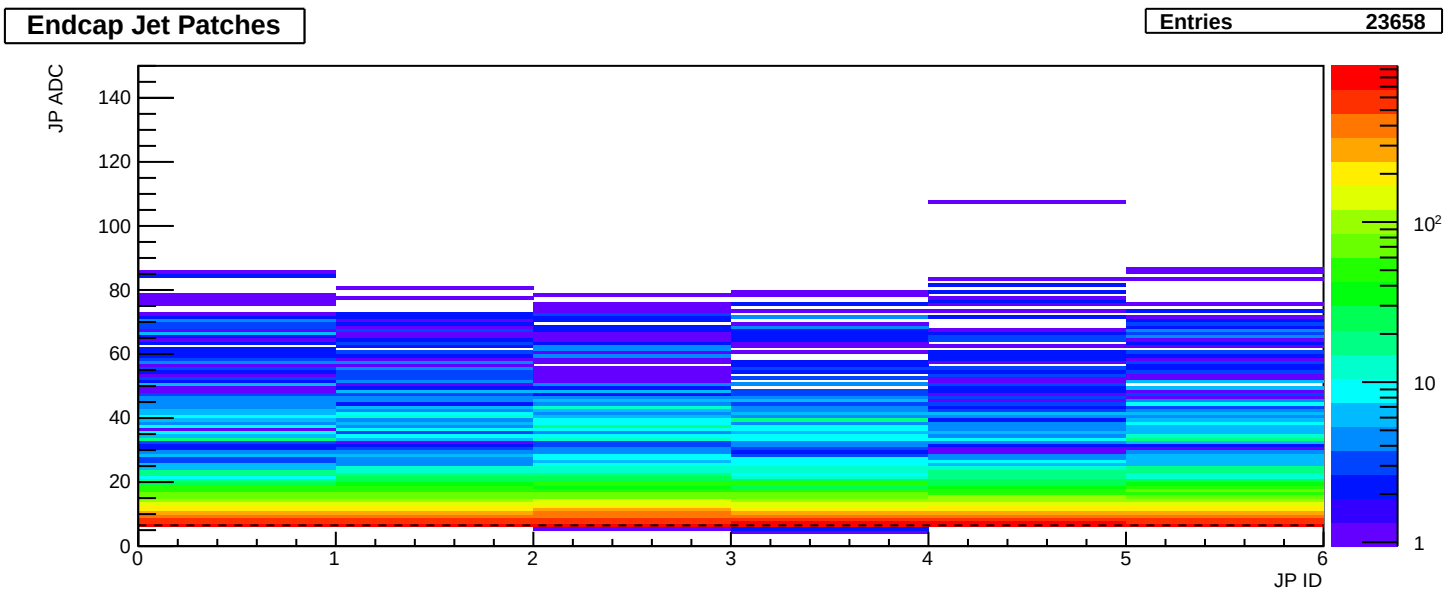

Barrel EMC L0 Input - High Tower
Entries 1182900
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

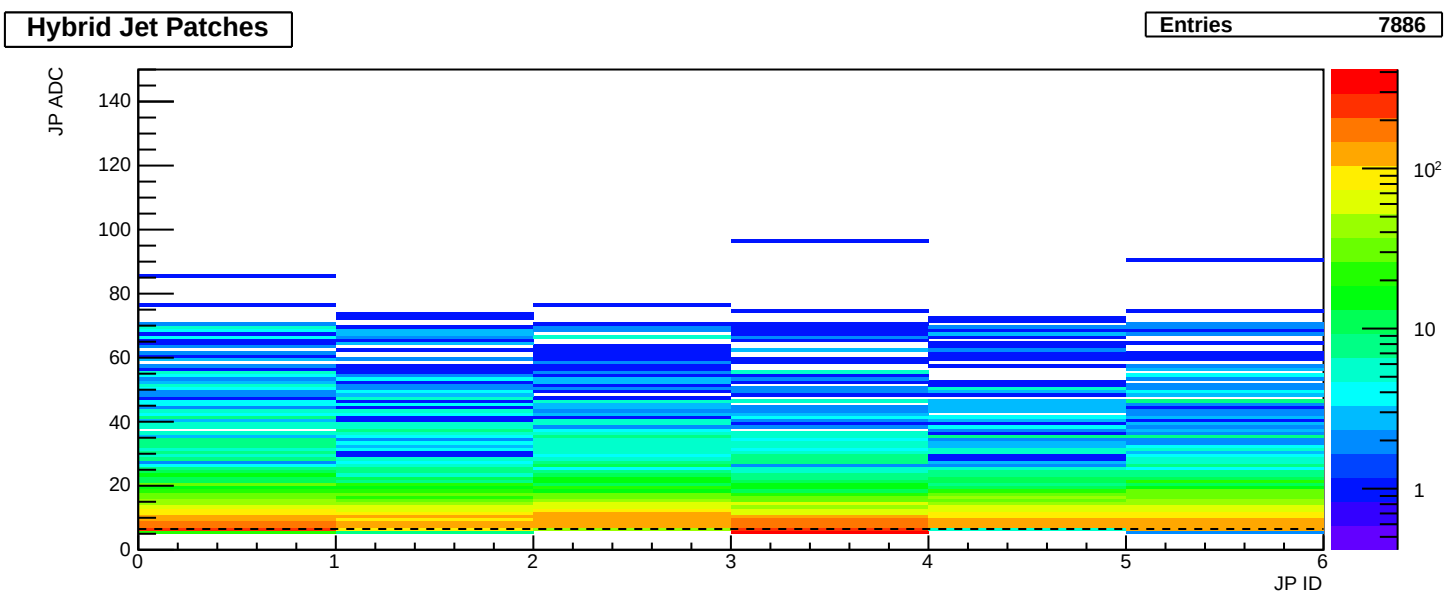

Barrel EMC L0 Input - Patch Sum
Entries 1182900
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

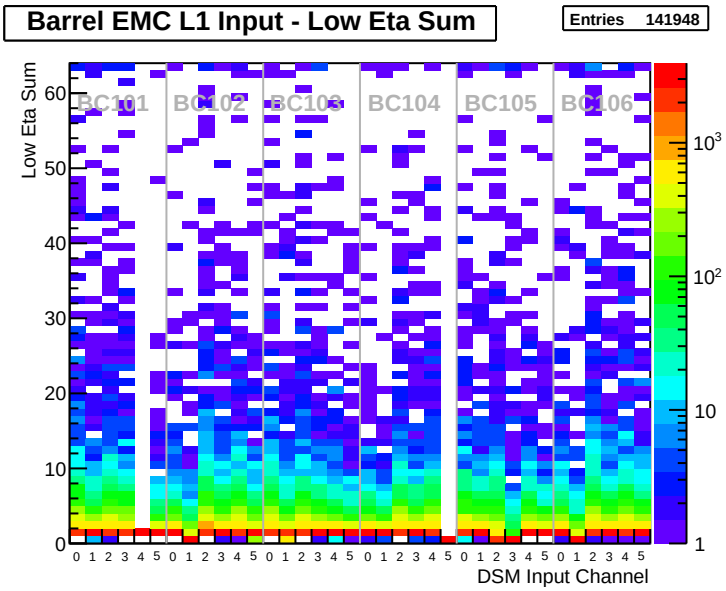

Endcap EMC L0 Input - High Tower
Entries 354870
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3

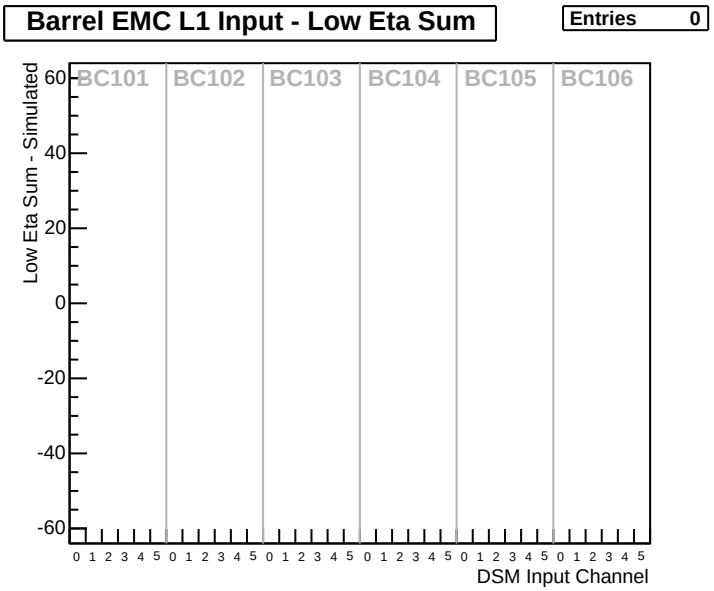

Endcap EMC L0 Input - Patch Sum
Entries 354870
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3

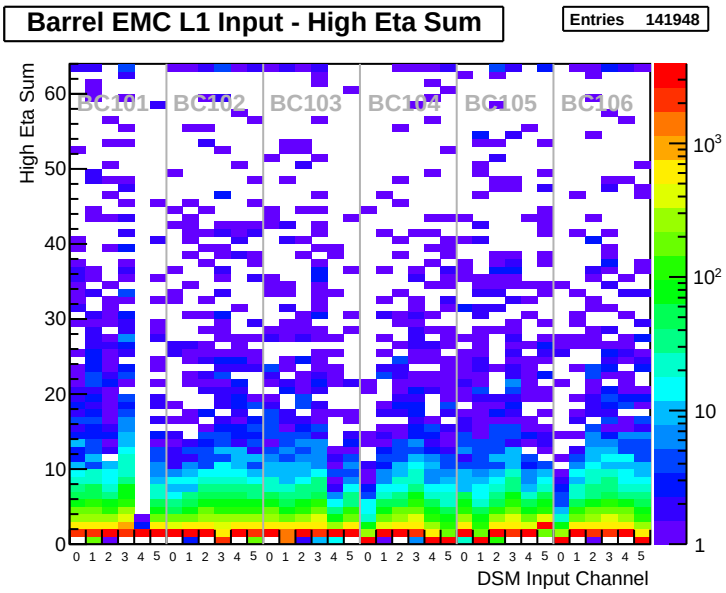

Barrel Jet Patches
Entries 70974
JP ADC
JP ID

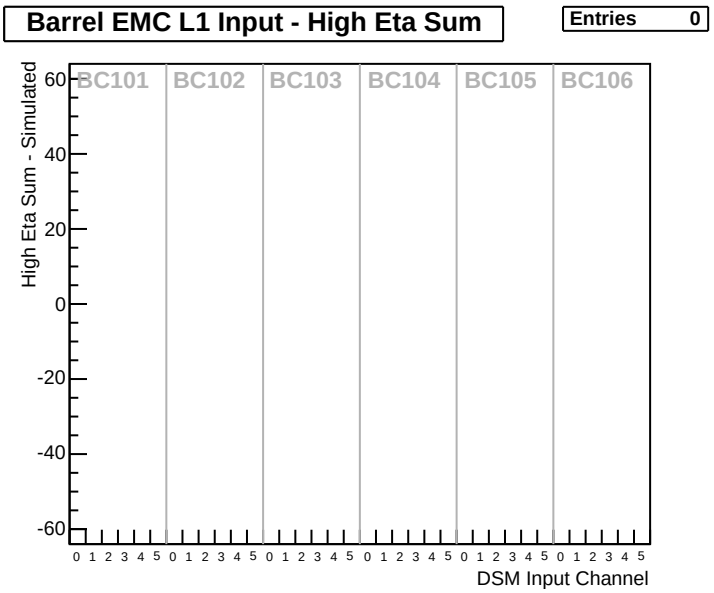

Endcap Jet Patches
Entries 23658
JP ADC
JP ID

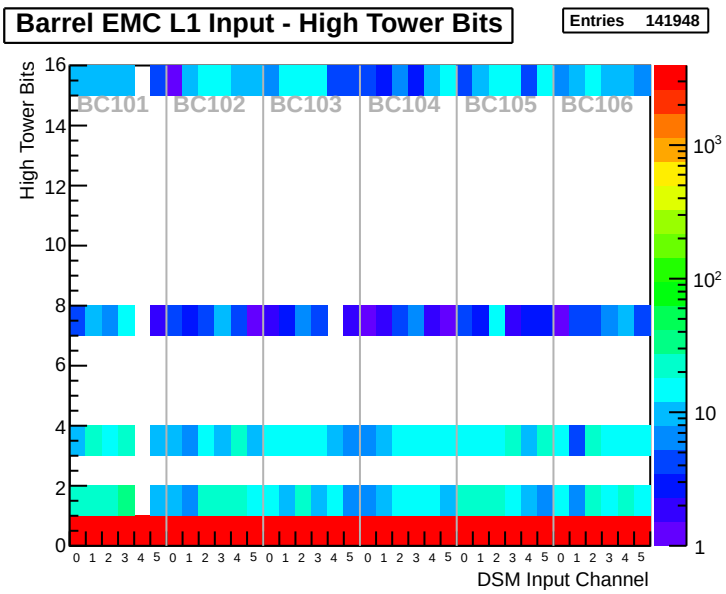

Hybrid Jet Patches
Entries 7886
JP ADC
JP ID

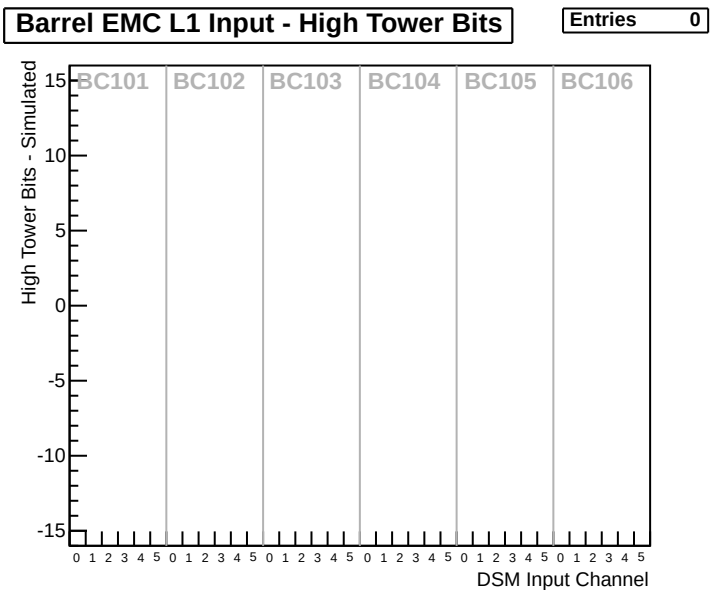

Barrel EMC L1 Input - Low Eta Sum
Entries 141948
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

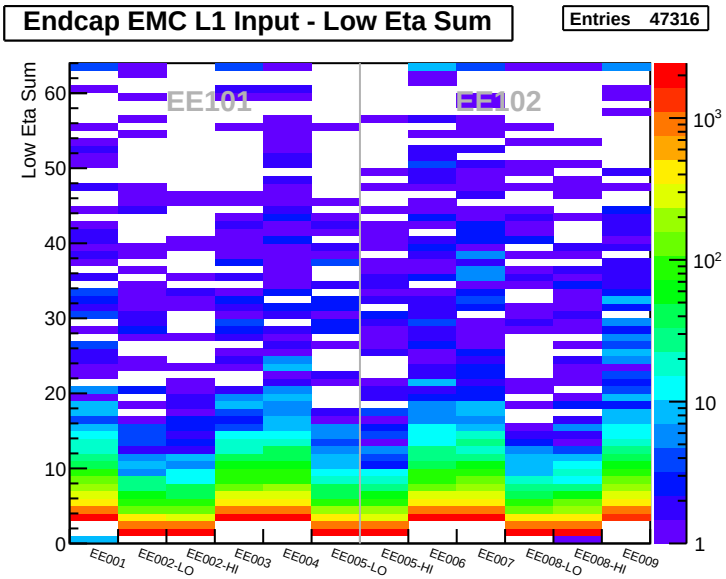

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

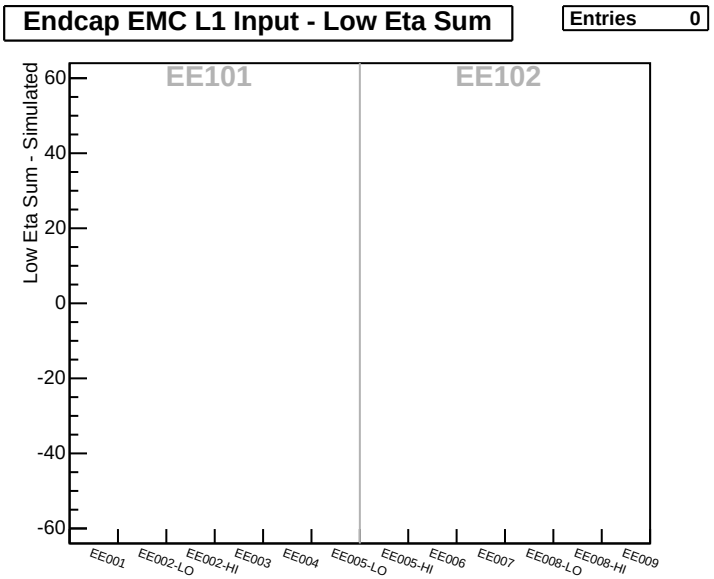

Barrel EMC L1 Input - High Eta Sum
Entries 141948
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

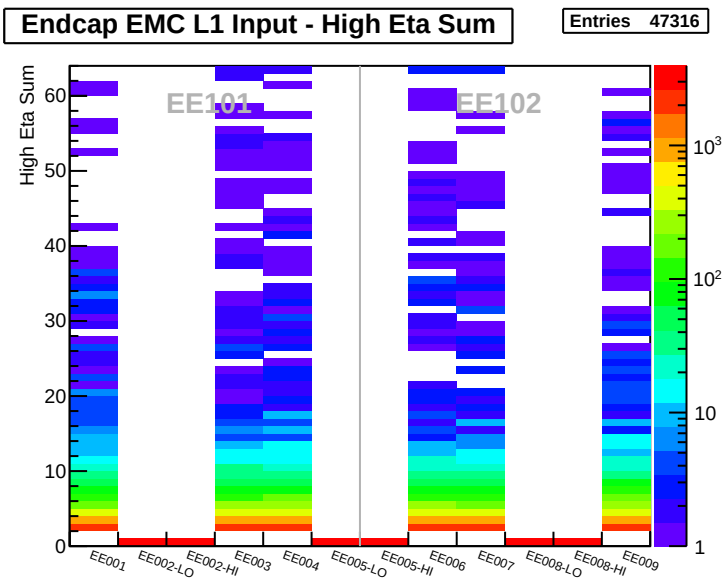

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

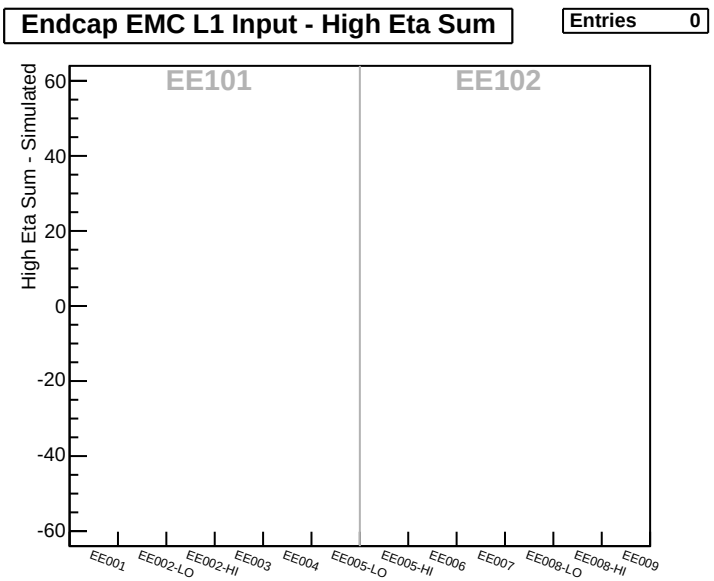

Barrel EMC L1 Input - High Tower Bits
Entries 141948
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

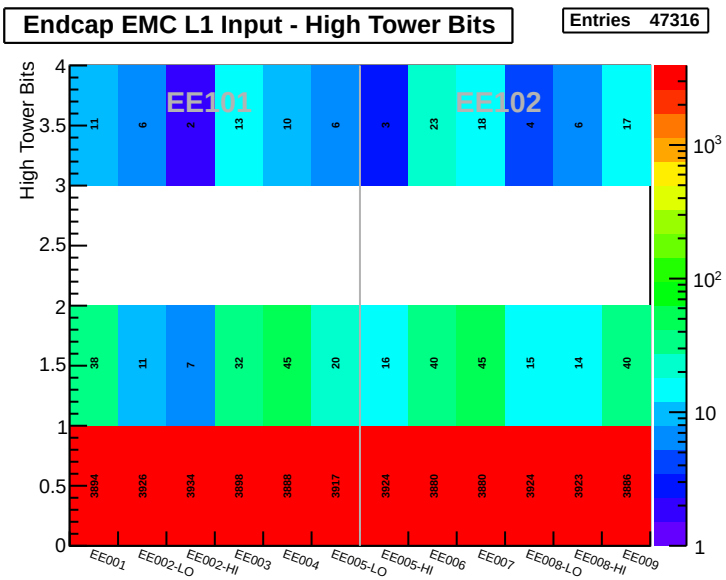

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

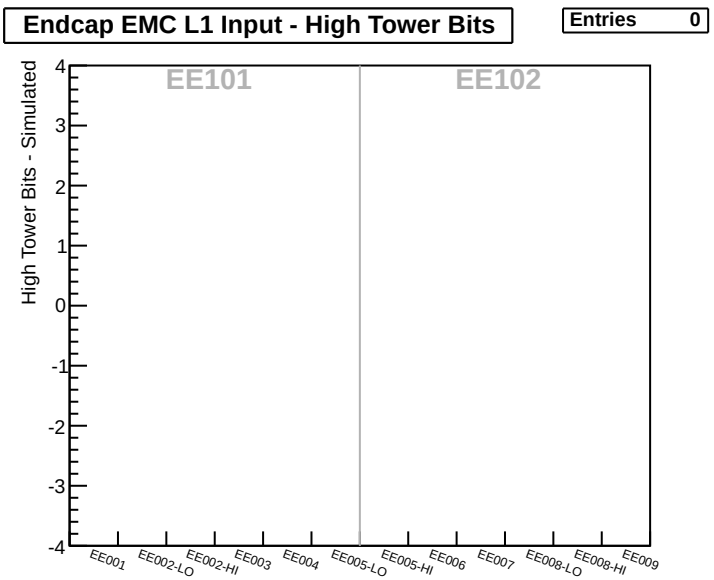

Endcap EMC L1 Input - Low Eta Sum
Entries 47316
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

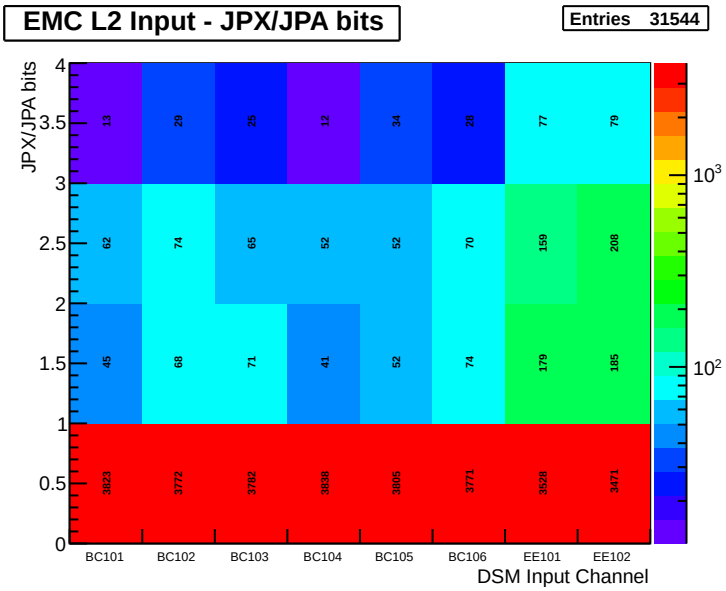

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

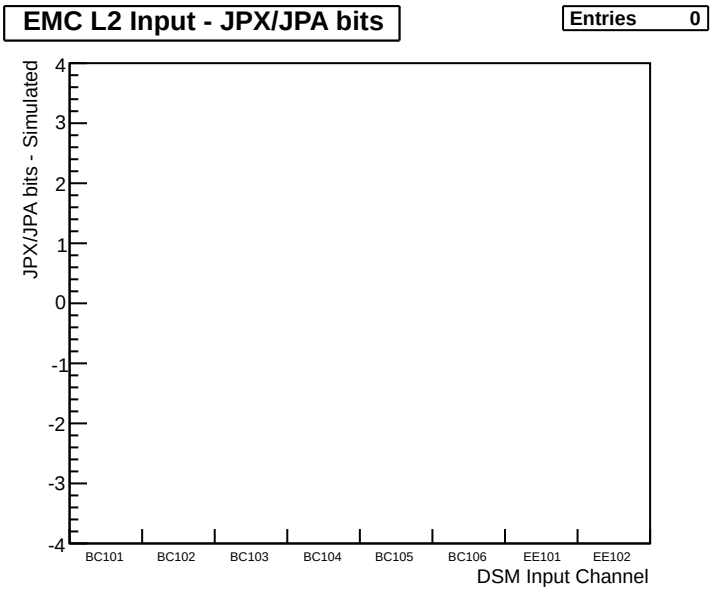

Endcap EMC L1 Input - High Eta Sum
Entries 47316
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

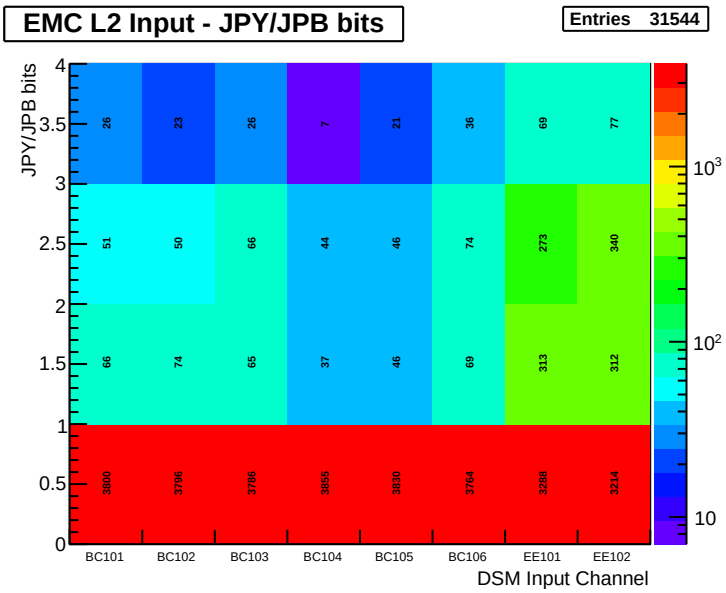

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

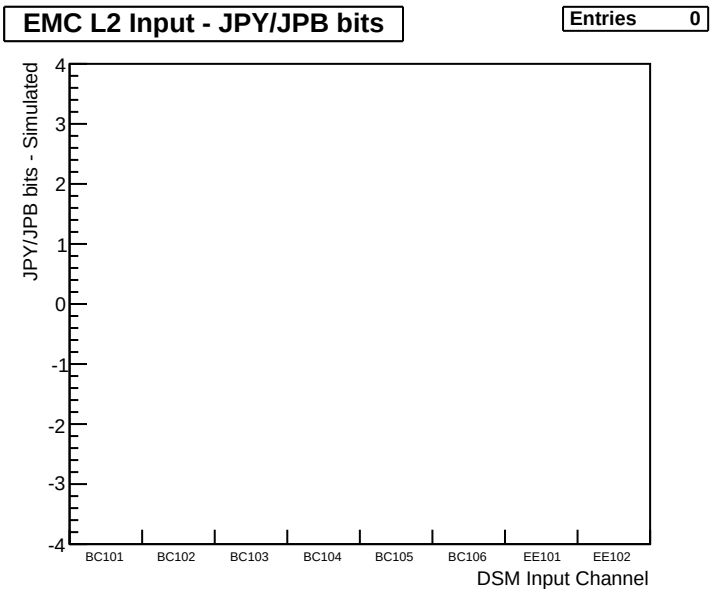

Endcap EMC L1 Input - High Tower Bits
Entries 47316
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

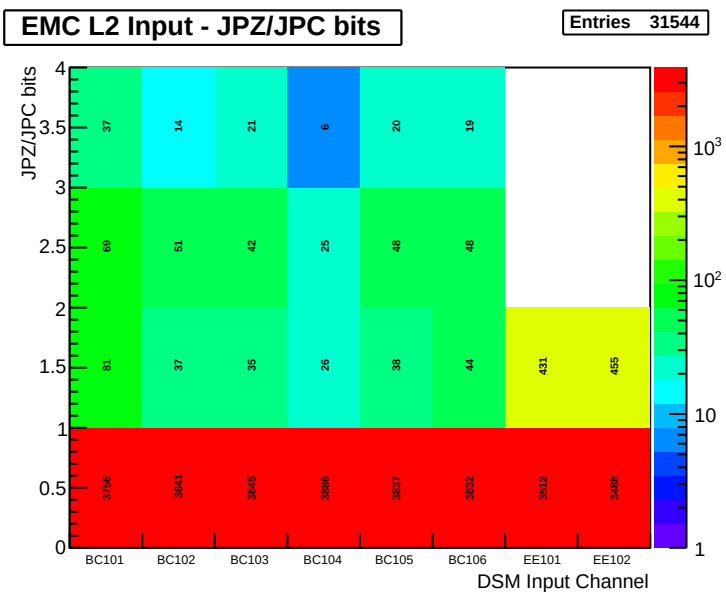

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

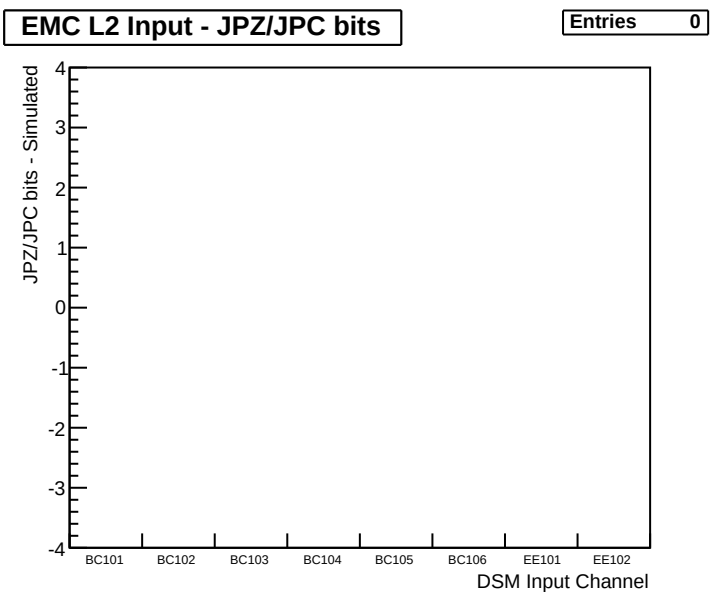

EMC L2 Input - JPX/JPA bits
Entries 31544
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
13 29 25 12 34 28 77 79
62 74 65 52 52 70 159 208
45 68 71 41 52 74 179 185
3823 3772 3782 3838 3805 3771 3528 3471

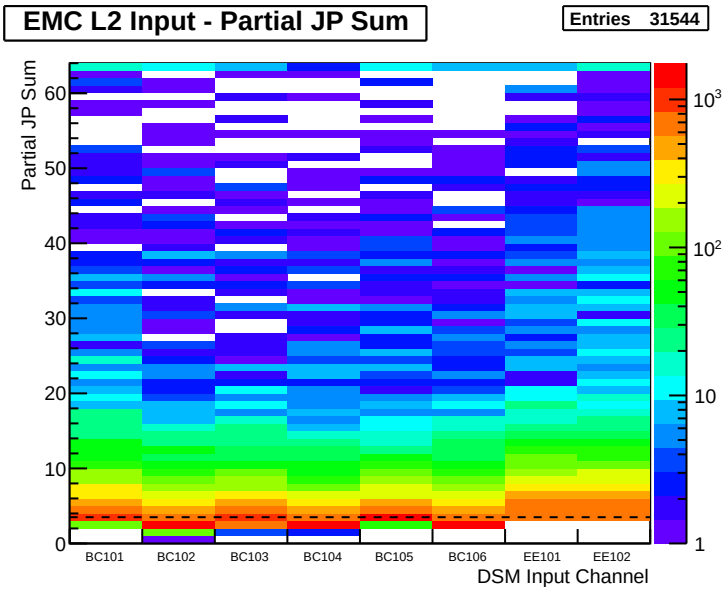

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

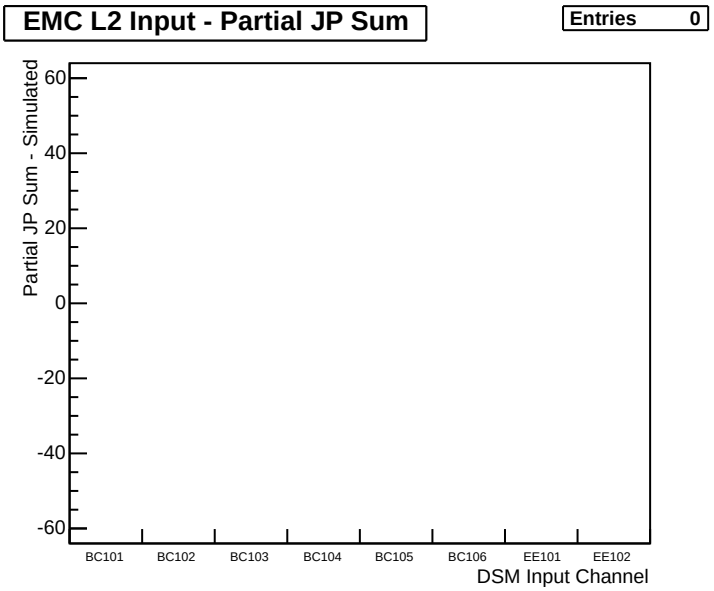

EMC L2 Input - JPY/JPB bits
Entries 31544
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
26 23 26 7 21 36 69 77
51 50 66 44 46 74 273 340
66 74 65 37 46 69 313 312
3800 3796 3786 3855 3830 3764 3288 3214

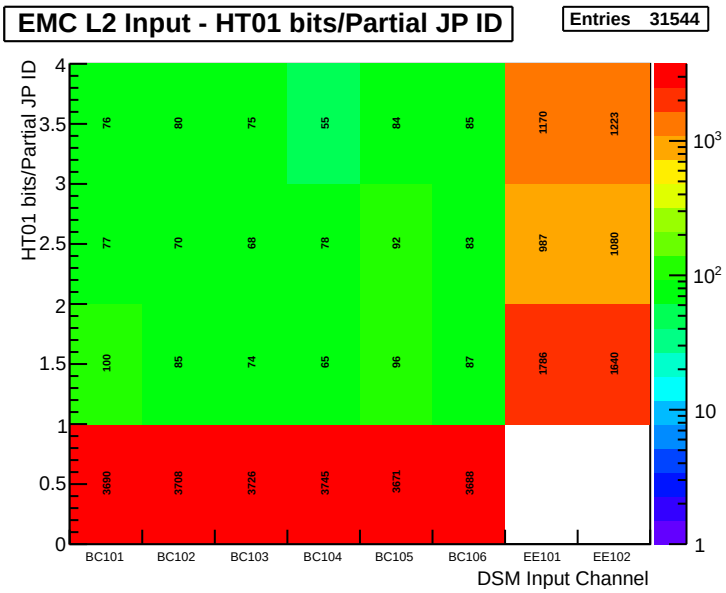

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

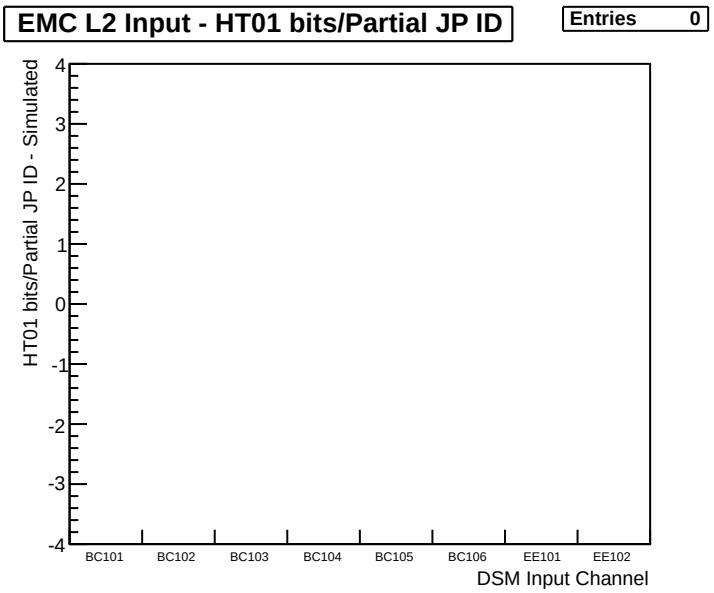

EMC L2 Input - JPZ/JPC bits
Entries 31544
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
37 14 21 6 20 19
69 51 42 25 48 48
81 37 35 26 38 44 431 455
3756 3841 3845 3886 3837 3832 3512 3488

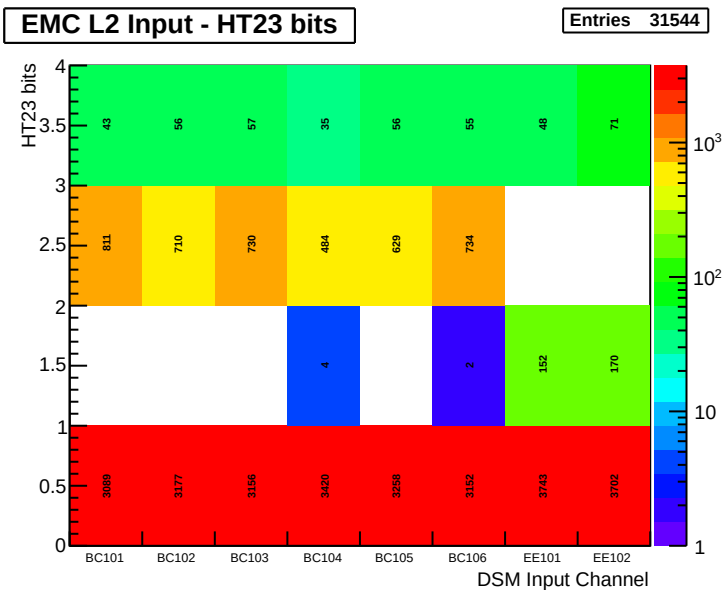

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

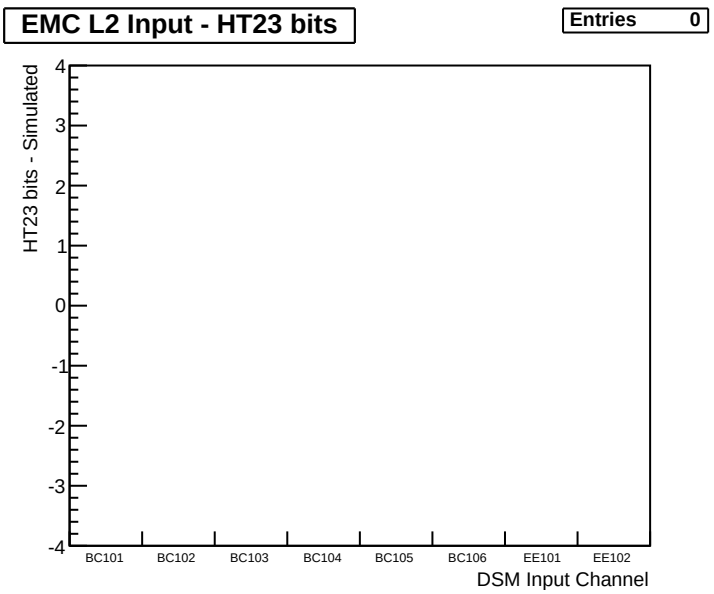

EMC L2 Input - Partial JP Sum
Entries 31544
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

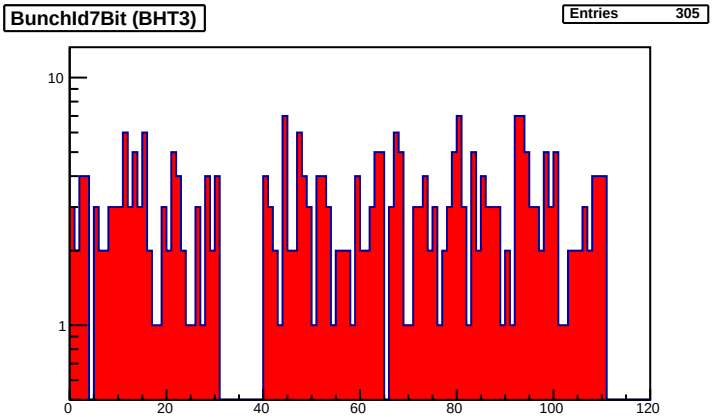

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

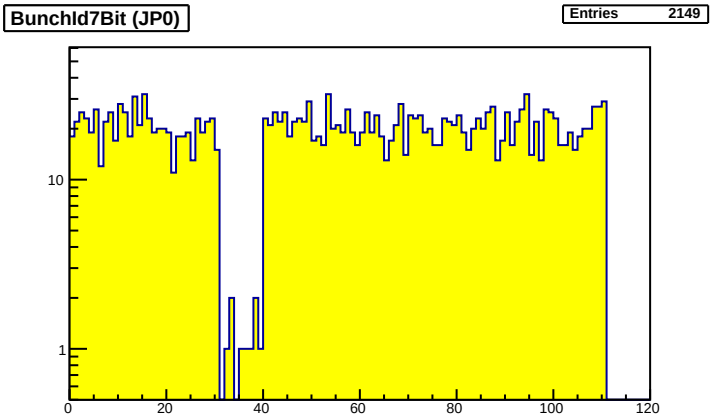

EMC L2 Input - HT01 bits/Partial JP ID
Entries 31544
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

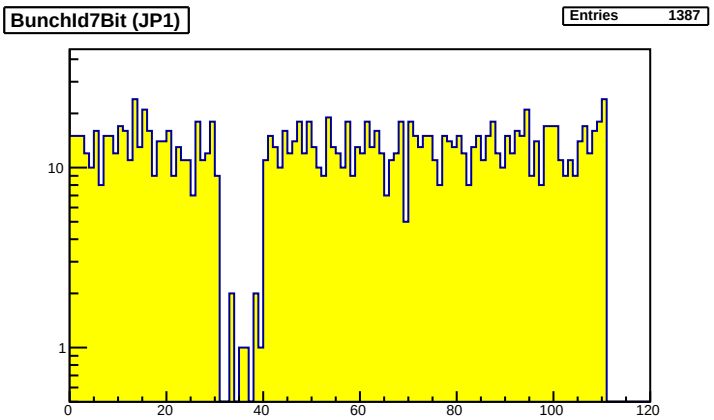

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

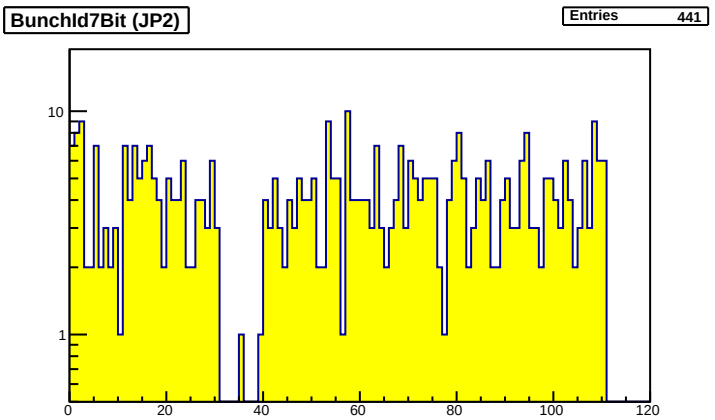

EMC L2 Input - HT23 bits
Entries 31544
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

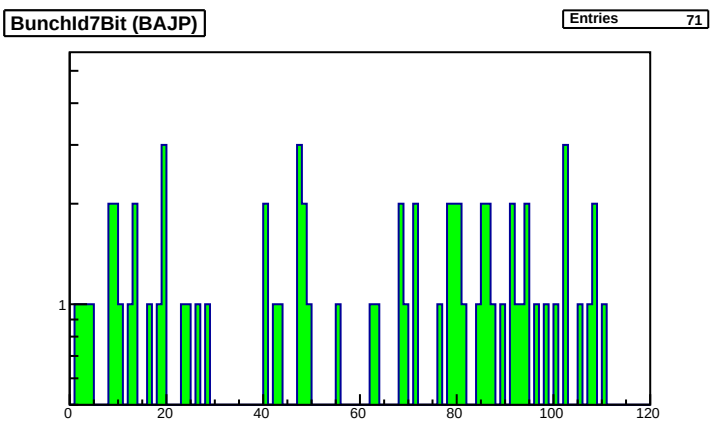

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

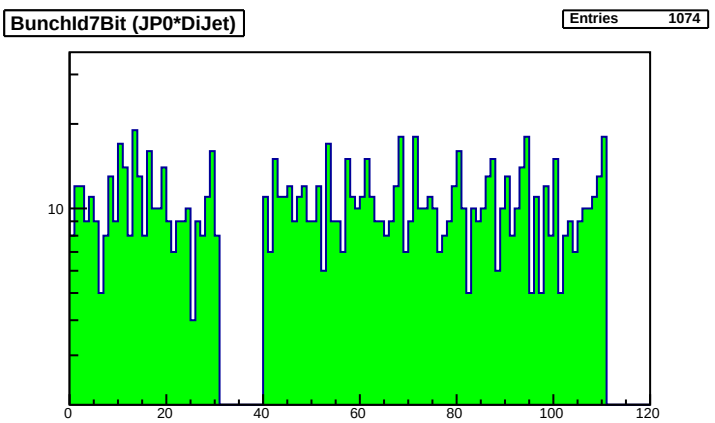

BunchId7Bit (BHT3)
Entries 305
10
1
0
20
40
60
80
100
120

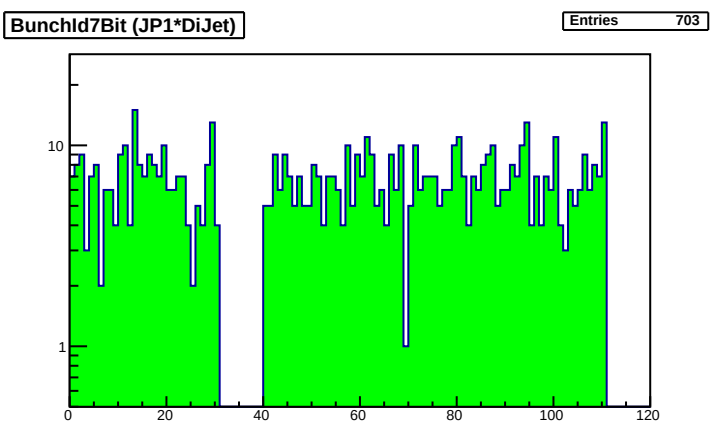

BunchId7Bit (JP0)
Entries 2149
10
1
0
20
40
60
80
100
120

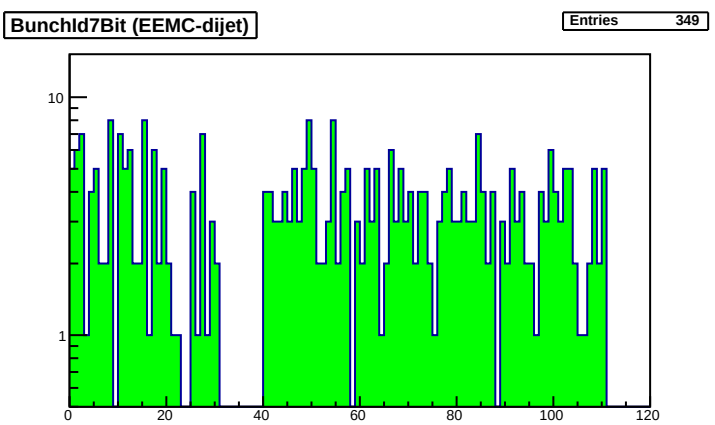

BunchId7Bit (JP1)
Entries 1387
10
1
0
20
40
60
80
100
120

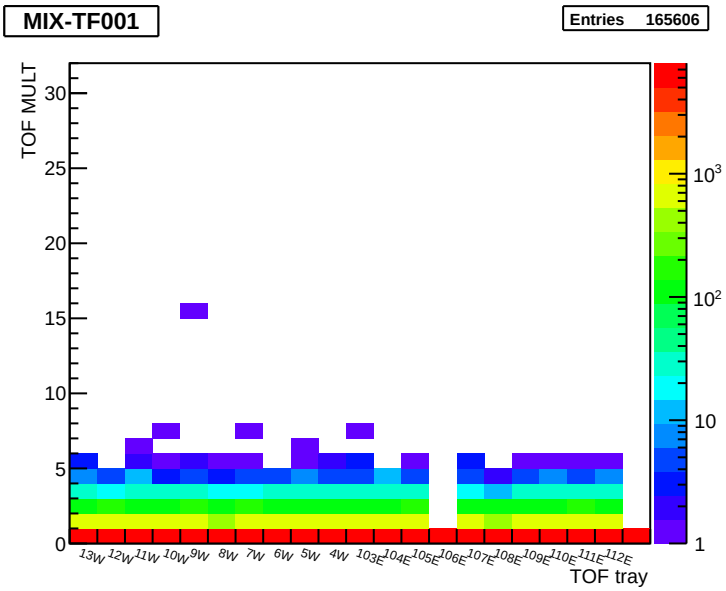

BunchId7Bit (JP2)
Entries 441
10
1
0
20
40
60
80
100
120

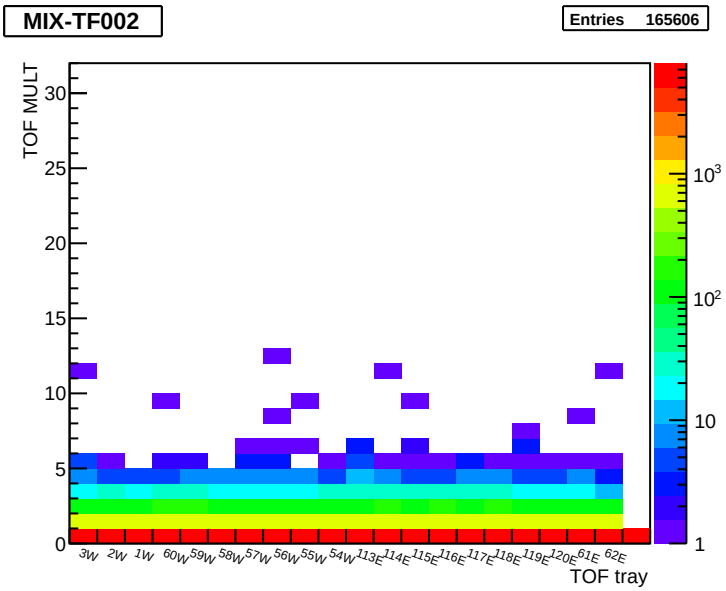

BunchId7Bit (BAJP)
Entries 71
1
0
20
40
60
80
100
120

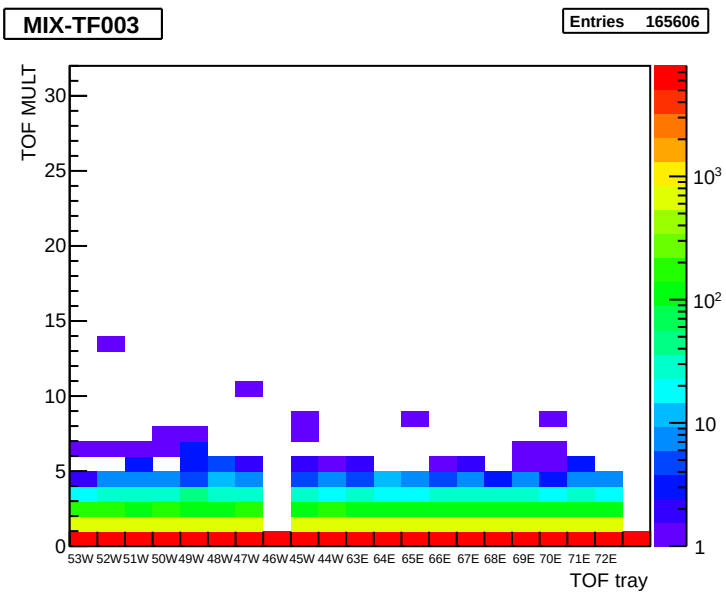

BunchId7Bit (JP0*DiJet)
Entries 1074
10
0
20
40
60
80
100
120

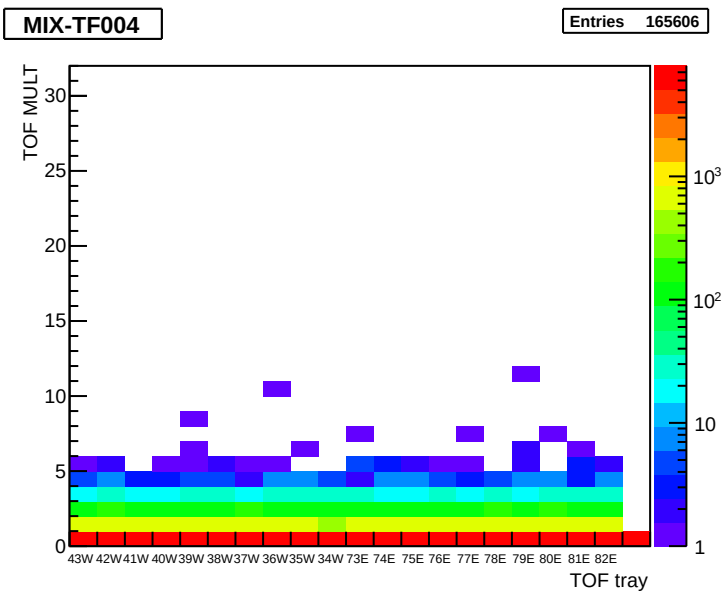

BunchId7Bit (JP1*DiJet)
Entries 703
10
1
0
20
40
60
80
100
120

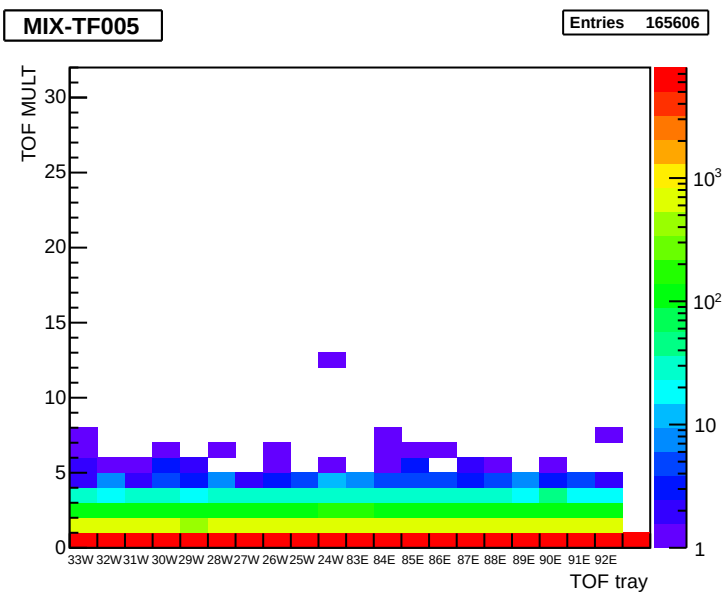

BunchId7Bit (EEMC-dijet)
Entries 349
10
1
0
20
40
60
80
100
120

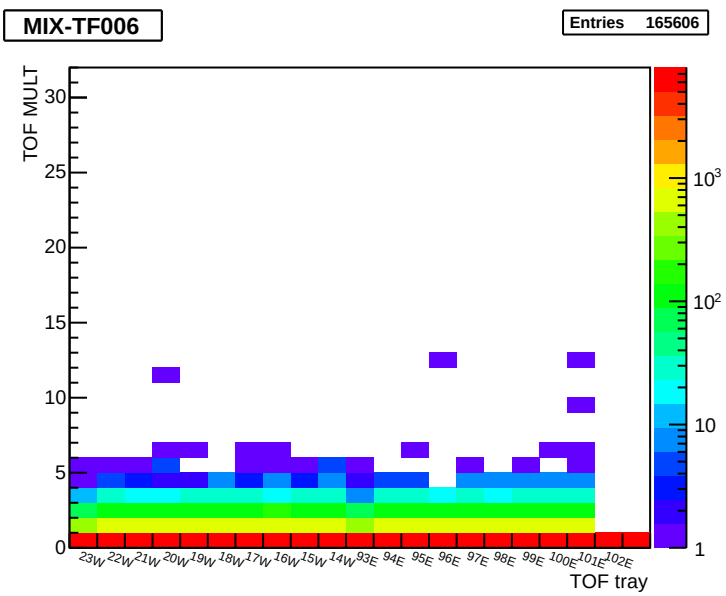

MIX-TF001
Entries 165606
TOF MULT
TOF tray

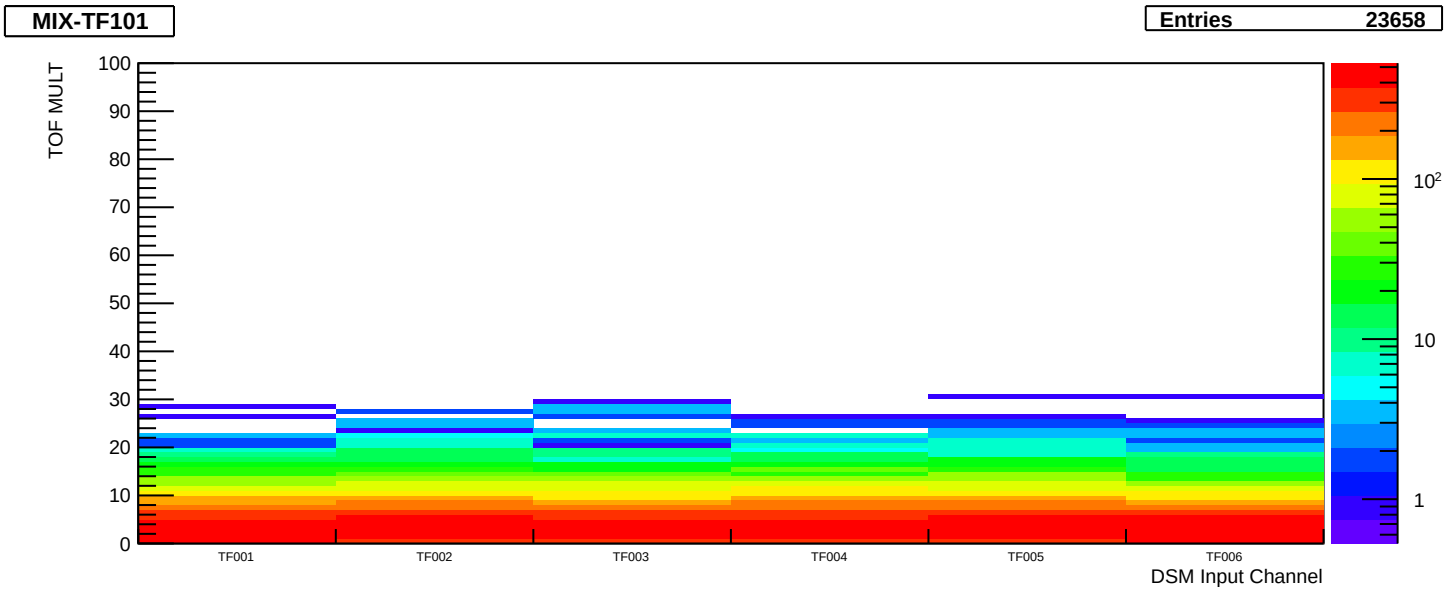

MIX-TF002
Entries 165606
TOF MULT
TOF tray

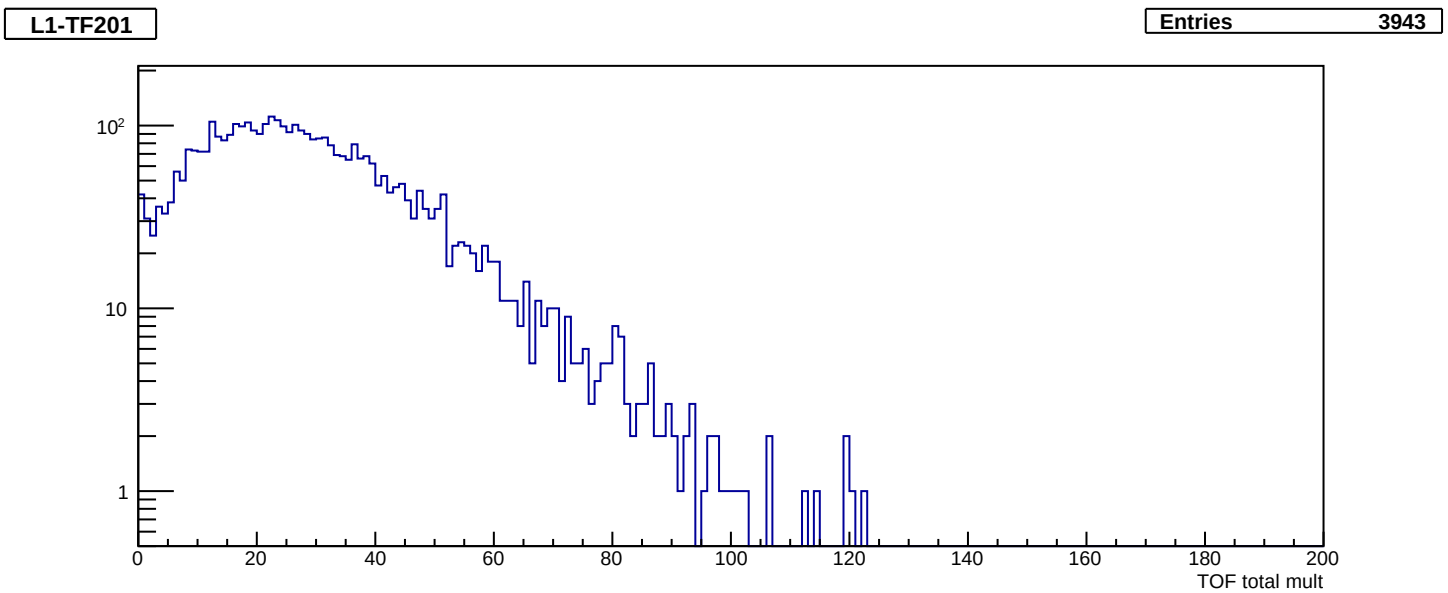

MIX-TF003
Entries 165606
TOF MULT
TOF tray

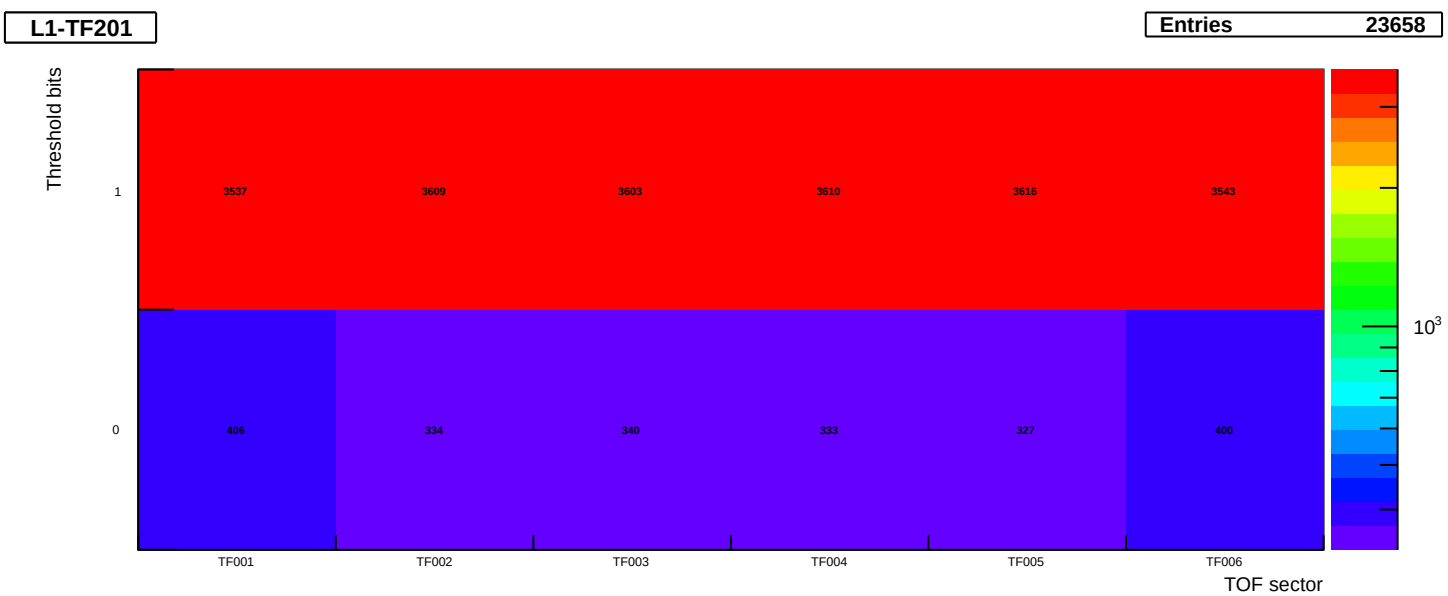

MIX-TF004
Entries 165606
TOF MULT
TOF tray

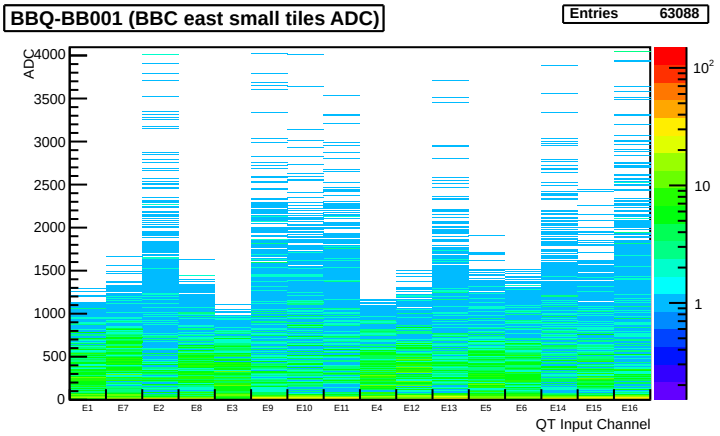

MIX-TF005
Entries 165606
TOF MULT
TOF tray

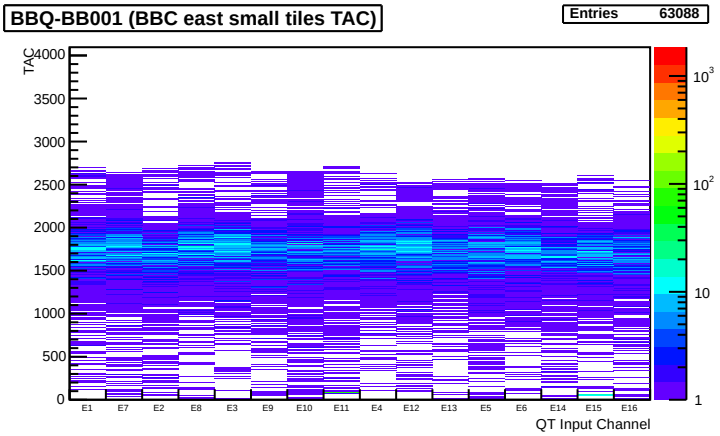

MIX-TF006
Entries 165606
TOF MULT
TOF tray

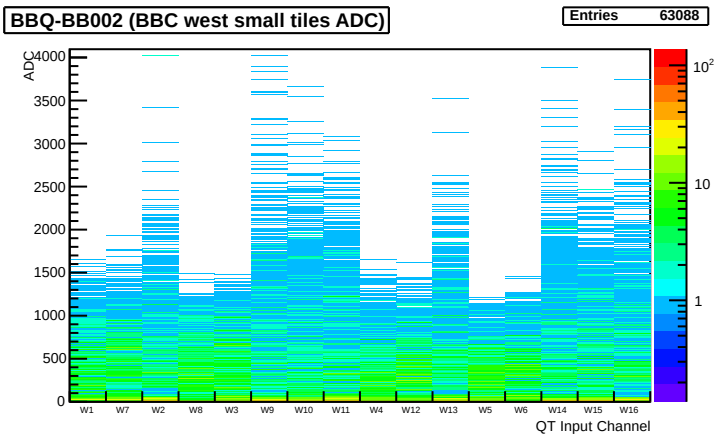

MIX-TF101
Entries 23658
TOF MULT
100
90
80
70
60
50
40
30
20
10
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^2
10
1

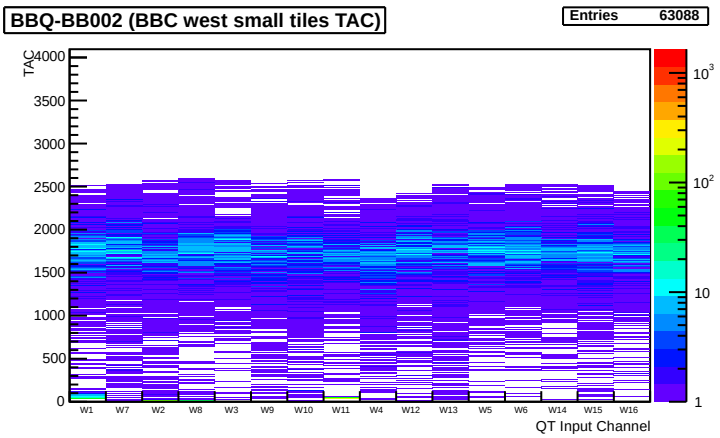

L1-TF201
Entries 3943
10^2
10
1
0
20
40
60
80
100
120
140
160
180
200
TOF total mult

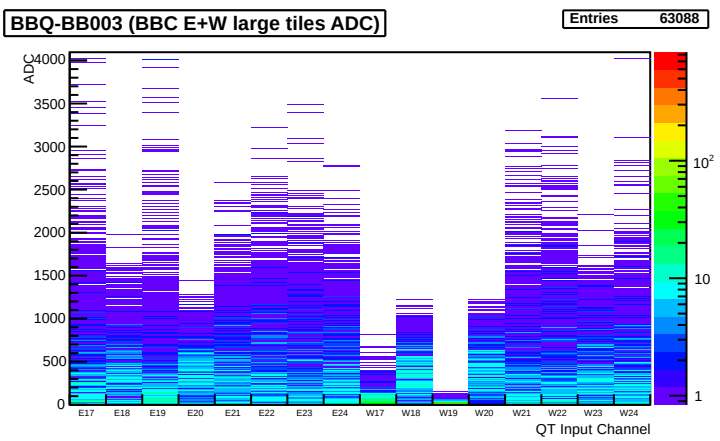

L1-TF201
Entries 23658
Threshold bits
1
0
3537
3609
3603
3610
3616
3543
406
334
340
333
327
400
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3

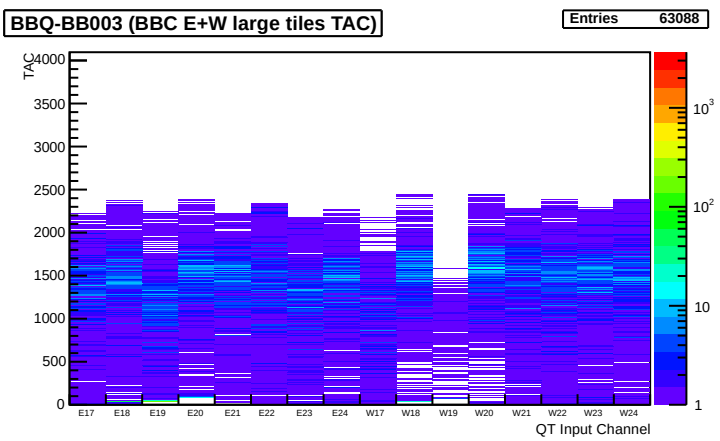

BBQ-BB001 (BBC east small tiles ADC)
Entries 63088
ADC
QT Input Channel

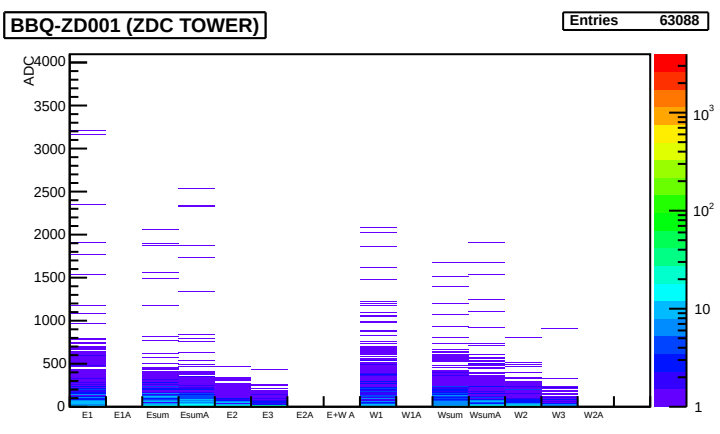

BBQ-BB001 (BBC east small tiles TAC)
Entries 63088
TAC
QT Input Channel

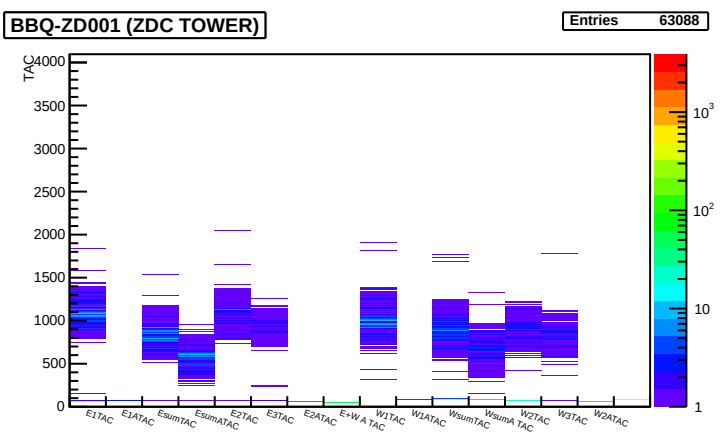

BBQ-BB002 (BBC west small tiles ADC)
Entries 63088
ADC
QT Input Channel

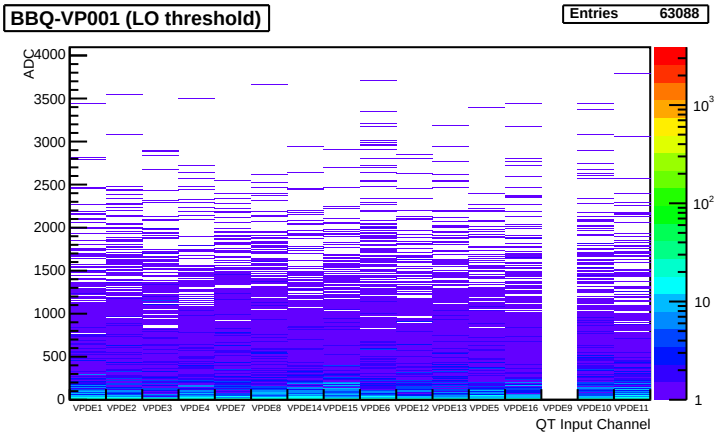

BBQ-BB002 (BBC west small tiles TAC)
Entries 63088
TAC
QT Input Channel

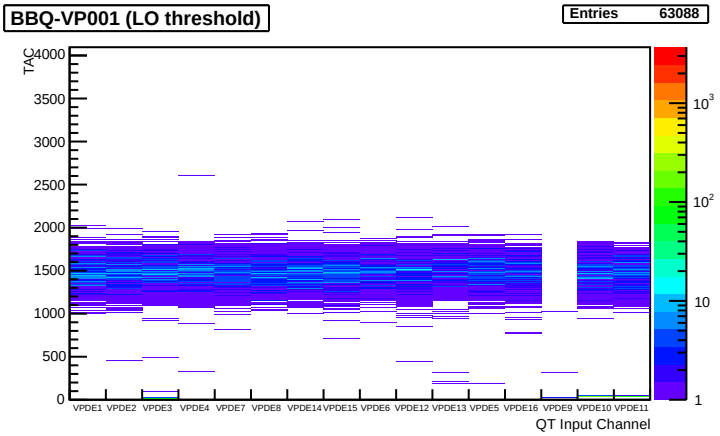

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 63088
ADC
QT Input Channel

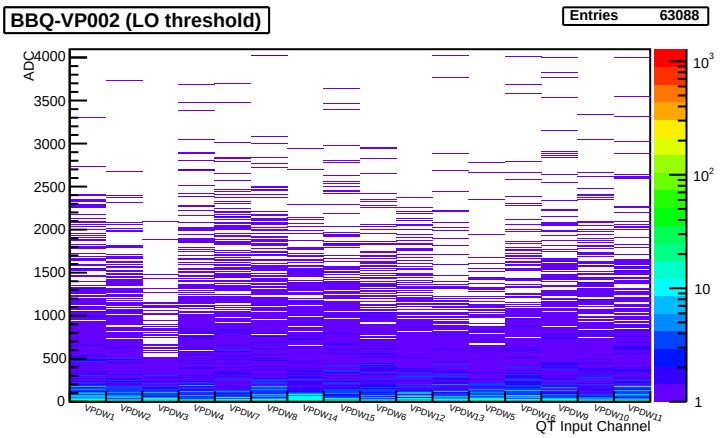

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 63088
TAC
QT Input Channel

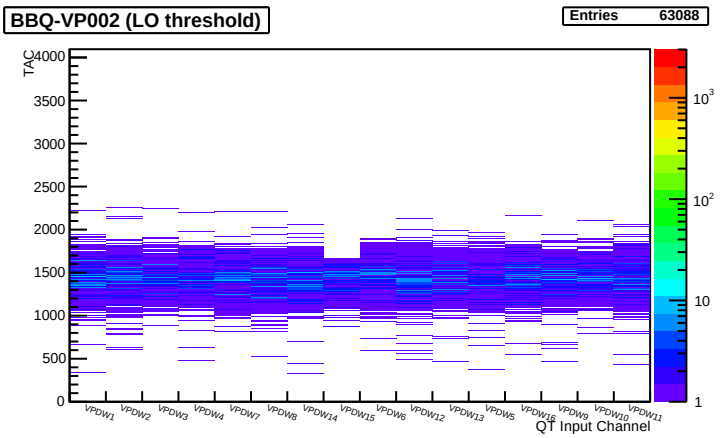

BBQ-ZD001 (ZDC TOWER)
Entries 63088
ADC

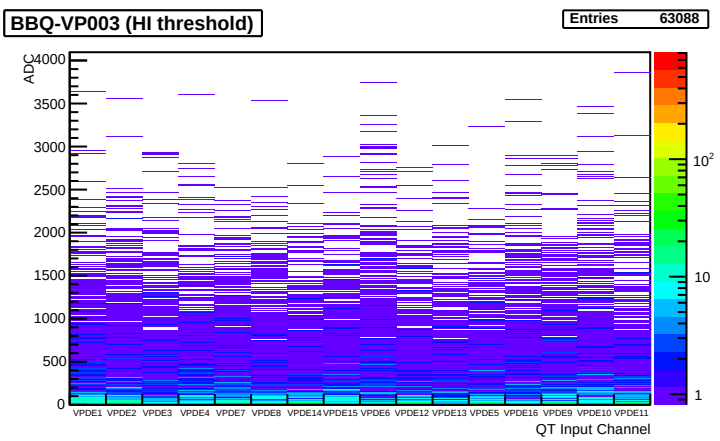

BBQ-ZD001 (ZDC TOWER)
Entries 63088
TAC

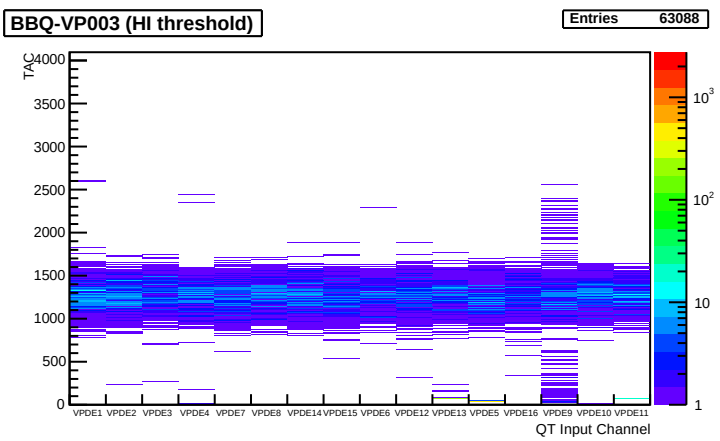

BBQ-VP001 (LO threshold)
Entries 63088
ADC
QT Input Channel

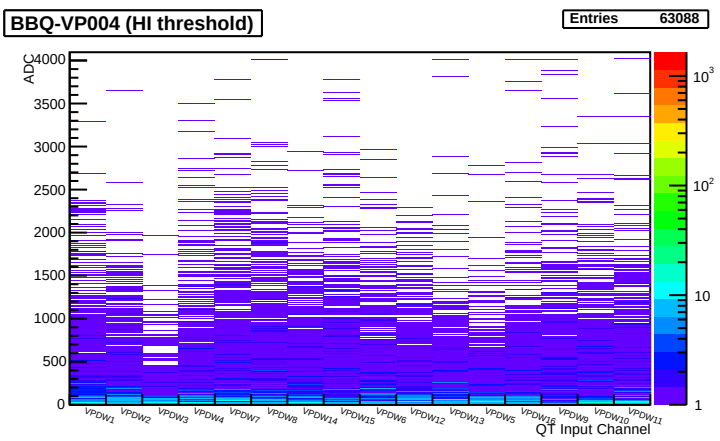

BBQ-VP001 (LO threshold)
Entries 63088
TAC
QT Input Channel

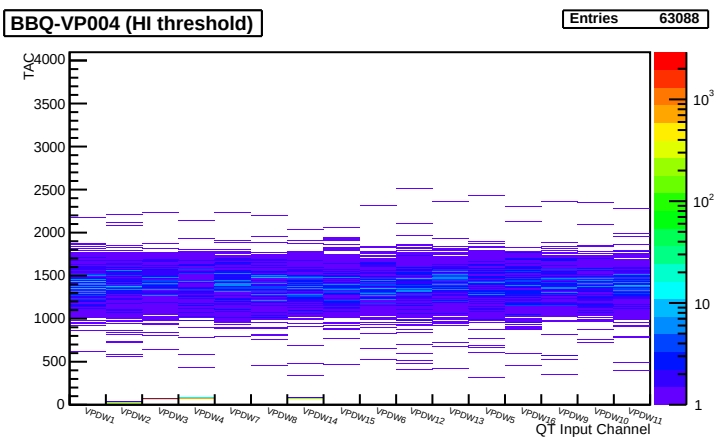

BBQ-VP002 (LO threshold)
Entries 63088
ADC
QT Input Channel

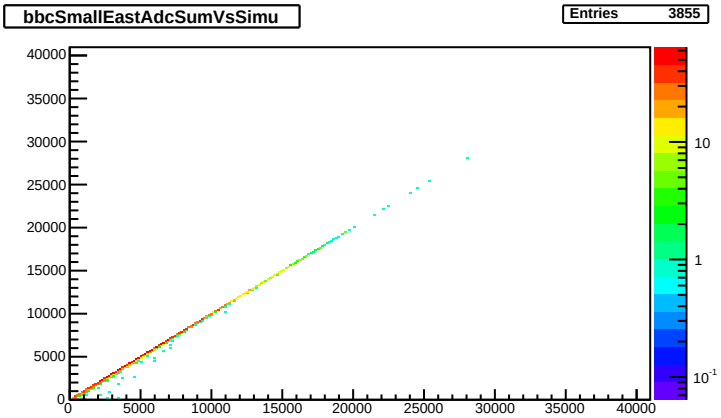

BBQ-VP002 (LO threshold)
Entries 63088
TAC
QT Input Channel

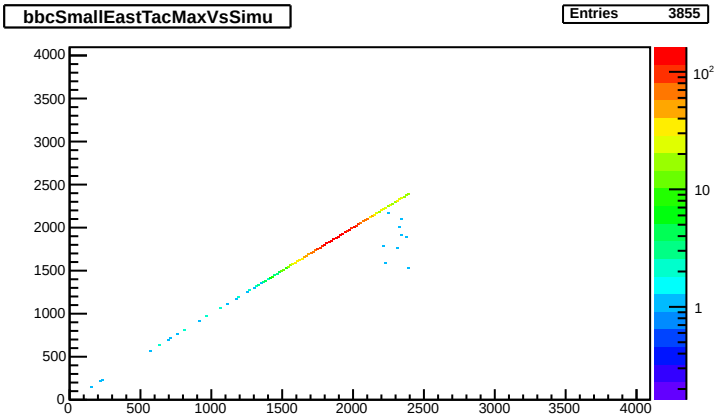

BBQ-VP003 (HI threshold)
Entries 63088
ADC
QT Input Channel

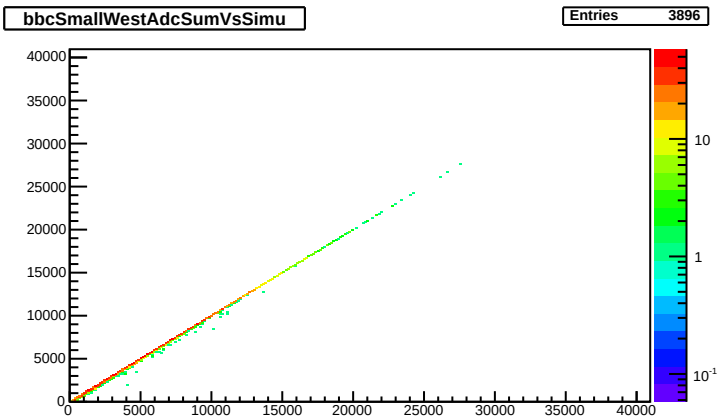

BBQ-VP003 (HI threshold)
Entries 63088
TAC
QT Input Channel

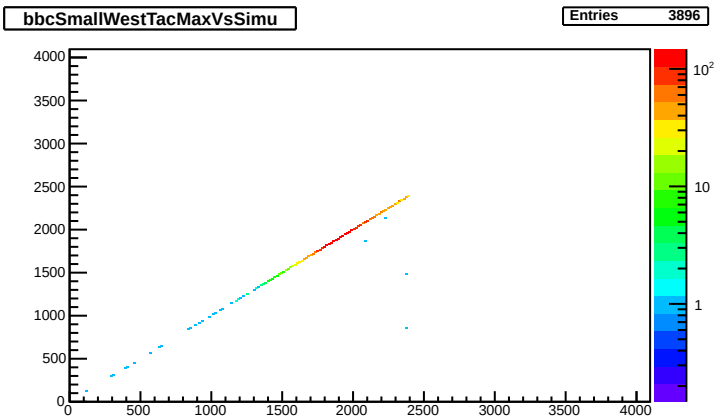

BBQ-VP004 (HI threshold)
Entries 63088
ADC
QT Input Channel

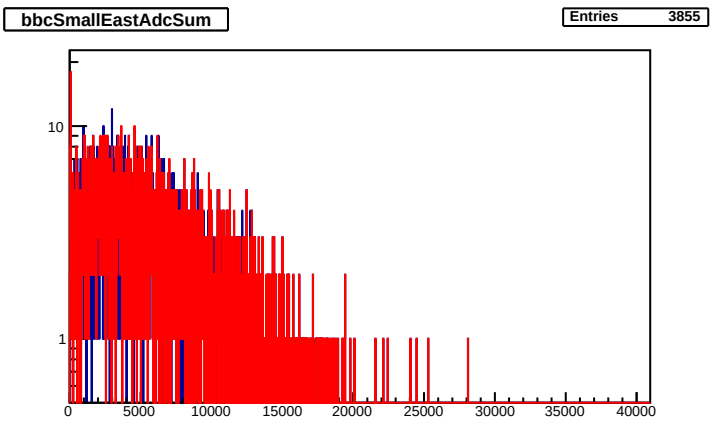

BBQ-VP004 (HI threshold)
Entries 63088
TAC
QT Input Channel

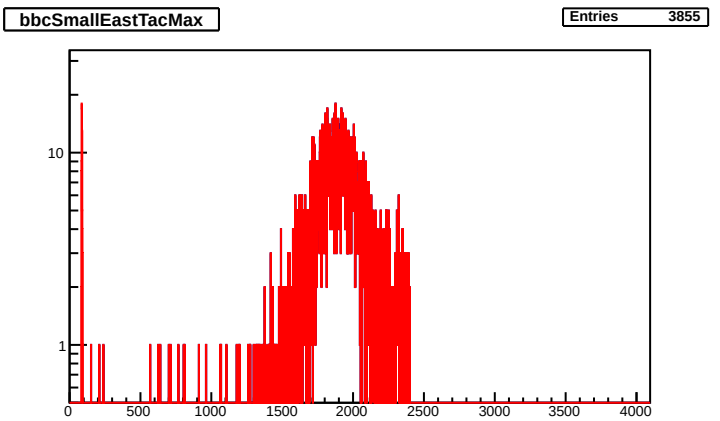

bbcSmallEastAdcSumVsSimu
Entries 3855

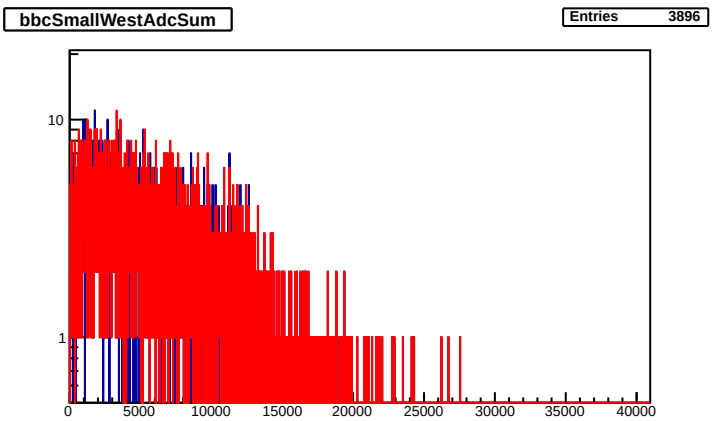

bbcSmallEastTacMaxVsSimu
Entries 3855

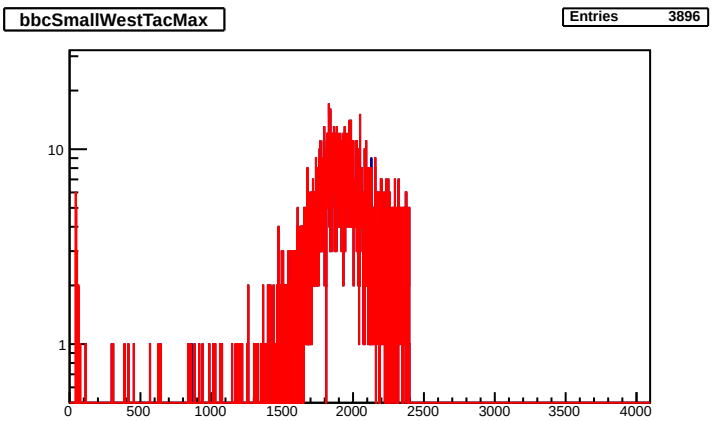

bbcSmallWestAdcSumVsSimu
Entries 3896

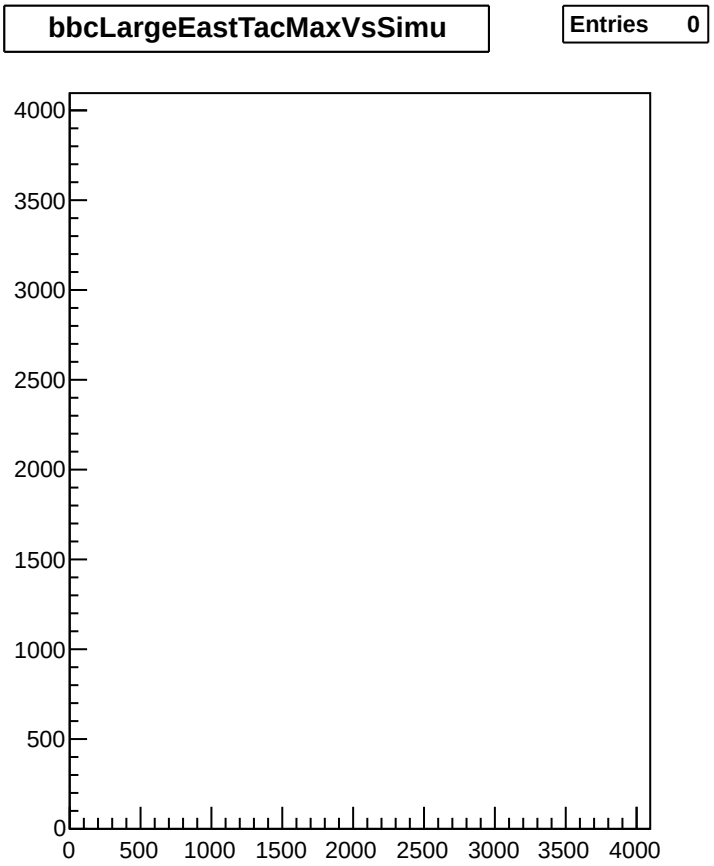

bbcSmallWestTacMaxVsSimu
Entries 3896

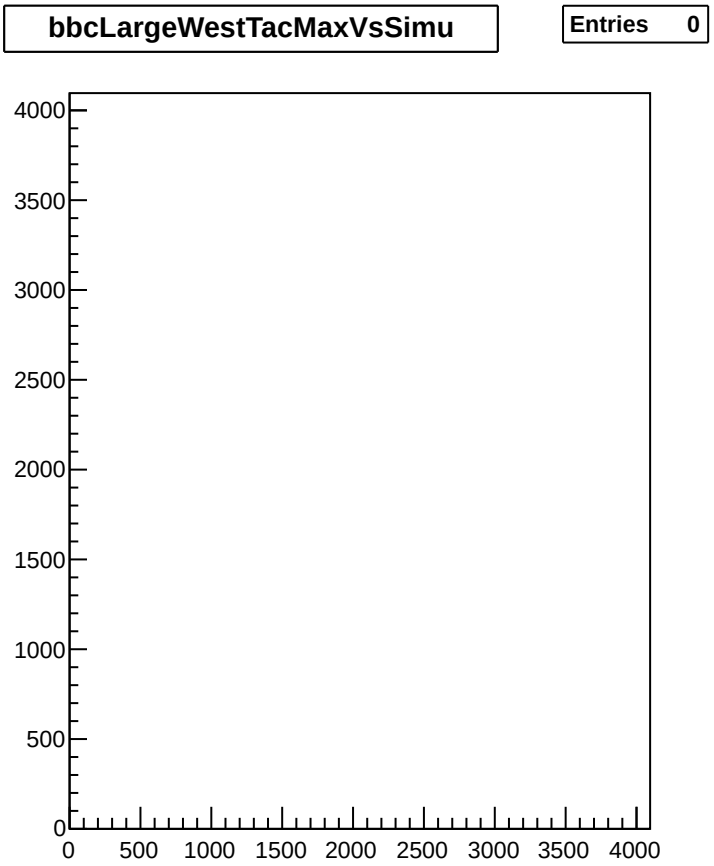

bbcSmallEastAdcSum
Entries 3855

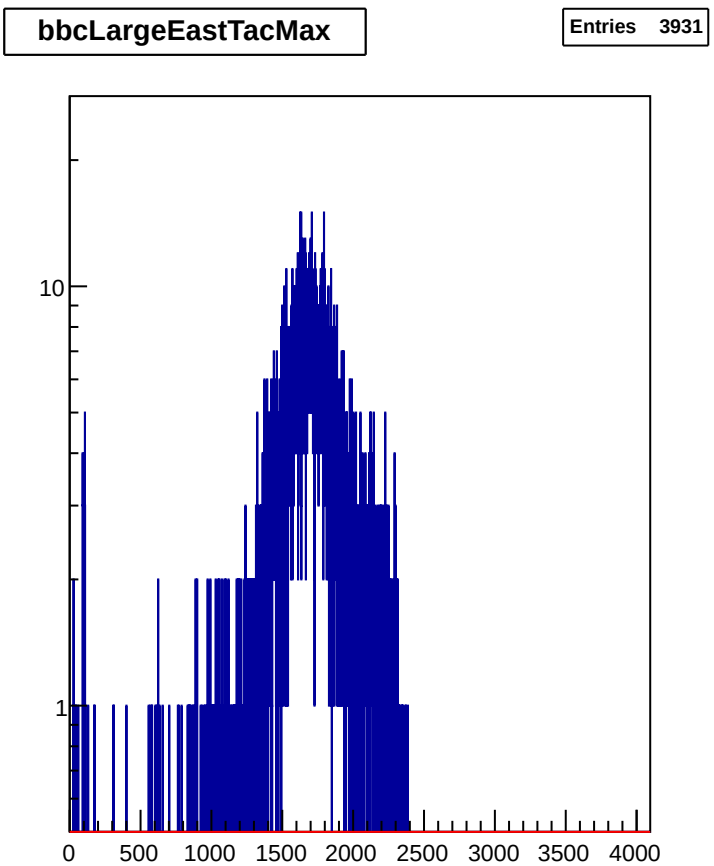

bbcSmallEastTacMax
Entries 3855

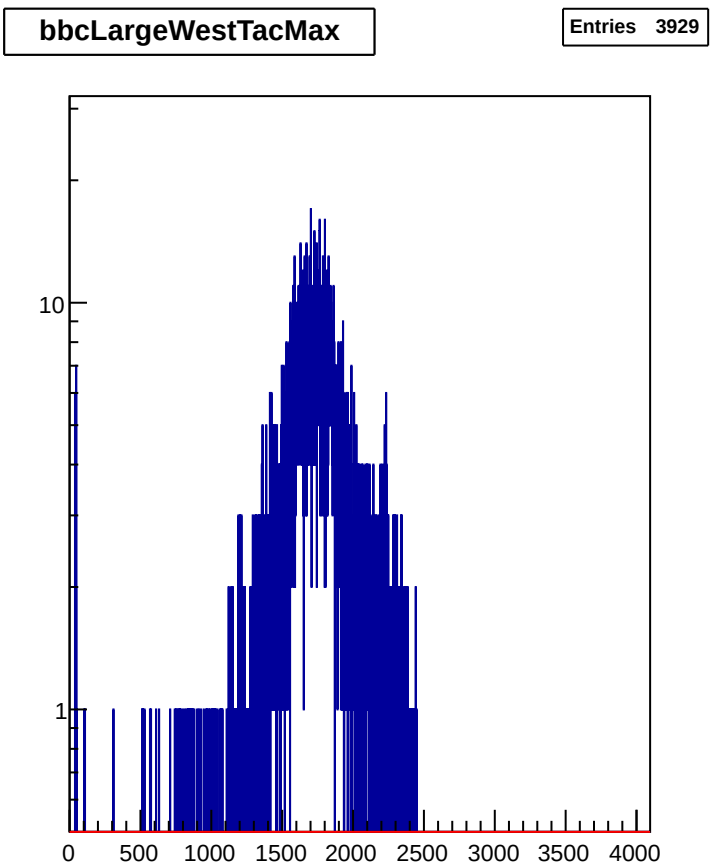

bbcSmallWestAdcSum
Entries 3896

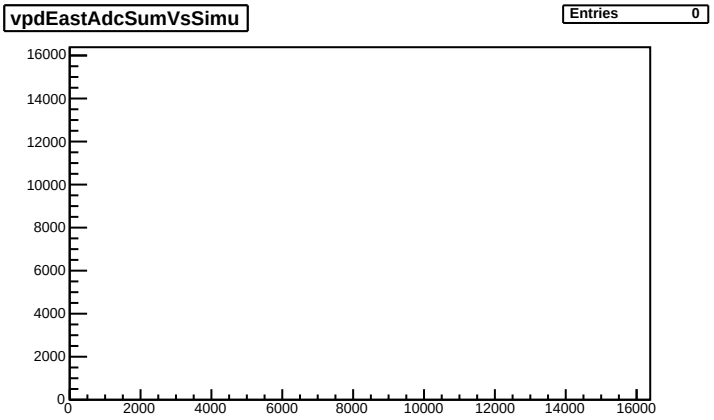

bbcSmallWestTacMax
Entries 3896

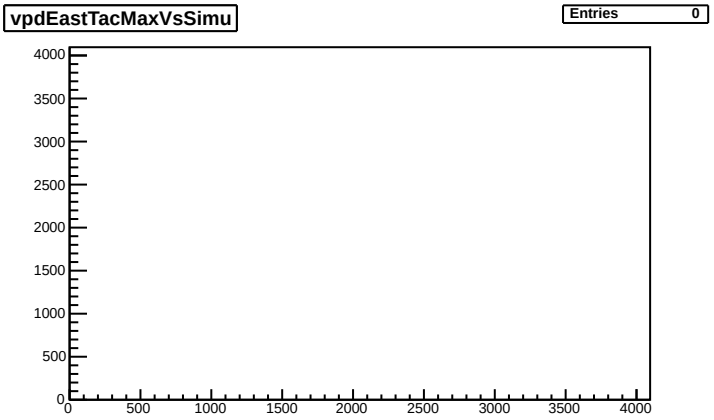

bbcLargeEastTacMaxVsSimu
Entries 0
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000

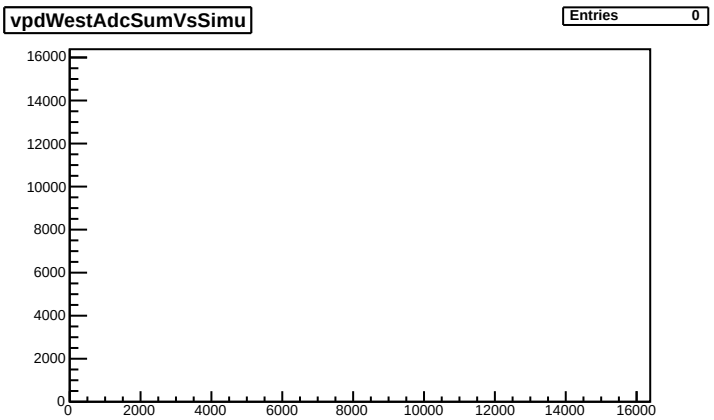

bbcLargeWestTacMaxVsSimu
Entries 0
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000

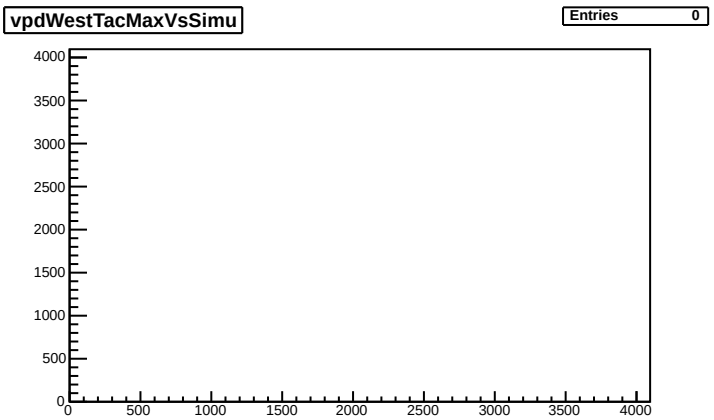

bbcLargeEastTacMax
Entries 3931
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

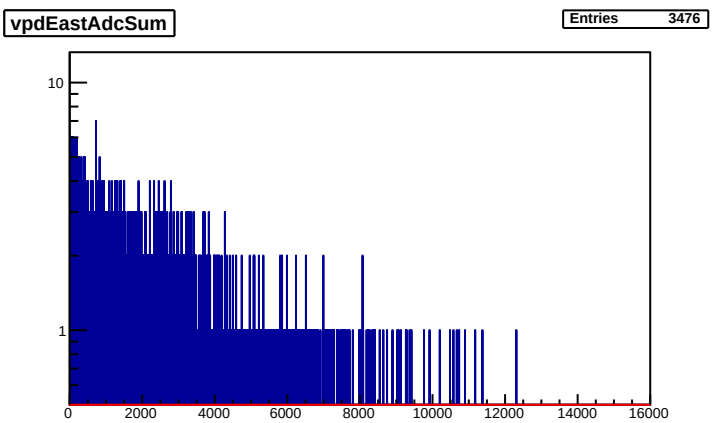

bbcLargeWestTacMax
Entries 3929
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

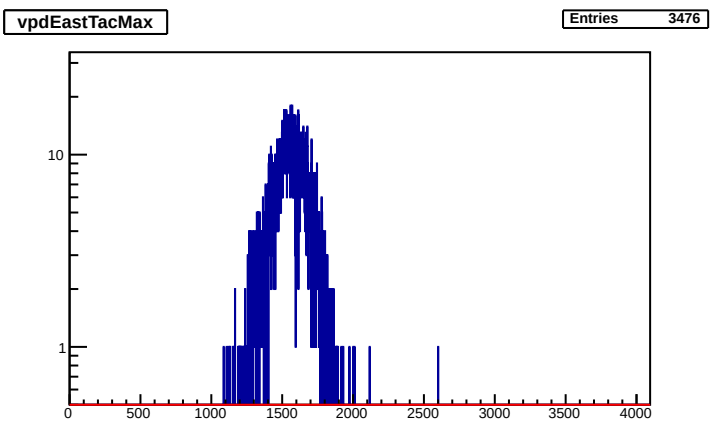

vpdEastAdcSumVsSimu
Entries 0

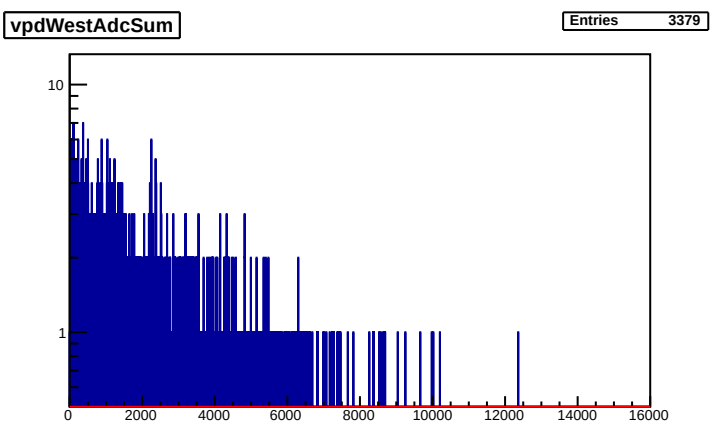

vpdEastTacMaxVsSimu
Entries 0

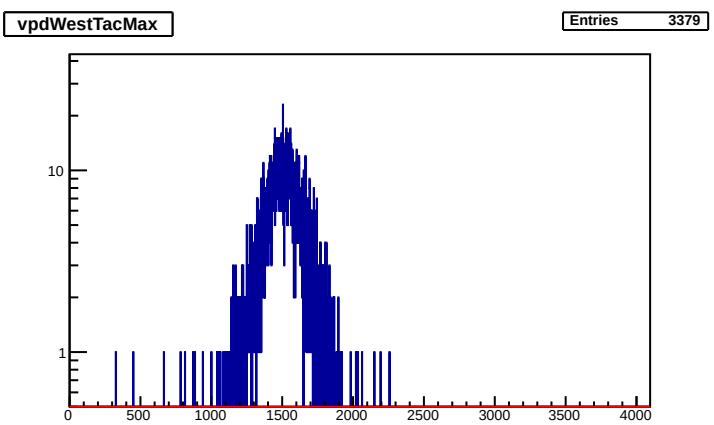

vpdWestAdcSumVsSimu
Entries 0

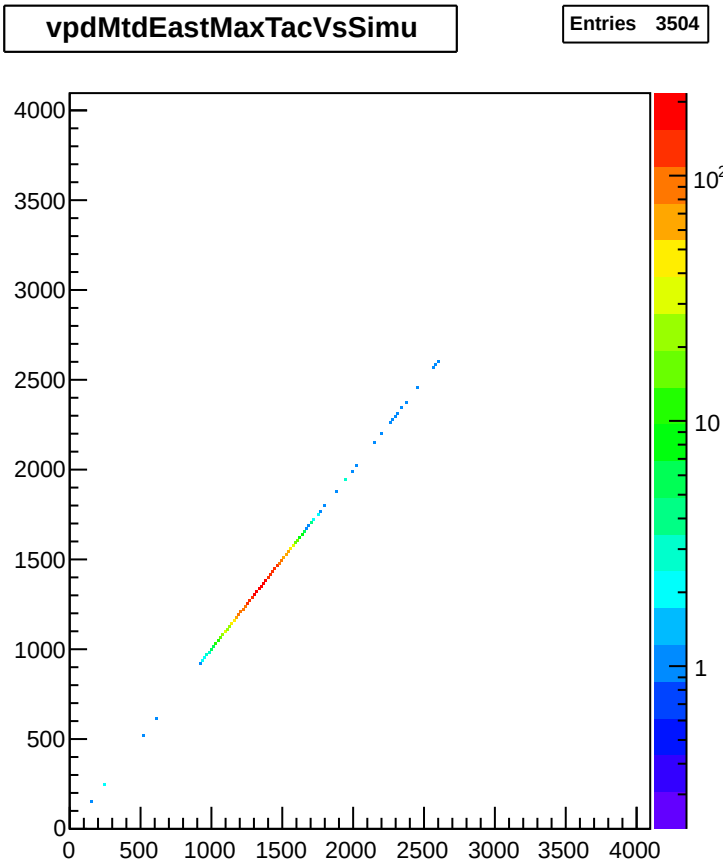

vpdWestTacMaxVsSimu
Entries 0

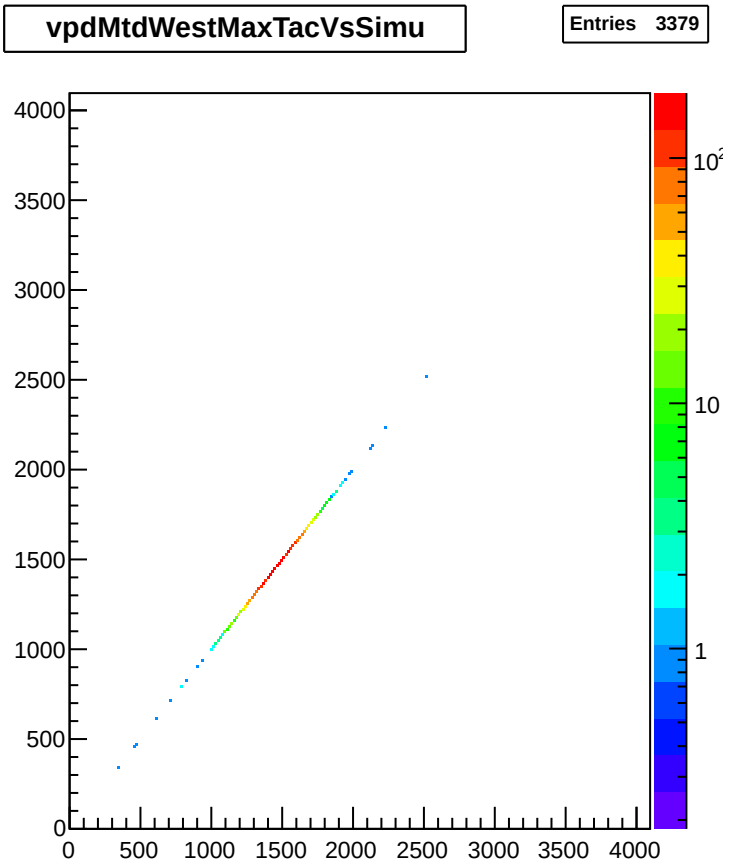

vpdEastAdcSum
Entries 3476

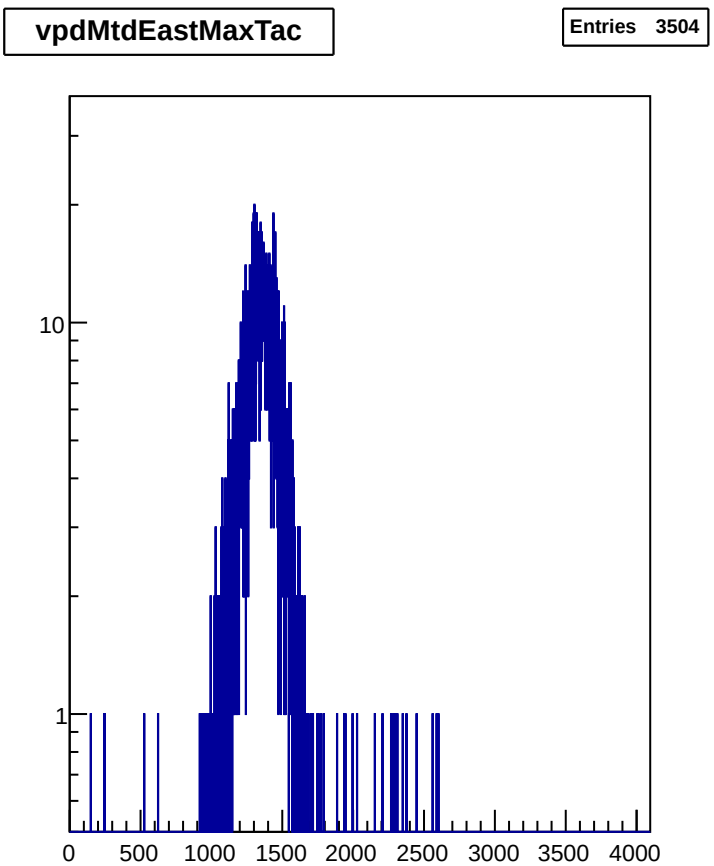

vpdEastTacMax
Entries 3476

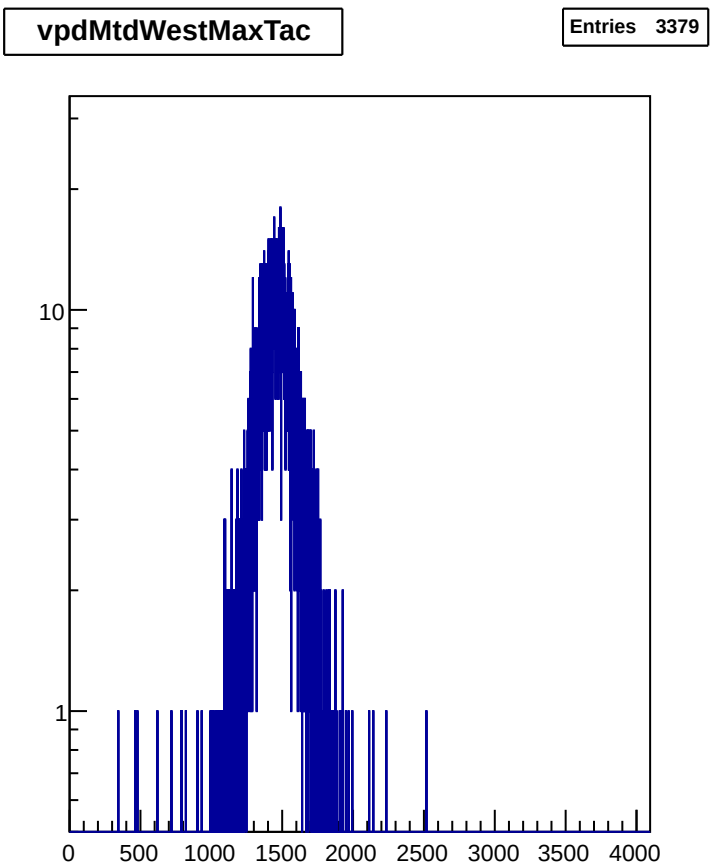

vpdWestAdcSum
Entries 3379

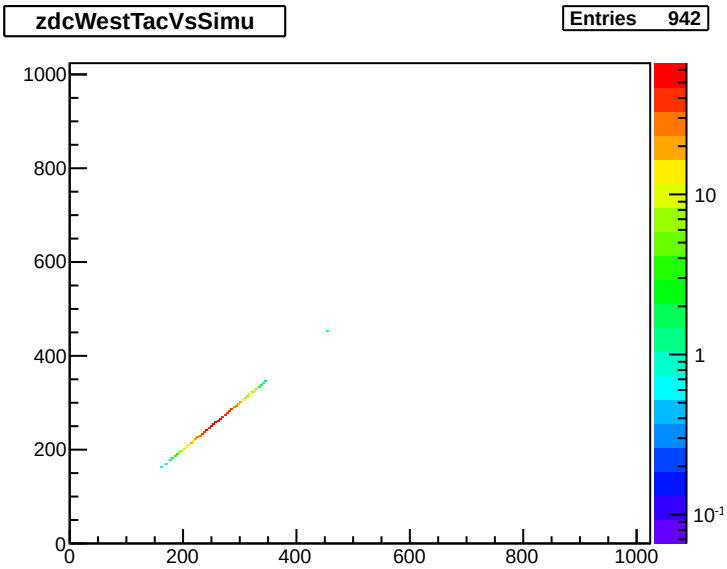

vpdWestTacMax
Entries 3379

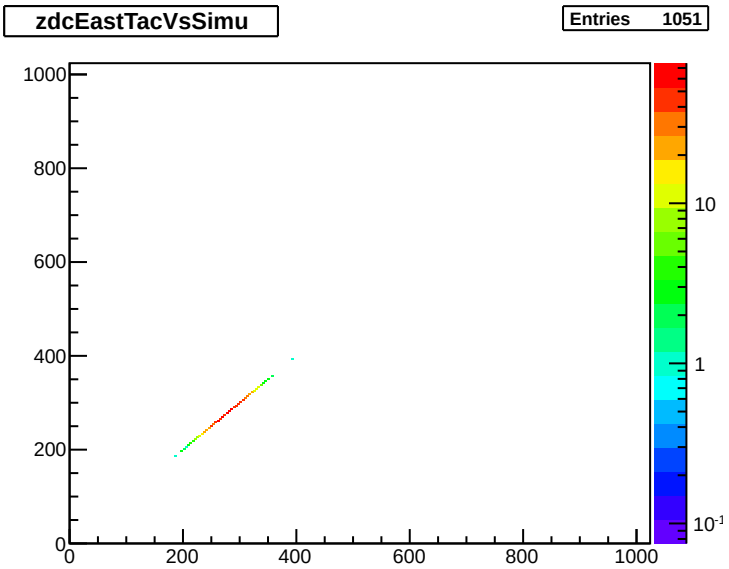

vpdMtdEastMaxTacVsSimu
Entries 3504
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000
10
1

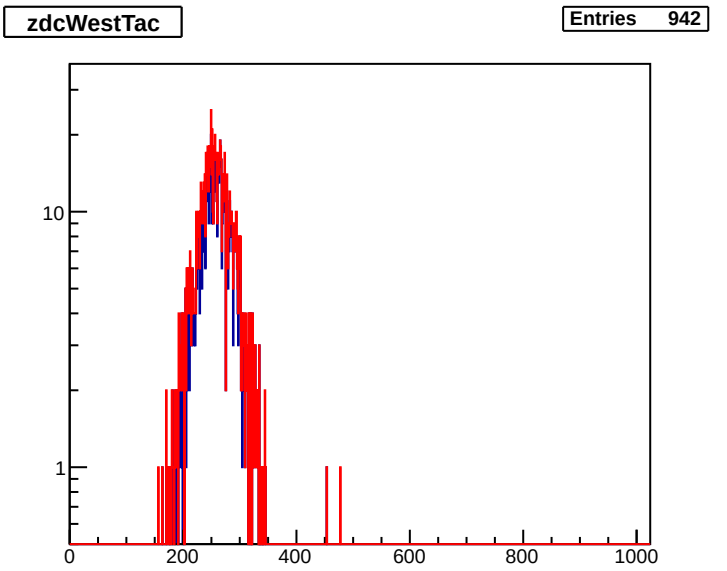

vpdMtdWestMaxTacVsSimu
Entries 3379
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000
10
1

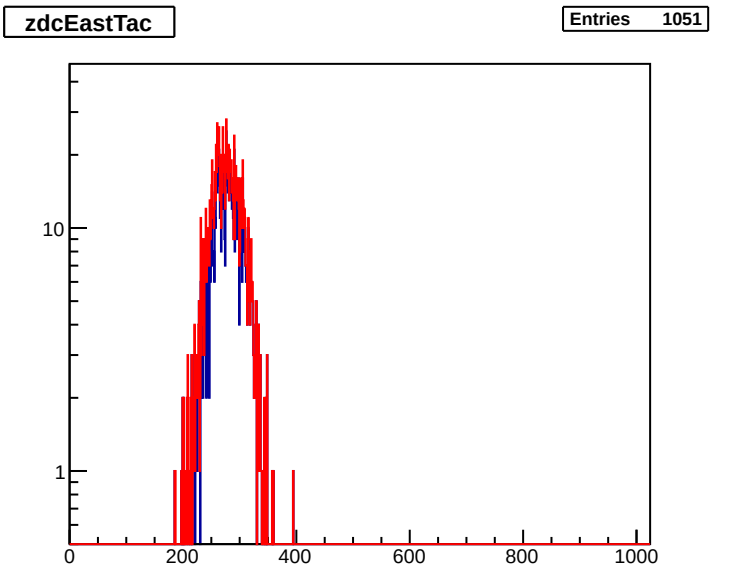

vpdMtdEastMaxTac
Entries 3504
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

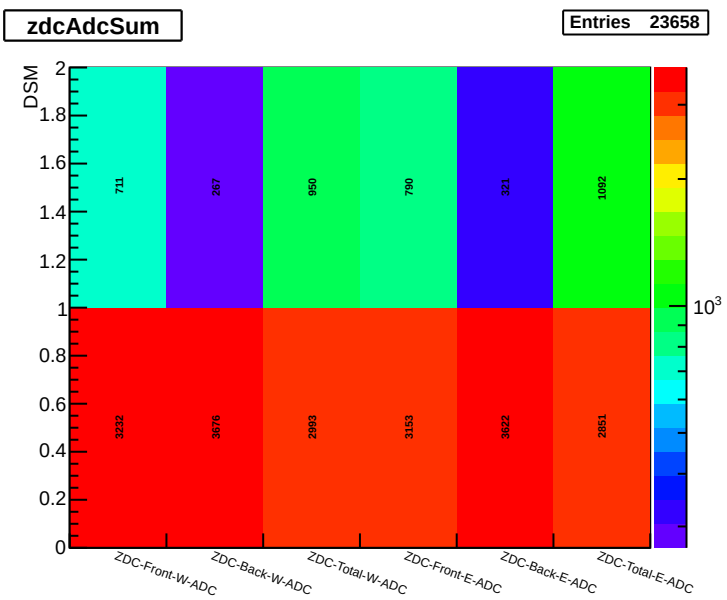

vpdMtdWestMaxTac
Entries 3379
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

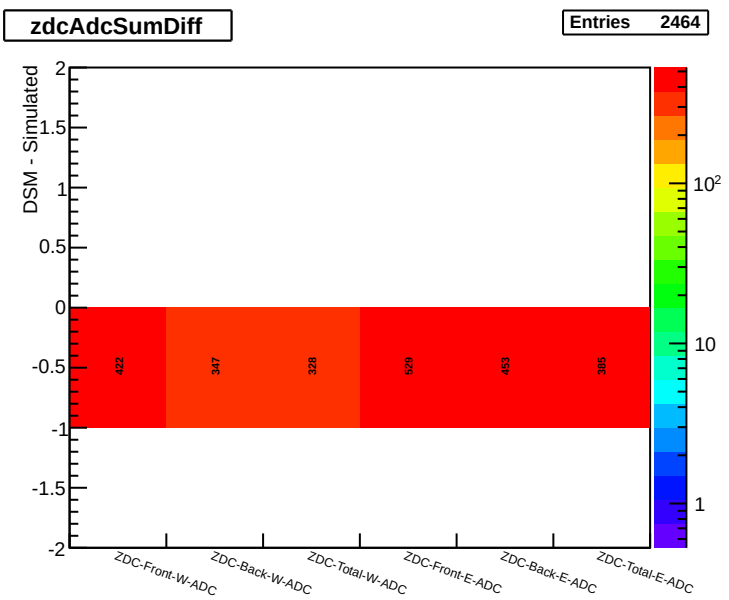

zdcWestTacVsSimu
Entries 942
1000
800
600
400
200
0
0
200
400
600
800
1000
10
1
10^{-1}

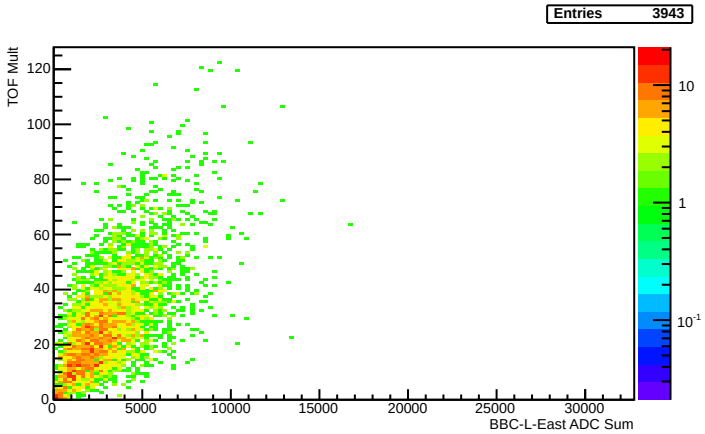

zdcEastTacVsSimu
Entries 1051
1000
800
600
400
200
0
0
200
400
600
800
1000
10
1
10^{-1}

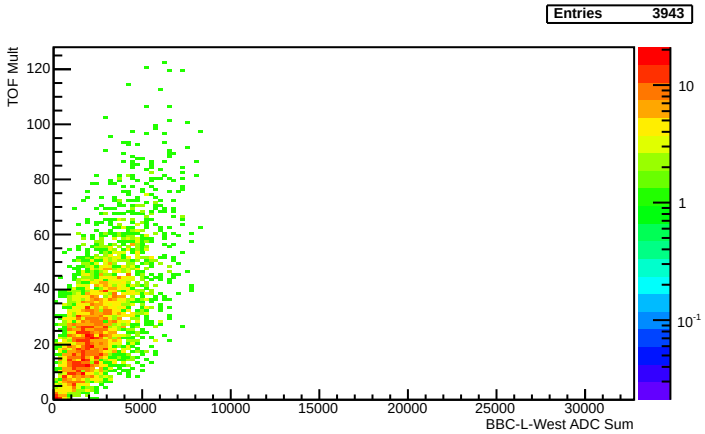

zdcWestTac
Entries 942
10
1
0
200
400
600
800
1000

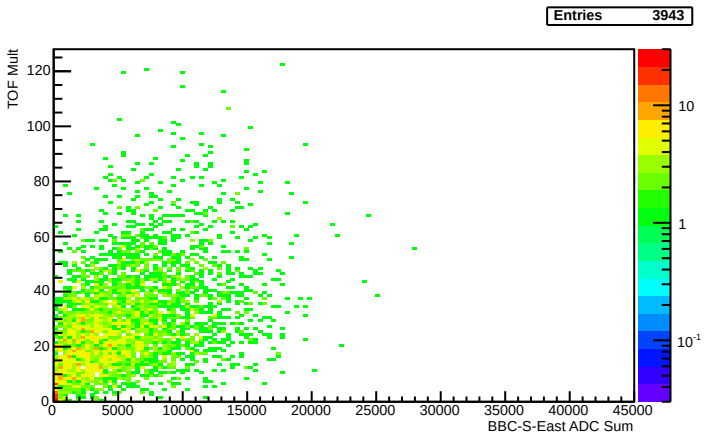

zdcEastTac
Entries 1051
10
1
0
200
400
600
800
1000

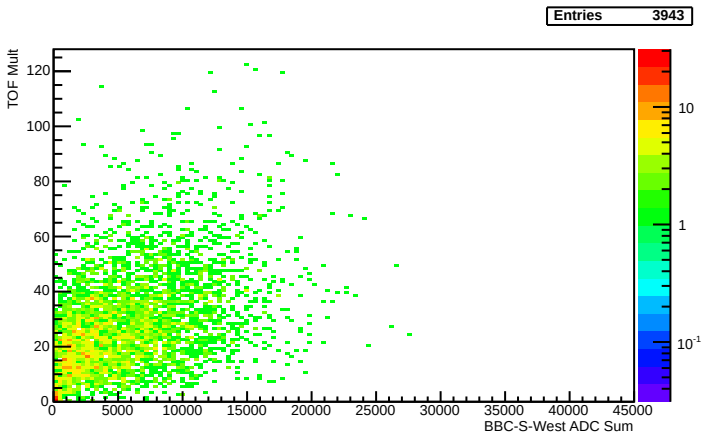

zdcAdcSum
Entries 23658
DSM
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
711
267
950
790
321
1092
3232
3676
2993
3153
3622
2851
10^3
ZDC-Front-W-ADC
ZDC-Back-W-ADC
ZDC-Total-W-ADC
ZDC-Front-E-ADC
ZDC-Back-E-ADC
ZDC-Total-E-ADC

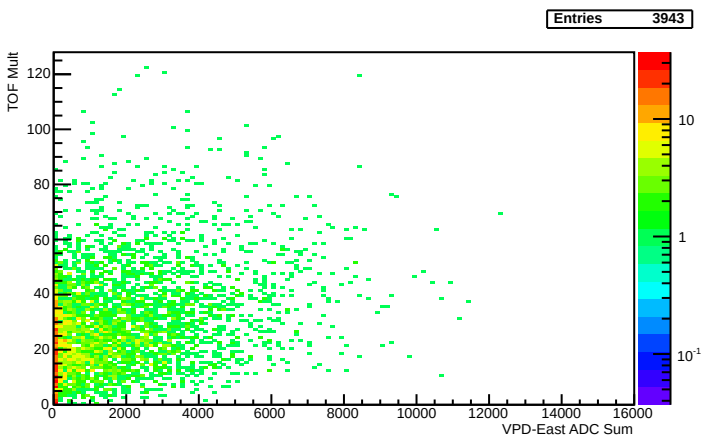

zdcAdcSumDiff
Entries 2464
DSM - Simulated
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
422
347
328
529
453
385
10^2
10
1
ZDC-Front-W-ADC
ZDC-Back-W-ADC
ZDC-Total-W-ADC
ZDC-Front-E-ADC
ZDC-Back-E-ADC
ZDC-Total-E-ADC

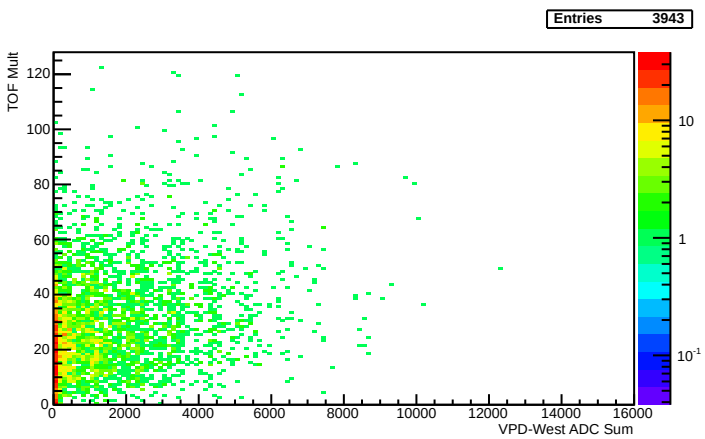

Entries 3943
TOF Mult
BBC-L-East ADC Sum

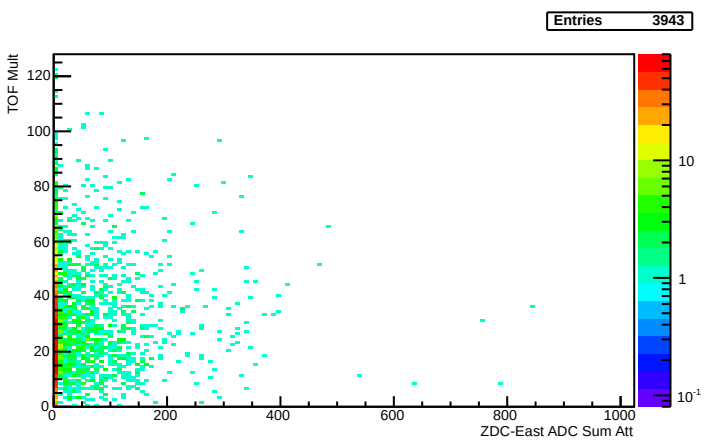

Entries 3943
TOF Mult
BBC-L-West ADC Sum

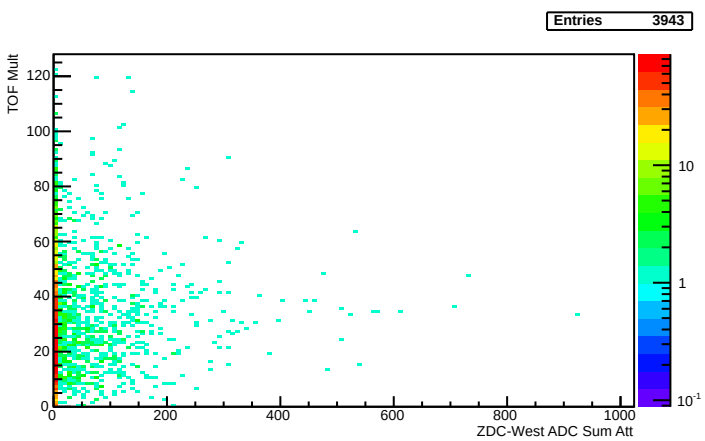

Entries 3943
TOF Mult
BBC-S-East ADC Sum

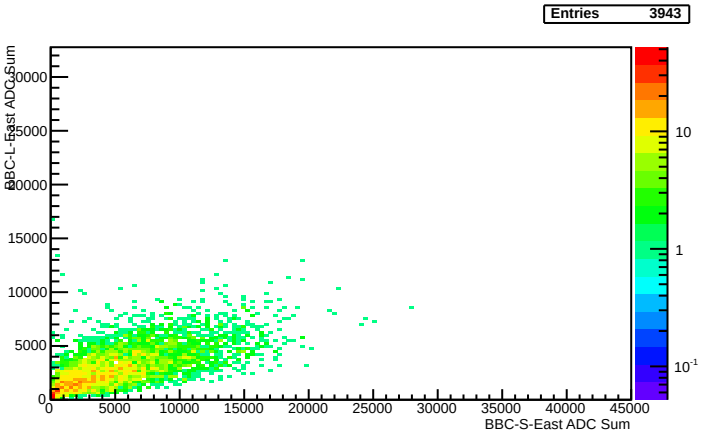

Entries 3943
TOF Mult
BBC-S-West ADC Sum

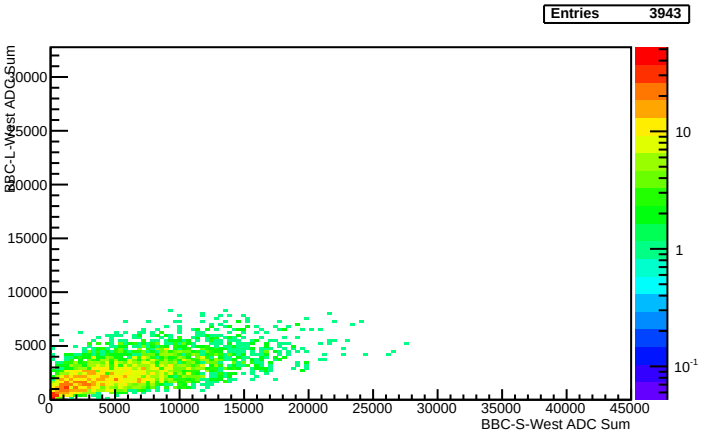

Entries 3943
TOF Mult
VPD-East ADC Sum

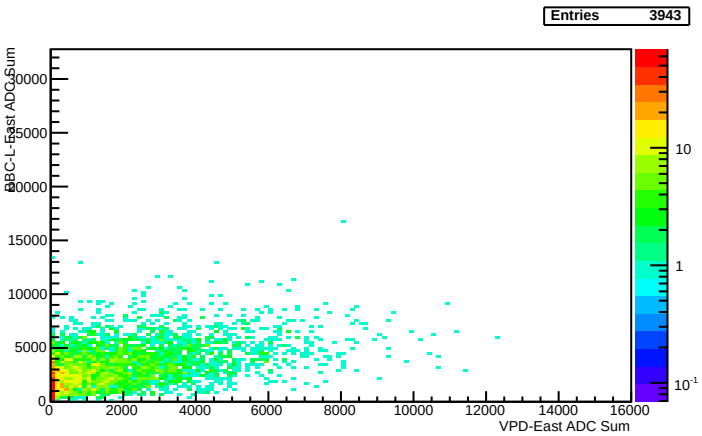

Entries 3943
TOF Mult
VPD-West ADC Sum

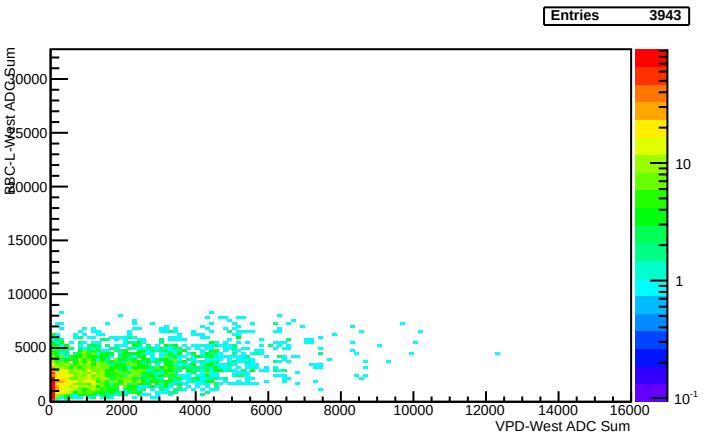

Entries 3943
TOF Mult
ZDC-East ADC Sum Att

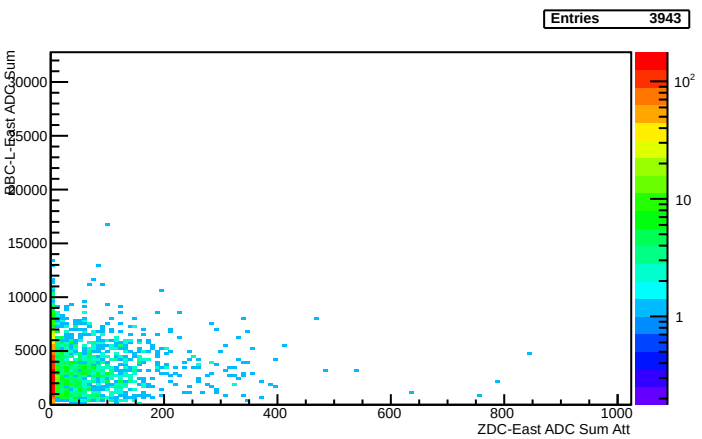

Entries 3943
TOF Mult
ZDC-West ADC Sum Att

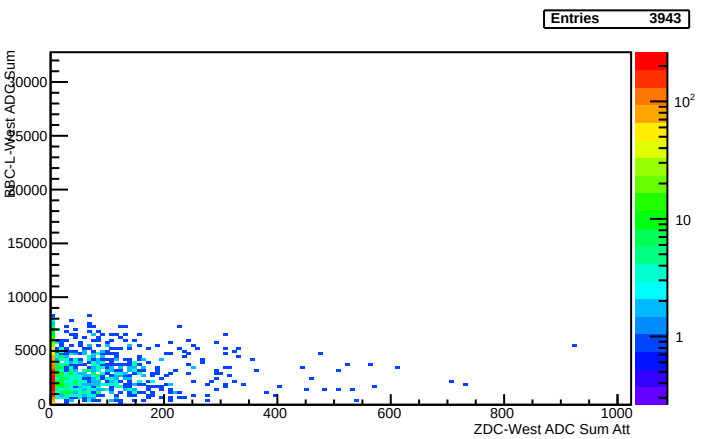

Entries 3943
BBC-L-East ADC Sum
BBC-S-East ADC Sum

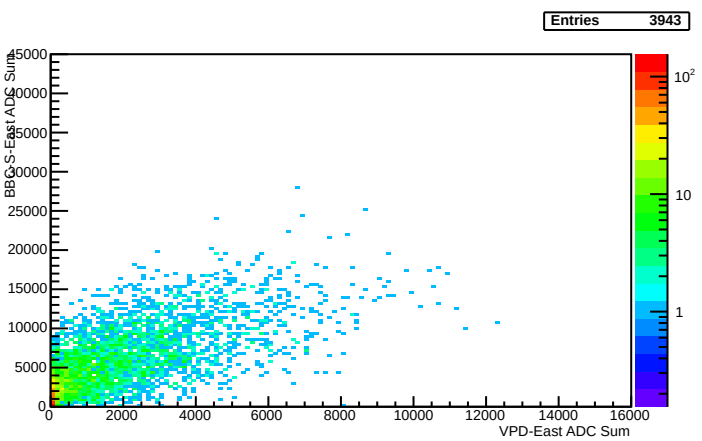

Entries 3943
BBC-L-West ADC Sum
BBC-S-West ADC Sum

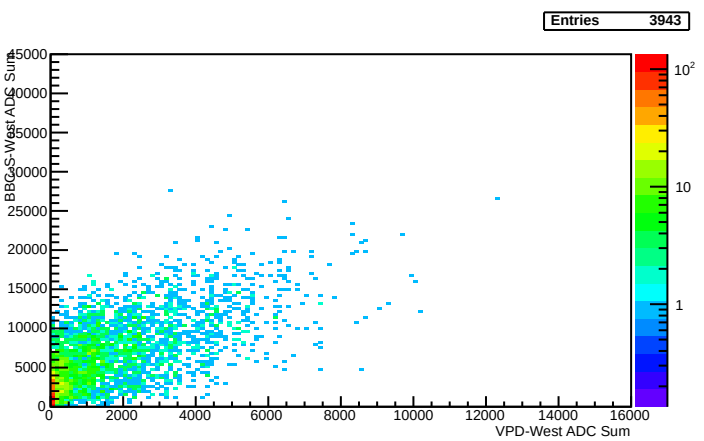

Entries 3943
BBC-L-East ADC Sum
VPD-East ADC Sum

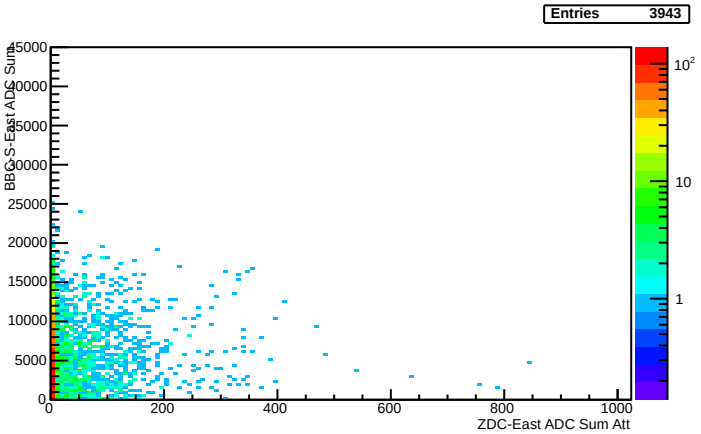

Entries 3943
BBC-L-West ADC Sum
VPD-West ADC Sum

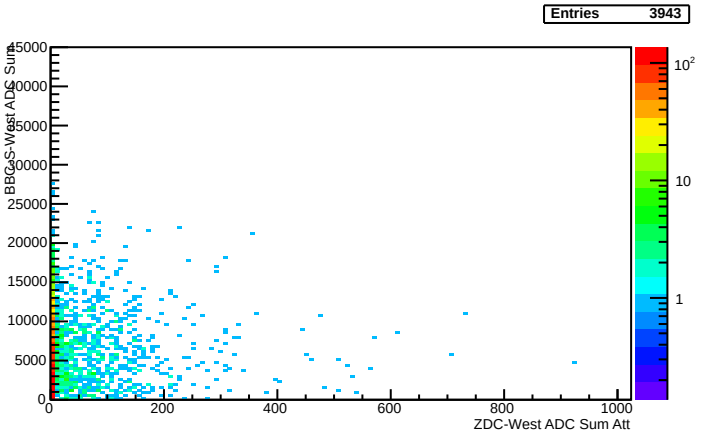

Entries 3943
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

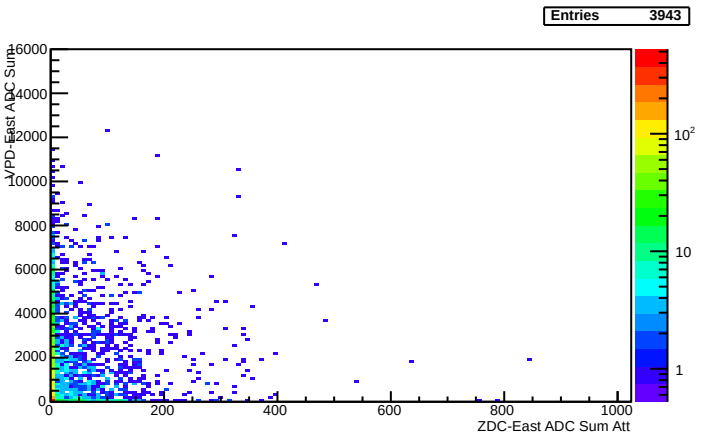

Entries 3943
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

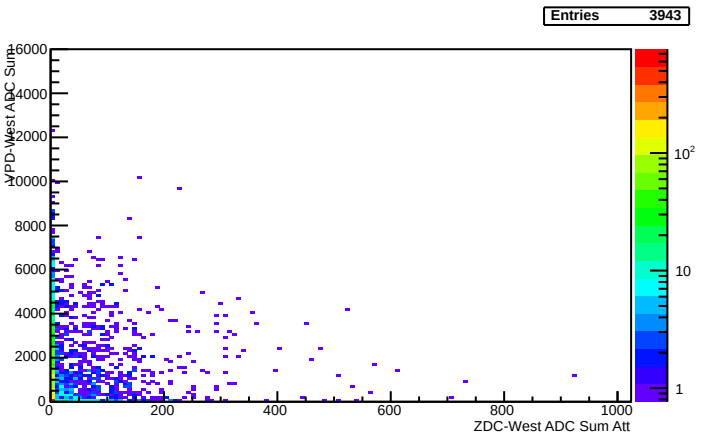

Entries 3943
BBC-S-East ADC Sum
VPD-East ADC Sum

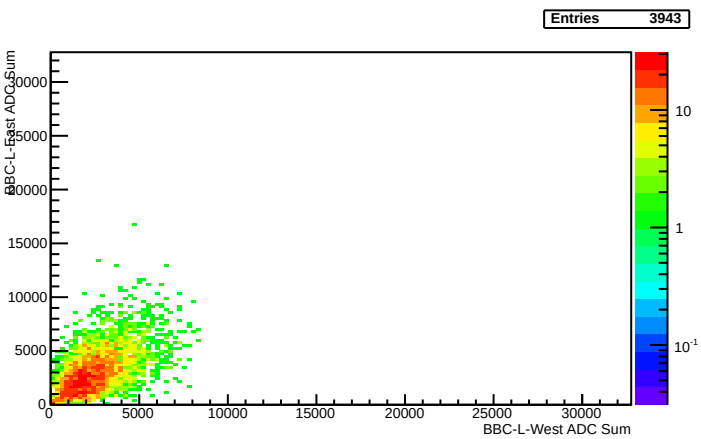

Entries 3943
BBC-S-West ADC Sum
VPD-West ADC Sum

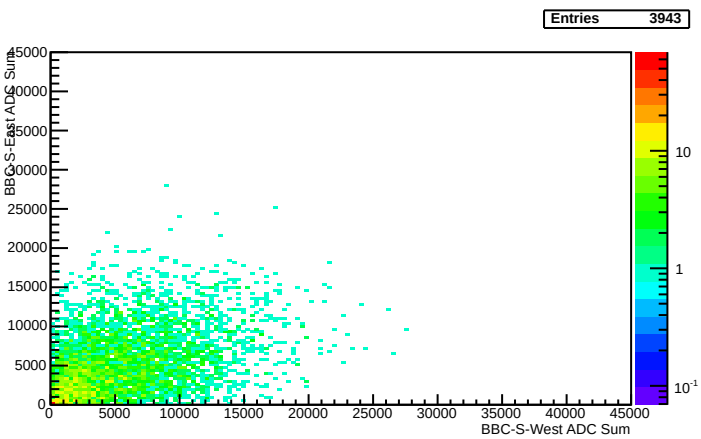

Entries 3943
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

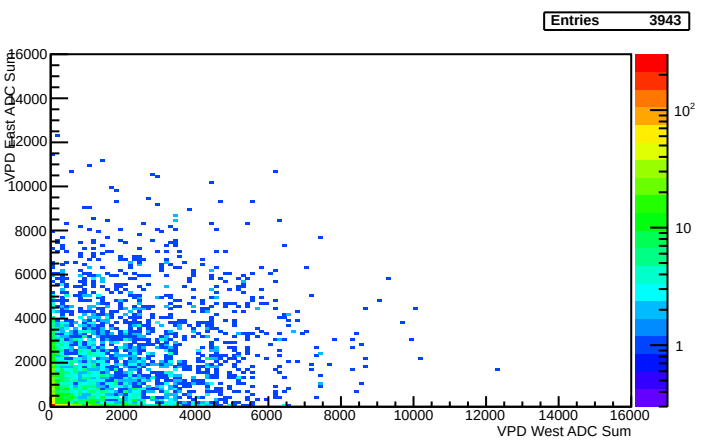

Entries 3943
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

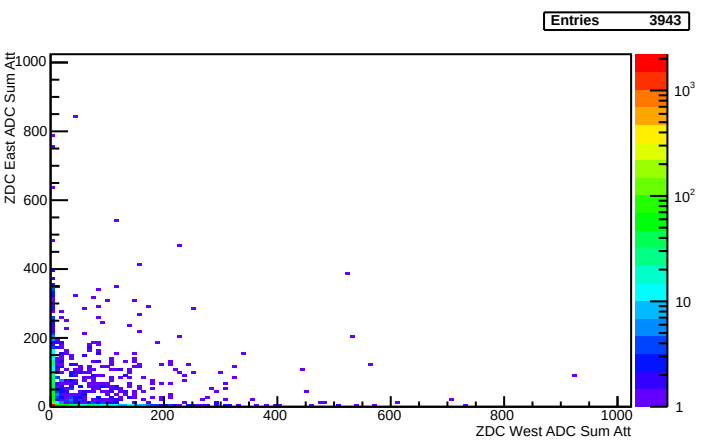

Entries 3943
VPD-East ADC Sum
ZDC-East ADC Sum Att

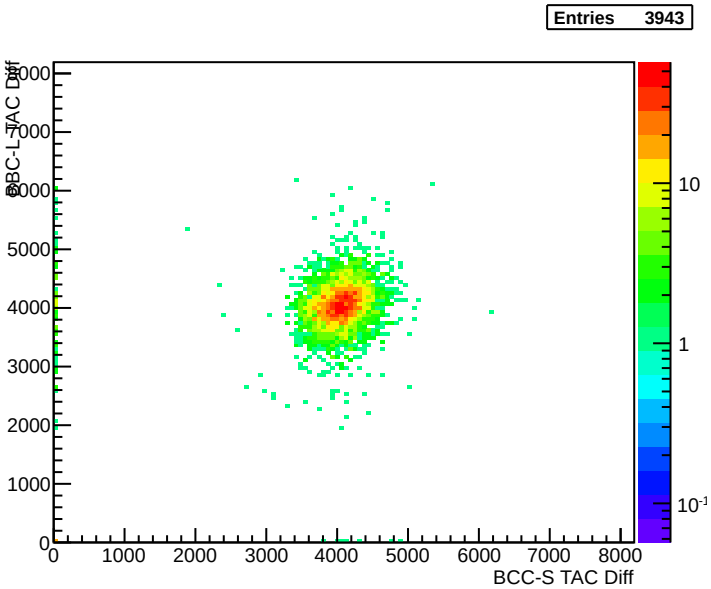

Entries 3943
VPD-West ADC Sum
ZDC-West ADC Sum Att

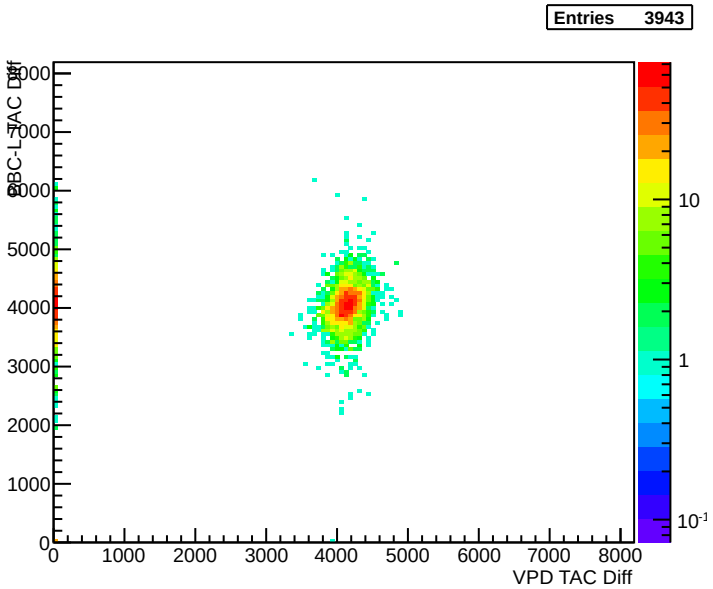

Entries 3943
BBC-L-East ADC Sum
BBC-L-West ADC Sum

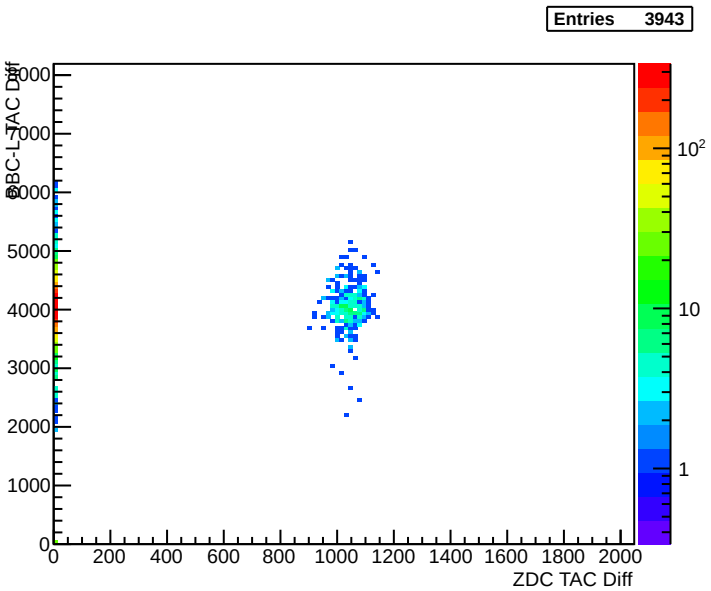

Entries 3943
BBC-S-East ADC Sum
BBC-S-West ADC Sum

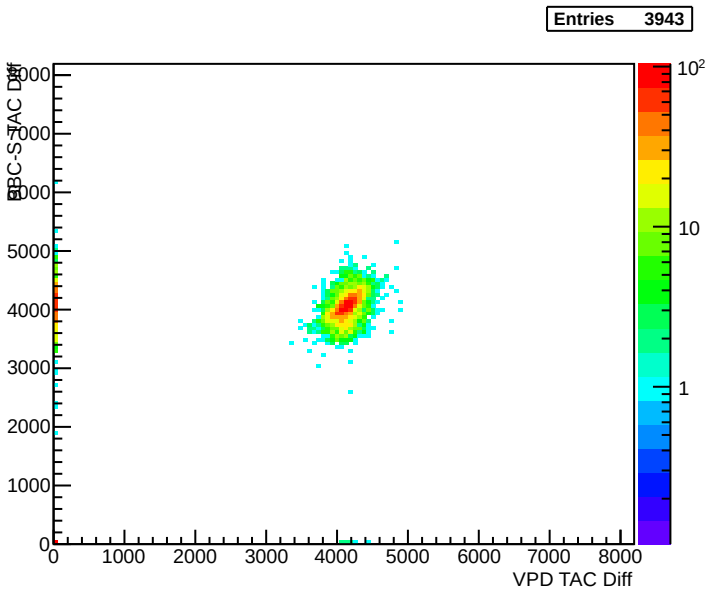

Entries 3943
VPD East ADC Sum
VPD West ADC Sum

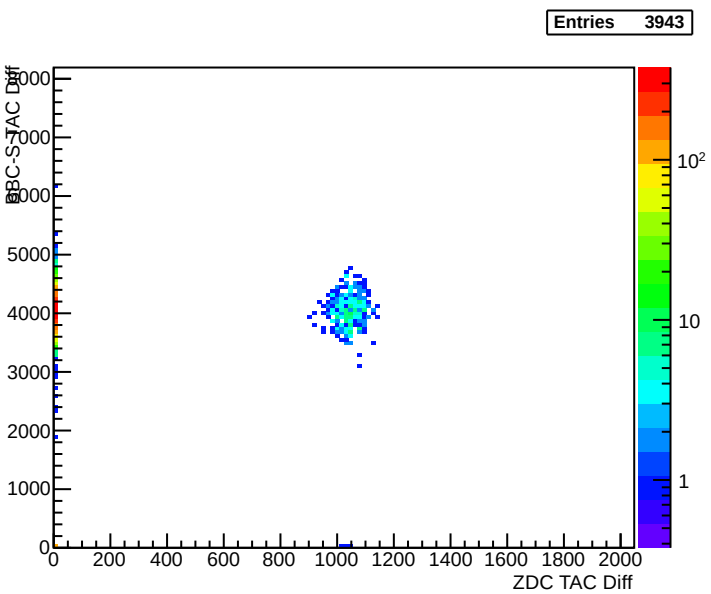

Entries 3943
ZDC East ADC Sum Att
ZDC West ADC Sum Att

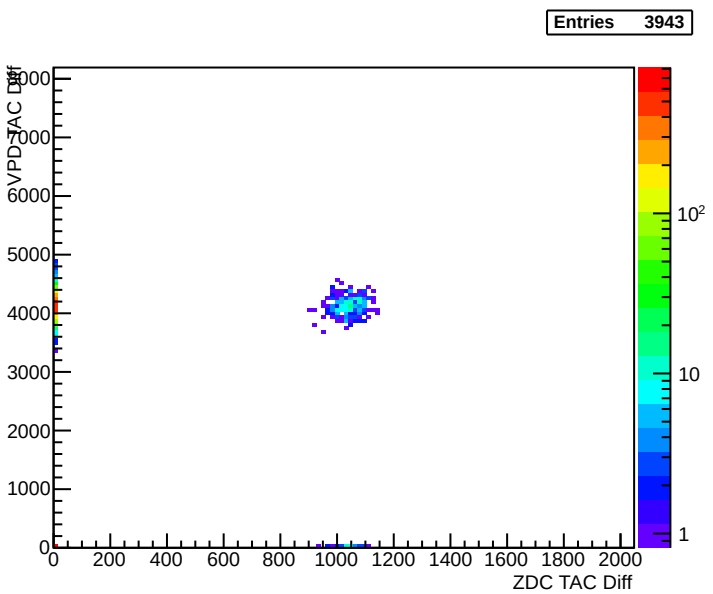

Entries 3943
BBC-L TAC Diff
BCC-S TAC Diff

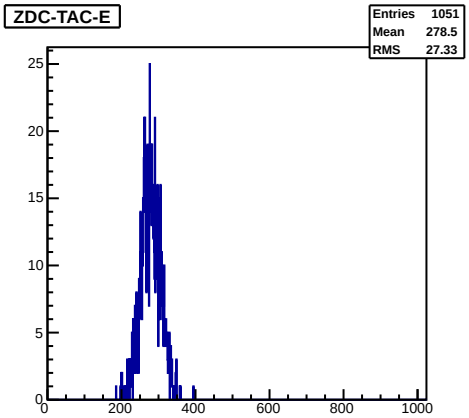

Entries 3943
BBC-L TAC Diff
VPD TAC Diff

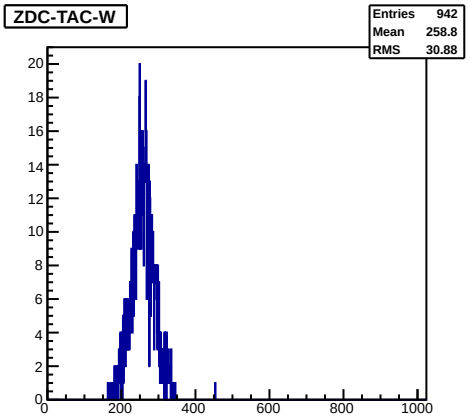

Entries 3943
BBC-L TAC Diff
ZDC TAC Diff

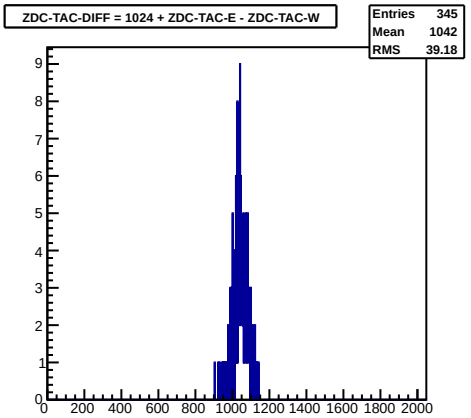

Entries 3943
BBC-S TAC Diff
VPD TAC Diff

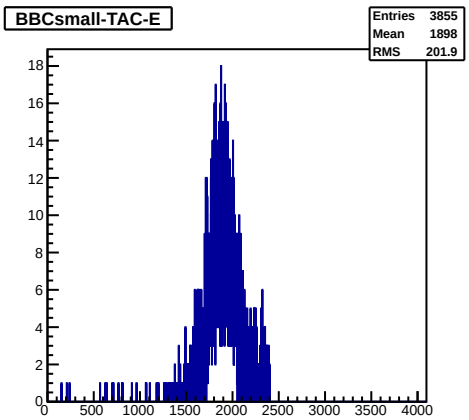

Entries 3943
BBC-S TAC Diff
ZDC TAC Diff

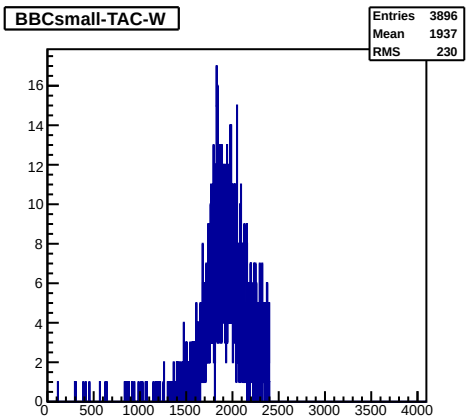

Entries 3943
VPD TAC Diff
ZDC TAC Diff

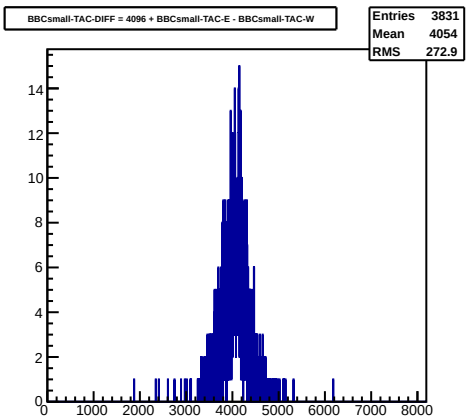

ZDC-TAC-E
Entries 1051
Mean 278.5
RMS 27.33

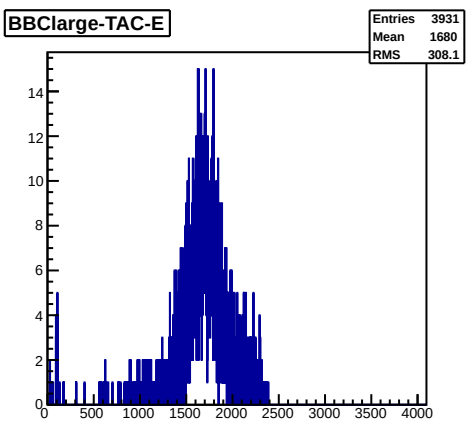

ZDC-TAC-W
Entries 942
Mean 258.8
RMS 30.88

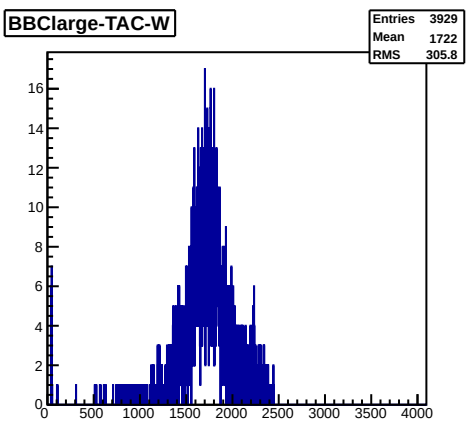

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 345
Mean 1042
RMS 39.18

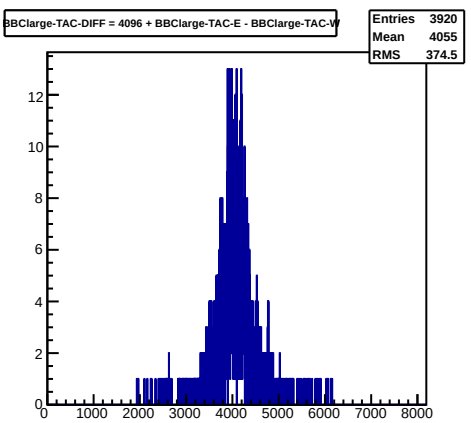

BBCsmall-TAC-E
Entries 3855
Mean 1898
RMS 201.9

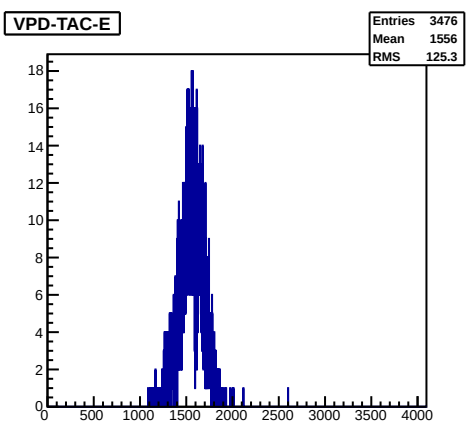

BBCsmall-TAC-W
Entries 3896
Mean 1937
RMS 230

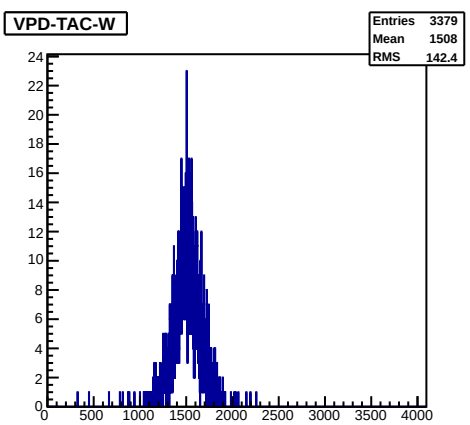

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 3831
Mean 4054
RMS 272.9

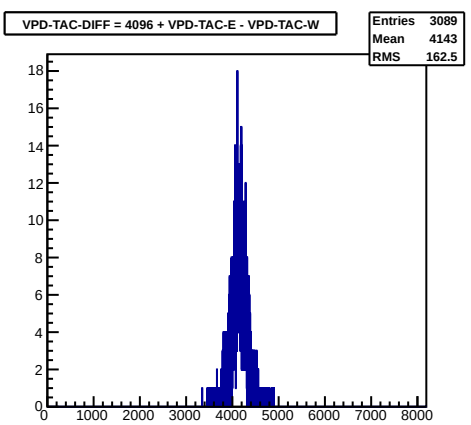

BBClarge-TAC-E
Entries 3931
Mean 1680
RMS 308.1

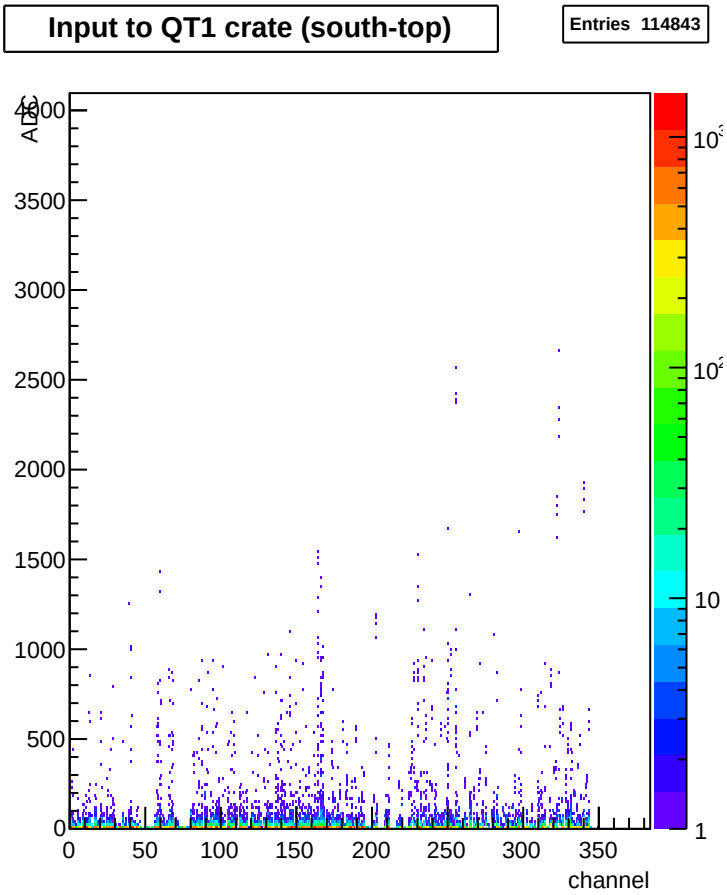

BBClarge-TAC-W
Entries 3929
Mean 1722
RMS 305.8

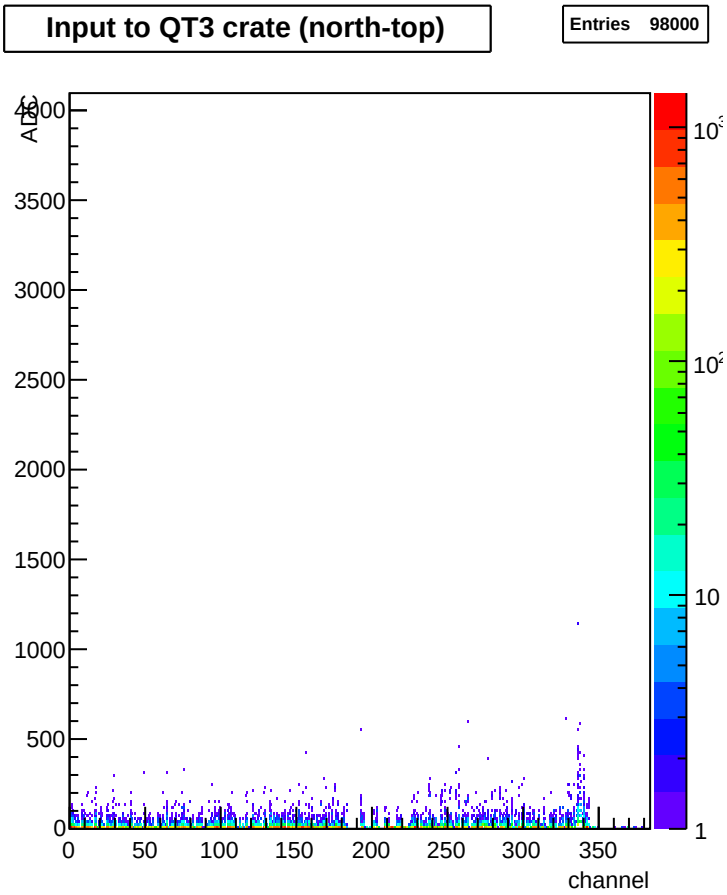

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 3920
Mean 4055
RMS 374.5

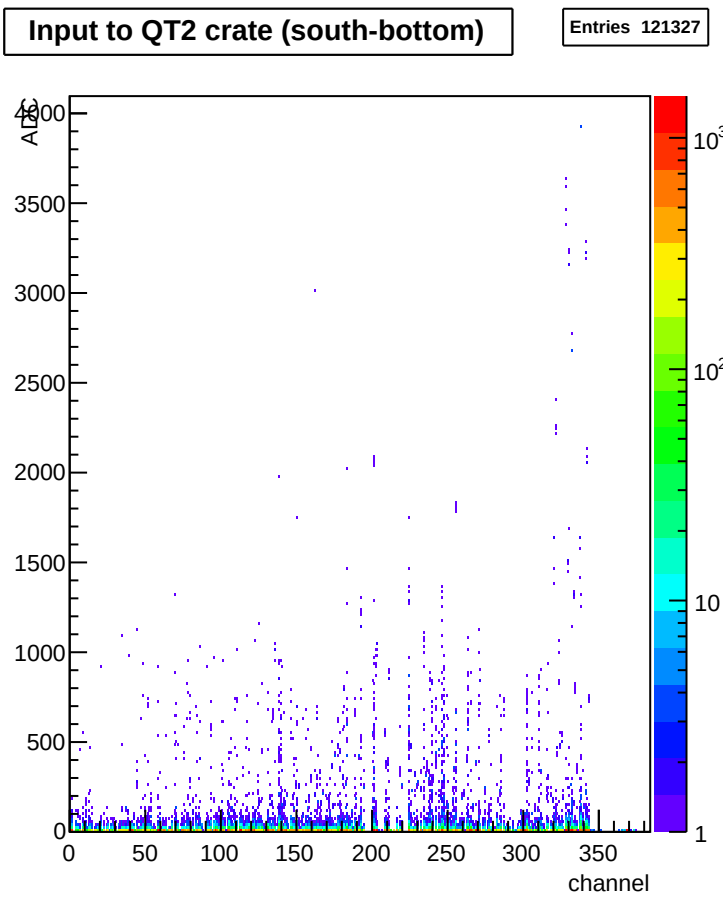

VPD-TAC-E
Entries 3476
Mean 1556
RMS 125.3

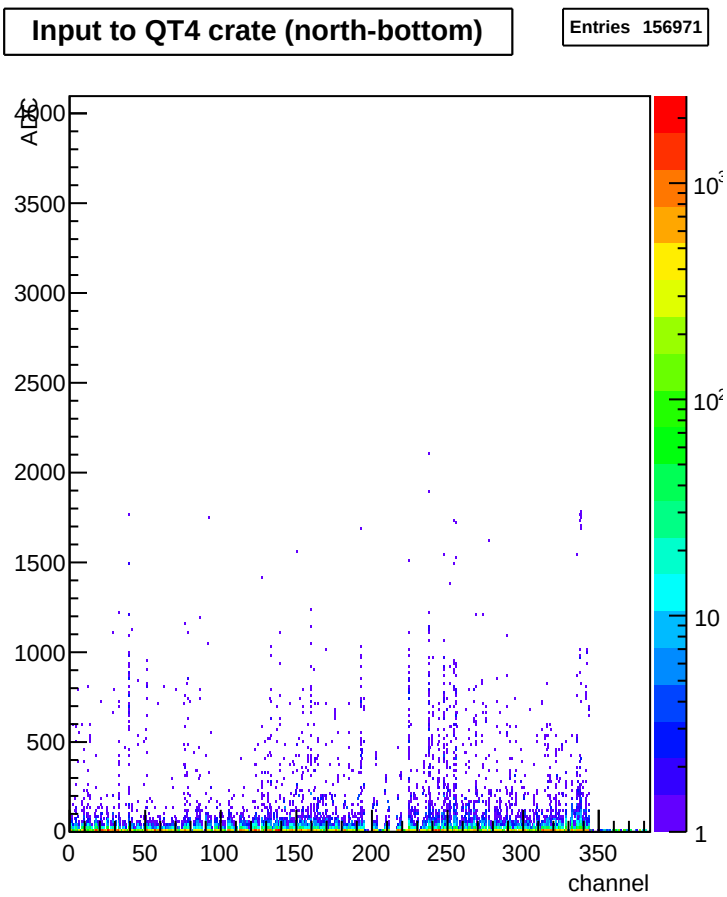

VPD-TAC-W
Entries 3379
Mean 1508
RMS 142.4

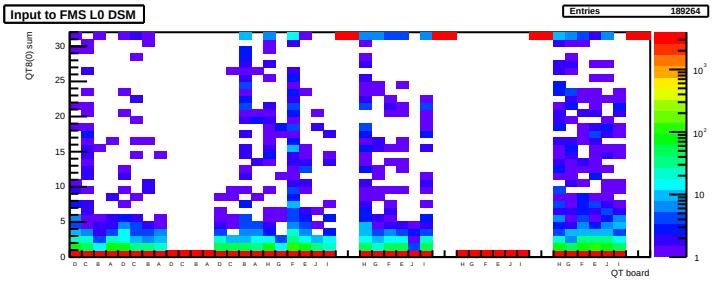

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 3089
Mean 4143
RMS 162.5

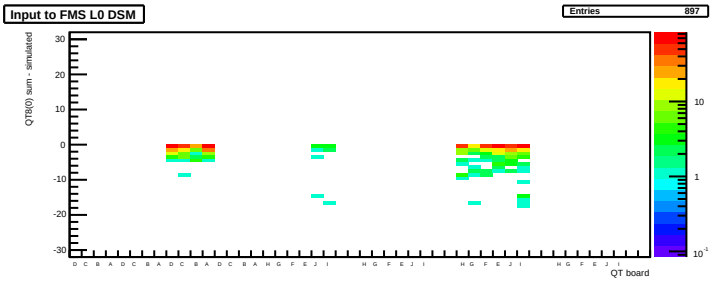

Input to QT1 crate (south-top)
Entries 114843
ADC
channel

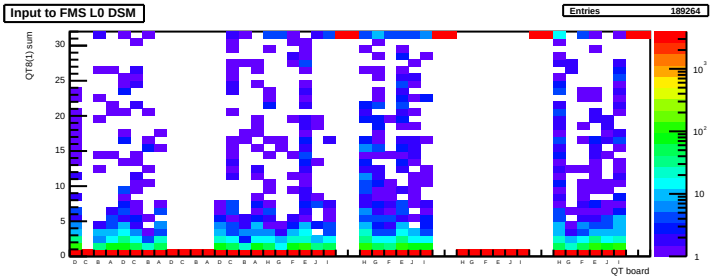

Input to QT3 crate (north-top)
Entries 98000
ADC
channel

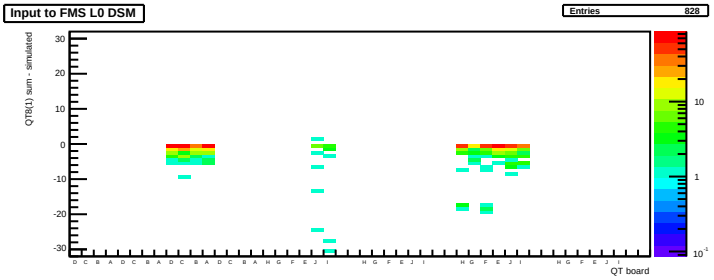

Input to QT2 crate (south-bottom)
Entries 121327
ADC
channel

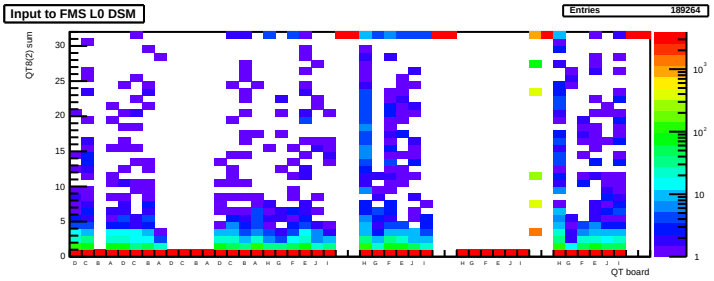

Input to QT4 crate (north-bottom)
Entries 156971
ADC
channel

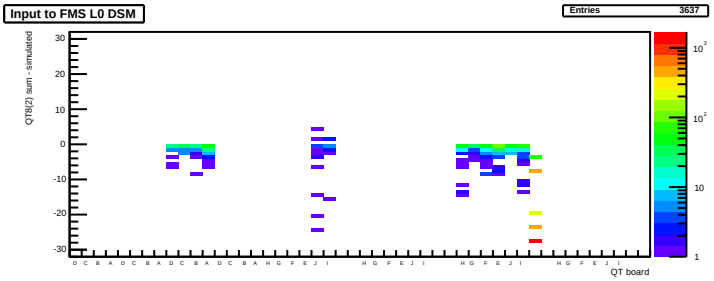

Input to FMS L0 DSM
Entries 189264
QT8(0) sum
QT board

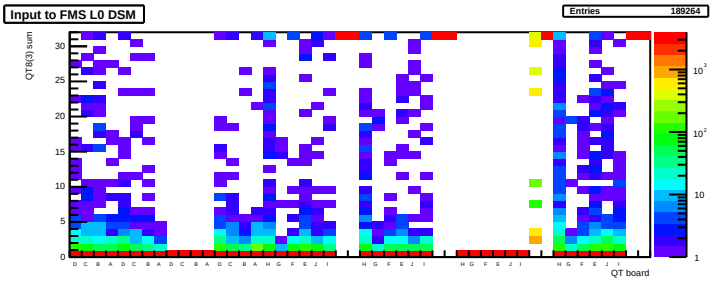

Input to FMS L0 DSM
Entries 897
QT8(0) sum - simulated
QT board

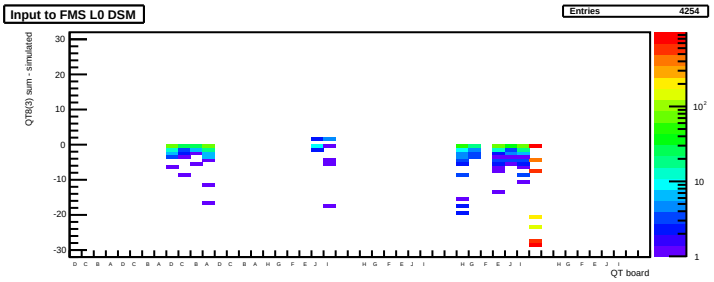

Input to FMS L0 DSM
Entries 189264
QT8(1) sum
QT board

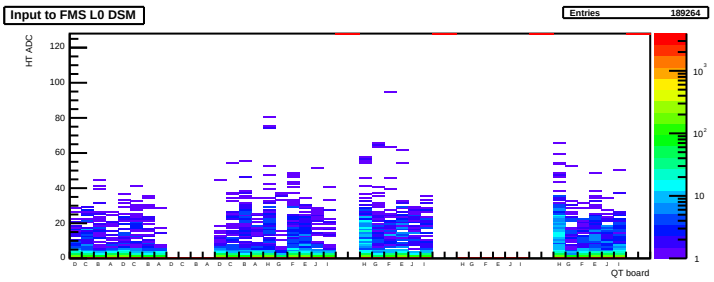

Input to FMS L0 DSM
Entries 828
QT8(1) sum - simulated
QT board

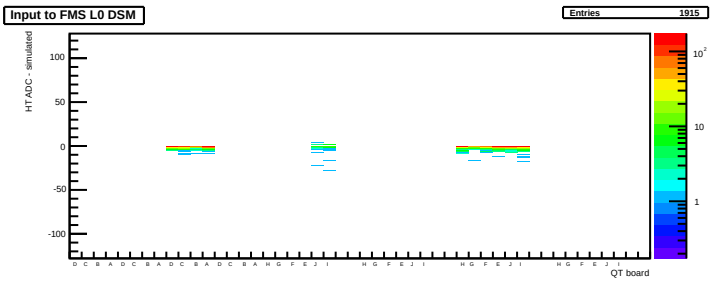

Input to FMS L0 DSM
Entries 189264
QT8(2) sum
QT board

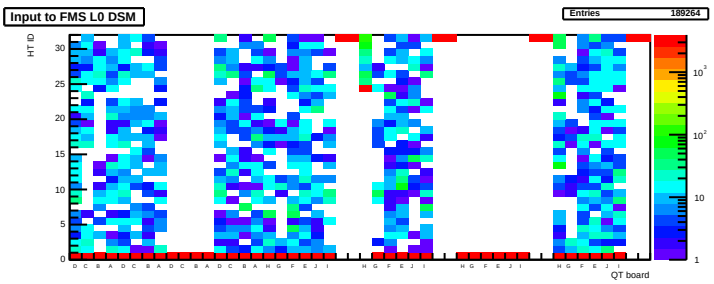

Input to FMS L0 DSM
Entries 3637
QT8(2) sum - simulated
QT board

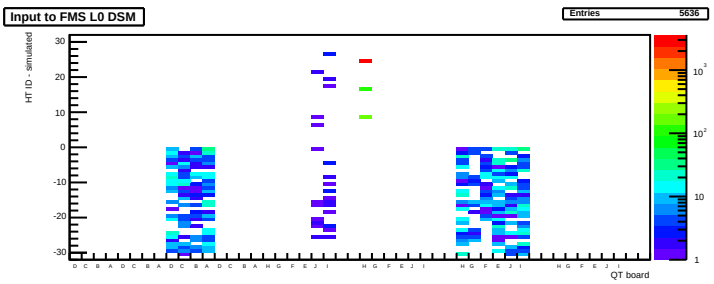

Input to FMS L0 DSM
Entries 189264
QT8(3) sum
QT board

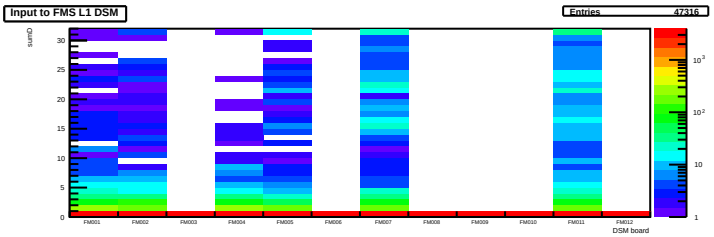

Input to FMS L0 DSM
Entries 4254
QT8(3) sum - simulated
QT board

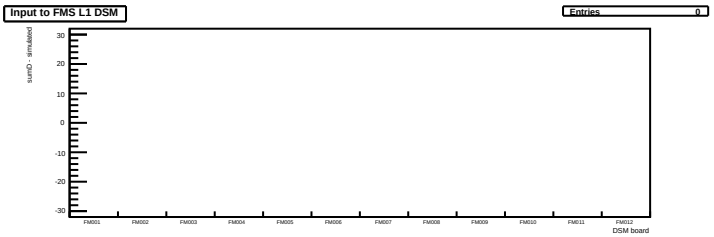

Input to FMS L0 DSM
Entries 189264
HT ADC
QT board

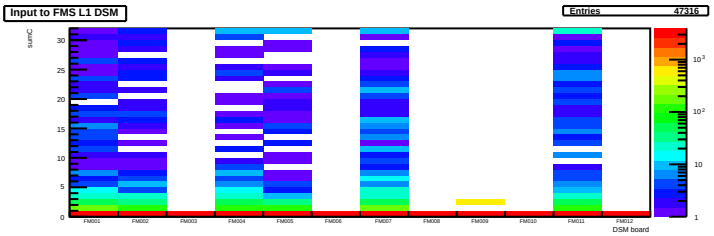

Input to FMS L0 DSM
Entries 1915
HT ADC - simulated
QT board

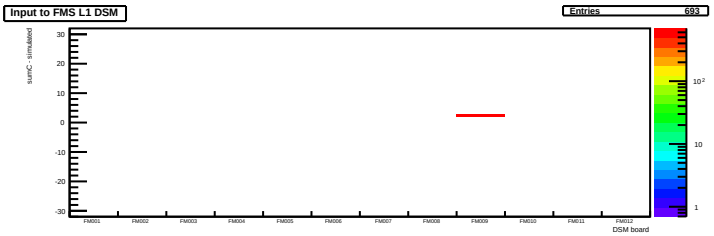

Input to FMS L0 DSM
Entries 189264
HT ID
QT board

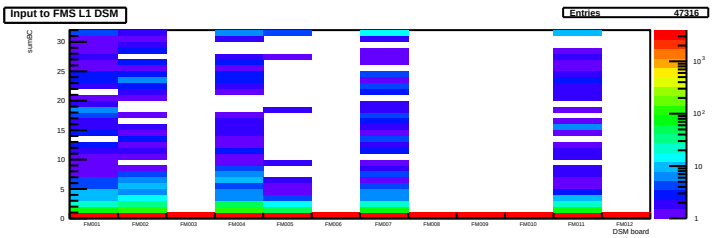

Input to FMS L0 DSM
Entries 5636
HT ID - simulated
QT board

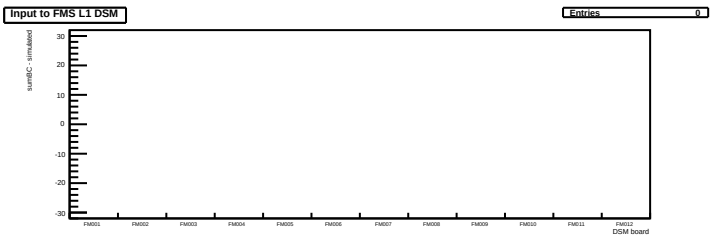

Input to FMS L1 DSM
Entries 47316
sumD
DSM board

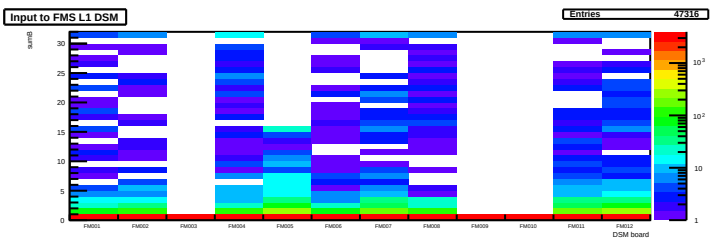

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

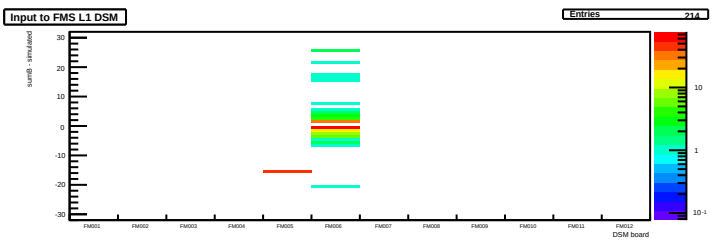

Input to FMS L1 DSM
Entries 47316
sumC
DSM board

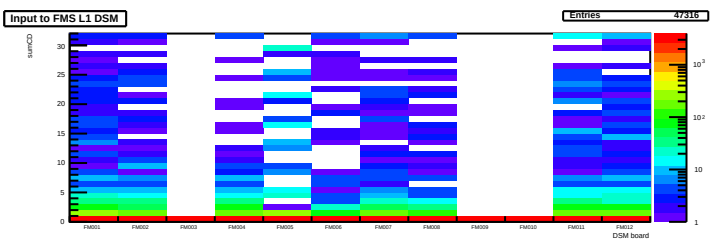

Input to FMS L1 DSM
Entries 693
sumC - simulated
DSM board

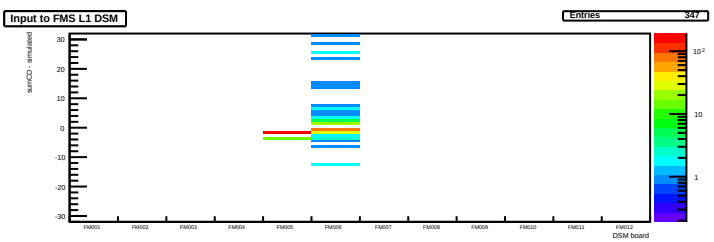

Input to FMS L1 DSM
Entries 47316
sumBC
DSM board

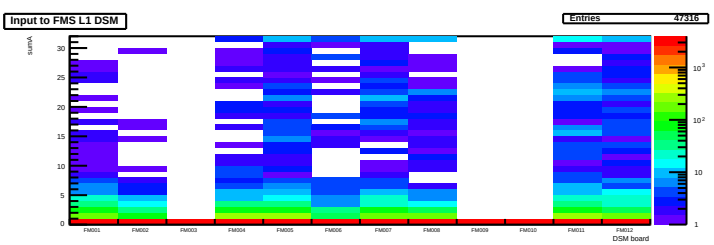

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

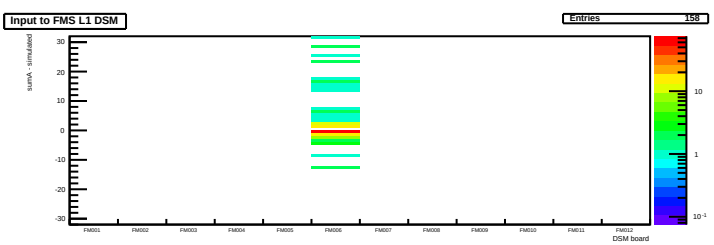

Input to FMS L1 DSM
Entries 47316
sumB
DSM board

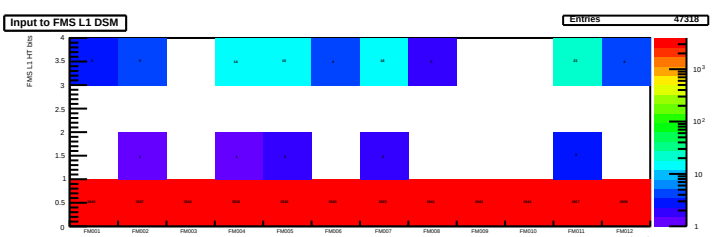

Input to FMS L1 DSM
Entries 214
sumB - simulated
DSM board

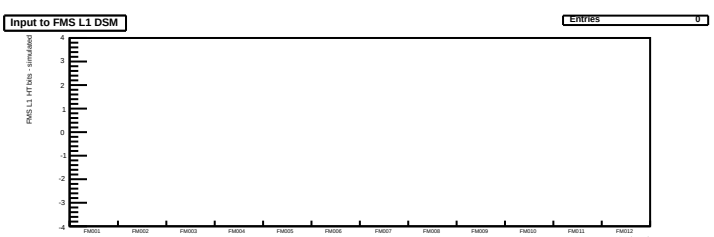

Input to FMS L1 DSM
Entries 47316
sumCD
DSM board

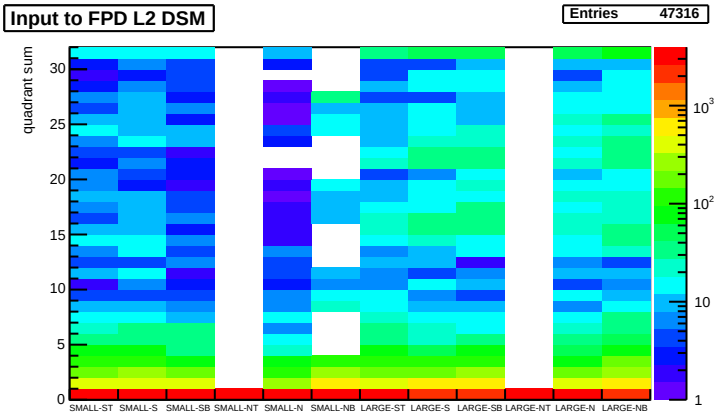

Input to FMS L1 DSM
Entries 347
sumCD - simulated
DSM board

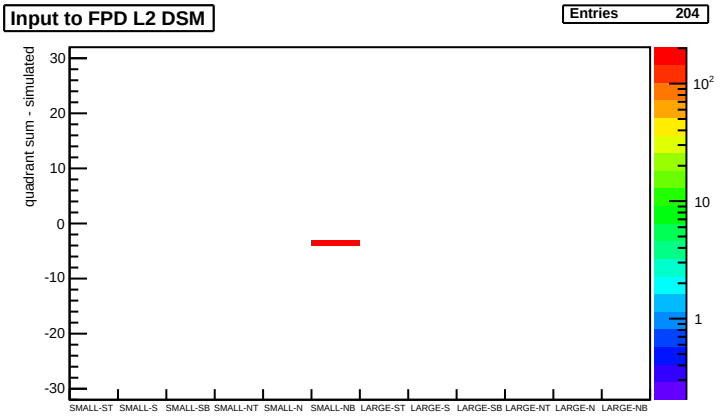

Input to FMS L1 DSM
Entries 47316
sumA
DSM board

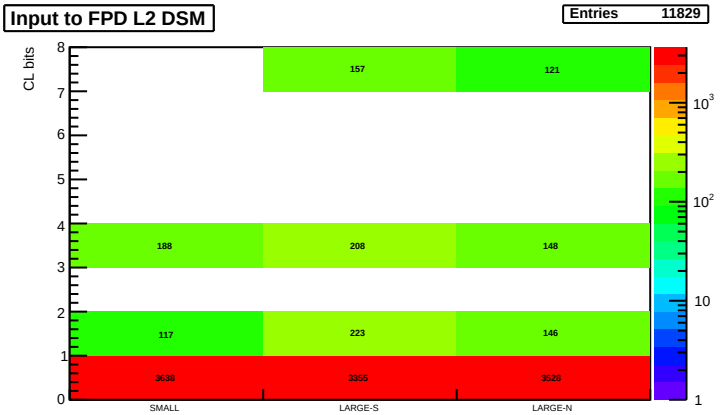

Input to FMS L1 DSM
Entries 158
sumA - simulated
DSM board

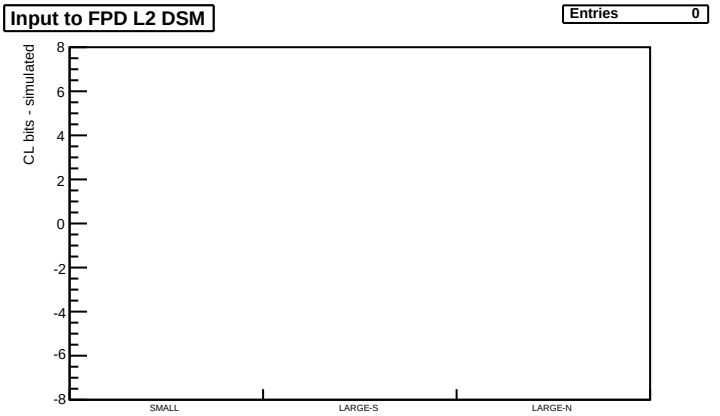

Input to FMS L1 DSM
Entries 47318
FMS L1 HT bits
DSM board

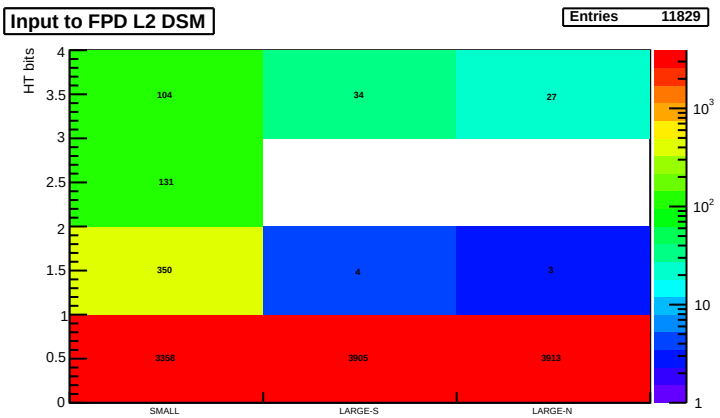

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

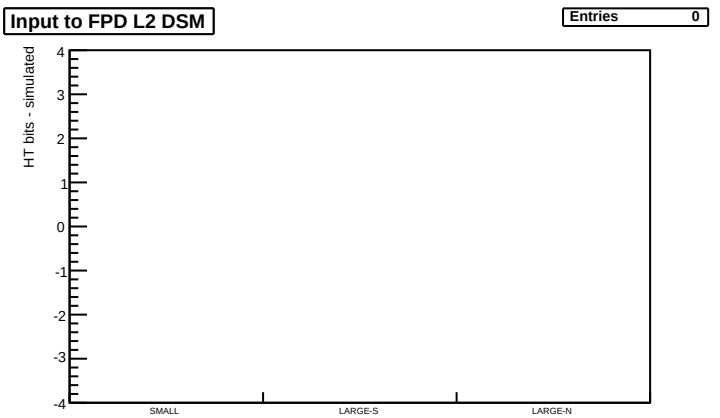

Input to FPD L2 DSM
Entries 47316
quadrant sum
SMALL-ST SMALL-S SMALL-SB SMALL-NT SMALL-N SMALL-NB LARGE-ST LARGE-S LARGE-SB LARGE-NT LARGE-N LARGE-NB

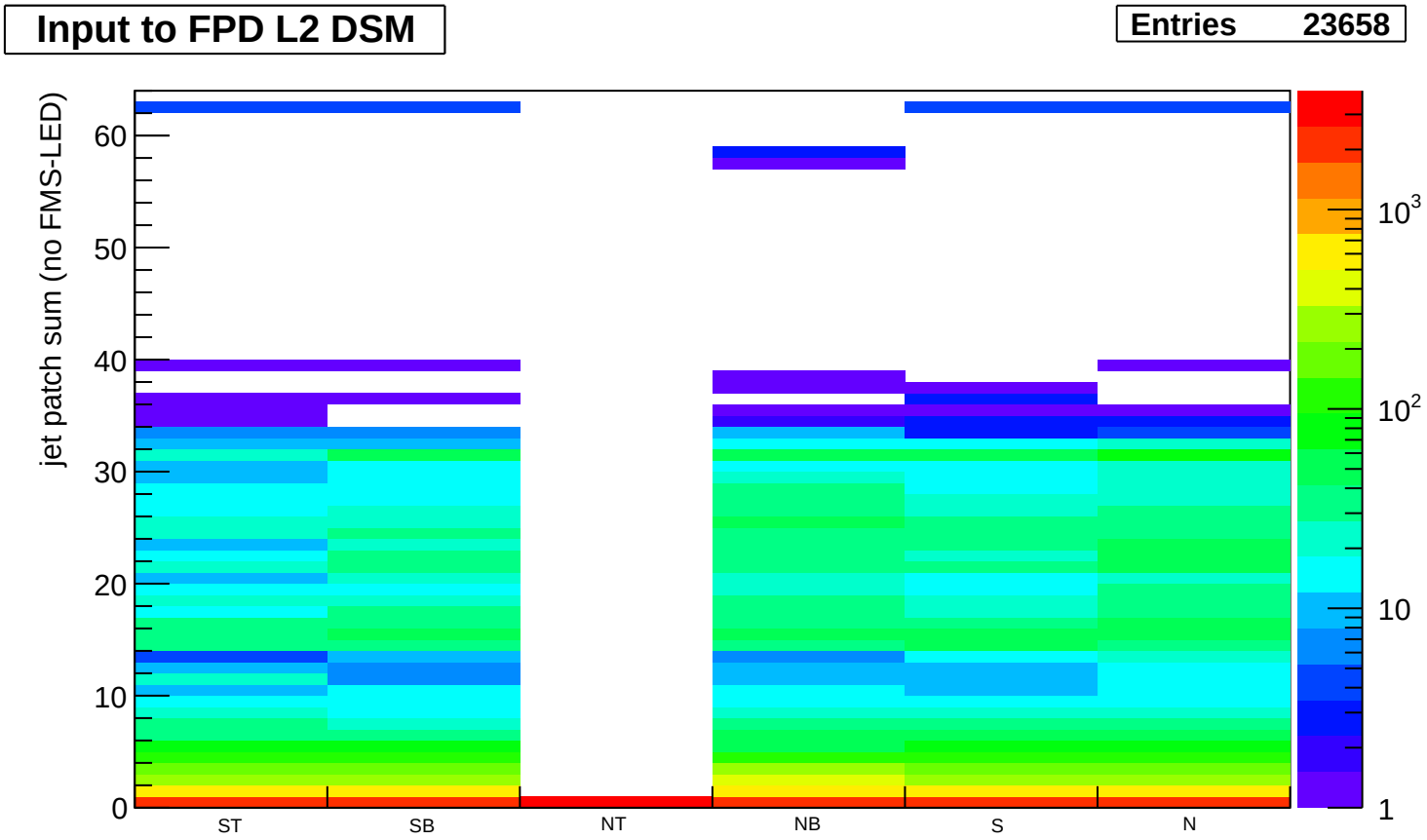

Input to FPD L2 DSM
Entries 204
quadrant sum - simulated
SMALL-ST SMALL-S SMALL-SB SMALL-NT SMALL-N SMALL-NB LARGE-ST LARGE-S LARGE-SB LARGE-NT LARGE-N LARGE-NB

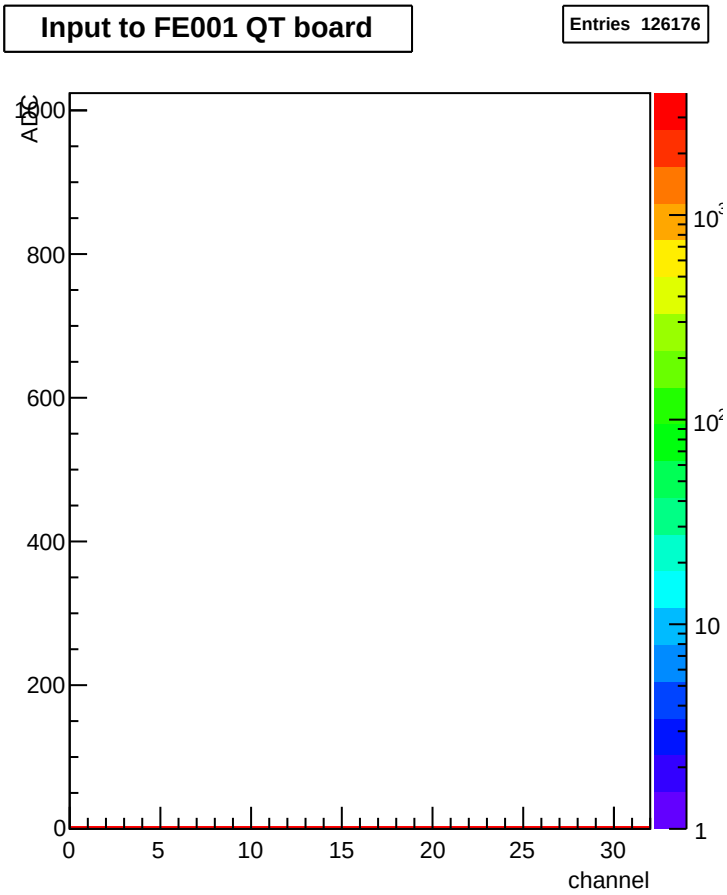

Input to FPD L2 DSM
Entries 11829
CL bits
157
121
188
208
148
117
223
146
3638
3355
3528
SMALL
LARGE-S
LARGE-N

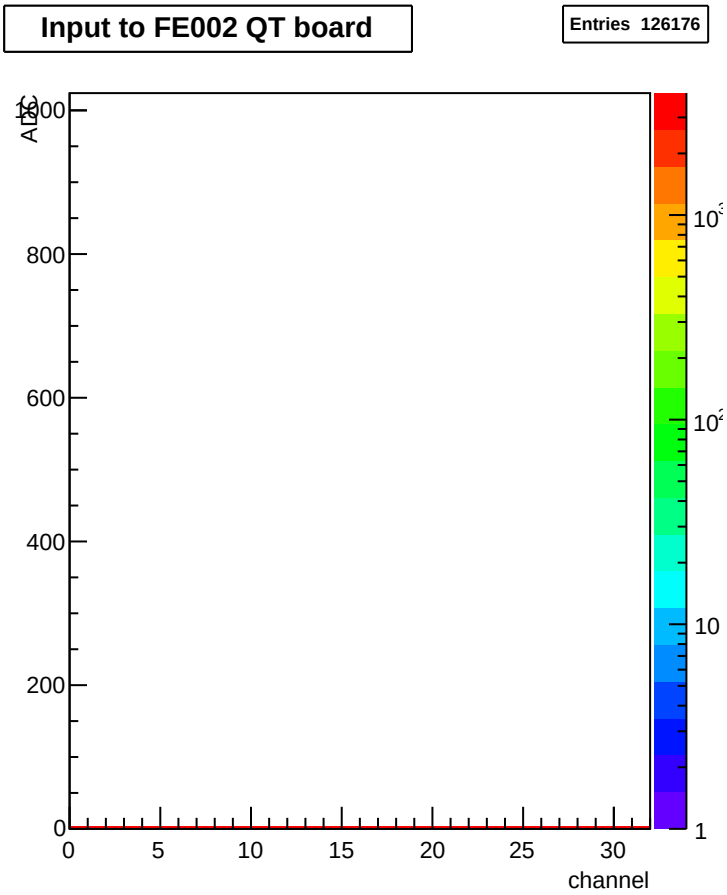

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

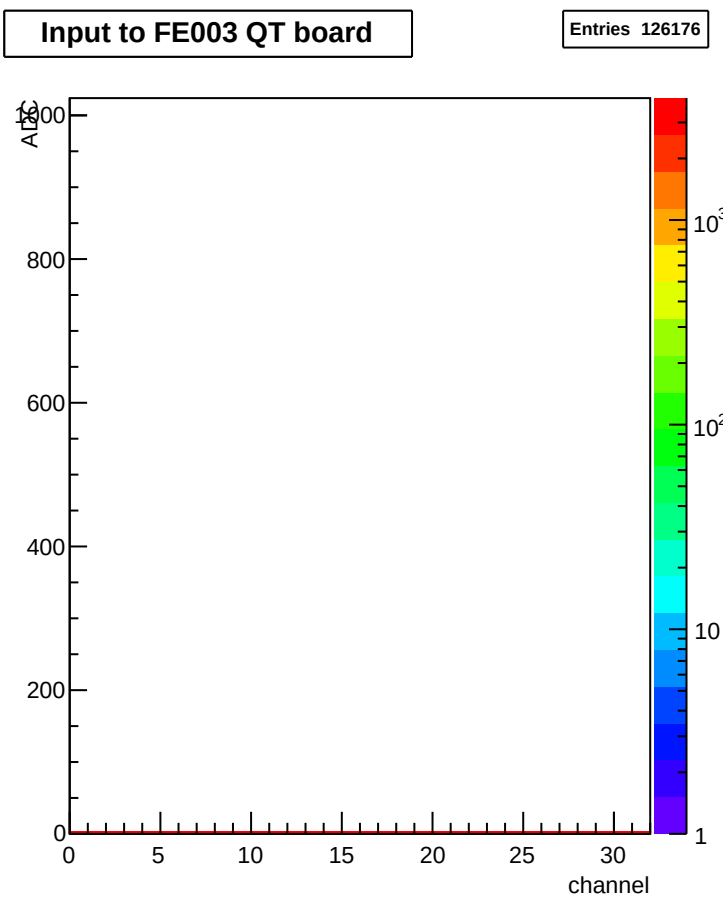

Input to FPD L2 DSM
Entries 11829
HT bits
104
34
27
131
350
4
3
3358
3905
3913
SMALL
LARGE-S
LARGE-N

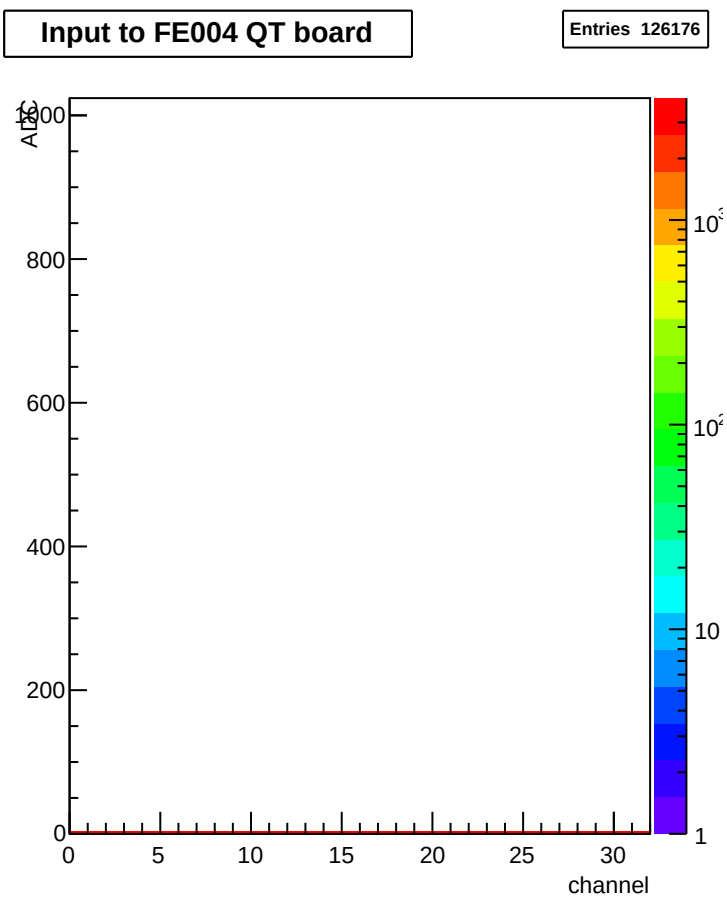

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

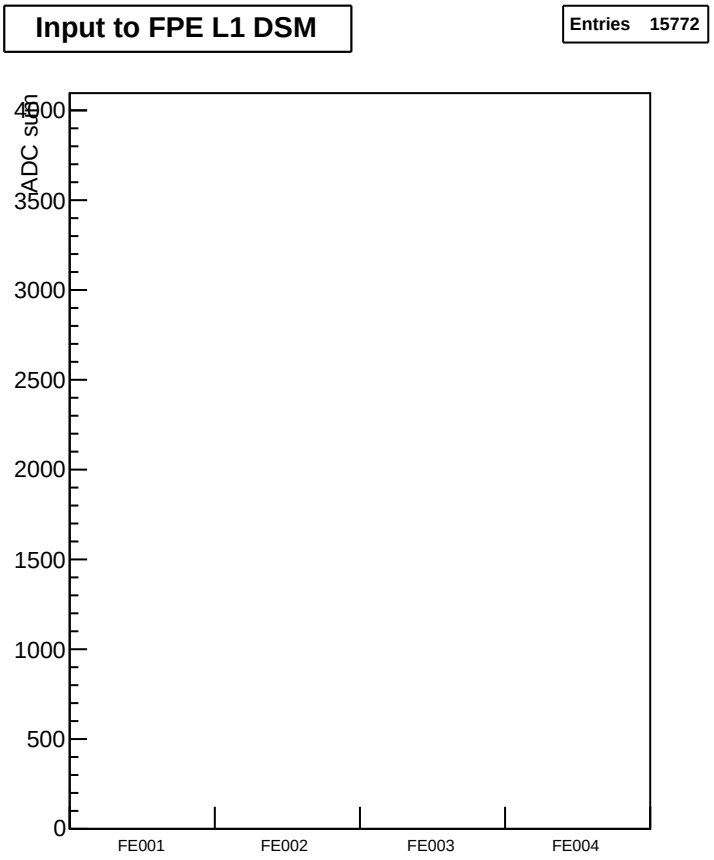

Input to FPD L2 DSM
Entries 23658
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

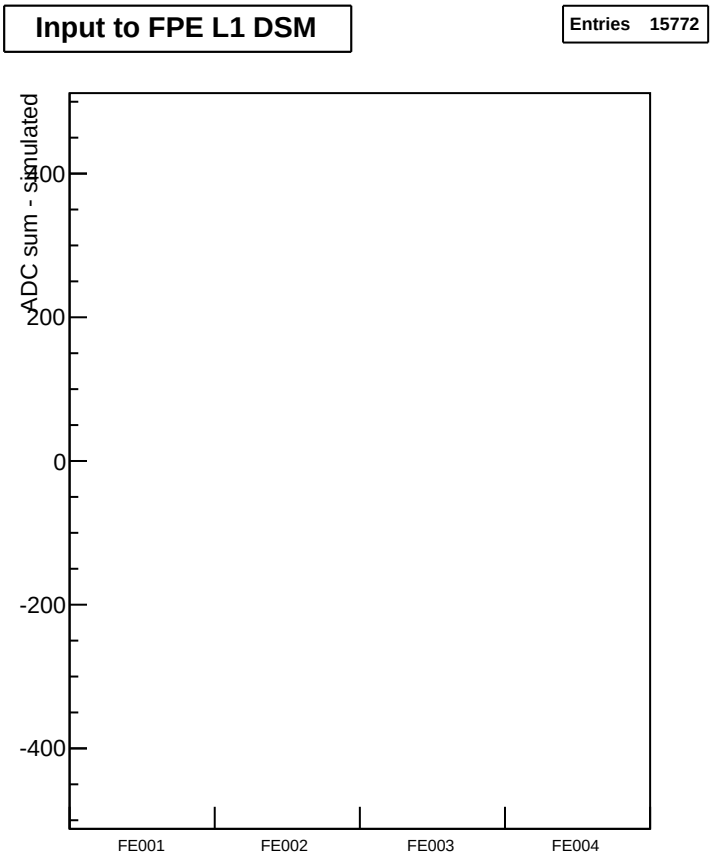

Input to FE001 QT board
Entries 126176
ADC
channel

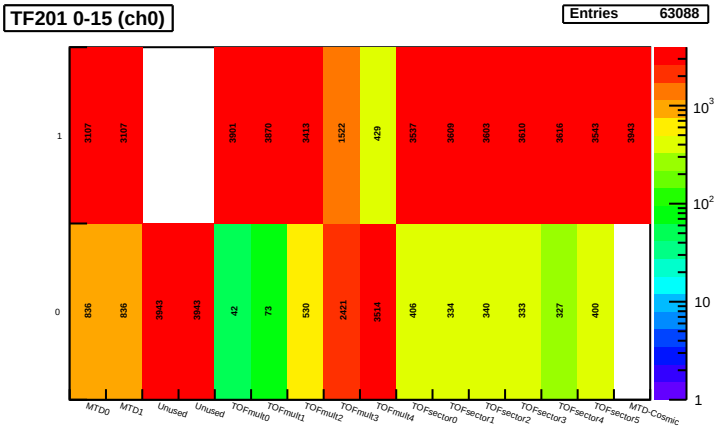

Input to FE002 QT board
Entries 126176
ADC
channel

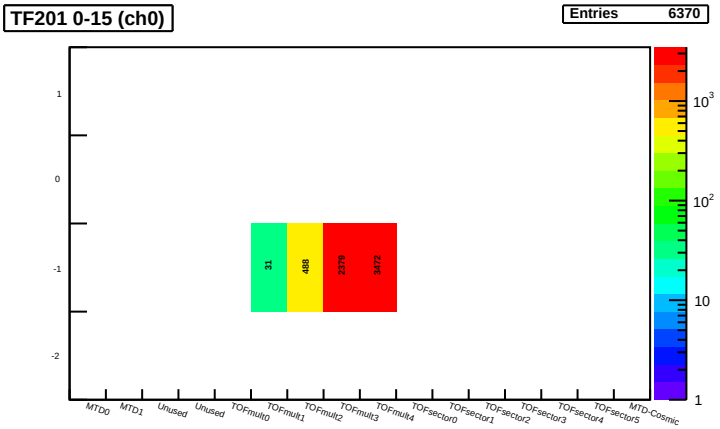

Input to FE003 QT board
Entries 126176
ADC
channel

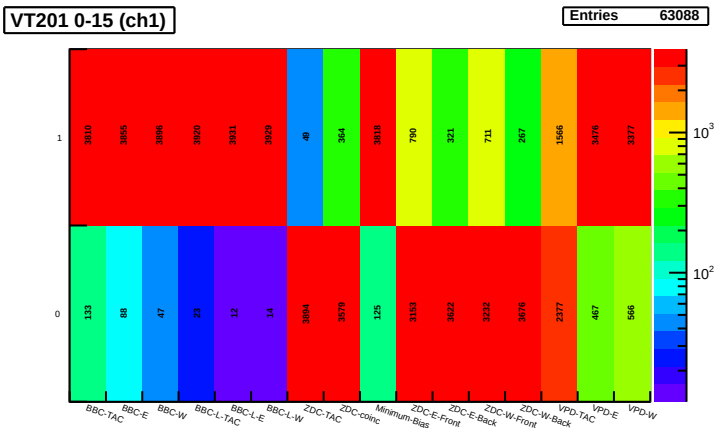

Input to FE004 QT board
Entries 126176
ADC
channel

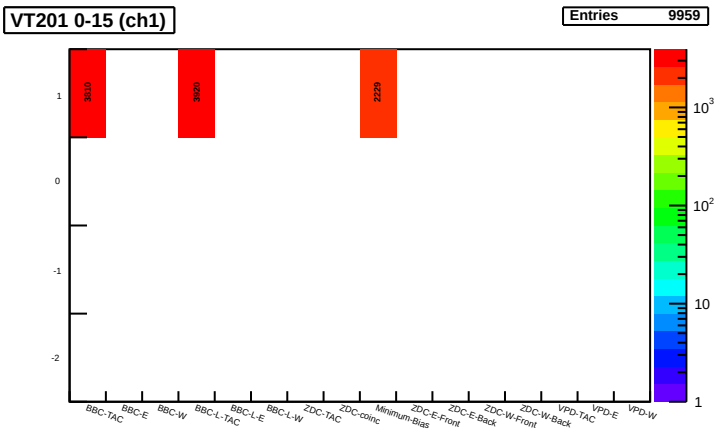

Input to FPE L1 DSM
Entries 15772
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004

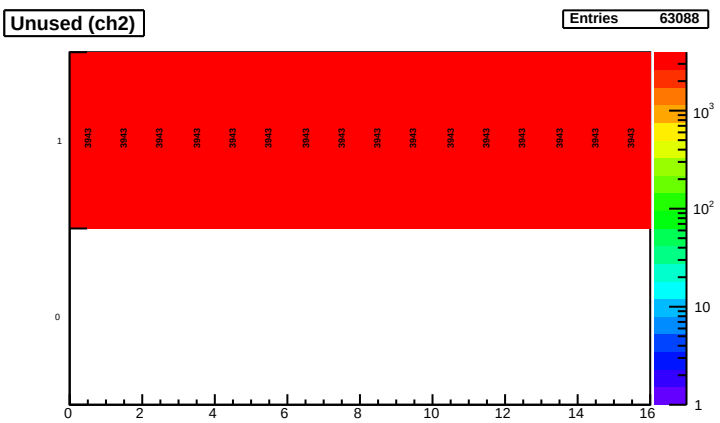

Input to FPE L1 DSM
Entries 15772
ADC sum - simulated
400
200
0
-200
-400
FE001
FE002
FE003
FE004

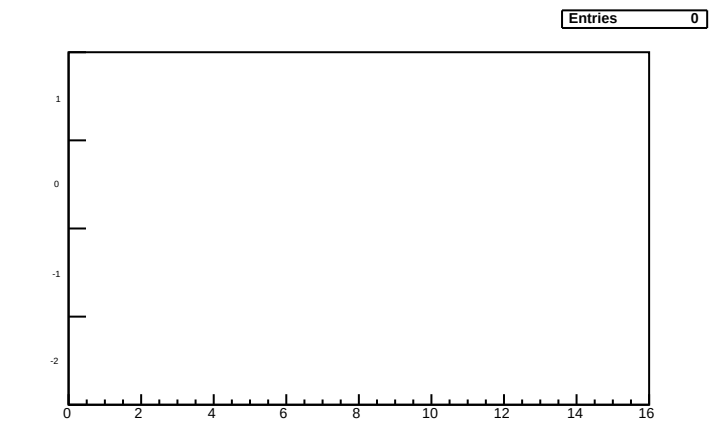

TF201 0-15 (ch0)
Entries 63088
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

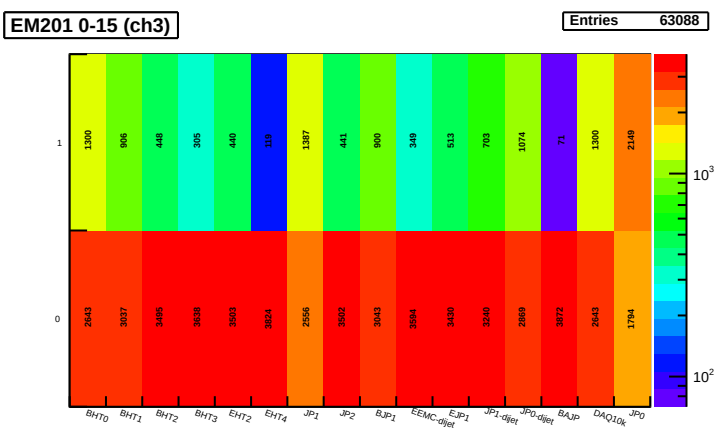

TF201 0-15 (ch0)
Entries 6370
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

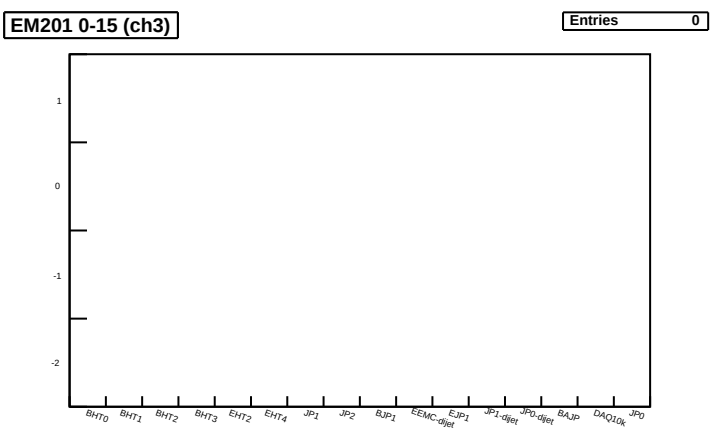

VT201 0-15 (ch1)
Entries 63088
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 9959
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

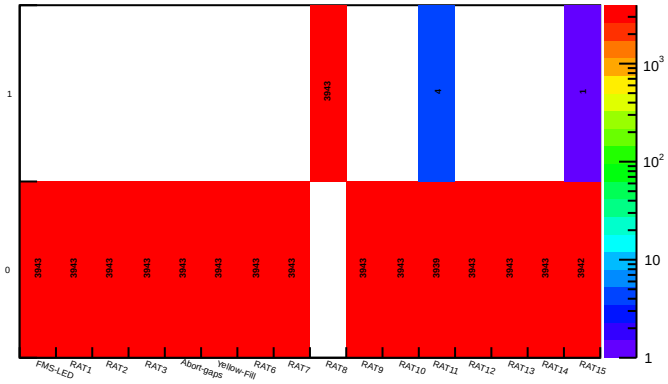

Unused (ch2)
Entries 63088

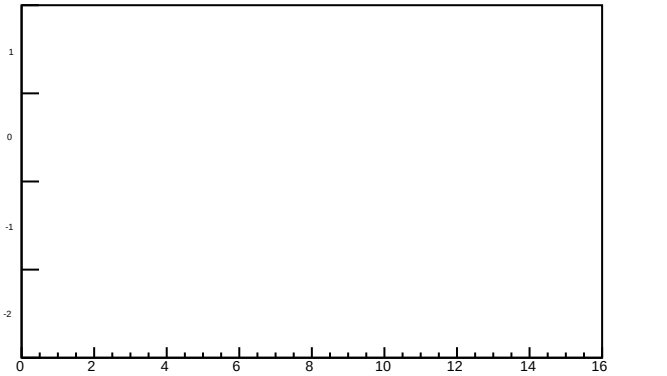

Entries 0


EM201 0-15 (ch3)
Entries 63088
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 EEMC-diJet EJP1 JP1-diJet JP0-diJet BAJP DAQ10k JP0

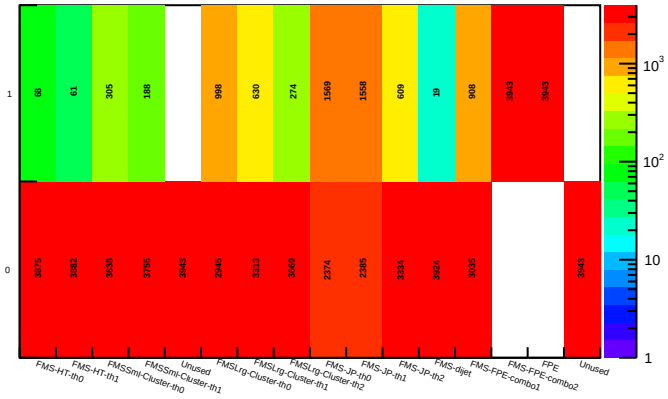

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 EEMC-diJet EJP1 JP1-diJet JP0-diJet BAJP DAQ10k JP0

RAT board (ch4)

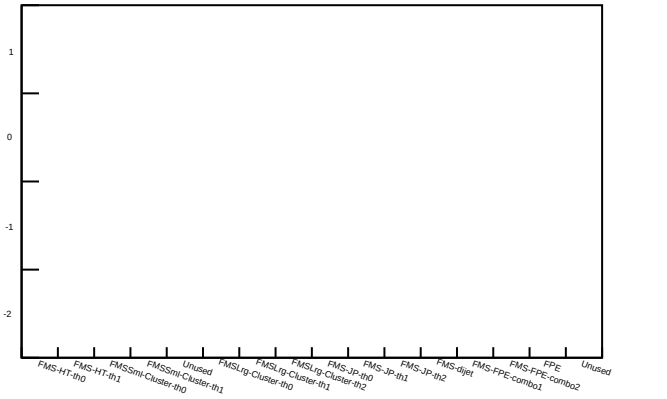




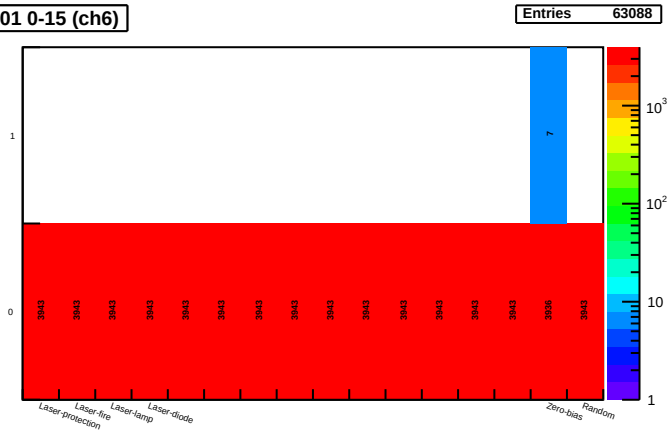
FP201 0-15 (ch5)

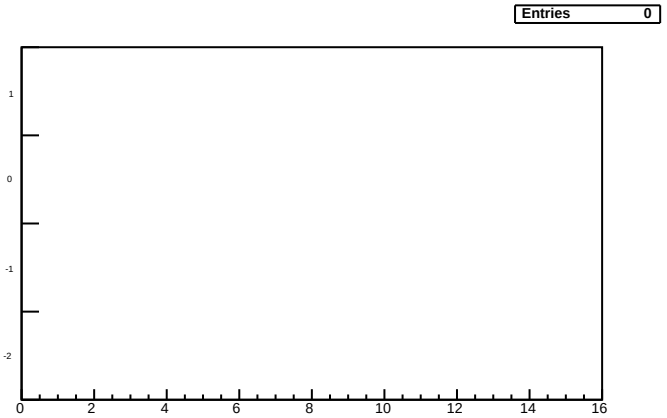
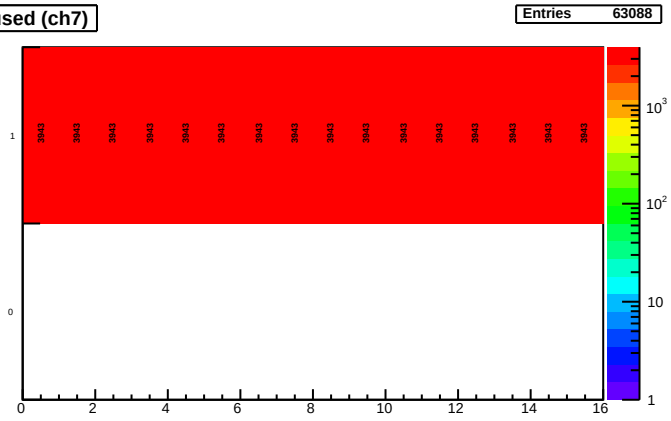
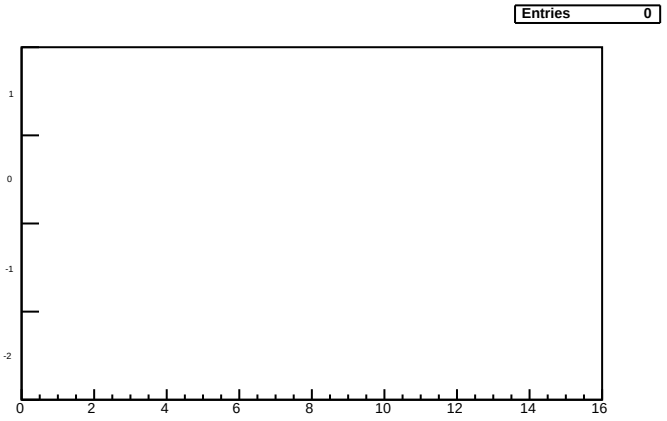


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)