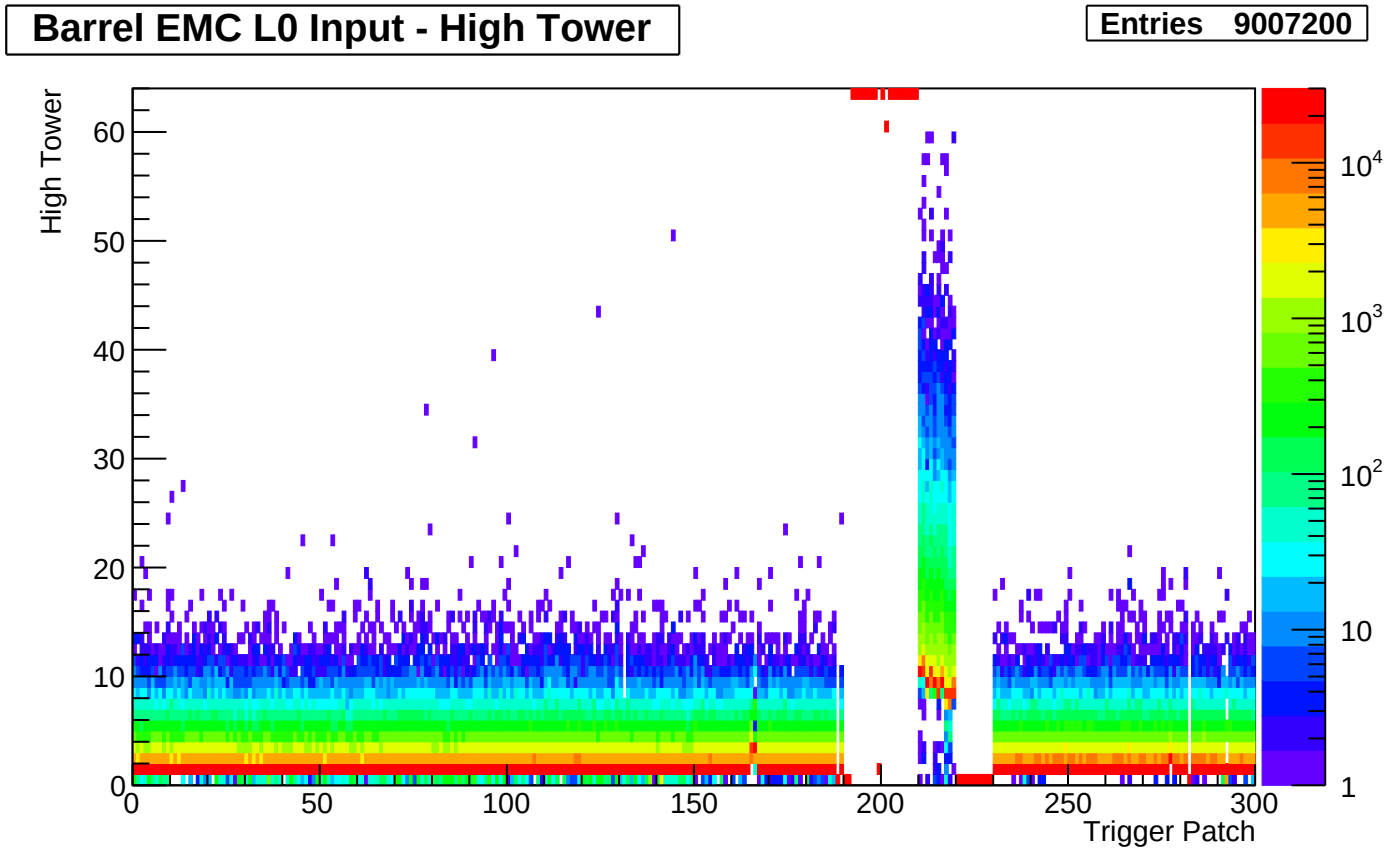
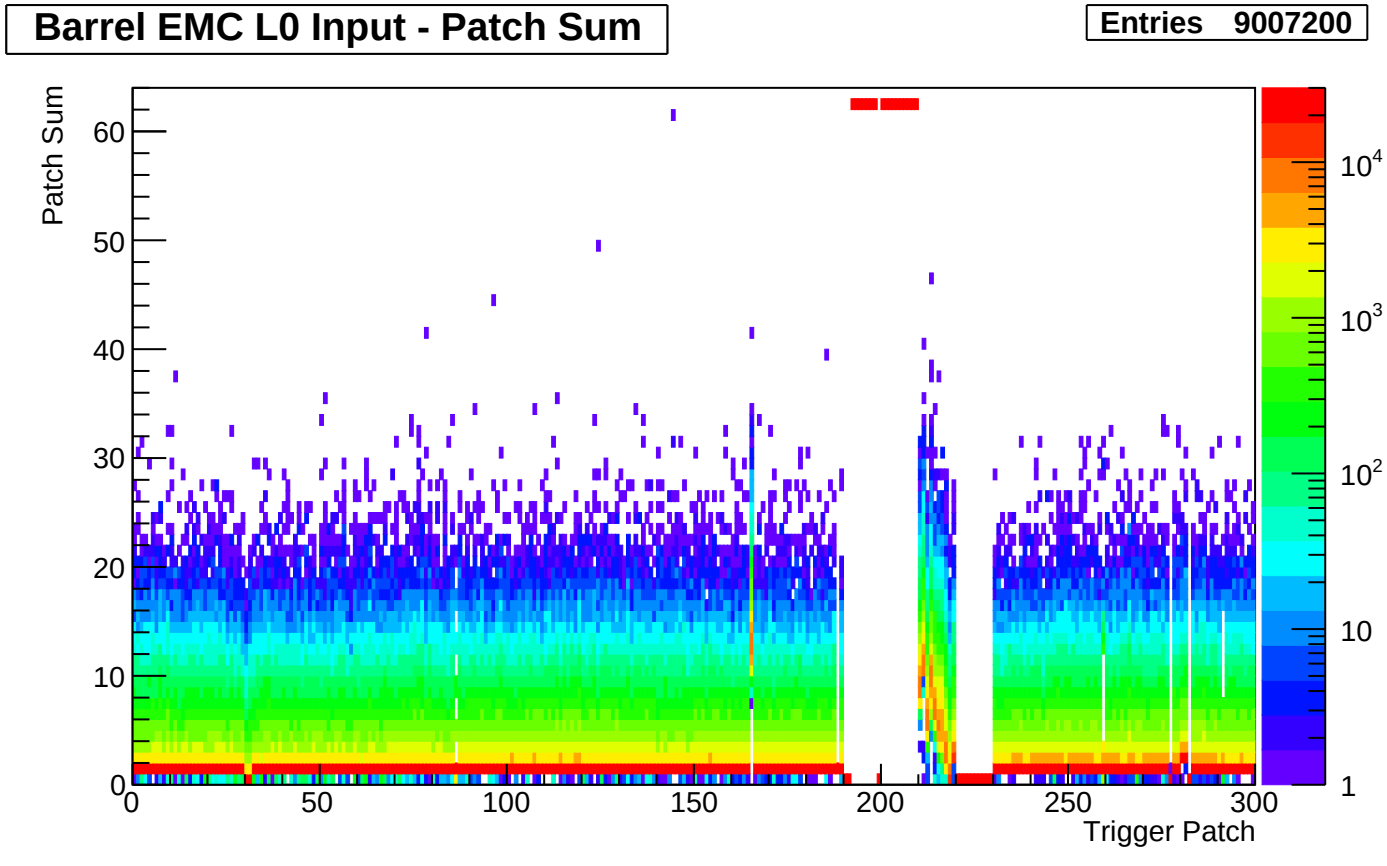
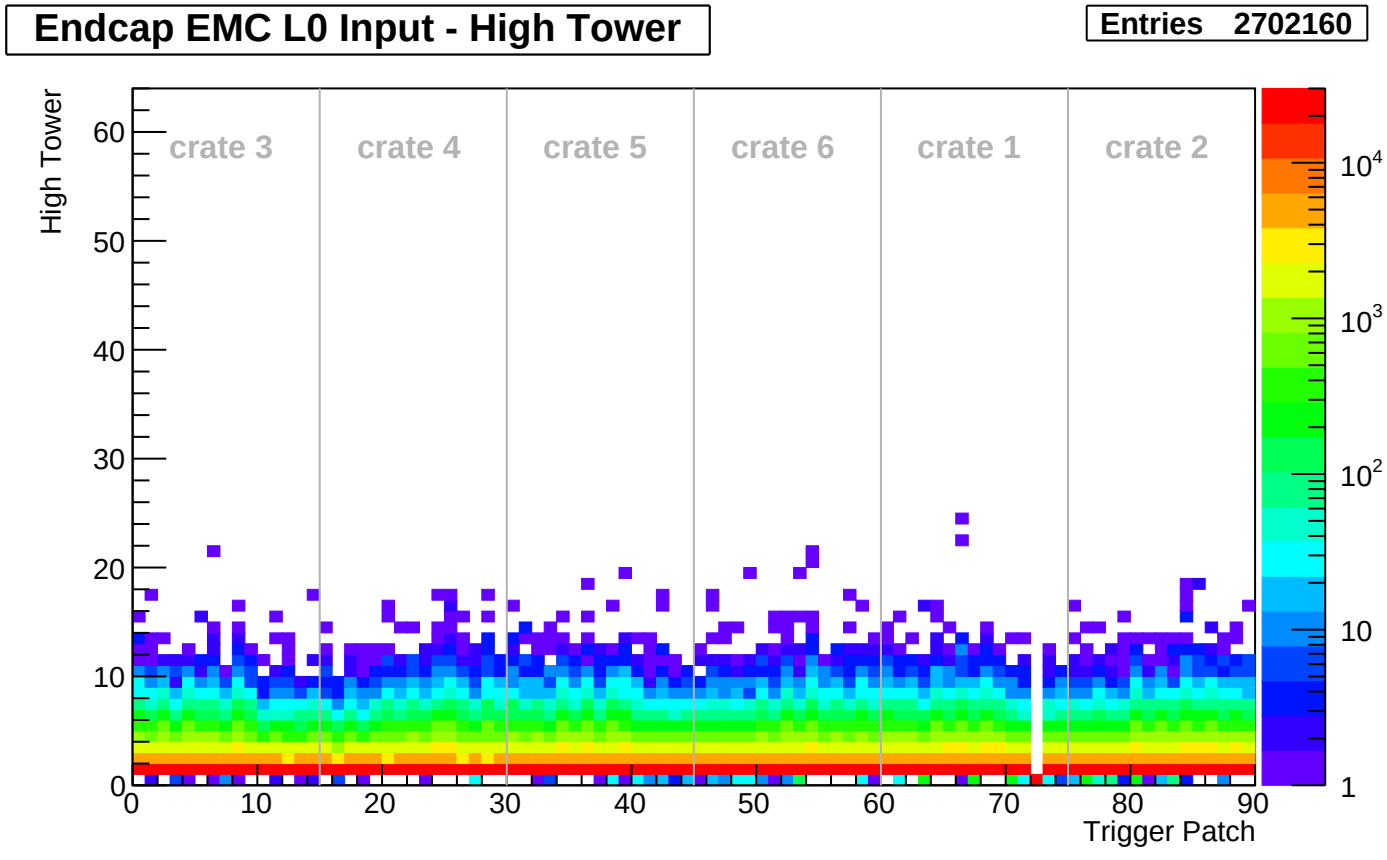
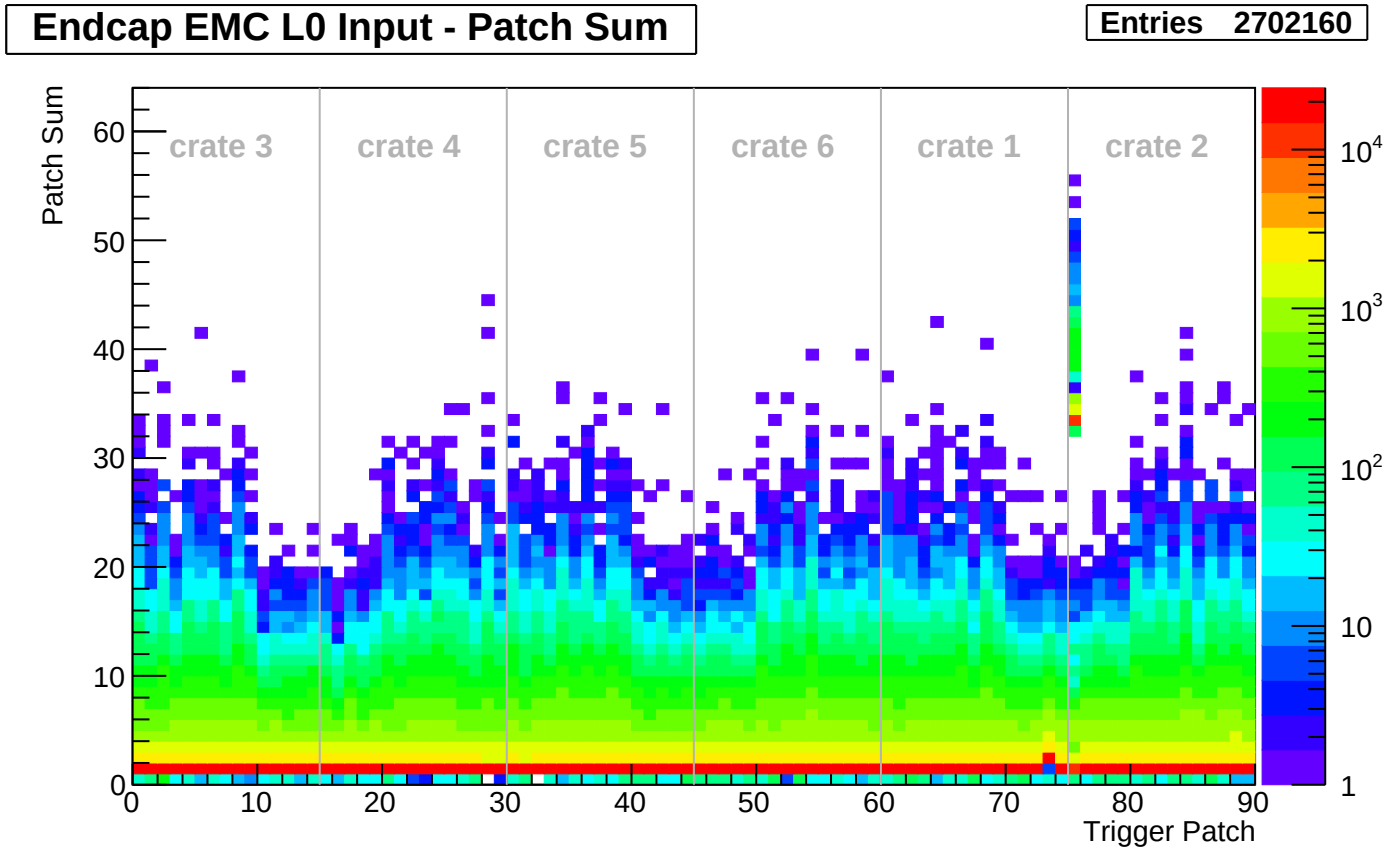
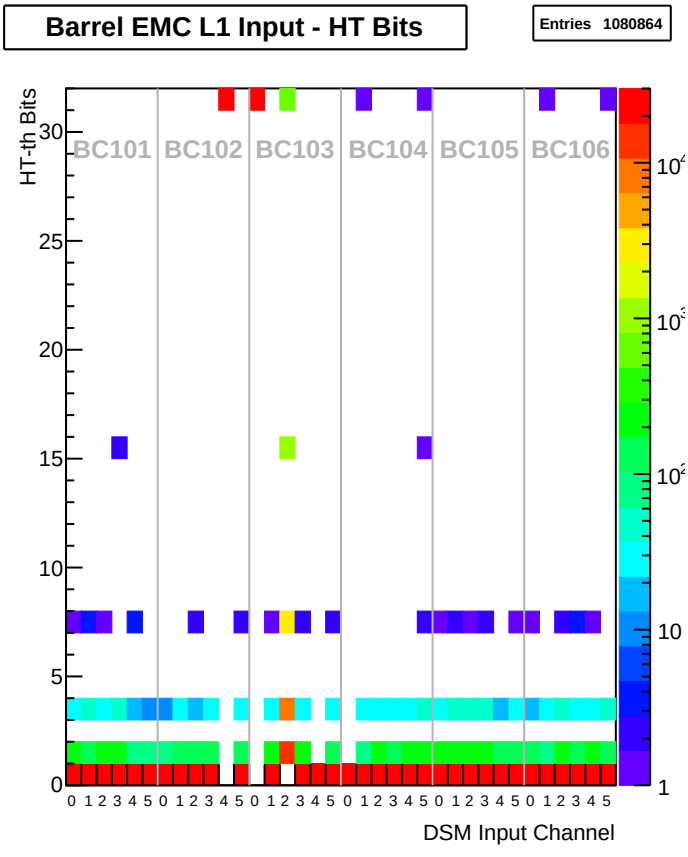
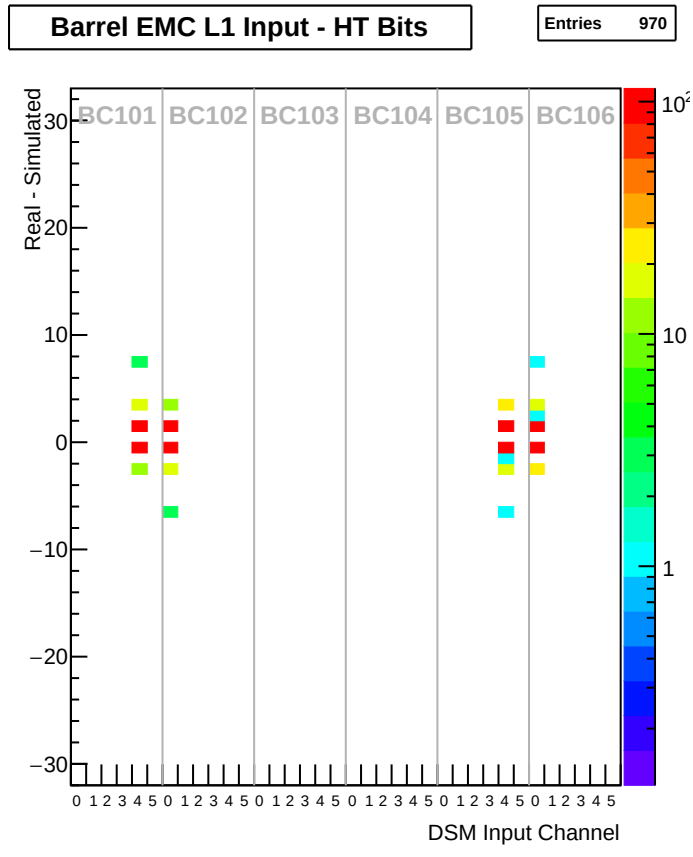

Barrel EMC L0 Input - High Tower
Entries 9007200
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

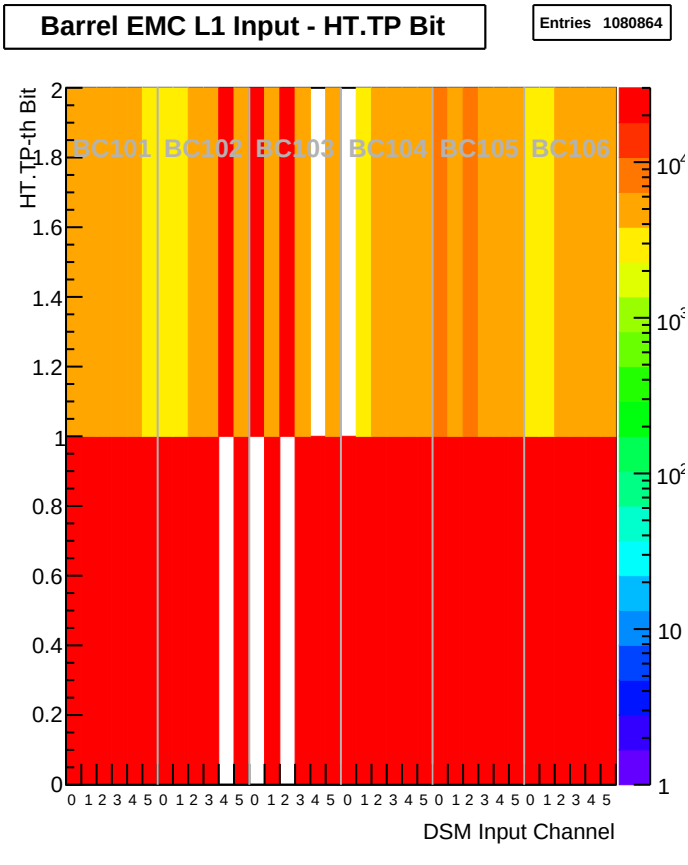

Barrel EMC L0 Input - Patch Sum
Entries 9007200
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

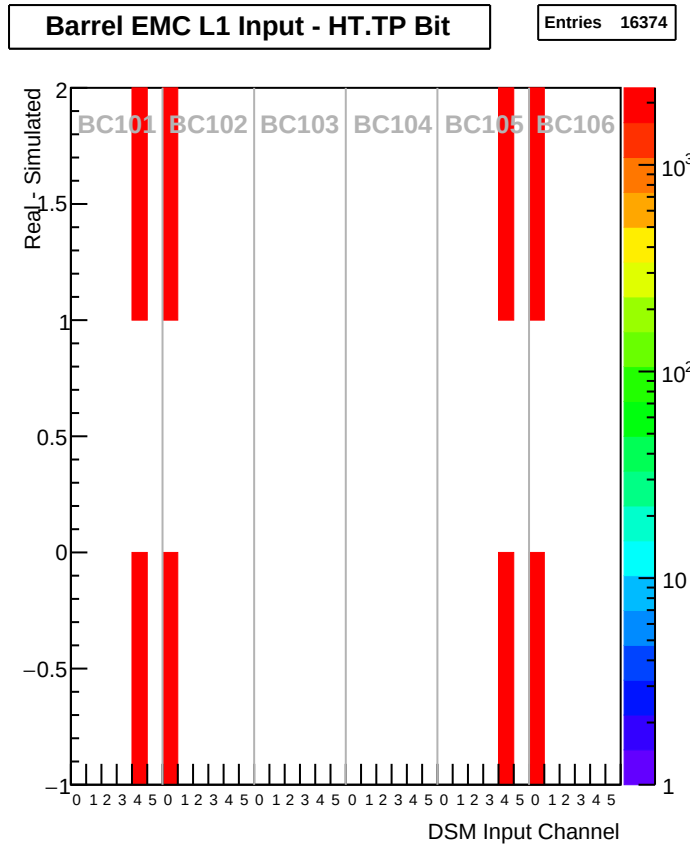

Endcap EMC L0 Input - High Tower
Entries 2702160
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

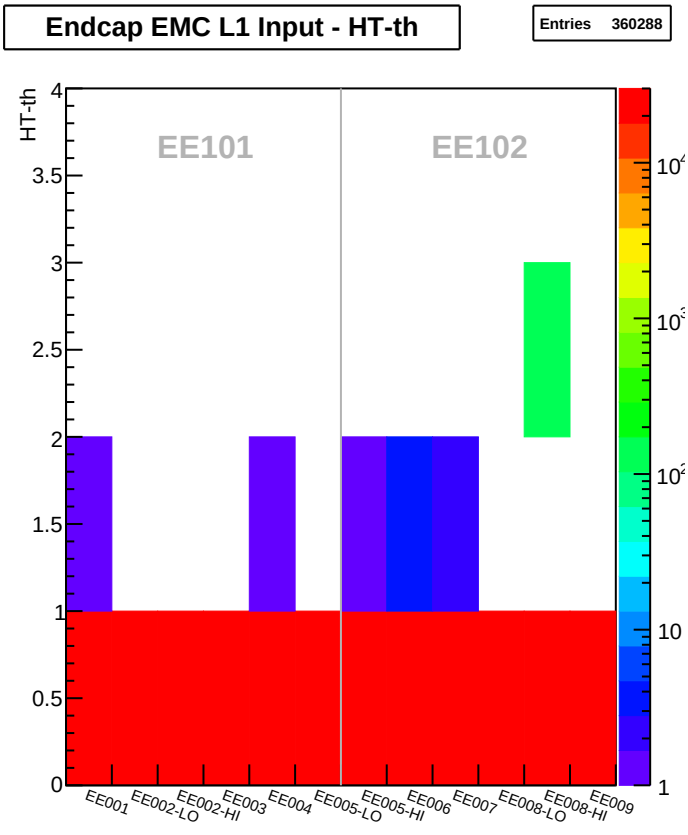

Endcap EMC L0 Input - Patch Sum
Entries 2702160
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

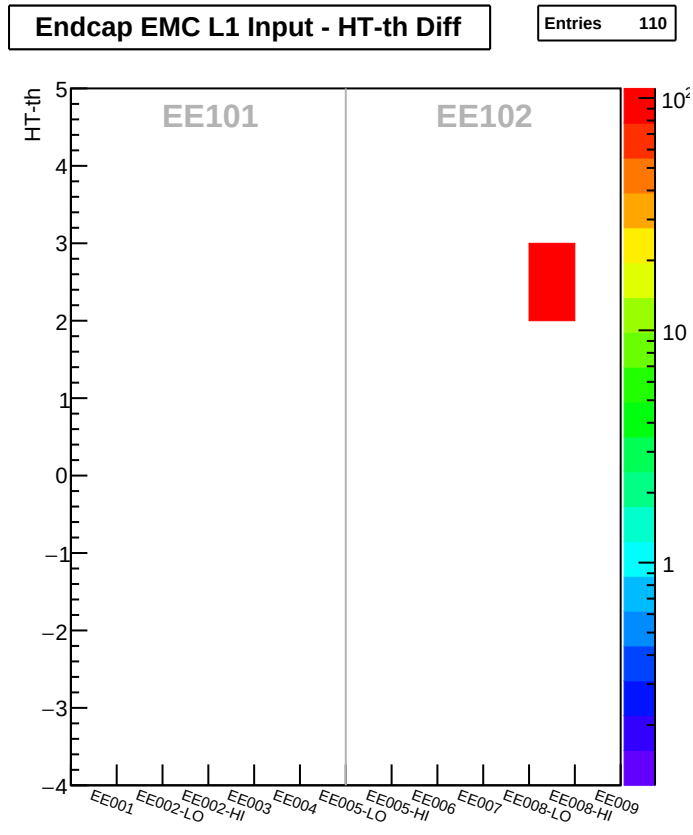

Barrel EMC L1 Input - HT Bits
Entries 1080864
HT-th Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

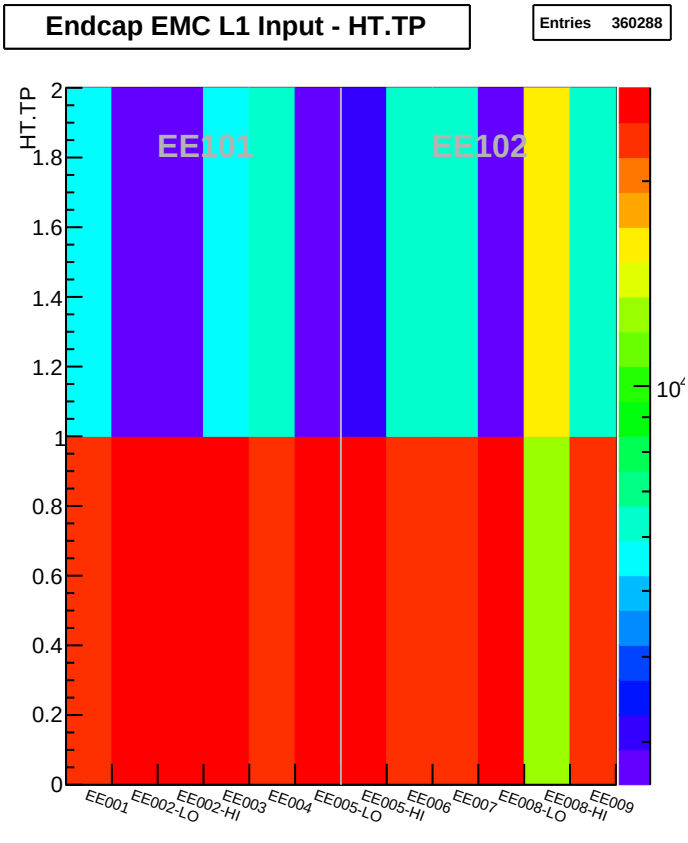

Barrel EMC L1 Input - HT Bits
Entries 970
Real - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

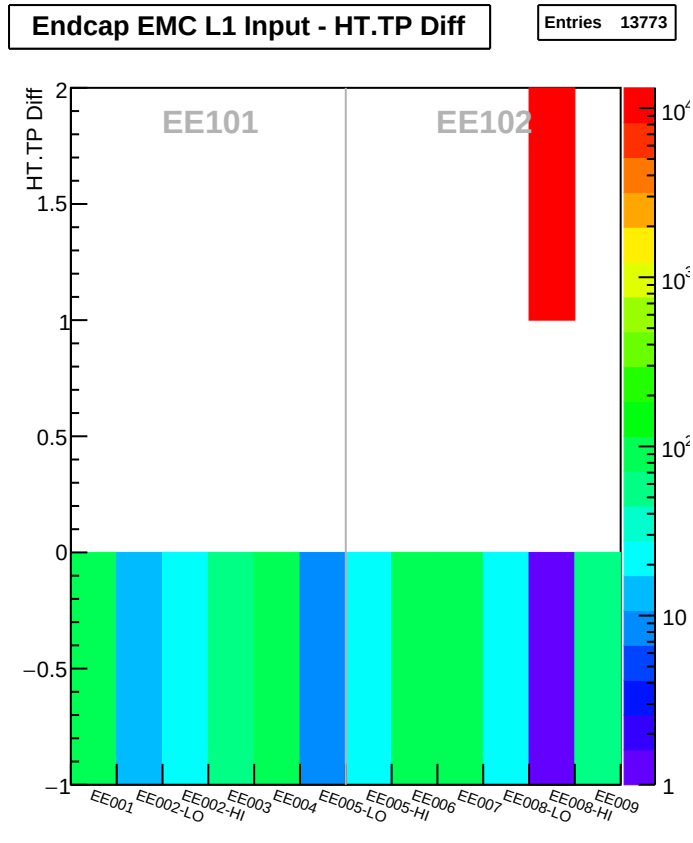

Barrel EMC L1 Input - HT.TP Bit
Entries 1080864
HT.TP-th Bit
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

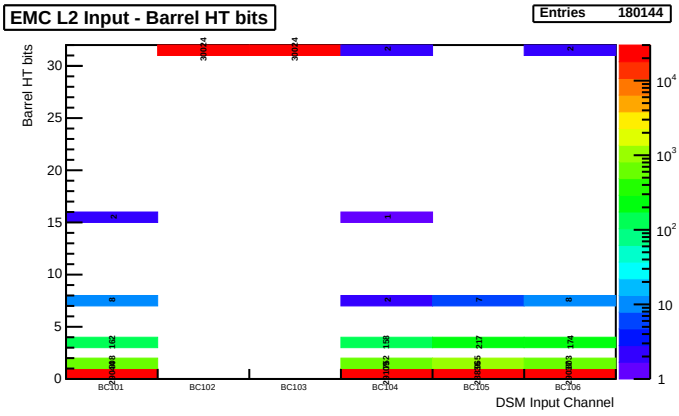

Barrel EMC L1 Input - HT.TP Bit
Entries 16374
Real - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

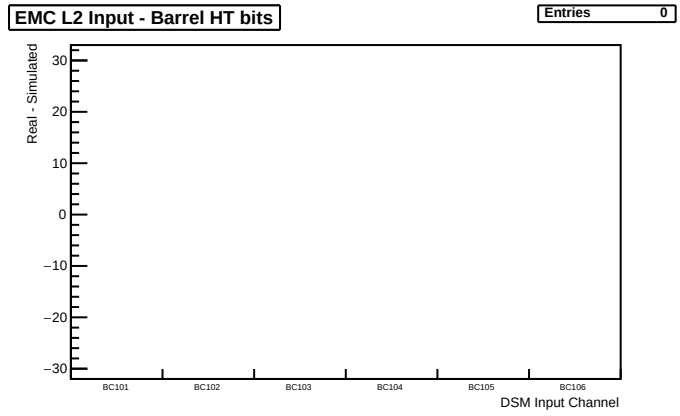

Endcap EMC L1 Input - HT-th
Entries 360288
HT-th
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

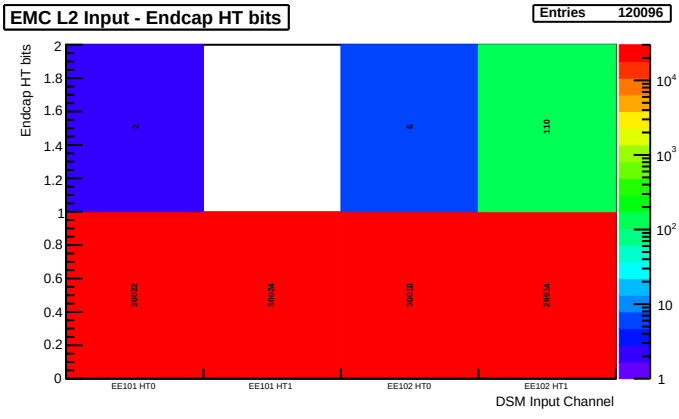

Endcap EMC L1 Input - HT-th Diff
Entries 110
HT-th
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

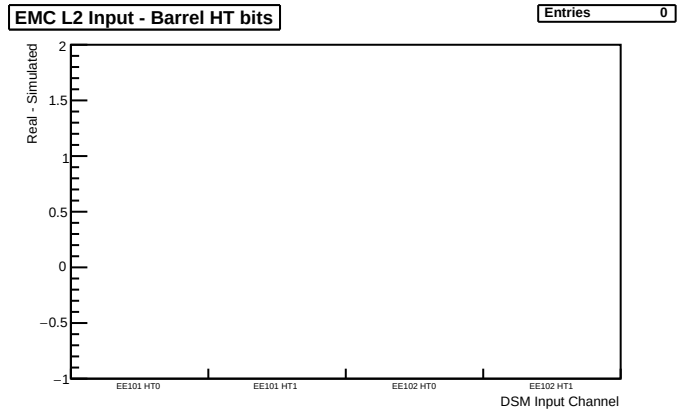

Endcap EMC L1 Input - HT.TP
Entries 360288
HT.TP
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

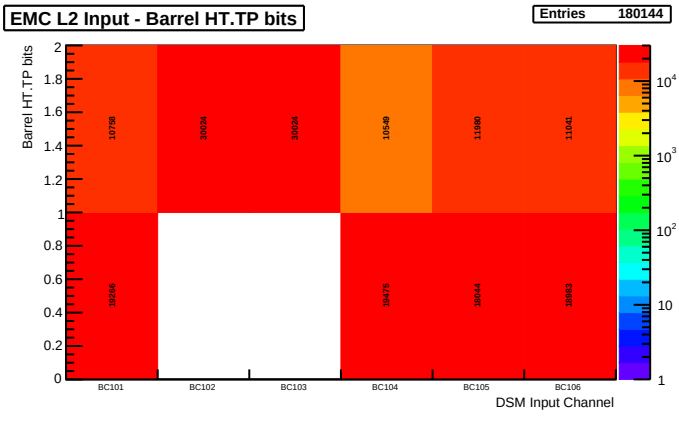

Endcap EMC L1 Input - HT.TP Diff
Entries 13773
HT.TP Diff
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

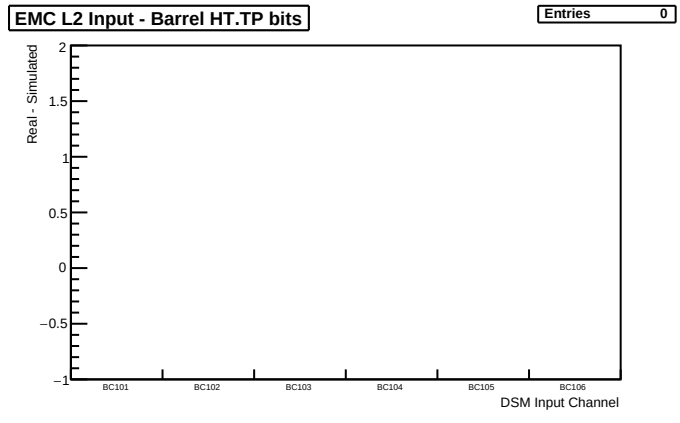

EMC L2 Input - Barrel HT bits
Entries 180144
Barrel HT bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

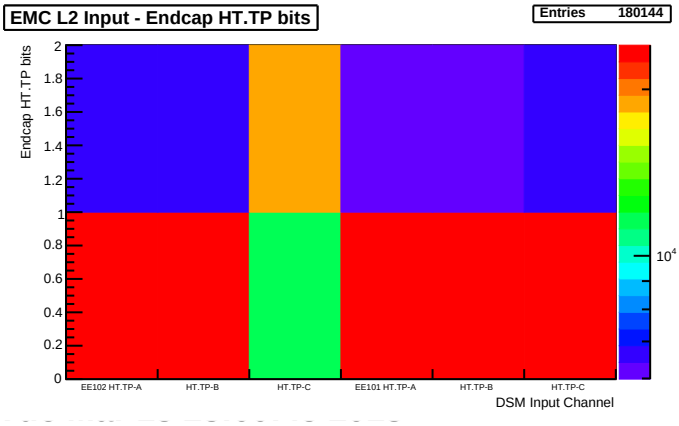

EMC L2 Input - Barrel HT bits
Entries 0
Real - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

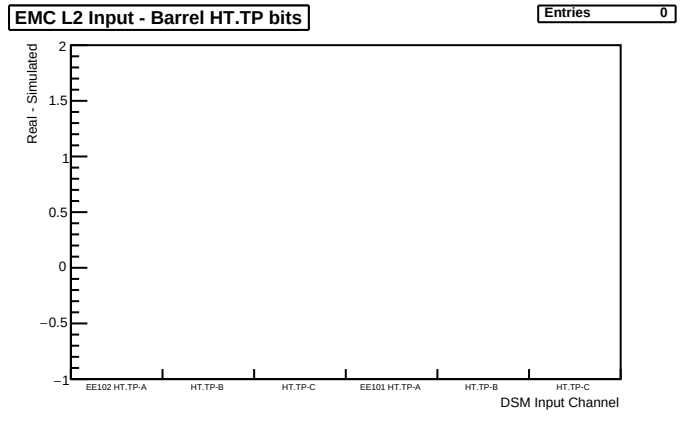

EMC L2 Input - Endcap HT bits
Entries 120096
Endcap HT bits
DSM Input Channel
EE101 HT0
EE101 HT1
EE102 HT0
EE102 HT1

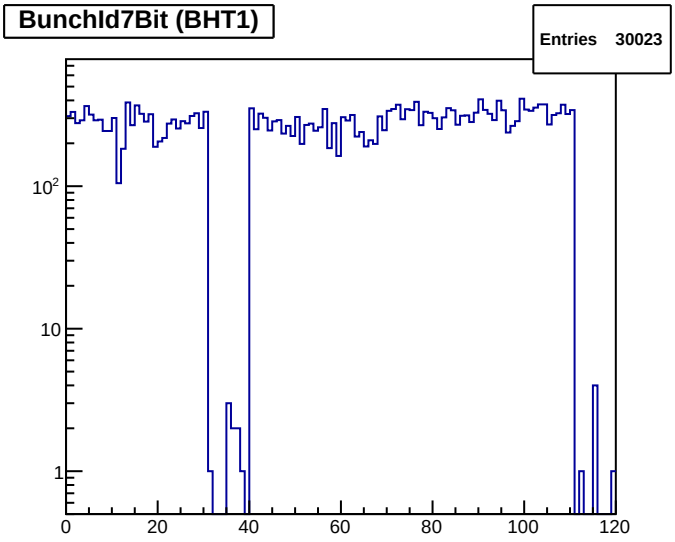

EMC L2 Input - Barrel HT bits
Entries 0
Real - Simulated
DSM Input Channel
EE101 HT0
EE101 HT1
EE102 HT0
EE102 HT1

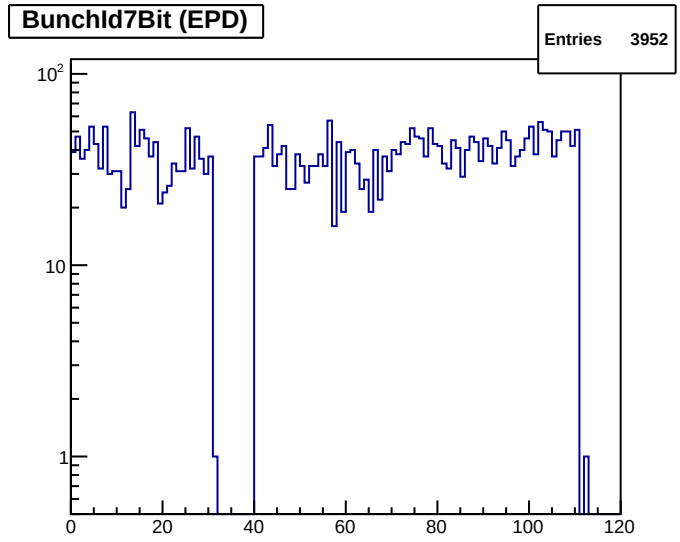

EMC L2 Input - Barrel HT.TP bits
Entries 180144
Barrel HT.TP bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

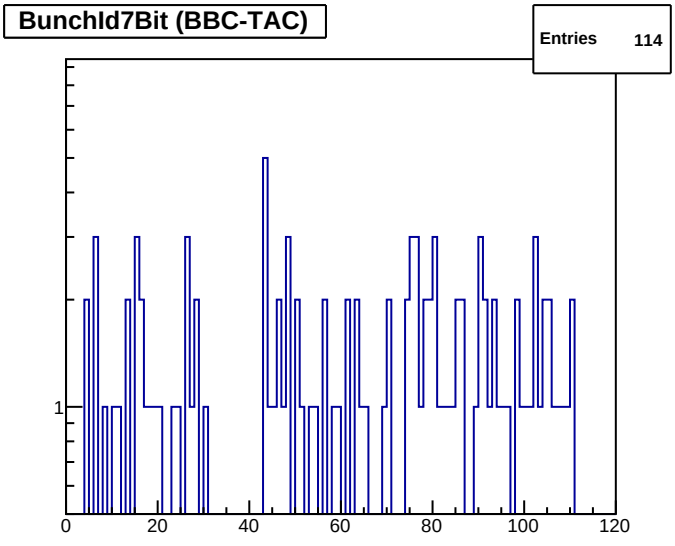

EMC L2 Input - Barrel HT.TP bits
Entries 0
Real - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

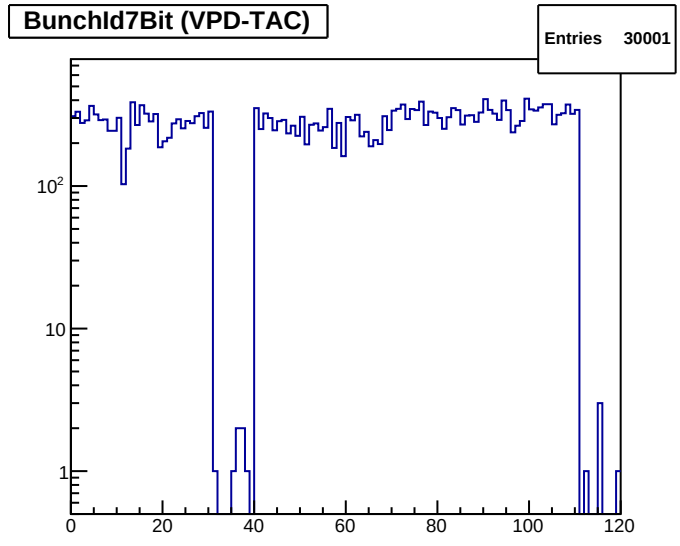

EMC L2 Input - Endcap HT.TP bits
Entries 180144
Endcap HT.TP bits
DSM Input Channel
EE102 HT.TP-A
HT.TP-B
HT.TP-C
EE101 HT.TP-A
HT.TP-B
HT.TP-C

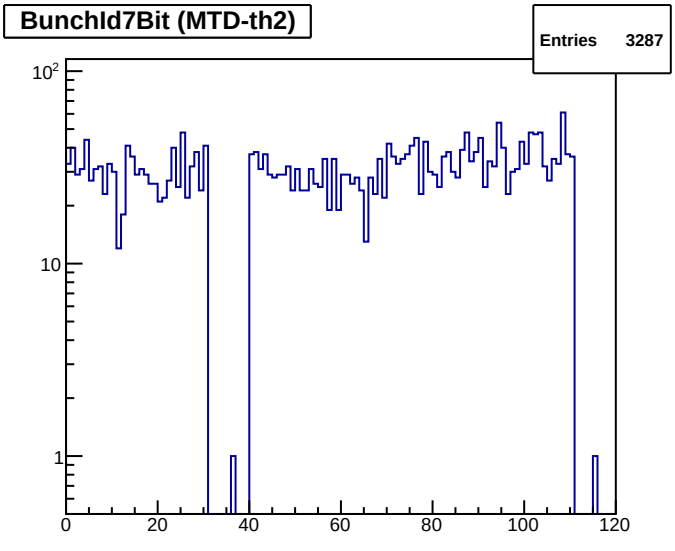

EMC L2 Input - Barrel HT.TP bits
Entries 0
Real - Simulated
DSM Input Channel
EE102 HT.TP-A
HT.TP-B
HT.TP-C
EE101 HT.TP-A
HT.TP-B
HT.TP-C

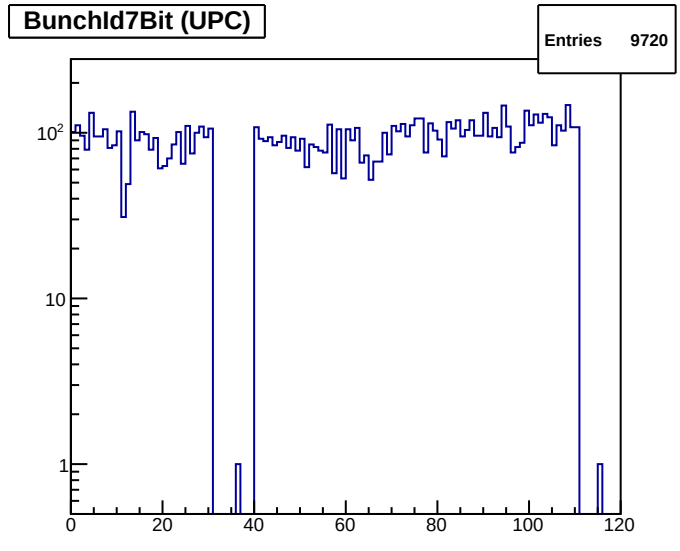

BunchId7Bit (BHT1)
Entries 30023
10^2
10
1
0
20
40
60
80
100
120

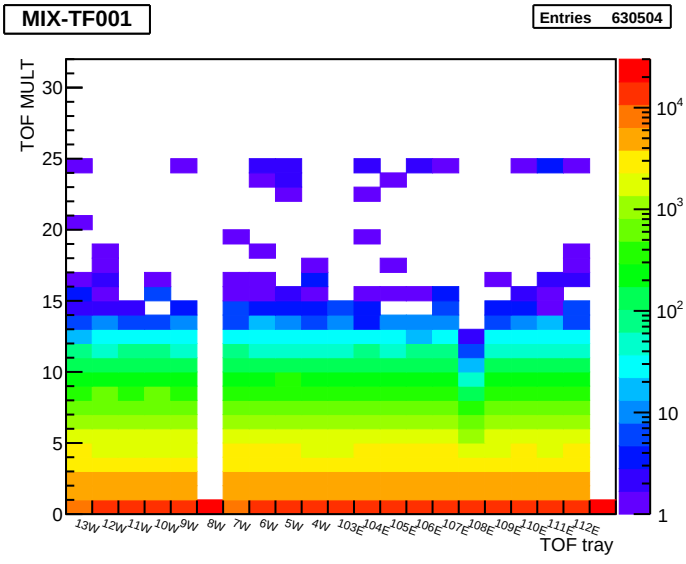

BunchId7Bit (EPD)
Entries 3952
10^2
10
1
0
20
40
60
80
100
120

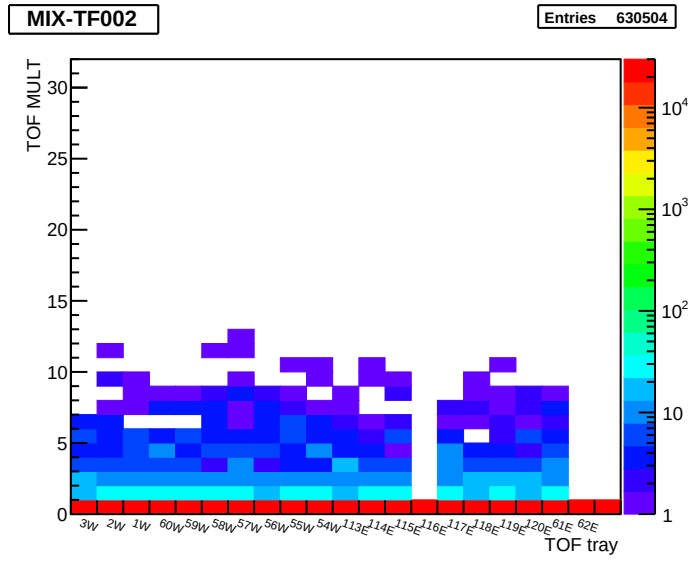

BunchId7Bit (BBC-TAC)
Entries 114
1
0
20
40
60
80
100
120

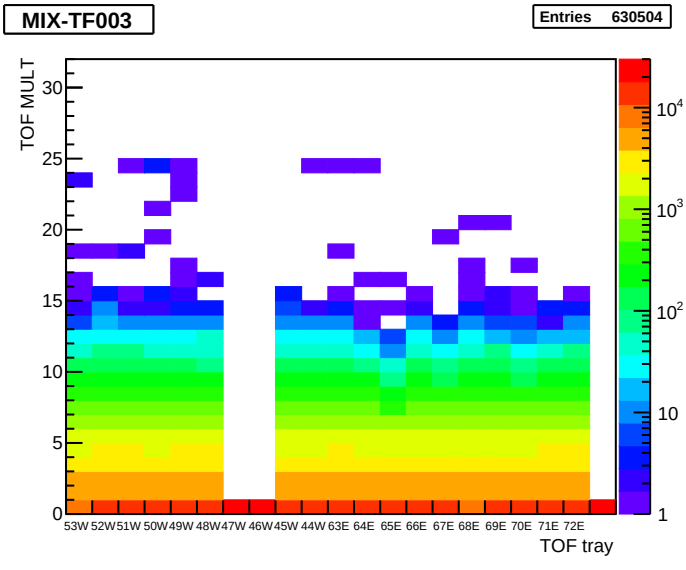

BunchId7Bit (VPD-TAC)
Entries 30001
10^2
10
1
0
20
40
60
80
100
120

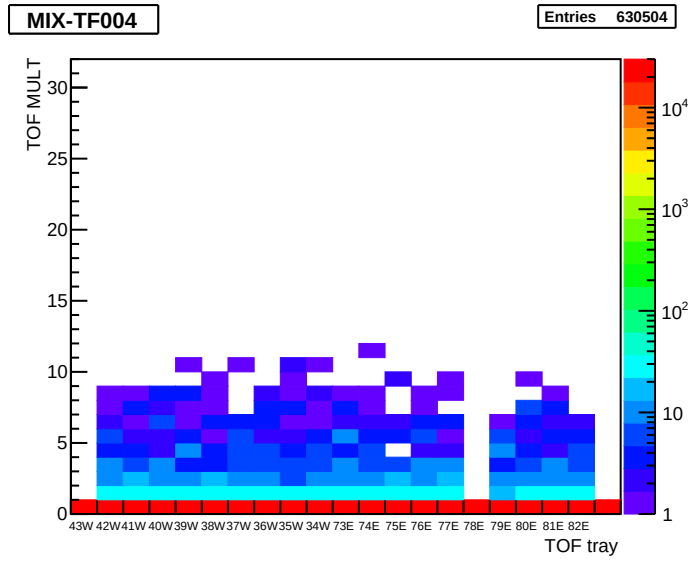

BunchId7Bit (MTD-th2)
Entries 3287
10^2
10
1
0
20
40
60
80
100
120

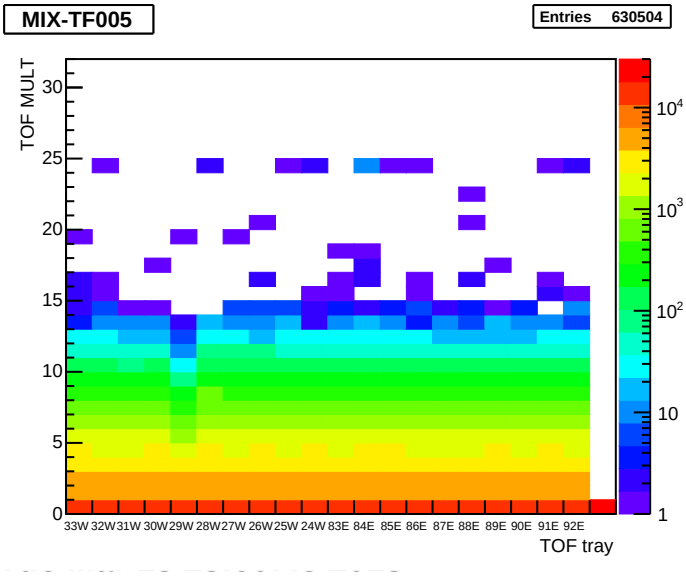

BunchId7Bit (UPC)
Entries 9720
10^2
10
1
0
20
40
60
80
100
120

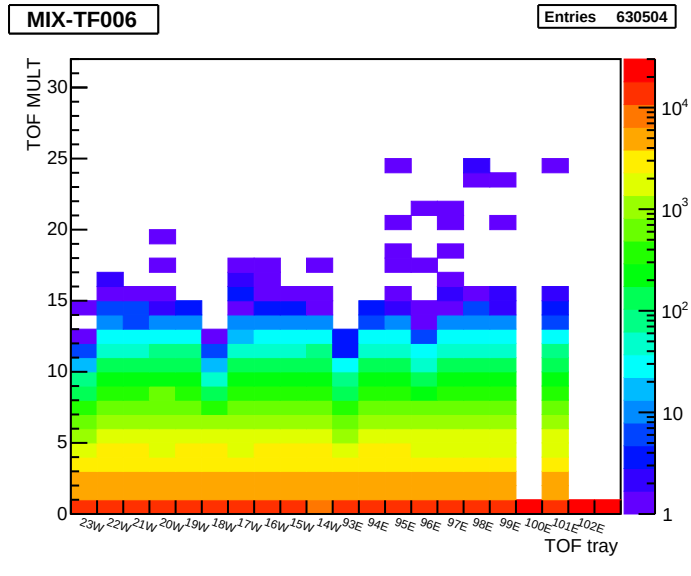

MIX-TF001
Entries 630504
TOF MULT
TOF tray
13W 12W 11W 10W 9W 8W 7W 6W 5W 4W 103E 104E 105E 106E 107E 108E 109E 110E 111E 112E

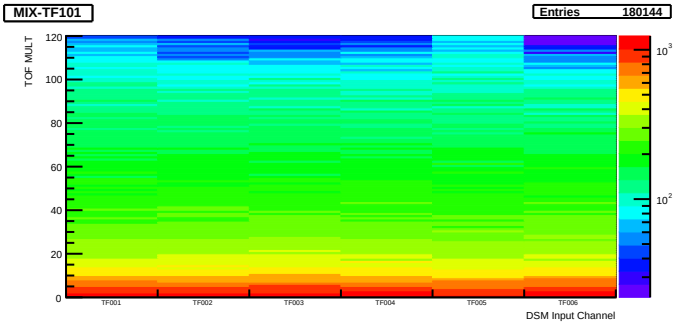

MIX-TF002
Entries 630504
TOF MULT
TOF tray
3W 2W 1W 60W 59W 58W 57W 56W 55W 54W 113E 114E 115E 116E 117E 118E 119E 120E 61E 62E

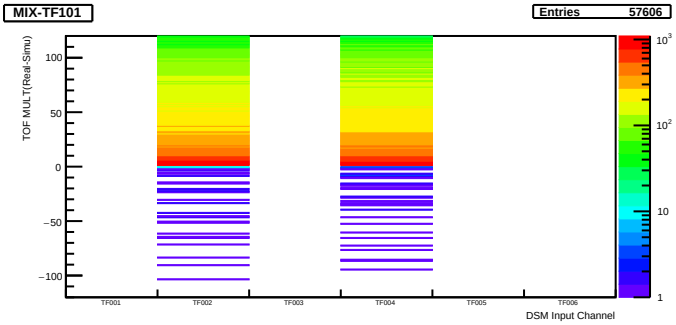

MIX-TF003
Entries 630504
TOF MULT
TOF tray
53W 52W 51W 50W 49W 48W 47W 46W 45W 44W 63E 64E 65E 66E 67E 68E 69E 70E 71E 72E

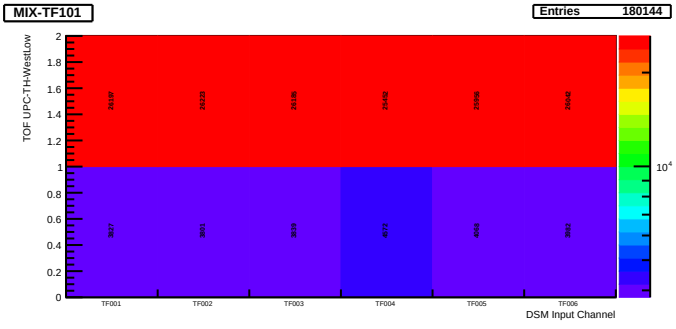

MIX-TF004
Entries 630504
TOF MULT
TOF tray
43W 42W 41W 40W 39W 38W 37W 36W 35W 34W 73E 74E 75E 76E 77E 78E 79E 80E 81E 82E

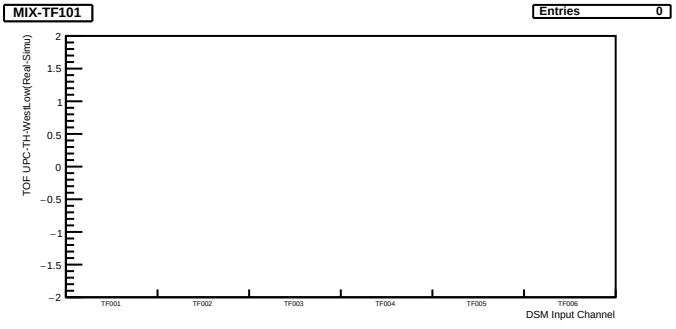

MIX-TF005
Entries 630504
TOF MULT
TOF tray
33W 32W 31W 30W 29W 28W 27W 26W 25W 24W 83E 84E 85E 86E 87E 88E 89E 90E 91E 92E

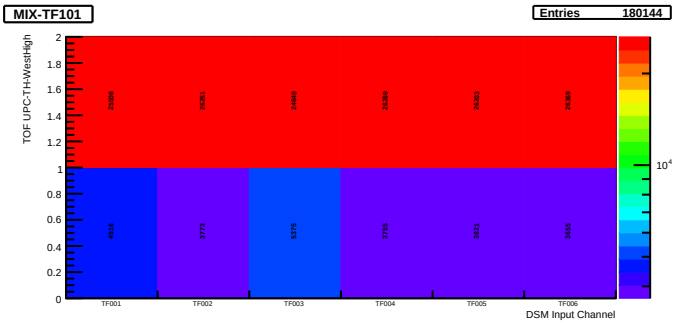

MIX-TF006
Entries 630504
TOF MULT
TOF tray
23W 22W 21W 20W 19W 18W 17W 16W 15W 14W 93E 94E 95E 96E 97E 98E 99E 100E 101E 102E

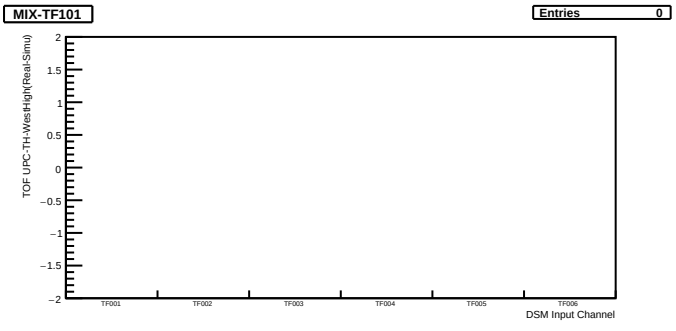

MIX-TF101
Entries 180144
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

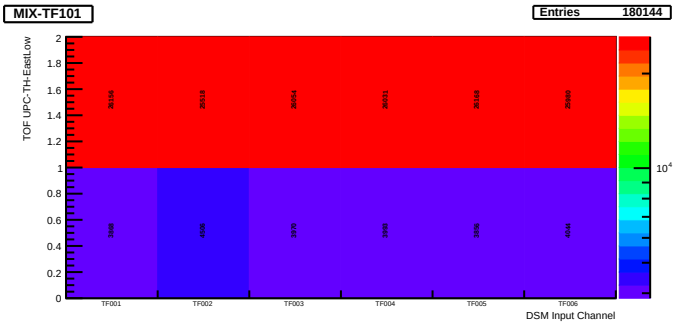

MIX-TF101
Entries 57606
TOF MULT(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

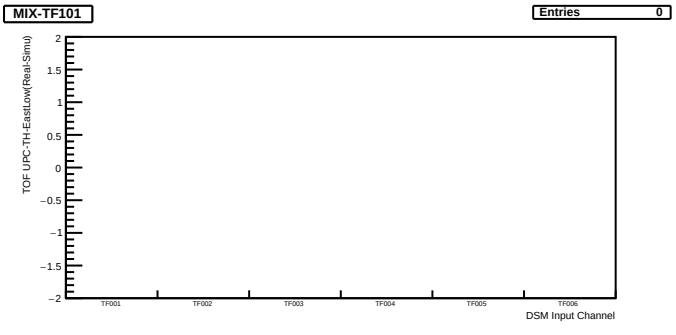

MIX-TF101
Entries 180144
TOF UPC-TH-WestLow
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

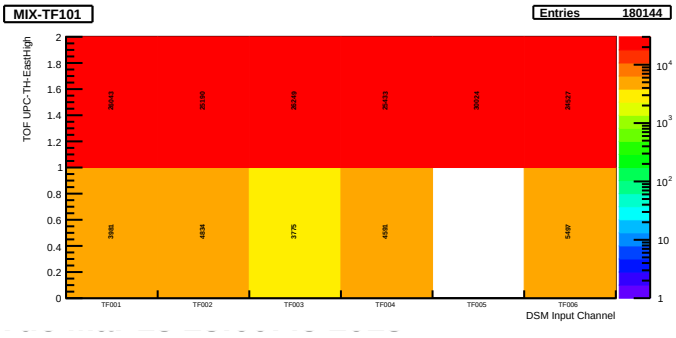

MIX-TF101
Entries 0
TOF UPC-TH-WestLow(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

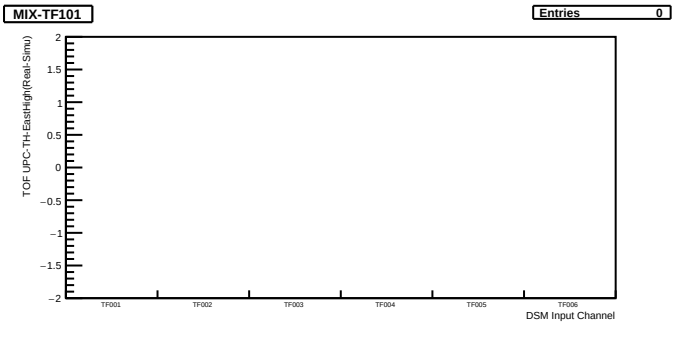

MIX-TF101
Entries 180144
TOF UPC-TH-WestHigh
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

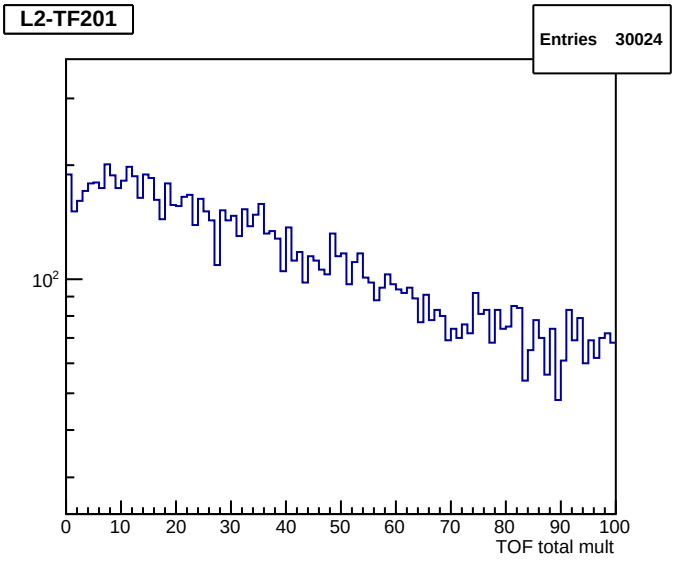

MIX-TF101
Entries 0
TOF UPC-TH-WestHigh(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

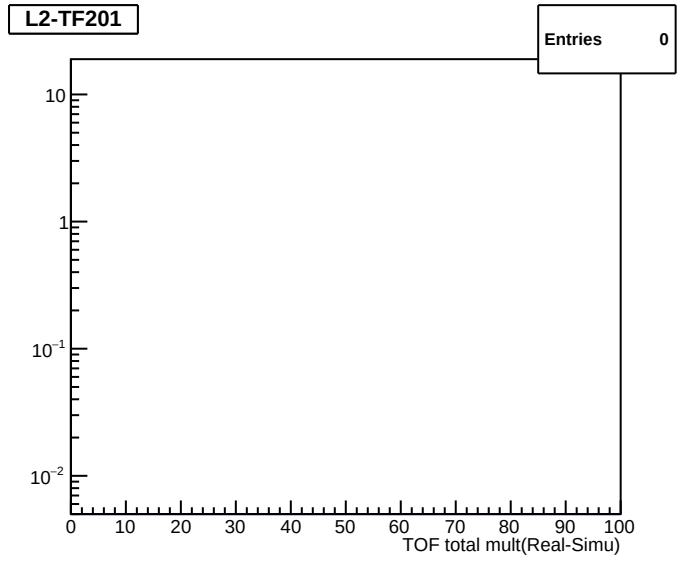

MIX-TF101
Entries 180144
TOF UPC-TH-EastLow
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

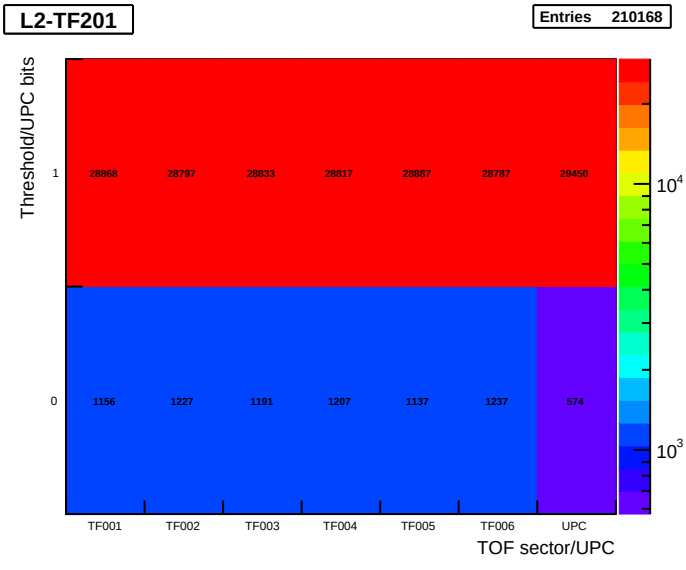

MIX-TF101
Entries 0
TOF UPC-TH-EastLow(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

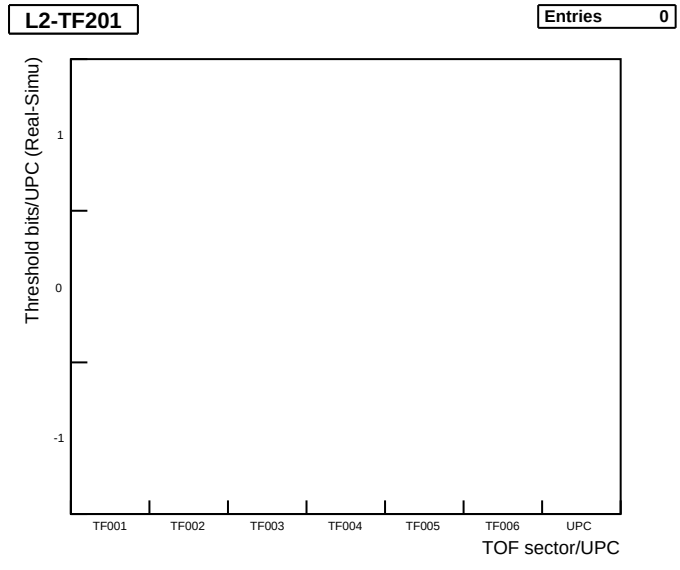

MIX-TF101
Entries 180144
TOF UPC-TH-EastHigh
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

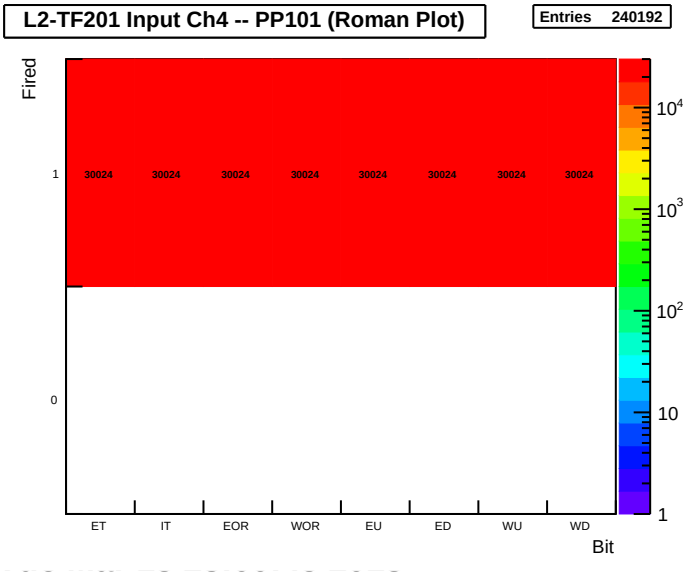

MIX-TF101
Entries 0
TOF UPC-TH-EastHigh(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

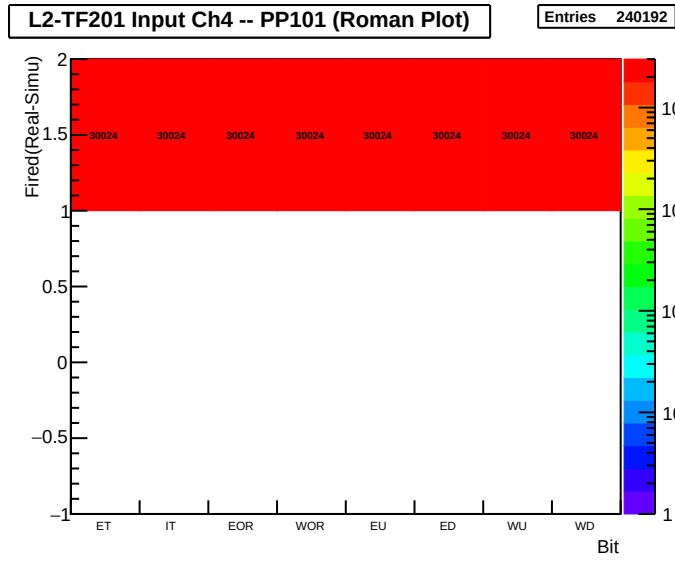

L2-TF201
Entries 30024
10^2
0 10 20 30 40 50 60 70 80 90 100
TOF total mult

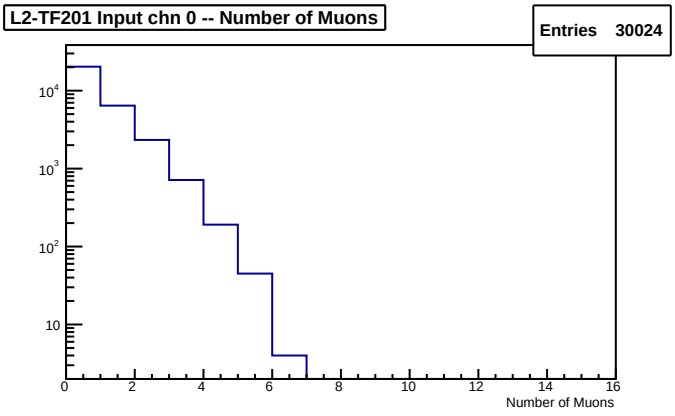

L2-TF201
Entries 0
10
1
10^{-1}
10^{-2}
0 10 20 30 40 50 60 70 80 90 100
TOF total mult(Real-Simu)

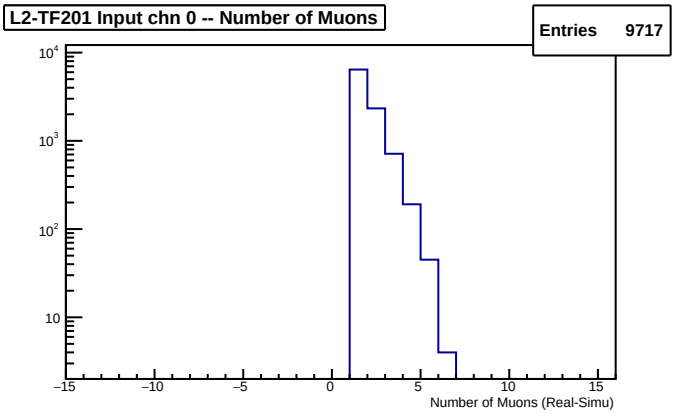

L2-TF201
Entries 210168
Threshold/UPC bits
1
0
28868 28797 28833 28817 28887 28787 29450
1156 1227 1191 1207 1137 1237 574
10^4
10^3
TF001 TF002 TF003 TF004 TF005 TF006 UPC
TOF sector/UPC

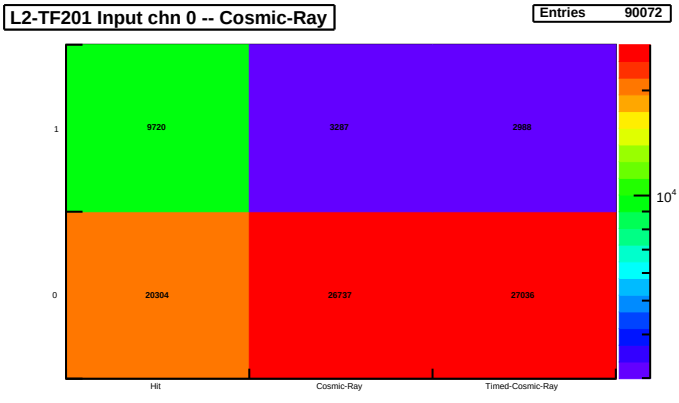

L2-TF201
Entries 0
Threshold bits/UPC (Real-Simu)
1
0
-1
TF001 TF002 TF003 TF004 TF005 TF006 UPC
TOF sector/UPC

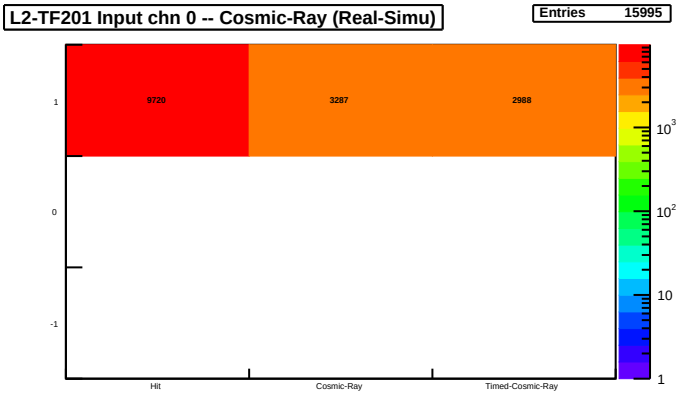

L2-TF201 Input Ch4 -- PP101 (Roman Plot)
Entries 240192
Fired
1
0
30024 30024 30024 30024 30024 30024 30024 30024
10^4
10^3
10^2
10
1
ET IT EOR WOR EU ED WU WD
Bit

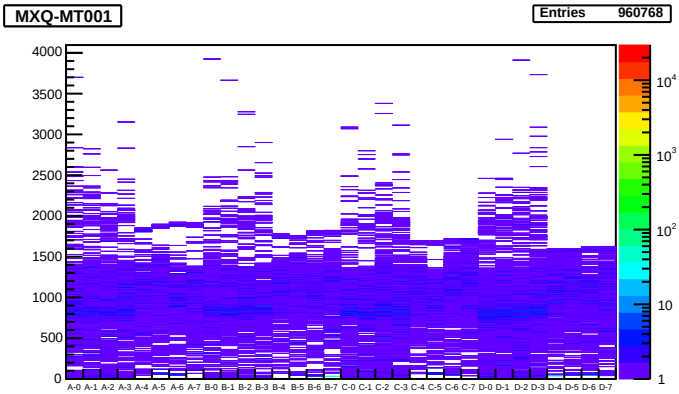

L2-TF201 Input Ch4 -- PP101 (Roman Plot)
Entries 240192
Fired(Real-Simu)
2
1.5
1
0.5
0
−0.5
−1
30024 30024 30024 30024 30024 30024 30024 30024
10^4
10^3
10^2
10
1
ET IT EOR WOR EU ED WU WD
Bit

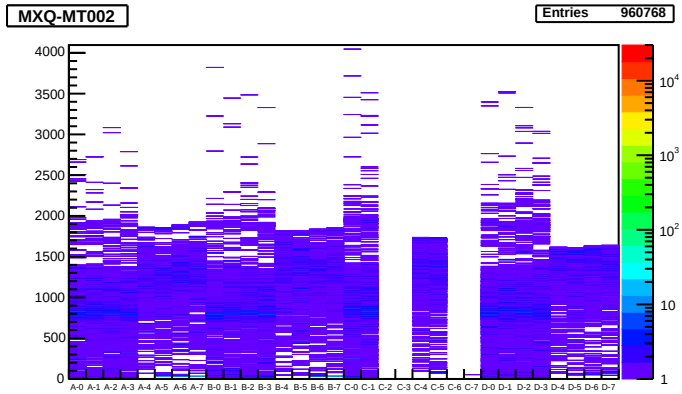

L2-TF201 Input chn 0 -- Number of Muons
Entries 30024
Number of Muons

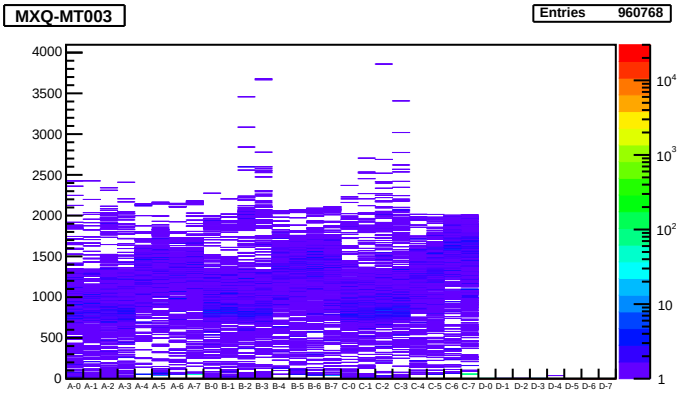

L2-TF201 Input chn 0 -- Number of Muons
Entries 9717
Number of Muons (Real-Simu)

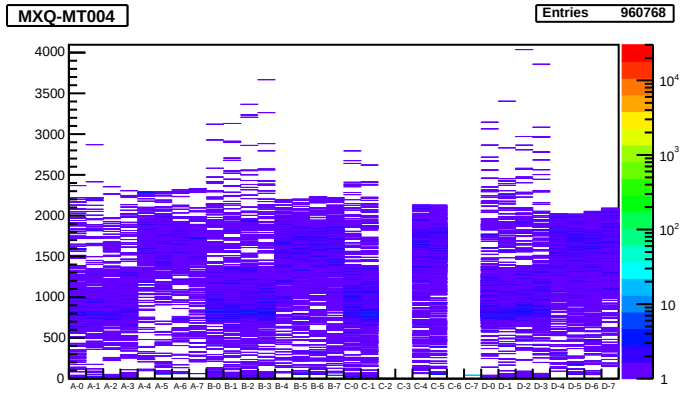

L2-TF201 Input chn 0 -- Cosmic-Ray
Entries 90072
9720
3287
2988
20304
26737
27036
Hit
Cosmic-Ray
Timed-Cosmic-Ray

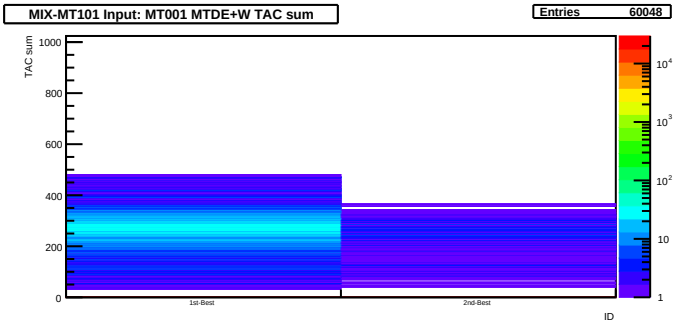

L2-TF201 Input chn 0 -- Cosmic-Ray (Real-Simu)
Entries 15995
9720
3287
2988
Hit
Cosmic-Ray
Timed-Cosmic-Ray

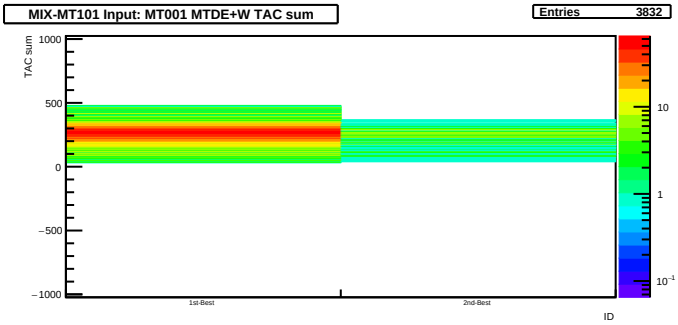

MXQ-MT001
Entries 960768

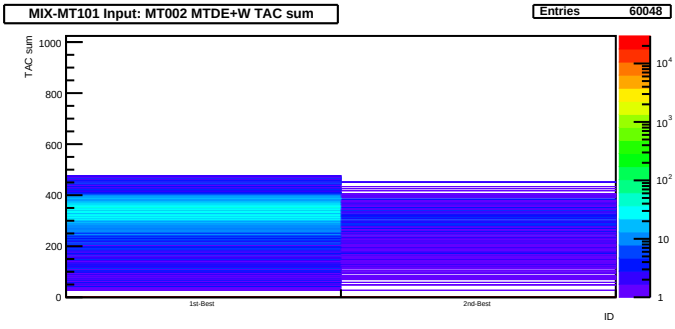

MXQ-MT002
Entries 960768

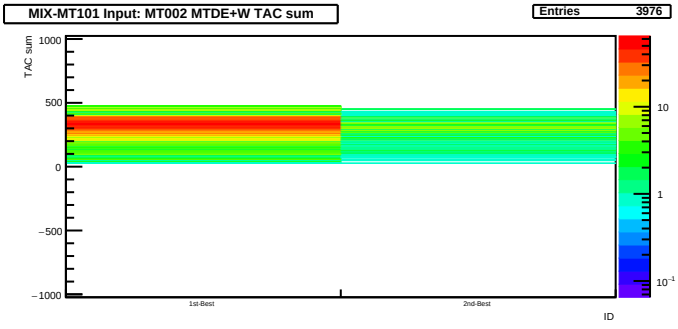

MXQ-MT003
Entries 960768

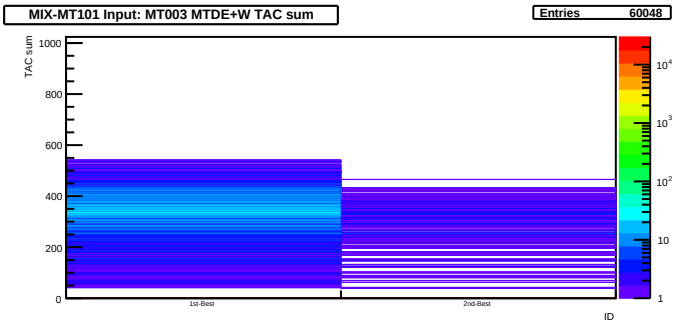

MXQ-MT004
Entries 960768

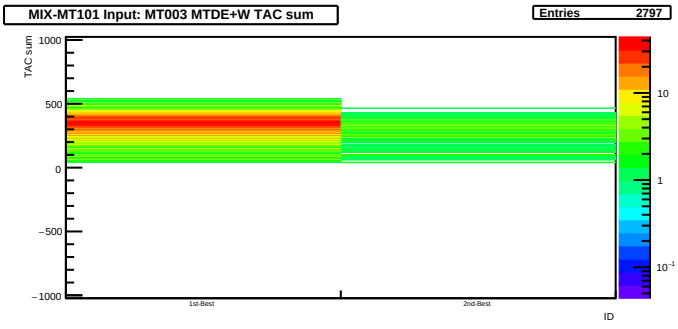

MIX-MT101 Input: MT001 MTDE+W TAC sum
Entries 60048
TAC sum
1st-Best
2nd-Best
ID

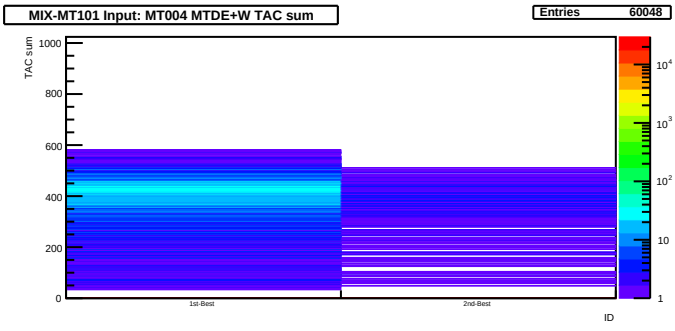

MIX-MT101 Input: MT001 MTDE+W TAC sum
Entries 3832
TAC sum
1st-Best
2nd-Best
ID

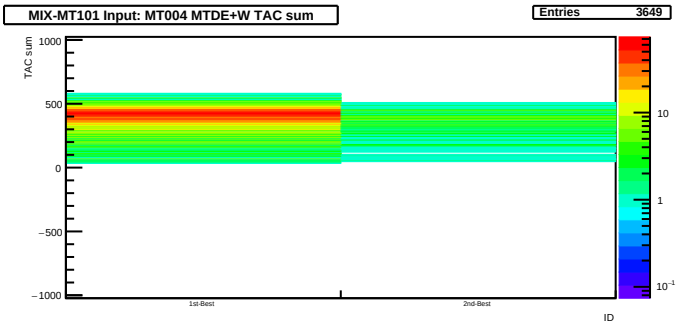

MIX-MT101 Input: MT002 MTDE+W TAC sum
Entries 60048
TAC sum
1st-Best
2nd-Best
ID

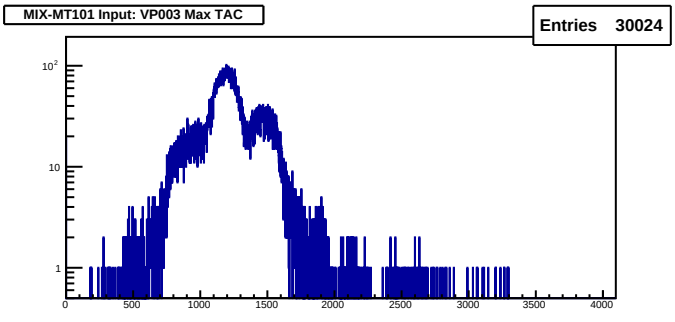

MIX-MT101 Input: MT002 MTDE+W TAC sum
Entries 3976
TAC sum
1st-Best
2nd-Best
ID

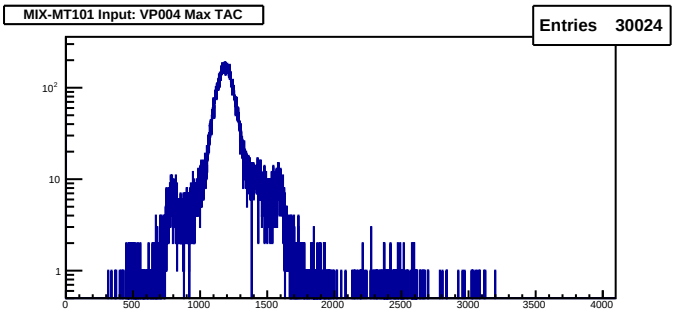

MIX-MT101 Input: MT003 MTDE+W TAC sum
Entries 60048
TAC sum
1st-Best
2nd-Best
ID

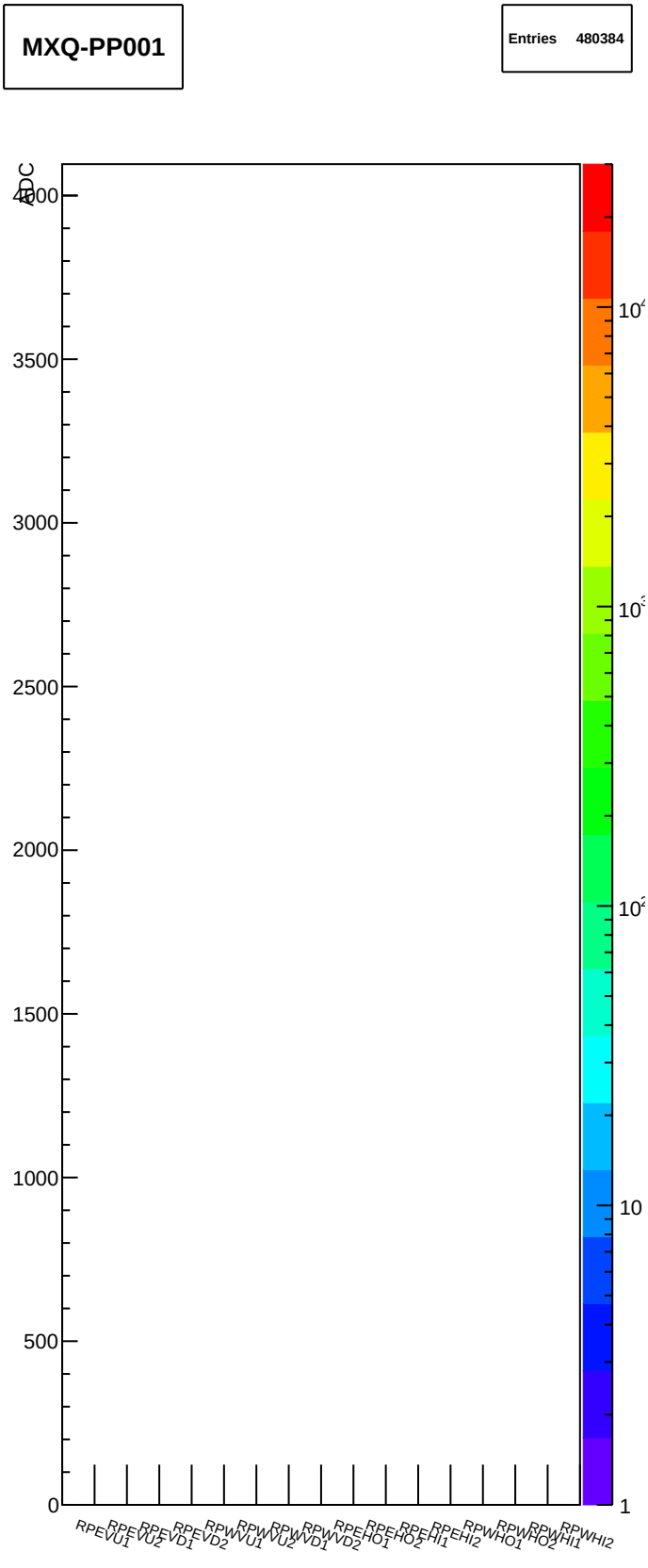

MIX-MT101 Input: MT003 MTDE+W TAC sum
Entries 2797
TAC sum
1st-Best
2nd-Best
ID

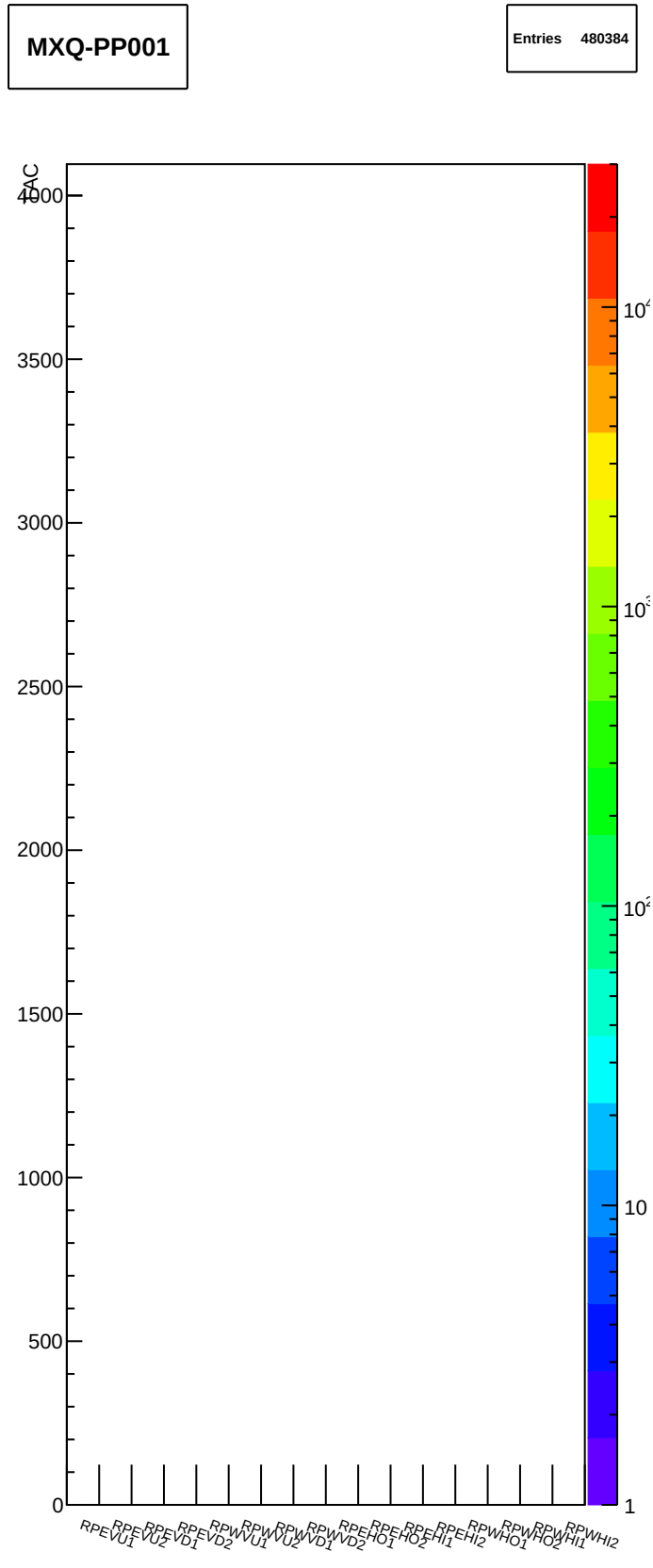

MIX-MT101 Input: MT004 MTDE+W TAC sum
Entries 60048
TAC sum
1st-Best
2nd-Best
ID

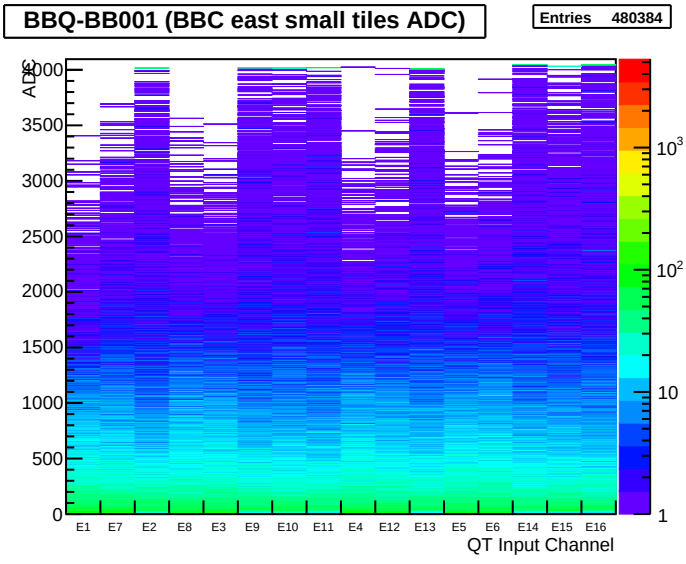

MIX-MT101 Input: MT004 MTDE+W TAC sum
Entries 3649
TAC sum
1st-Best
2nd-Best
ID

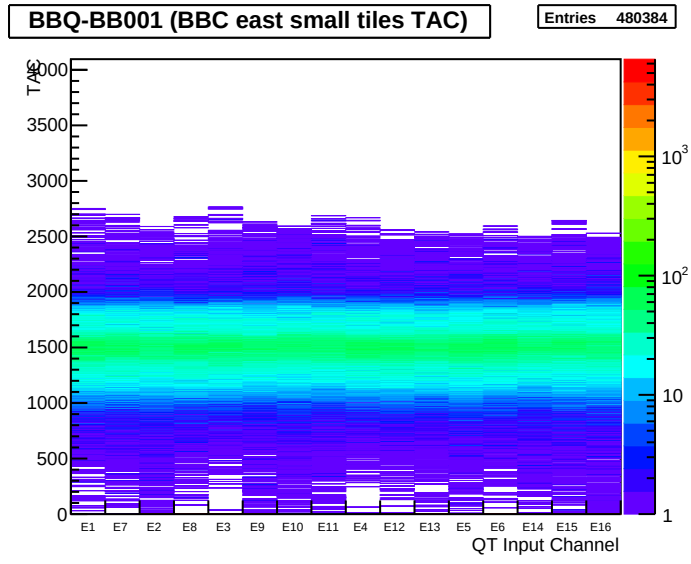

MIX-MT101 Input: VP003 Max TAC
Entries 30024

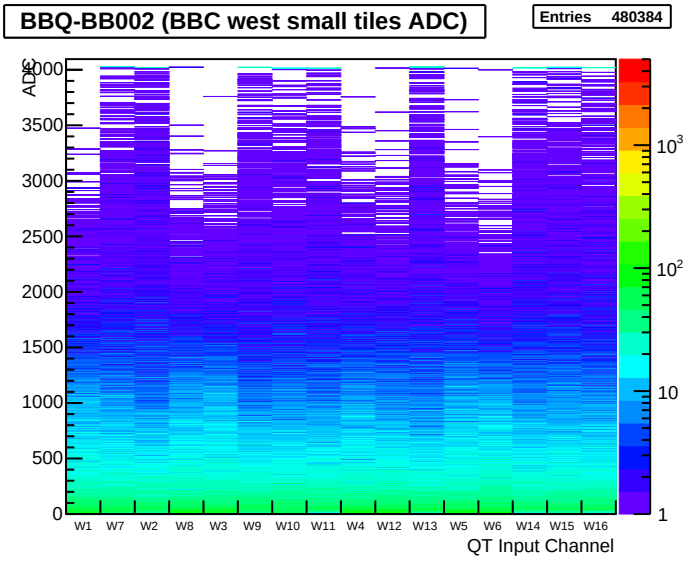

MIX-MT101 Input: VP004 Max TAC
Entries 30024

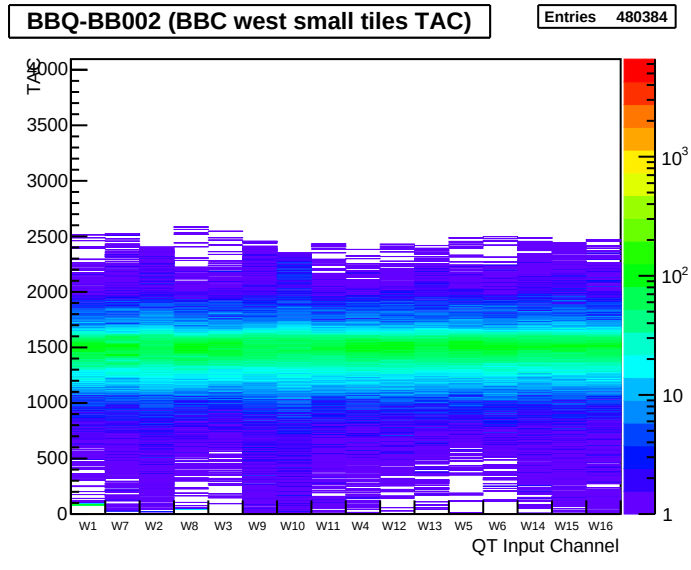

MXQ-PP001
Entries 480384
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
RPEVU1
RPEVU2
RPEVD1
RPEVD2
RPWVU1
RPWVU2
RPWVD1
RPWVD2
RPEHO1
RPEHO2
RPEHI1
RPEHI2
RPWHO1
RPWHO2
RPWHI1
RPWHI2
10
1

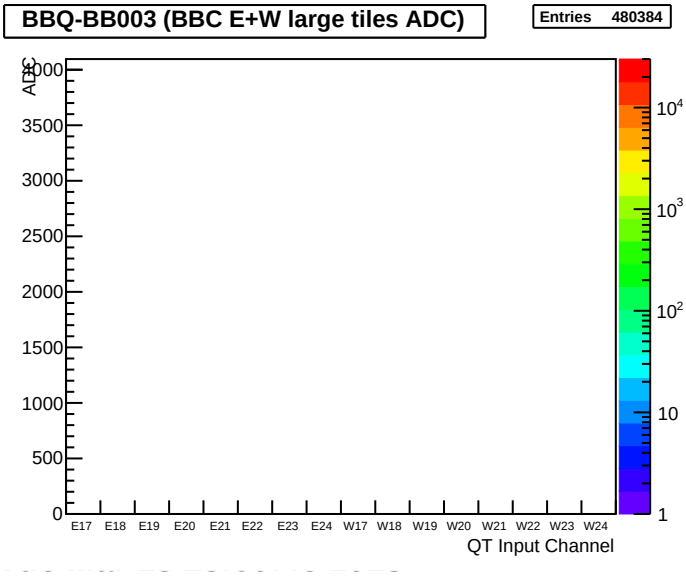

MXQ-PP001
Entries 480384
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
RPEVU1
RPEVU2
RPEVD1
RPEVD2
RPWVU1
RPWVU2
RPWVD1
RPWVD2
RPEHO1
RPEHO2
RPEHI1
RPEHI2
RPWHO1
RPWHO2
RPWHI1
RPWHI2
10
1

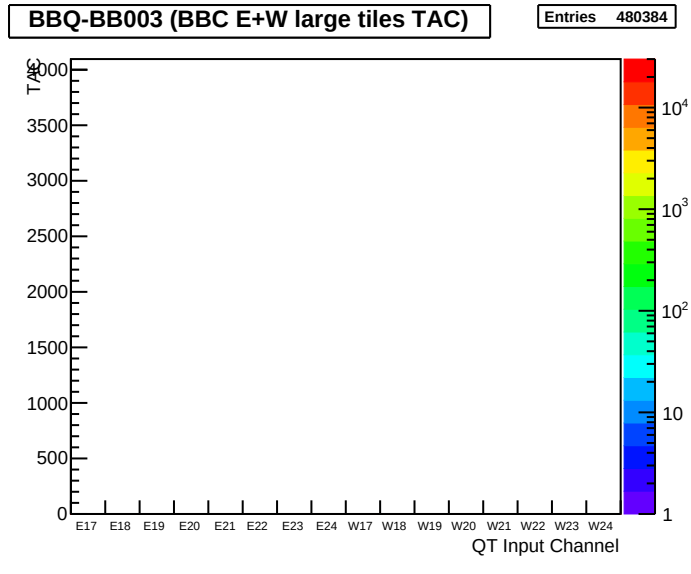

BBQ-BB001 (BBC east small tiles ADC)
Entries 480384
ADC
QT Input Channel

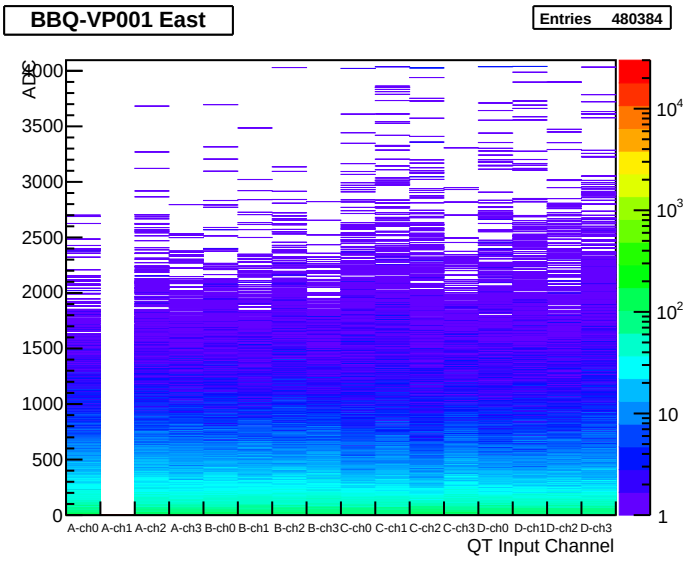

BBQ-BB001 (BBC east small tiles TAC)
Entries 480384
TAC
QT Input Channel

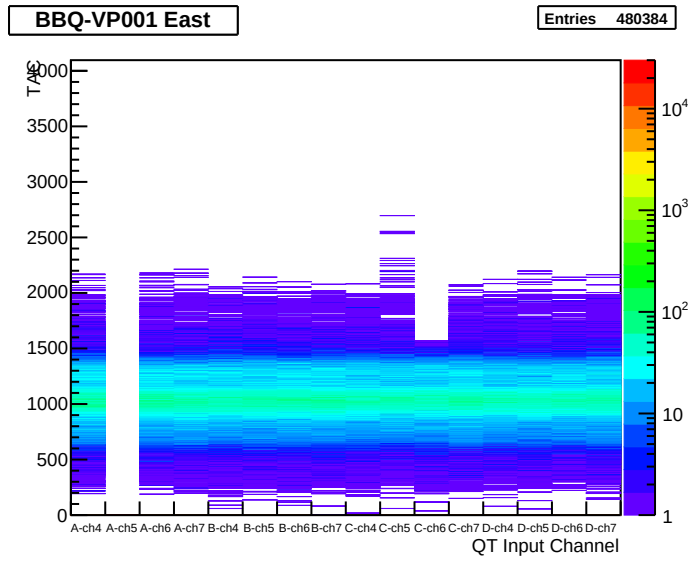

BBQ-BB002 (BBC west small tiles ADC)
Entries 480384
ADC
QT Input Channel

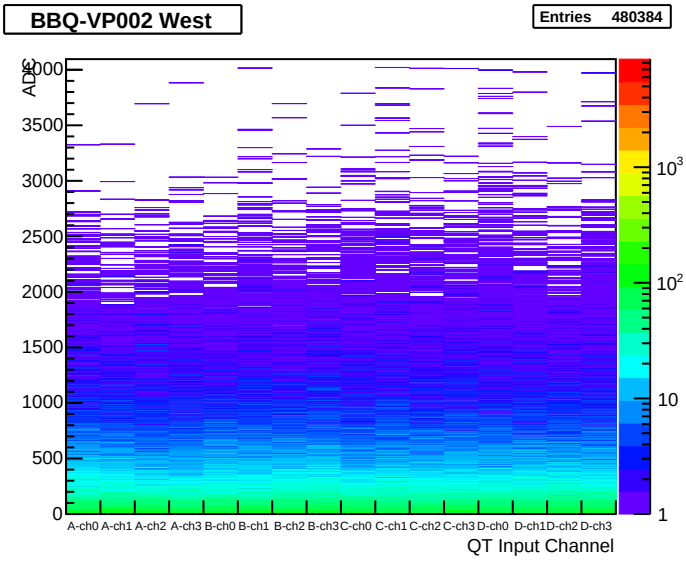

BBQ-BB002 (BBC west small tiles TAC)
Entries 480384
TAC
QT Input Channel

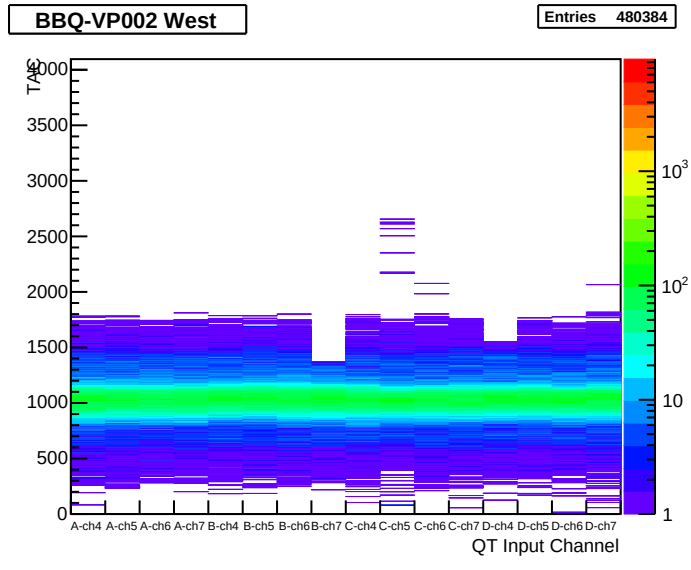

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 480384
ADC
QT Input Channel

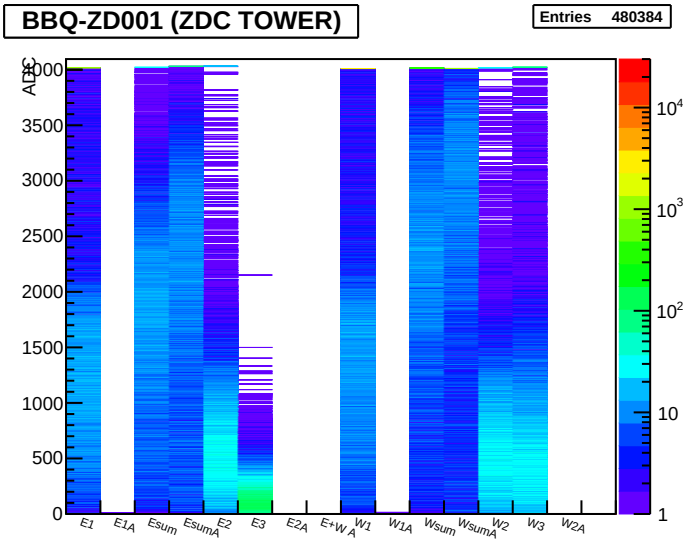

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 480384
TAC
QT Input Channel

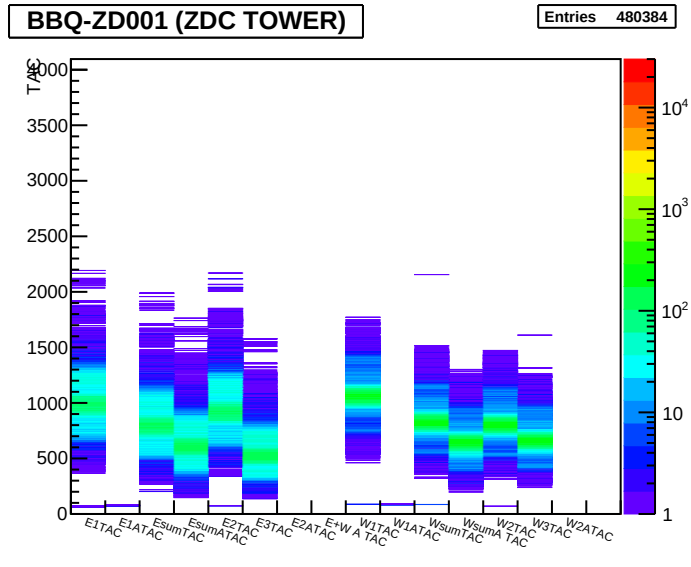

BBQ-VP001 East
Entries 480384
ADC
QT Input Channel

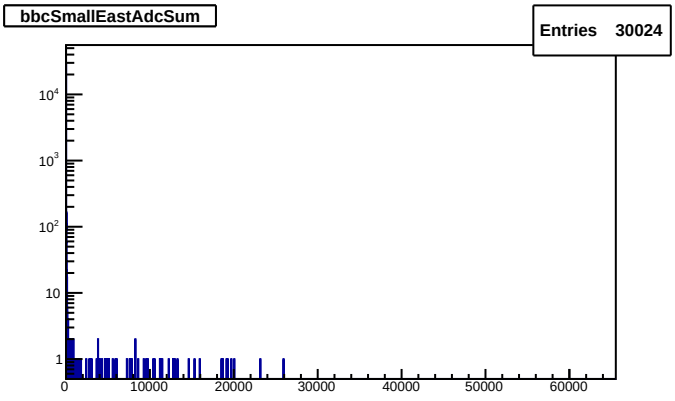

BBQ-VP001 East
Entries 480384
TAC
QT Input Channel

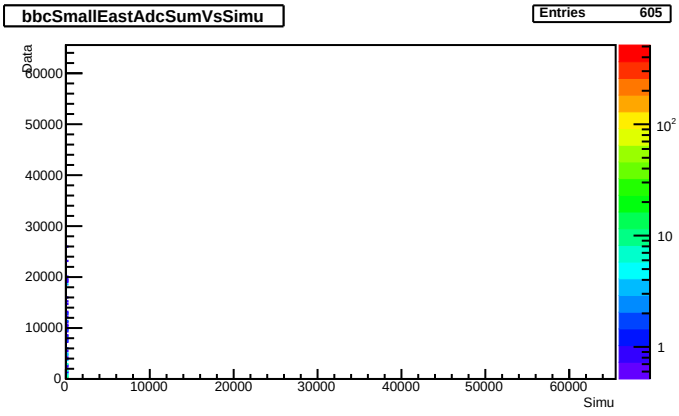

BBQ-VP002 West
Entries 480384
ADC
QT Input Channel

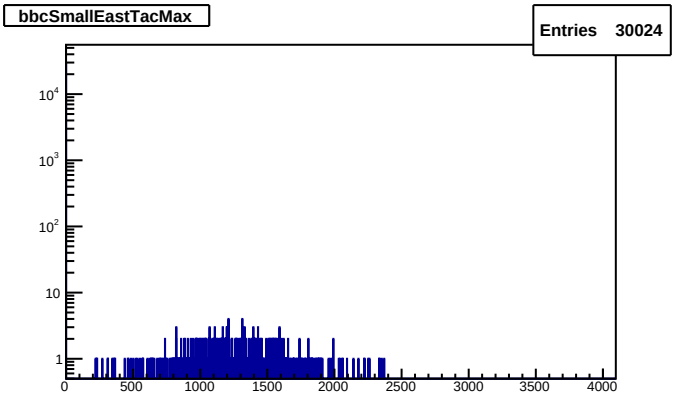

BBQ-VP002 West
Entries 480384
TAC
QT Input Channel

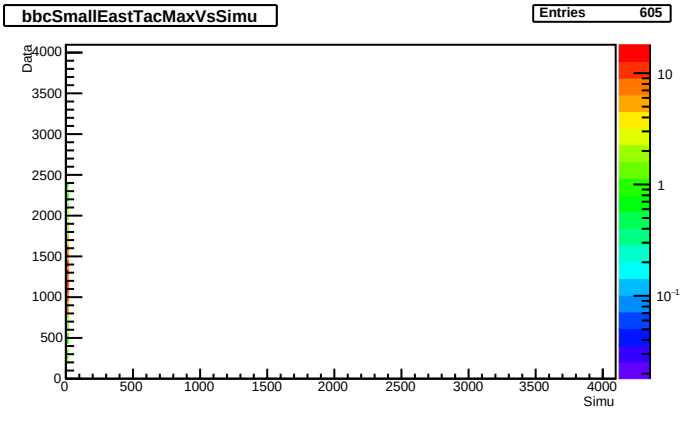

BBQ-ZD001 (ZDC TOWER)
Entries 480384
ADC

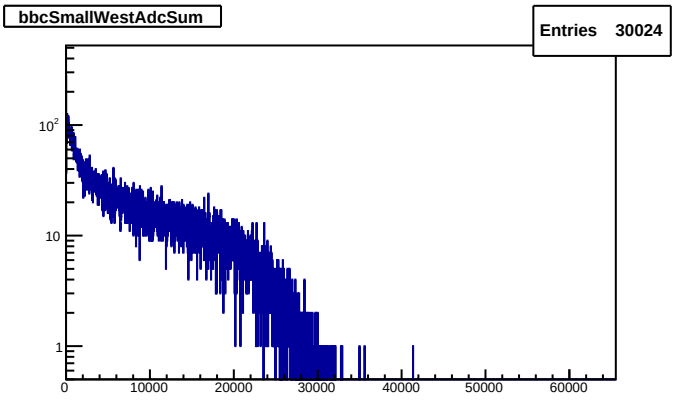

BBQ-ZD001 (ZDC TOWER)
Entries 480384
TAC

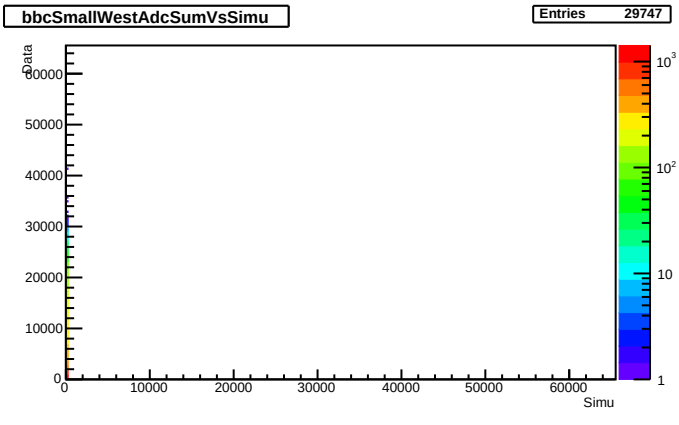

bbcSmallEastAdcSum
Entries 30024

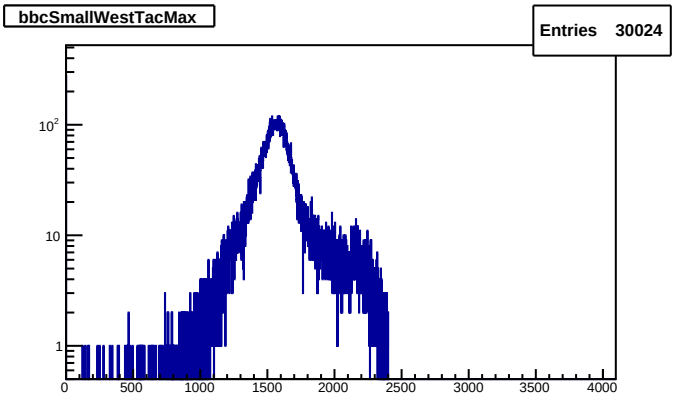

bbcSmallEastAdcSumVsSimu
Entries 605
Data
Simu

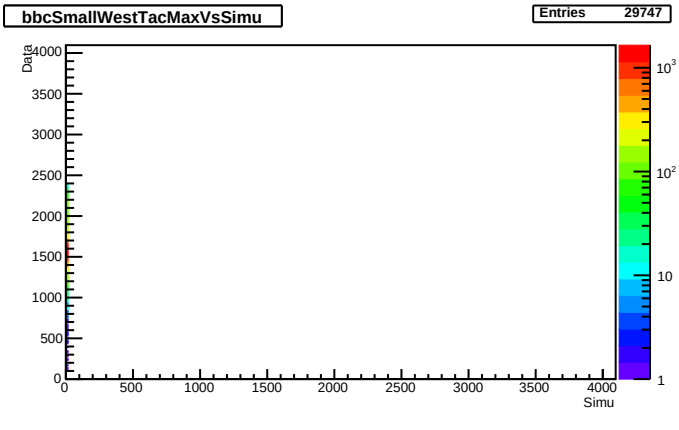

bbcSmallEastTacMax
Entries 30024

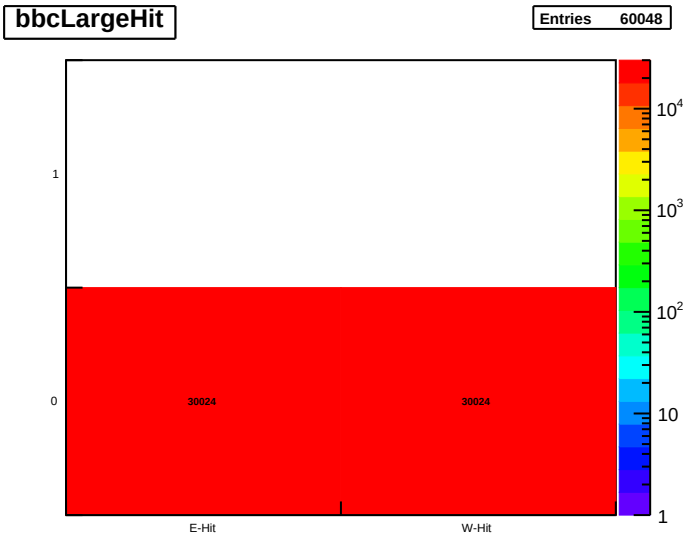

bbcSmallEastTacMaxVsSimu
Entries 605
Data
Simu

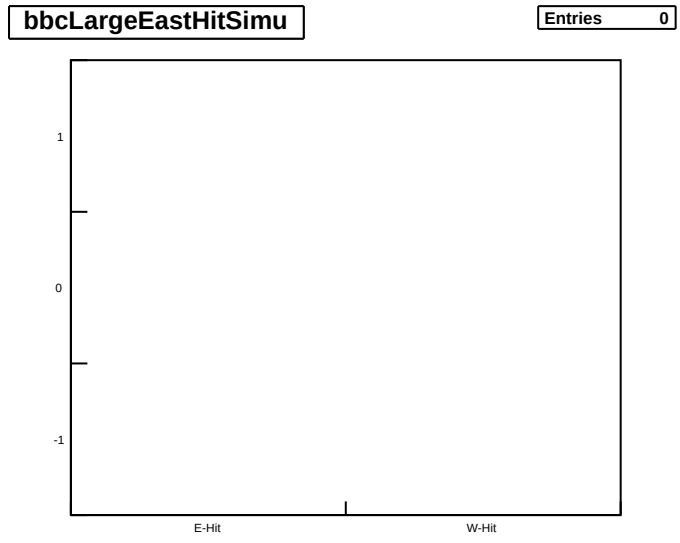

bbcSmallWestAdcSum
Entries 30024

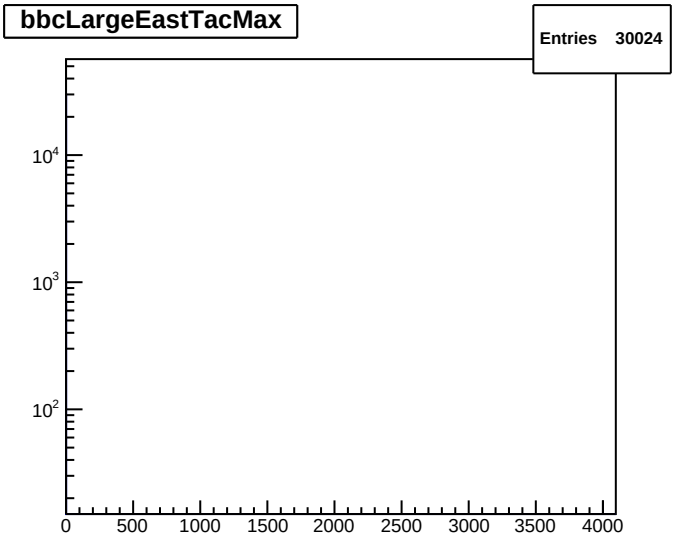

bbcSmallWestAdcSumVsSimu
Entries 29747
Data
Simu

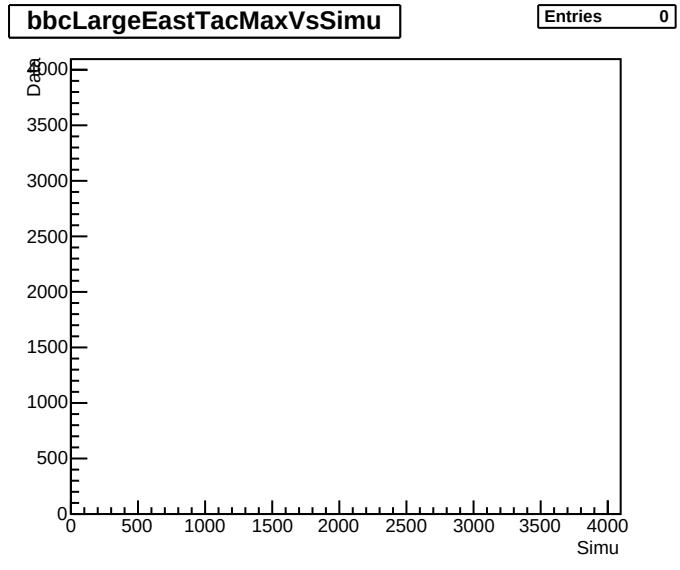

bbcSmallWestTacMax
Entries 30024

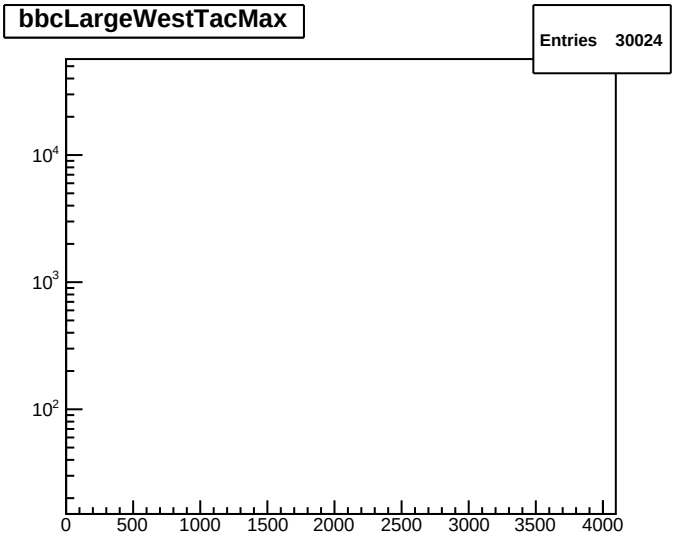

bbcSmallWestTacMaxVsSimu
Entries 29747
Data
Simu

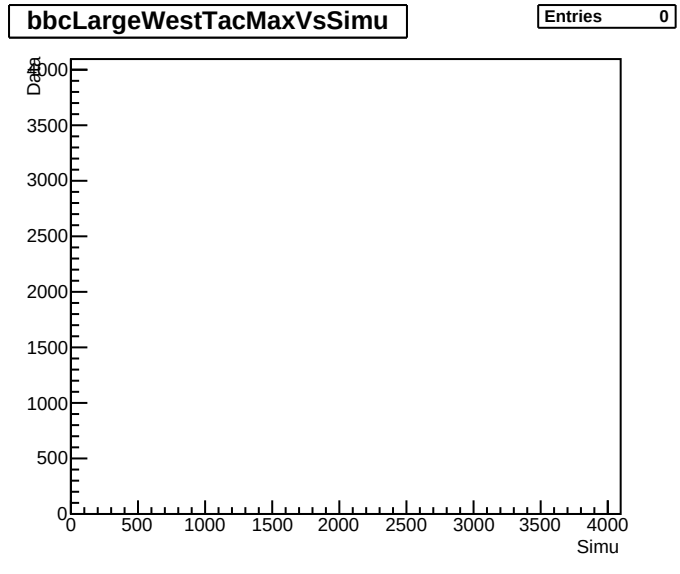

bbcLargeHit
Entries 60048
30024
30024
E-Hit
W-Hit

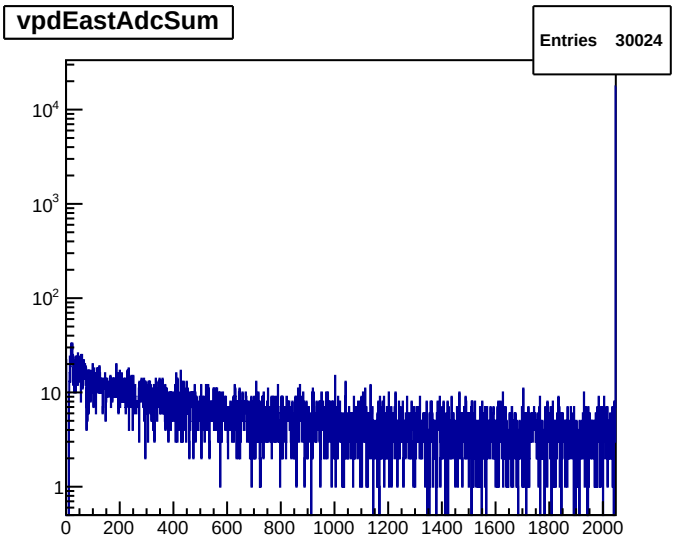

bbcLargeEastHitSimu
Entries 0
E-Hit
W-Hit

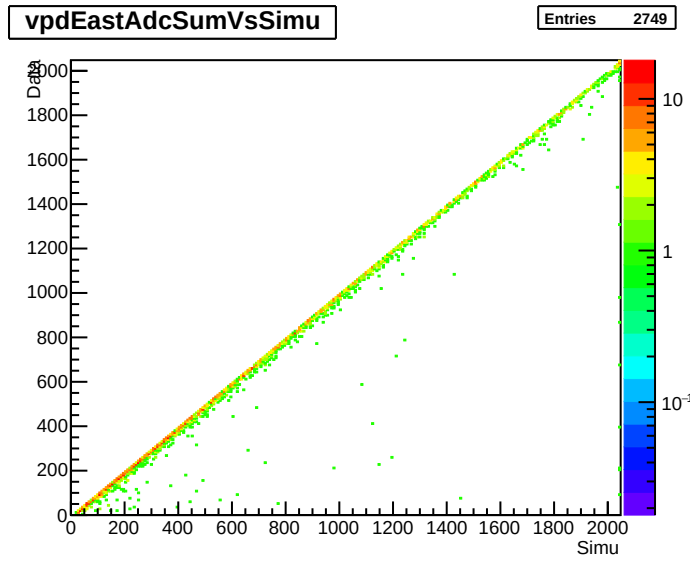

bbcLargeEastTacMax
Entries 30024

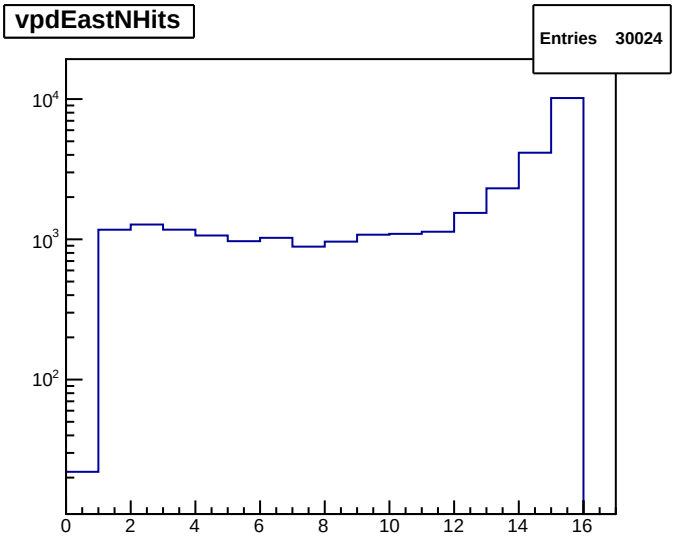

bbcLargeEastTacMaxVsSimu
Entries 0
Data
Simu

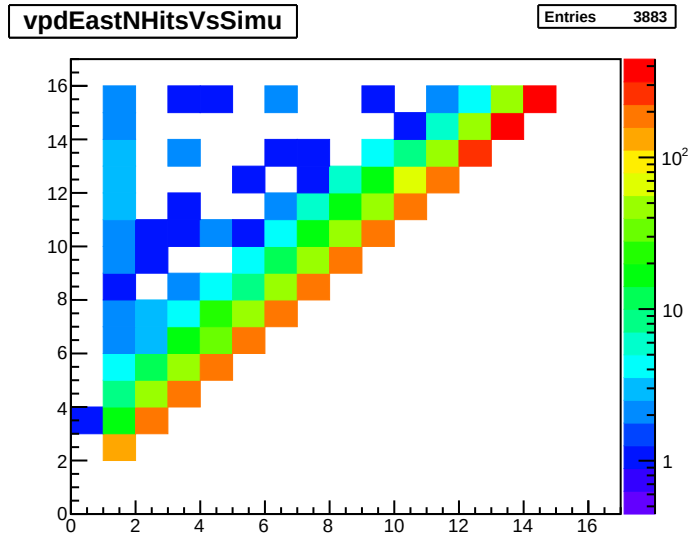

bbcLargeWestTacMax
Entries 30024

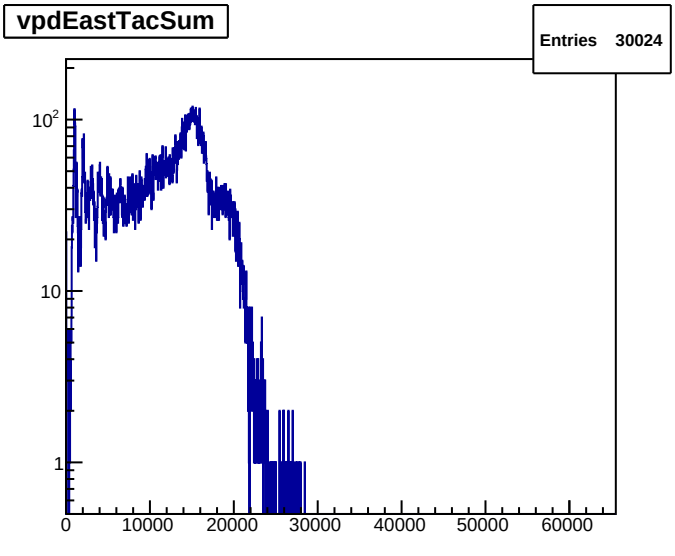

bbcLargeWestTacMaxVsSimu
Entries 0
Data
Simu

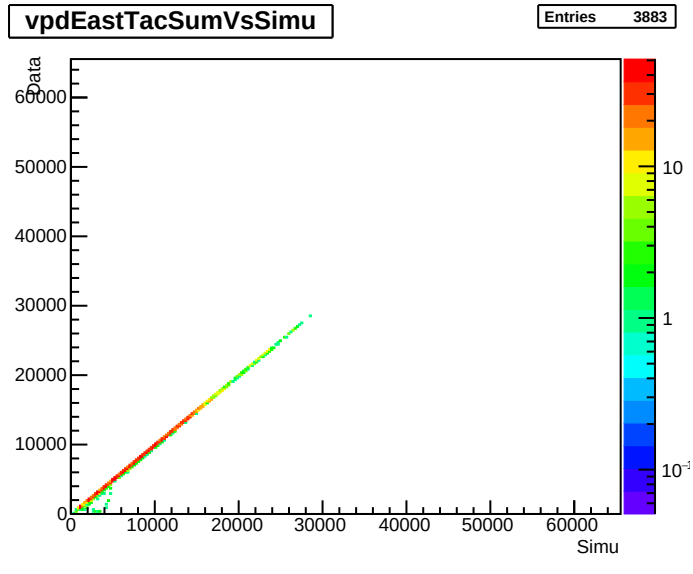

vpdEastAdcSum
Entries 30024

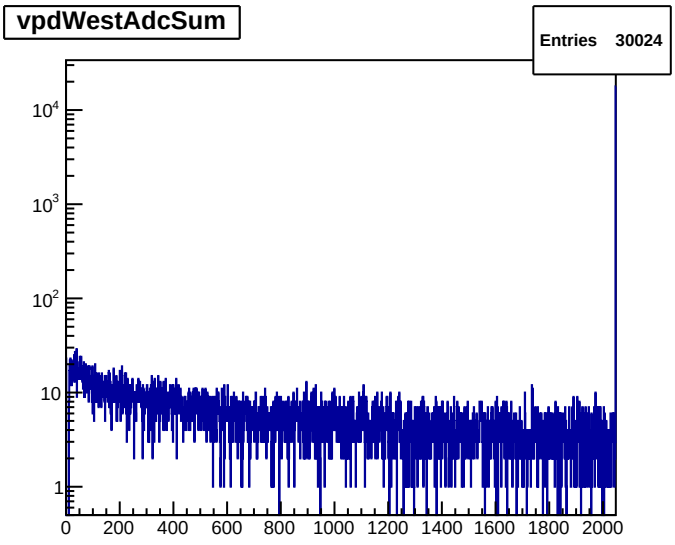

vpdEastAdcSumVsSimu
Entries 2749
Data
Simu

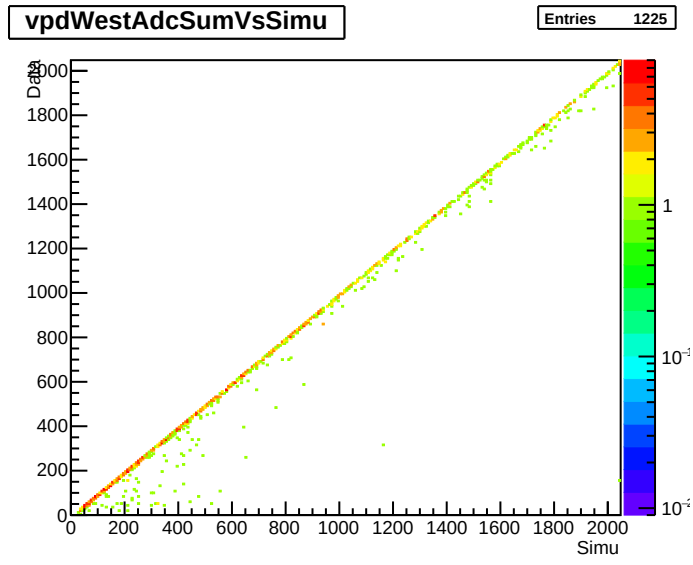

vpdEastNHits
Entries 30024

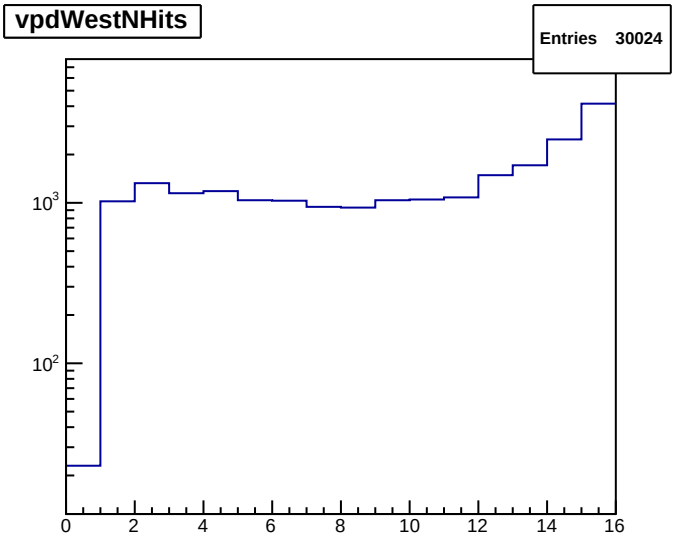

vpdEastNHitsVsSimu
Entries 3883

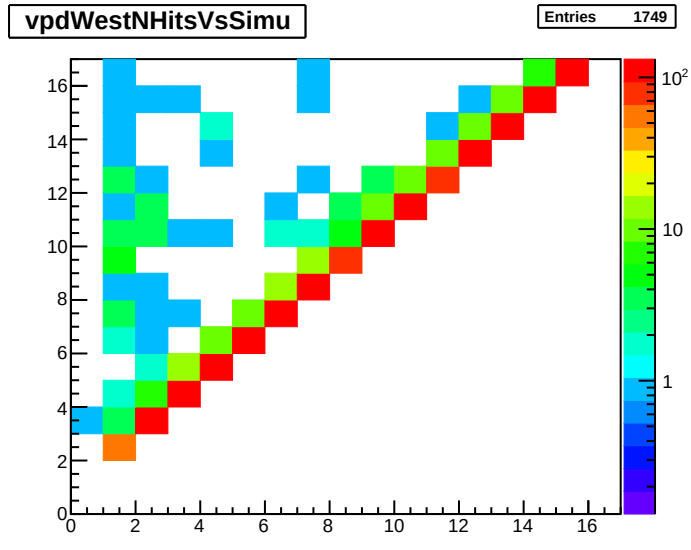

vpdEastTacSum
Entries 30024

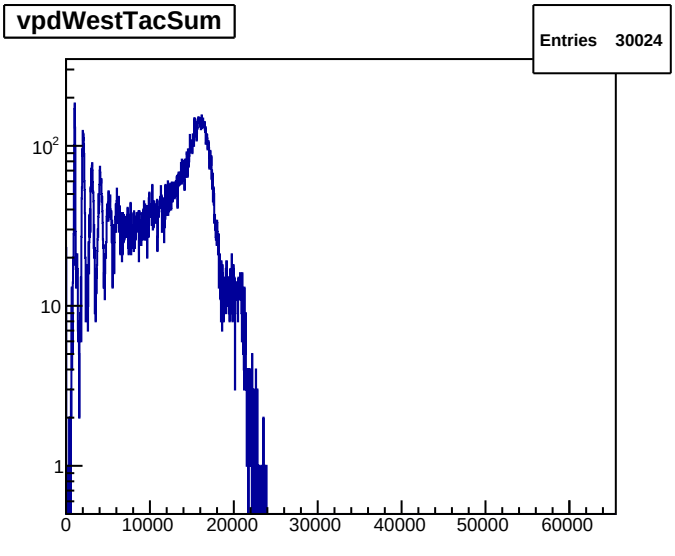

vpdEastTacSumVsSimu
Entries 3883
Data
Simu

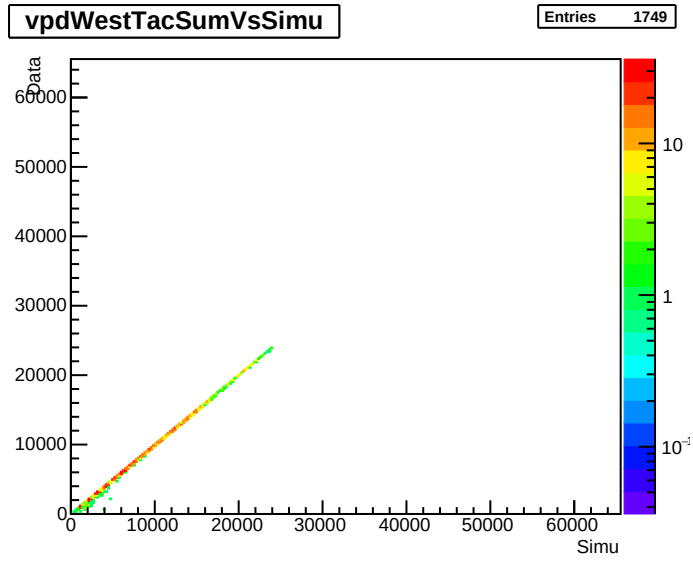

vpdWestAdcSum
Entries 30024

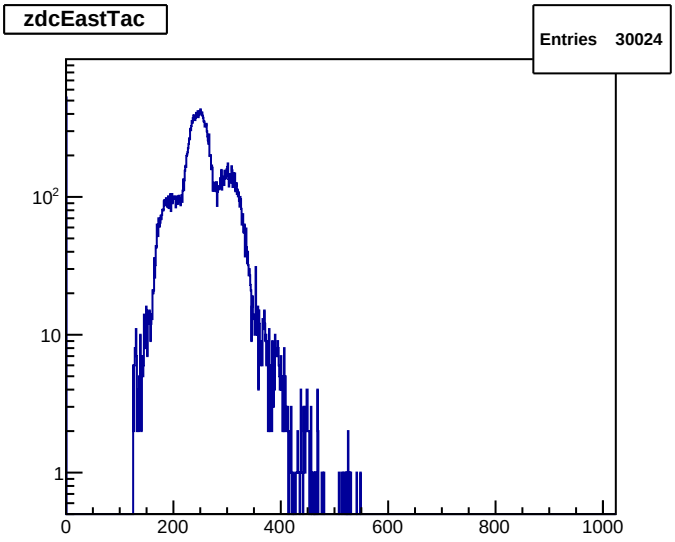

vpdWestAdcSumVsSimu
Entries 1225
Data
Simu

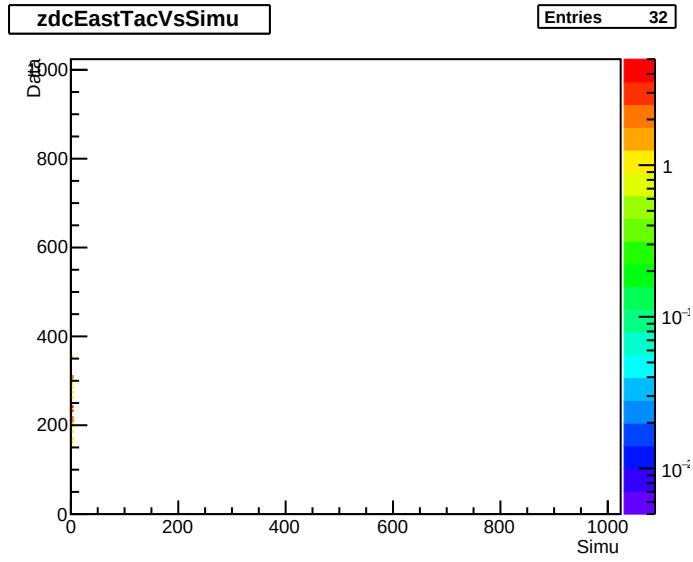

vpdWestNHits
Entries 30024

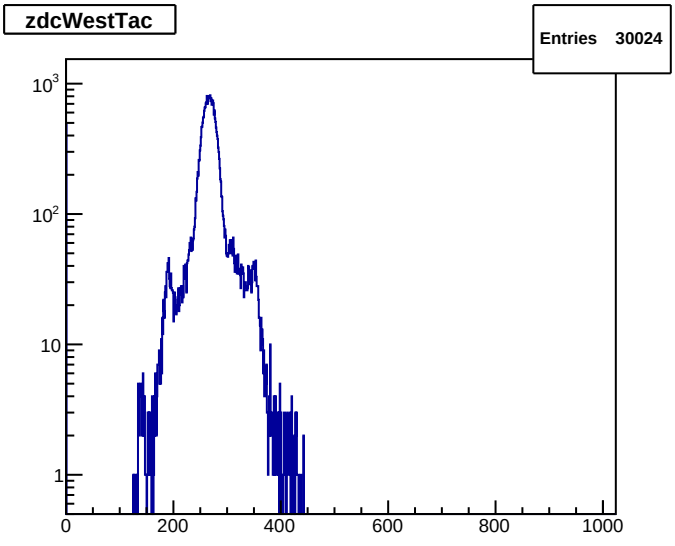

vpdWestNHitsVsSimu
Entries 1749

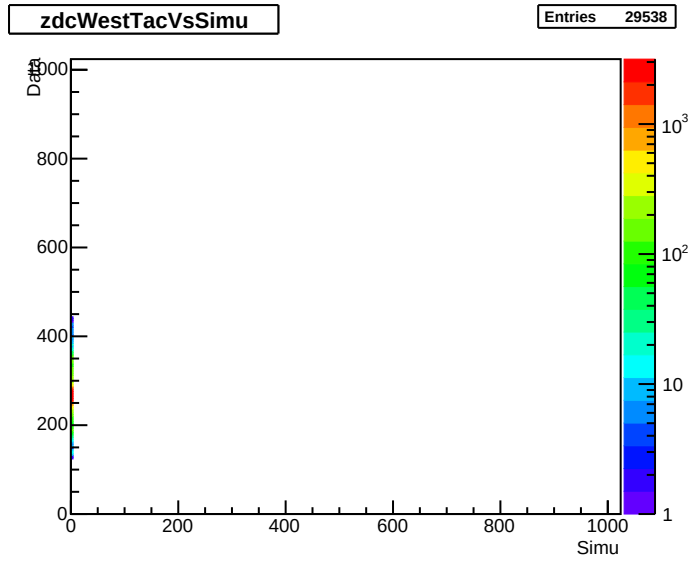

vpdWestTacSum
Entries 30024

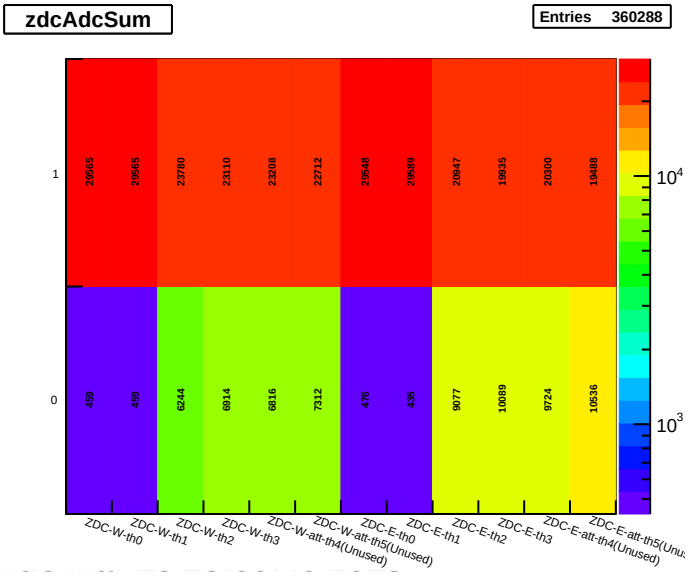

vpdWestTacSumVsSimu
Entries 1749
Data
Simu

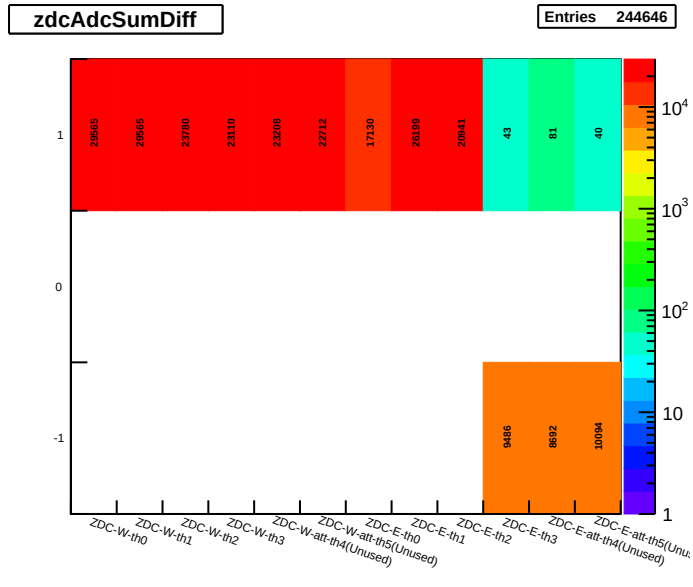

zdcEastTac
Entries 30024

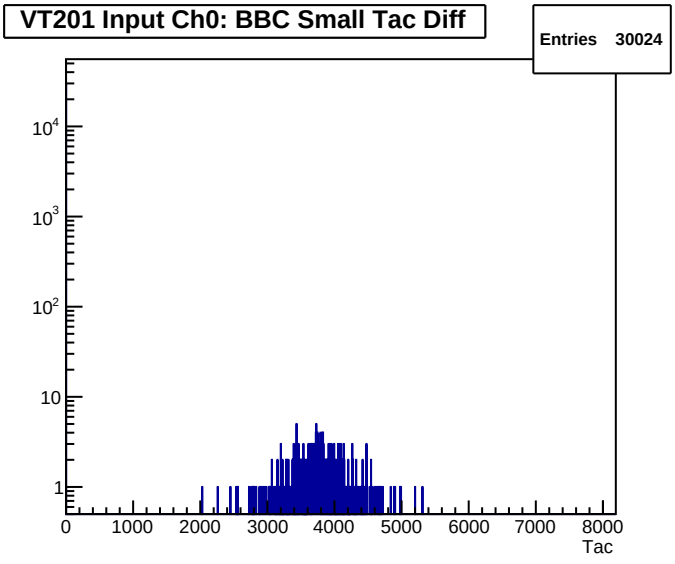

zdcEastTacVsSimu
Entries 32
Data
Simu

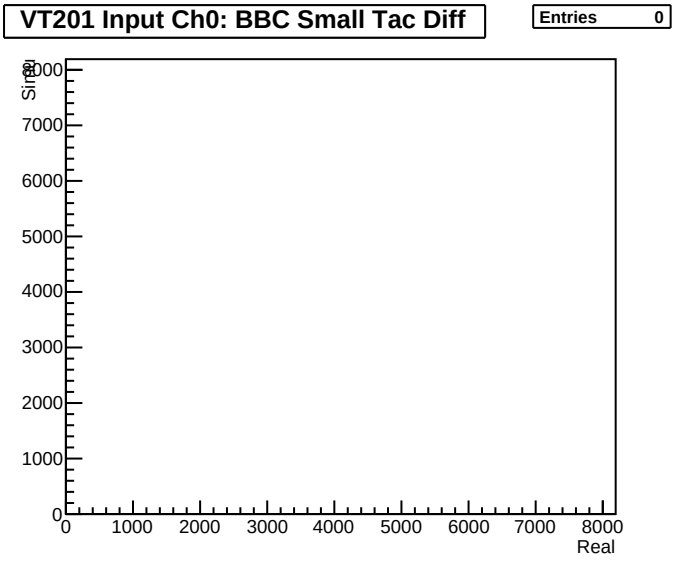

zdcWestTac
Entries 30024

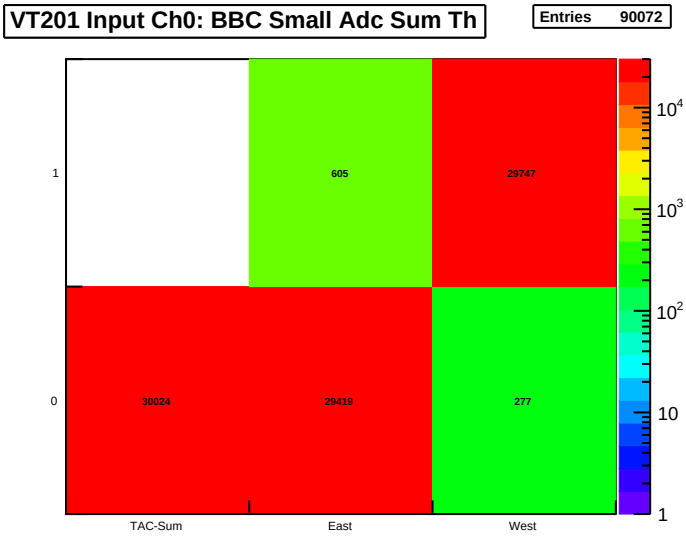

zdcWestTacVsSimu
Entries 29538
Data
Simu

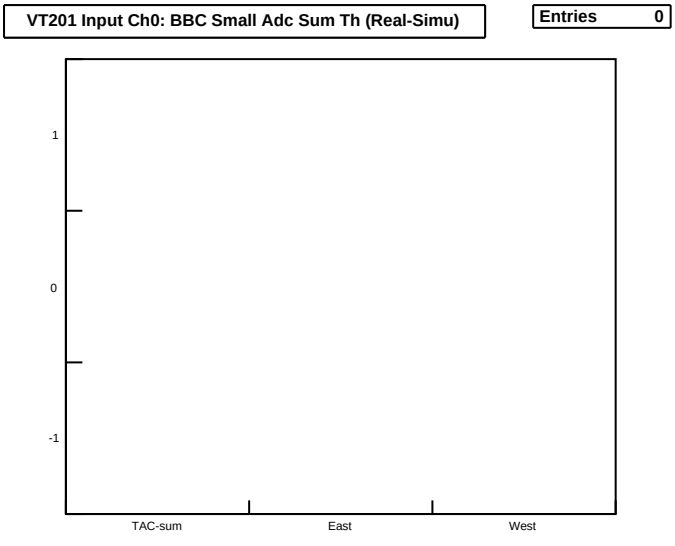

zdcAdcSum
Entries 360288
29565 29565 23780 23110 23208 22712 29548 29589 20047 19935 20300 19488
459 459 6244 6914 6816 7312 476 435 9077 10089 9724 10536
ZDC-W-th0
ZDC-W-th1
ZDC-W-th2
ZDC-W-th3
ZDC-W-att-th4(Unused)
ZDC-W-att-th5(Unused)
ZDC-E-th0
ZDC-E-th1
ZDC-E-th2
ZDC-E-th3
ZDC-E-att-th4(Unused)
ZDC-E-att-th5(Unu

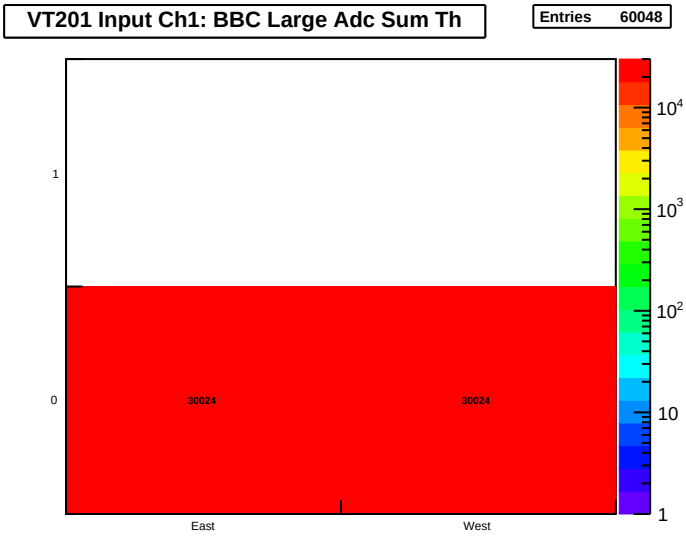

zdcAdcSumDiff
Entries 244646
29565 29565 23780 23110 23208 22712 17130 26199 20941 43 81 40
9486 8692 10094
ZDC-W-th0
ZDC-W-th1
ZDC-W-th2
ZDC-W-th3
ZDC-W-att-th4(Unused)
ZDC-W-att-th5(Unused)
ZDC-E-th0
ZDC-E-th1
ZDC-E-th2
ZDC-E-th3
ZDC-E-att-th4(Unused)
ZDC-E-att-th5(Unu

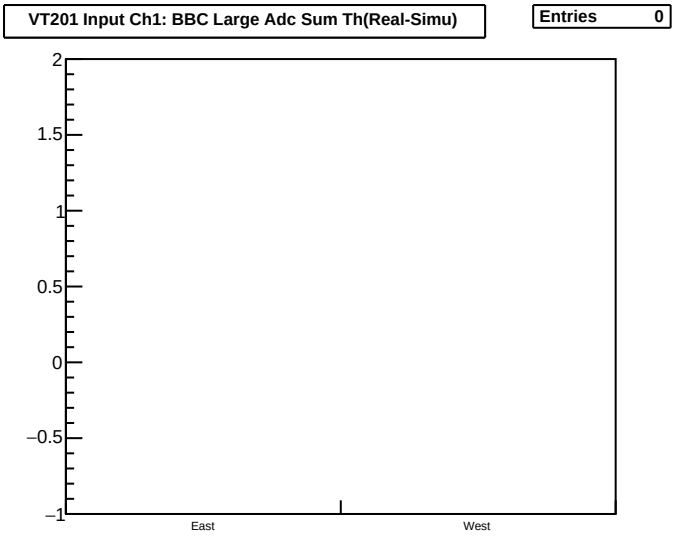

VT201 Input Ch0: BBC Small Tac Diff
Entries 30024
Tac


VT201 Input Ch0: BBC Small Tac Diff
Entries 0
Simu
Real

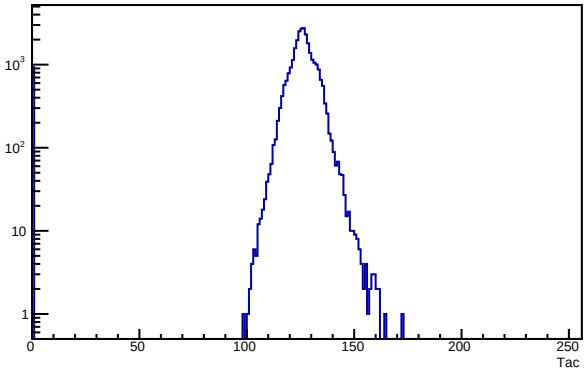

VT201 Input Ch0: BBC Small Adc Sum Th
Entries 90072
605
29747
30024
29419
277
TAC-Sum
East
West


VT201 Input Ch0: BBC Small Adc Sum Th (Real-Simu)
Entries 0
TAC-sum
East
West

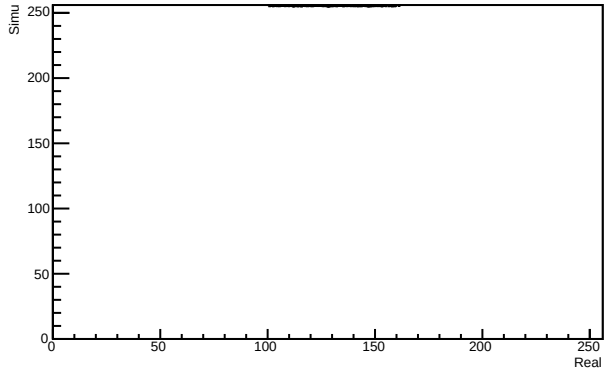

VT201 Input Ch1: BBC Large Adc Sum Th
Entries 60048
30024
30024
East
West


VT201 Input Ch1: BBC Large Adc Sum Th(Real-Simu)
Entries 0
East
West

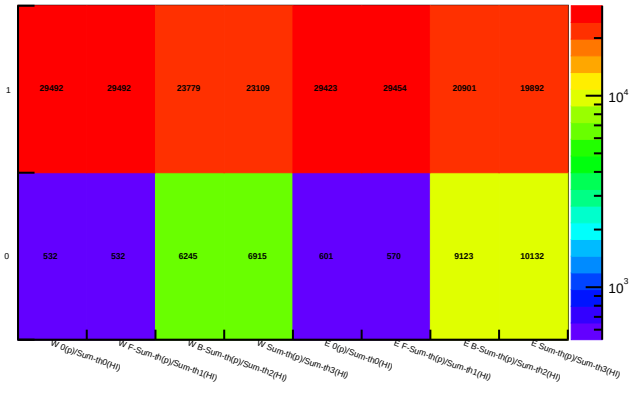
VT201 Input Ch2: ZDC Tac Diff



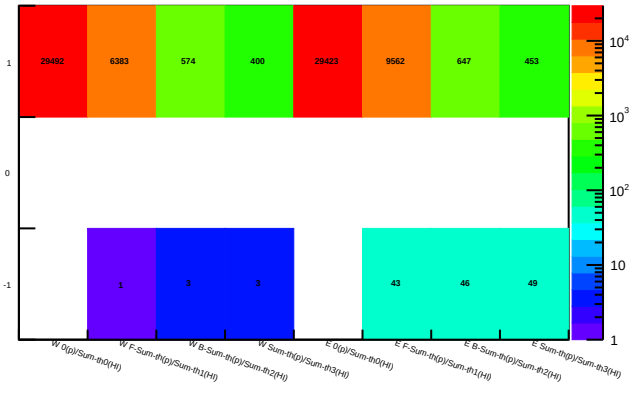
VT201 Input Ch2: ZDC Tac Diff



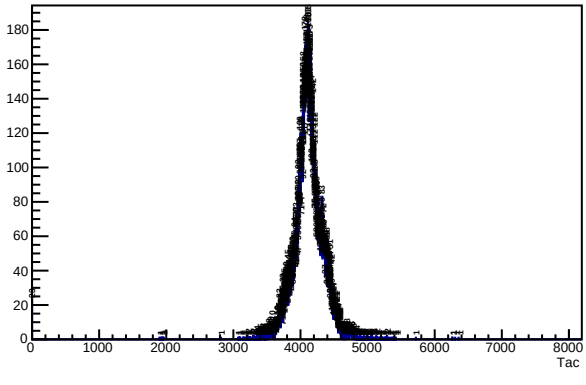
VT201 Input Ch2: ZDC Adc Sum Th



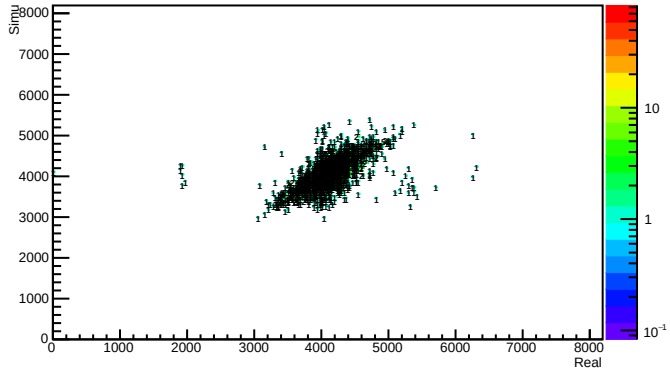
VT201 Input Ch2: ZDC Adc Sum Th (Real-Simu)



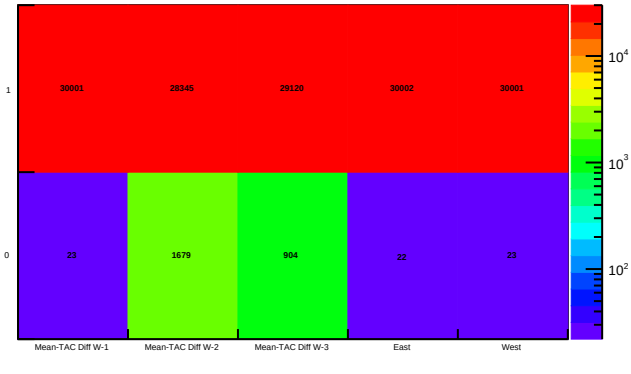
VT201 Input Ch4: VPD Tac Diff



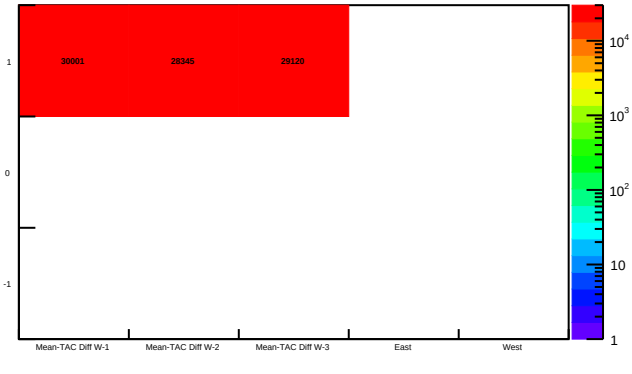
VT201 Input Ch4: VPD Tac Diff

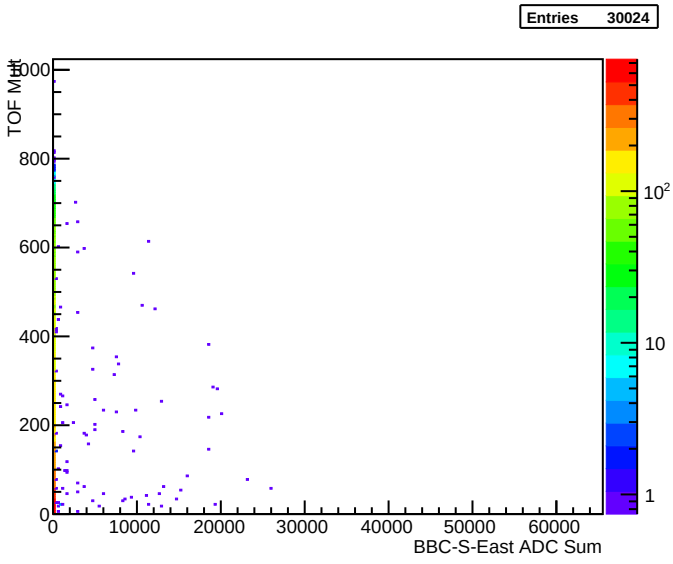


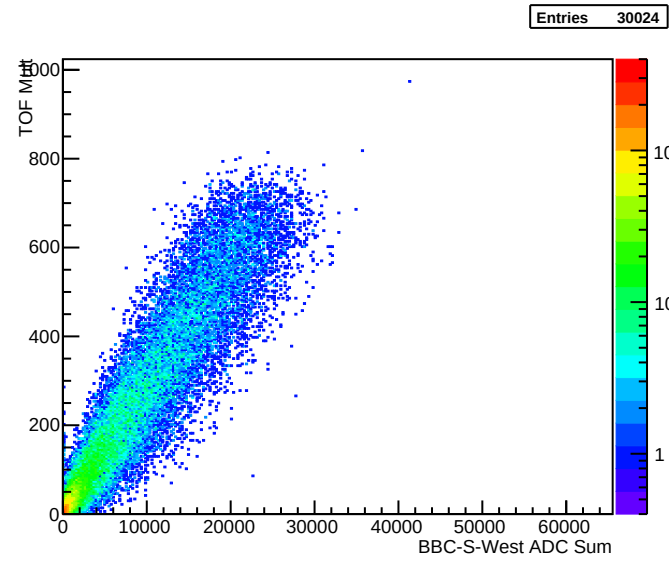
VT201 Input Ch4: VPD Adc Sum Th

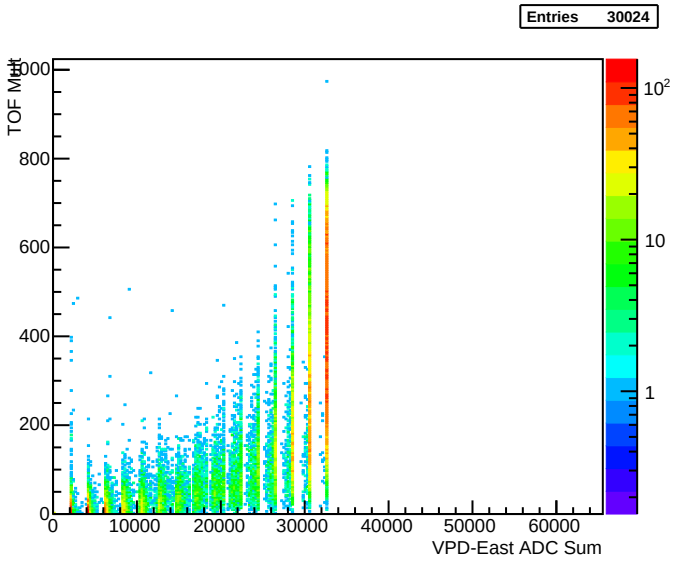


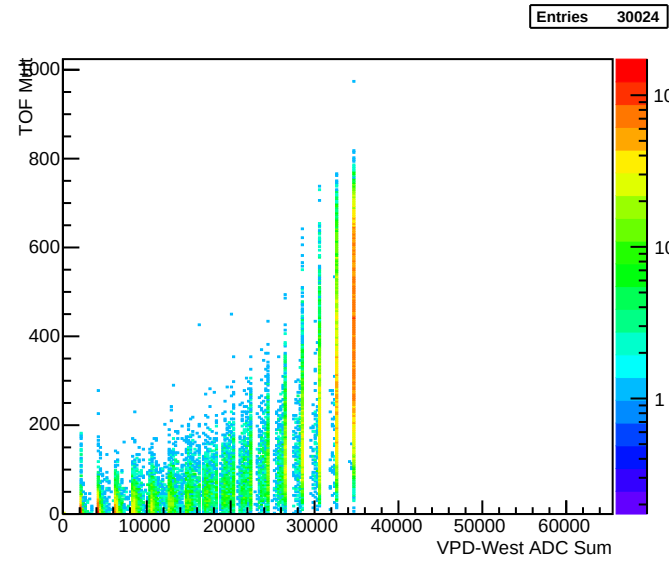
VT201 Input Ch4: VPD Adc Sum Th(Real-Simu)

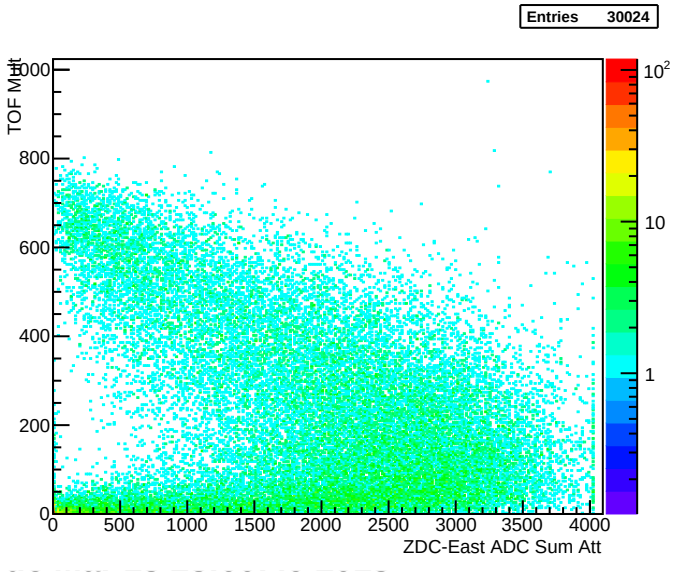


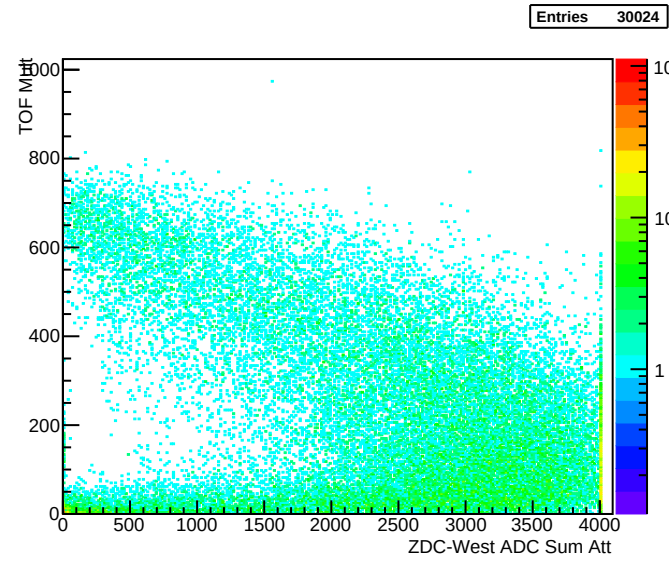

Entries 30024
TOF Mult
BBC-S-East ADC Sum

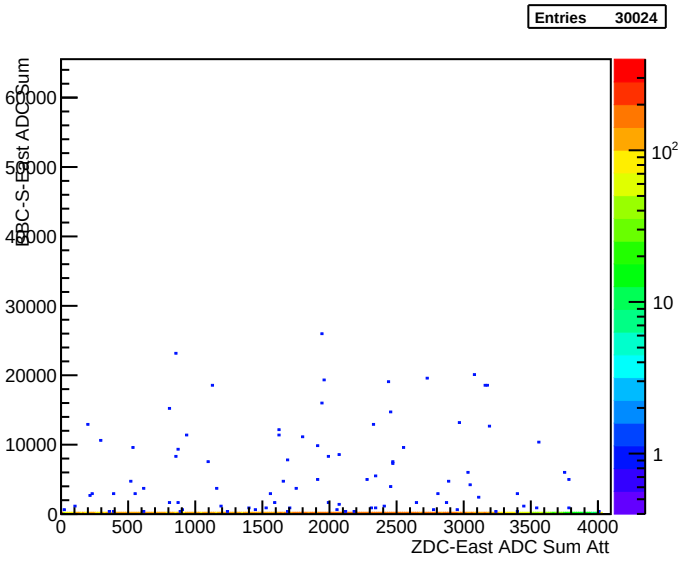

Entries 30024
TOF Mult
BBC-S-West ADC Sum

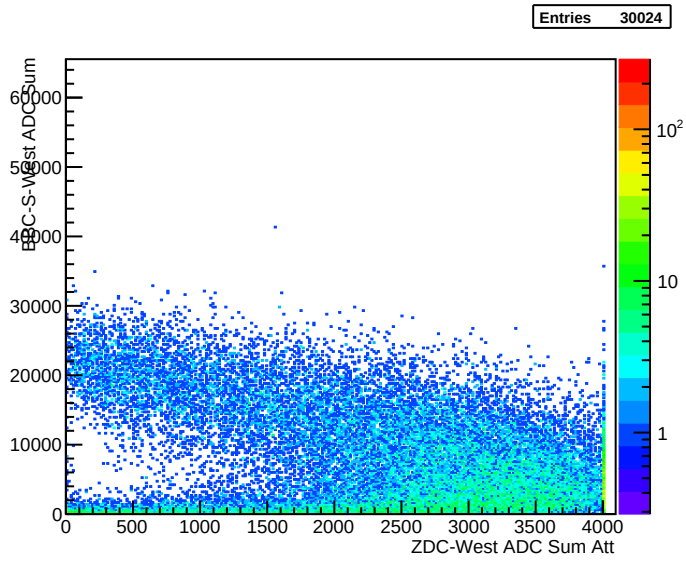

Entries 30024
TOF Mult
VPD-East ADC Sum

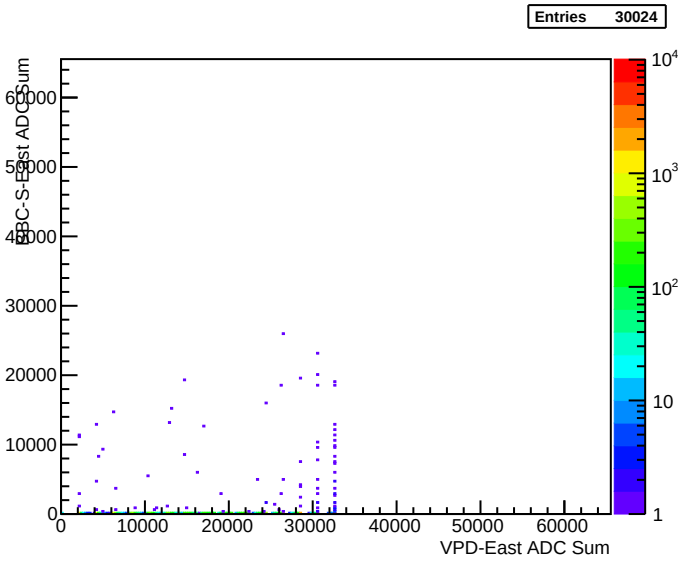

Entries 30024
TOF Mult
VPD-West ADC Sum

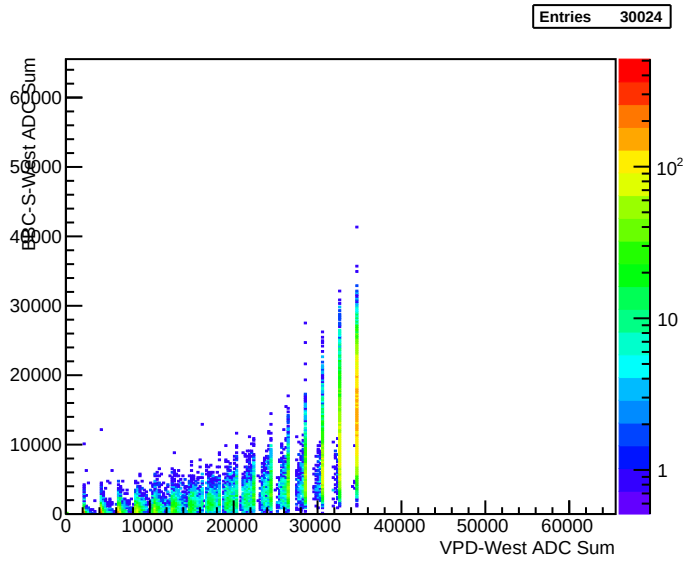

Entries 30024
TOF Mult
ZDC-East ADC Sum Att

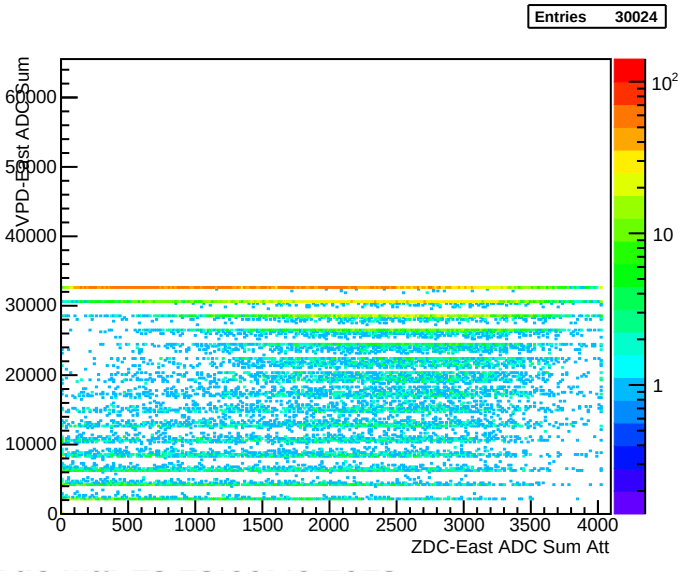

Entries 30024
TOF Mult
ZDC-West ADC Sum Att

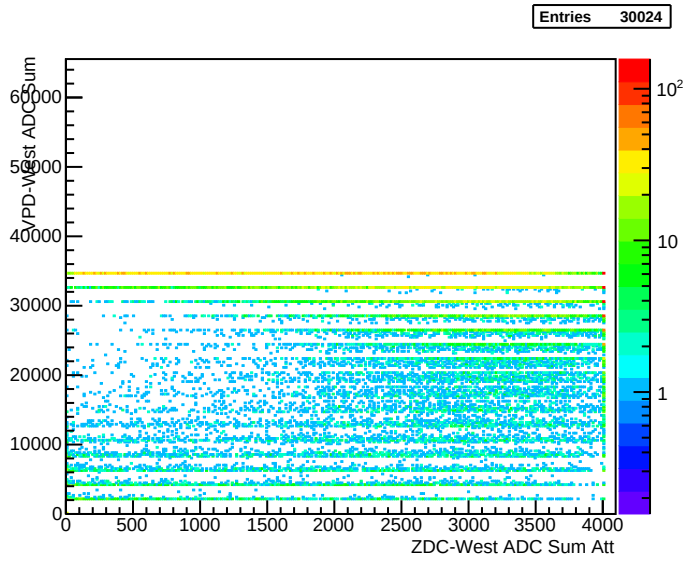

Entries 30024
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

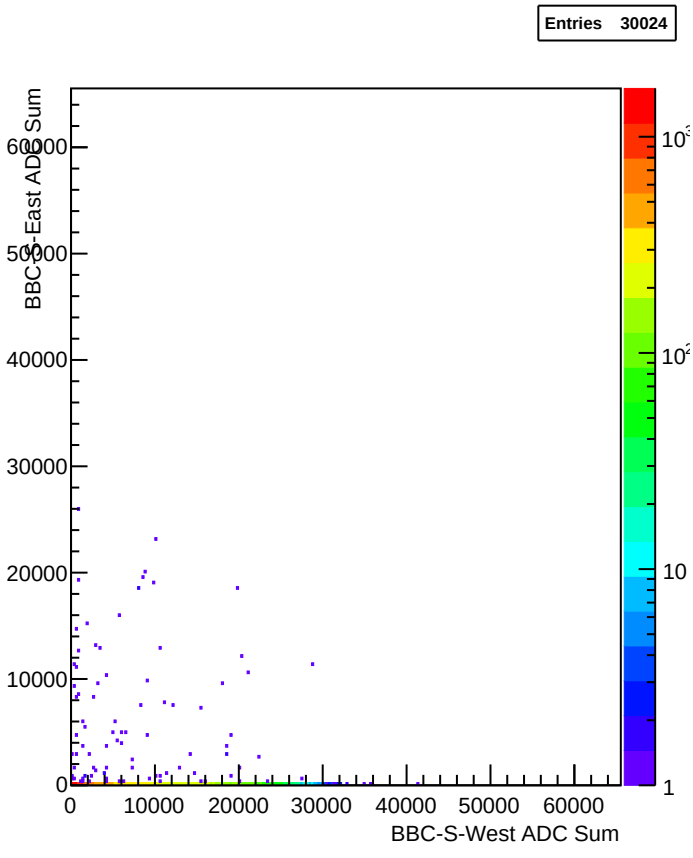

Entries 30024
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

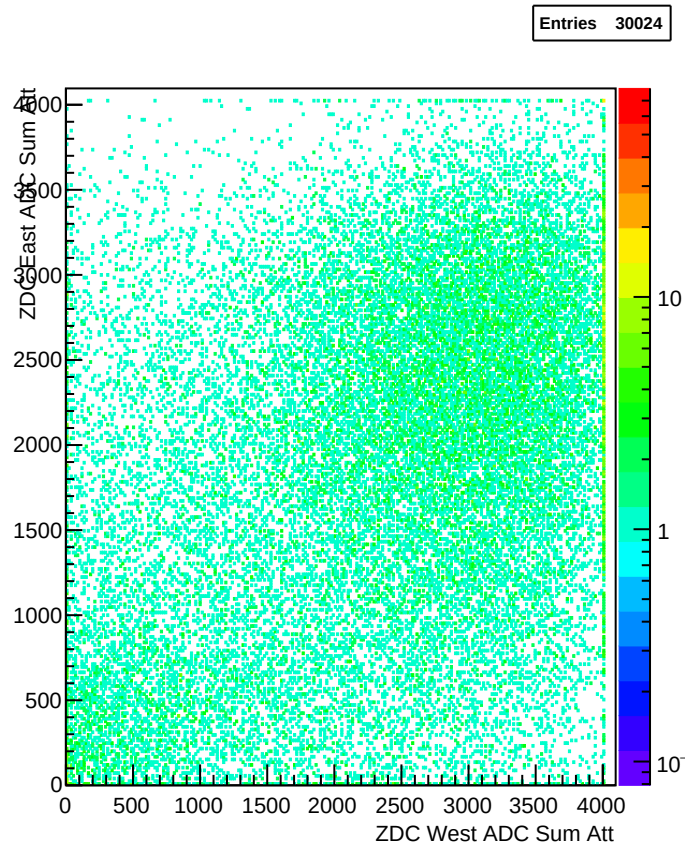

Entries 30024
BBC-S-East ADC Sum
VPD-East ADC Sum

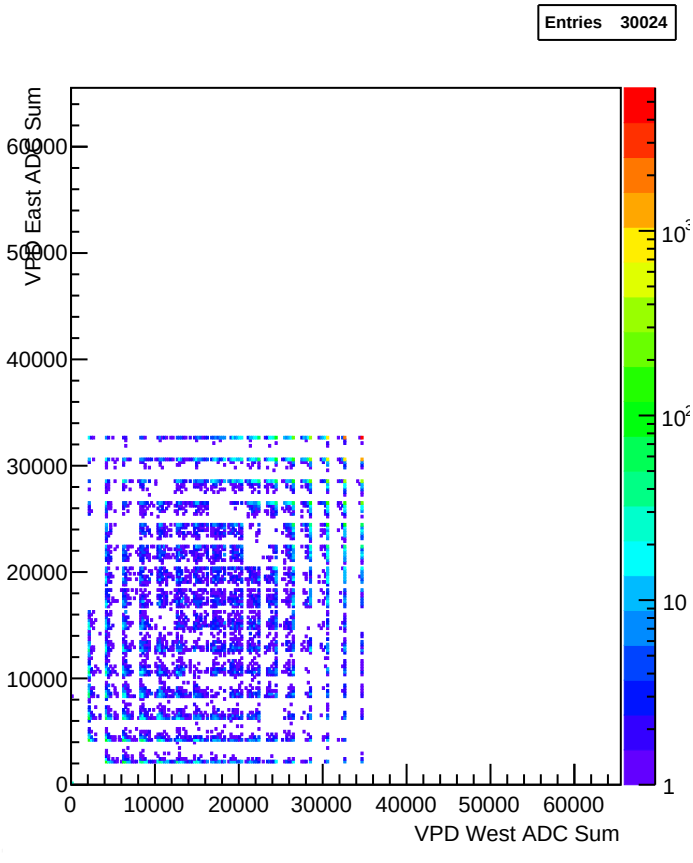

Entries 30024
BBC-S-West ADC Sum
VPD-West ADC Sum

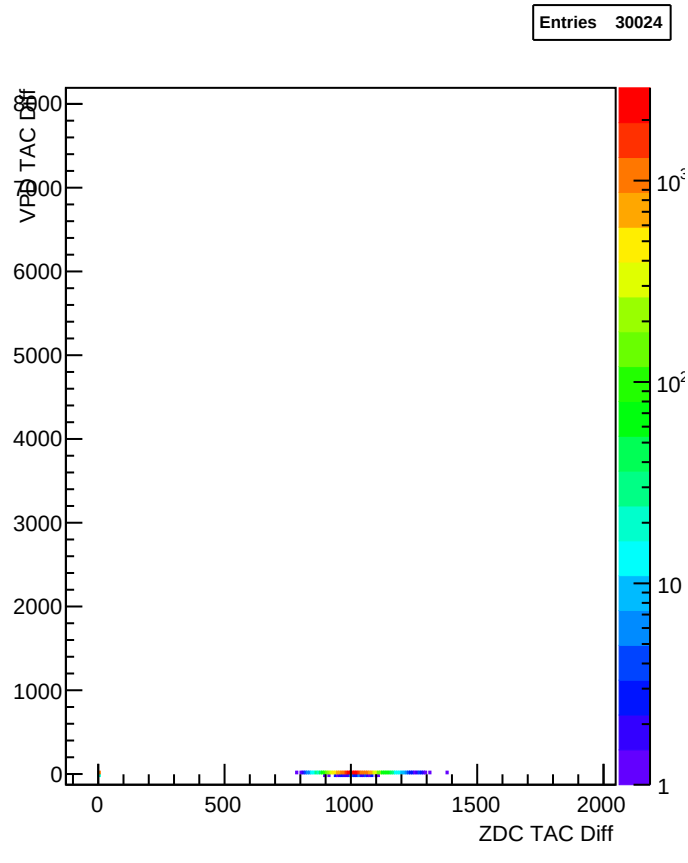

Entries 30024
VPD-East ADC Sum
ZDC-East ADC Sum Att

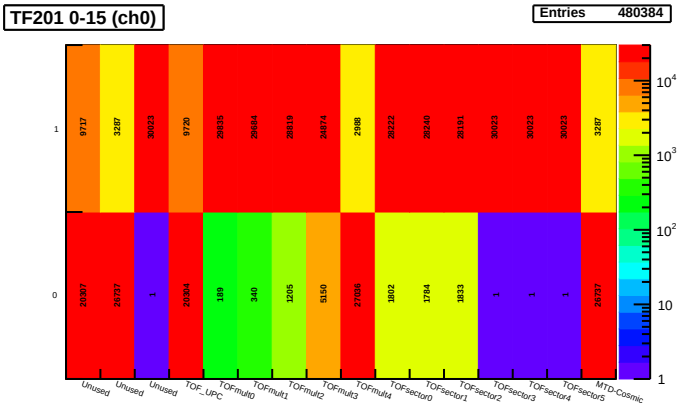

Entries 30024
VPD-West ADC Sum
ZDC-West ADC Sum Att

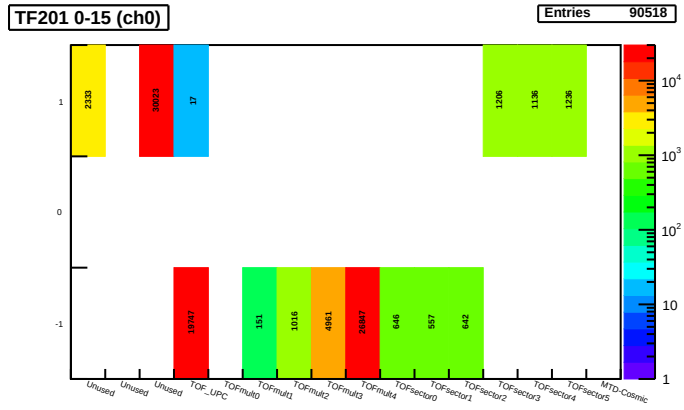

Entries 30024
BBC-S-East ADC Sum
BBC-S-West ADC Sum

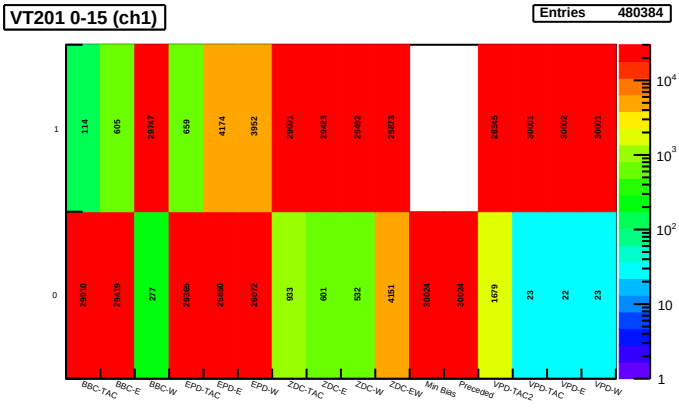

Entries 30024
ZDC East ADC Sum Att
ZDC West ADC Sum Att

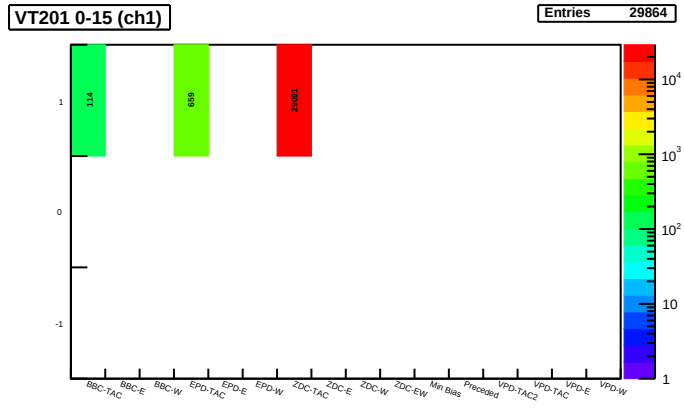

Entries 30024
VPD East ADC Sum
VPD West ADC Sum

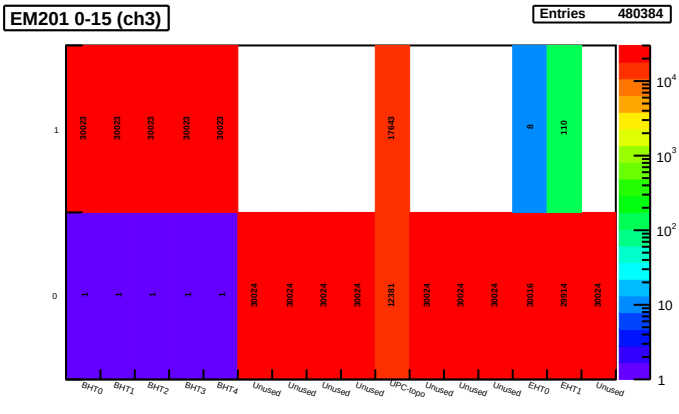

Entries 30024
VPD TAC Diff
ZDC TAC Diff

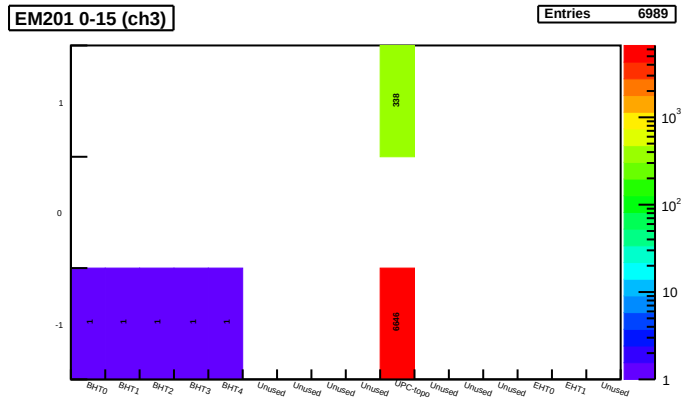

TF201 0-15 (ch0)
Entries 480384
9717 3287 30023 9720 29935 29684 28319 24974 2988 28222 28240 28191 30023 30023 30023 3287
20307 26737 1 20304 189 340 1205 5150 27606 1802 1784 1833 1 1 1 26737
Unused Unused Unused TOF_UPC TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

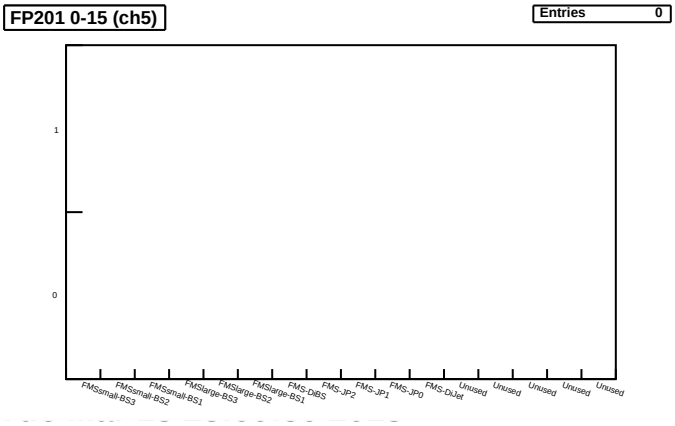

TF201 0-15 (ch0)
Entries 90518
2333 30023 17 1206 1136 1236
19747 151 1016 4961 26947 646 557 642
Unused Unused Unused TOF_UPC TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

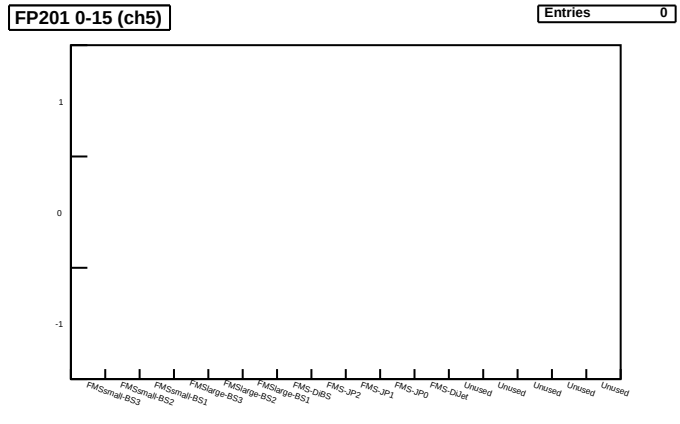

VT201 0-15 (ch1)
Entries 480384
114 605 29747 659 4174 3952 29091 29423 29482 25973 29345 30001 30002 30001
29930 29419 277 29365 25830 26072 933 601 532 4151 30024 30024 1679 23 22 23
BBC-TAC BBC-E BBC-W EPD-TAC EPD-E EPD-W ZDC-TAC ZDC-E ZDC-W ZDC-EW Min Bias Preceded VPD-TAC2 VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 29864
114 659 29091
BBC-TAC BBC-E BBC-W EPD-TAC EPD-E EPD-W ZDC-TAC ZDC-E ZDC-W ZDC-EW Min Bias Preceded VPD-TAC2 VPD-TAC VPD-E VPD-W


EM201 0-15 (ch3)
Entries 480384
30023 30023 30023 30023 30023 17543 8 110
1 1 1 1 1 30024 30024 30024 30024 12391 30024 30024 30024 30016 29914 30024
BHT0 BHT1 BHT2 BHT3 BHT4 Unused Unused Unused Unused UPC-topo Unused Unused Unused EHT0 EHT1 Unused


EM201 0-15 (ch3)
Entries 6989
338
1 1 1 1 1 6546
BHT0 BHT1 BHT2 BHT3 BHT4 Unused Unused Unused Unused UPC-topo Unused Unused Unused EHT0 EHT1 Unused


FP201 0-15 (ch5)
Entries 0
FMSsmall-BS3 FMSsmall-BS2 FMSsmall-BS1 FMSlarge-BS3 FMSlarge-BS2 FMSlarge-BS1 FMS-DiBS FMS-JP2 FMS-JP1 FMS-JP0 FMS-DiJet Unused Unused Unused Unused Unused


FP201 0-15 (ch5)
Entries 0
FMSsmall-BS3 FMSsmall-BS2 FMSsmall-BS1 FMSlarge-BS3 FMSlarge-BS2 FMSlarge-BS1 FMS-DiBS FMS-JP2 FMS-JP1 FMS-JP0 FMS-DiJet Unused Unused Unused Unused Unused