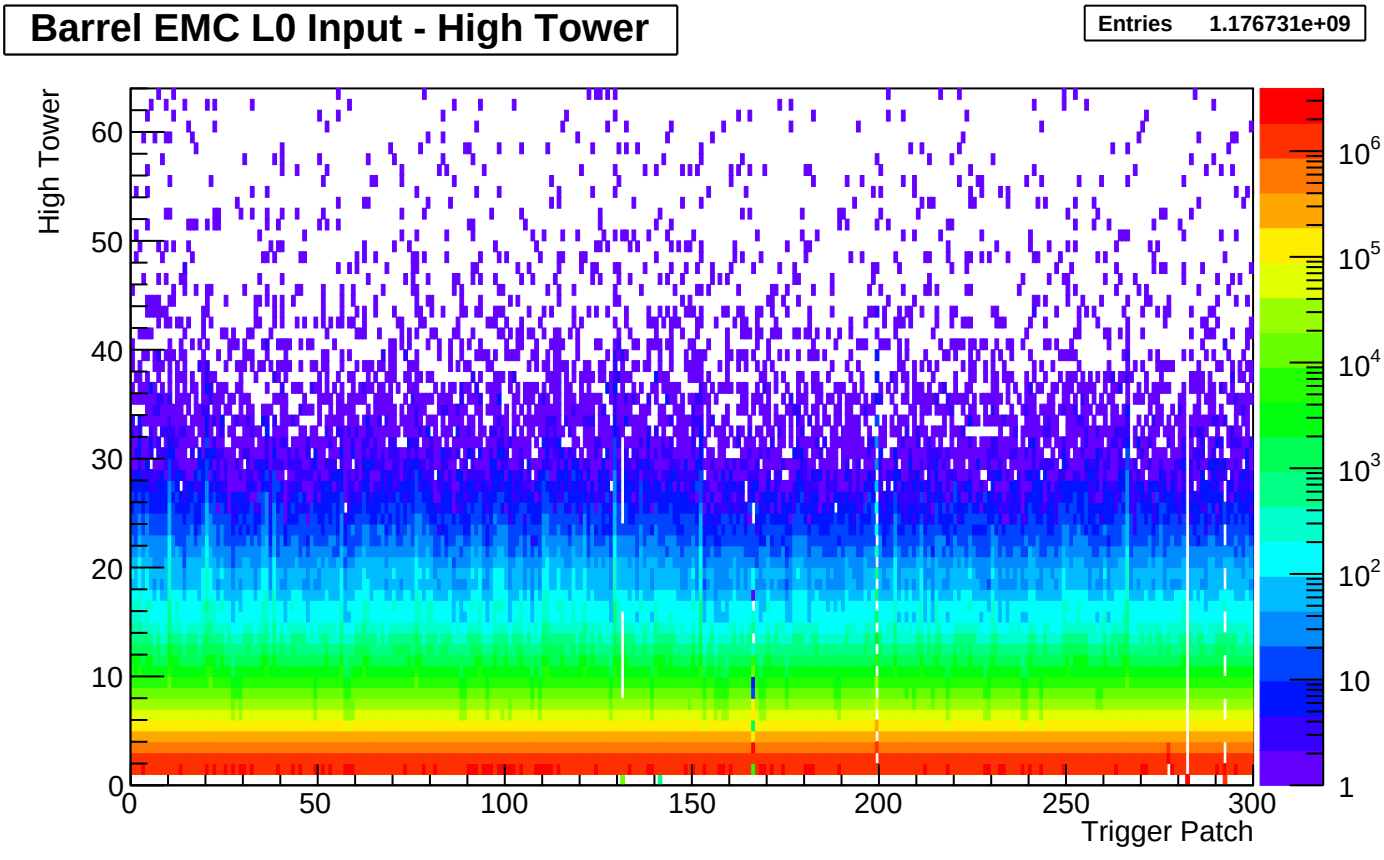
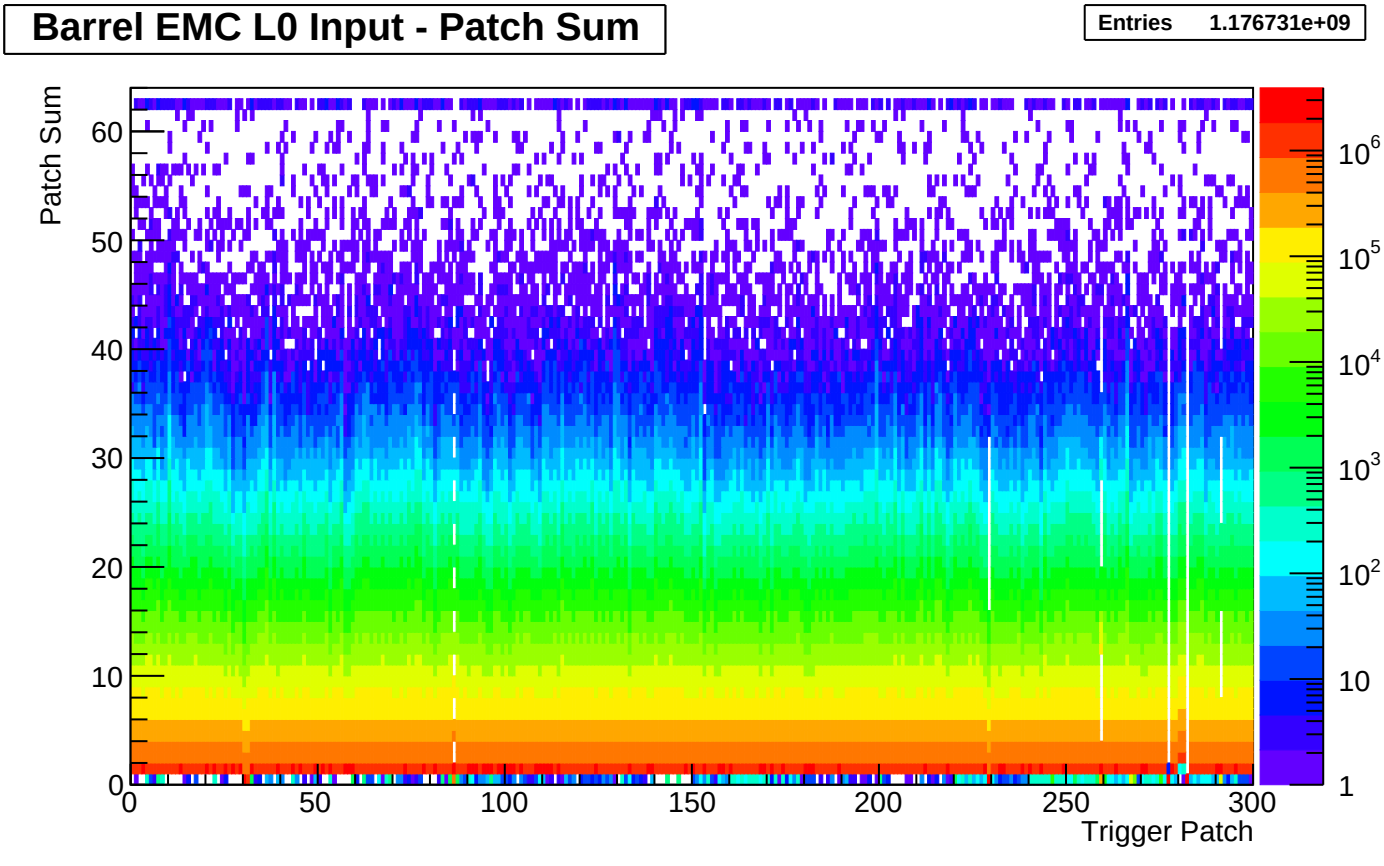
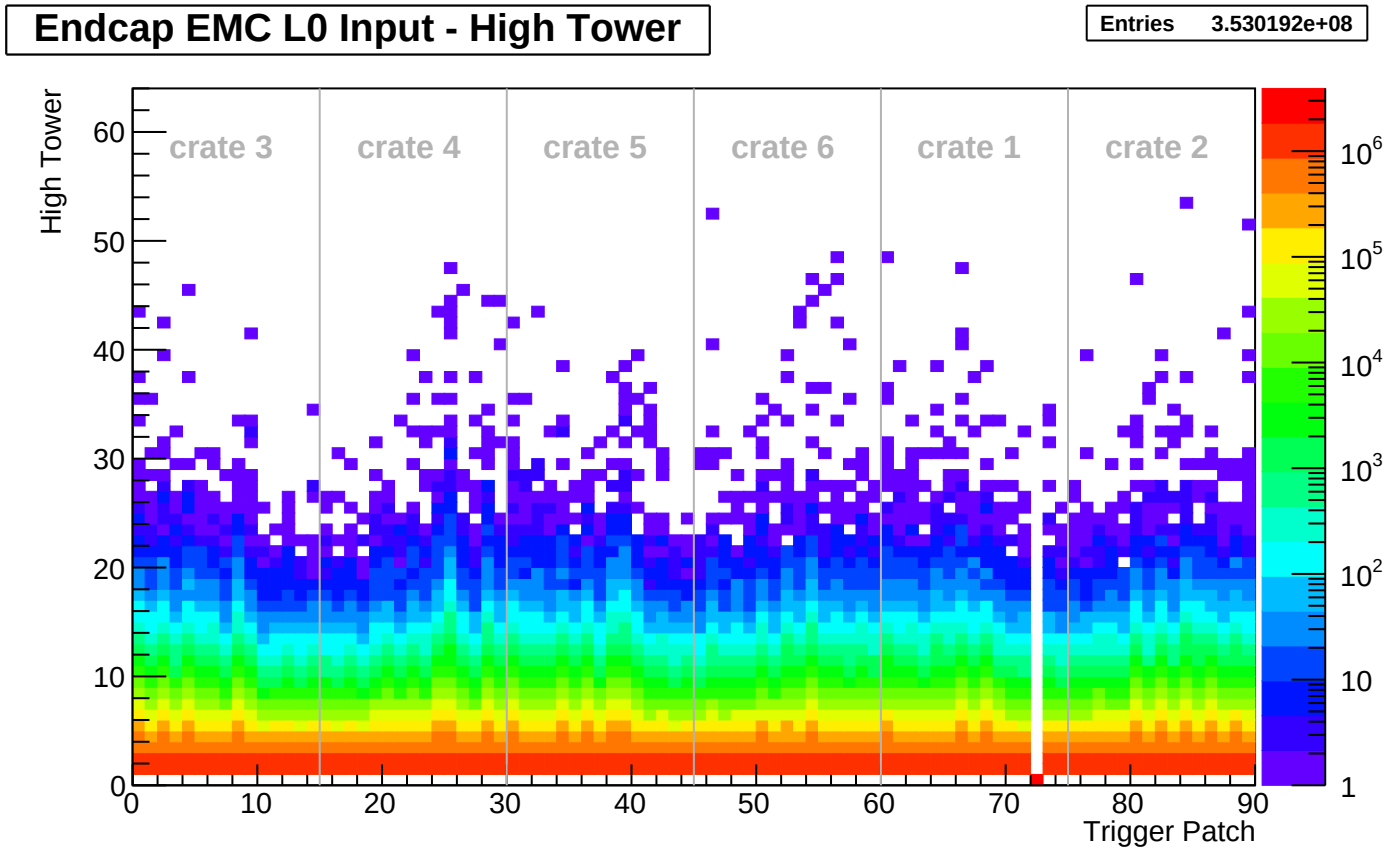
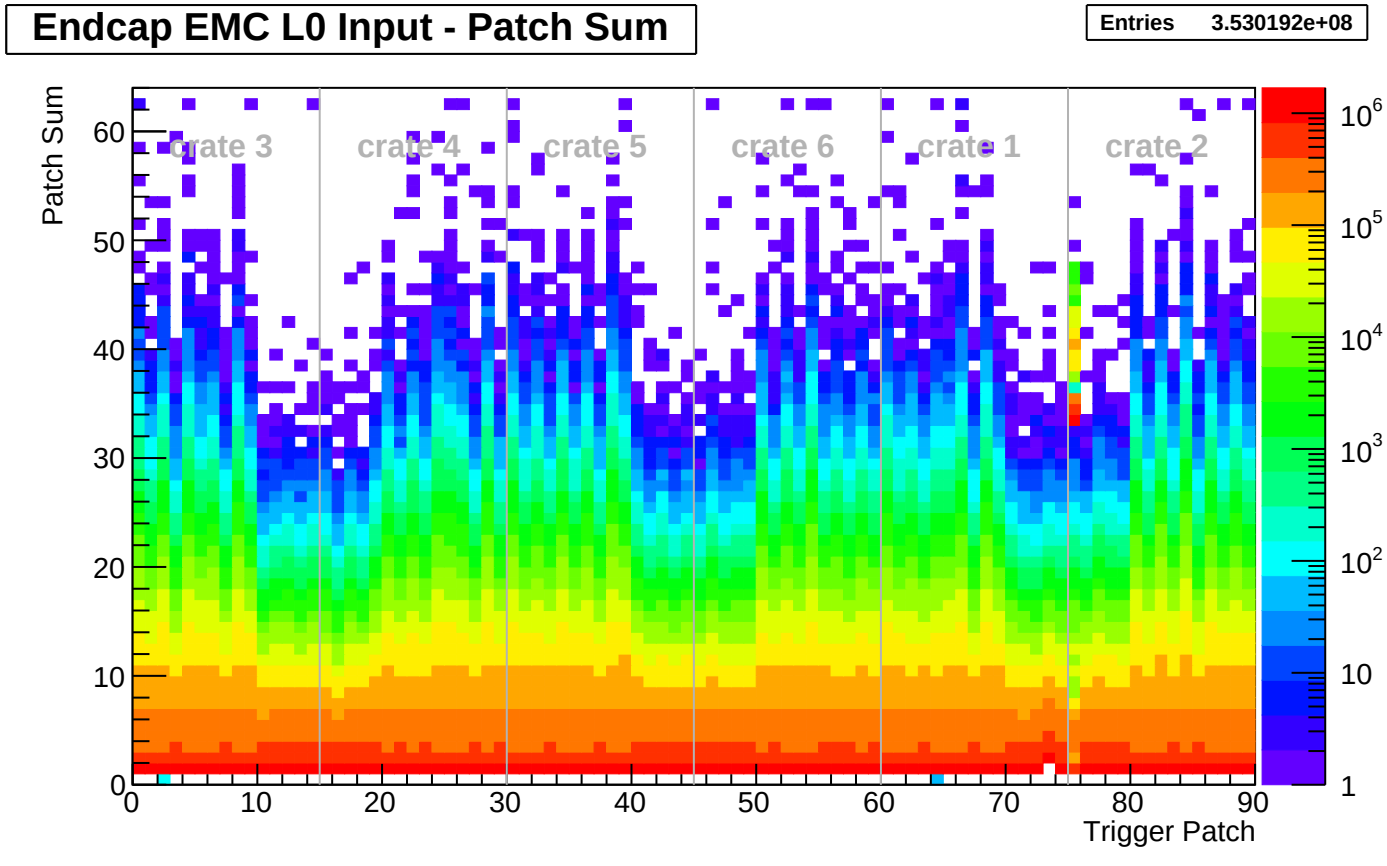
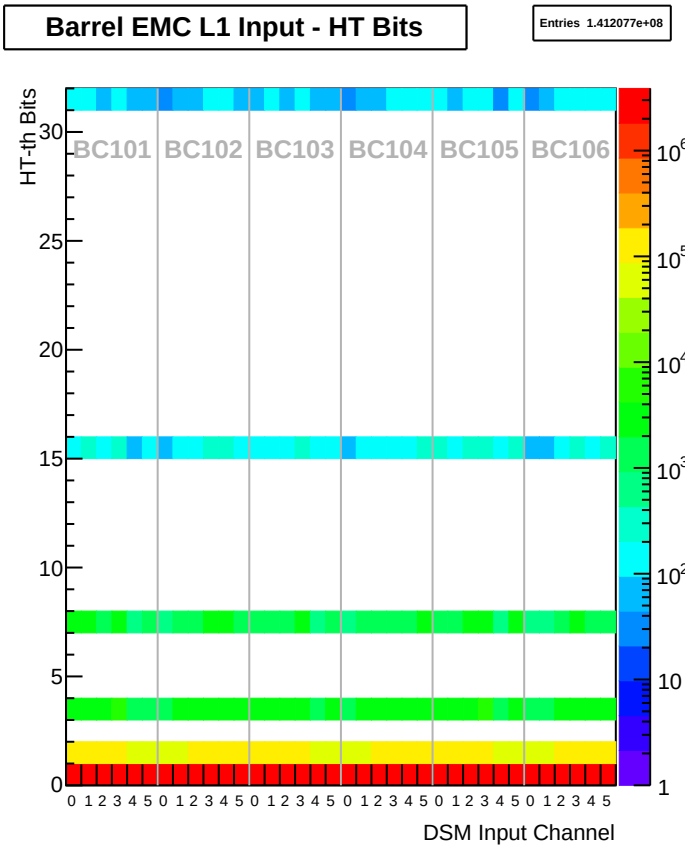
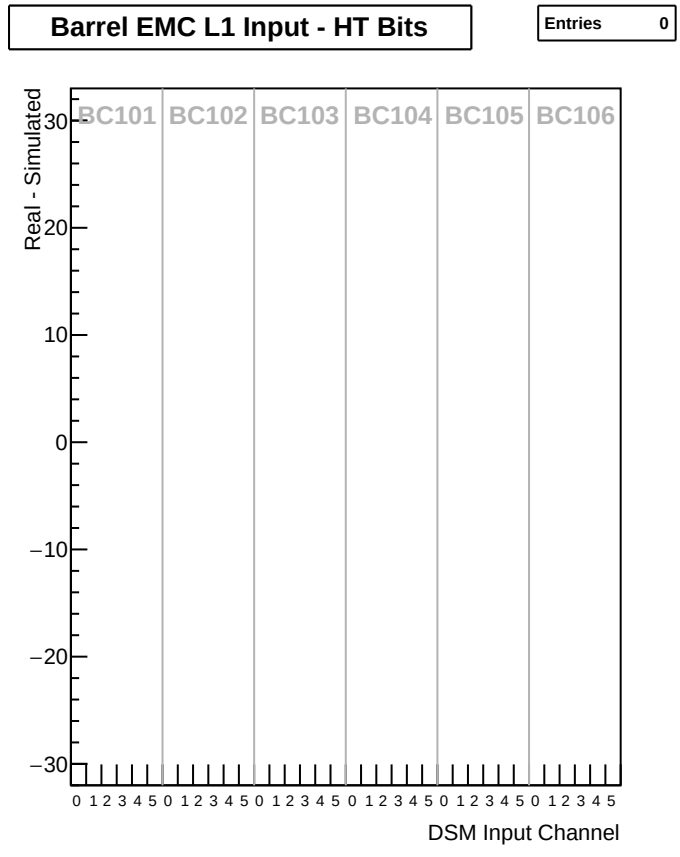

Barrel EMC L0 Input - High Tower
Entries 1.176731e+09
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$
$10^6$

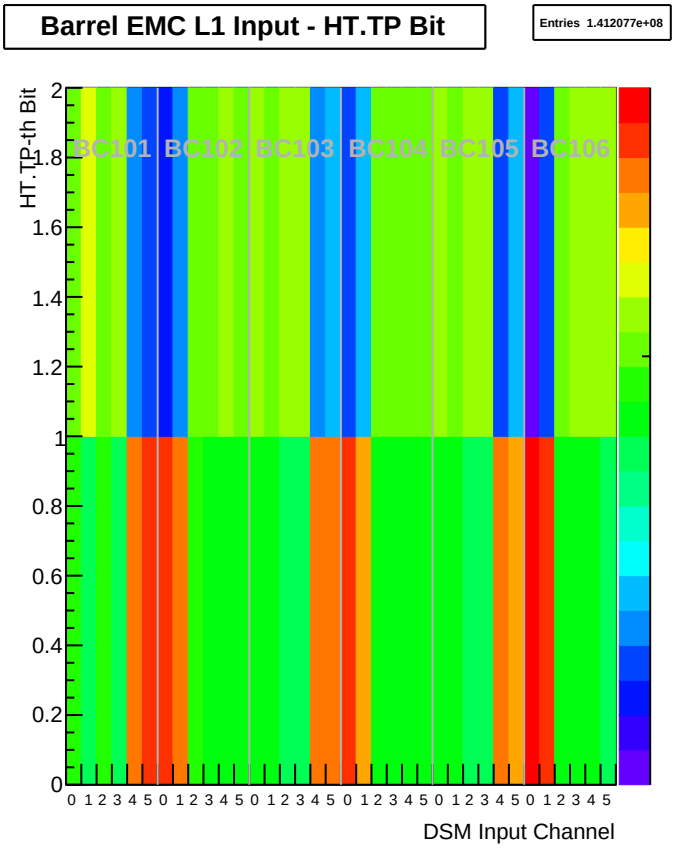

Barrel EMC L0 Input - Patch Sum
Entries 1.176731e+09
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$
$10^6$

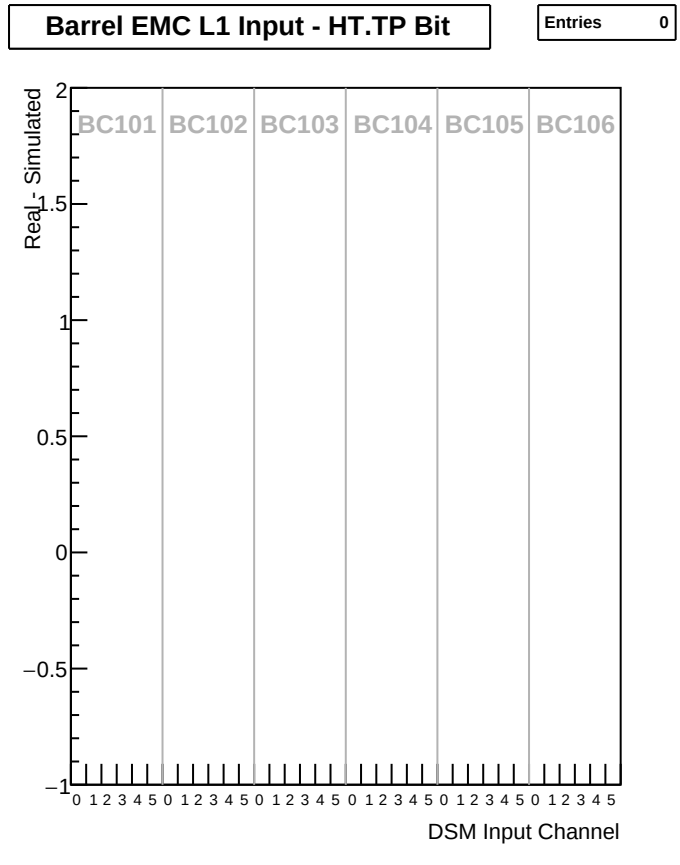

Endcap EMC L0 Input - High Tower
Entries 3.530192e+08
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

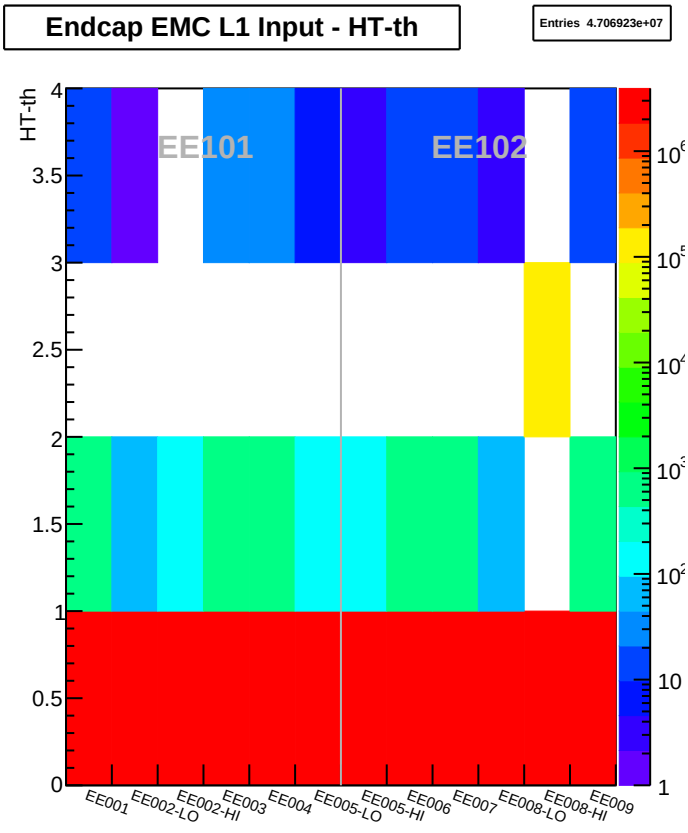

Endcap EMC L0 Input - Patch Sum
Entries 3.530192e+08
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

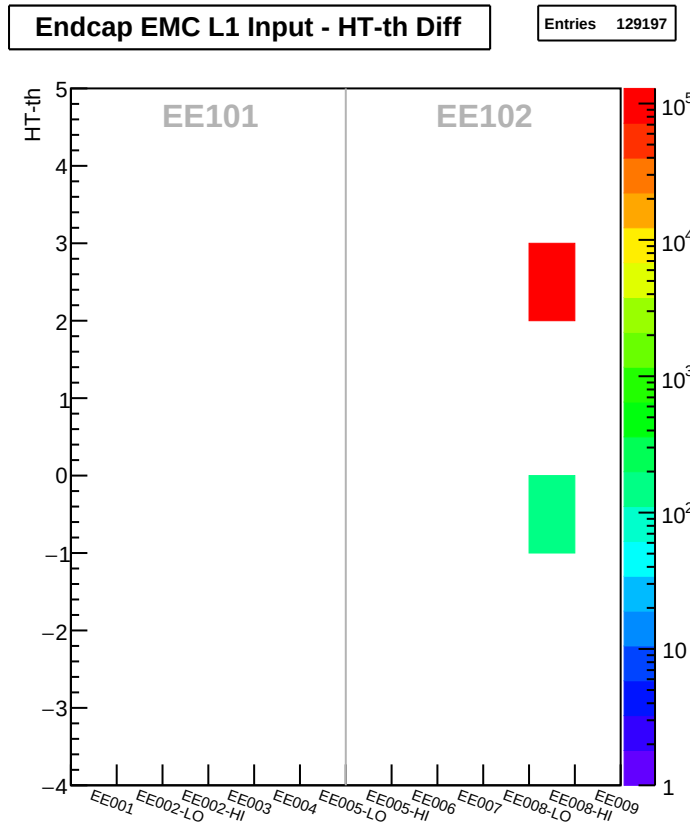

Barrel EMC L1 Input - HT Bits
Entries 1.412077e+08
HT-th Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

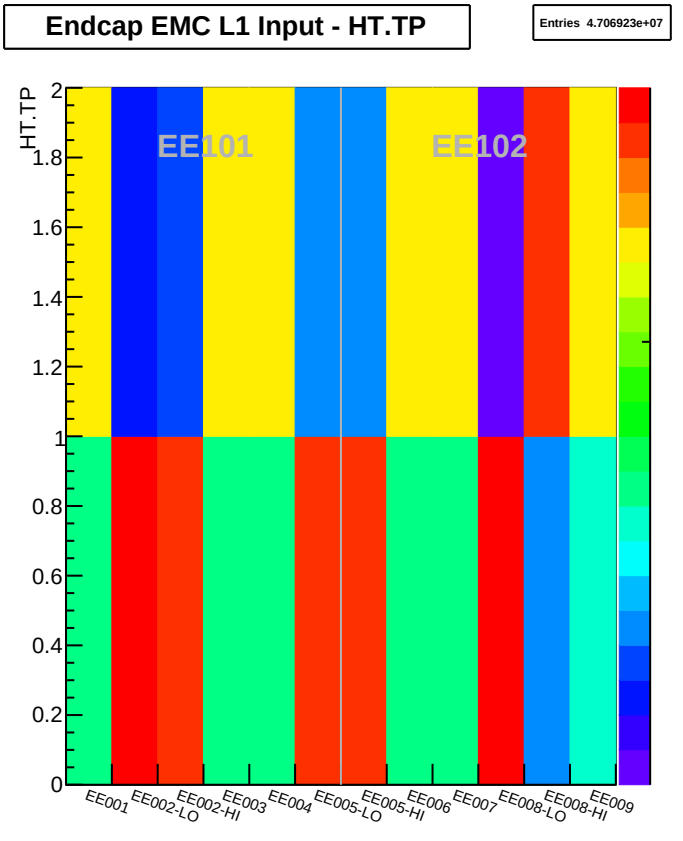

Barrel EMC L1 Input - HT Bits
Entries 0
Real - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

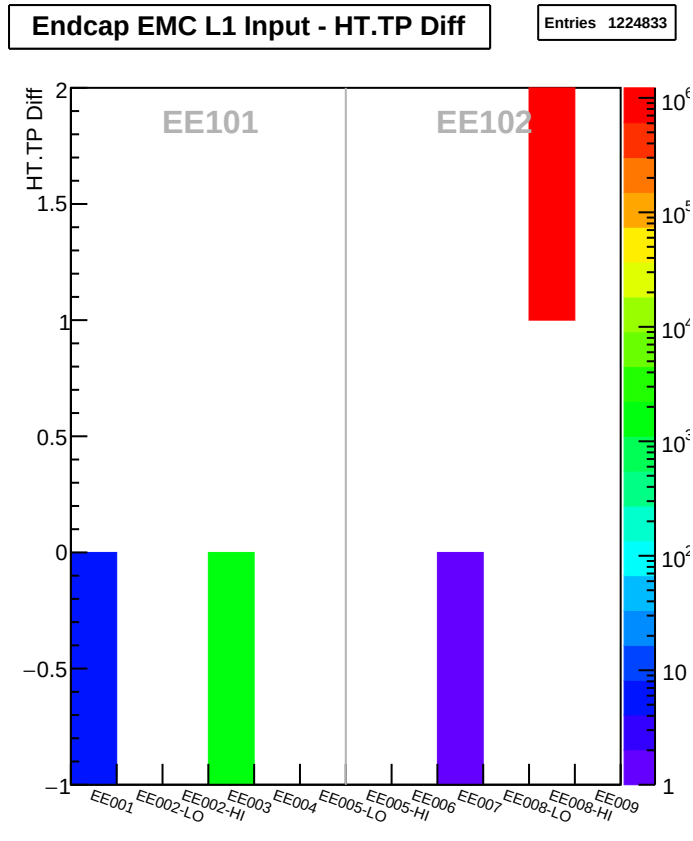

Barrel EMC L1 Input - HT.TP Bit
Entries 1.412077e+08
HT.TP-th Bit
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

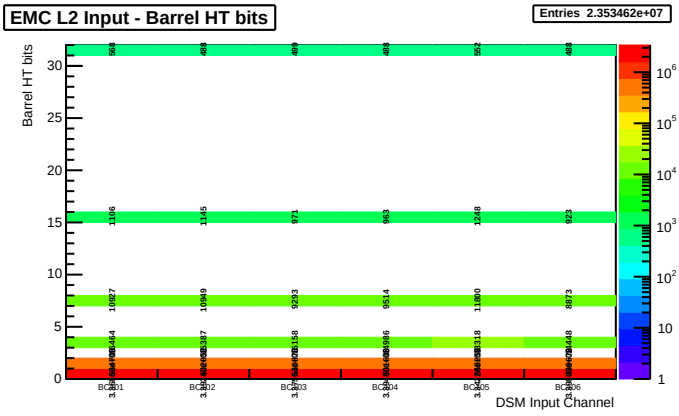

Barrel EMC L1 Input - HT.TP Bit
Entries 0
Real - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

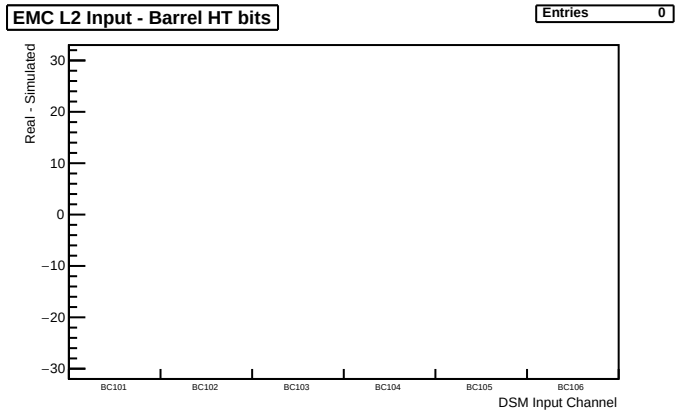

Endcap EMC L1 Input - HT-th
Entries 4.706923e+07
HT-th
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

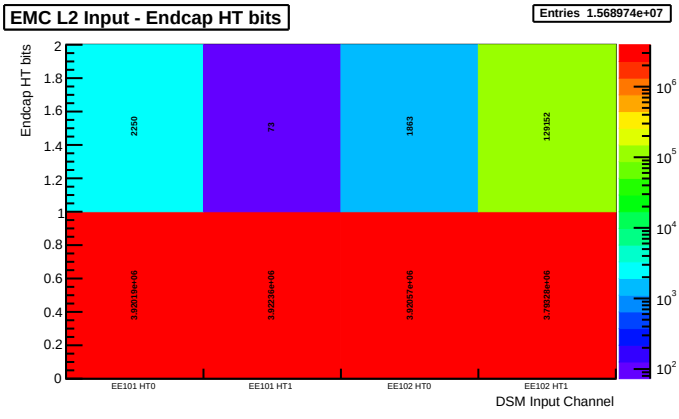

Endcap EMC L1 Input - HT-th Diff
Entries 129197
HT-th
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

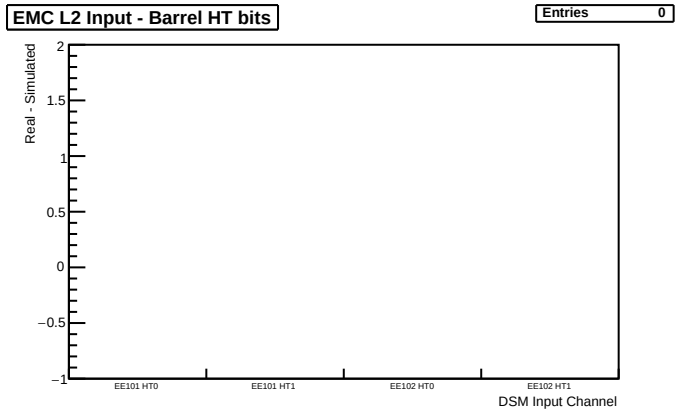

Endcap EMC L1 Input - HT.TP
Entries 4.706923e+07
HT.TP
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

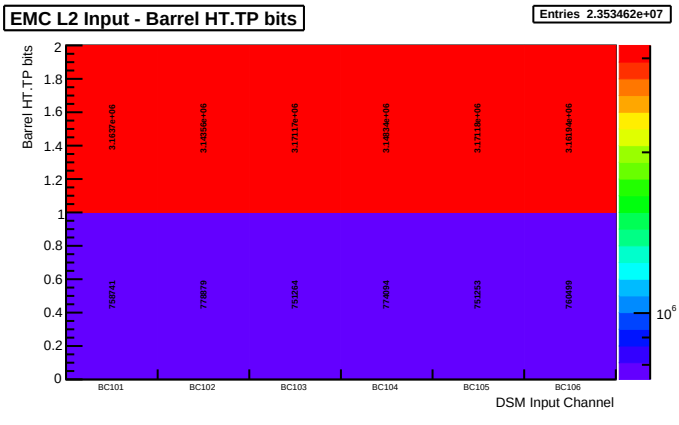

Endcap EMC L1 Input - HT.TP Diff
Entries 1224833
HT.TP Diff
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

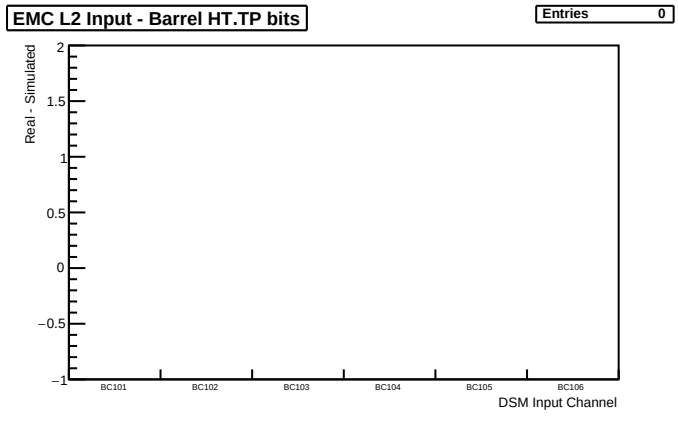

EMC L2 Input - Barrel HT bits
Entries 2.353462e+07
Barrel HT bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

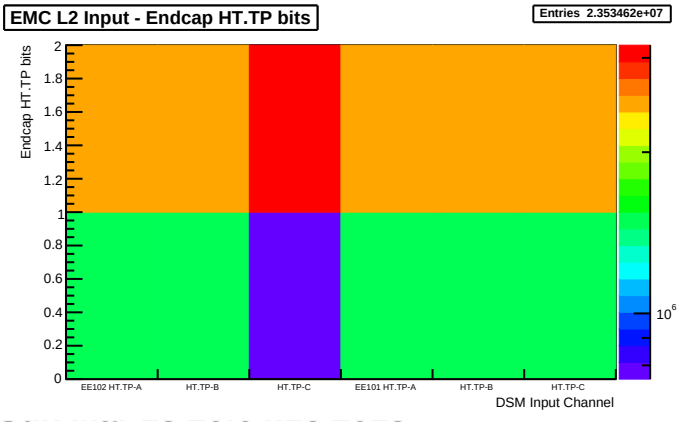

EMC L2 Input - Barrel HT bits
Entries 0
Real - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

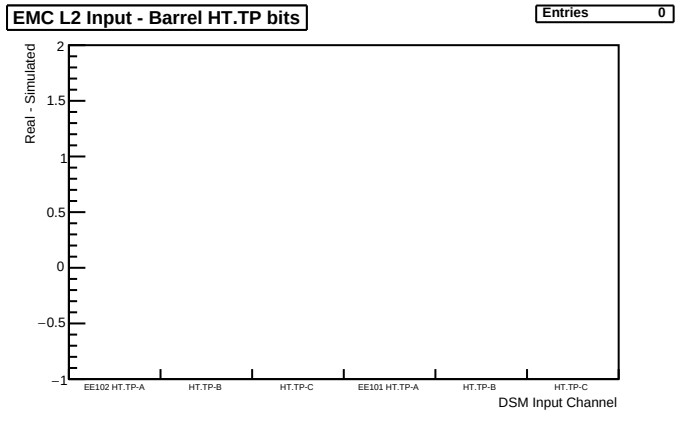

EMC L2 Input - Endcap HT bits
Entries 1.568974e+07
Endcap HT bits
DSM Input Channel
EE101 HT0
EE101 HT1
EE102 HT0
EE102 HT1

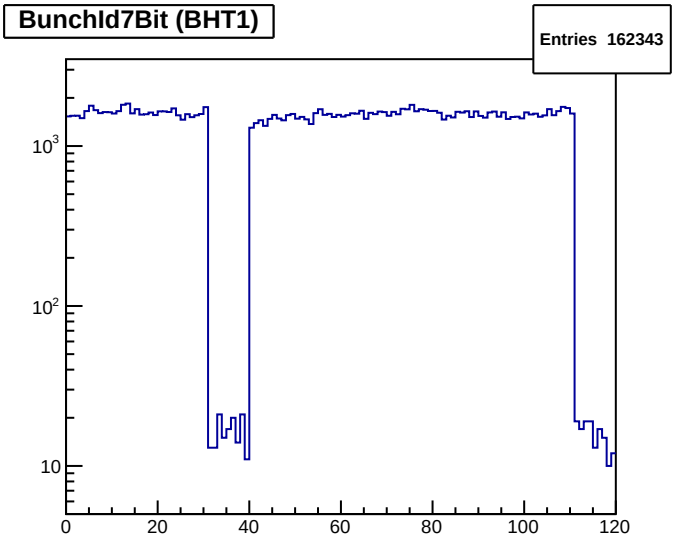

EMC L2 Input - Barrel HT bits
Entries 0
Real - Simulated
DSM Input Channel
EE101 HT0
EE101 HT1
EE102 HT0
EE102 HT1

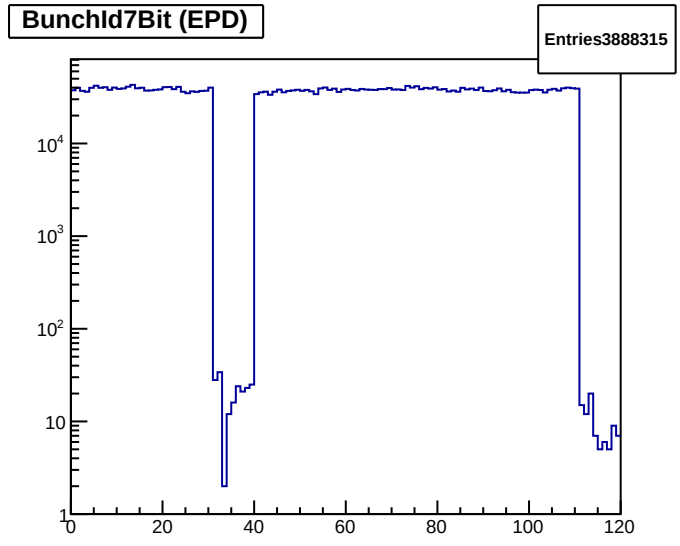

EMC L2 Input - Barrel HT.TP bits
Entries 2.353462e+07
Barrel HT.TP bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

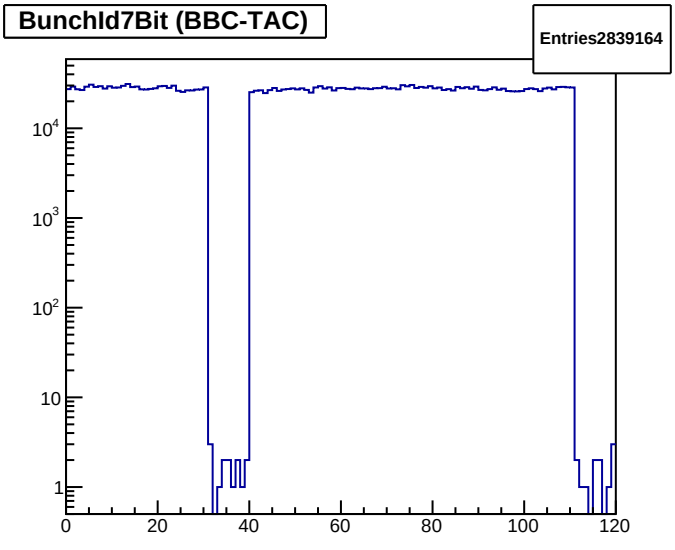

EMC L2 Input - Barrel HT.TP bits
Entries 0
Real - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106

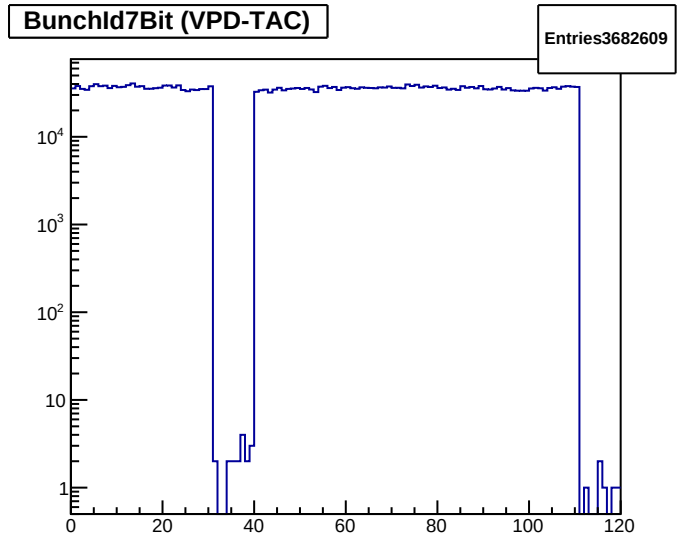

EMC L2 Input - Endcap HT.TP bits
Entries 2.353462e+07
Endcap HT.TP bits
DSM Input Channel
EE102 HT.TP-A
HT.TP-B
HT.TP-C
EE101 HT.TP-A
HT.TP-B
HT.TP-C

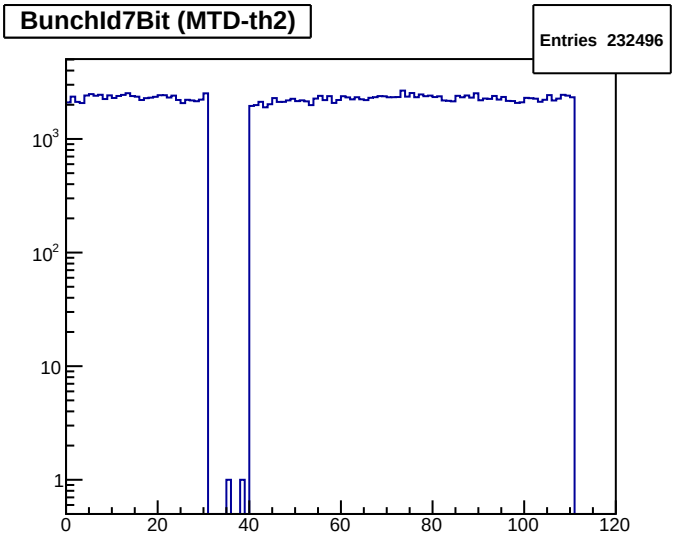

EMC L2 Input - Barrel HT.TP bits
Entries 0
Real - Simulated
DSM Input Channel
EE102 HT.TP-A
HT.TP-B
HT.TP-C
EE101 HT.TP-A
HT.TP-B
HT.TP-C

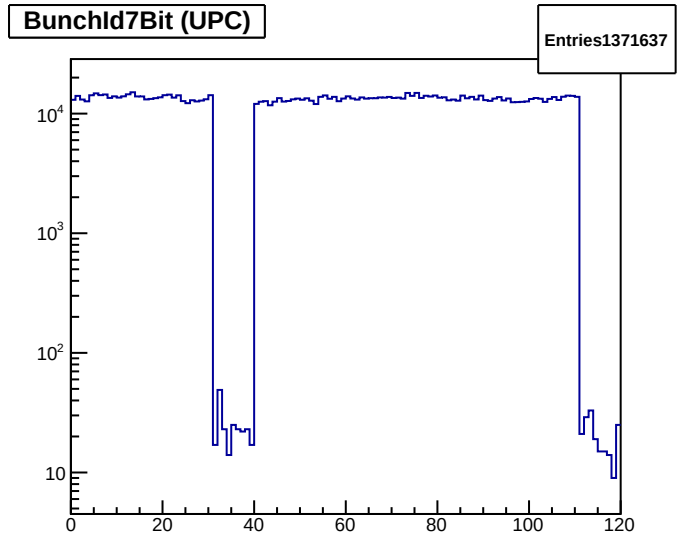

BunchId7Bit (BHT1)
Entries 162343
$10^3$
$10^2$
10
0
20
40
60
80
100
120

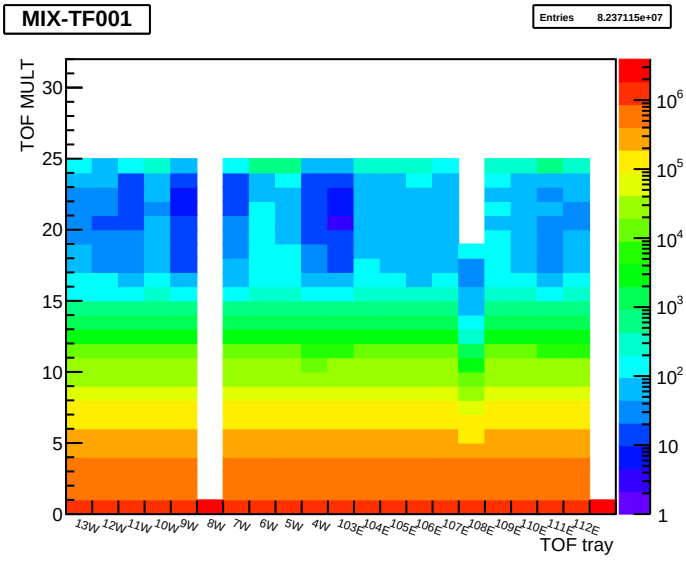

BunchId7Bit (EPD)
Entries3888315
$10^4$
$10^3$
$10^2$
10
1
0
20
40
60
80
100
120

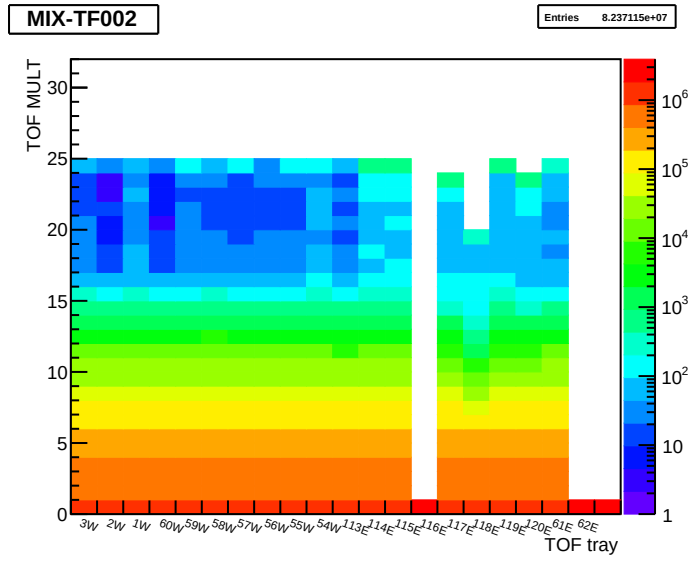

BunchId7Bit (BBC-TAC)
Entries2839164
$10^4$
$10^3$
$10^2$
10
1
0
20
40
60
80
100
120

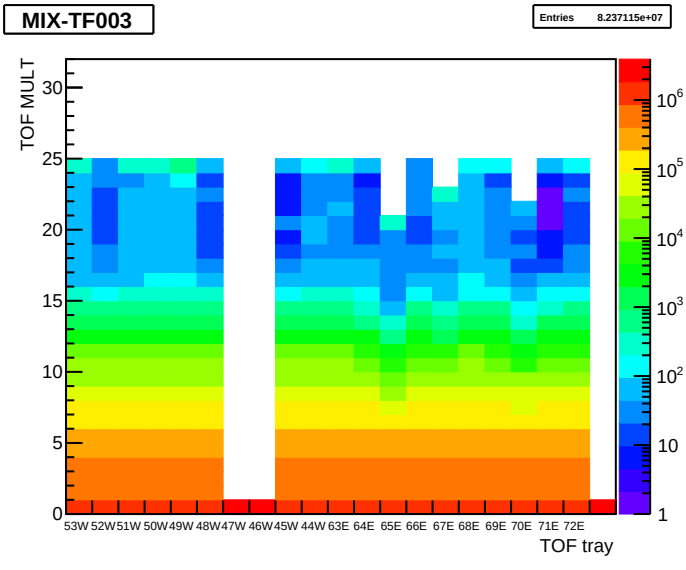

BunchId7Bit (VPD-TAC)
Entries3682609
$10^4$
$10^3$
$10^2$
10
1
0
20
40
60
80
100
120

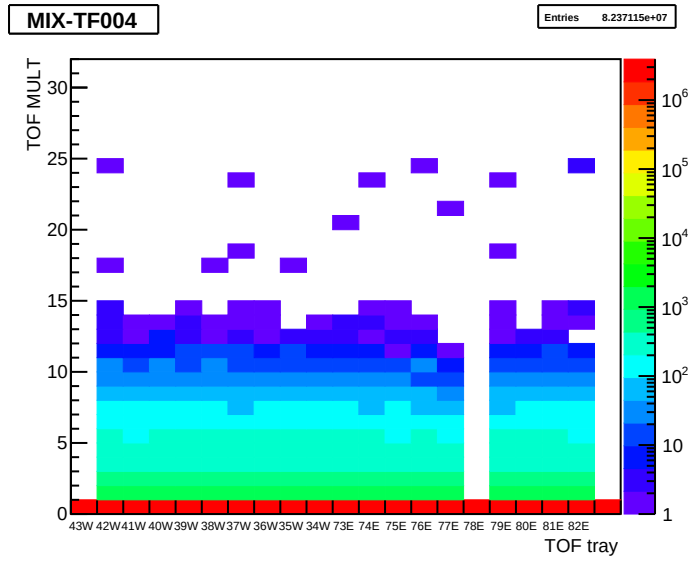

BunchId7Bit (MTD-th2)
Entries 232496
$10^3$
$10^2$
10
1
0
20
40
60
80
100
120

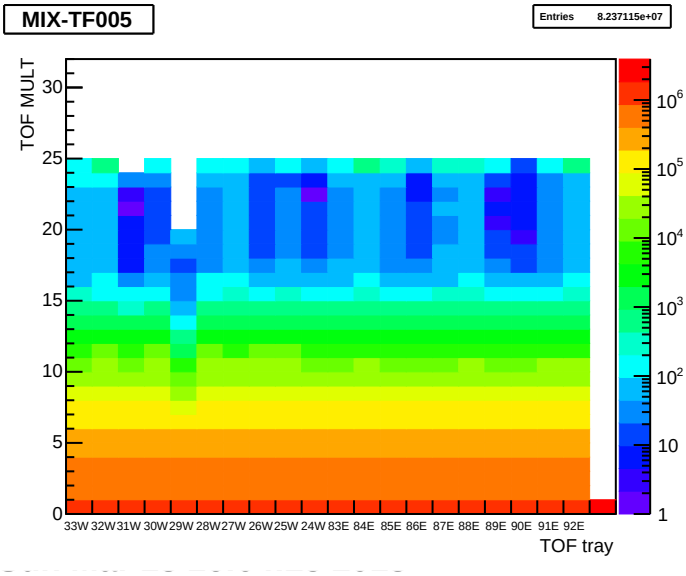

BunchId7Bit (UPC)
Entries1371637
$10^4$
$10^3$
$10^2$
10
0
20
40
60
80
100
120

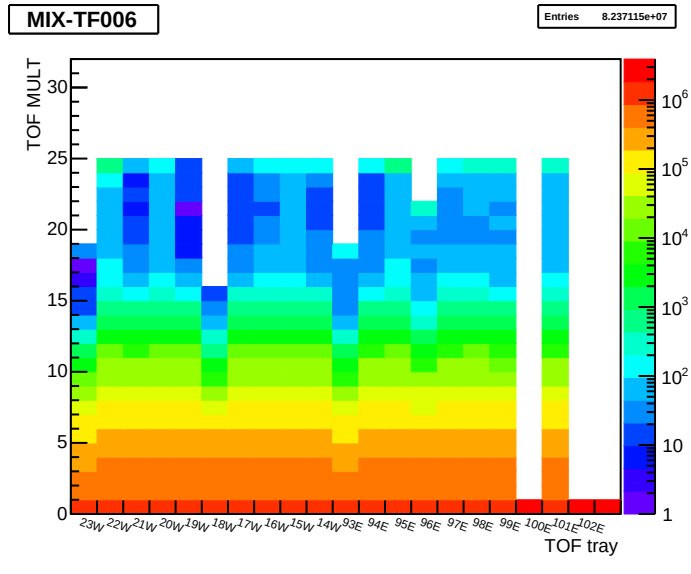

MIX-TF001
Entries 8.237115e+07
TOF MULT
TOF tray
13W 12W 11W 10W 9W 8W 7W 6W 5W 4W 103E 104E 105E 106E 107E 108E 109E 110E 111E 112E

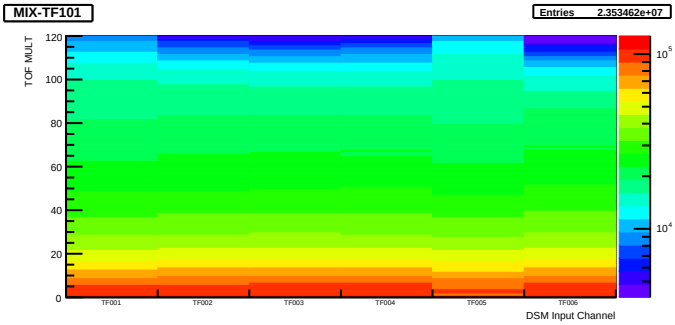

MIX-TF002
Entries 8.237115e+07
TOF MULT
TOF tray
3W 2W 1W 60W 59W 58W 57W 56W 55W 54W 113E 114E 115E 116E 117E 118E 119E 120E 61E 62E

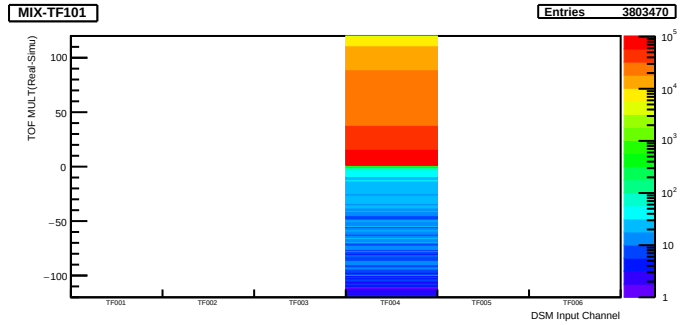

MIX-TF003
Entries 8.237115e+07
TOF MULT
TOF tray
53W 52W 51W 50W 49W 48W 47W 46W 45W 44W 63E 64E 65E 66E 67E 68E 69E 70E 71E 72E

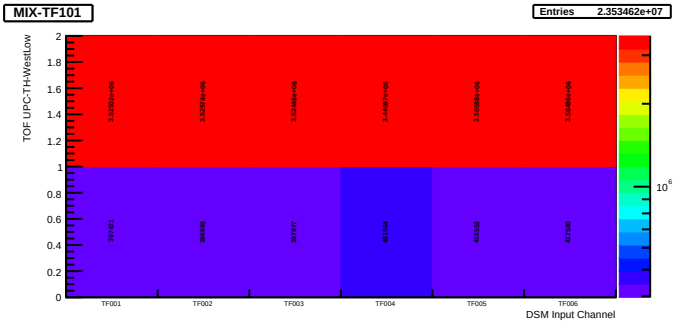

MIX-TF004
Entries 8.237115e+07
TOF MULT
TOF tray
43W 42W 41W 40W 39W 38W 37W 36W 35W 34W 73E 74E 75E 76E 77E 78E 79E 80E 81E 82E

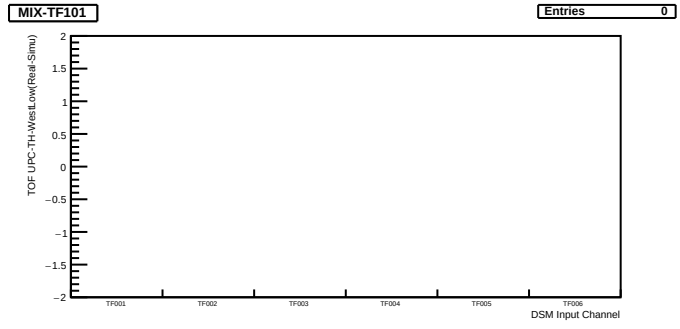

MIX-TF005
Entries 8.237115e+07
TOF MULT
TOF tray
33W 32W 31W 30W 29W 28W 27W 26W 25W 24W 83E 84E 85E 86E 87E 88E 89E 90E 91E 92E

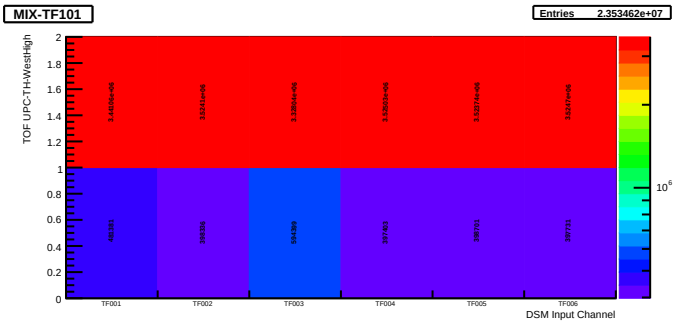

MIX-TF006
Entries 8.237115e+07
TOF MULT
TOF tray
23W 22W 21W 20W 19W 18W 17W 16W 15W 14W 93E 94E 95E 96E 97E 98E 99E 100E 101E 102E

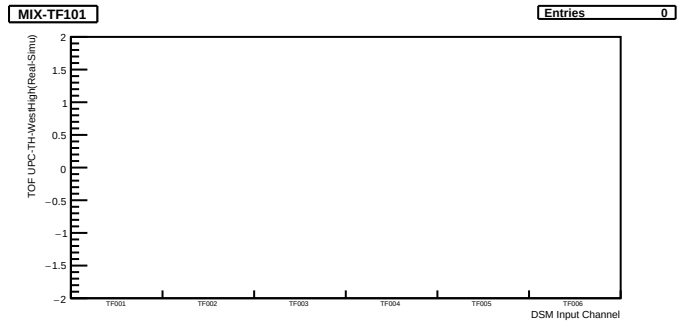

MIX-TF101
Entries 2.353462e+07
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

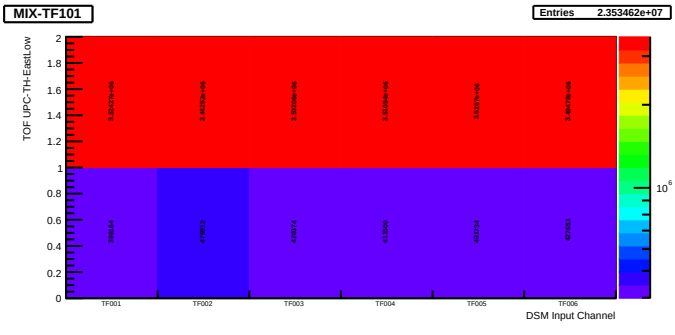

MIX-TF101
Entries 3803470
TOF MULT(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

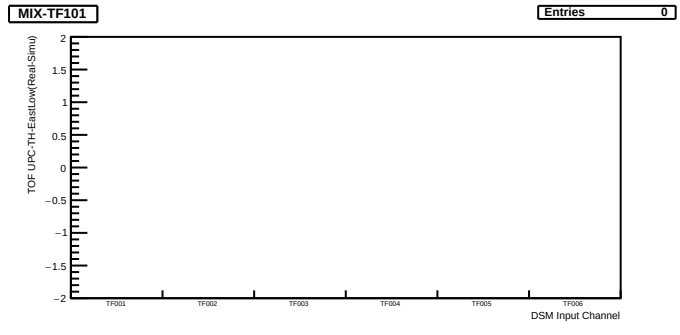

MIX-TF101
Entries 2.353462e+07
TOF UPC-TH-WestLow
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

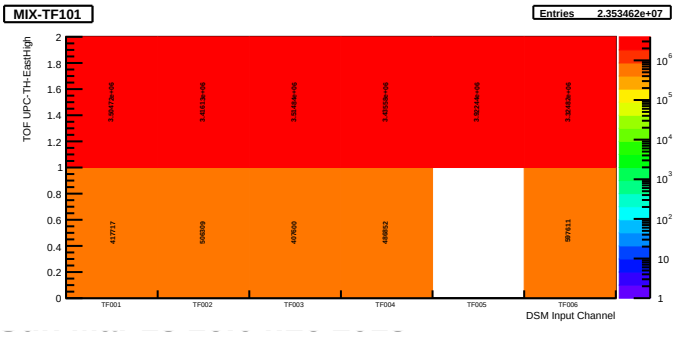

MIX-TF101
Entries 0
TOF UPC-TH-WestLow(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

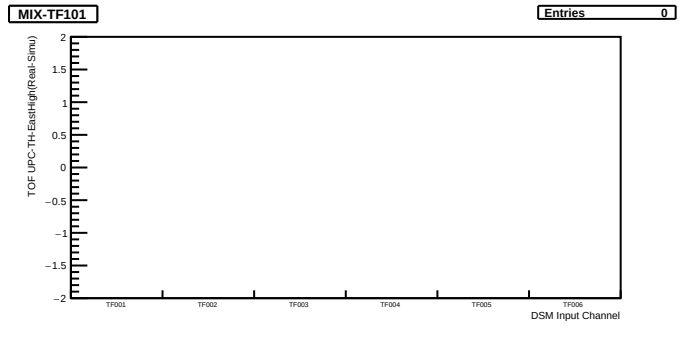

MIX-TF101
Entries 2.353462e+07
TOF UPC-TH-WestHigh
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

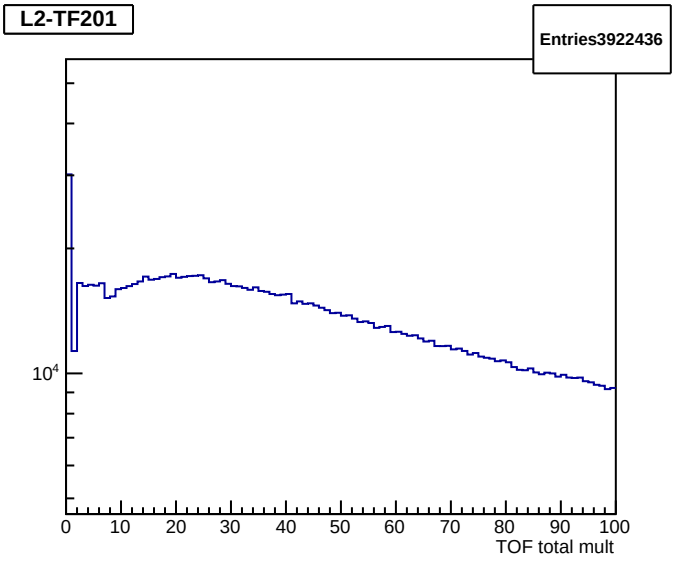

MIX-TF101
Entries 0
TOF UPC-TH-WestHigh(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

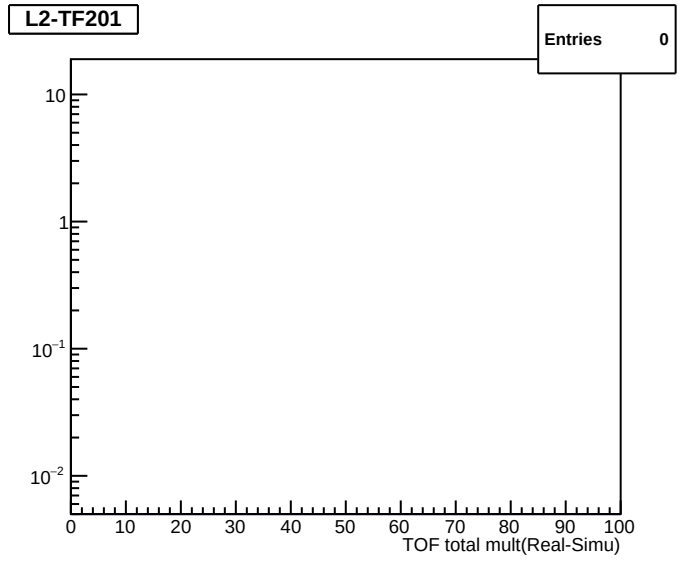

MIX-TF101
Entries 2.353462e+07
TOF UPC-TH-EastLow
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

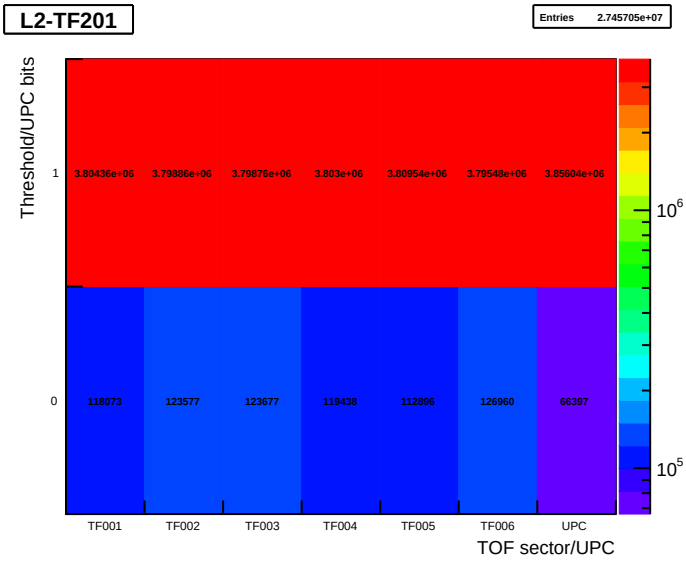

MIX-TF101
Entries 0
TOF UPC-TH-EastLow(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

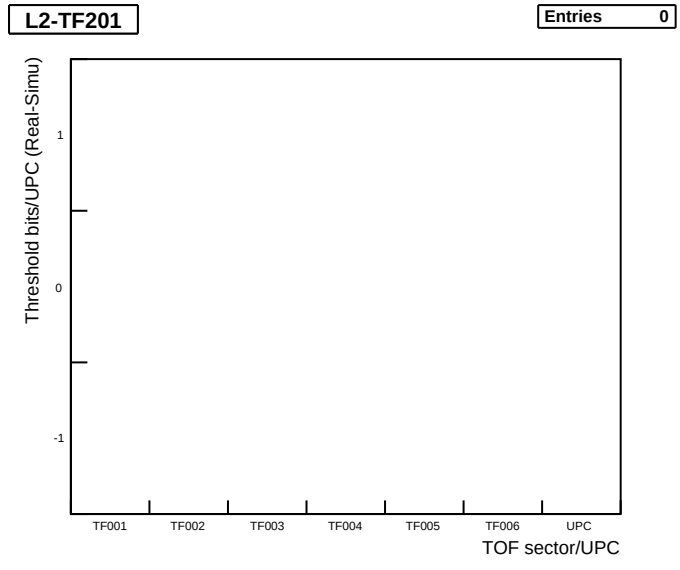

MIX-TF101
Entries 2.353462e+07
TOF UPC-TH-EastHigh
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

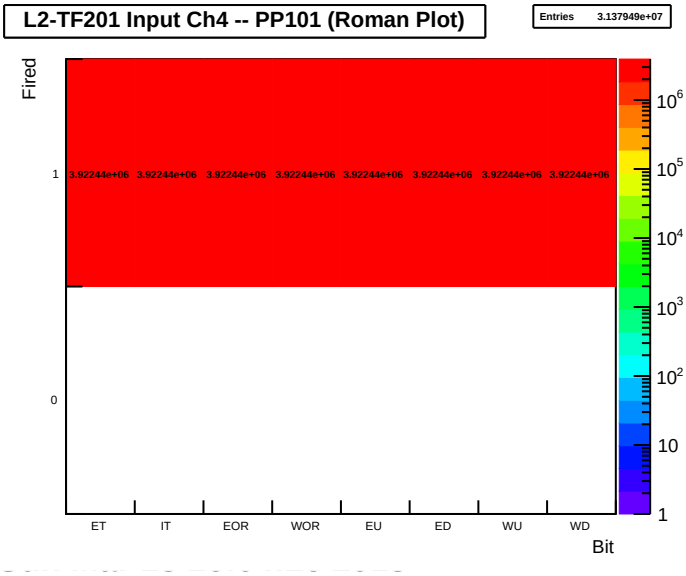

MIX-TF101
Entries 0
TOF UPC-TH-EastHigh(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

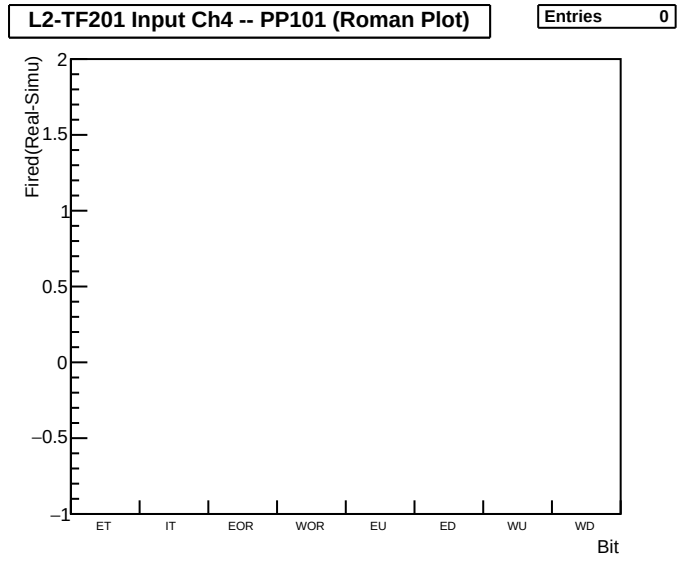

L2-TF201
Entries3922436
$10^4$
0 10 20 30 40 50 60 70 80 90 100
TOF total mult

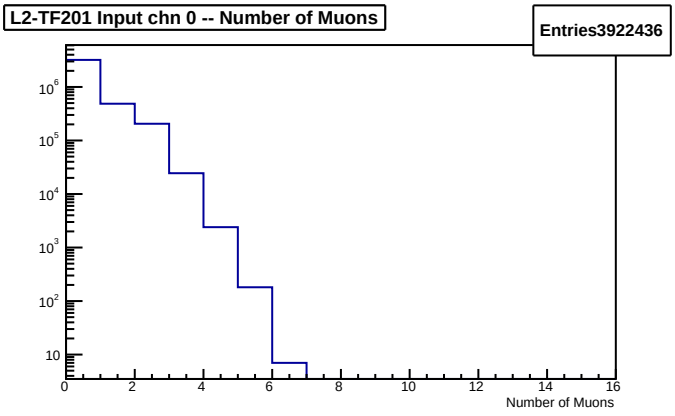

L2-TF201
Entries 0
10
1
$10^{-1}$
$10^{-2}$
0 10 20 30 40 50 60 70 80 90 100
TOF total mult(Real-Simu)

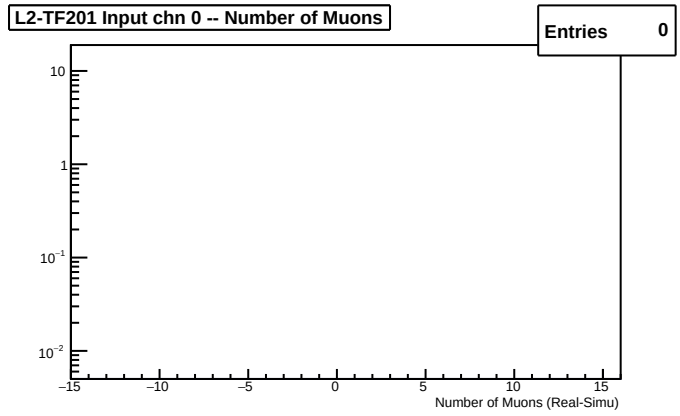

L2-TF201
Entries 2.745705e+07
Threshold/UPC bits
1
0
3.80436e+06 3.79886e+06 3.79876e+06 3.803e+06 3.80954e+06 3.79548e+06 3.85604e+06
118073 123577 123677 119438 112896 126960 66397
$10^6$
$10^5$
TF001 TF002 TF003 TF004 TF005 TF006 UPC
TOF sector/UPC

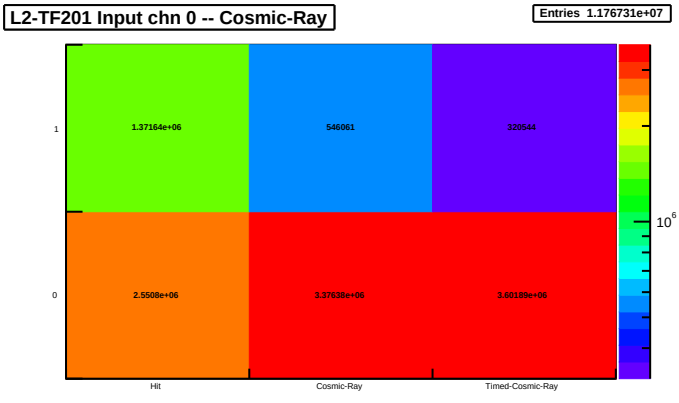

L2-TF201
Entries 0
Threshold bits/UPC (Real-Simu)
1
0
-1
TF001 TF002 TF003 TF004 TF005 TF006 UPC
TOF sector/UPC

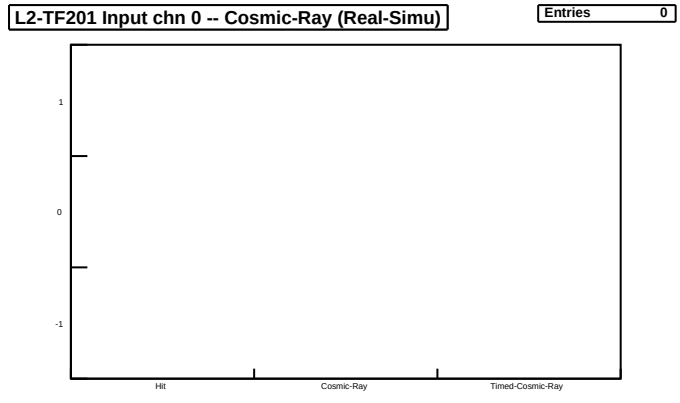

L2-TF201 Input Ch4 -- PP101 (Roman Plot)
Entries 3.137949e+07
Fired
1
0
3.92244e+06 3.92244e+06 3.92244e+06 3.92244e+06 3.92244e+06 3.92244e+06 3.92244e+06 3.92244e+06
$10^6$
$10^5$
$10^4$
$10^3$
$10^2$
10
1
ET IT EOR WOR EU ED WU WD
Bit

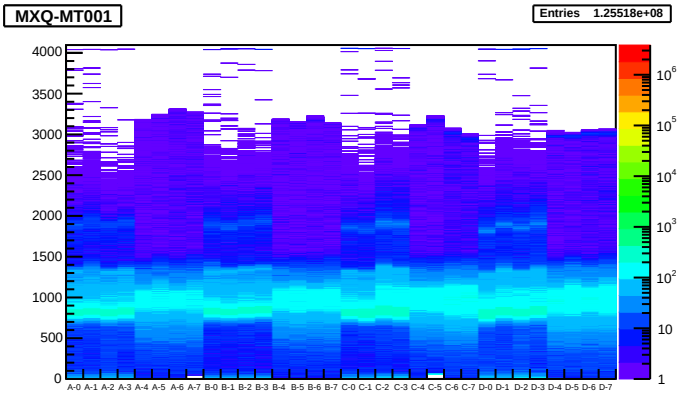

L2-TF201 Input Ch4 -- PP101 (Roman Plot)
Entries 0
Fired(Real-Simu)
2
1.5
1
0.5
0
−0.5
−1
ET IT EOR WOR EU ED WU WD
Bit

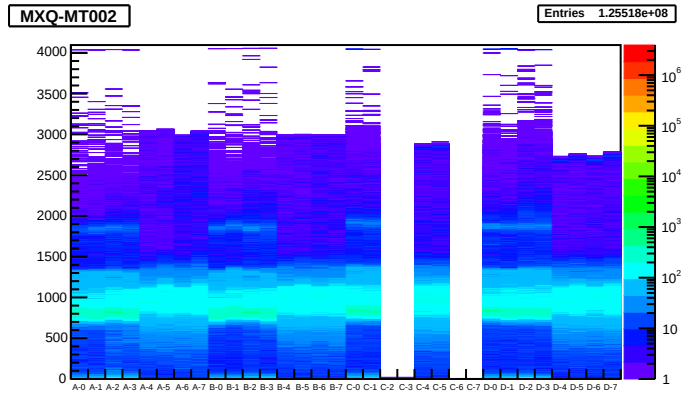

L2-TF201 Input chn 0 -- Number of Muons
Entries3922436
Number of Muons

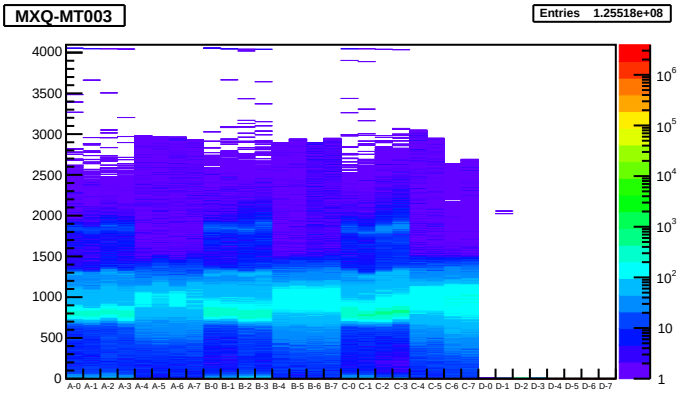

L2-TF201 Input chn 0 -- Number of Muons
Entries 0
Number of Muons (Real-Simu)

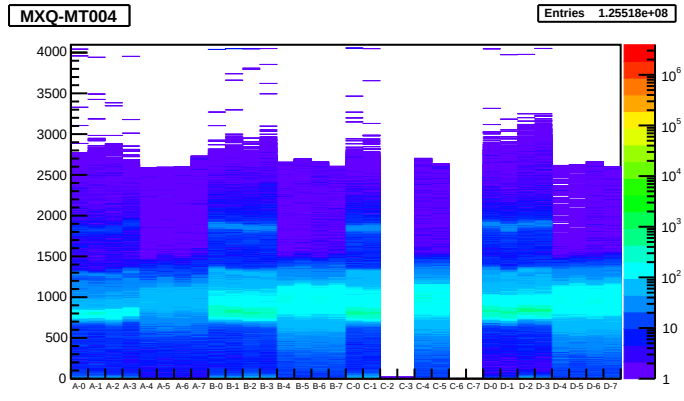

L2-TF201 Input chn 0 -- Cosmic-Ray
Entries 1.176731e+07
1.37164e+06
546061
320544
2.5508e+06
3.37638e+06
3.60189e+06
Hit
Cosmic-Ray
Timed-Cosmic-Ray

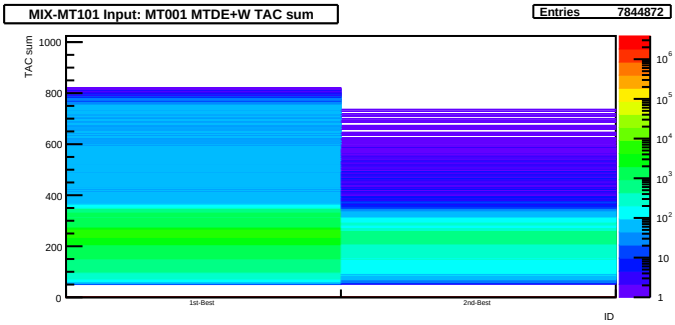

L2-TF201 Input chn 0 -- Cosmic-Ray (Real-Simu)
Entries 0
Hit
Cosmic-Ray
Timed-Cosmic-Ray

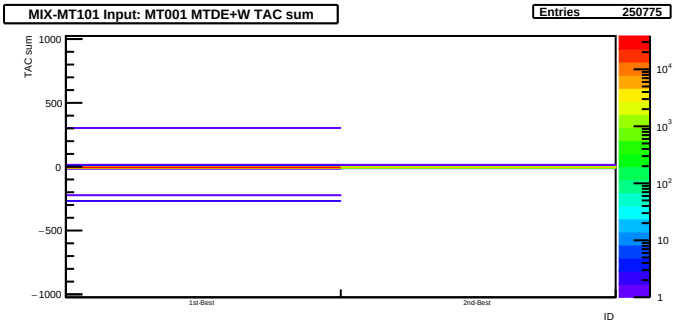

MXQ-MT001
Entries 1.25518e+08

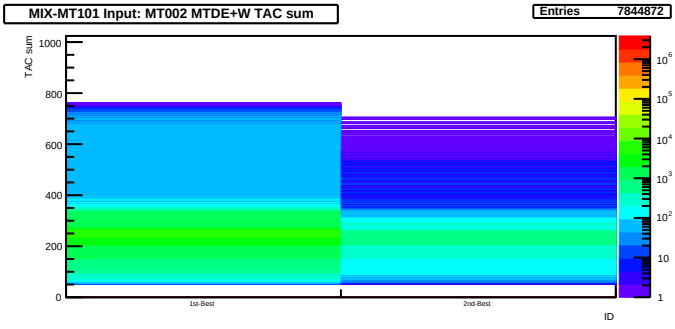

MXQ-MT002
Entries 1.25518e+08

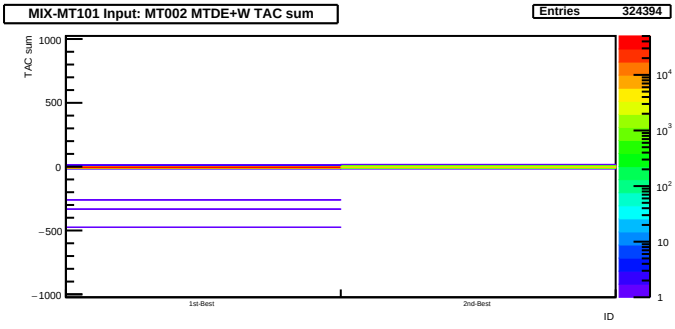

MXQ-MT003
Entries 1.25518e+08

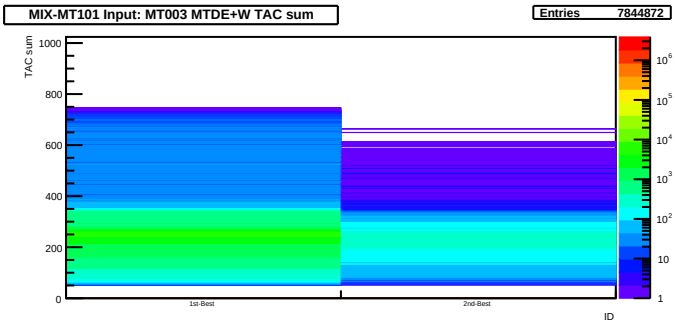

MXQ-MT004
Entries 1.25518e+08

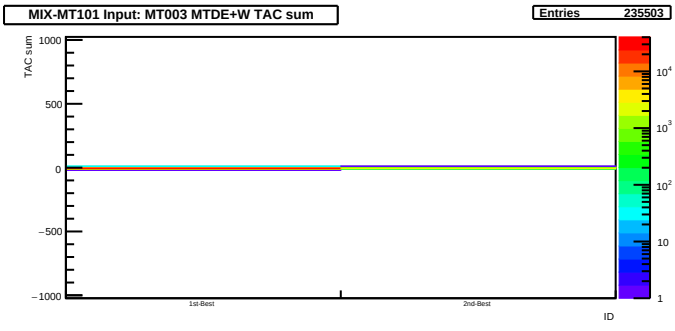

MIX-MT101 Input: MT001 MTDE+W TAC sum
Entries 7844872
TAC sum
1st-Best
2nd-Best
ID

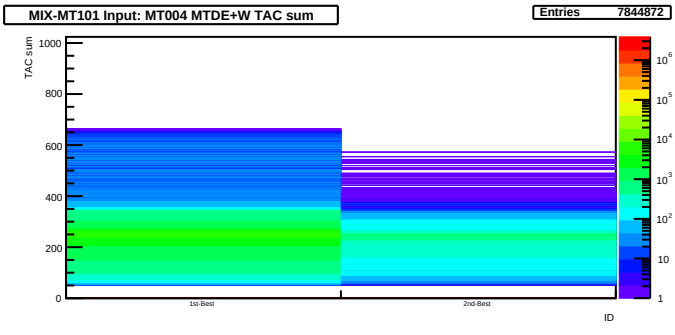

MIX-MT101 Input: MT001 MTDE+W TAC sum
Entries 250775
TAC sum
1st-Best
2nd-Best
ID

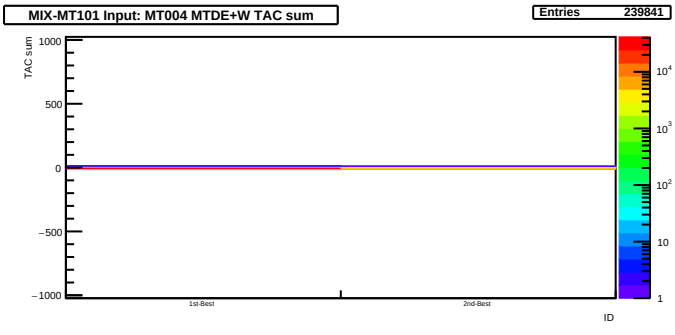

MIX-MT101 Input: MT002 MTDE+W TAC sum
Entries 7844872
TAC sum
1st-Best
2nd-Best
ID

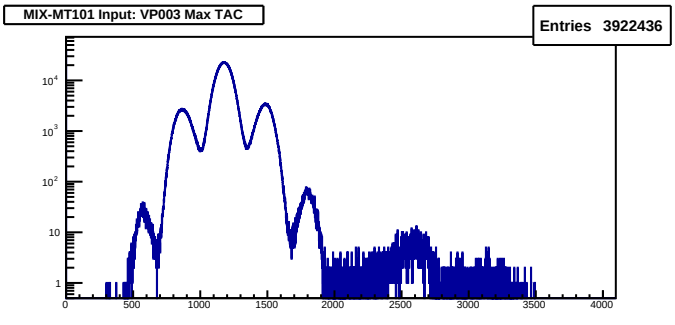

MIX-MT101 Input: MT002 MTDE+W TAC sum
Entries 324394
TAC sum
1st-Best
2nd-Best
ID

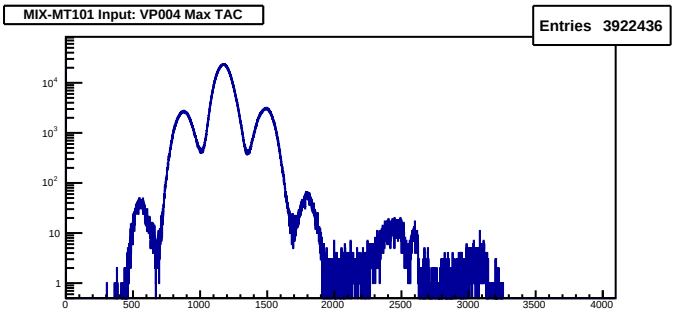

MIX-MT101 Input: MT003 MTDE+W TAC sum
Entries 7844872
TAC sum
1st-Best
2nd-Best
ID

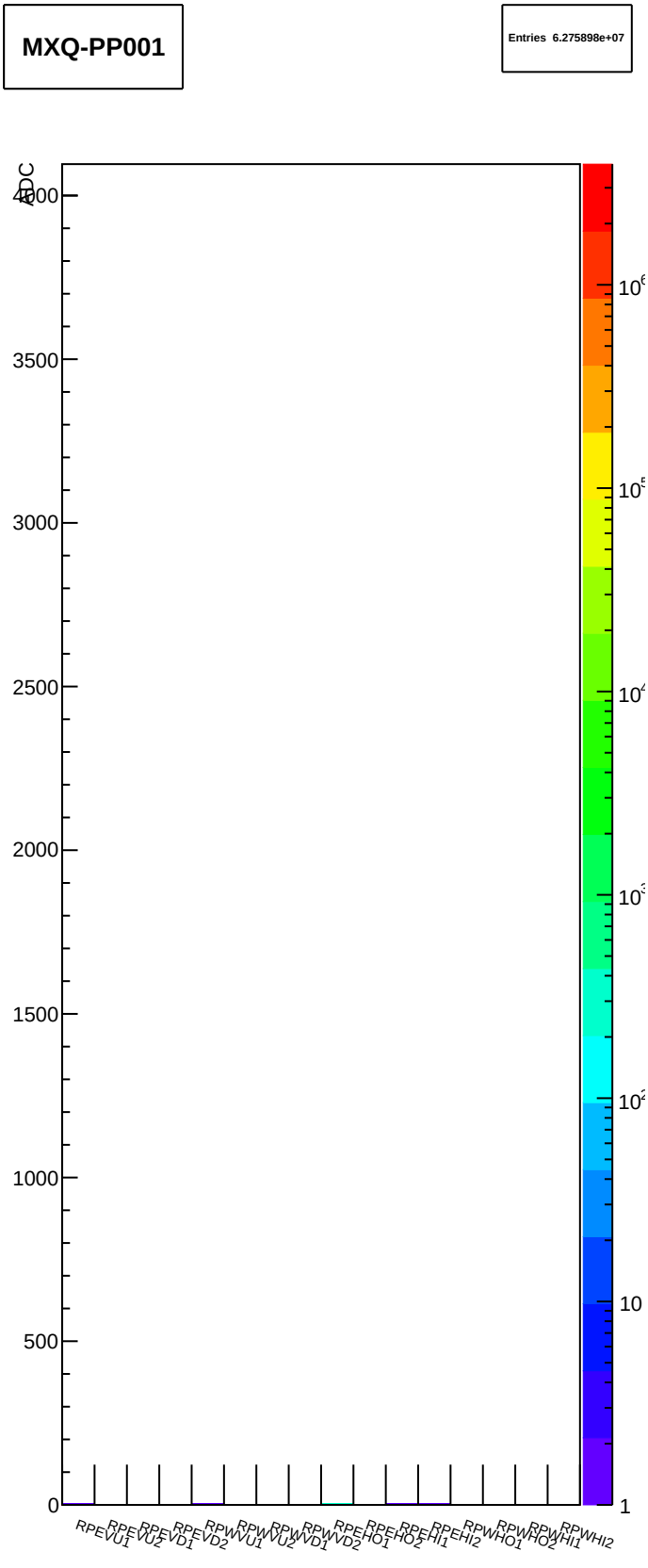

MIX-MT101 Input: MT003 MTDE+W TAC sum
Entries 235503
TAC sum
1st-Best
2nd-Best
ID

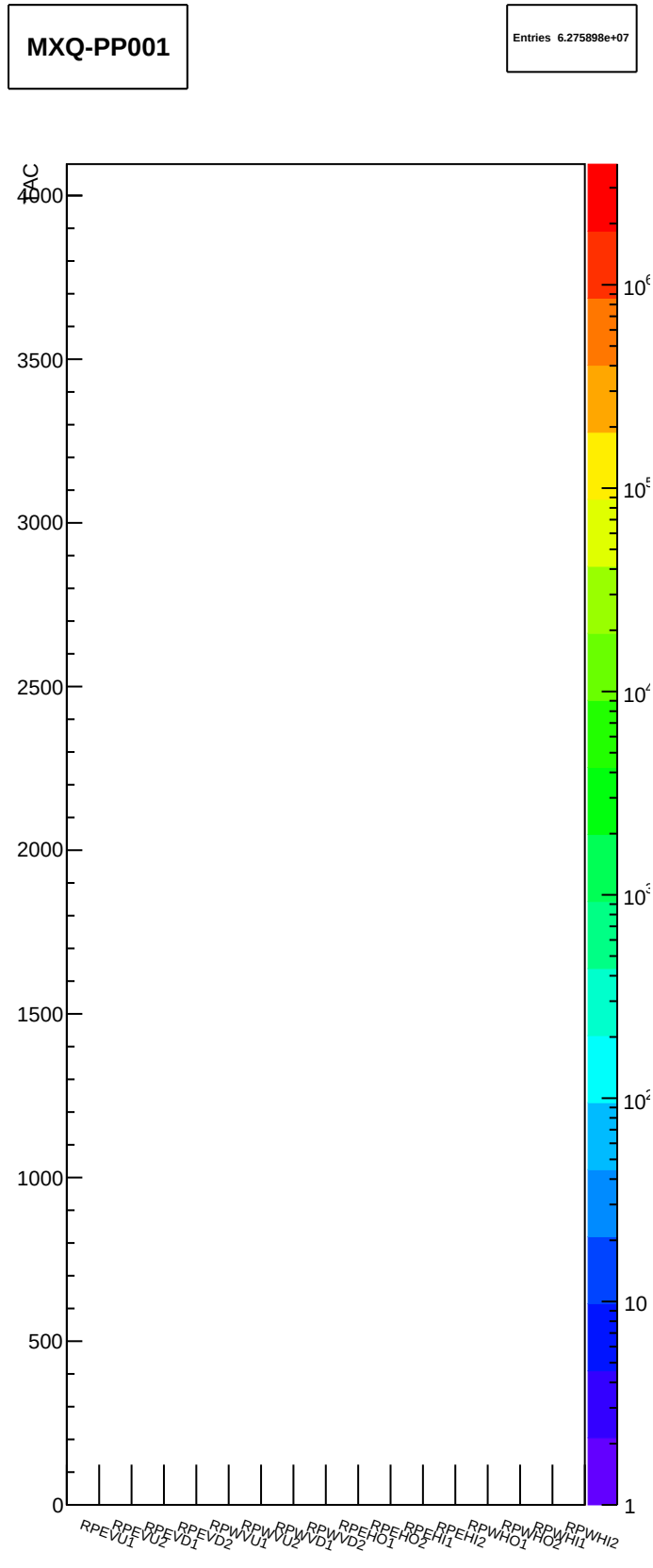

MIX-MT101 Input: MT004 MTDE+W TAC sum
Entries 7844872
TAC sum
1st-Best
2nd-Best
ID

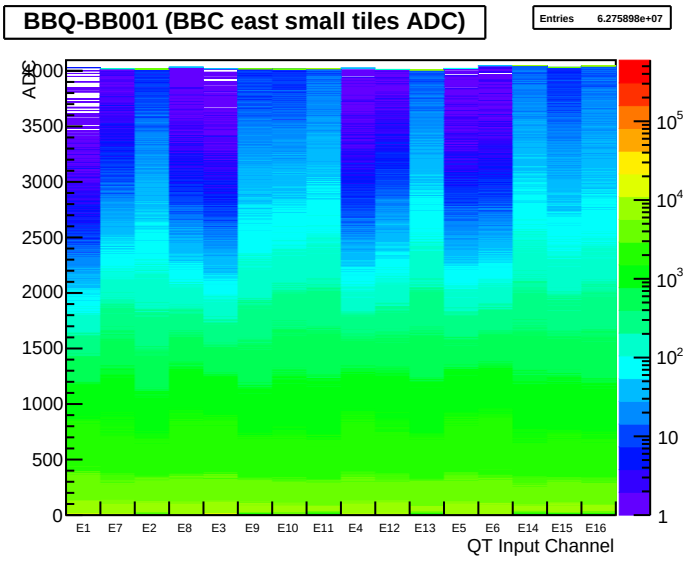

MIX-MT101 Input: MT004 MTDE+W TAC sum
Entries 239841
TAC sum
1st-Best
2nd-Best
ID

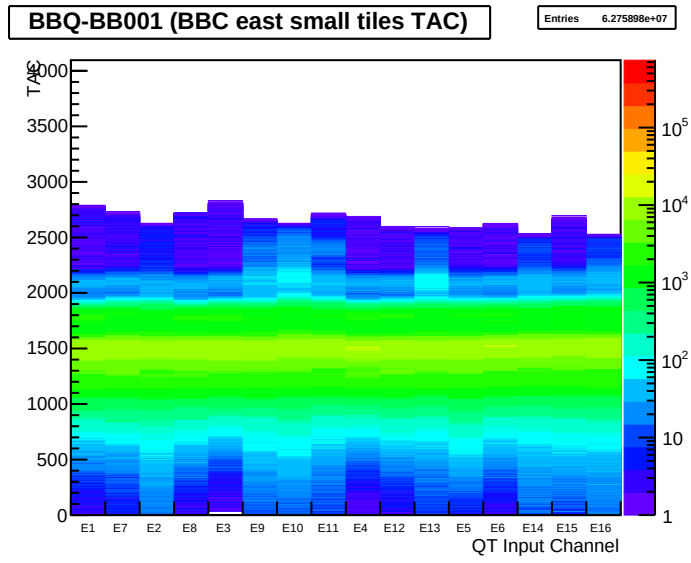

MIX-MT101 Input: VP003 Max TAC
Entries 3922436

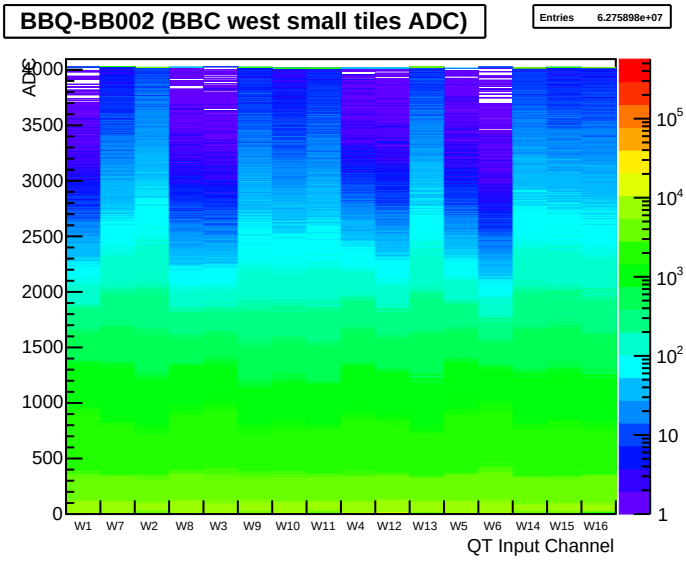

MIX-MT101 Input: VP004 Max TAC
Entries 3922436

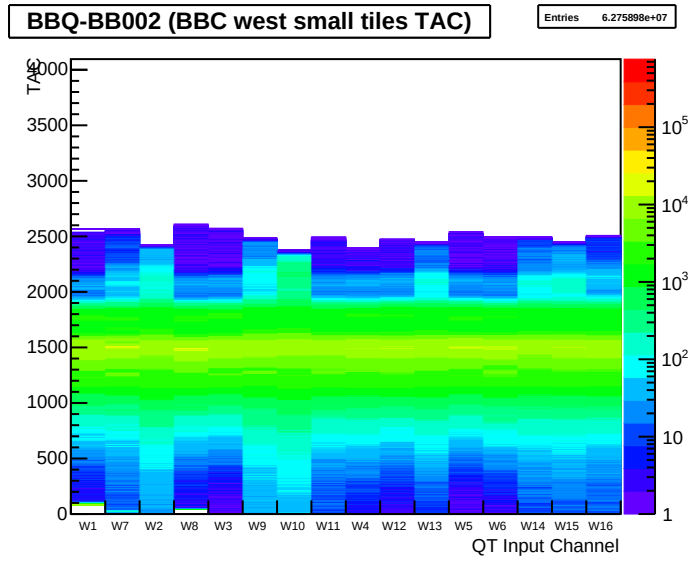

MXQ-PP001
Entries 6.275898e+07
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
RPEVU1
RPEVU2
RPEVD1
RPEVD2
RPWVU1
RPWVU2
RPWVD1
RPWVD2
RPEHO1
RPEHO2
RPEHI1
RPEHI2
RPWHO1
RPWHO2
RPWHI1
RPWHI2
$10^6$
$10^5$
$10^4$
$10^3$
$10^2$
10
1

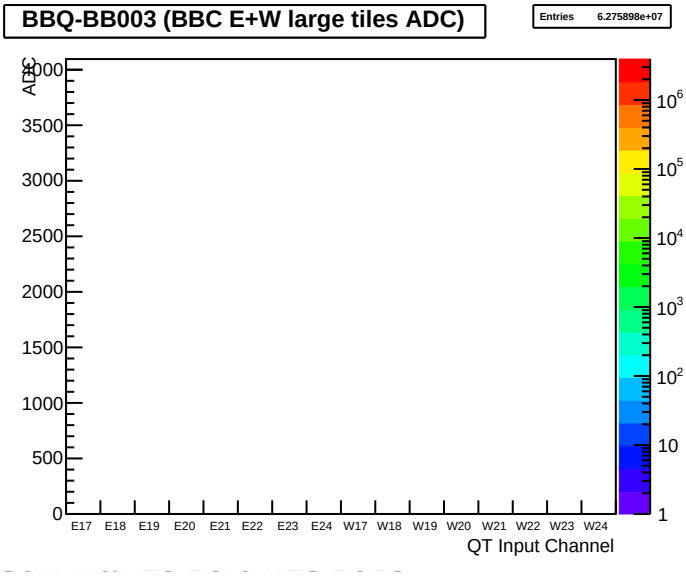

MXQ-PP001
Entries 6.275898e+07
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
RPEVU1
RPEVU2
RPEVD1
RPEVD2
RPWVU1
RPWVU2
RPWVD1
RPWVD2
RPEHO1
RPEHO2
RPEHI1
RPEHI2
RPWHO1
RPWHO2
RPWHI1
RPWHI2
$10^6$
$10^5$
$10^4$
$10^3$
$10^2$
10
1

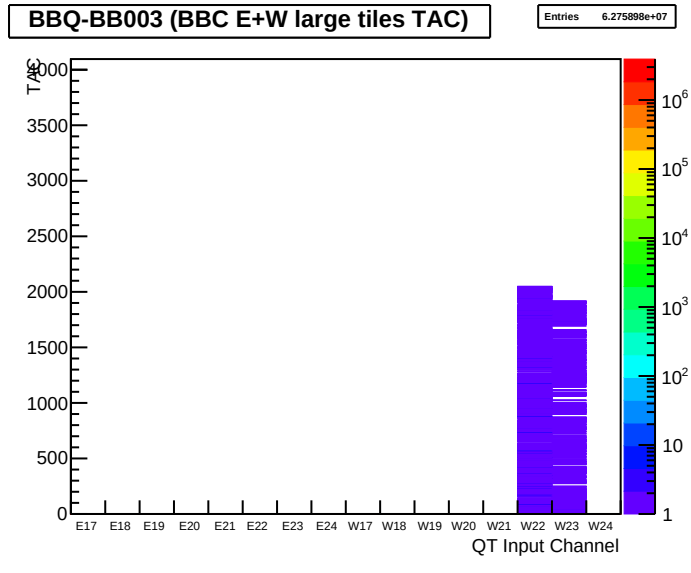

BBQ-BB001 (BBC east small tiles ADC)
Entries 6.275898e+07
ADC
QT Input Channel

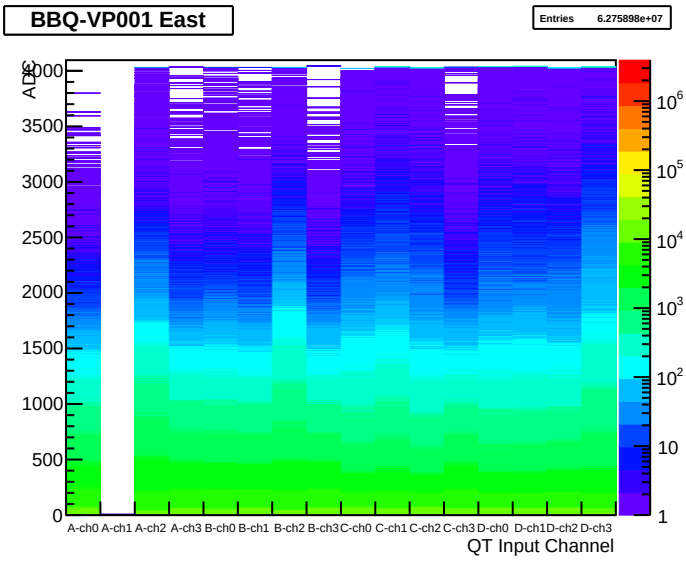

BBQ-BB001 (BBC east small tiles TAC)
Entries 6.275898e+07
TAC
QT Input Channel

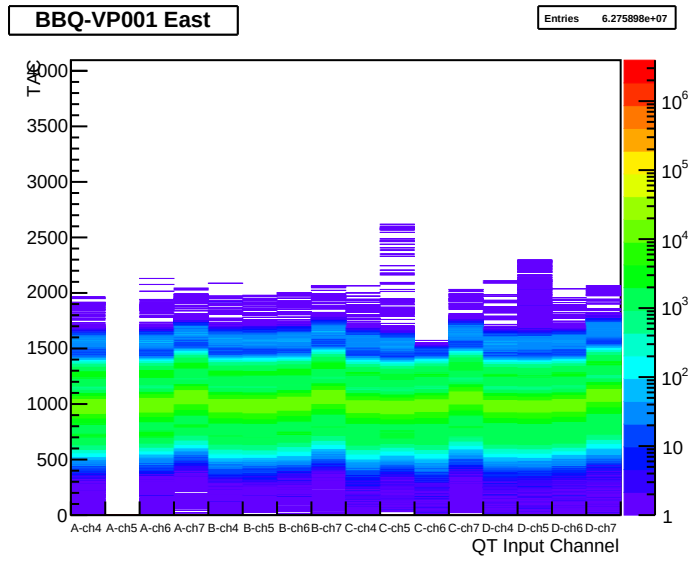

BBQ-BB002 (BBC west small tiles ADC)
Entries 6.275898e+07
ADC
QT Input Channel

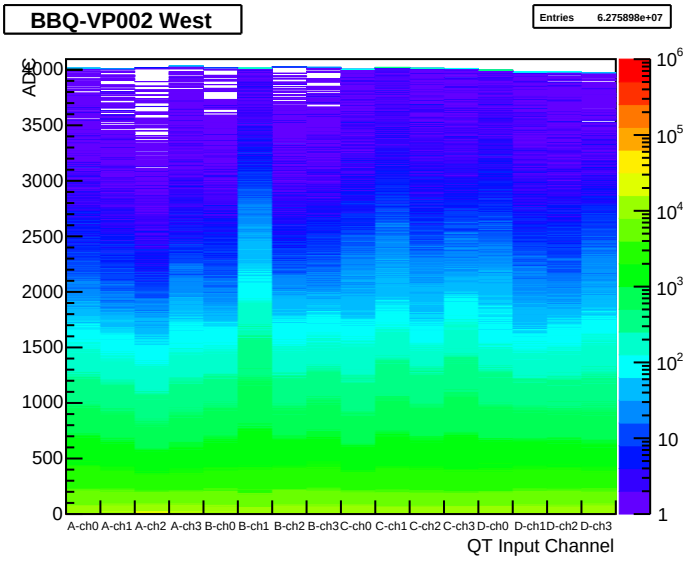

BBQ-BB002 (BBC west small tiles TAC)
Entries 6.275898e+07
TAC
QT Input Channel

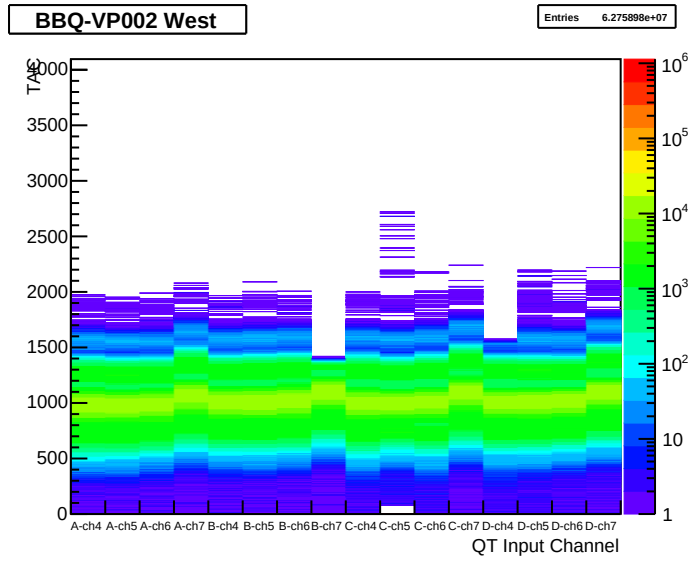

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 6.275898e+07
ADC
QT Input Channel

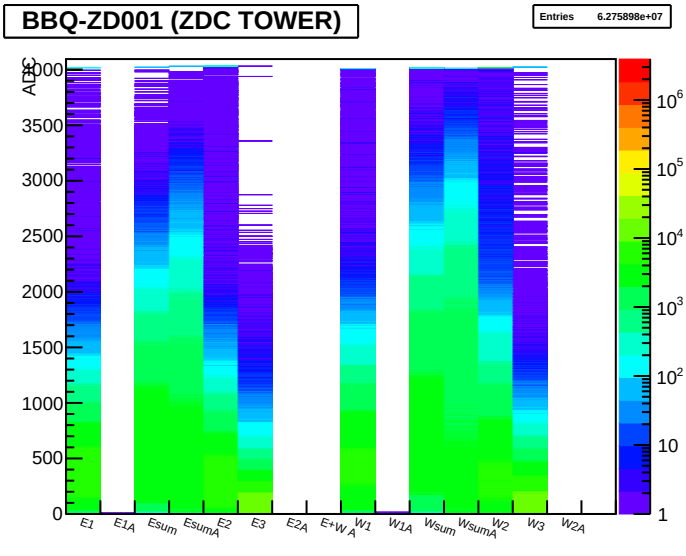

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 6.275898e+07
TAC
QT Input Channel

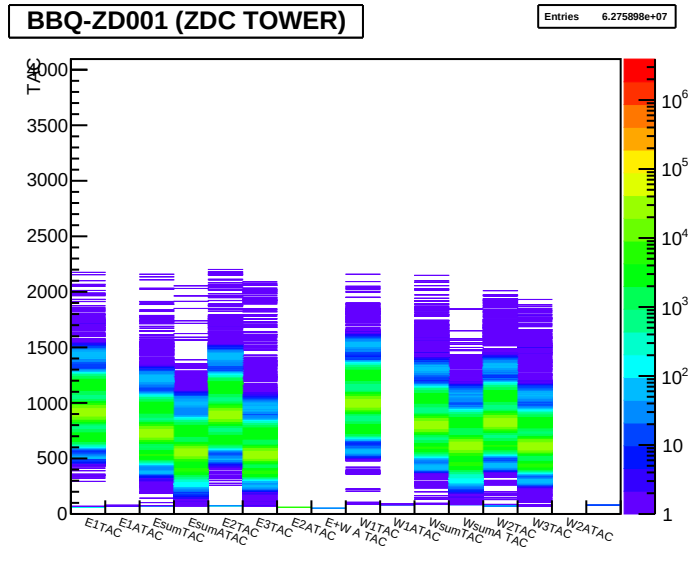

BBQ-VP001 East
Entries 6.275898e+07
ADC
QT Input Channel

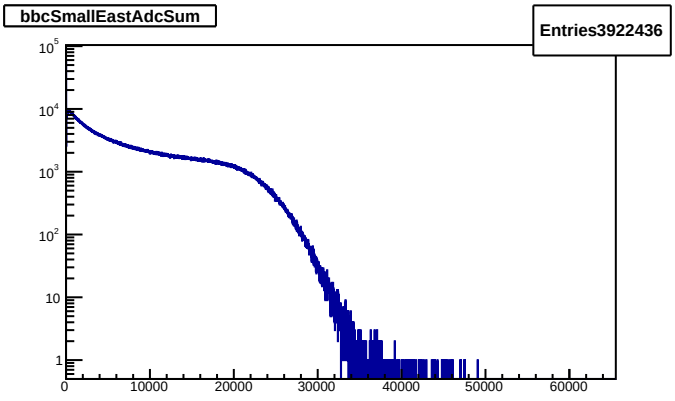

BBQ-VP001 East
Entries 6.275898e+07
TAC
QT Input Channel

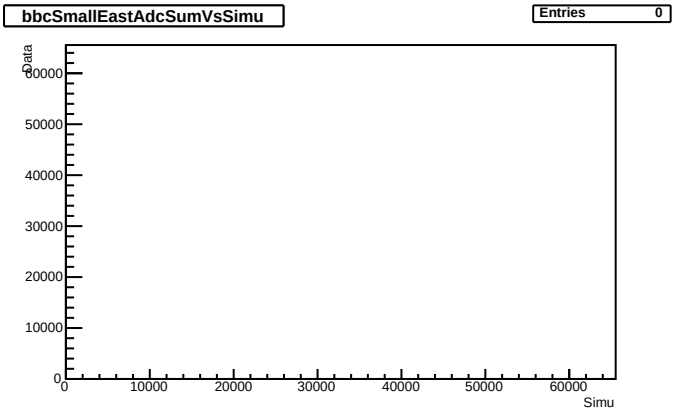

BBQ-VP002 West
Entries 6.275898e+07
ADC
QT Input Channel

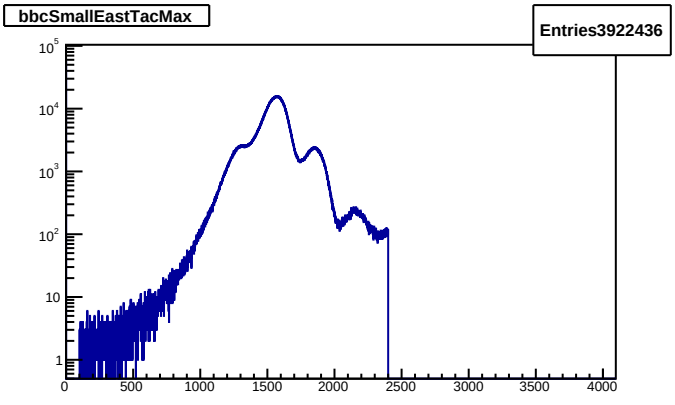

BBQ-VP002 West
Entries 6.275898e+07
TAC
QT Input Channel

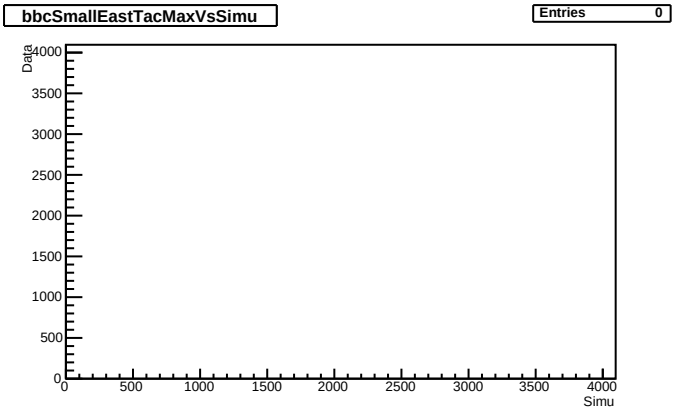

BBQ-ZD001 (ZDC TOWER)
Entries 6.275898e+07
ADC

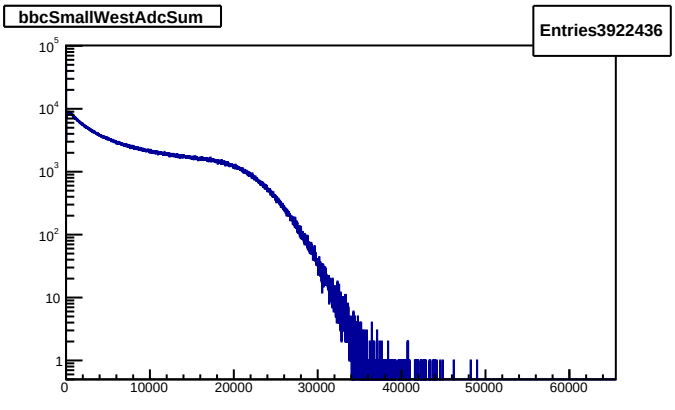

BBQ-ZD001 (ZDC TOWER)
Entries 6.275898e+07
TAC

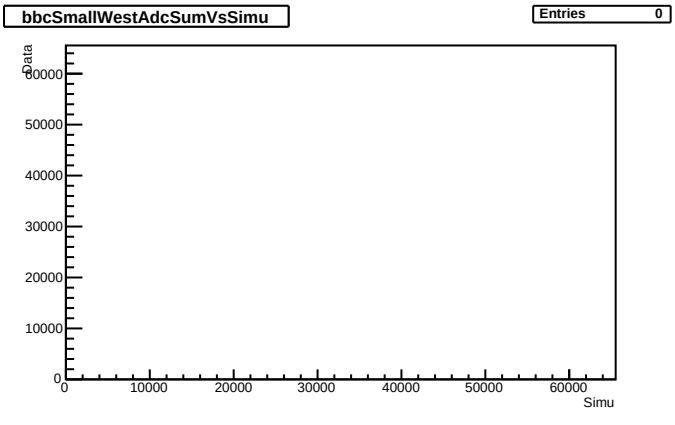

bbcSmallEastAdcSum
Entries3922436

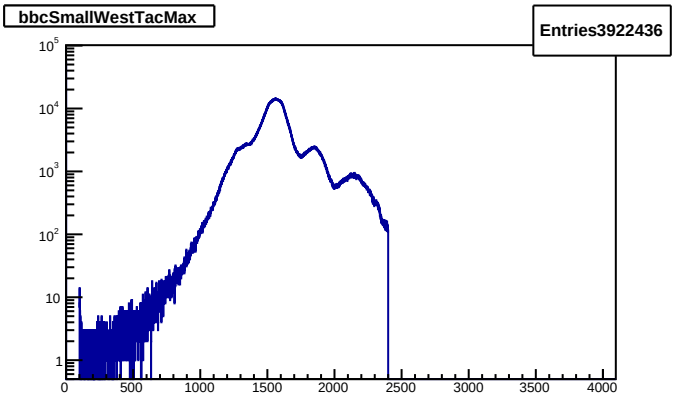

bbcSmallEastAdcSumVsSimu
Entries 0
Data
Simu

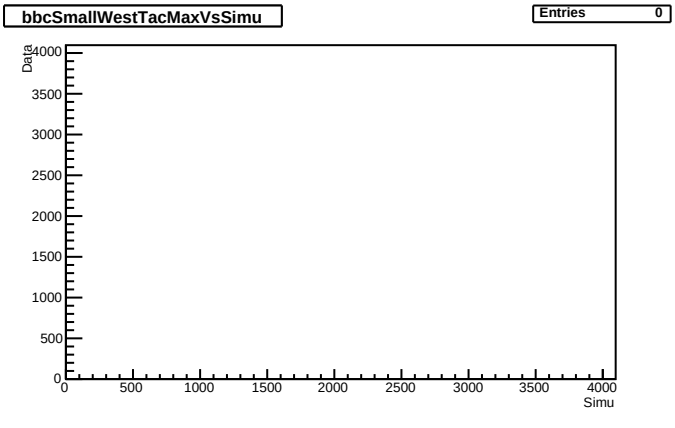

bbcSmallEastTacMax
Entries3922436

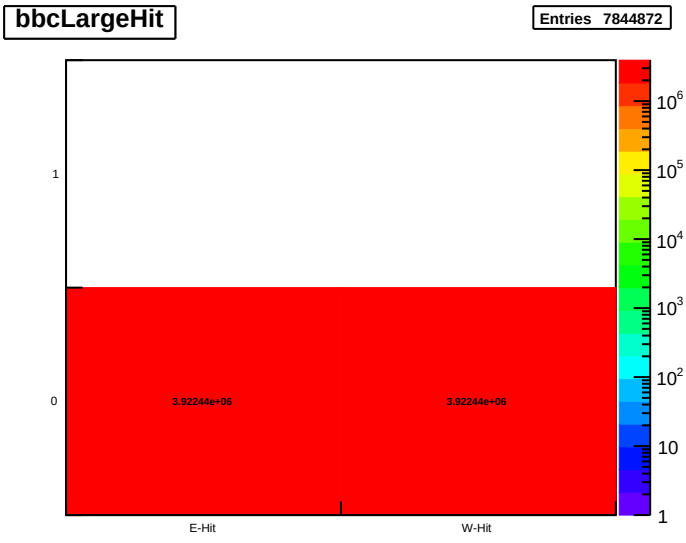

bbcSmallEastTacMaxVsSimu
Entries 0
Data
Simu

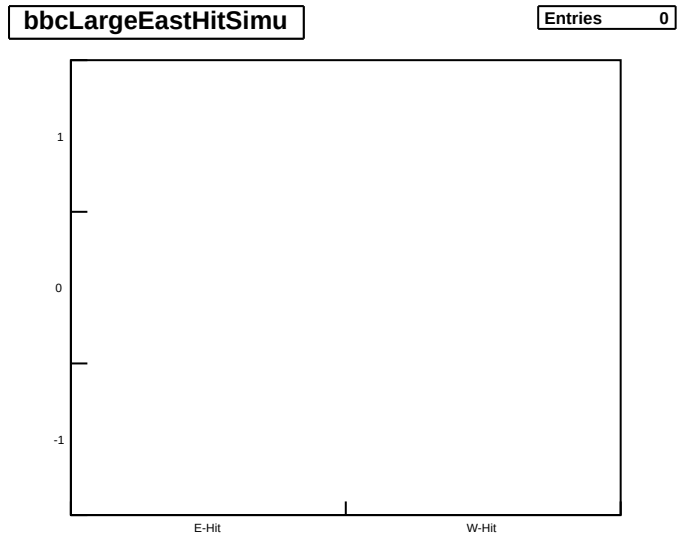

bbcSmallWestAdcSum
Entries3922436

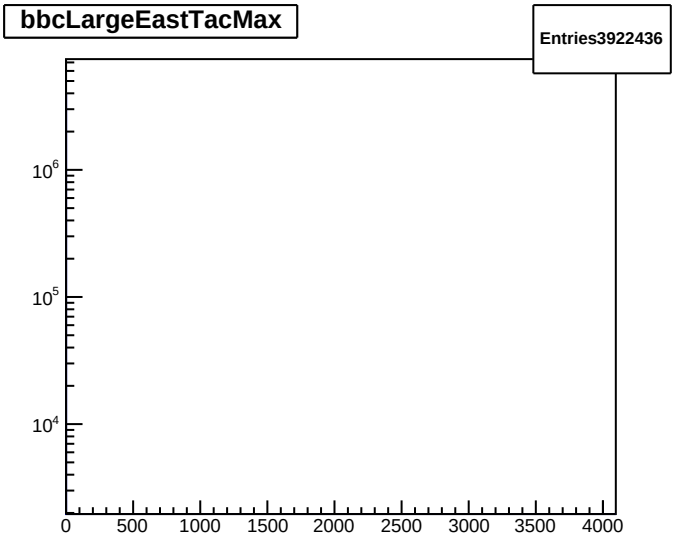

bbcSmallWestAdcSumVsSimu
Entries 0
Data
Simu

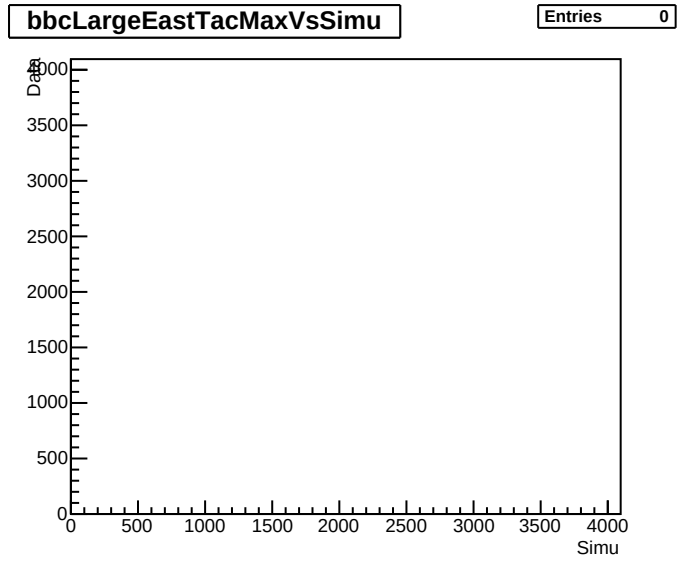

bbcSmallWestTacMax
Entries3922436

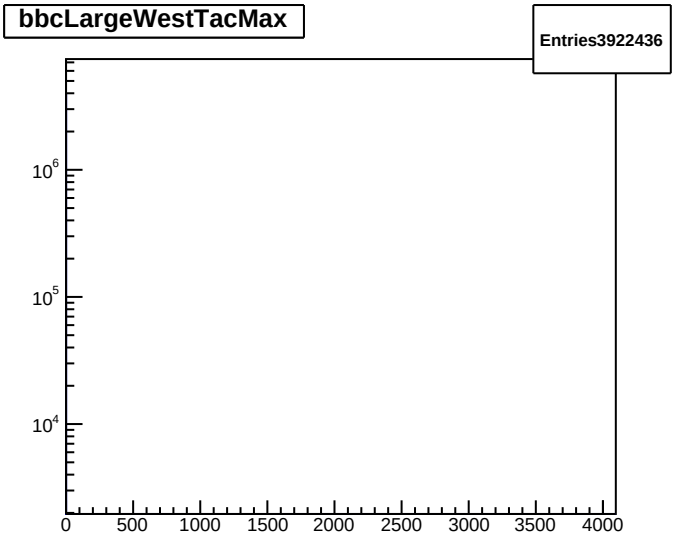

bbcSmallWestTacMaxVsSimu
Entries 0
Data
Simu

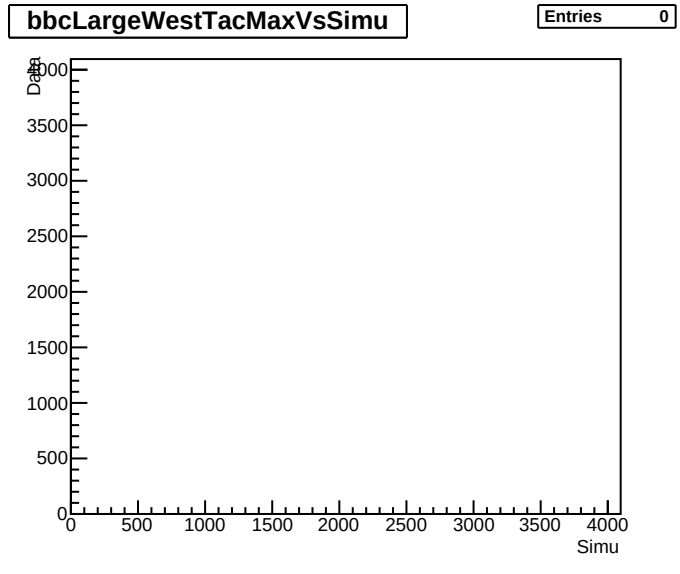

bbcLargeHit
Entries 7844872
1
0
3.92244e+06
3.92244e+06
E-Hit
W-Hit
$10^6$
$10^5$
$10^4$
$10^3$
$10^2$
10
1

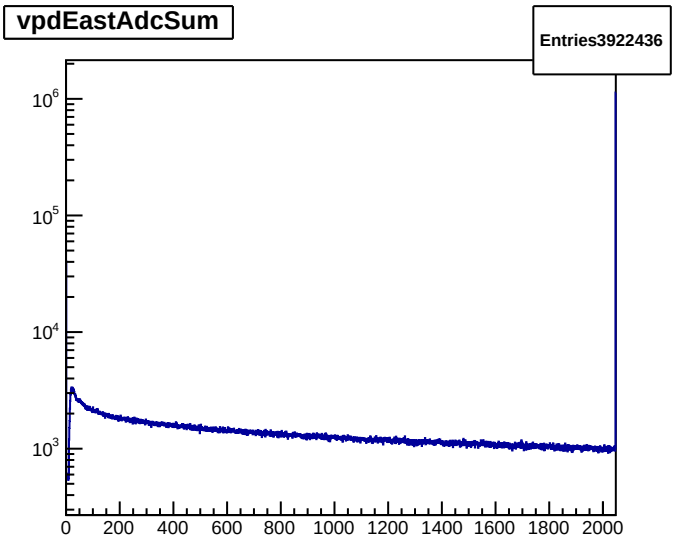

bbcLargeEastHitSimu
Entries 0
1
0
-1
E-Hit
W-Hit

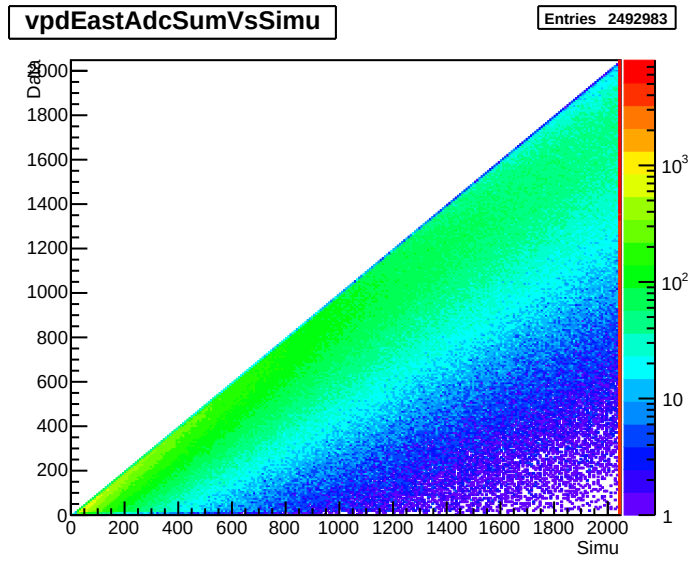

bbcLargeEastTacMax
Entries3922436
$10^6$
$10^5$
$10^4$
0
500
1000
1500
2000
2500
3000
3500
4000

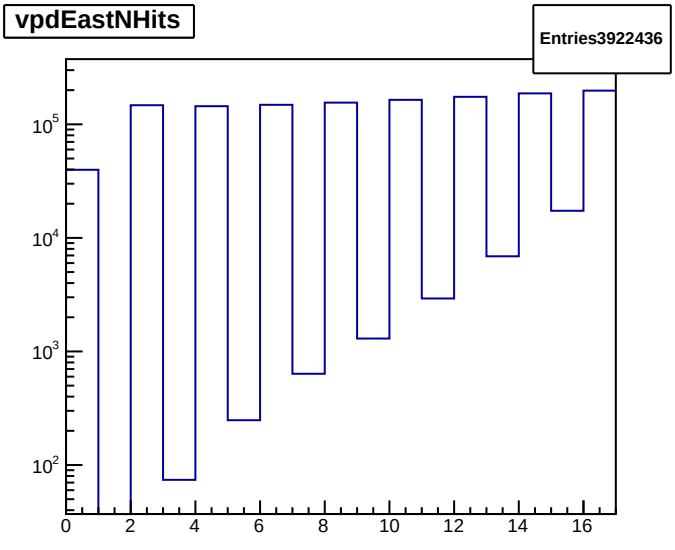

bbcLargeEastTacMaxVsSimu
Entries 0
Data
4000
3500
3000
2500
2000
1500
1000
500
0
0
500
1000
1500
2000
2500
3000
3500
4000
Simu

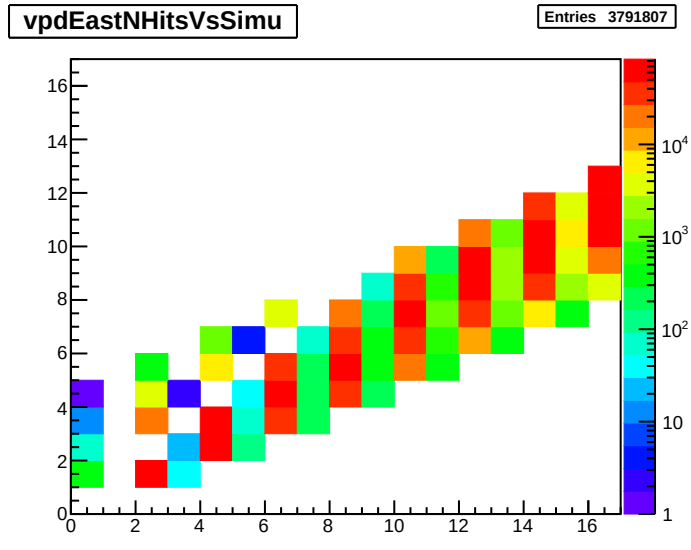

bbcLargeWestTacMax
Entries3922436
$10^6$
$10^5$
$10^4$
0
500
1000
1500
2000
2500
3000
3500
4000

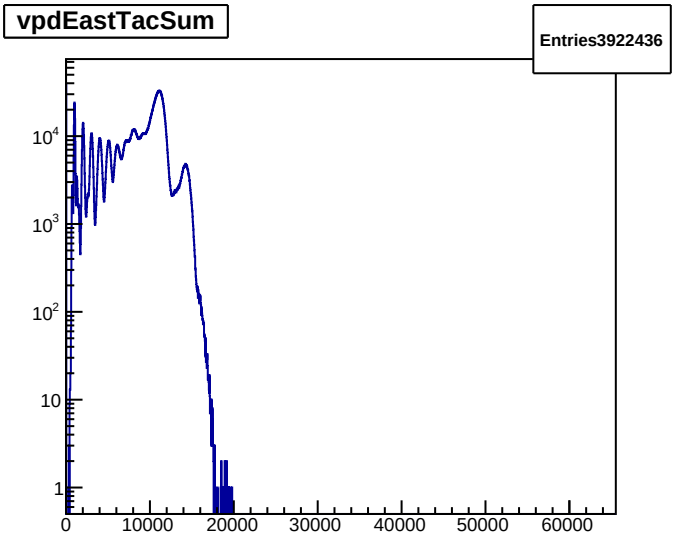

bbcLargeWestTacMaxVsSimu
Entries 0
Data
4000
3500
3000
2500
2000
1500
1000
500
0
0
500
1000
1500
2000
2500
3000
3500
4000
Simu

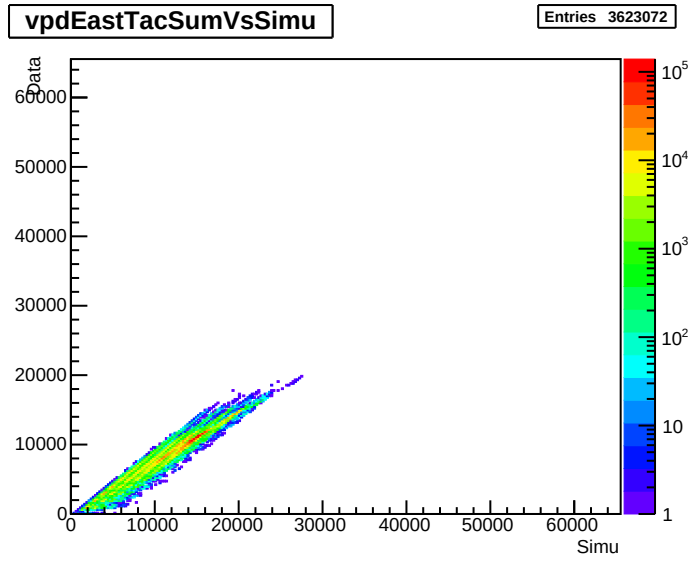

vpdEastAdcSum
Entries3922436

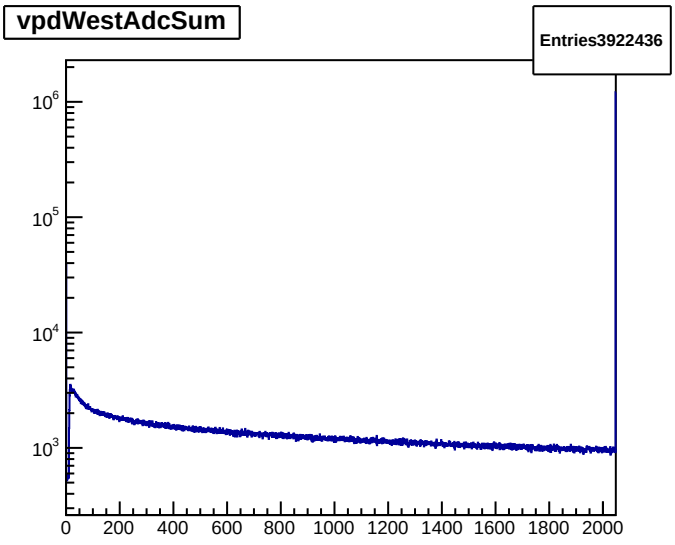

vpdEastAdcSumVsSimu
Entries 2492983
Data
Simu

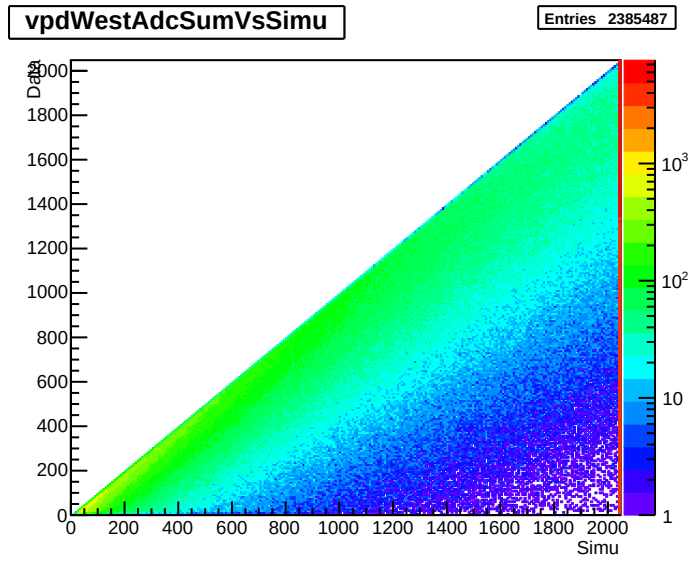

vpdEastNHits
Entries3922436

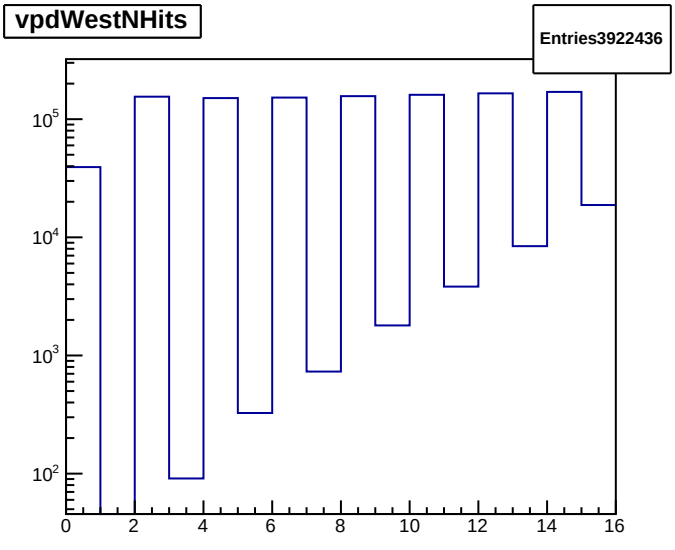

vpdEastNHitsVsSimu
Entries 3791807

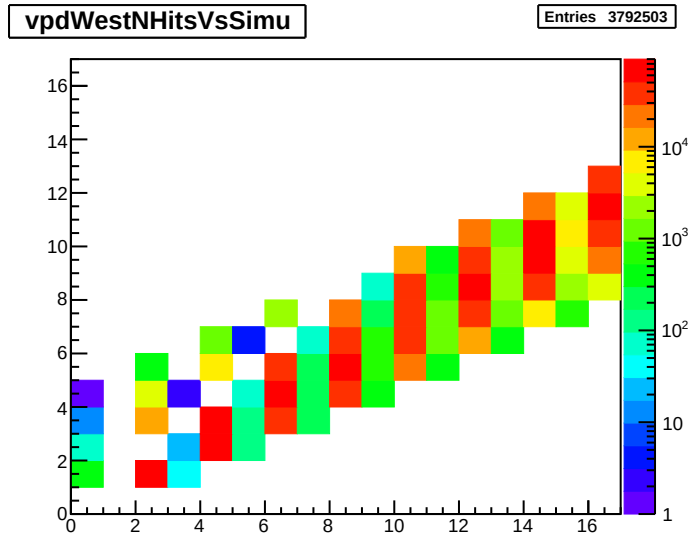

vpdEastTacSum
Entries3922436

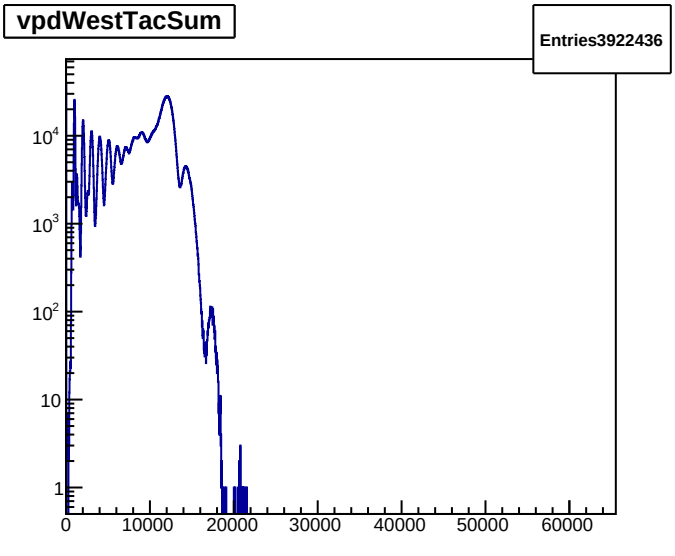

vpdEastTacSumVsSimu
Entries 3623072
Data
Simu

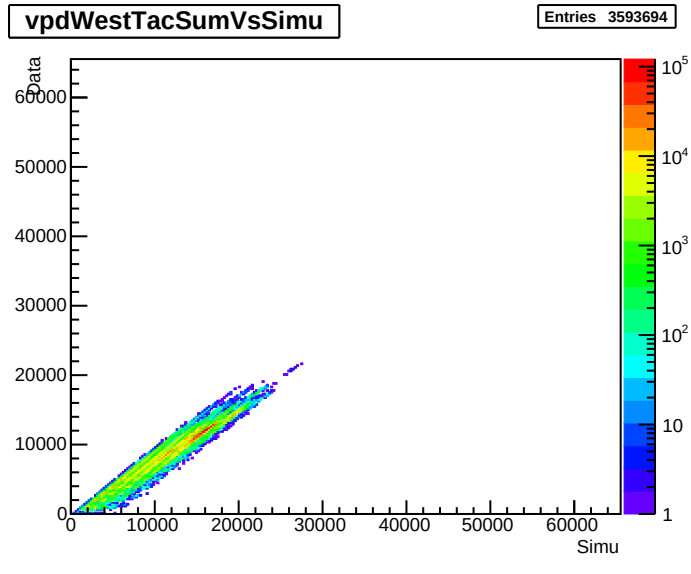

vpdWestAdcSum
Entries3922436

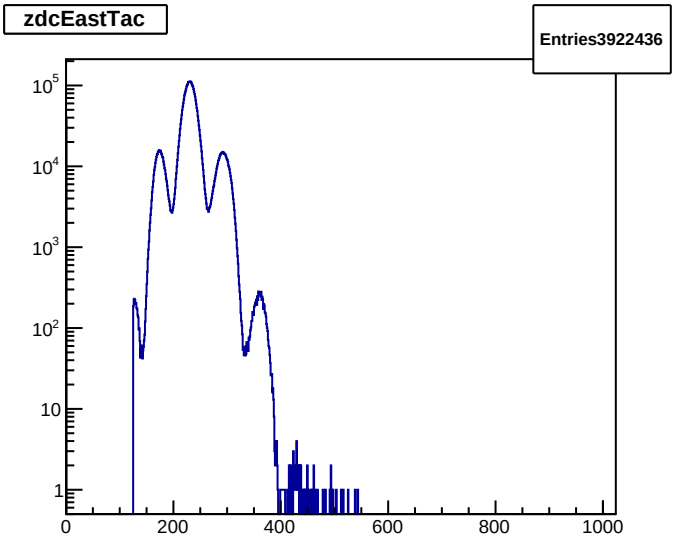

vpdWestAdcSumVsSimu
Entries 2385487
Data
Simu

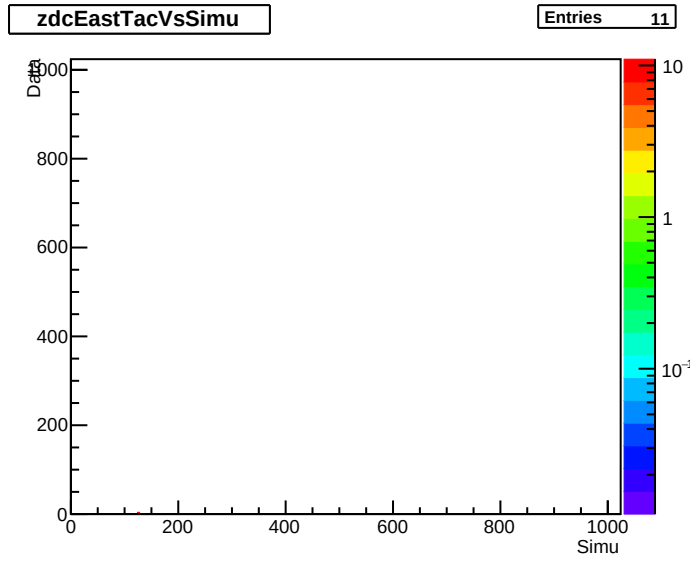

vpdWestNHits
Entries3922436

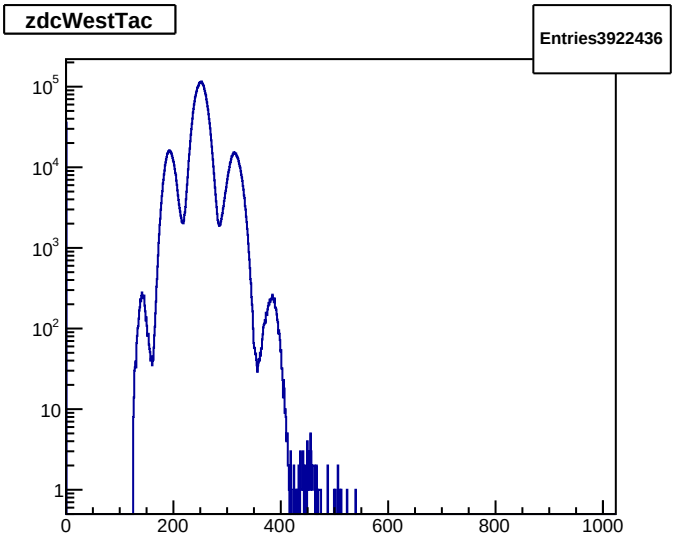

vpdWestNHitsVsSimu
Entries 3792503

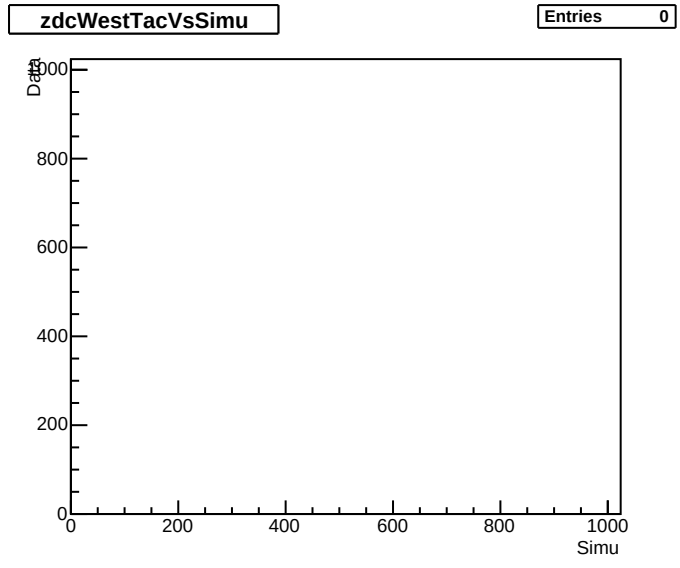

vpdWestTacSum
Entries3922436

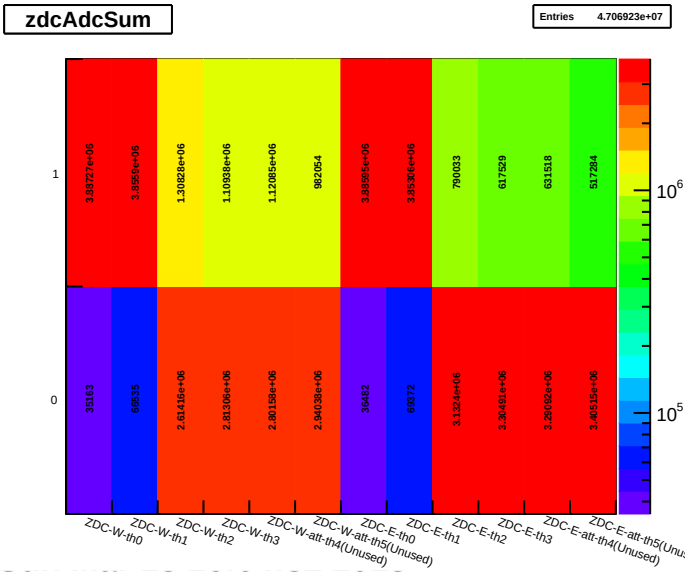

vpdWestTacSumVsSimu
Entries 3593694
Data
Simu

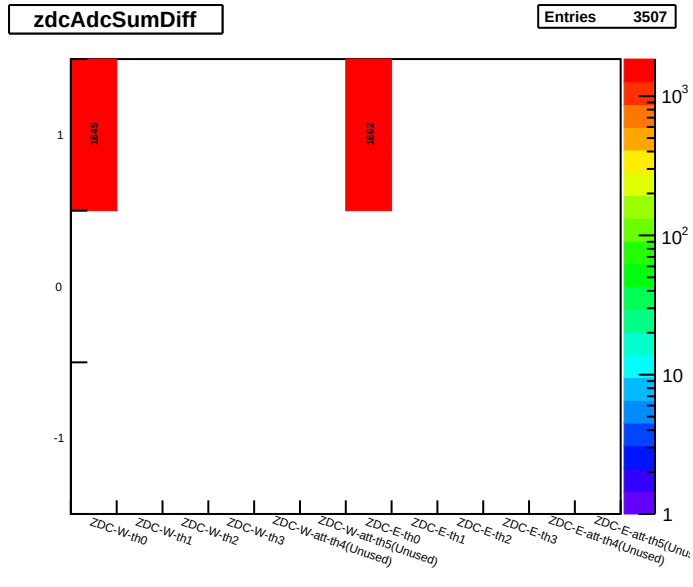

zdcEastTac
Entries3922436

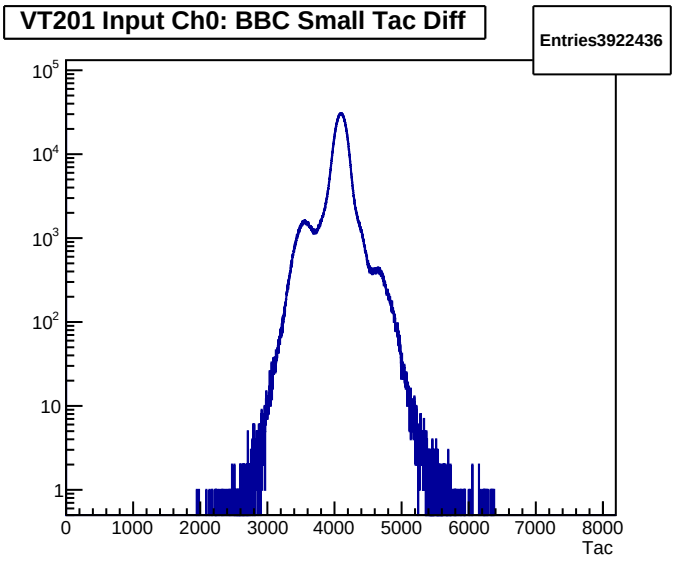

zdcEastTacVsSimu
Entries 11
Data
Simu

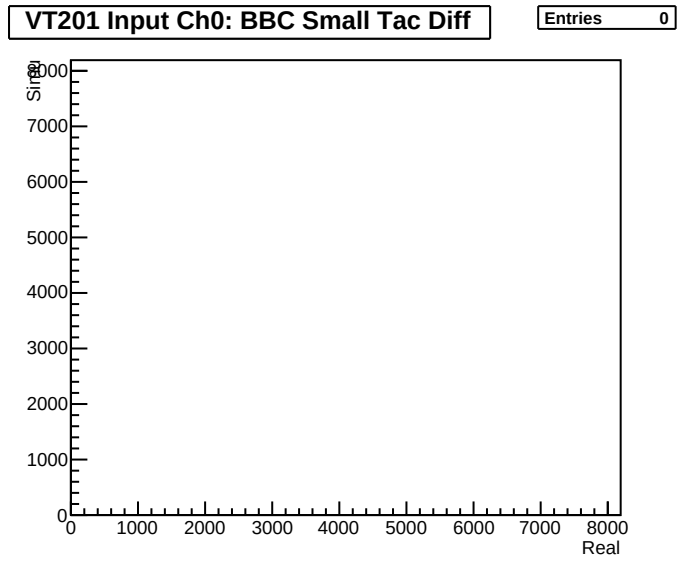

zdcWestTac
Entries3922436

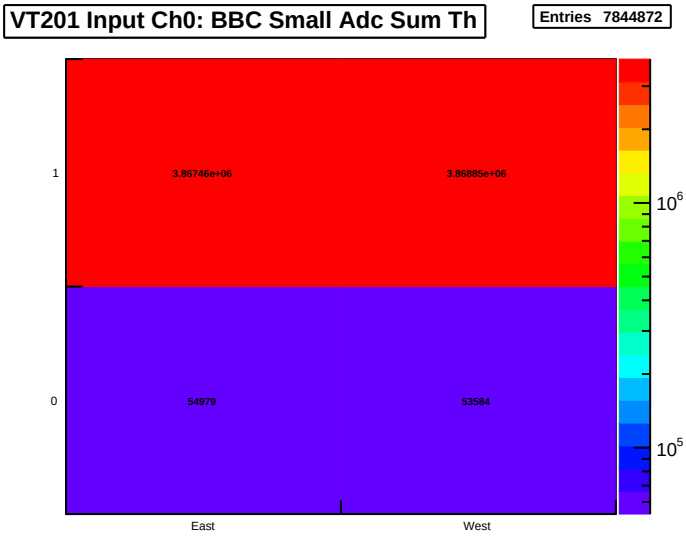

zdcWestTacVsSimu
Entries 0
Data
Simu

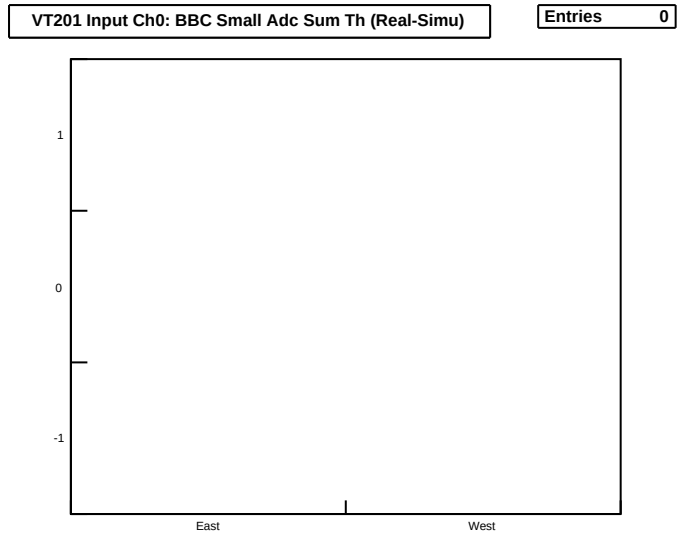

zdcAdcSum
Entries 4.706923e+07
3.88727e+06
3.8559e+06
1.30828e+06
1.10938e+06
1.12085e+06
982054
3.88595e+06
3.85386e+06
790033
617529
631518
517284
35163
66535
2.61416e+06
2.81306e+06
2.80158e+06
2.94038e+06
36482
69372
3.13234e+06
3.30491e+06
3.29092e+06
3.40515e+06
ZDC-W-th0
ZDC-W-th1
ZDC-W-th2
ZDC-W-th3
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)

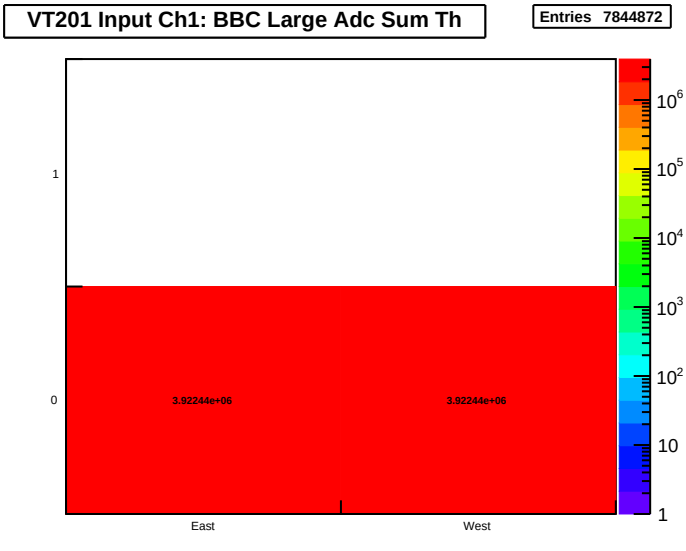

zdcAdcSumDiff
Entries 3507
1845
1662
ZDC-W-th0
ZDC-W-th1
ZDC-W-th2
ZDC-W-th3
ZDC-W-att-th4(Unused)
ZDC-W-att-th5(Unused)
ZDC-E-th0
ZDC-E-th1
ZDC-E-th2
ZDC-E-th3
ZDC-E-att-th4(Unused)

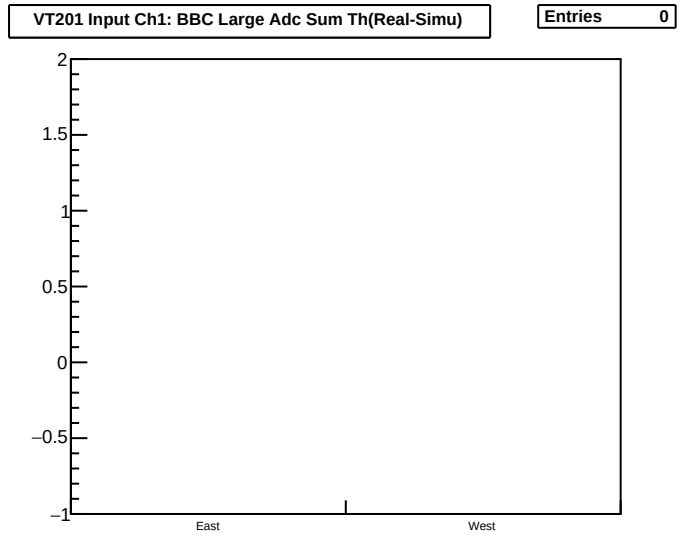

VT201 Input Ch0: BBC Small Tac Diff
Entries3922436
Tac

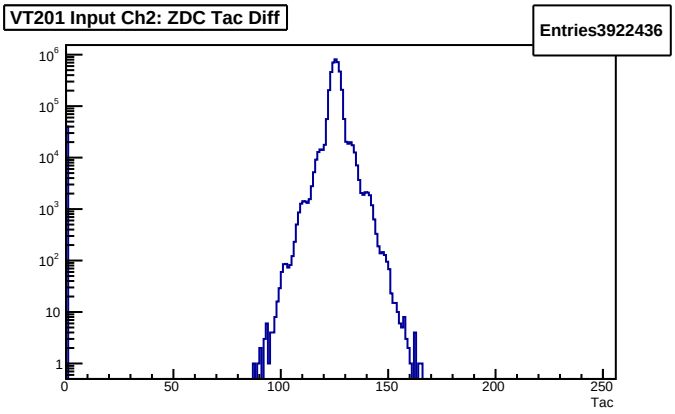

VT201 Input Ch0: BBC Small Tac Diff
Entries 0
Simu
Real

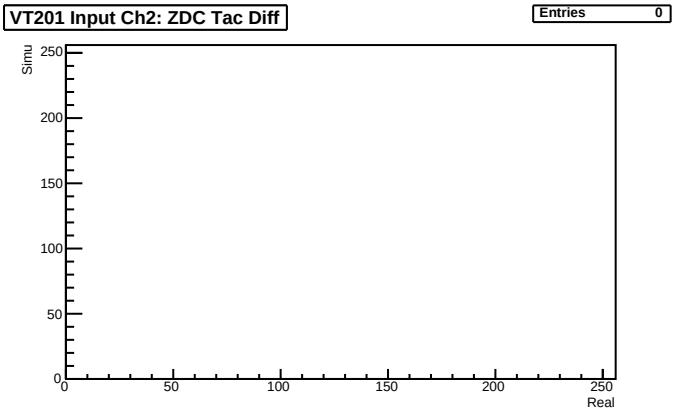

VT201 Input Ch0: BBC Small Adc Sum Th
Entries 7844872
3.86746e+06
3.86885e+06
54979
53584
East
West

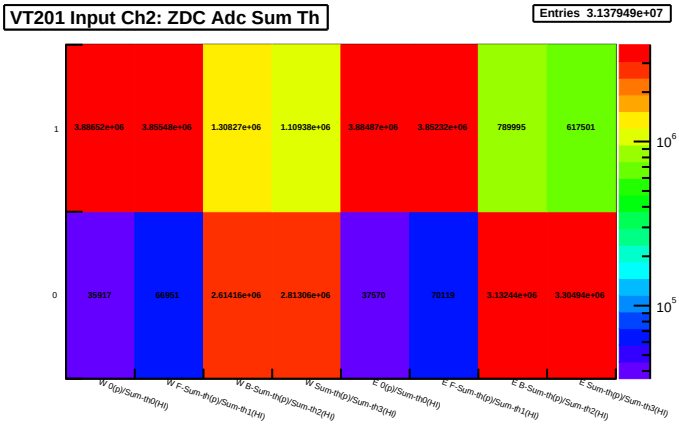

VT201 Input Ch0: BBC Small Adc Sum Th (Real-Simu)
Entries 0
East
West

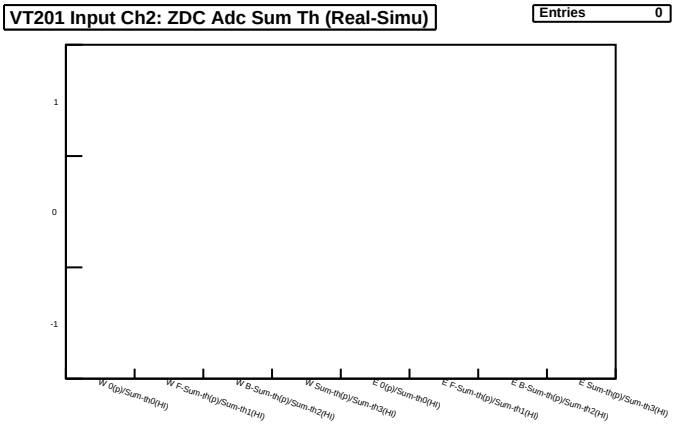

VT201 Input Ch1: BBC Large Adc Sum Th
Entries 7844872
3.92244e+06
3.92244e+06
East
West

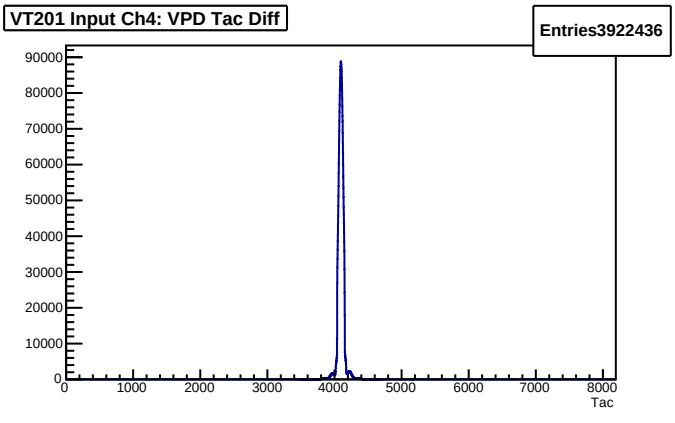

VT201 Input Ch1: BBC Large Adc Sum Th(Real-Simu)
Entries 0
East
West

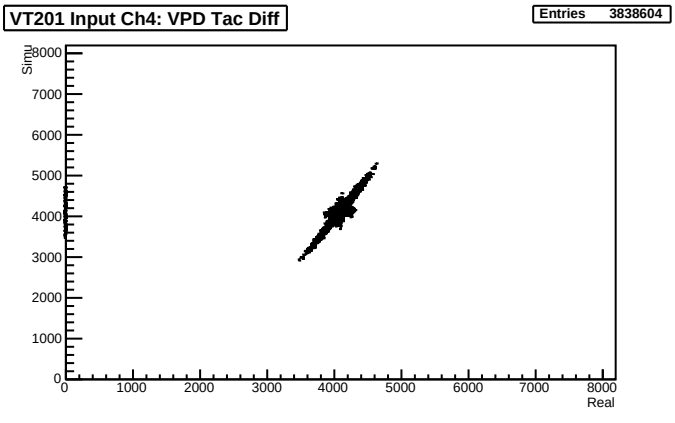

VT201 Input Ch2: ZDC Tac Diff
Entries3922436
Tac

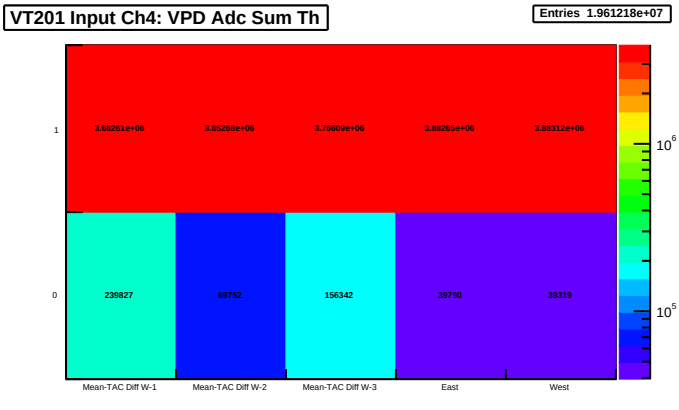

VT201 Input Ch2: ZDC Tac Diff
Entries 0
Simu
Real

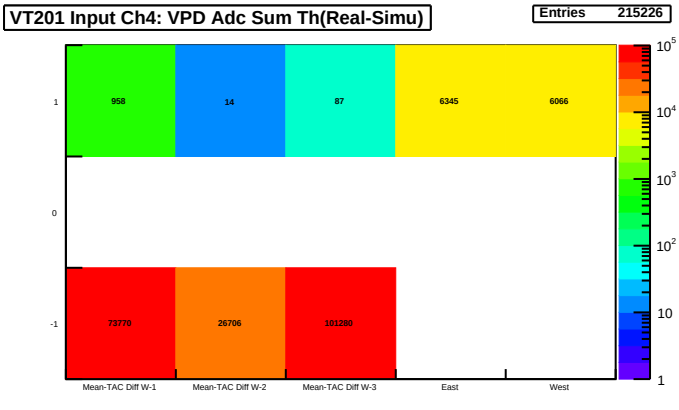

VT201 Input Ch2: ZDC Adc Sum Th
Entries 3.137949e+07
3.88652e+06
3.85548e+06
1.30827e+06
1.10938e+06
3.88487e+06
3.85232e+06
789995
617501
35917
66951
2.61416e+06
2.81306e+06
37570
70119
3.13244e+06
3.30494e+06
W 0(p)/Sum-th0(Hl)
W F-Sum-th(p)/Sum-th1(Hl)
W B-Sum-th(p)/Sum-th2(Hl)
W Sum-th(p)/Sum-th3(Hl)
E 0(p)/Sum-th0(Hl)
E F-Sum-th(p)/Sum-th1(Hl)
E B-Sum-th(p)/Sum-th2(Hl)
E Sum-th(p)/Sum-th3(Hl)

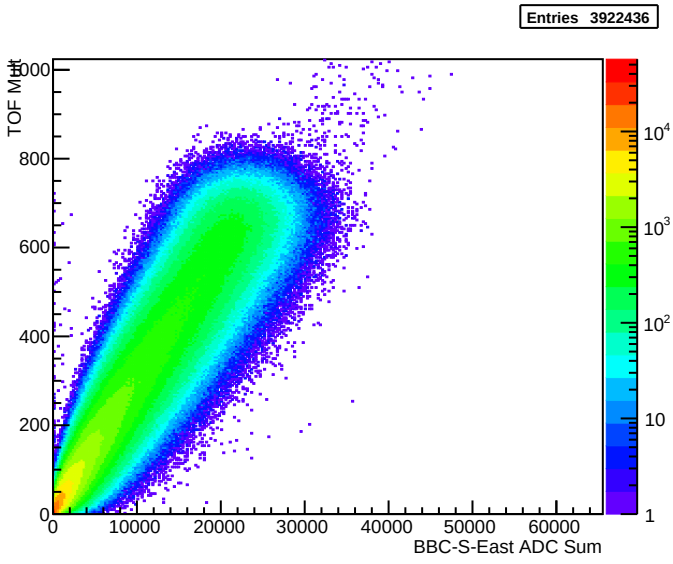

VT201 Input Ch2: ZDC Adc Sum Th (Real-Simu)
Entries 0
W 0(p)/Sum-th0(Hl)
W F-Sum-th(p)/Sum-th1(Hl)
W B-Sum-th(p)/Sum-th2(Hl)
W Sum-th(p)/Sum-th3(Hl)
E 0(p)/Sum-th0(Hl)
E F-Sum-th(p)/Sum-th1(Hl)
E B-Sum-th(p)/Sum-th2(Hl)
E Sum-th(p)/Sum-th3(Hl)

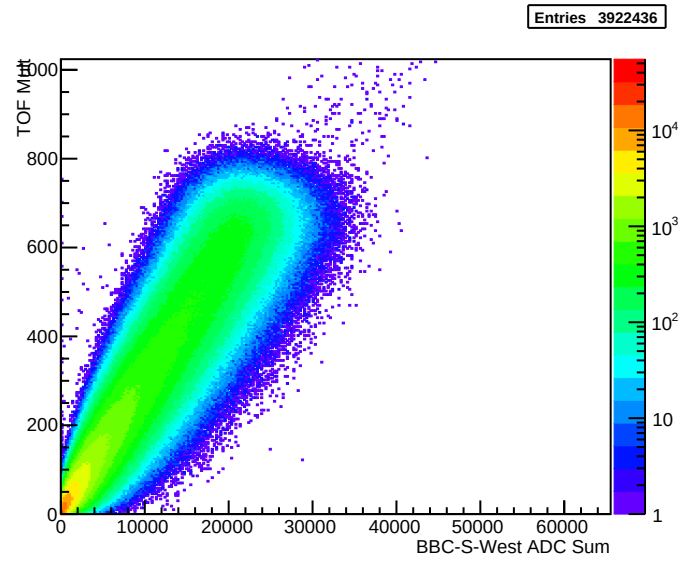

VT201 Input Ch4: VPD Tac Diff
Entries3922436
Tac

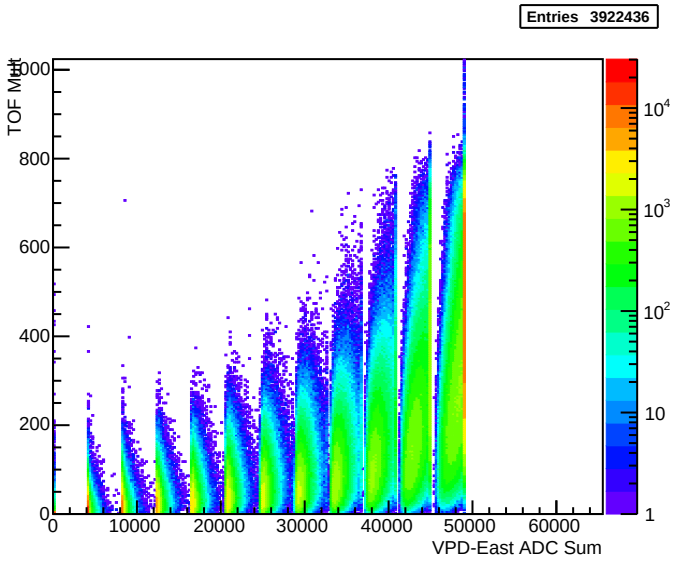

VT201 Input Ch4: VPD Tac Diff
Entries 3838604
Simu
Real

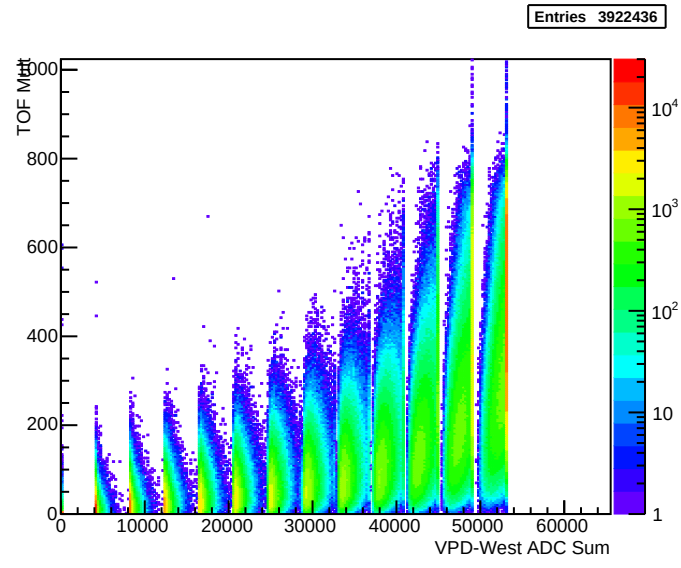

VT201 Input Ch4: VPD Adc Sum Th
Entries 1.961218e+07
3.68261e+06
3.85268e+06
3.76609e+06
3.88265e+06
3.88312e+06
239827
69752
156342
39790
39319
Mean-TAC Diff W-1
Mean-TAC Diff W-2
Mean-TAC Diff W-3
East
West

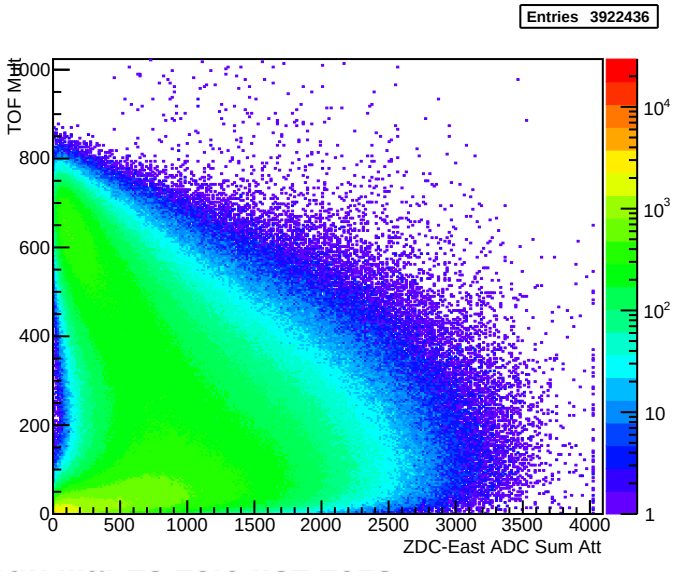

VT201 Input Ch4: VPD Adc Sum Th(Real-Simu)
Entries 215226
958
14
87
6345
6066
73770
26706
101280
Mean-TAC Diff W-1
Mean-TAC Diff W-2
Mean-TAC Diff W-3
East
West

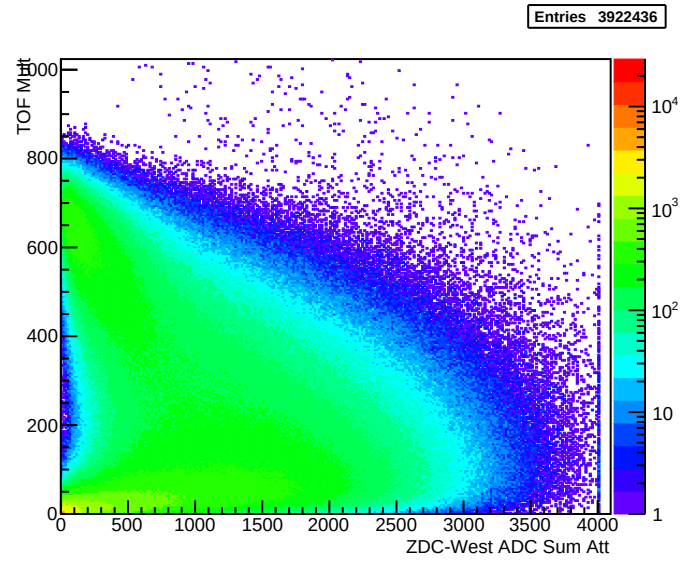

Entries 3922436
TOF Mult
BBC-S-East ADC Sum

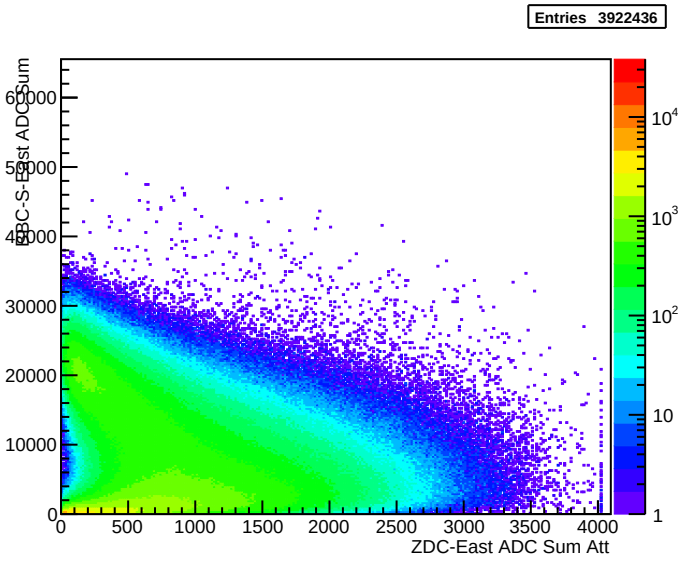

Entries 3922436
TOF Mult
BBC-S-West ADC Sum

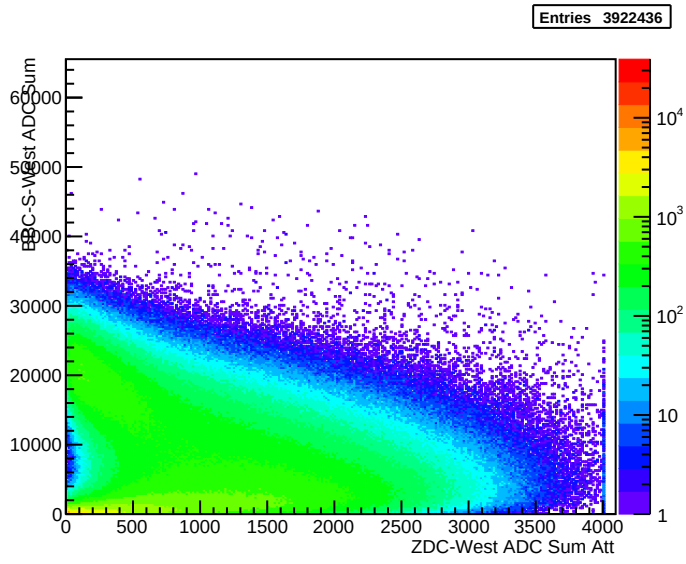

Entries 3922436
TOF Mult
VPD-East ADC Sum

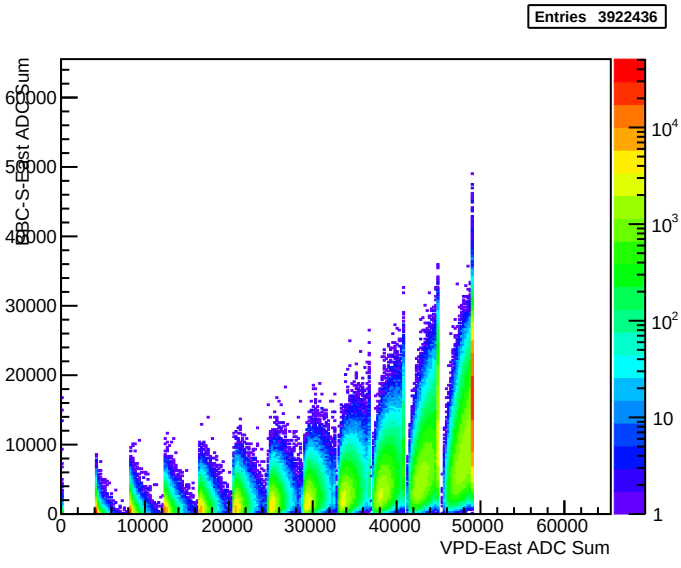

Entries 3922436
TOF Mult
VPD-West ADC Sum

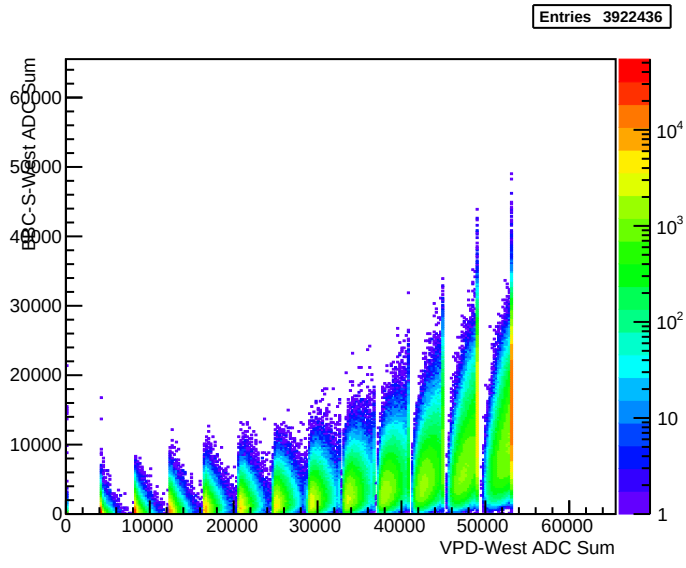

Entries 3922436
TOF Mult
ZDC-East ADC Sum Att


Entries 3922436
TOF Mult
ZDC-West ADC Sum Att


Entries 3922436
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 3922436
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 3922436
BBC-S-East ADC Sum
VPD-East ADC Sum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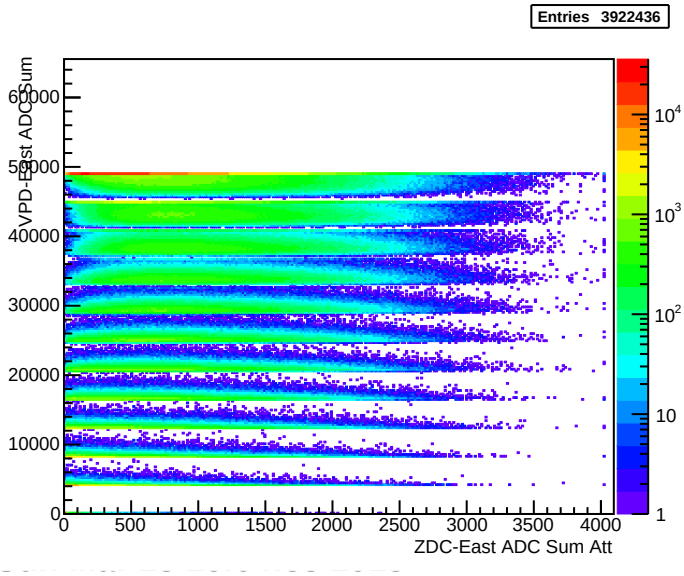
BBC-S-West ADC Sum
VPD-West ADC Sum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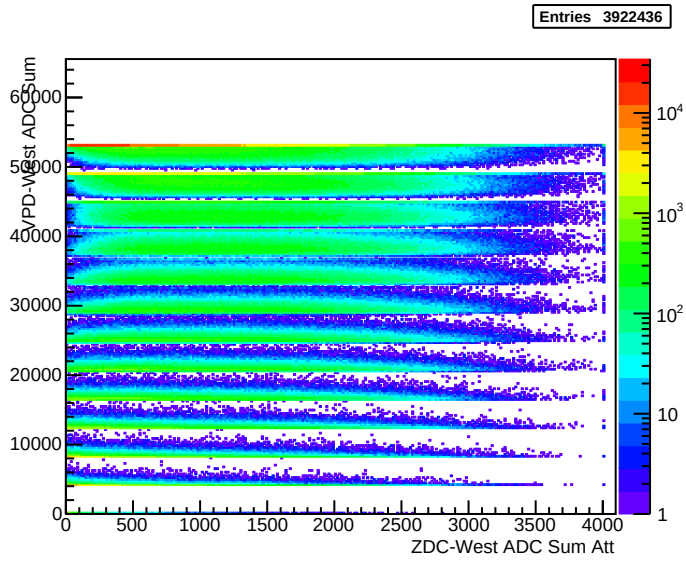
VPD-East ADC Sum
ZDC-East ADC Sum Att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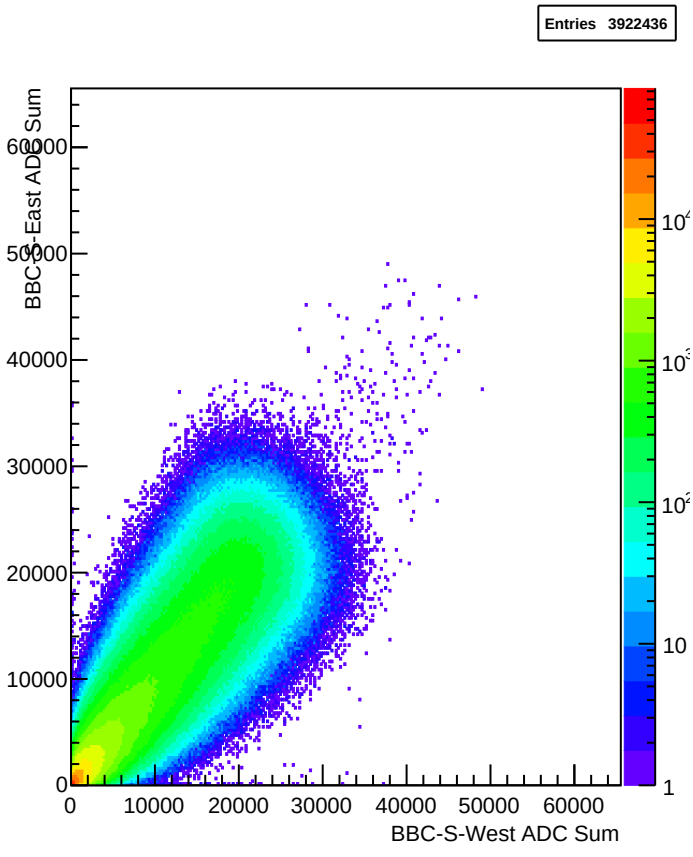
VPD-West ADC Sum
ZDC-West ADC Sum Att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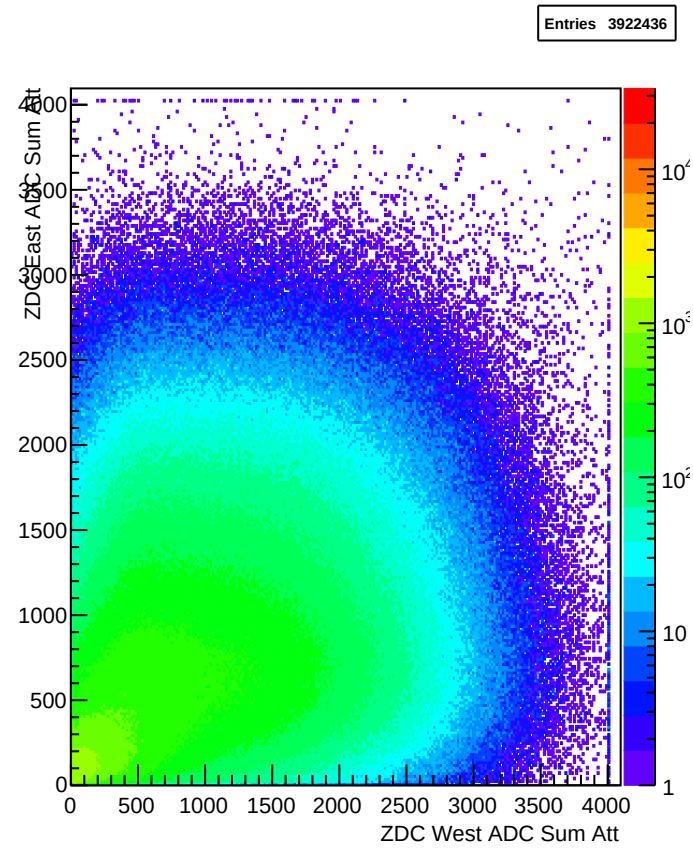
BBC-S-East ADC Sum
BBC-S-West ADC Sum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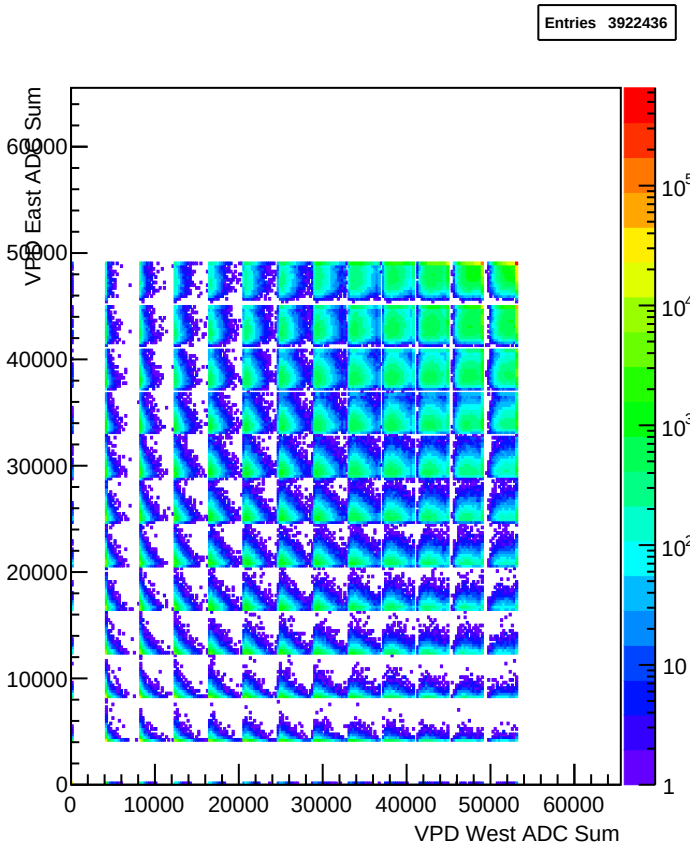
ZDC East ADC Sum Att
ZDC West ADC Sum Att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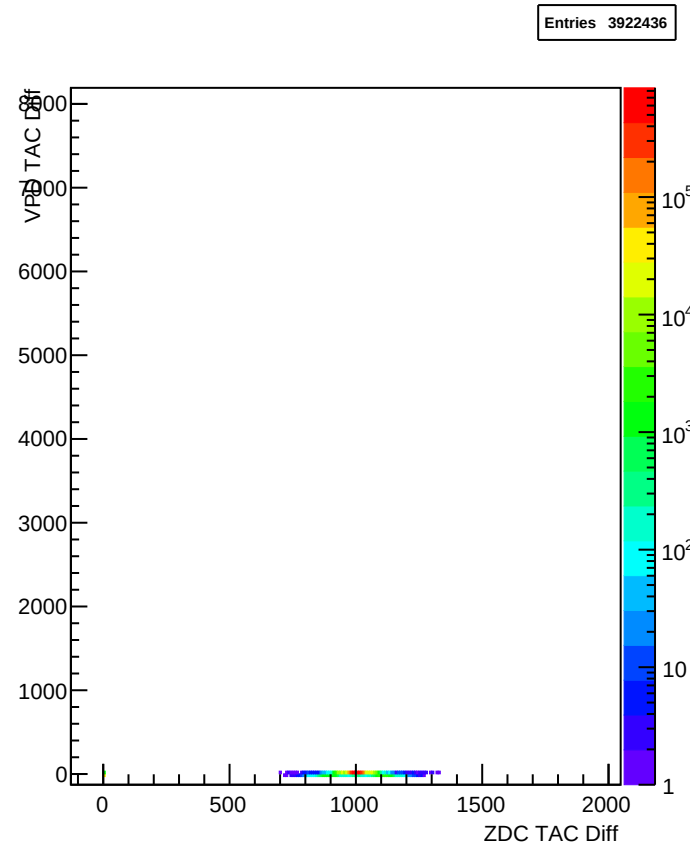
VPD East ADC Sum
VPD West ADC Sum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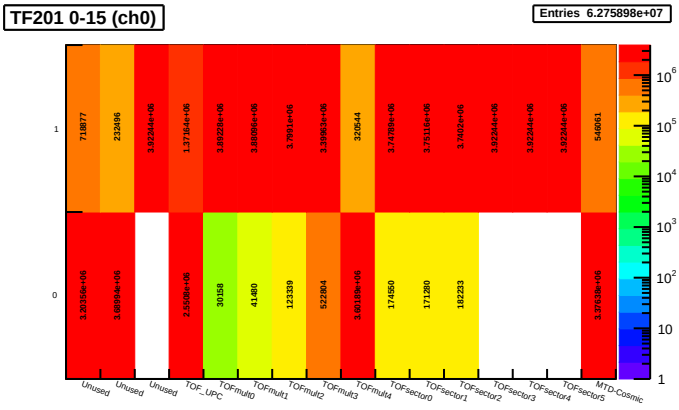
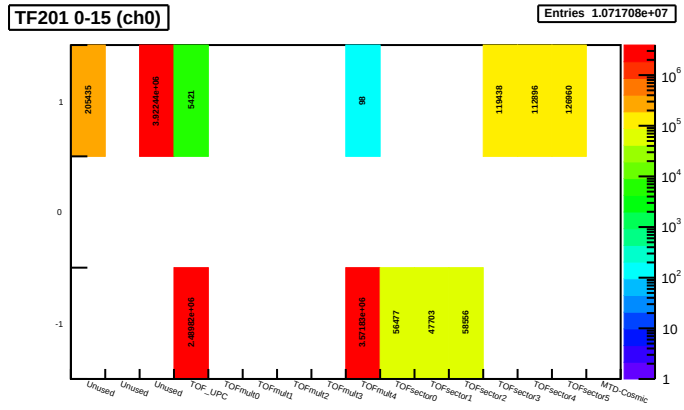
VPD TAC Diff
ZDC TAC Diff


TF201 0-15 (ch0)
Entries 6.275898e+07
Unused
TOF_UPC
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5
MTD-Cosmic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TOF_UPC
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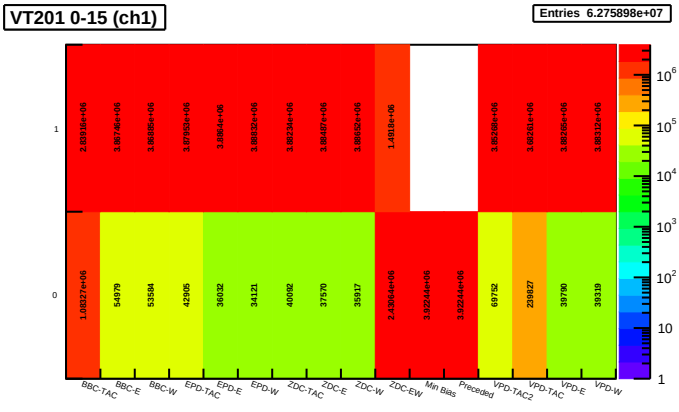
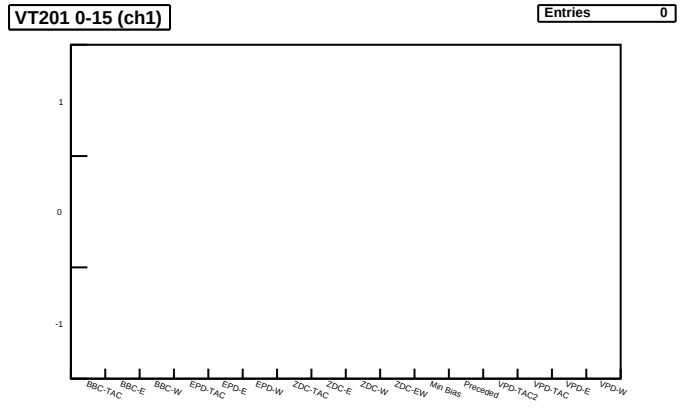
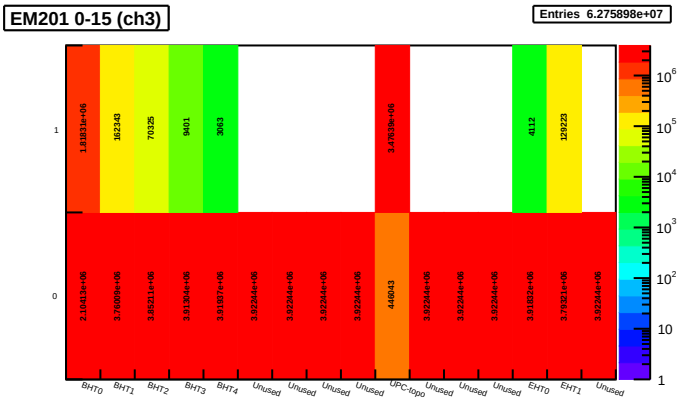
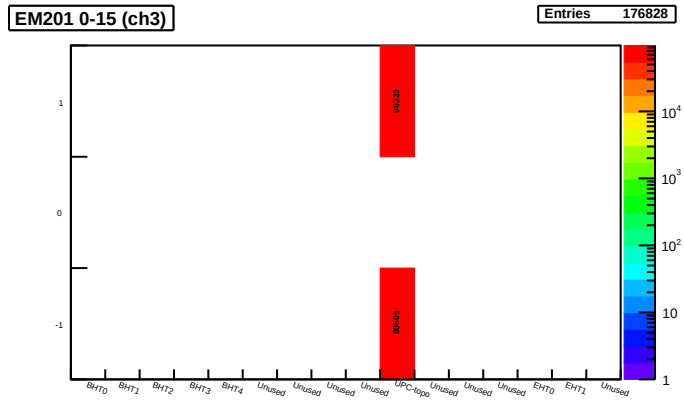
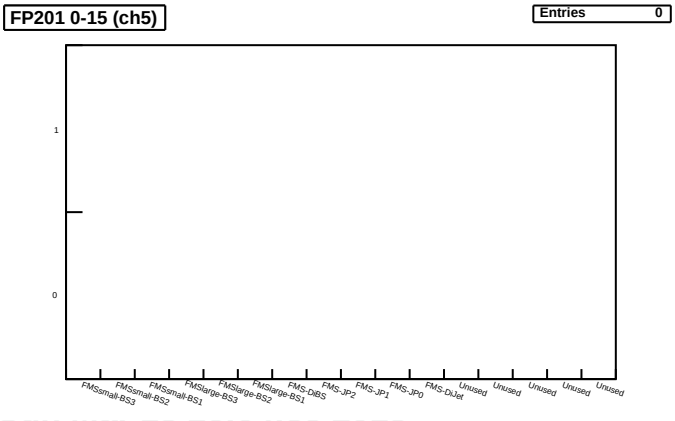
TOFsector2
TOFsector3
TOFsector4
TOFsector5
MTD-Cosmic

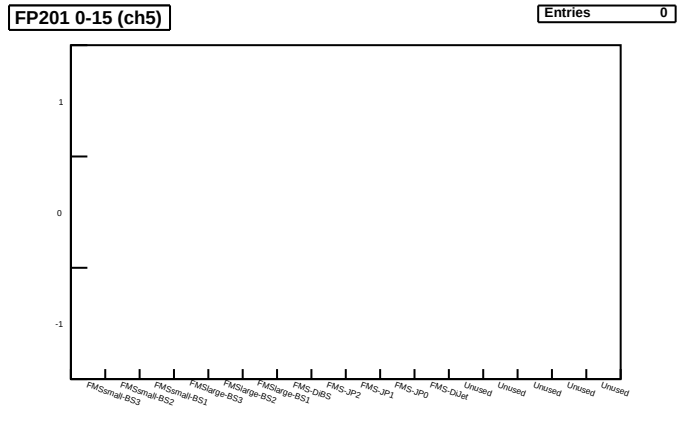

VT201 0-15 (ch1)
Entries 6.275898e+07
BBC-TAC
BBC-E
BBC-W
EPD-TAC
EPD-E
EPD-W
ZDC-TAC
ZDC-E
ZDC-W
ZDC-EW
Min Bias
Preceded
VPD-TAC2
VPD-TAC
VPD-E
VPD-W


VT201 0-15 (ch1)
Entries 0
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 6.275898e+07
BHT0
BHT1
BHT2
BHT3
BHT4
Unused
UPC-topo
EHT0
EHT1


EM201 0-15 (ch3)
Entries 176828
BHT0
BHT1
BHT2
BHT3
BHT4
Unused
UPC-topo
EHT0
EHT1


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


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