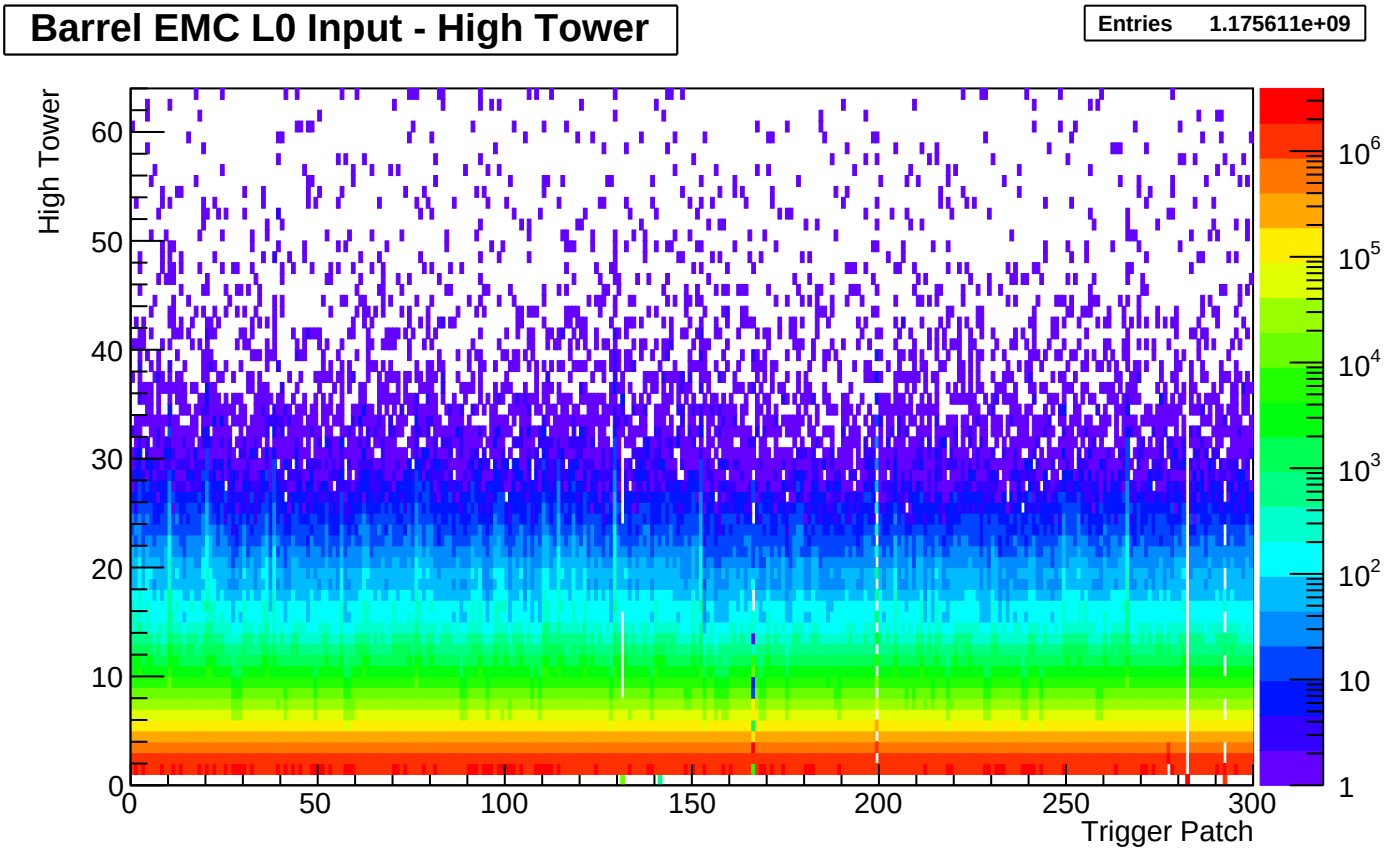
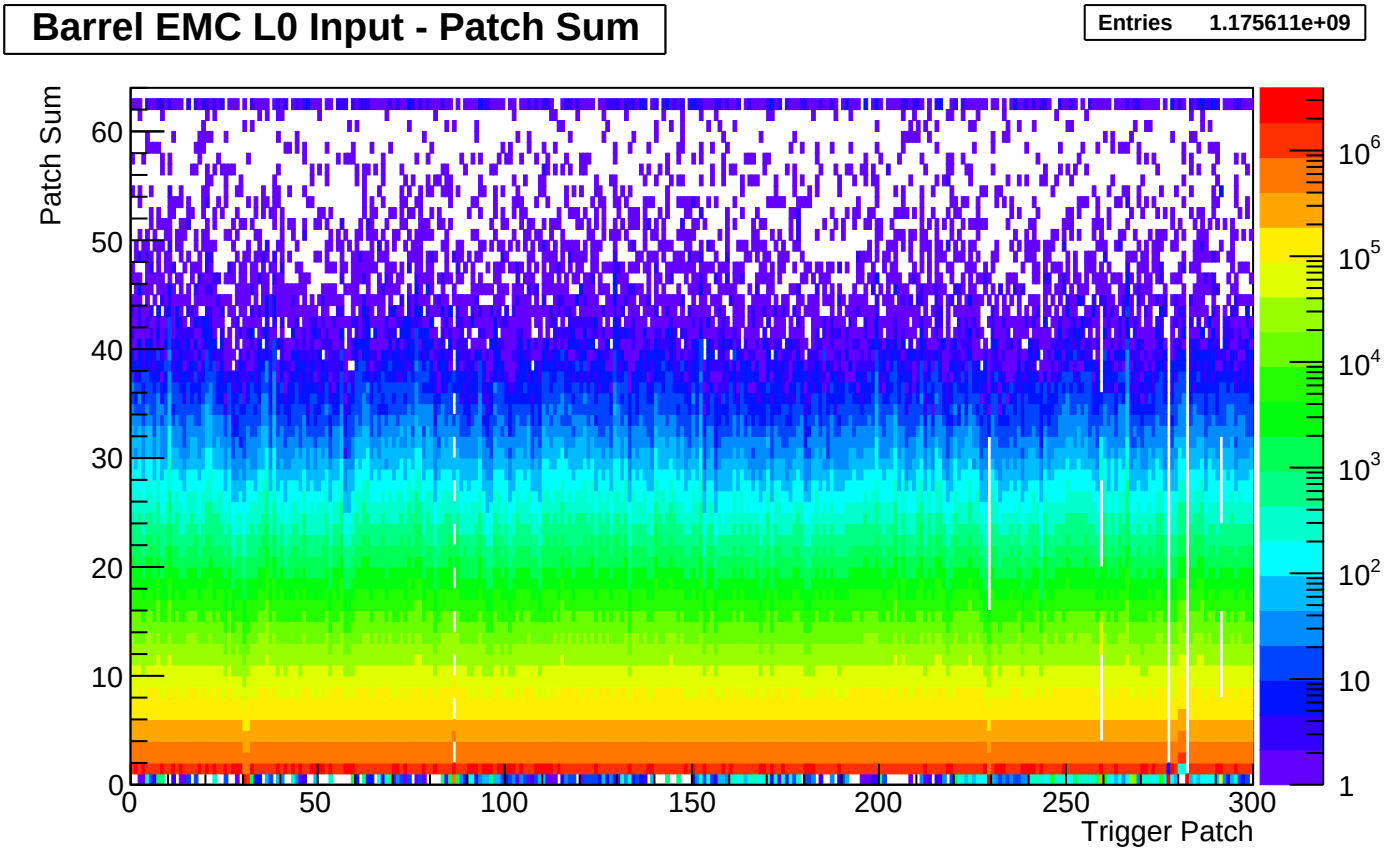
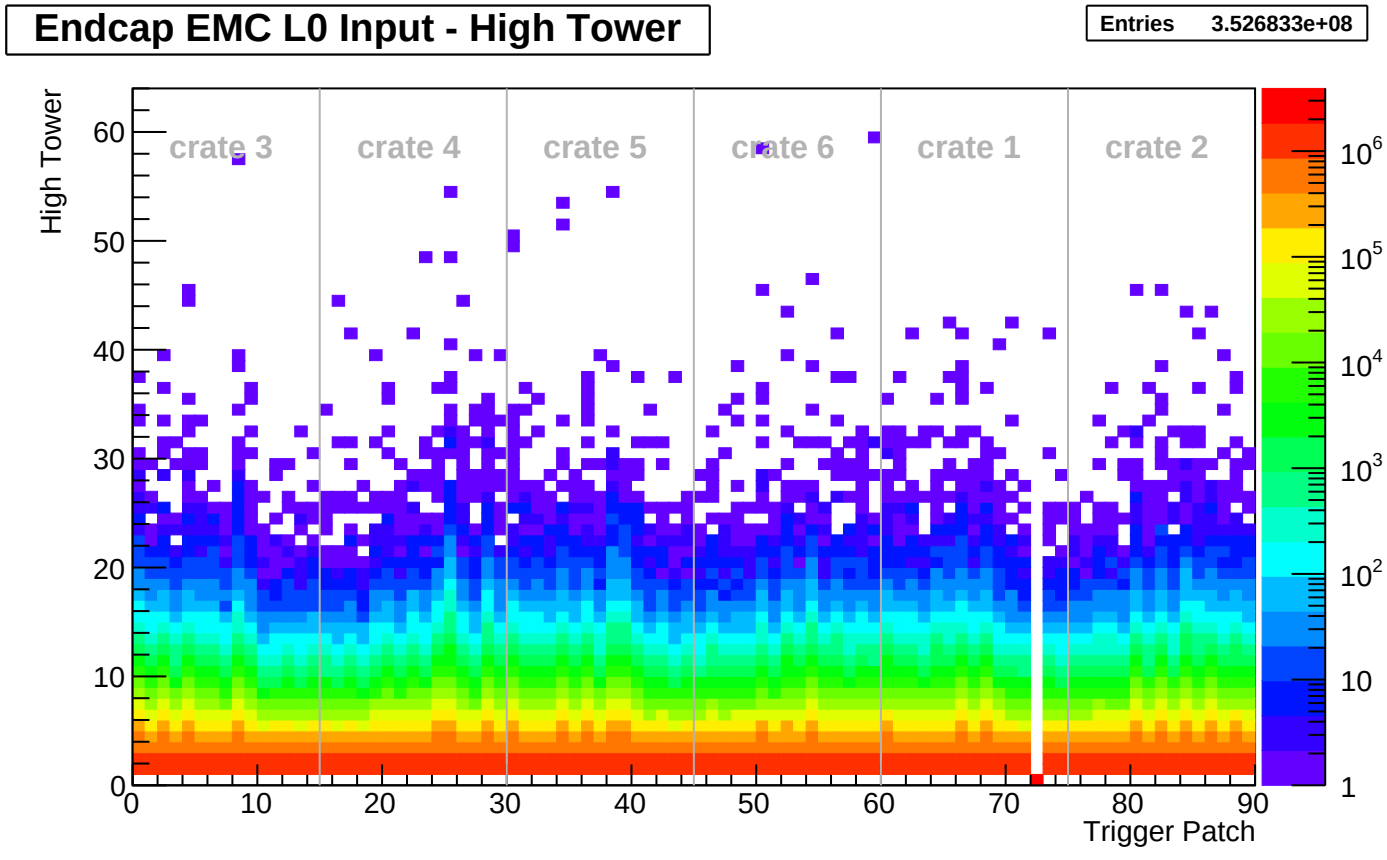
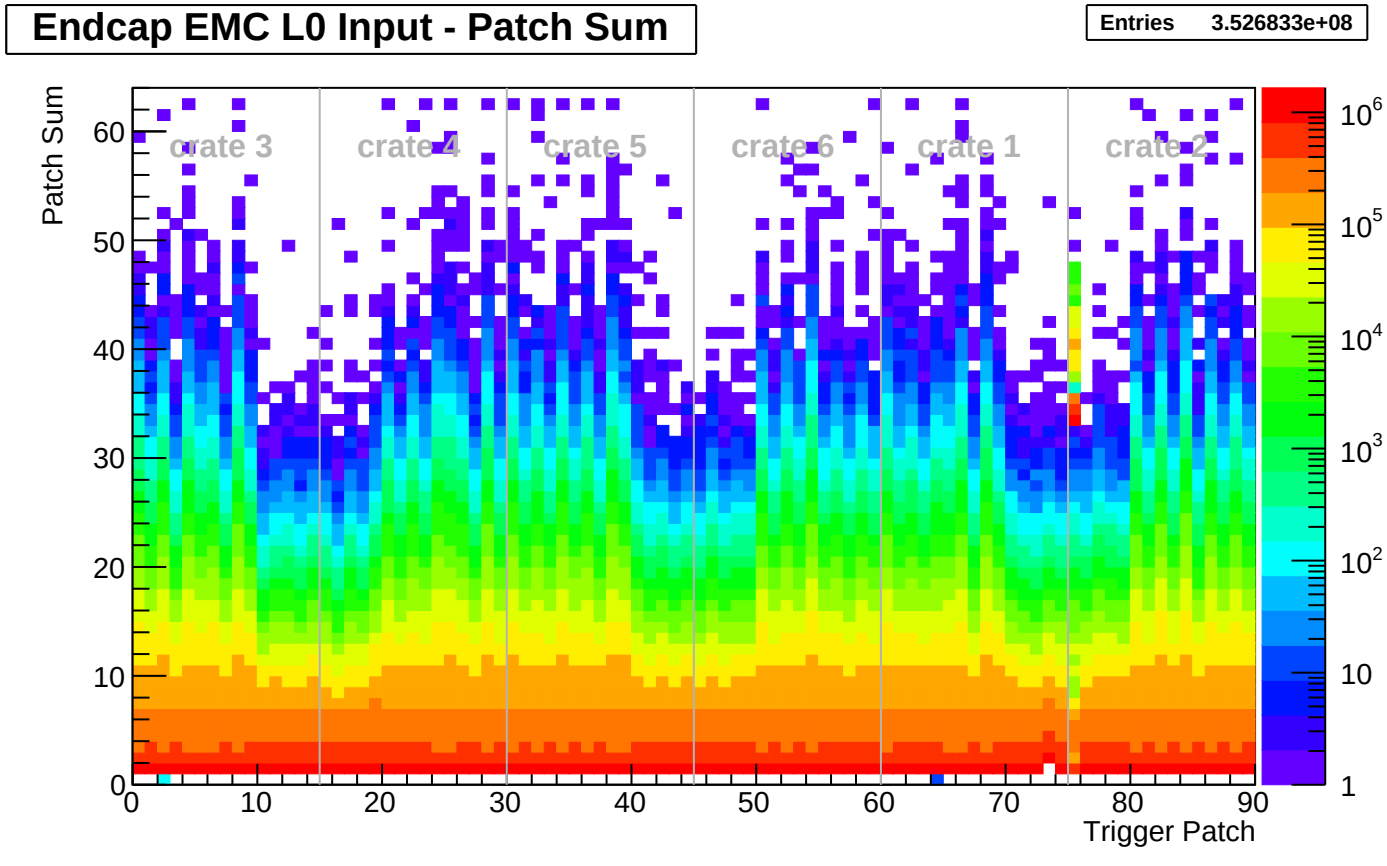
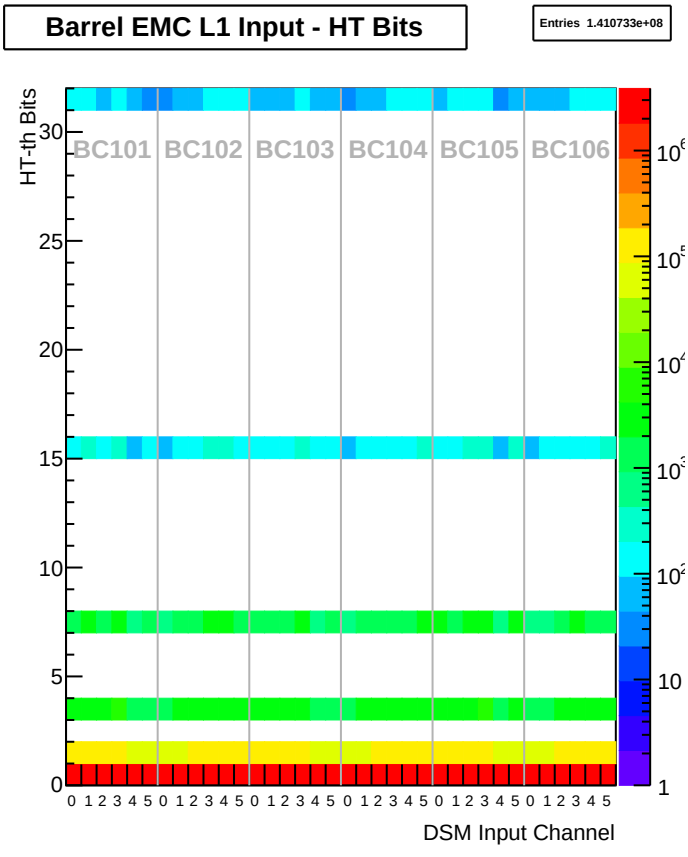
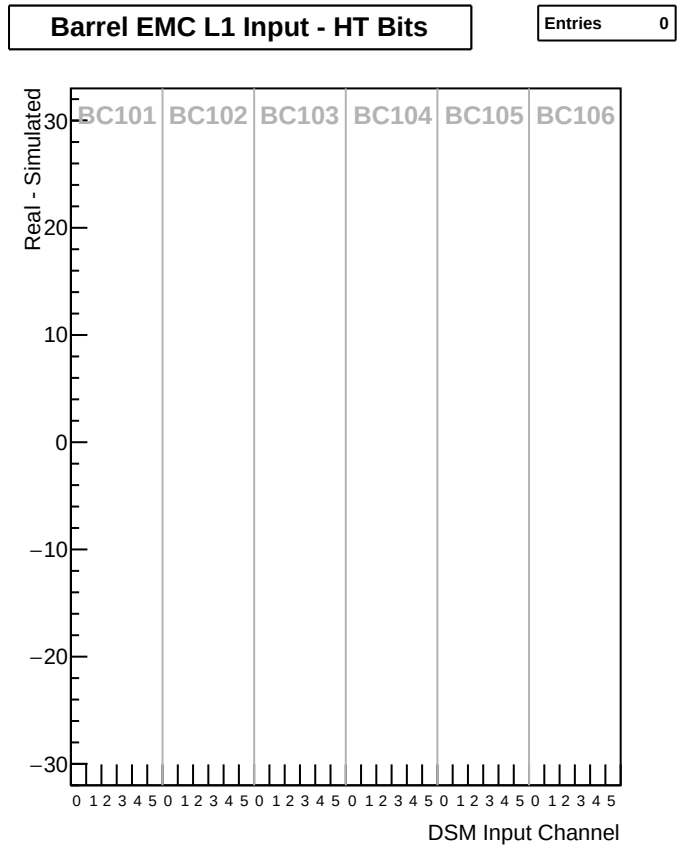

Barrel EMC L0 Input - High Tower
Entries 1.175611e+09
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

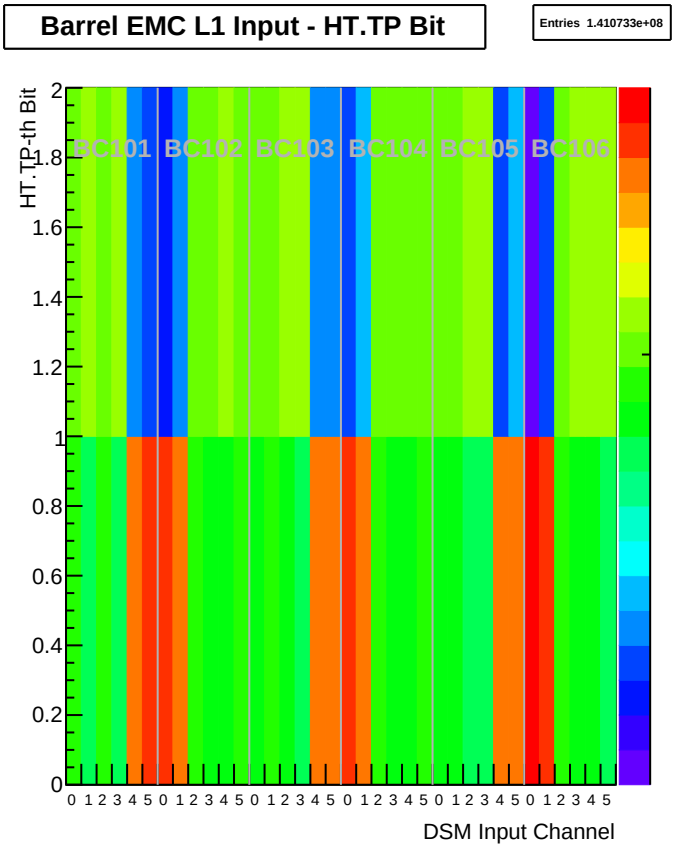

Barrel EMC L0 Input - Patch Sum
Entries 1.175611e+09
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

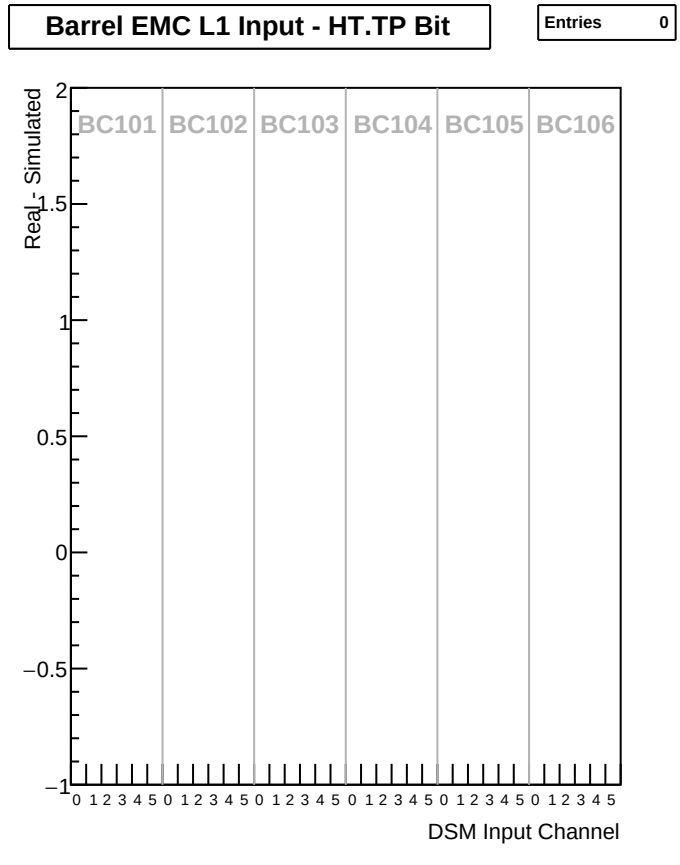

Endcap EMC L0 Input - High Tower
Entries 3.526833e+08
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

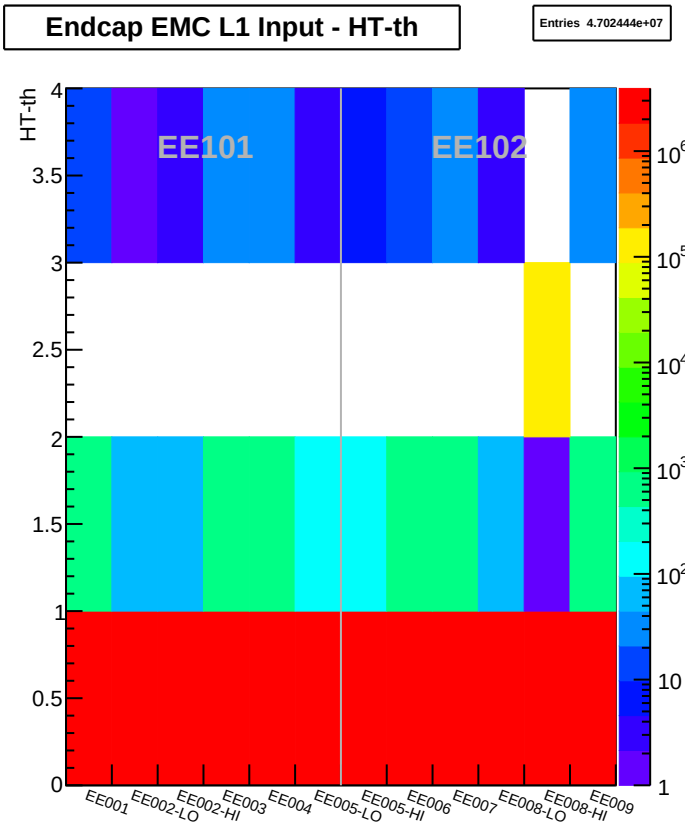

Endcap EMC L0 Input - Patch Sum
Entries 3.526833e+08
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

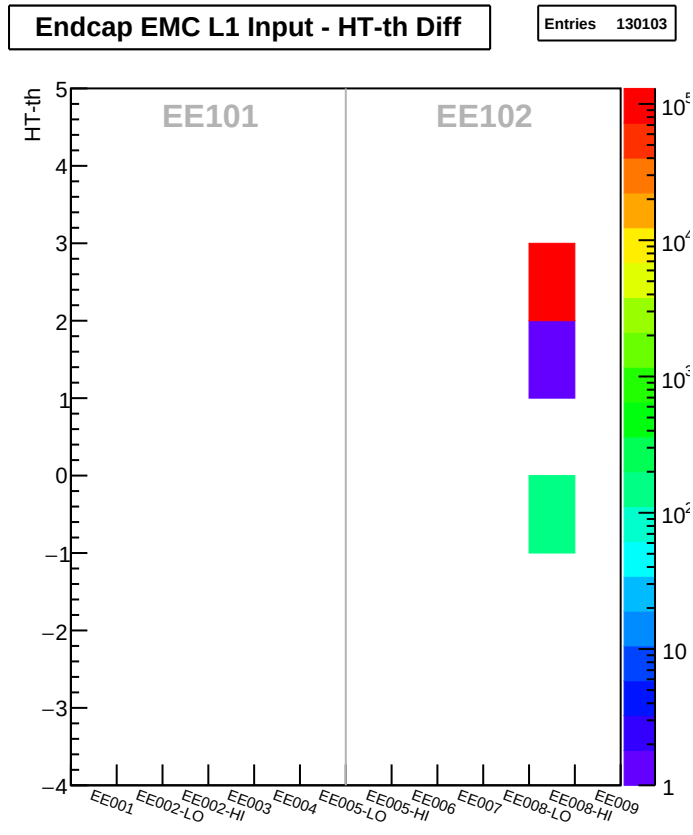

Barrel EMC L1 Input - HT Bits
Entries 1.410733e+08
HT-th Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

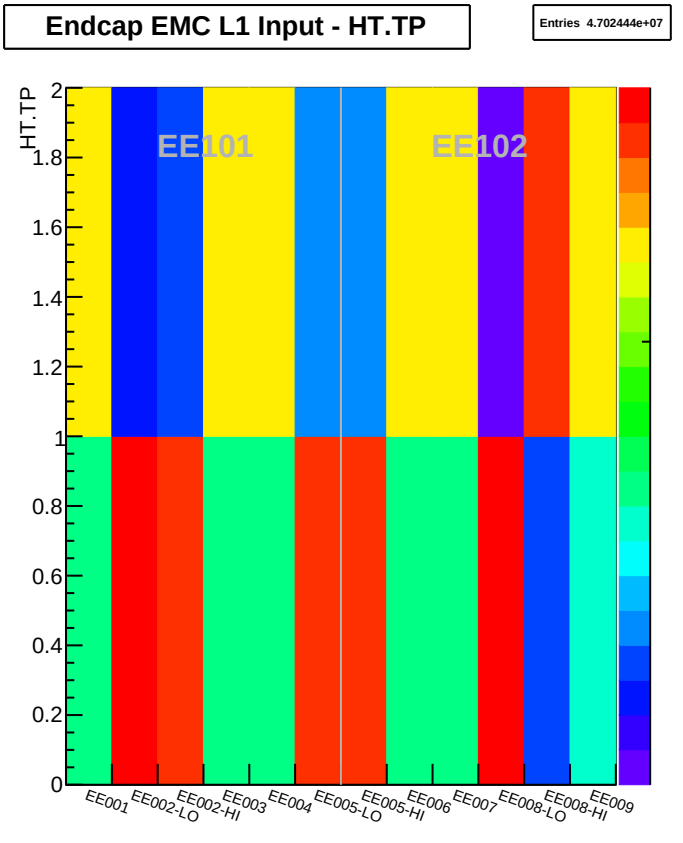

Barrel EMC L1 Input - HT Bits
Entries 0
Real - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

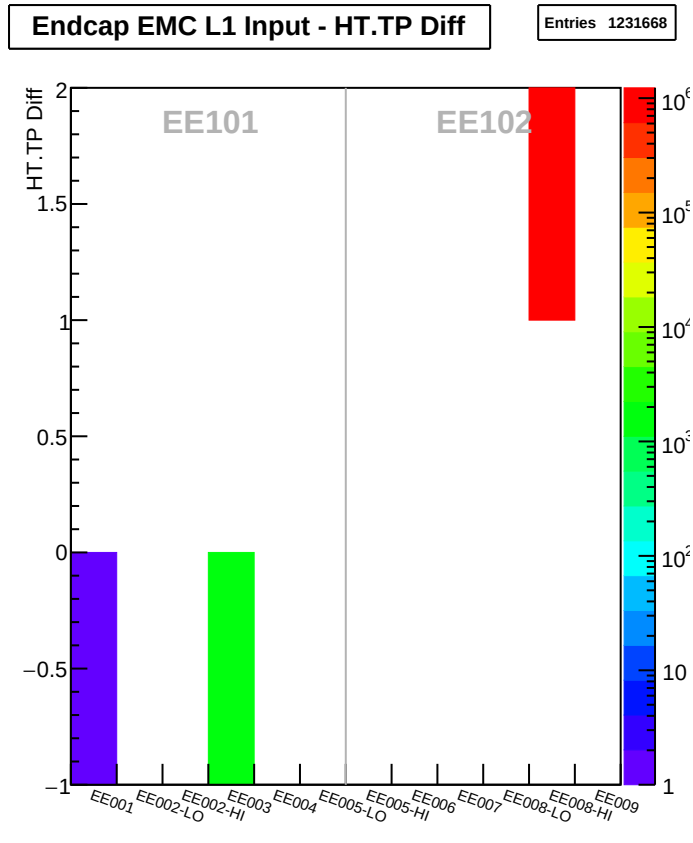

Barrel EMC L1 Input - HT.TP Bit
Entries 1.410733e+08
HT.TP-th Bit
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

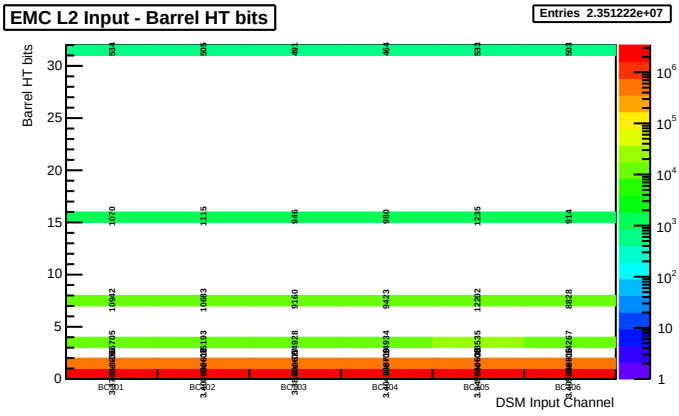

Barrel EMC L1 Input - HT.TP Bit
Entries 0
Real - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

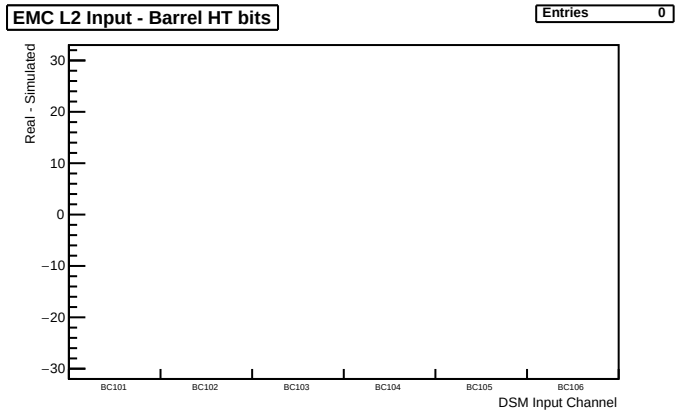

Endcap EMC L1 Input - HT-th
Entries 4.702444e+07
HT-th
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

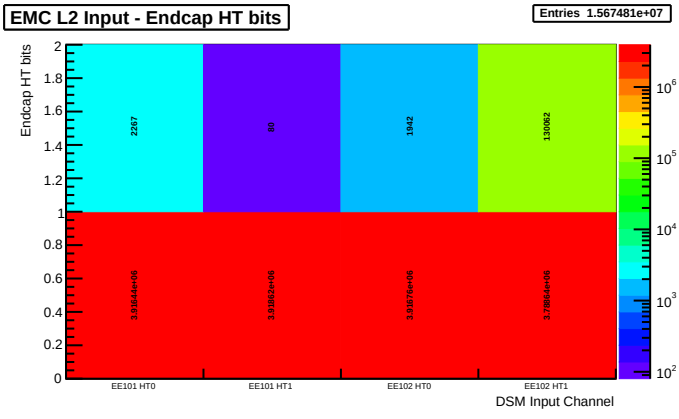

Endcap EMC L1 Input - HT-th Diff
Entries 130103
HT-th
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

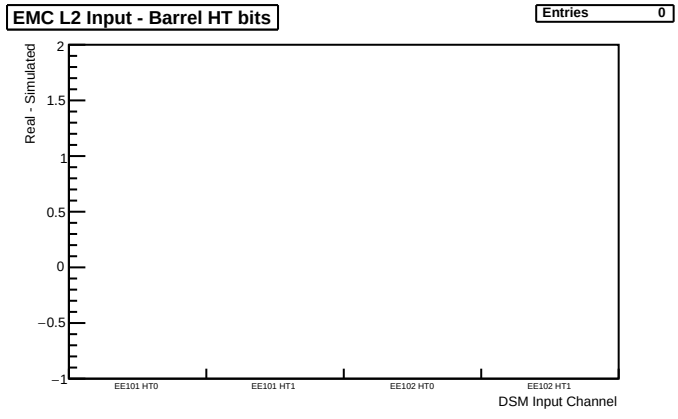

Endcap EMC L1 Input - HT.TP
Entries 4.702444e+07
HT.TP
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

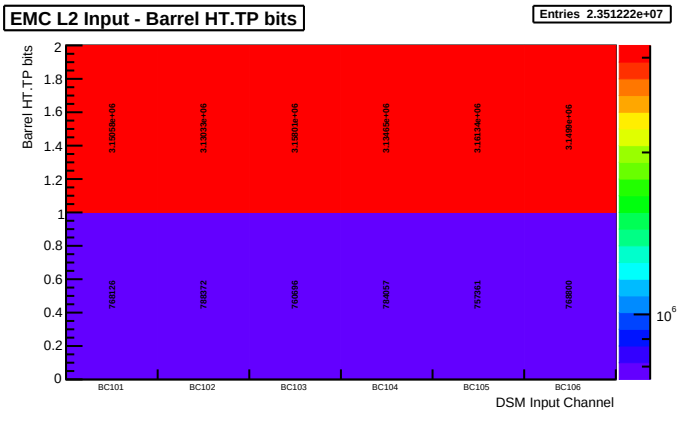

Endcap EMC L1 Input - HT.TP Diff
Entries 1231668
HT.TP Diff
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

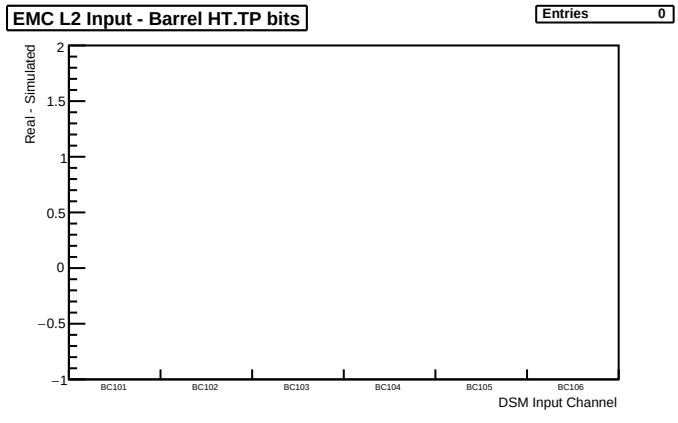

EMC L2 Input - Barrel HT bits
Entries 2.351222e+07
Barrel HT bits
DSM Input Channel

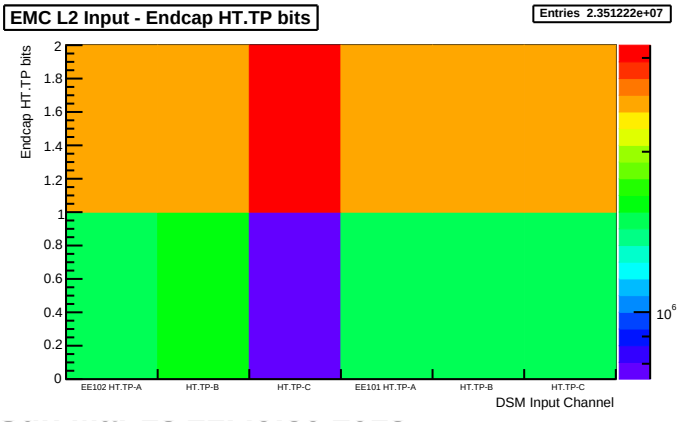

EMC L2 Input - Barrel HT bits
Entries 0
Real - Simulated
DSM Input Channel

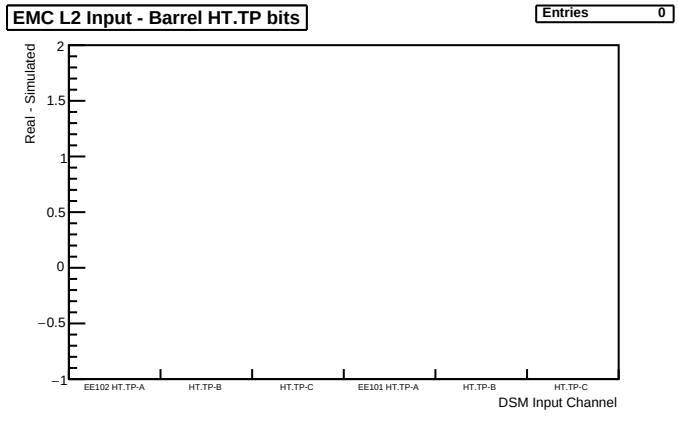

EMC L2 Input - Endcap HT bits
Entries 1.567481e+07
Endcap HT bits
DSM Input Channel

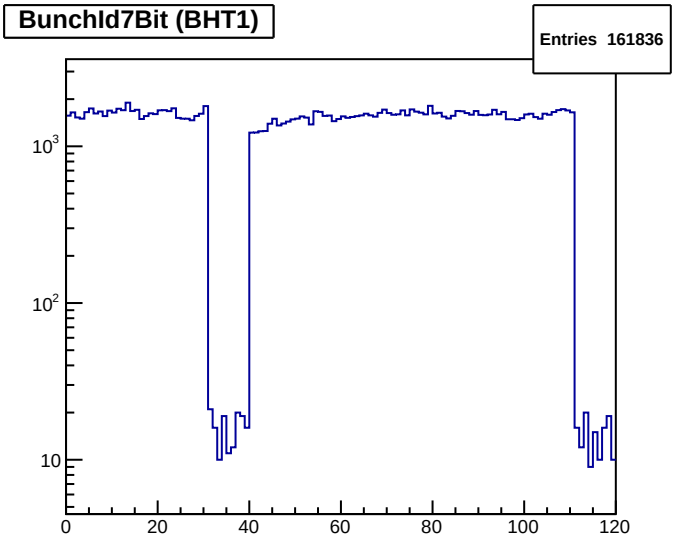

EMC L2 Input - Barrel HT bits
Entries 0
Real - Simulated
DSM Input Channel

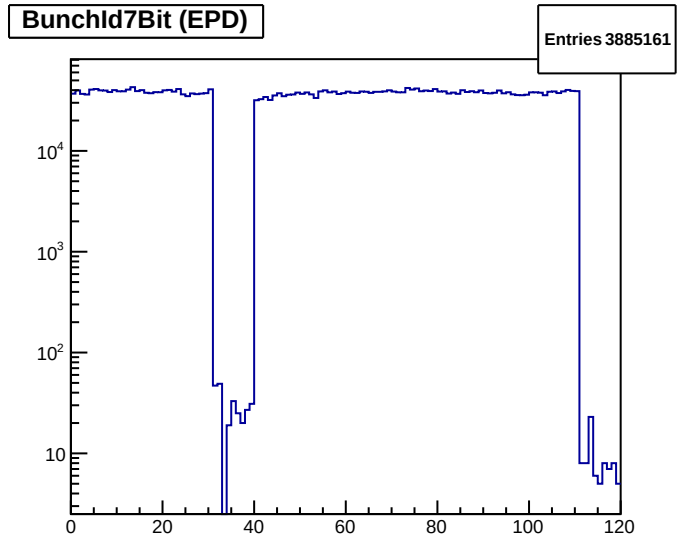

EMC L2 Input - Barrel HT.TP bits
Entries 2.351222e+07
Barrel HT.TP bits
DSM Input Channel

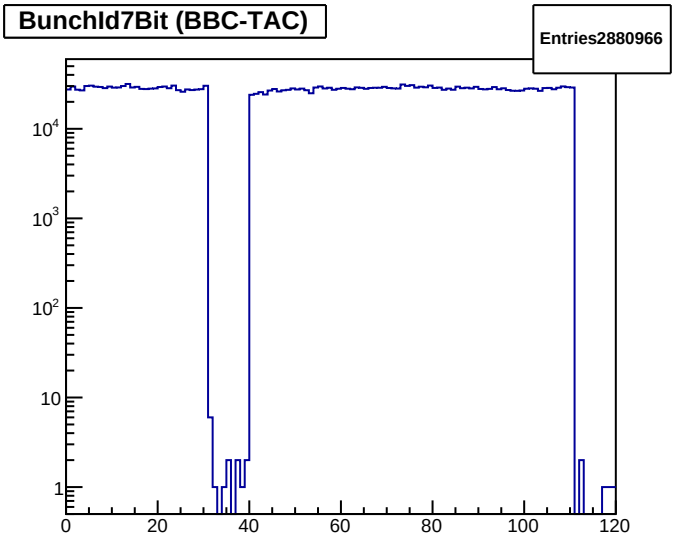

EMC L2 Input - Barrel HT.TP bits
Entries 0
Real - Simulated
DSM Input Channel

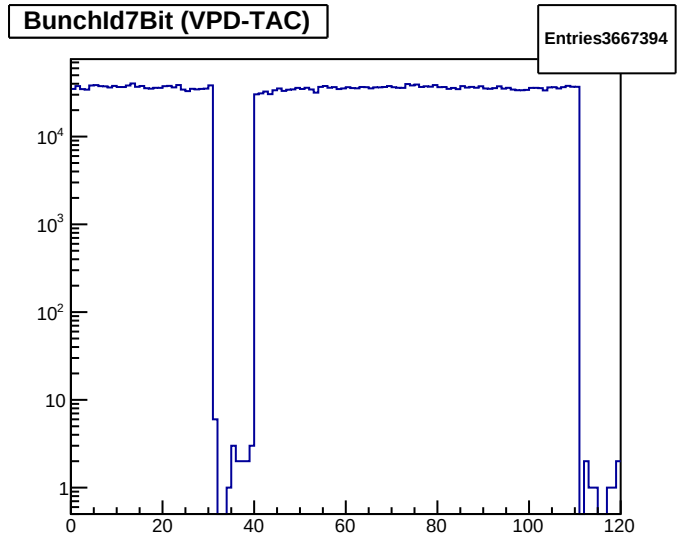

EMC L2 Input - Endcap HT.TP bits
Entries 2.351222e+07
Endcap HT.TP bits
DSM Input Channel

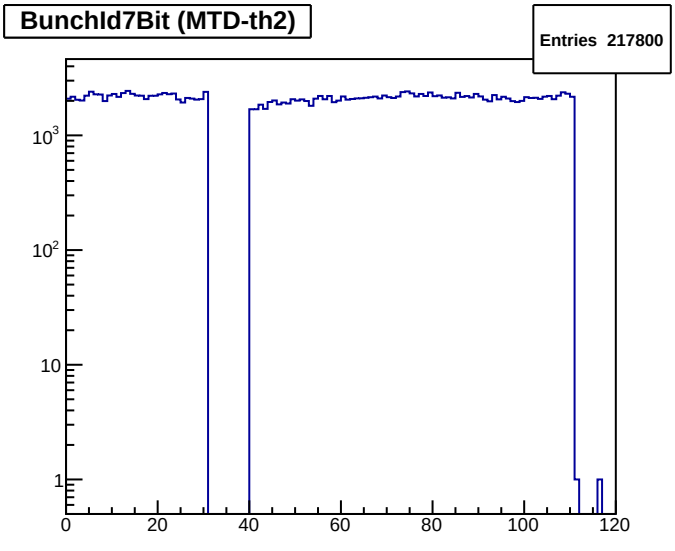

EMC L2 Input - Barrel HT.TP bits
Entries 0
Real - Simulated
DSM Input Channel

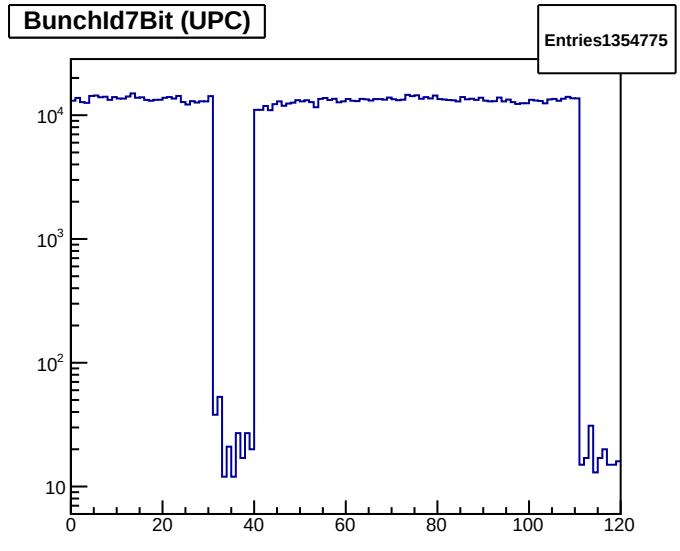

BunchId7Bit (BHT1)
Entries 161836
10^3
10^2
10
0 20 40 60 80 100 120

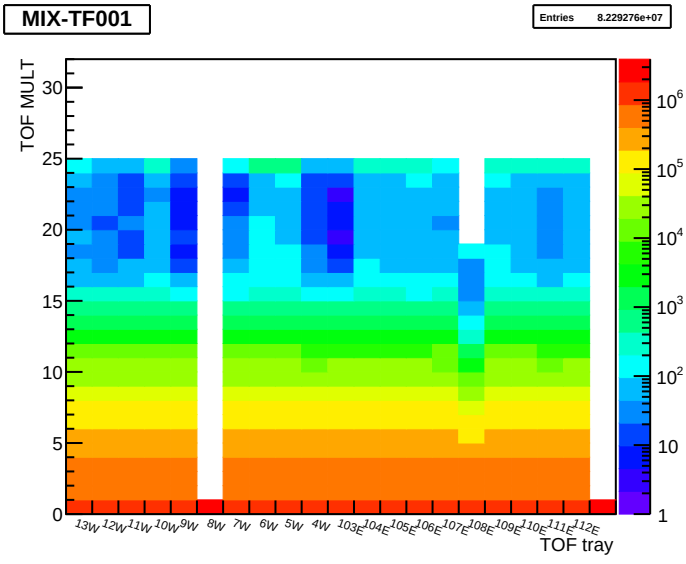

BunchId7Bit (EPD)
Entries 3885161
10^4
10^3
10^2
10
0 20 40 60 80 100 120

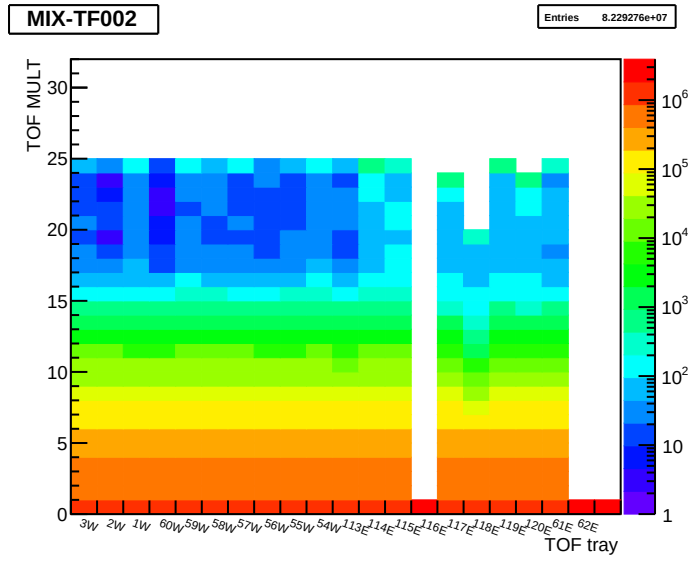

BunchId7Bit (BBC-TAC)
Entries2880966
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

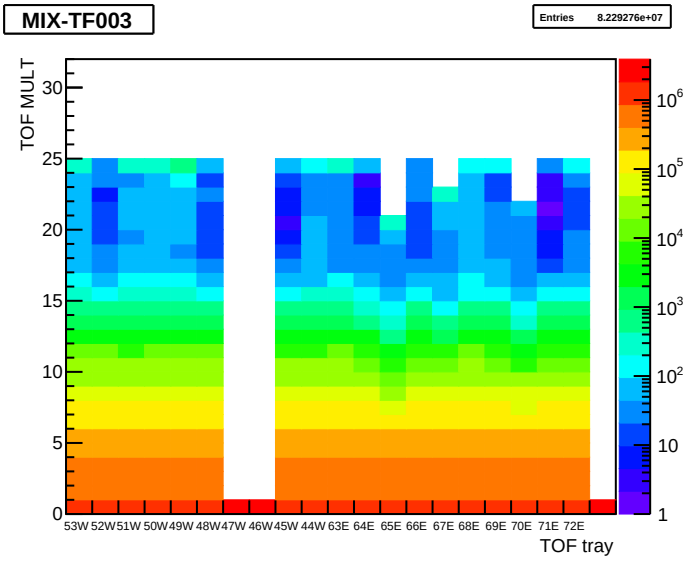

BunchId7Bit (VPD-TAC)
Entries3667394
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

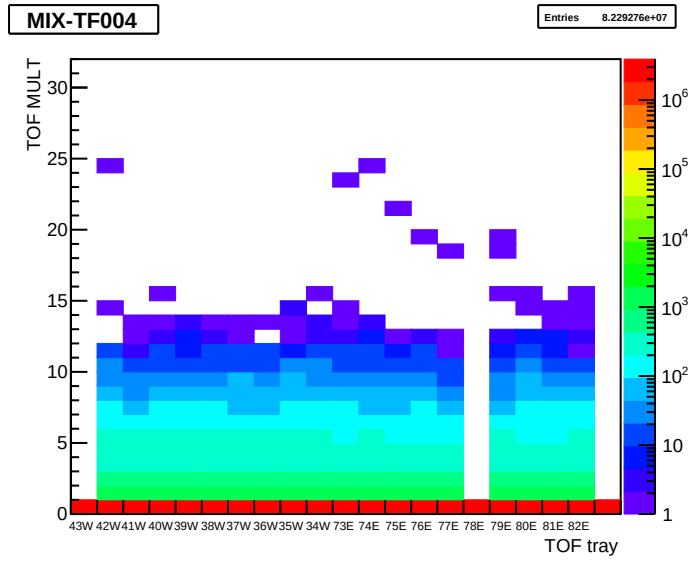

BunchId7Bit (MTD-th2)
Entries 217800
10^3
10^2
10
1
0 20 40 60 80 100 120

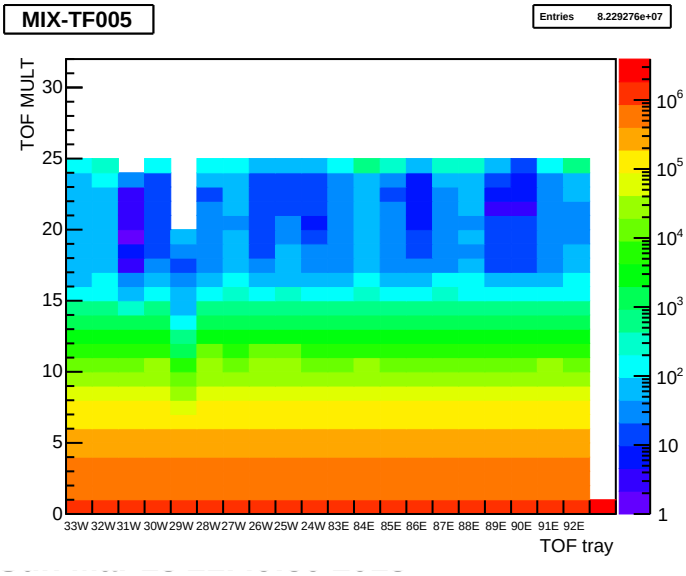

BunchId7Bit (UPC)
Entries1354775
10^4
10^3
10^2
10
0 20 40 60 80 100 120

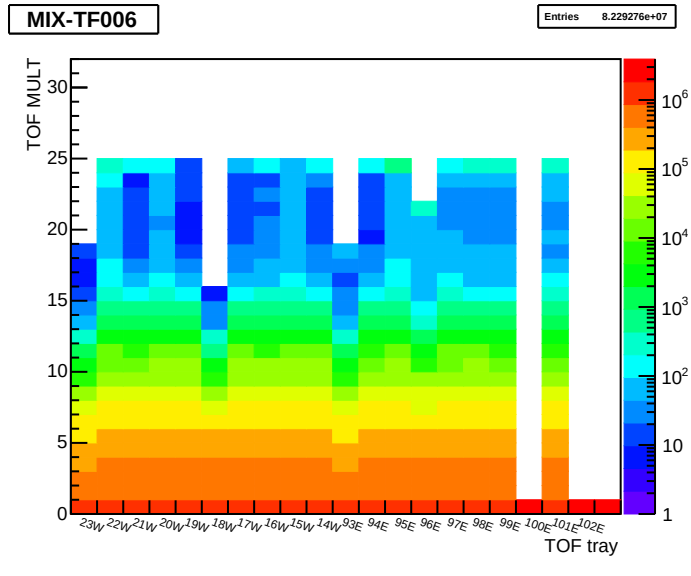

MIX-TF001
Entries 8.229276e+07
TOF MULT
TOF tray

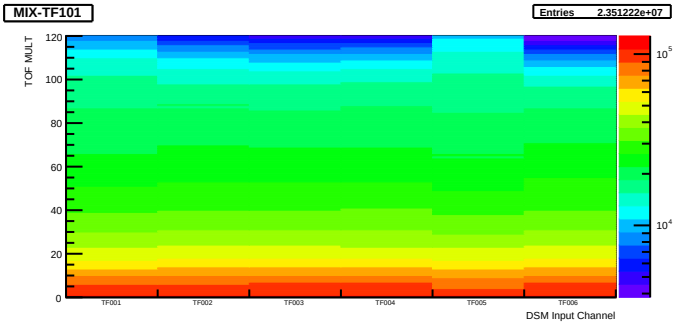

MIX-TF002
Entries 8.229276e+07
TOF MULT
TOF tray

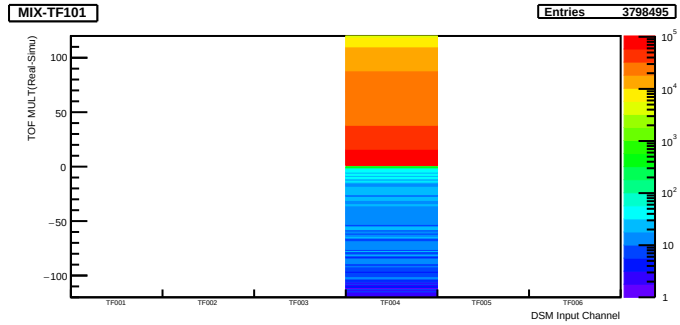

MIX-TF003
Entries 8.229276e+07
TOF MULT
TOF tray

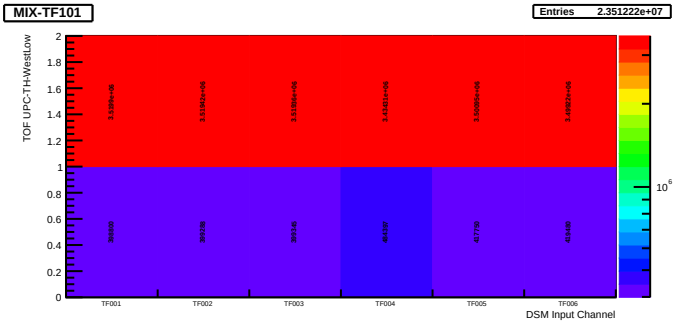

MIX-TF004
Entries 8.229276e+07
TOF MULT
TOF tray

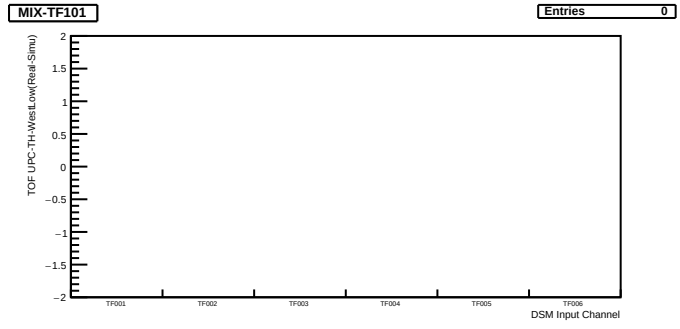

MIX-TF005
Entries 8.229276e+07
TOF MULT
TOF tray

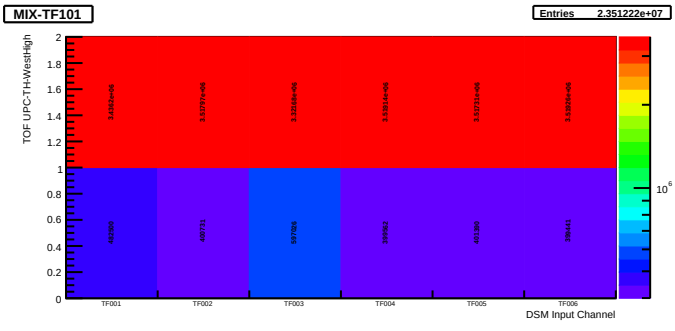

MIX-TF006
Entries 8.229276e+07
TOF MULT
TOF tray

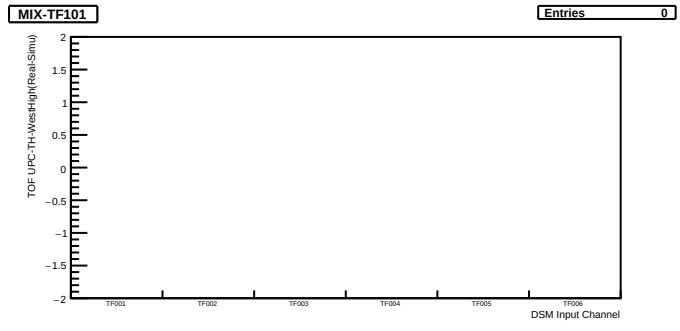

MIX-TF101
Entries 2.351222e+07
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

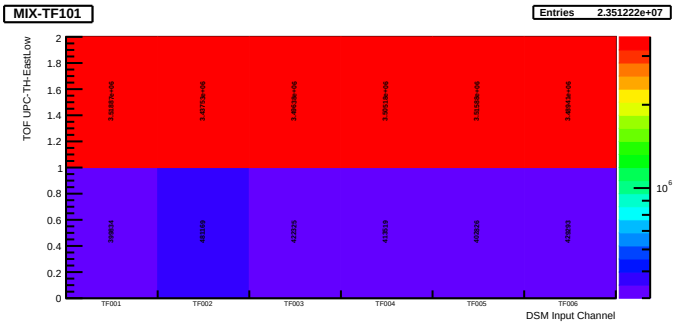

MIX-TF101
Entries 3798495
TOF MULT(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

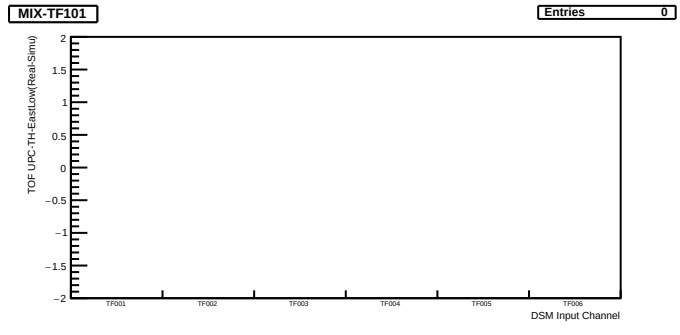

MIX-TF101
Entries 2.351222e+07
TOF UPC-TH-WestLow
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

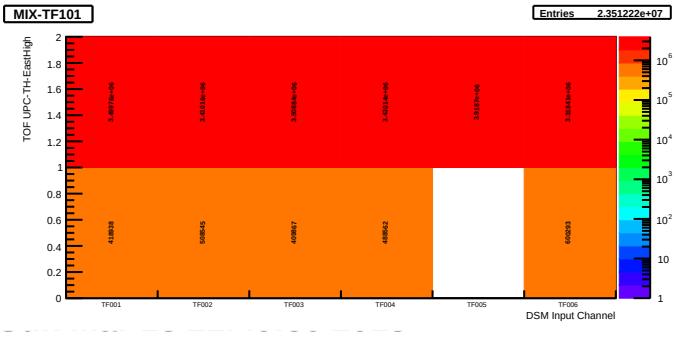

MIX-TF101
Entries 0
TOF UPC-TH-WestLow(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

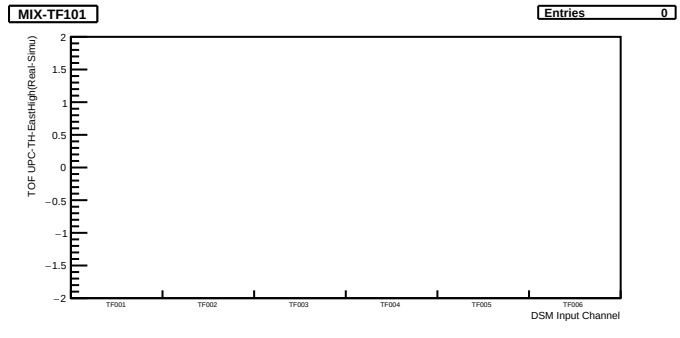

MIX-TF101
Entries 2.351222e+07
TOF UPC-TH-WestHigh
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

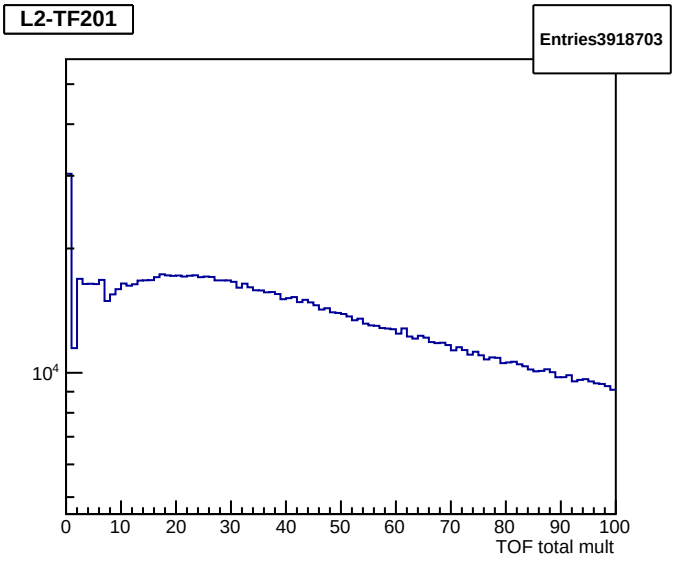

MIX-TF101
Entries 0
TOF UPC-TH-WestHigh(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

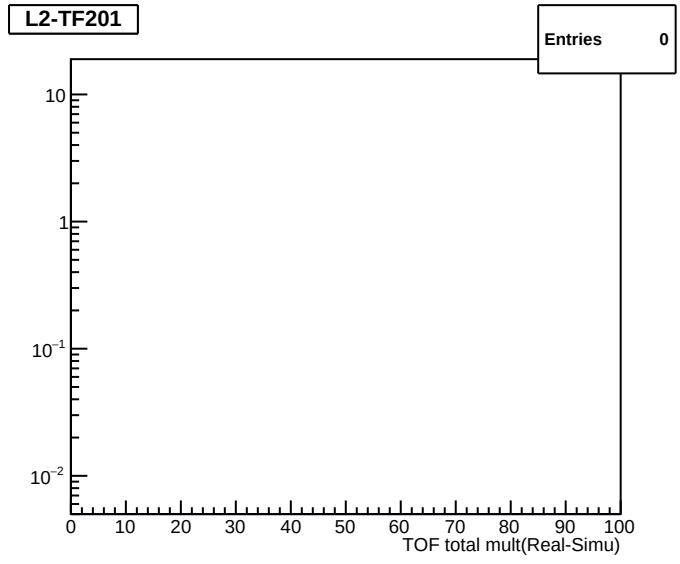

MIX-TF101
Entries 2.351222e+07
TOF UPC-TH-EastLow
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

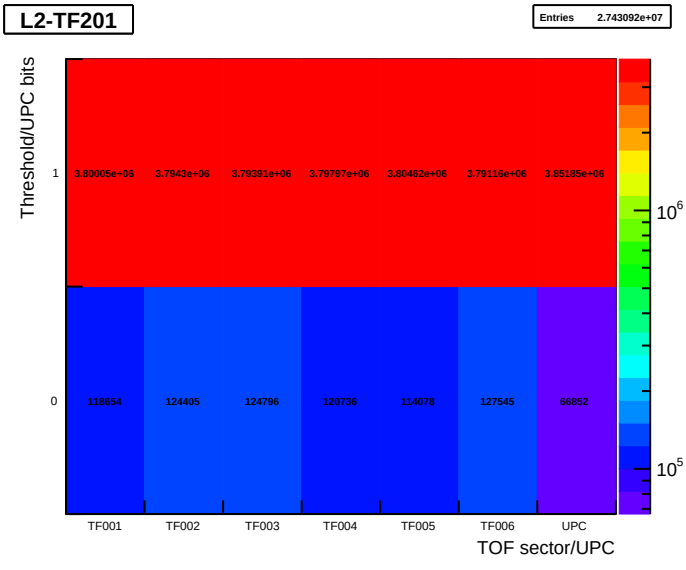

MIX-TF101
Entries 0
TOF UPC-TH-EastLow(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

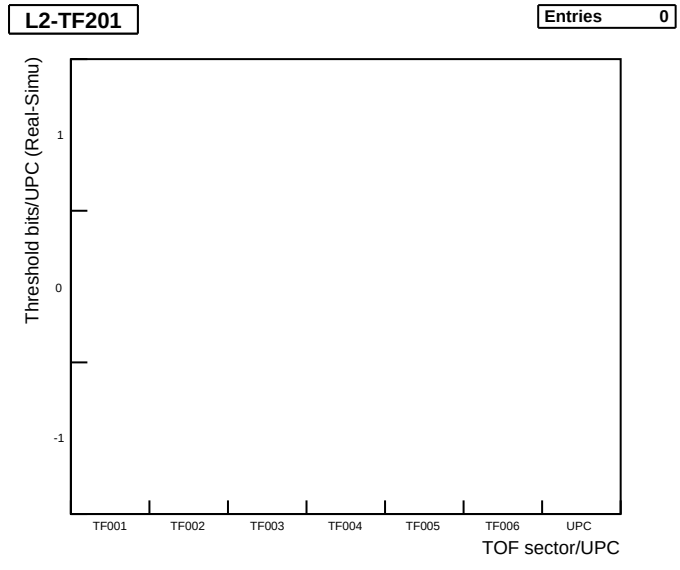

MIX-TF101
Entries 2.351222e+07
TOF UPC-TH-EastHigh
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

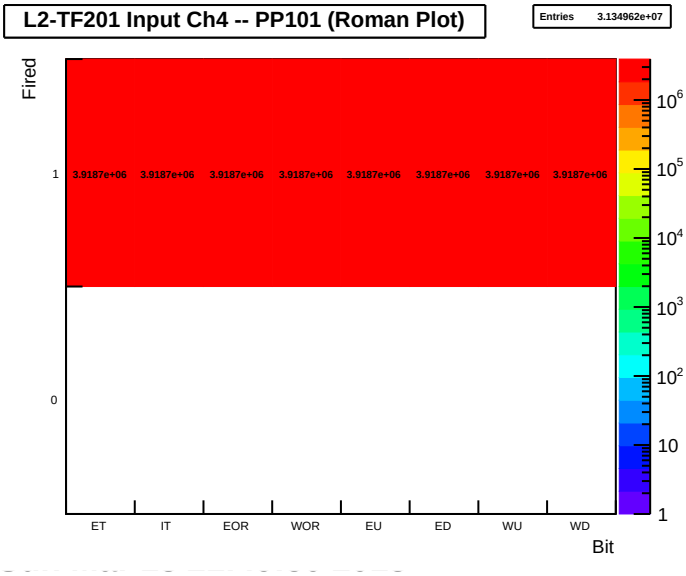

MIX-TF101
Entries 0
TOF UPC-TH-EastHigh(Real-Simu)
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

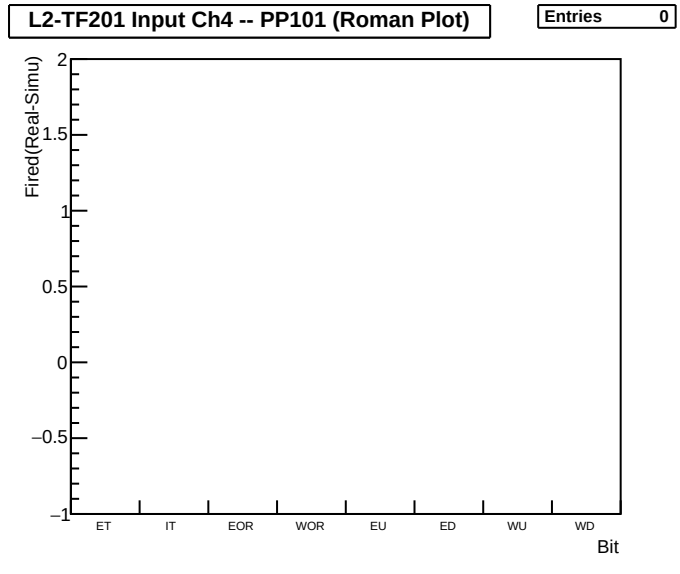

L2-TF201
Entries3918703
10^4
0 10 20 30 40 50 60 70 80 90 100
TOF total mult

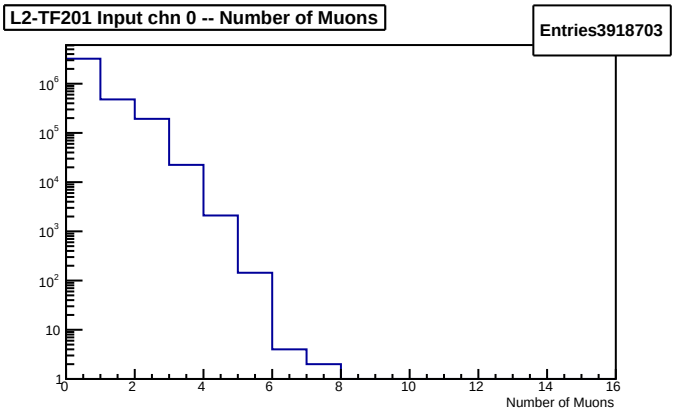

L2-TF201
Entries 0
10
1
10^{-1}
10^{-2}
0 10 20 30 40 50 60 70 80 90 100
TOF total mult(Real-Simu)

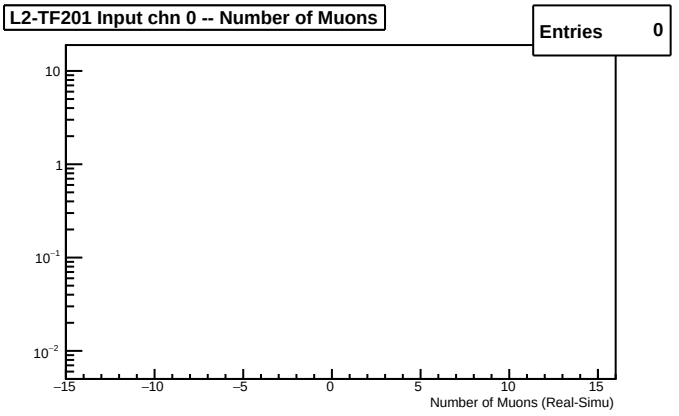

L2-TF201
Entries 2.743092e+07
Threshold/UPC bits
1
0
3.80005e+06 3.7943e+06 3.79391e+06 3.79797e+06 3.80462e+06 3.79116e+06 3.85185e+06
118654 124405 124796 120736 114078 127545 66852
10^6
10^5
TF001 TF002 TF003 TF004 TF005 TF006 UPC
TOF sector/UPC

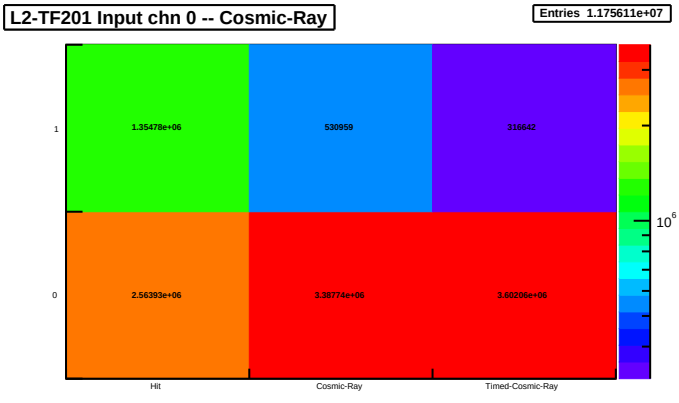

L2-TF201
Entries 0
Threshold bits/UPC (Real-Simu)
1
0
-1
TF001 TF002 TF003 TF004 TF005 TF006 UPC
TOF sector/UPC

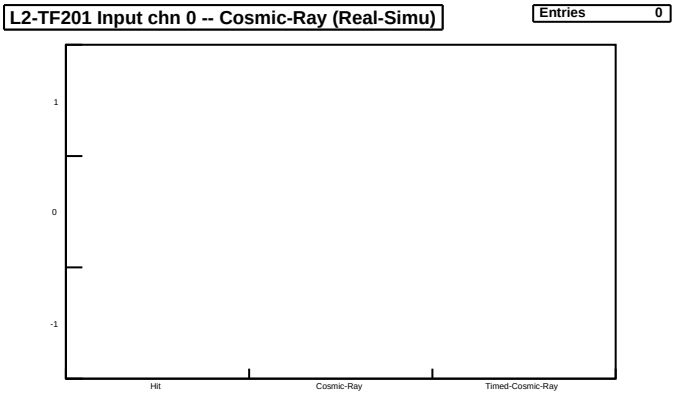

L2-TF201 Input Ch4 -- PP101 (Roman Plot)
Entries 3.134962e+07
Fired
1
0
3.9187e+06 3.9187e+06 3.9187e+06 3.9187e+06 3.9187e+06 3.9187e+06 3.9187e+06 3.9187e+06
10^6
10^5
10^4
10^3
10^2
10
1
ET IT EOR WOR EU ED WU WD
Bit

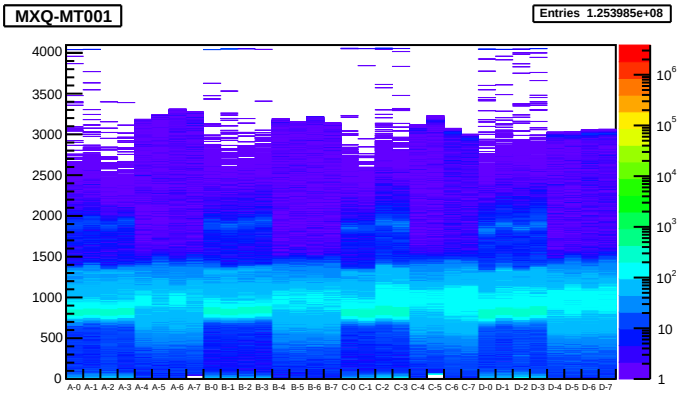

L2-TF201 Input Ch4 -- PP101 (Roman Plot)
Entries 0
Fired(Real-Simu)
2
1.5
1
0.5
0
−0.5
−1
ET IT EOR WOR EU ED WU WD
Bit

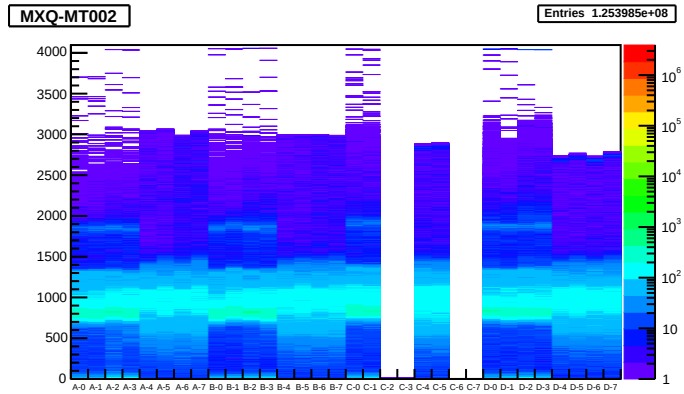

L2-TF201 Input chn 0 -- Number of Muons
Entries3918703
Number of Muons

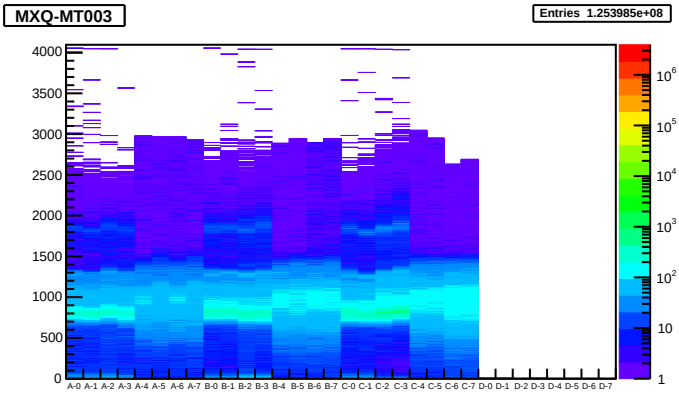

L2-TF201 Input chn 0 -- Number of Muons
Entries 0
Number of Muons (Real-Simu)

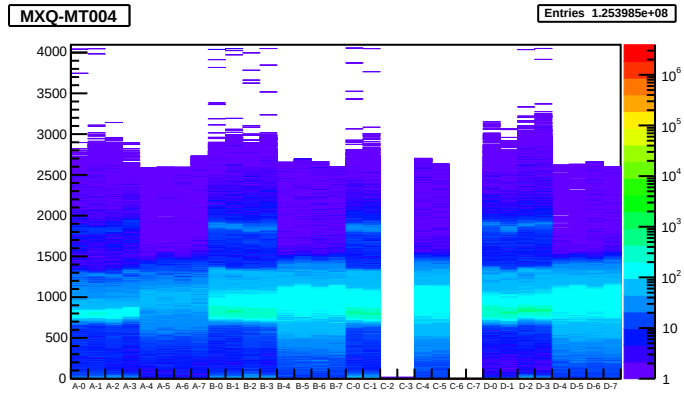

L2-TF201 Input chn 0 -- Cosmic-Ray
Entries 1.175611e+07
1.35478e+06
530959
316642
2.56393e+06
3.38774e+06
3.60206e+06
Hit
Cosmic-Ray
Timed-Cosmic-Ray

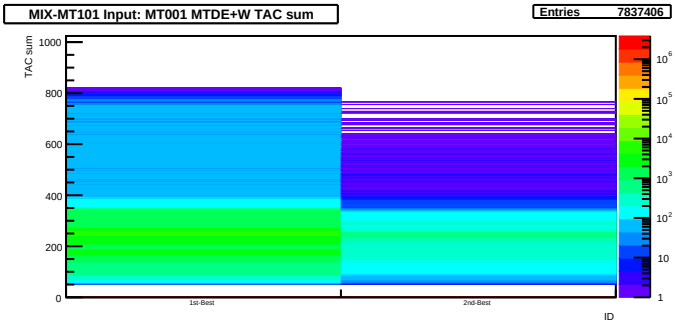

L2-TF201 Input chn 0 -- Cosmic-Ray (Real-Simu)
Entries 0
Hit
Cosmic-Ray
Timed-Cosmic-Ray

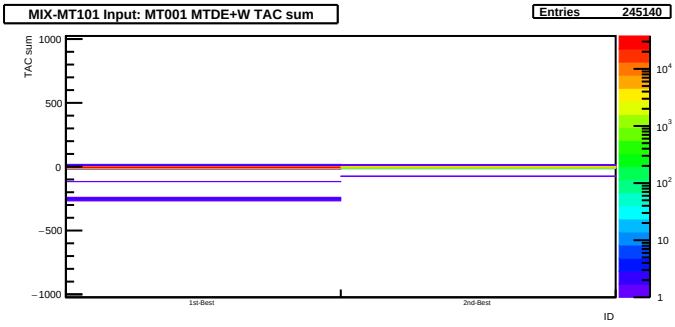

MXQ-MT001
Entries 1.253985e+08
4000
3500
3000
2500
2000
1500
1000
500
0
A-0 A-1 A-2 A-3 A-4 A-5 A-6 A-7 B-0 B-1 B-2 B-3 B-4 B-5 B-6 B-7 C-0 C-1 C-2 C-3 C-4 C-5 C-6 C-7 D-0 D-1 D-2 D-3 D-4 D-5 D-6 D-7
10^6
10^5
10^4
10^3
10^2
10
1

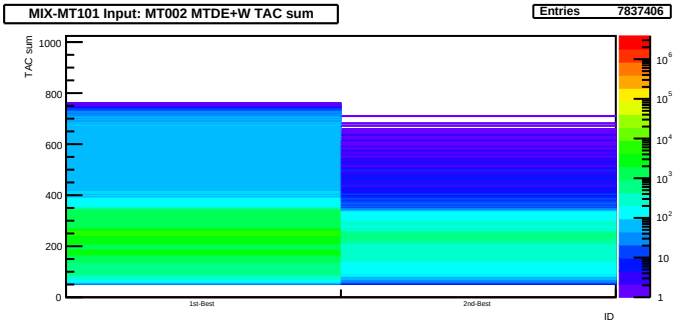

MXQ-MT002
Entries 1.253985e+08
4000
3500
3000
2500
2000
1500
1000
500
0
A-0 A-1 A-2 A-3 A-4 A-5 A-6 A-7 B-0 B-1 B-2 B-3 B-4 B-5 B-6 B-7 C-0 C-1 C-2 C-3 C-4 C-5 C-6 C-7 D-0 D-1 D-2 D-3 D-4 D-5 D-6 D-7
10^6
10^5
10^4
10^3
10^2
10
1

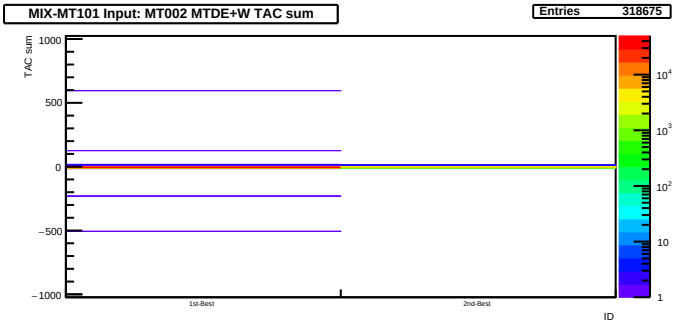

MXQ-MT003
Entries 1.253985e+08
4000
3500
3000
2500
2000
1500
1000
500
0
A-0 A-1 A-2 A-3 A-4 A-5 A-6 A-7 B-0 B-1 B-2 B-3 B-4 B-5 B-6 B-7 C-0 C-1 C-2 C-3 C-4 C-5 C-6 C-7 D-0 D-1 D-2 D-3 D-4 D-5 D-6 D-7
10^6
10^5
10^4
10^3
10^2
10
1

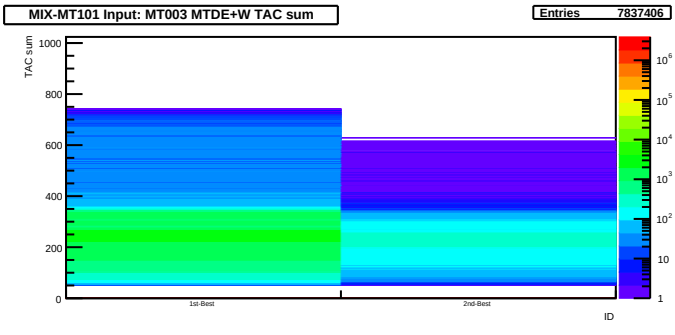

MXQ-MT004
Entries 1.253985e+08
4000
3500
3000
2500
2000
1500
1000
500
0
A-0 A-1 A-2 A-3 A-4 A-5 A-6 A-7 B-0 B-1 B-2 B-3 B-4 B-5 B-6 B-7 C-0 C-1 C-2 C-3 C-4 C-5 C-6 C-7 D-0 D-1 D-2 D-3 D-4 D-5 D-6 D-7
10^6
10^5
10^4
10^3
10^2
10
1

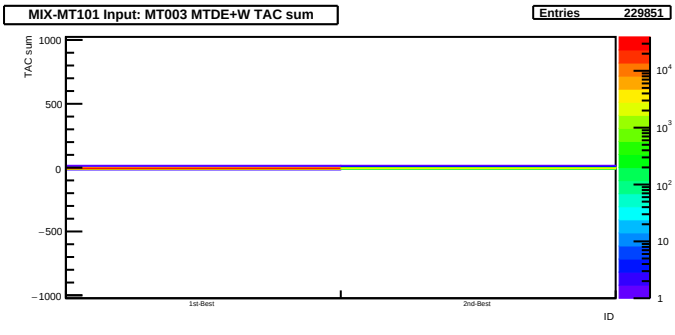

MIX-MT101 Input: MT001 MTDE+W TAC sum
Entries 7837406
TAC sum
1st-Best
2nd-Best
ID

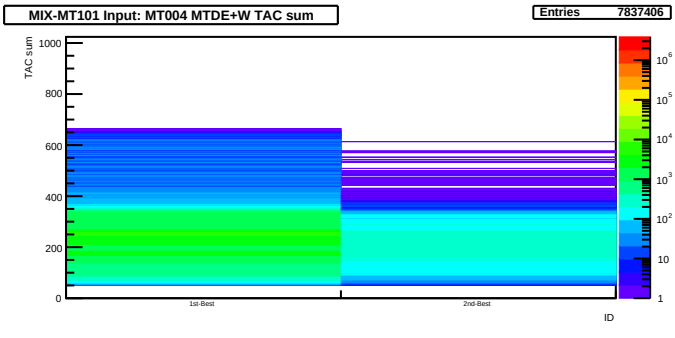

MIX-MT101 Input: MT001 MTDE+W TAC sum
Entries 245140
TAC sum
1st-Best
2nd-Best
ID

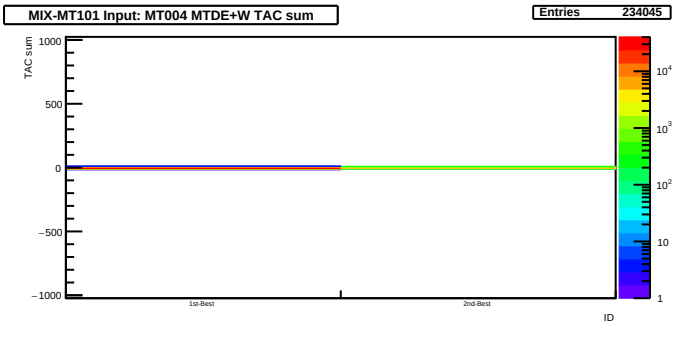

MIX-MT101 Input: MT002 MTDE+W TAC sum
Entries 7837406
TAC sum
1st-Best
2nd-Best
ID

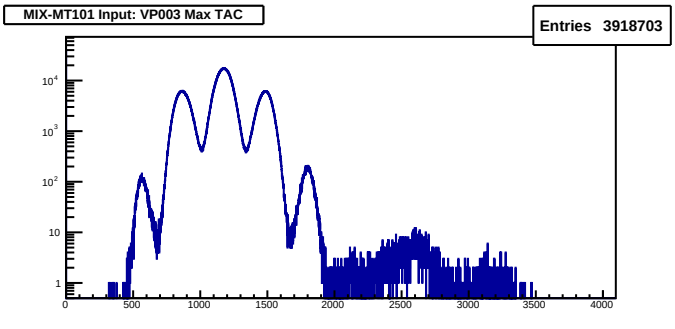

MIX-MT101 Input: MT002 MTDE+W TAC sum
Entries 318675
TAC sum
1st-Best
2nd-Best
ID

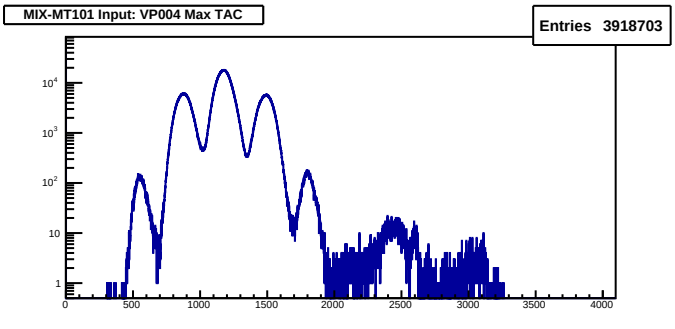

MIX-MT101 Input: MT003 MTDE+W TAC sum
Entries 7837406
TAC sum
1st-Best
2nd-Best
ID

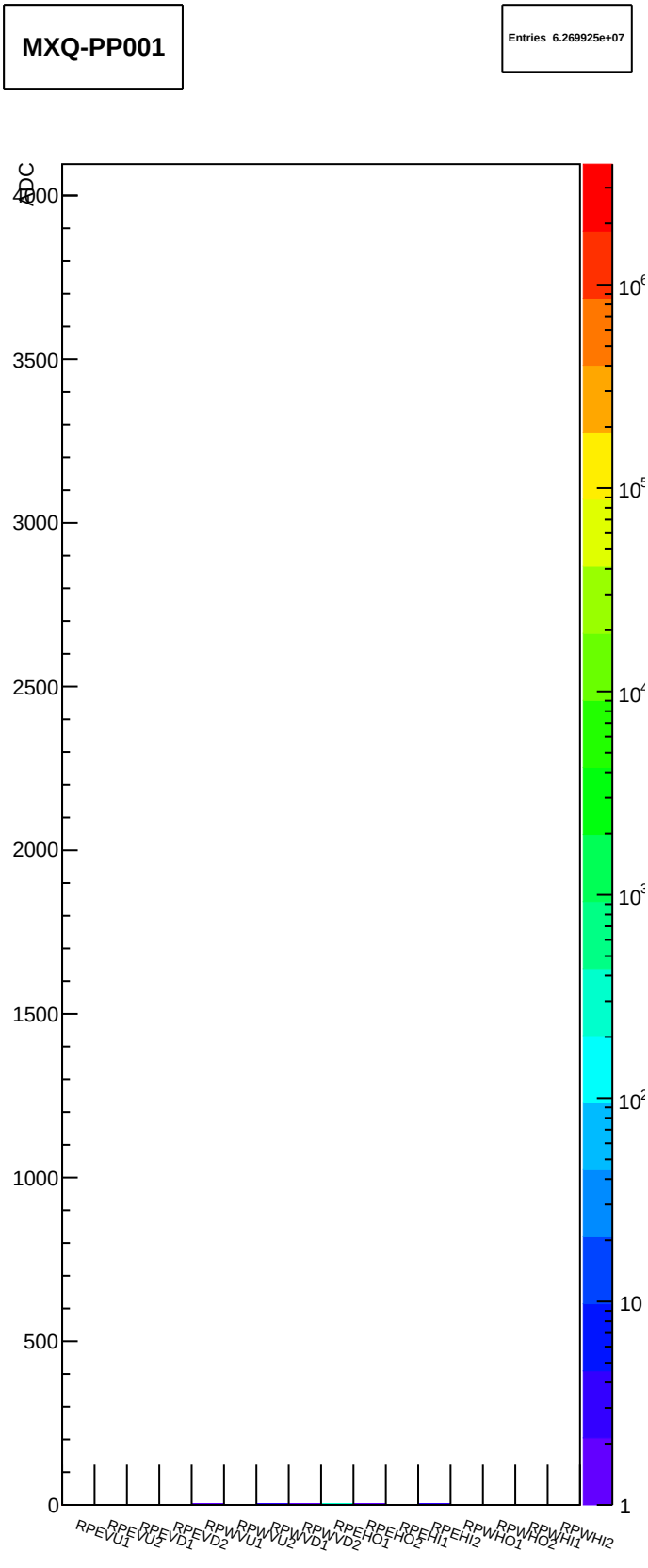

MIX-MT101 Input: MT003 MTDE+W TAC sum
Entries 229851
TAC sum
1st-Best
2nd-Best
ID

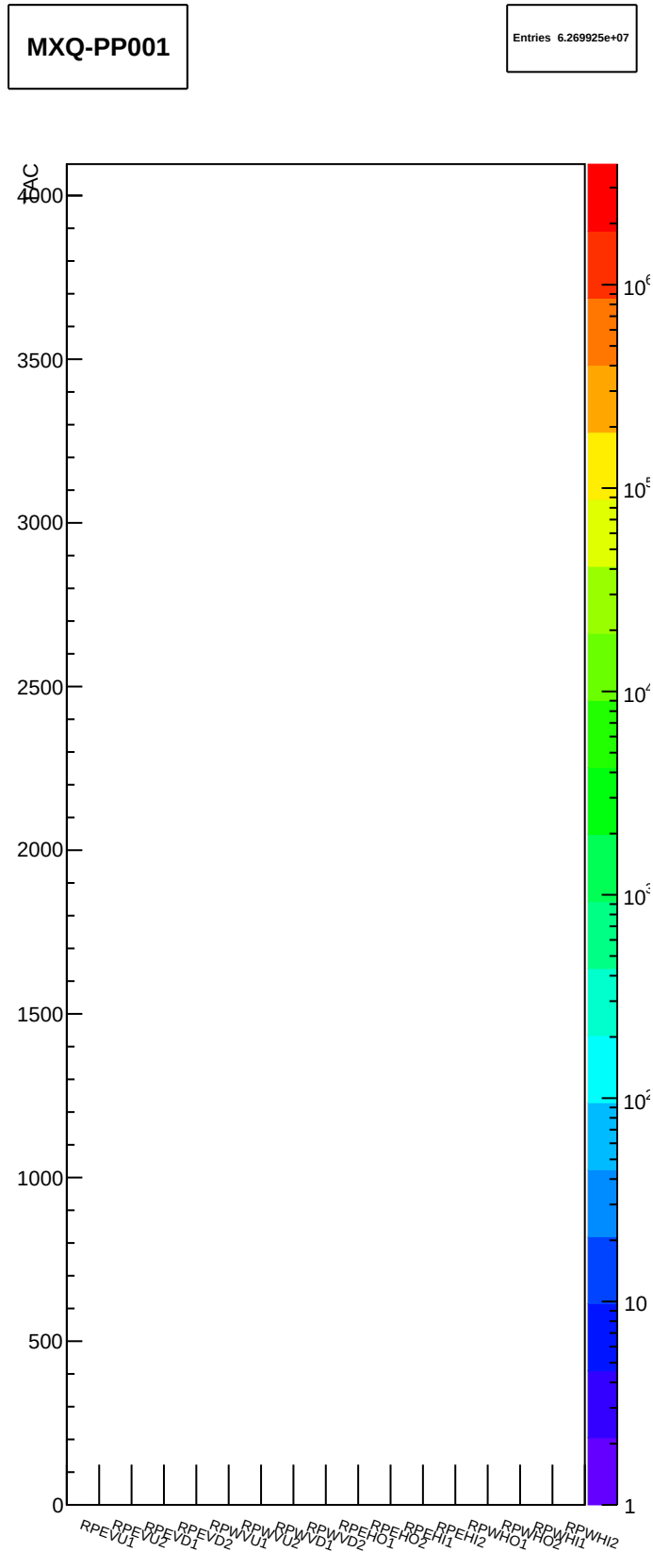

MIX-MT101 Input: MT004 MTDE+W TAC sum
Entries 7837406
TAC sum
1st-Best
2nd-Best
ID

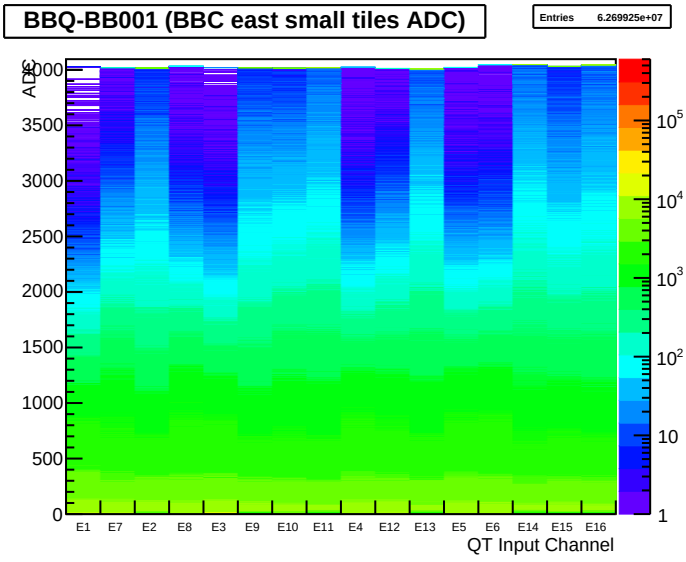

MIX-MT101 Input: MT004 MTDE+W TAC sum
Entries 234045
TAC sum
1st-Best
2nd-Best
ID

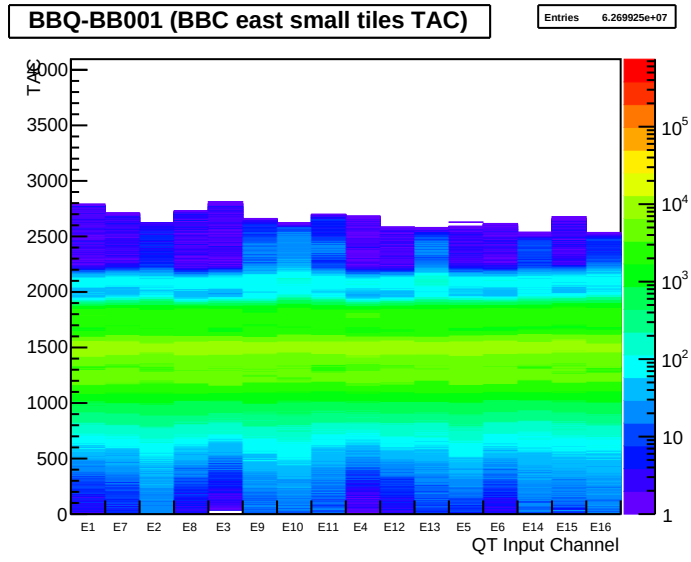

MIX-MT101 Input: VP003 Max TAC
Entries 3918703

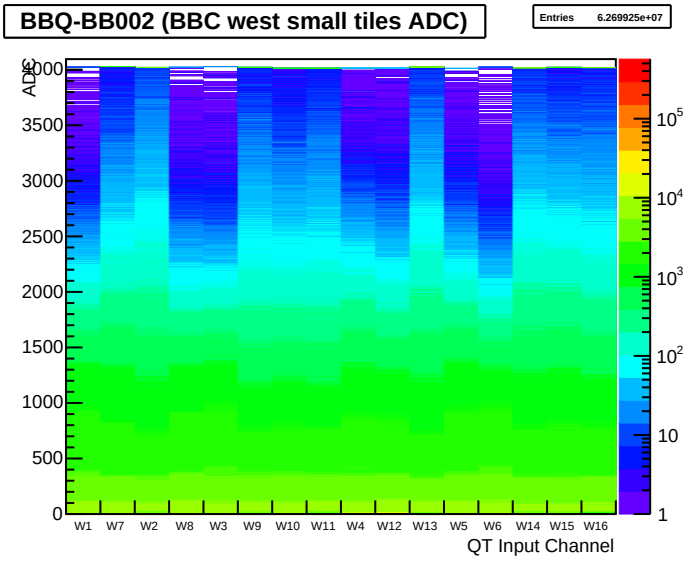

MIX-MT101 Input: VP004 Max TAC
Entries 3918703

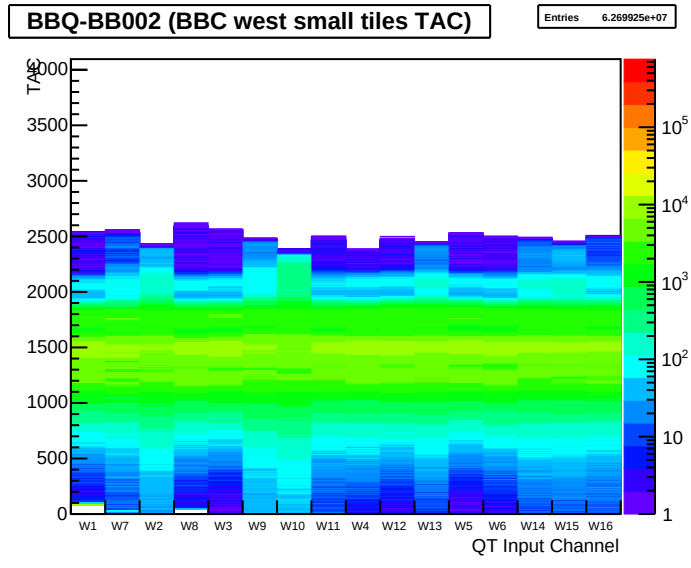

MXQ-PP001
Entries 6.269925e+07
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
RPEVU1
RPEVU2
RPEVD1
RPEVD2
RPWVU1
RPWVU2
RPWVD1
RPWVD2
RPEHO1
RPEHO2
RPEHI1
RPEHI2
RPWHO1
RPWHO2
RPWHI1
RPWHI2
1
10

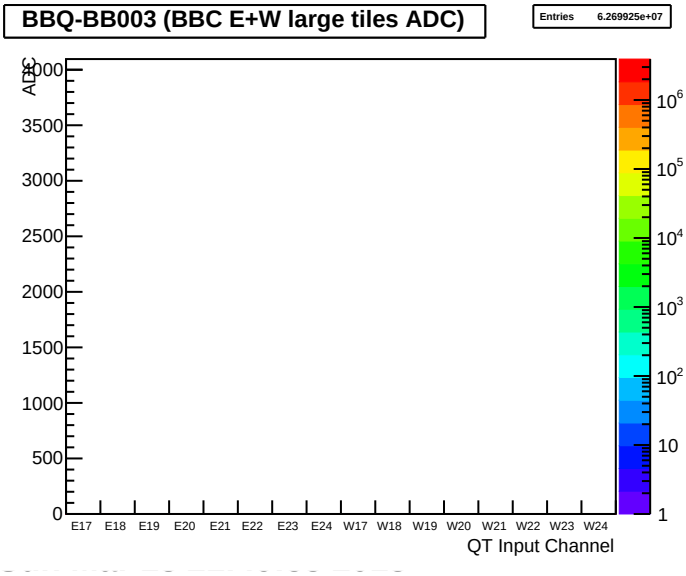

MXQ-PP001
Entries 6.269925e+07
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
RPEVU1
RPEVU2
RPEVD1
RPEVD2
RPWVU1
RPWVU2
RPWVD1
RPWVD2
RPEHO1
RPEHO2
RPEHI1
RPEHI2
RPWHO1
RPWHO2
RPWHI1
RPWHI2
1
10

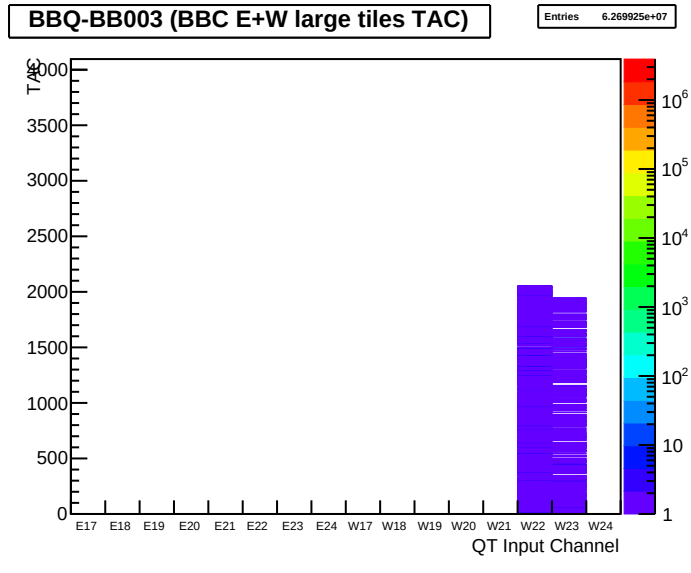

BBQ-BB001 (BBC east small tiles ADC)
Entries 6.269925e+07
ADC
QT Input Channel

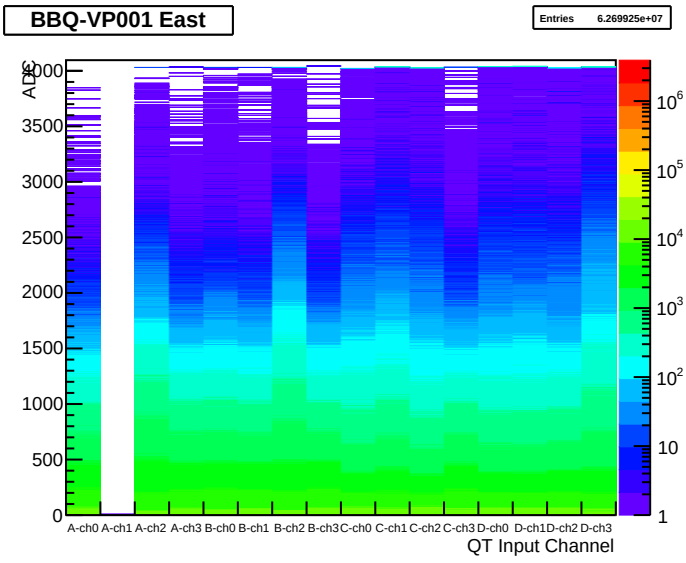

BBQ-BB001 (BBC east small tiles TAC)
Entries 6.269925e+07
TAC
QT Input Channel

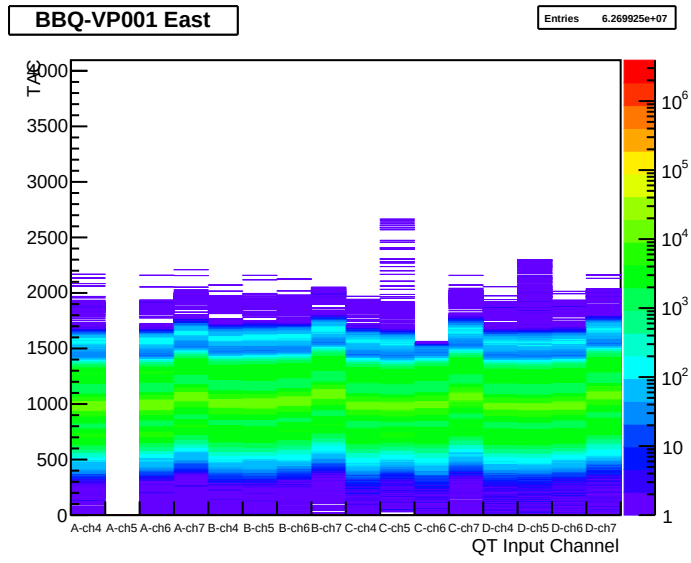

BBQ-BB002 (BBC west small tiles ADC)
Entries 6.269925e+07
ADC
QT Input Channel

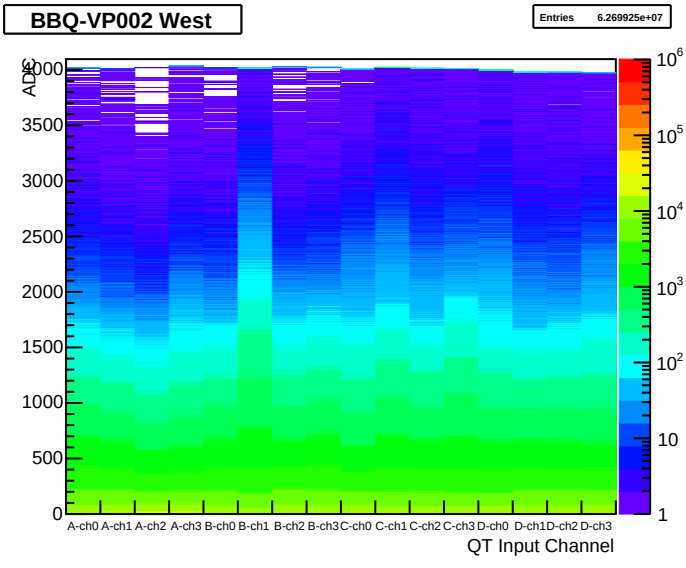

BBQ-BB002 (BBC west small tiles TAC)
Entries 6.269925e+07
TAC
QT Input Channel

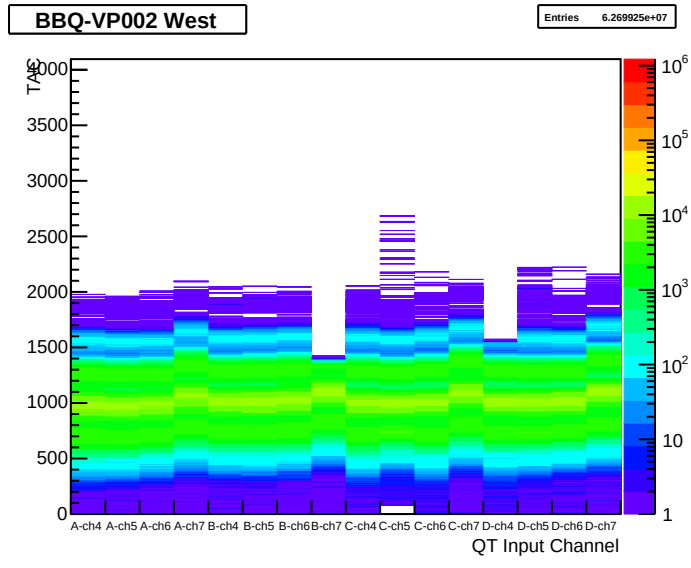

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 6.269925e+07
ADC
QT Input Channel

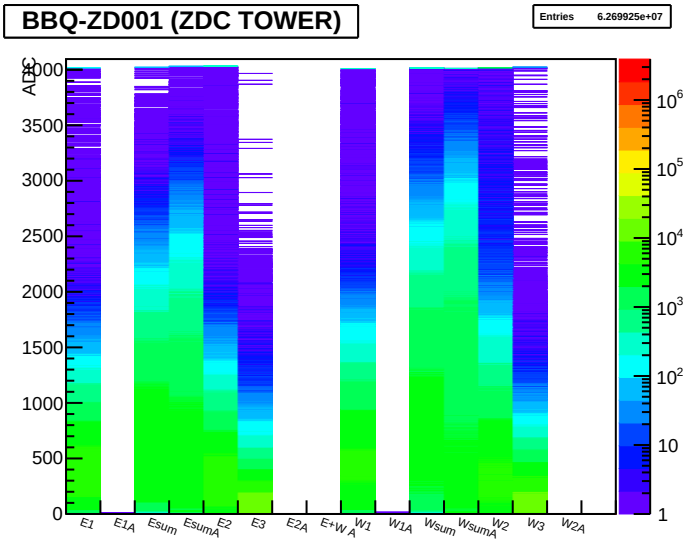

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 6.269925e+07
TAC
QT Input Channel

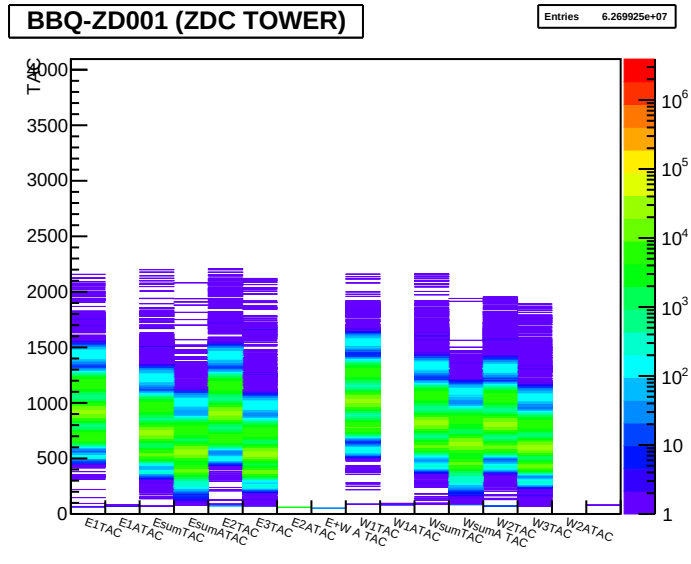

BBQ-VP001 East
Entries 6.269925e+07
ADC
QT Input Channel

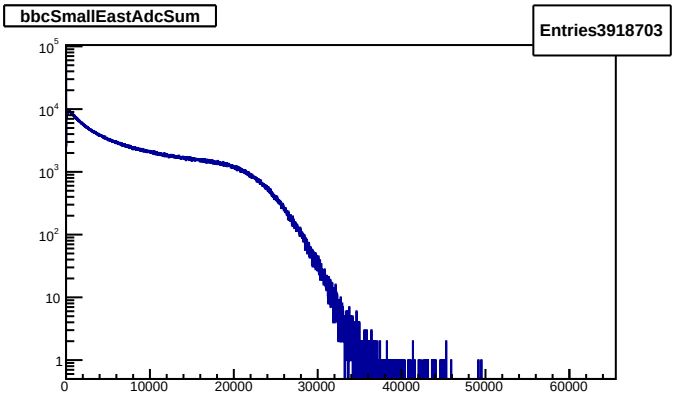

BBQ-VP001 East
Entries 6.269925e+07
TAC
QT Input Channel

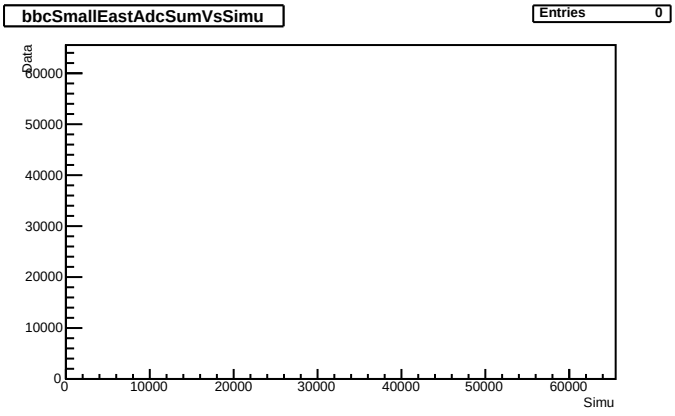

BBQ-VP002 West
Entries 6.269925e+07
ADC
QT Input Channel

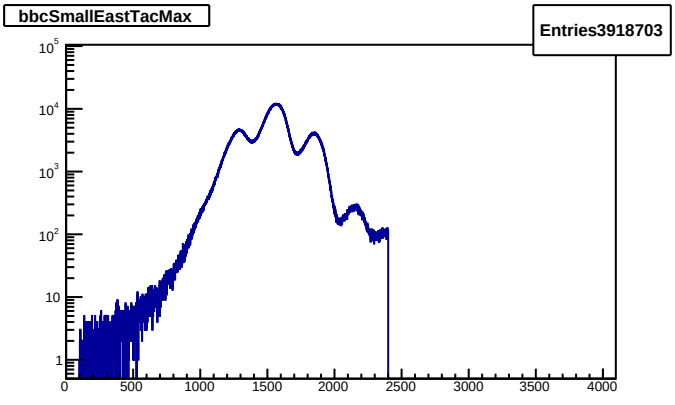

BBQ-VP002 West
Entries 6.269925e+07
TAC
QT Input Channel

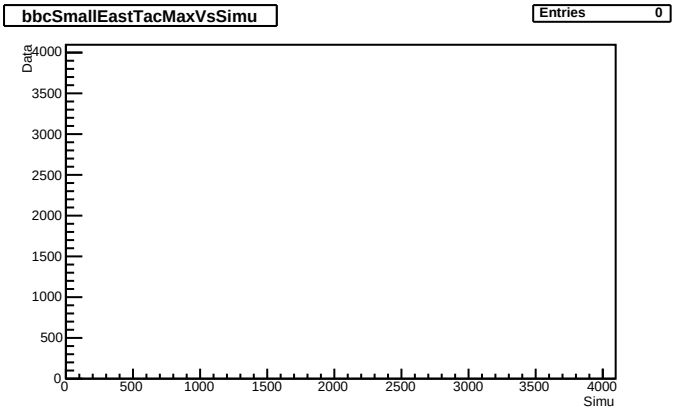

BBQ-ZD001 (ZDC TOWER)
Entries 6.269925e+07
ADC

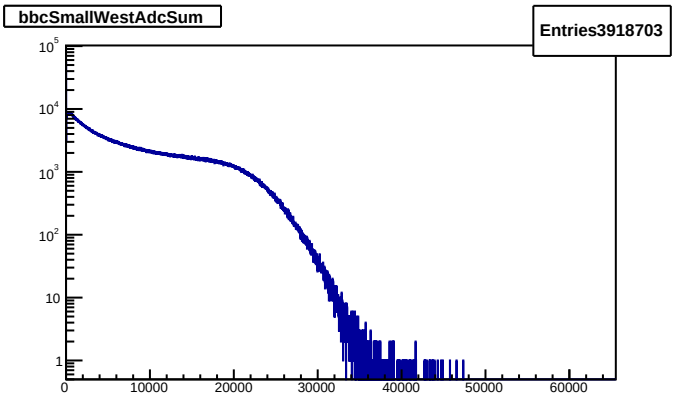

BBQ-ZD001 (ZDC TOWER)
Entries 6.269925e+07
TAC

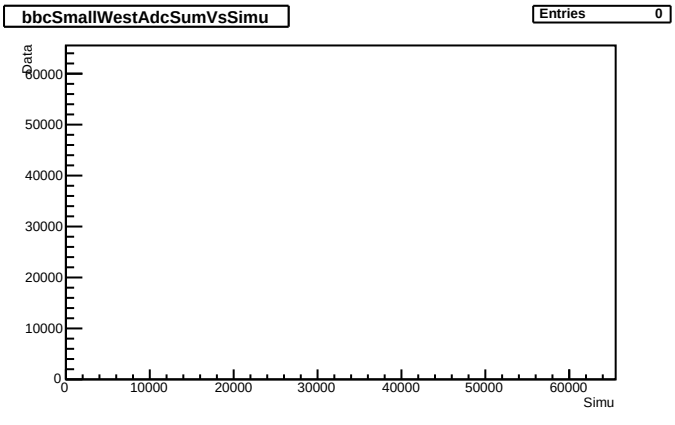

bbcSmallEastAdcSum
Entries3918703

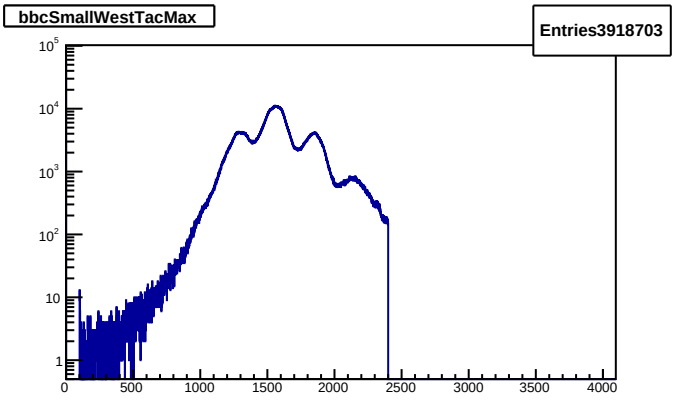

bbcSmallEastAdcSumVsSimu
Entries 0
Data
Simu

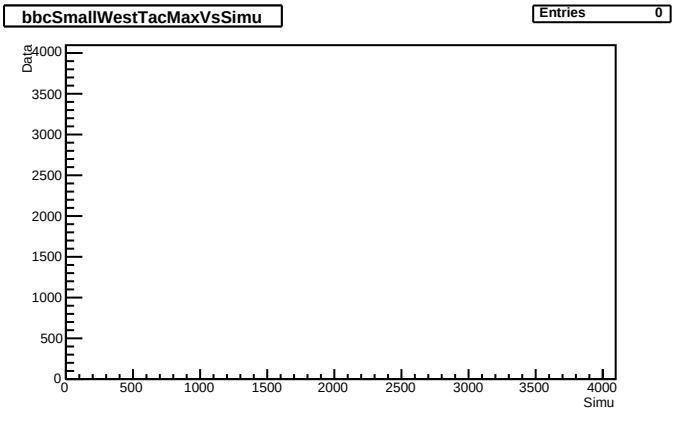

bbcSmallEastTacMax
Entries3918703

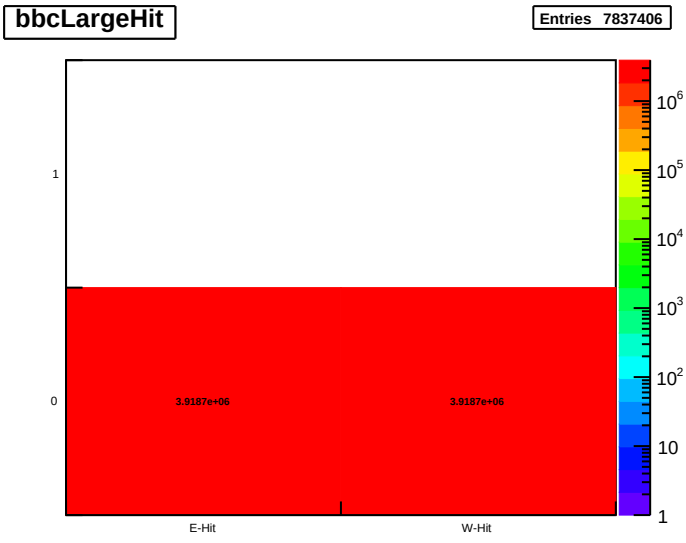

bbcSmallEastTacMaxVsSimu
Entries 0
Data
Simu

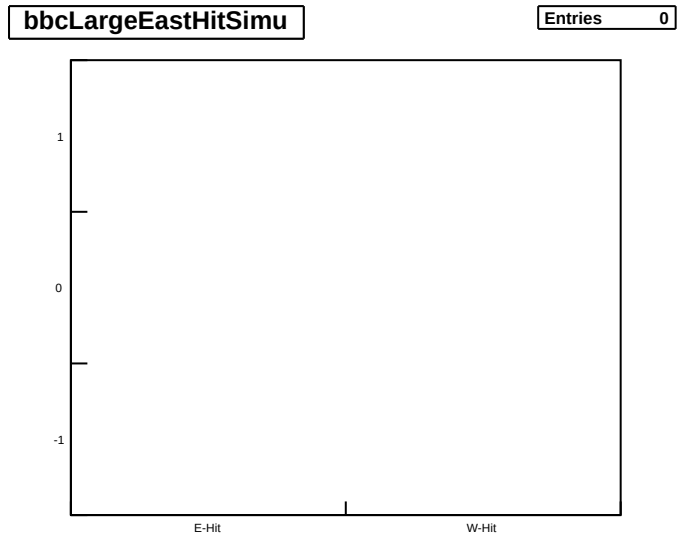

bbcSmallWestAdcSum
Entries3918703

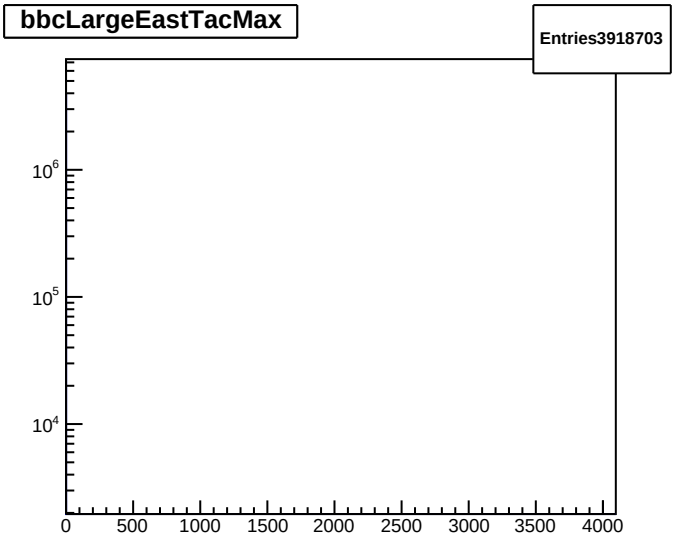

bbcSmallWestAdcSumVsSimu
Entries 0
Data
Simu

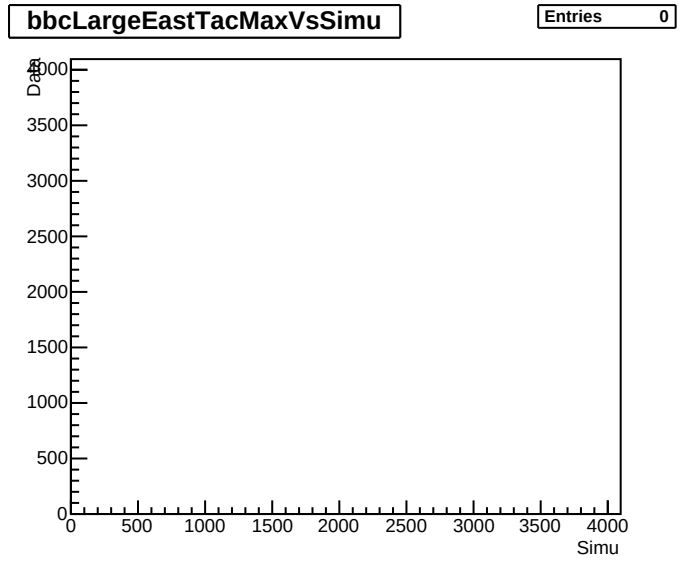

bbcSmallWestTacMax
Entries3918703

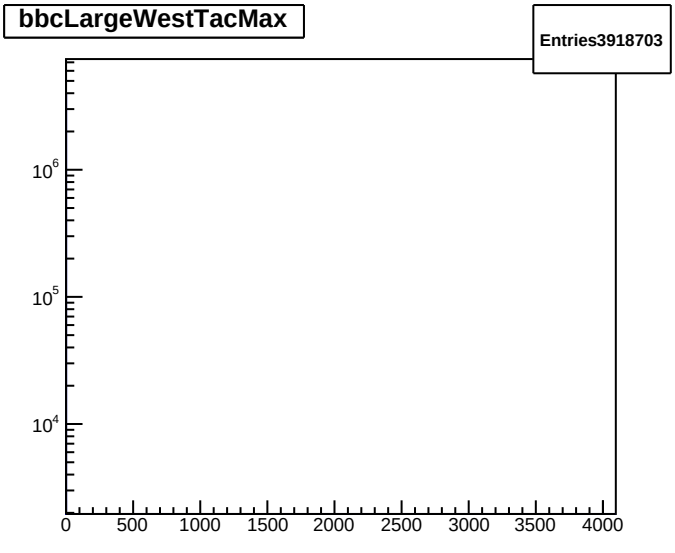

bbcSmallWestTacMaxVsSimu
Entries 0
Data
Simu

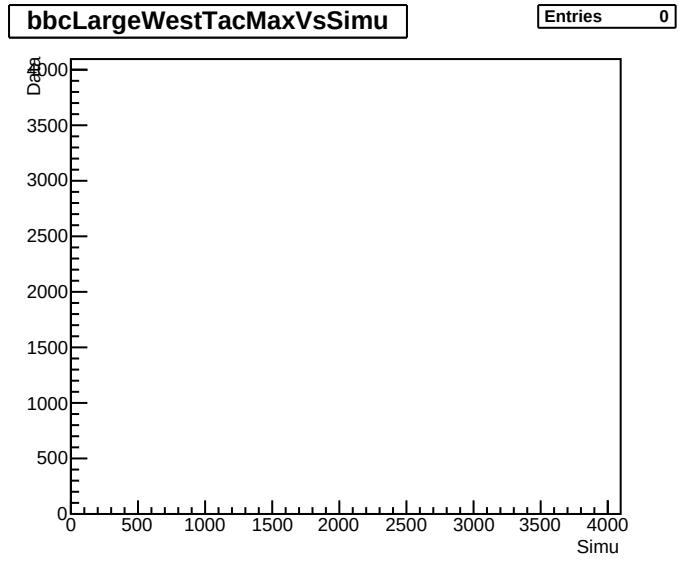

bbcLargeHit
Entries 7837406
1
0
3.9187e+06
3.9187e+06
E-Hit
W-Hit
10^6
10^5
10^4
10^3
10^2
10
1

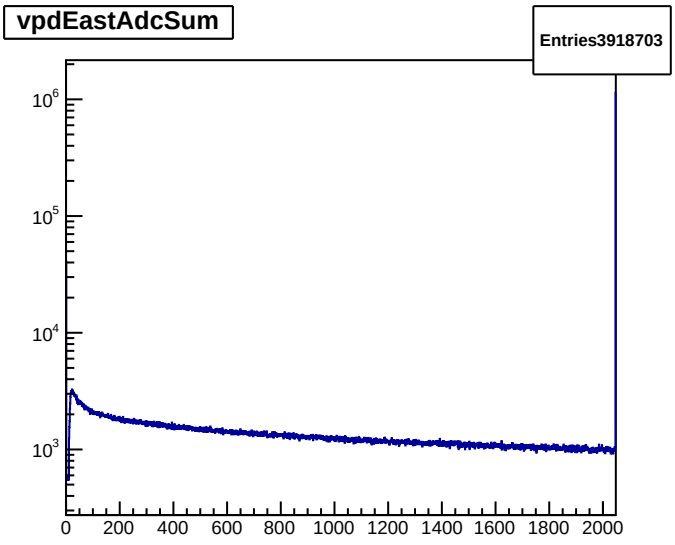

bbcLargeEastHitSimu
Entries 0
1
0
-1
E-Hit
W-Hit

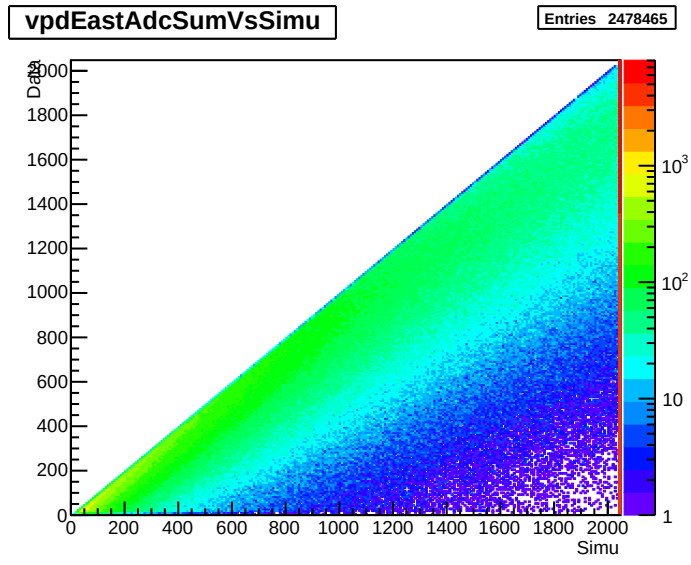

bbcLargeEastTacMax
Entries3918703
10^6
10^5
10^4
0
500
1000
1500
2000
2500
3000
3500
4000

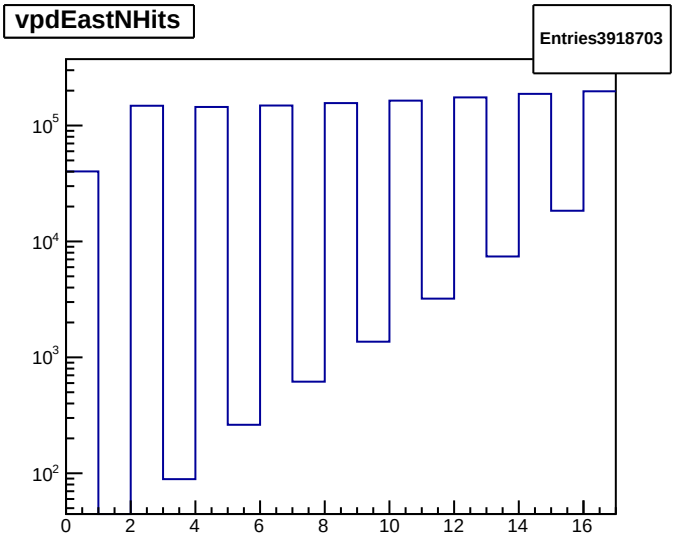

bbcLargeEastTacMaxVsSimu
Entries 0
Data
4000
3500
3000
2500
2000
1500
1000
500
0
0
500
1000
1500
2000
2500
3000
3500
4000
Simu

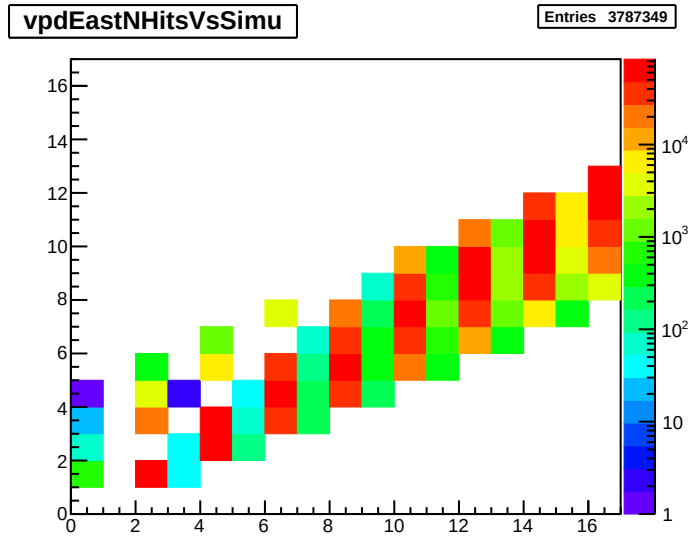

bbcLargeWestTacMax
Entries3918703
10^6
10^5
10^4
0
500
1000
1500
2000
2500
3000
3500
4000

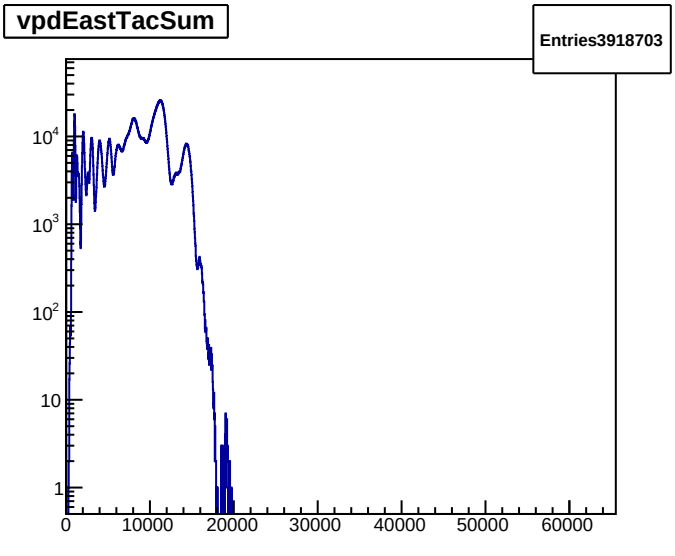

bbcLargeWestTacMaxVsSimu
Entries 0
Data
4000
3500
3000
2500
2000
1500
1000
500
0
0
500
1000
1500
2000
2500
3000
3500
4000
Simu

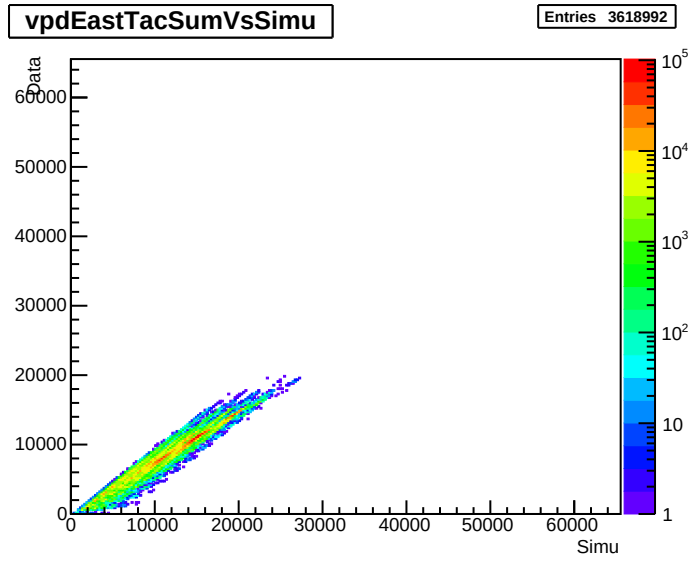

vpdEastAdcSum
Entries3918703

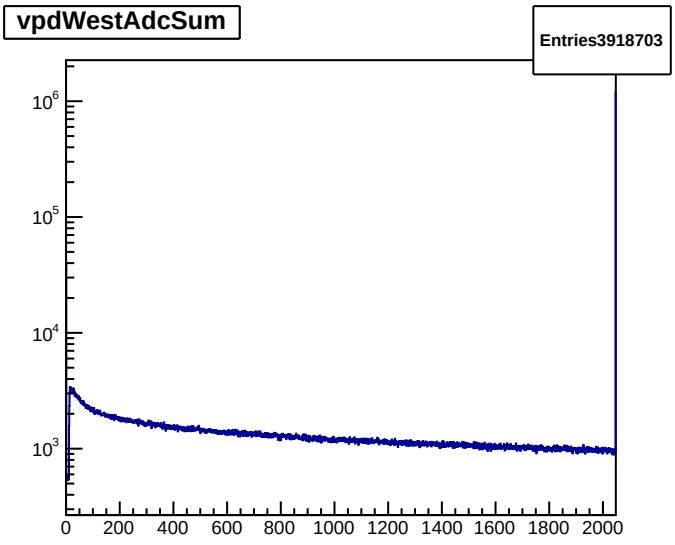

vpdEastAdcSumVsSimu
Entries 2478465
Data
Simu

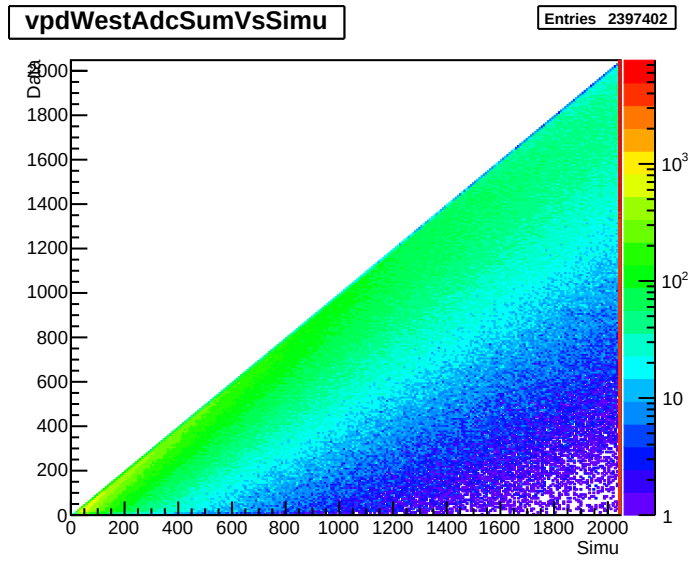

vpdEastNHits
Entries3918703

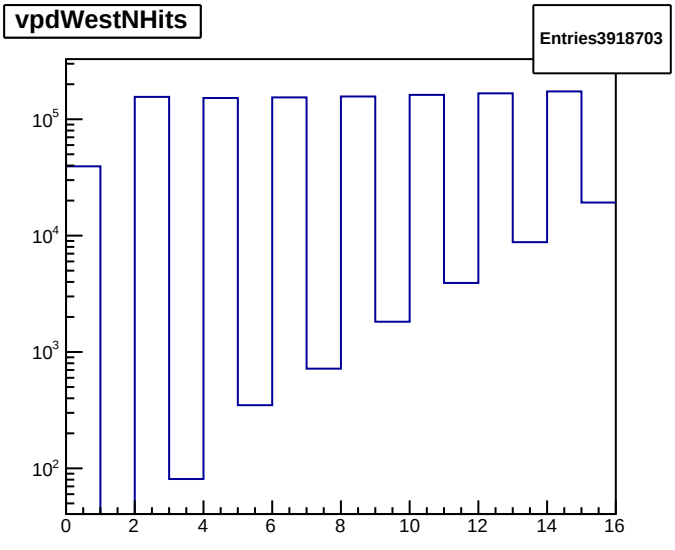

vpdEastNHitsVsSimu
Entries 3787349

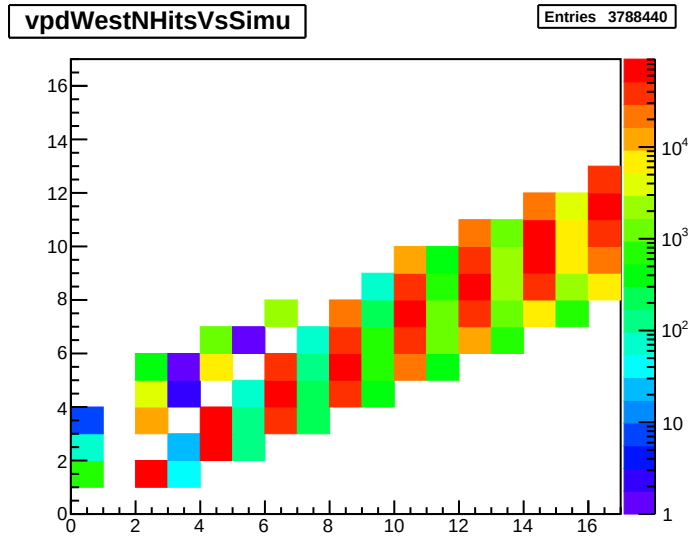

vpdEastTacSum
Entries3918703

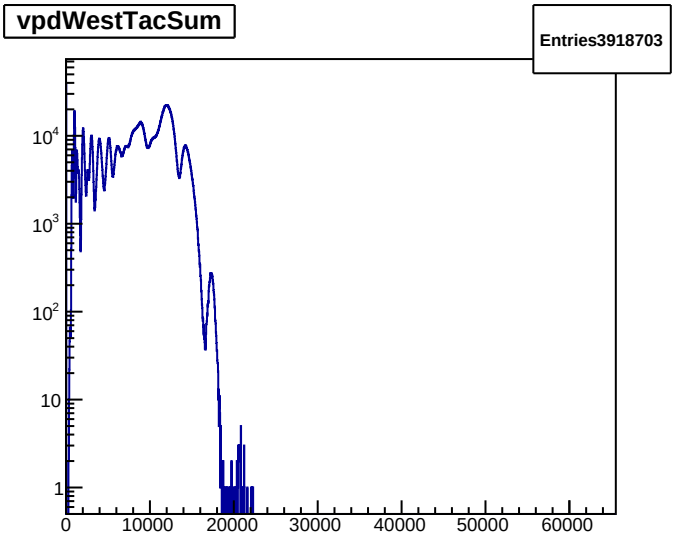

vpdEastTacSumVsSimu
Entries 3618992
Data
Simu

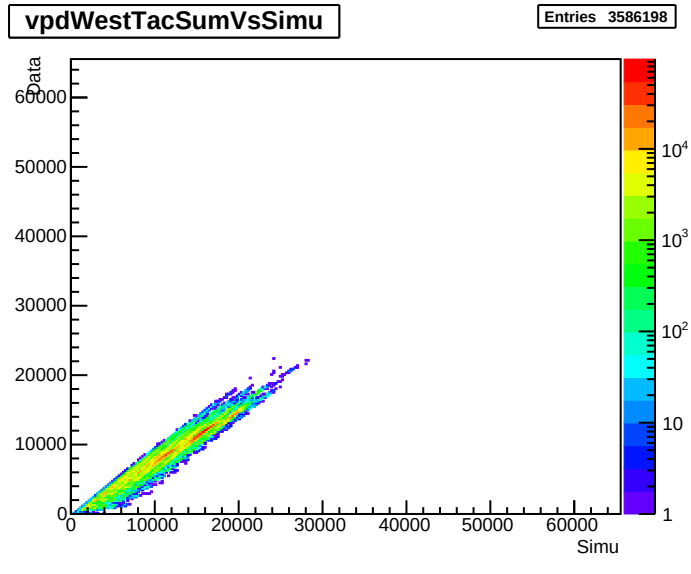

vpdWestAdcSum
Entries3918703

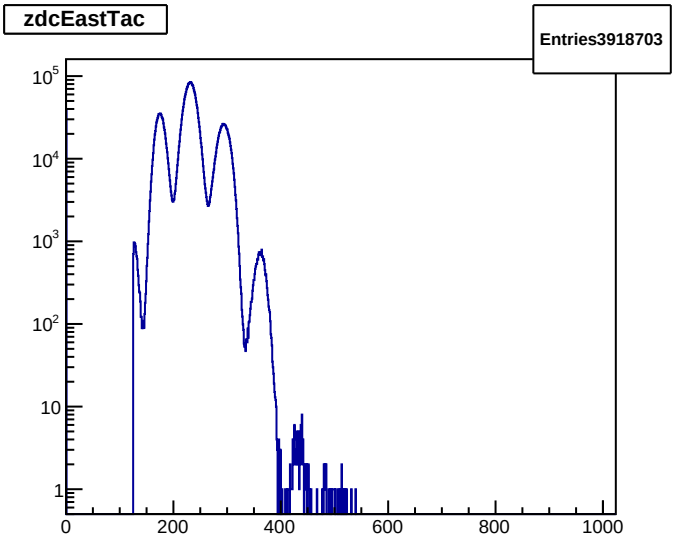

vpdWestAdcSumVsSimu
Entries 2397402
Data
Simu

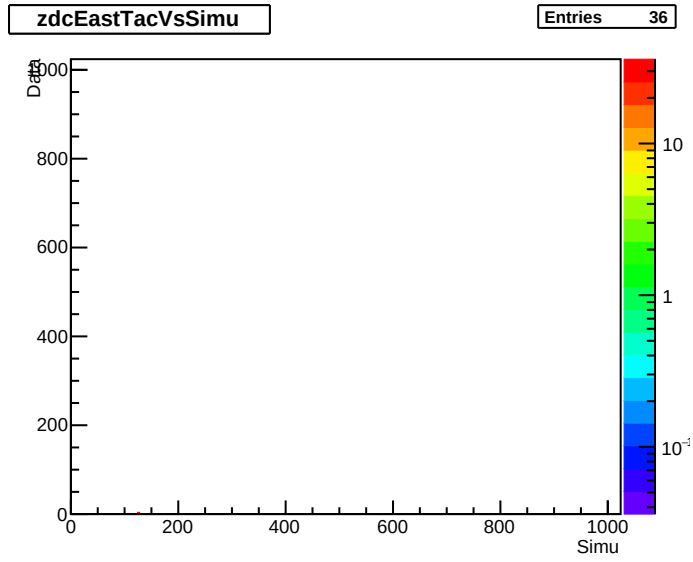

vpdWestNHits
Entries3918703

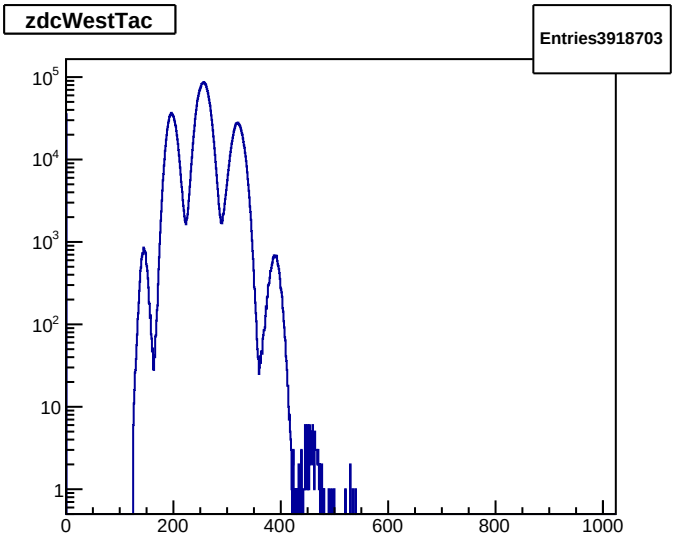

vpdWestNHitsVsSimu
Entries 3788440

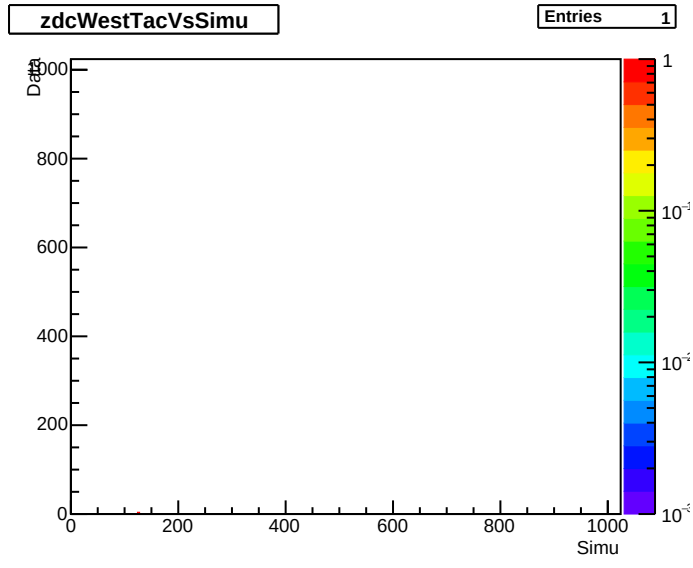

vpdWestTacSum
Entries3918703

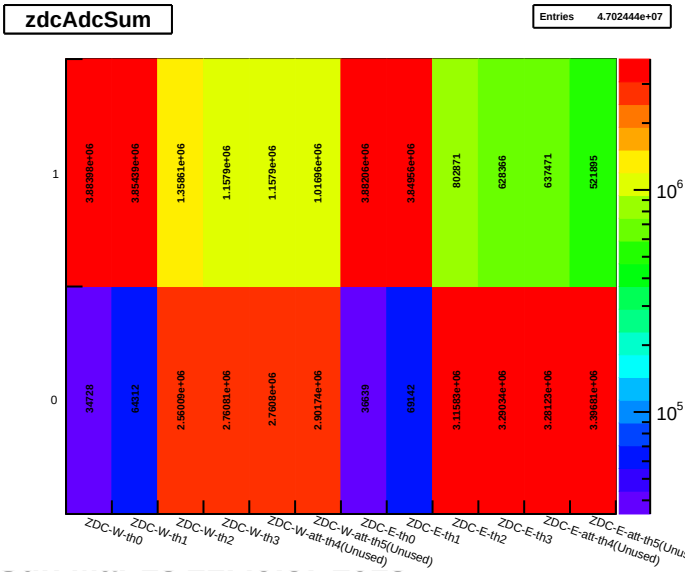

vpdWestTacSumVsSimu
Entries 3586198
Data
Simu

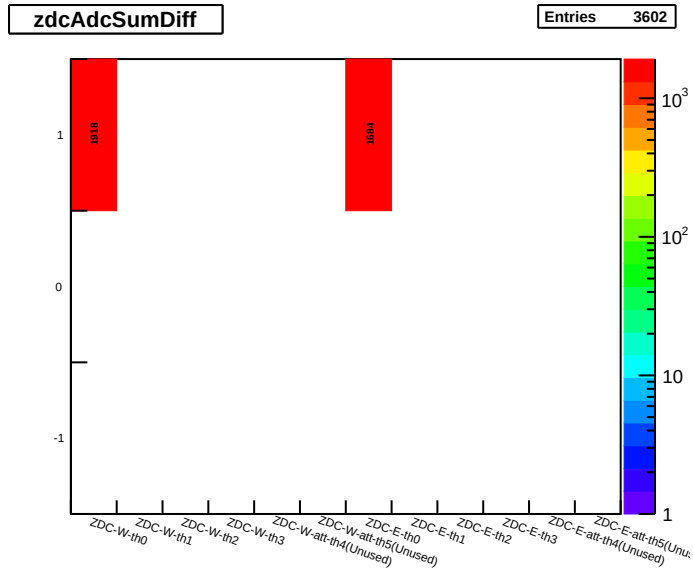

zdcEastTac
Entries3918703

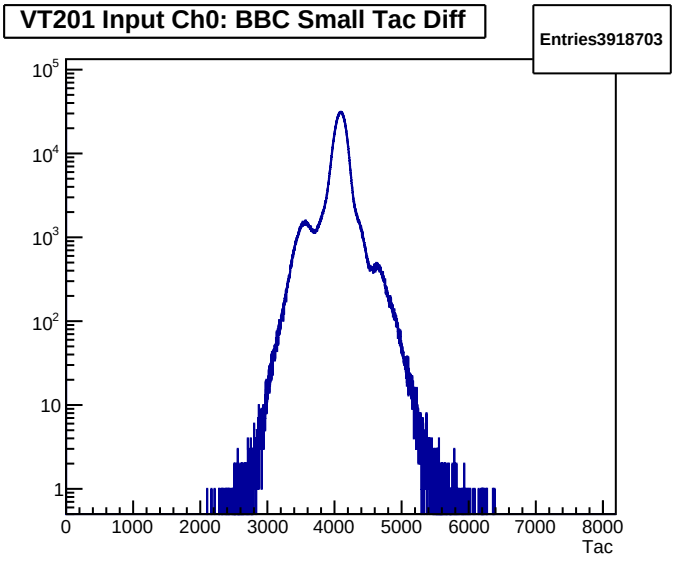

zdcEastTacVsSimu
Entries 36
Data
Simu

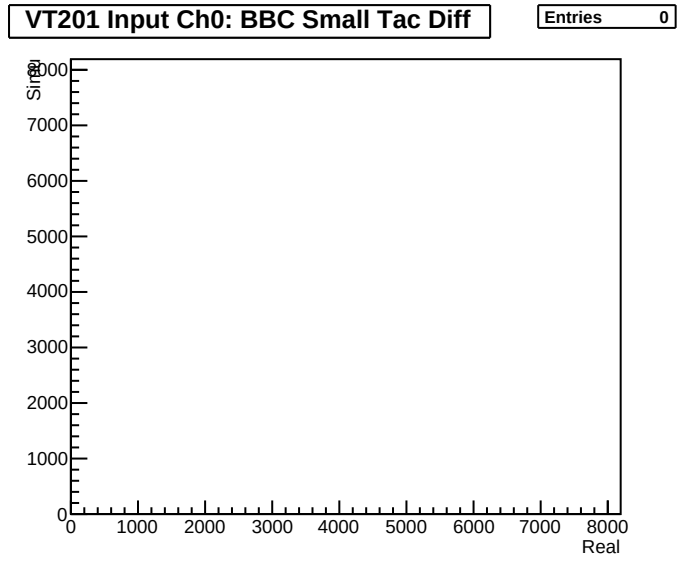

zdcWestTac
Entries3918703

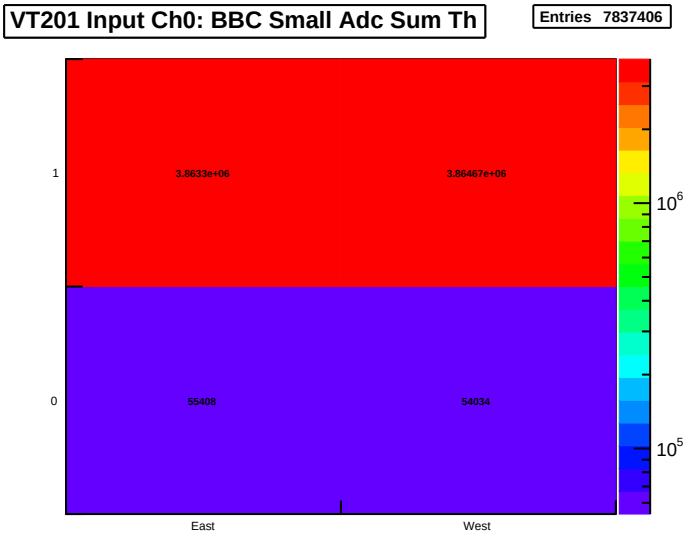

zdcWestTacVsSimu
Entries 1
Data
Simu

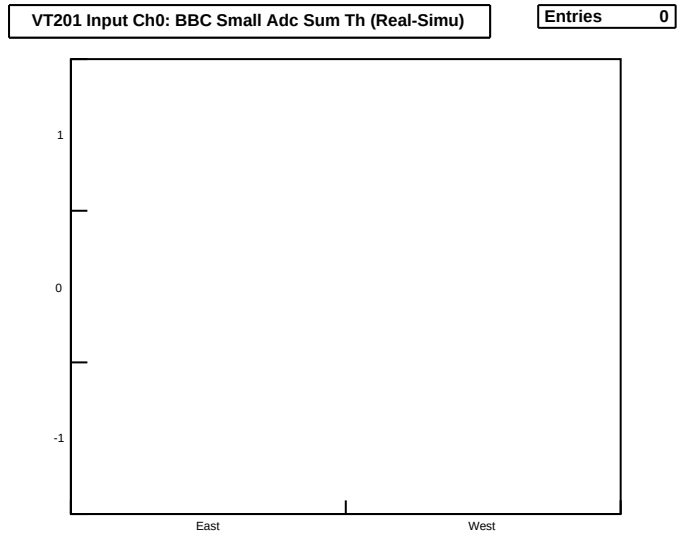

zdcAdcSum
Entries 4.702444e+07
ZDC-W-th0
ZDC-W-th1
ZDC-W-th2
ZDC-W-th3
ZDC-W-att-th4(Unused)
ZDC-W-att-th5(Unused)
ZDC-E-th0
ZDC-E-th1
ZDC-E-th2
ZDC-E-th3
ZDC-E-att-th4(Unused)
ZDC-E-att-th5(Unu

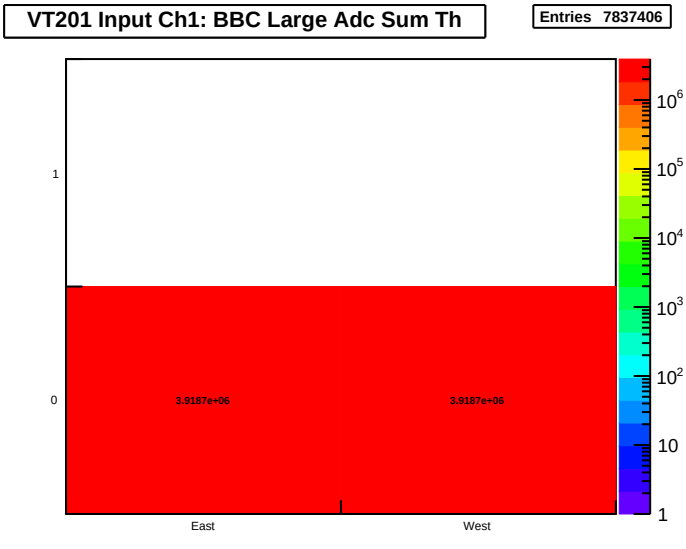

zdcAdcSumDiff
Entries 3602
1918
1684
ZDC-W-th0
ZDC-W-th1
ZDC-W-th2
ZDC-W-th3
ZDC-W-att-th4(Unused)
ZDC-W-att-th5(Unused)
ZDC-E-th0
ZDC-E-th1
ZDC-E-th2
ZDC-E-th3
ZDC-E-att-th4(Unused)
ZDC-E-att-th5(Unu

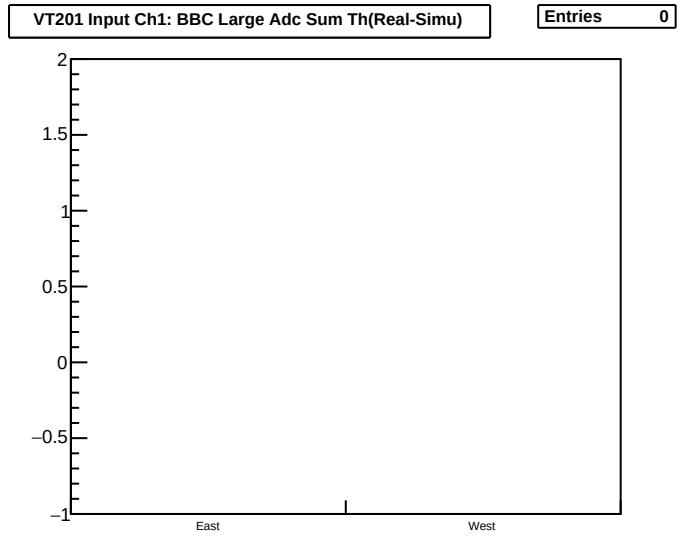

VT201 Input Ch0: BBC Small Tac Diff
Entries3918703
Tac

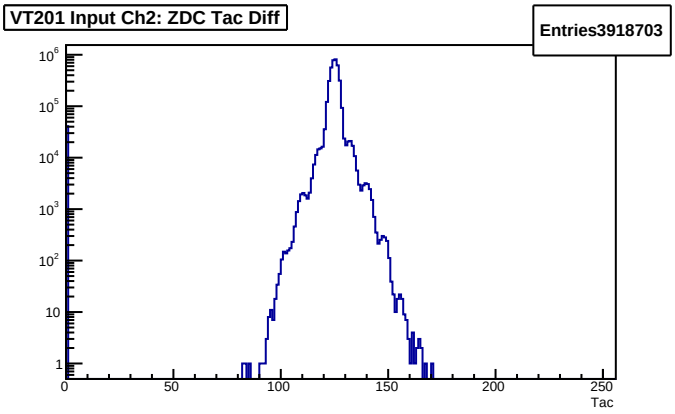

VT201 Input Ch0: BBC Small Tac Diff
Entries 0
Simu
Real

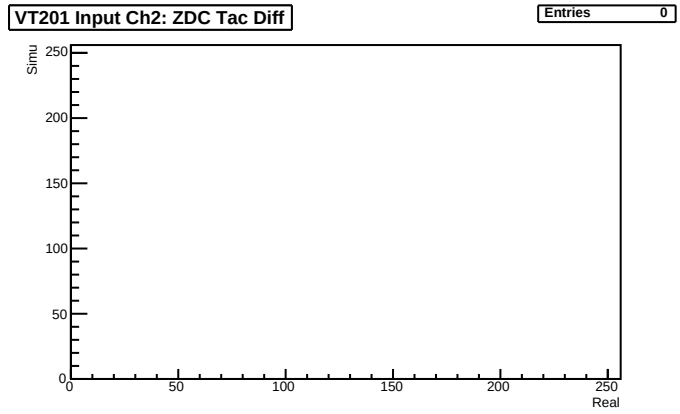

VT201 Input Ch0: BBC Small Adc Sum Th
Entries 7837406
3.8633e+06
3.86467e+06
55408
54034
East
West

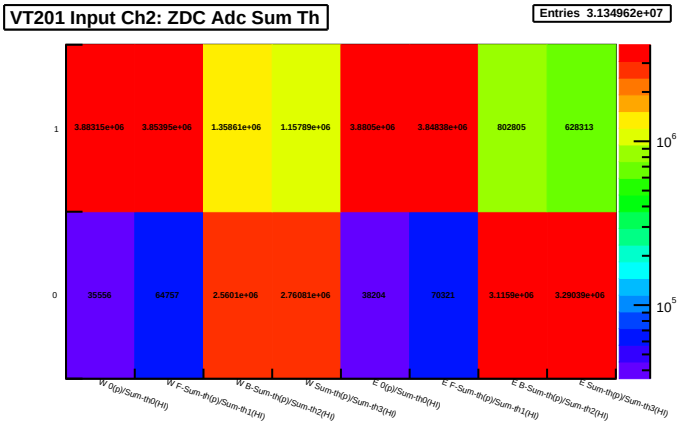

VT201 Input Ch0: BBC Small Adc Sum Th (Real-Simu)
Entries 0
East
West

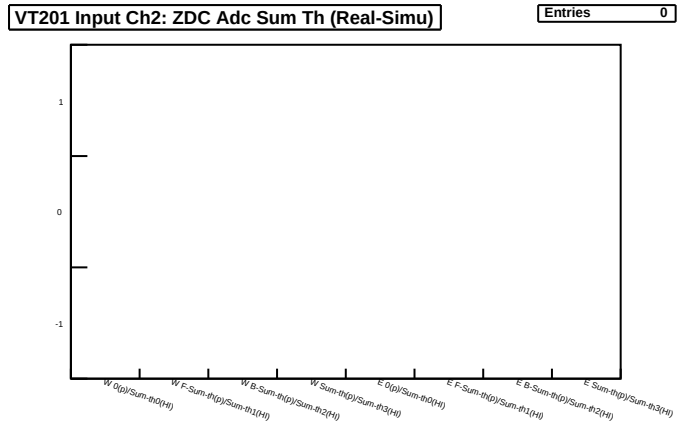

VT201 Input Ch1: BBC Large Adc Sum Th
Entries 7837406
3.9187e+06
3.9187e+06
East
West

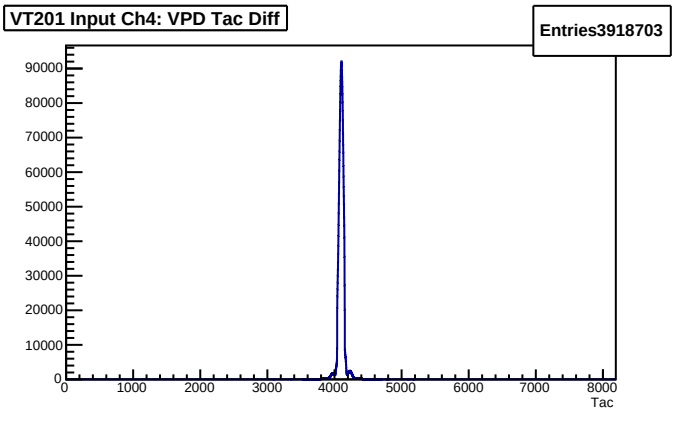

VT201 Input Ch1: BBC Large Adc Sum Th(Real-Simu)
Entries 0
East
West

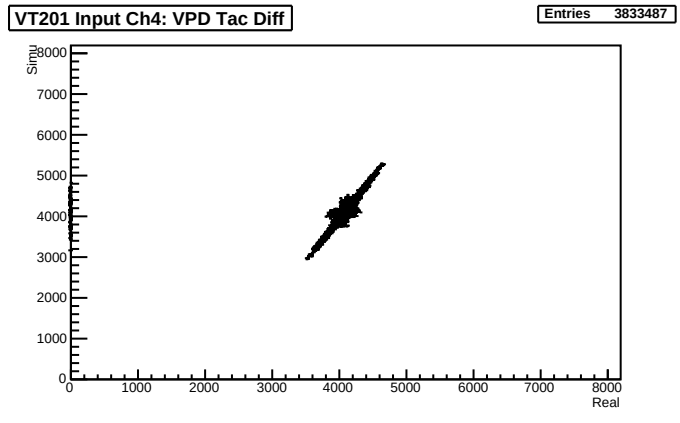

VT201 Input Ch2: ZDC Tac Diff
Entries3918703
Tac

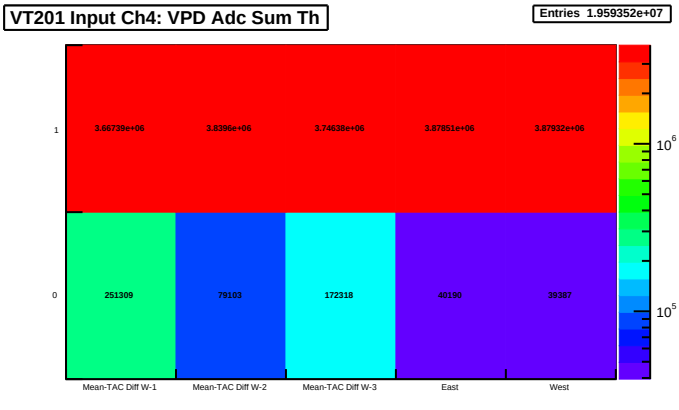

VT201 Input Ch2: ZDC Tac Diff
Entries 0
Simu
Real

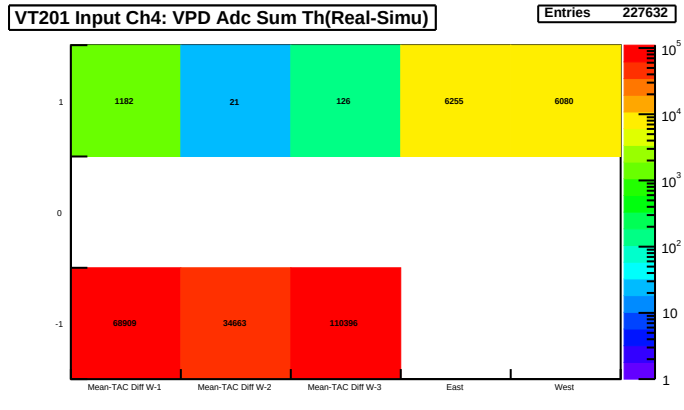

VT201 Input Ch2: ZDC Adc Sum Th
Entries 3.134962e+07
3.88315e+06
3.85395e+06
1.35861e+06
1.15789e+06
3.8805e+06
3.84838e+06
802805
628313
35556
64757
2.5601e+06
2.76081e+06
38204
70321
3.1159e+06
3.29039e+06
W 0(p)/Sum-th0(H)
W F-Sum-th(p)/Sum-th1(H)
W B-Sum-th(p)/Sum-th2(H)
W Sum-th(p)/Sum-th3(H)
E 0(p)/Sum-th0(H)
E F-Sum-th(p)/Sum-th1(H)
E B-Sum-th(p)/Sum-th2(H)
E Sum-th(p)/Sum-th3(H)

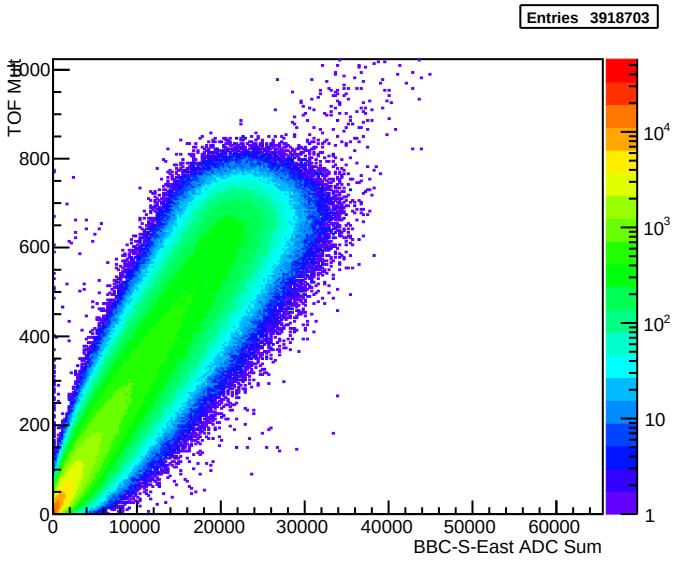

VT201 Input Ch2: ZDC Adc Sum Th (Real-Simu)
Entries 0
W 0(p)/Sum-th0(H)
W F-Sum-th(p)/Sum-th1(H)
W B-Sum-th(p)/Sum-th2(H)
W Sum-th(p)/Sum-th3(H)
E 0(p)/Sum-th0(H)
E F-Sum-th(p)/Sum-th1(H)
E B-Sum-th(p)/Sum-th2(H)
E Sum-th(p)/Sum-th3(H)

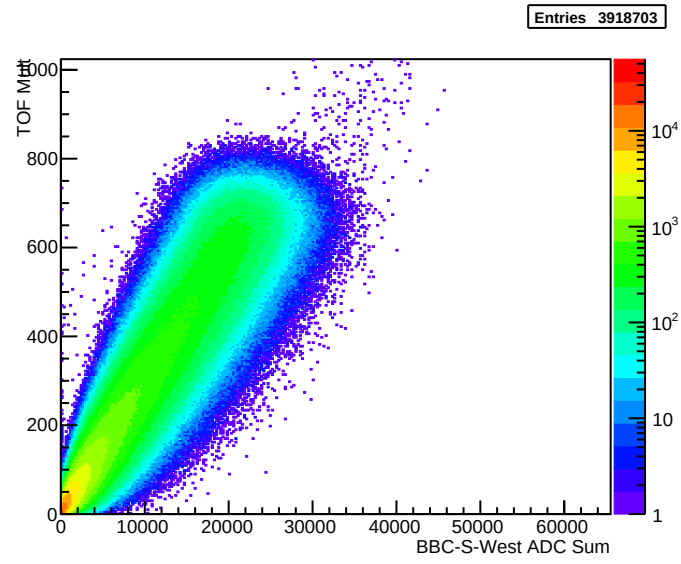

VT201 Input Ch4: VPD Tac Diff
Entries3918703
Tac

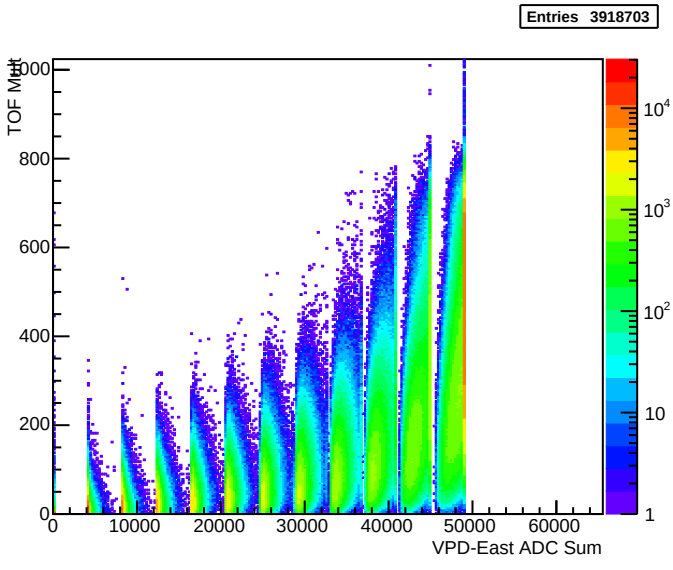

VT201 Input Ch4: VPD Tac Diff
Entries 3833487
Simu
Real

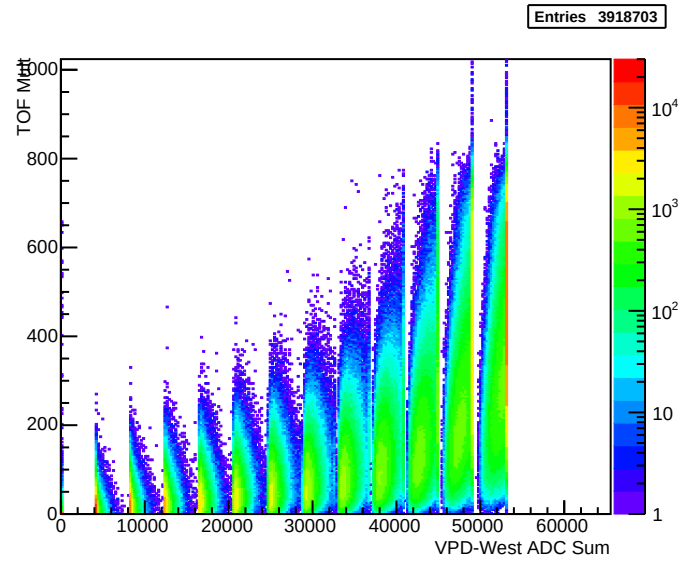

VT201 Input Ch4: VPD Adc Sum Th
Entries 1.959352e+07
3.66739e+06
3.8396e+06
3.74638e+06
3.87851e+06
3.87932e+06
251309
79103
172318
40190
39387
Mean-TAC Diff W-1
Mean-TAC Diff W-2
Mean-TAC Diff W-3
East
West

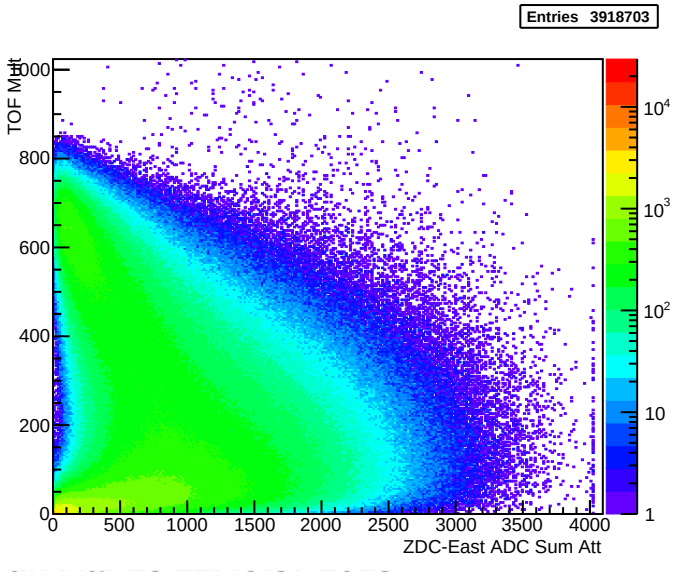

VT201 Input Ch4: VPD Adc Sum Th(Real-Simu)
Entries 227632
1182
21
126
6255
6080
68909
34663
110396
Mean-TAC Diff W-1
Mean-TAC Diff W-2
Mean-TAC Diff W-3
East
West

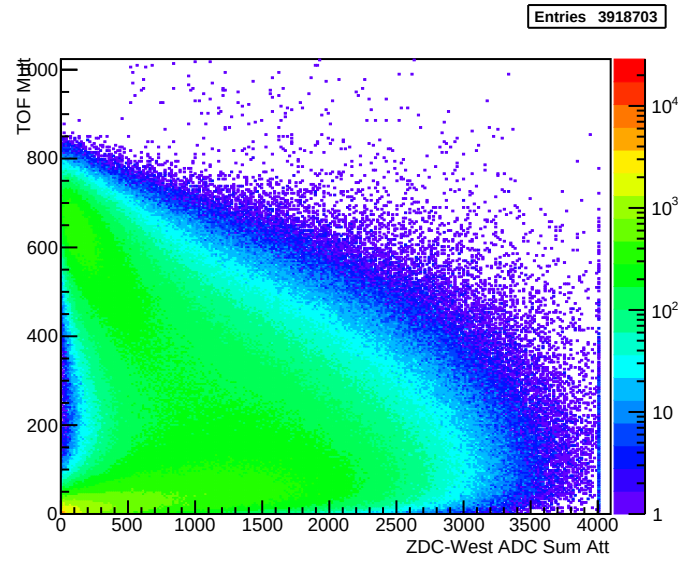

Entries 3918703
TOF Mult
BBC-S-East ADC Sum

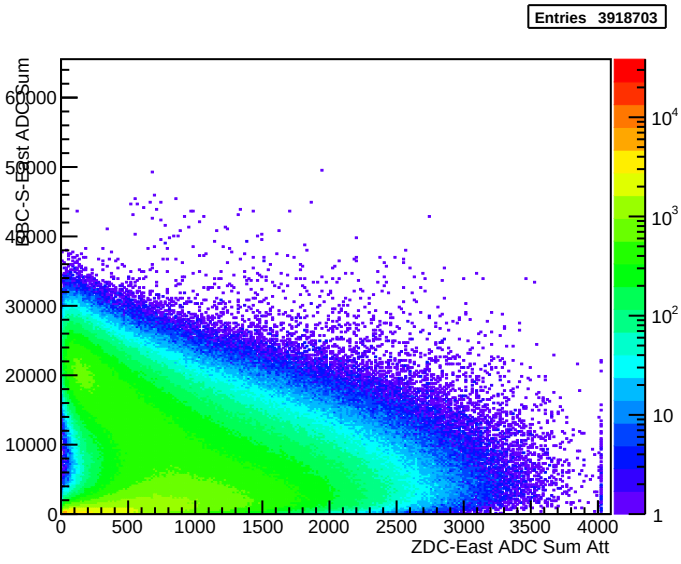

Entries 3918703
TOF Mult
BBC-S-West ADC Sum

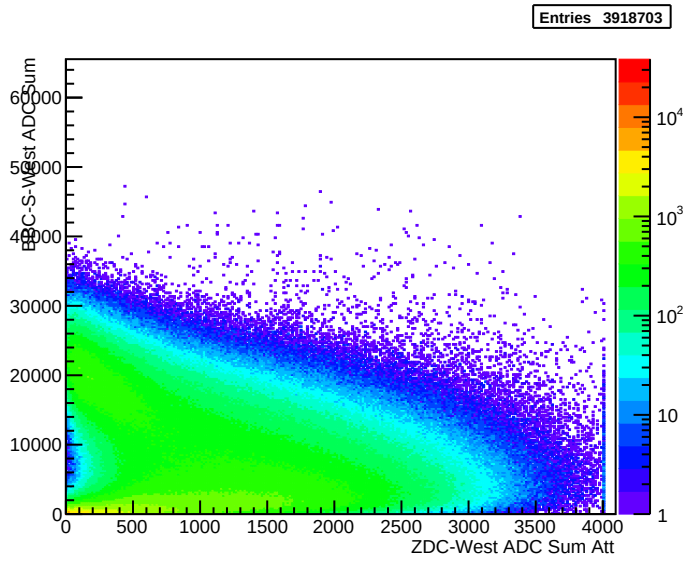

Entries 3918703
TOF Mult
VPD-East ADC Sum

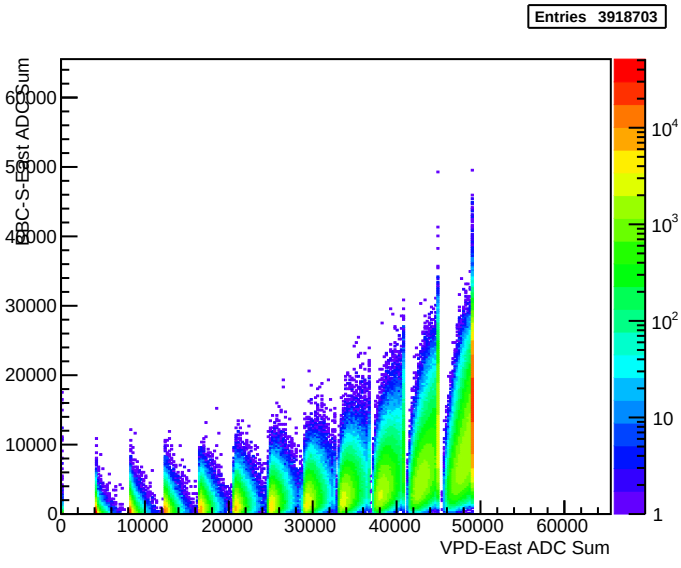

Entries 3918703
TOF Mult
VPD-West ADC Sum

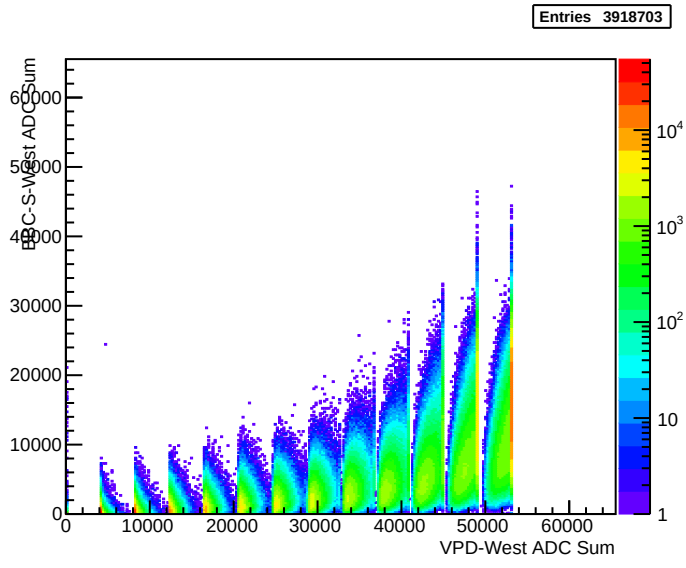

Entries 3918703
TOF Mult
ZDC-East ADC Sum Att

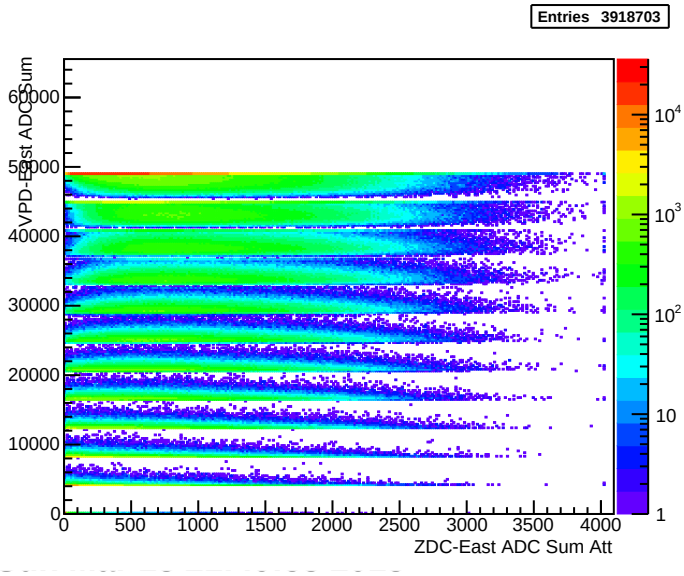

Entries 3918703
TOF Mult
ZDC-West ADC Sum Att

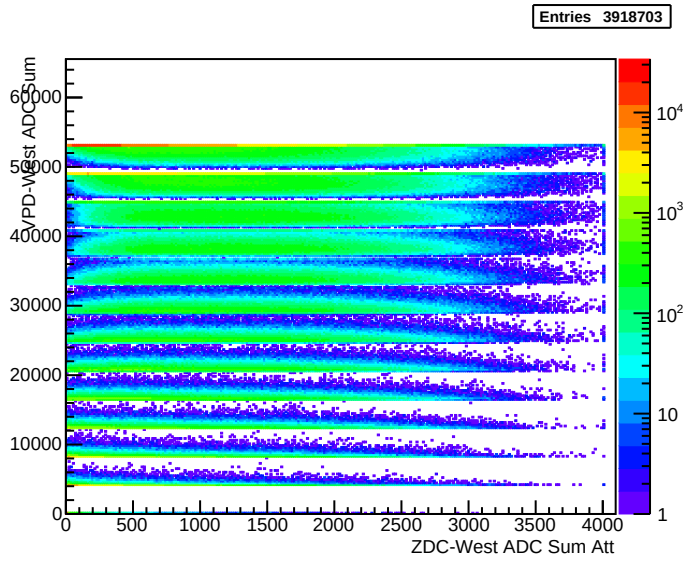

Entries 3918703
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

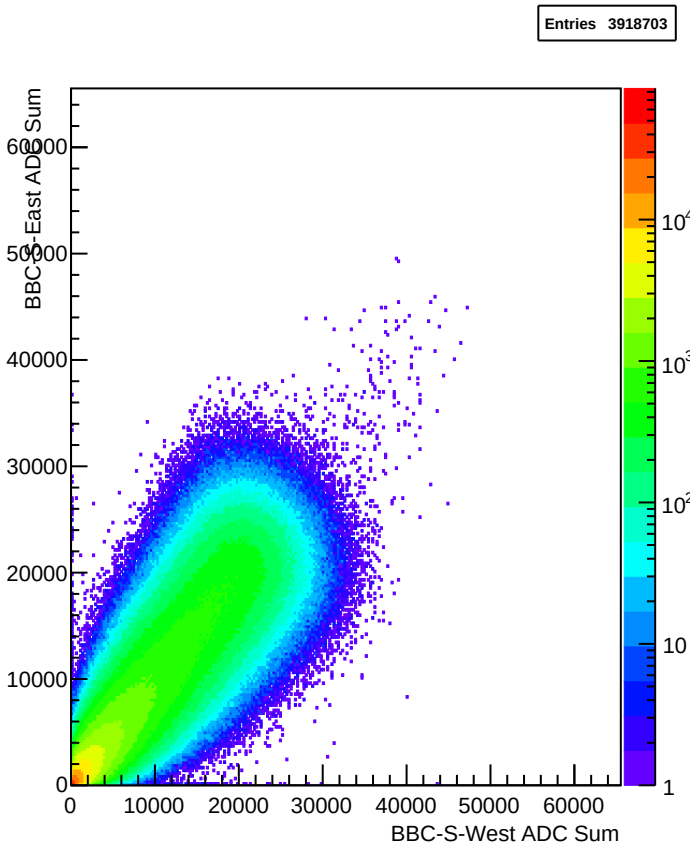

Entries 3918703
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

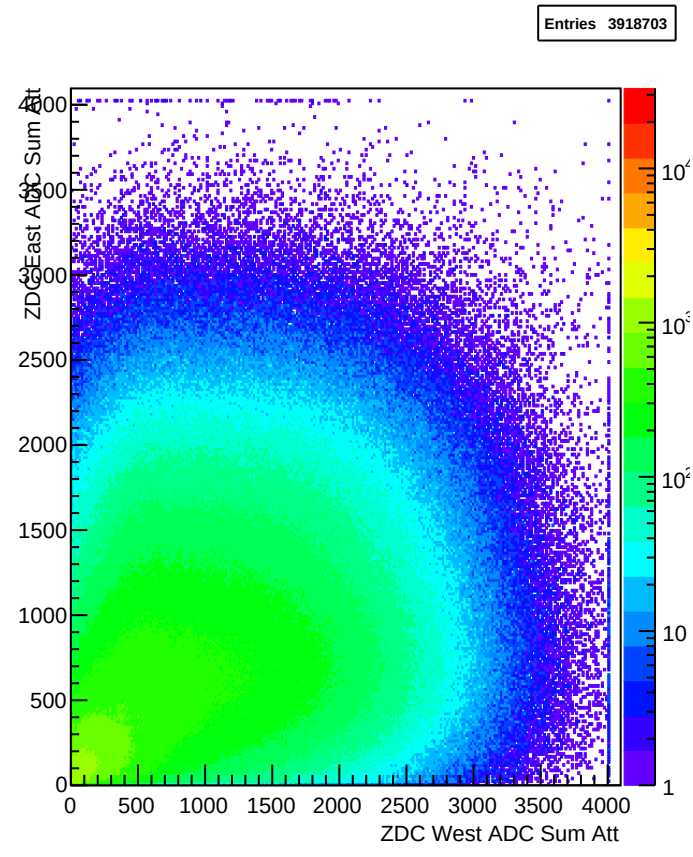

Entries 3918703
BBC-S-East ADC Sum
VPD-East ADC Sum

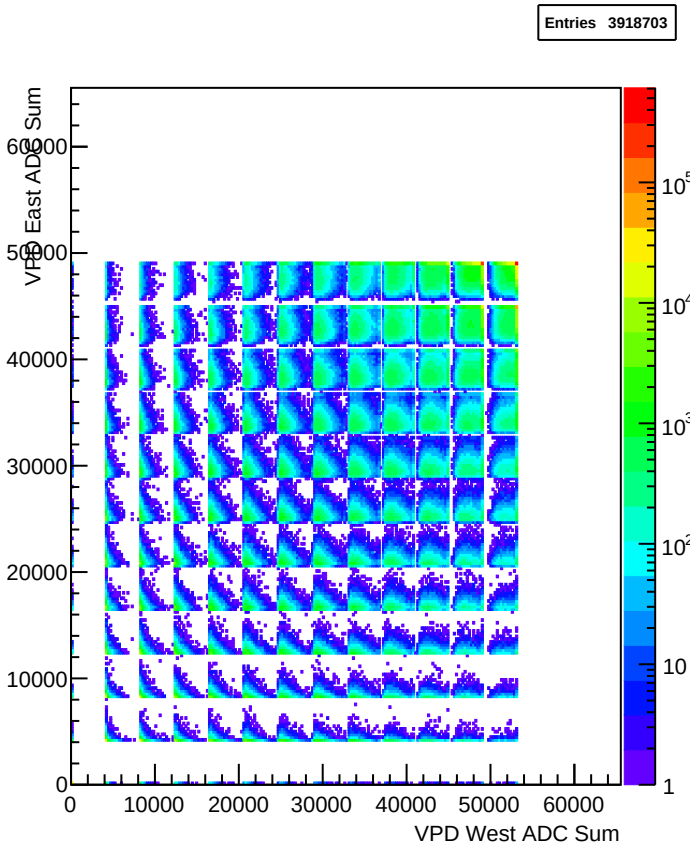

Entries 3918703
BBC-S-West ADC Sum
VPD-West ADC Sum

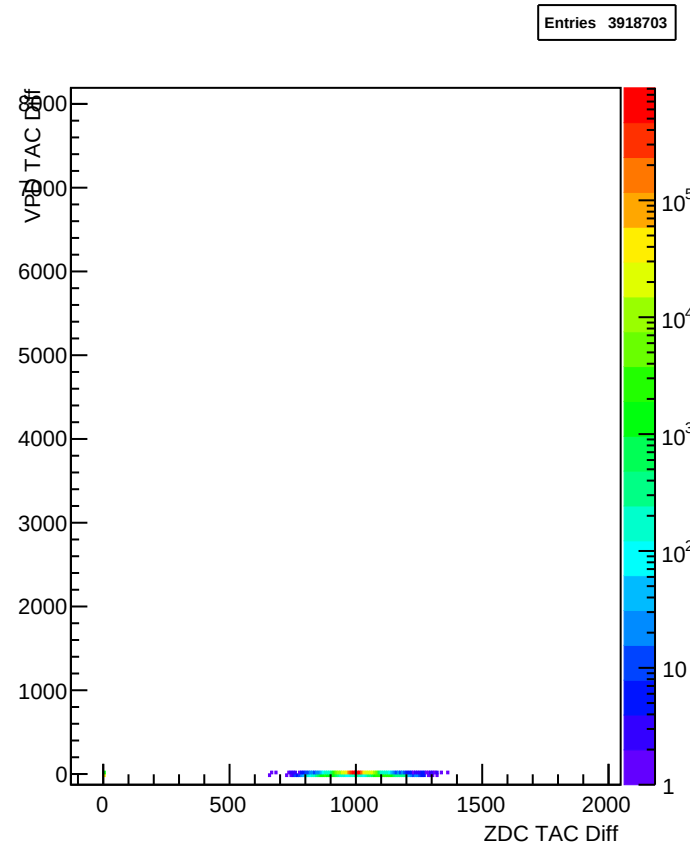

Entries 3918703
VPD-East ADC Sum
ZDC-East ADC Sum Att

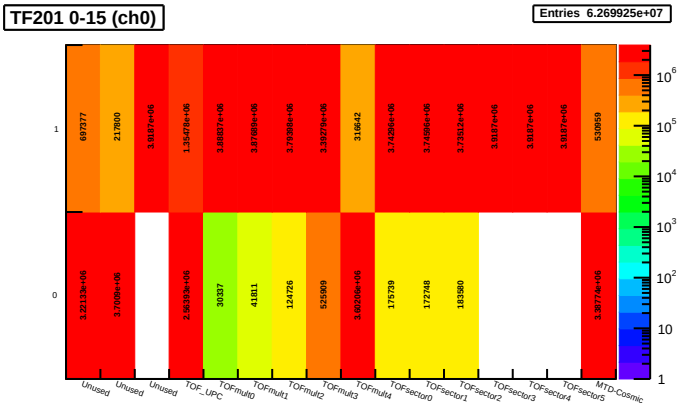

Entries 3918703
VPD-West ADC Sum
ZDC-West ADC Sum Att

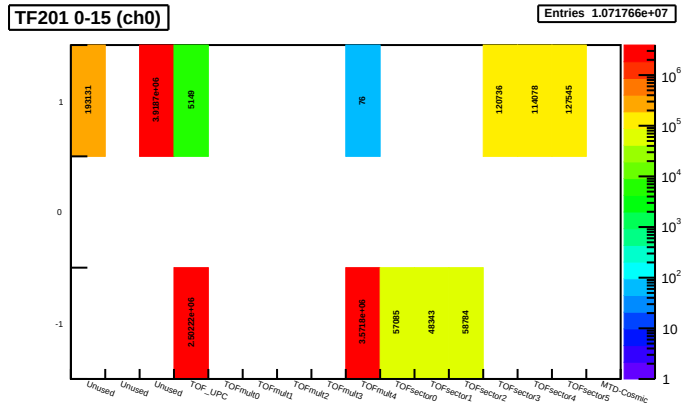

Entries 3918703
BBC-S-East ADC Sum
BBC-S-West ADC Sum

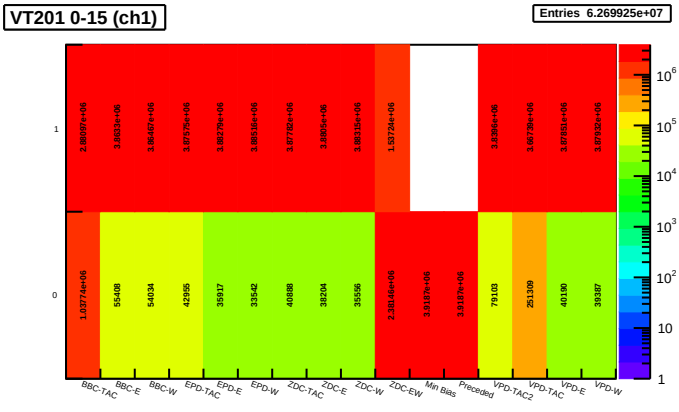

Entries 3918703
ZDC East ADC Sum Att
ZDC West ADC Sum Att

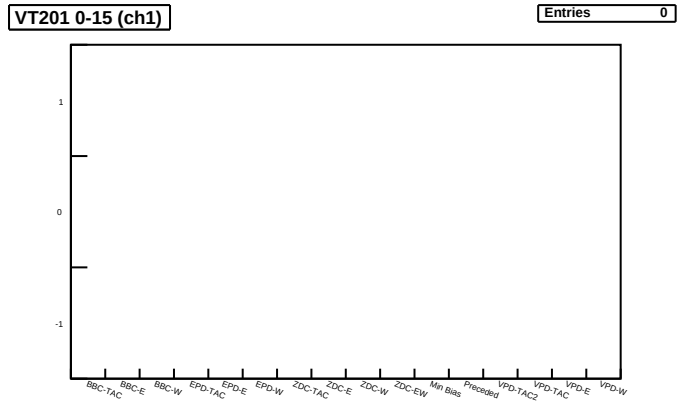

Entries 3918703
VPD East ADC Sum
VPD West ADC Sum

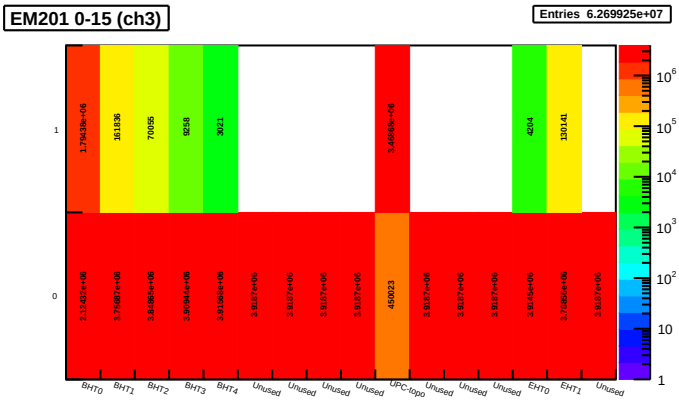

Entries 3918703
VPD TAC Diff
ZDC TAC Diff

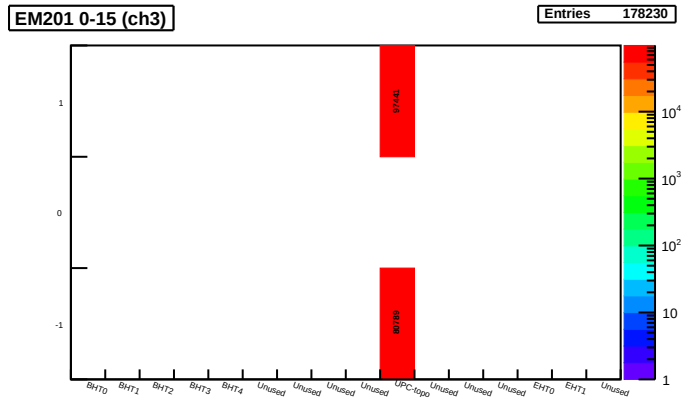

TF201 0-15 (ch0)
Entries 6.269925e+07
697377
217800
3.9187e+06
1.354728e+06
3.88837e+06
3.87889e+06
3.79398e+06
3.39279e+06
319642
3.74296e+06
3.74596e+06
3.73512e+06
3.9187e+06
3.9187e+06
3.9187e+06
530959
3.22132e+06
3.7008e+06
2.56393e+06
30327
41811
124726
525909
3.60206e+06
175739
172748
183380
3.38774e+06
Unused
Unused
Unused
TOF_UPC
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5
MTD-Cosmic

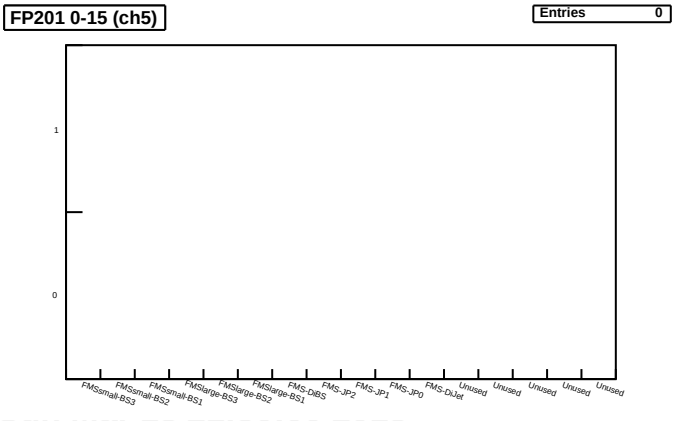

TF201 0-15 (ch0)
Entries 1.071766e+07
193131
3.9187e+06
5149
76
120736
114078
127545
2.50222e+06
3.5718e+06
57985
48343
56784
Unused
Unused
Unused
TOF_UPC
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5
MTD-Cosmic

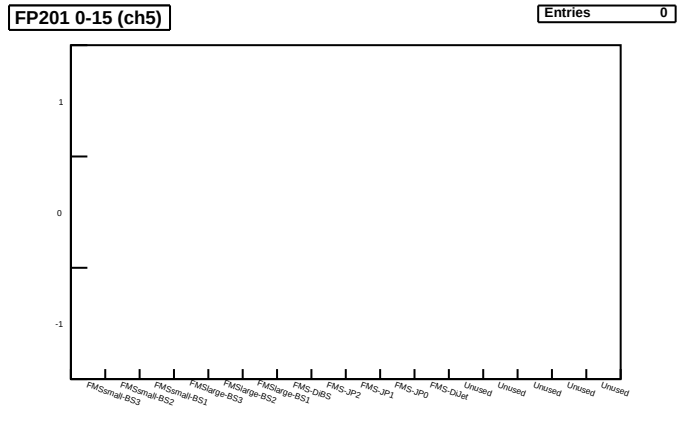

VT201 0-15 (ch1)
Entries 6.269925e+07
2.86597e+06
3.8633e+06
3.86457e+06
3.87275e+06
3.88279e+06
3.88516e+06
3.87782e+06
3.88054e+06
3.88315e+06
1.53724e+06
3.8596e+06
3.66739e+06
3.87651e+06
3.87922e+06
1.03774e+06
55408
54034
42995
35917
33542
40888
38204
35556
2.38146e+06
3.9187e+06
3.9187e+06
79103
251309
40190
39387
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 6.269925e+07
1.79438e+06
161836
70055
9258
3021
3.46868e+06
4204
130141
2.12452e+06
3.75687e+06
3.84385e+06
3.90944e+06
3.91568e+06
3.9187e+06
3.9187e+06
3.9187e+06
3.9187e+06
450223
3.9187e+06
3.9187e+06
3.9187e+06
3.9145e+06
3.78856e+06
3.9187e+06
BHT0
BHT1
BHT2
BHT3
BHT4
Unused
Unused
Unused
Unused
UPC-topo
Unused
Unused
Unused
EHT0
EHT1
Unused


EM201 0-15 (ch3)
Entries 178230
97441
80789
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