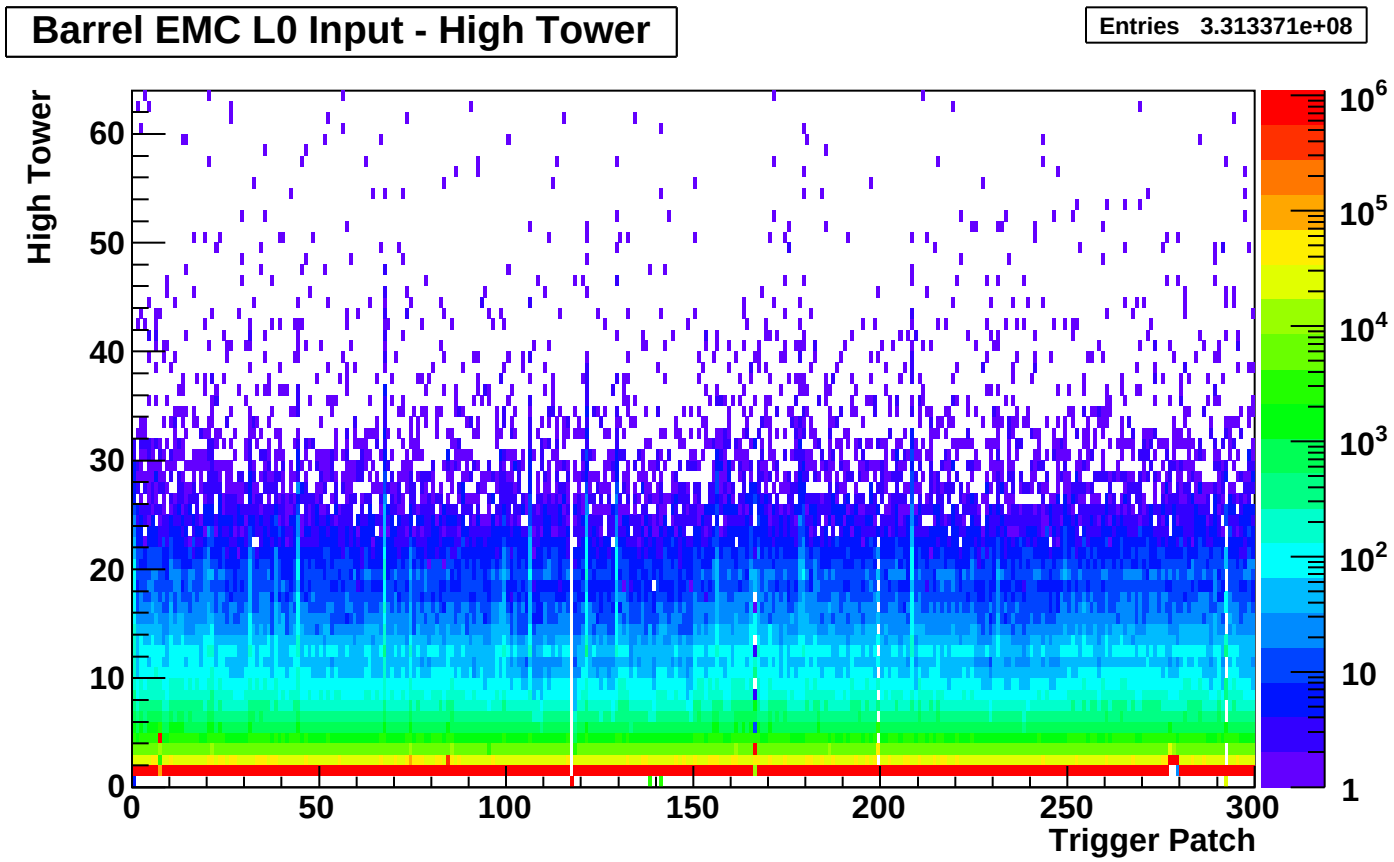
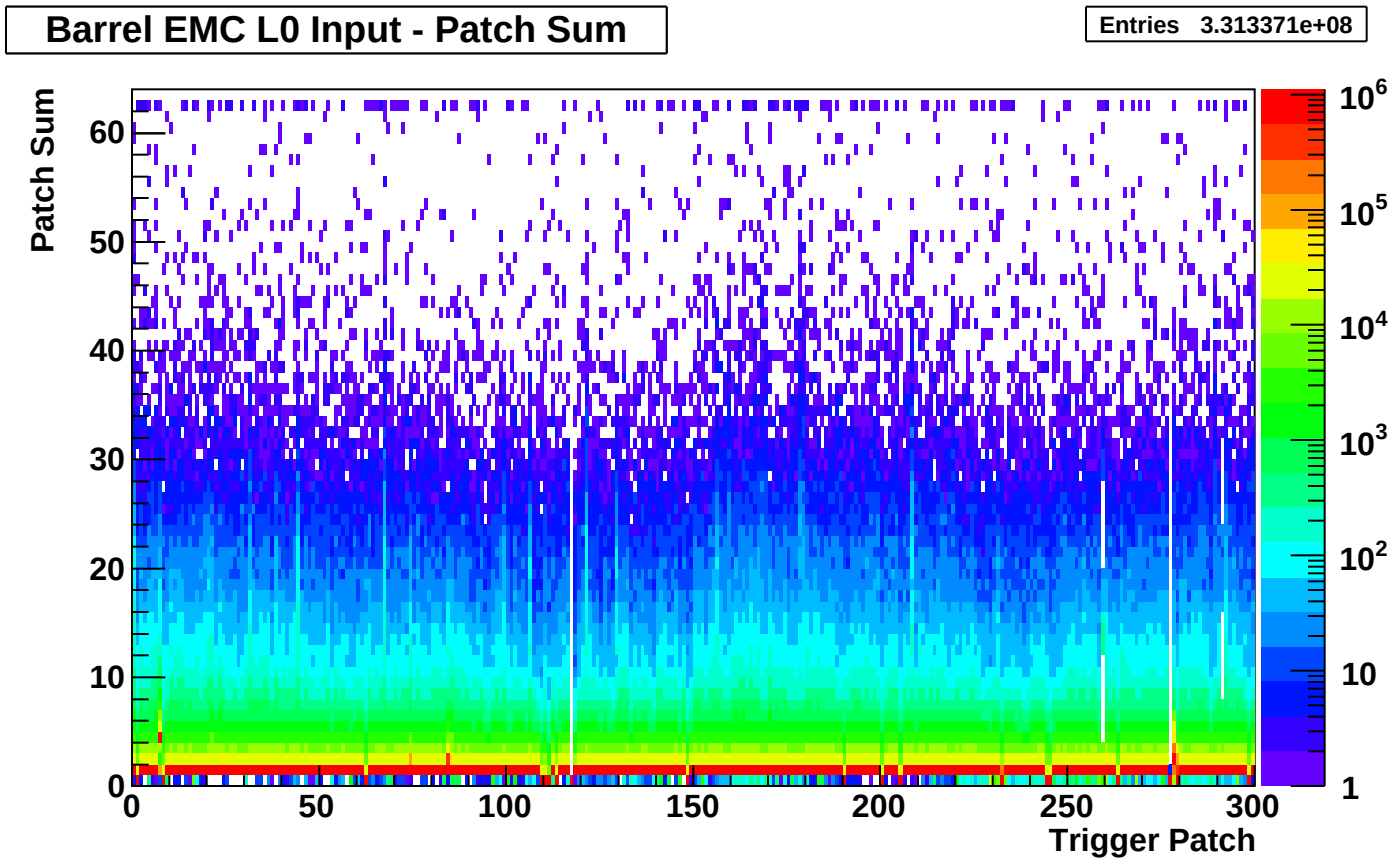
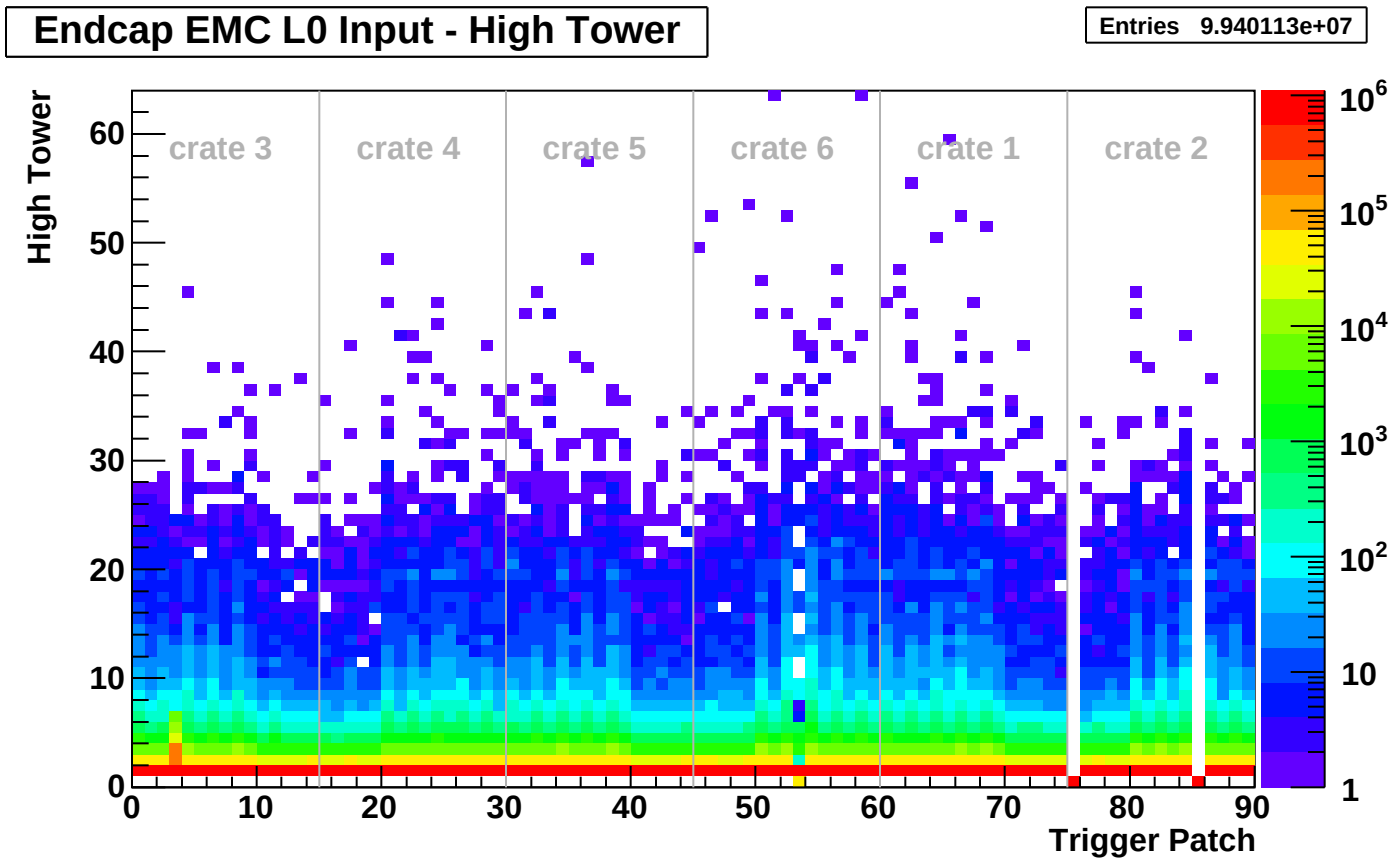
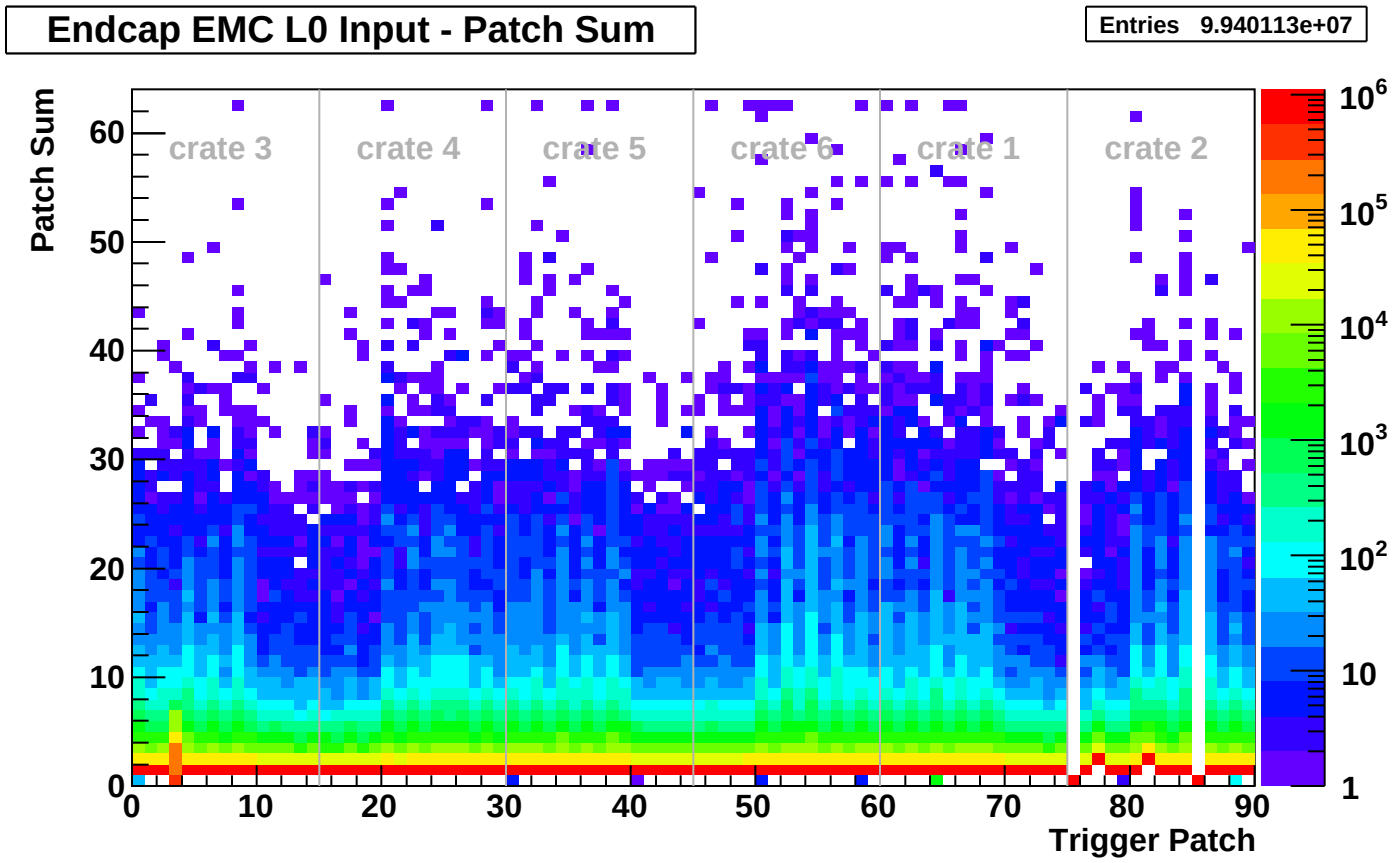
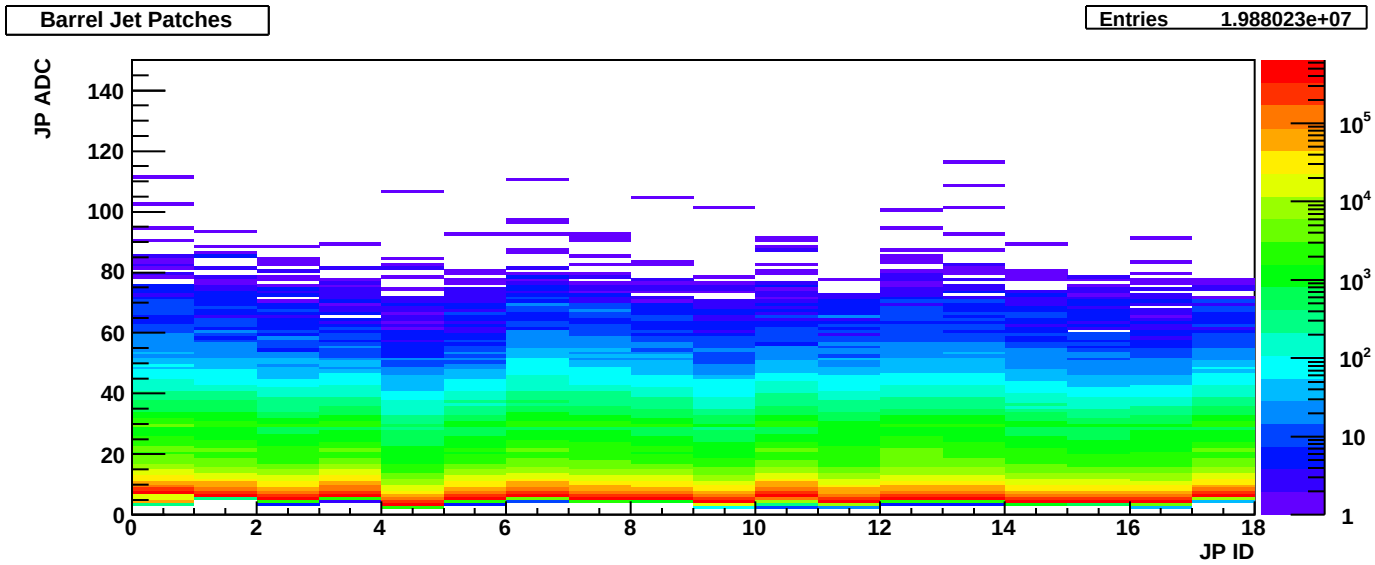
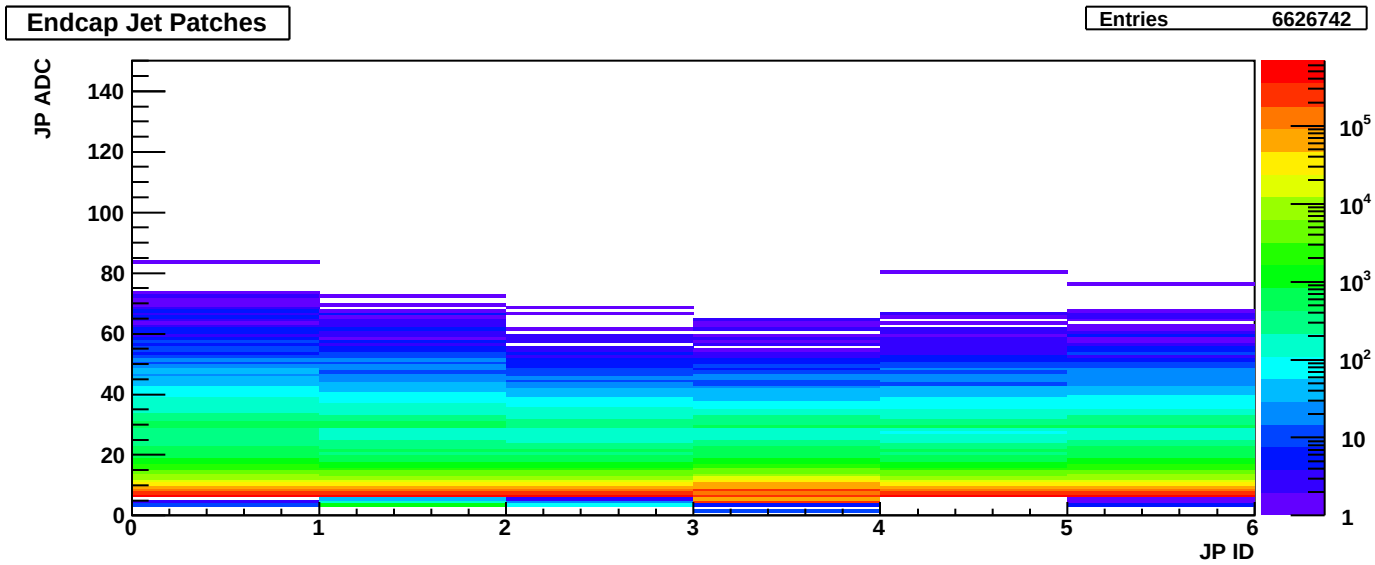

Barrel EMC L0 Input - High Tower
Entries 3.313371e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

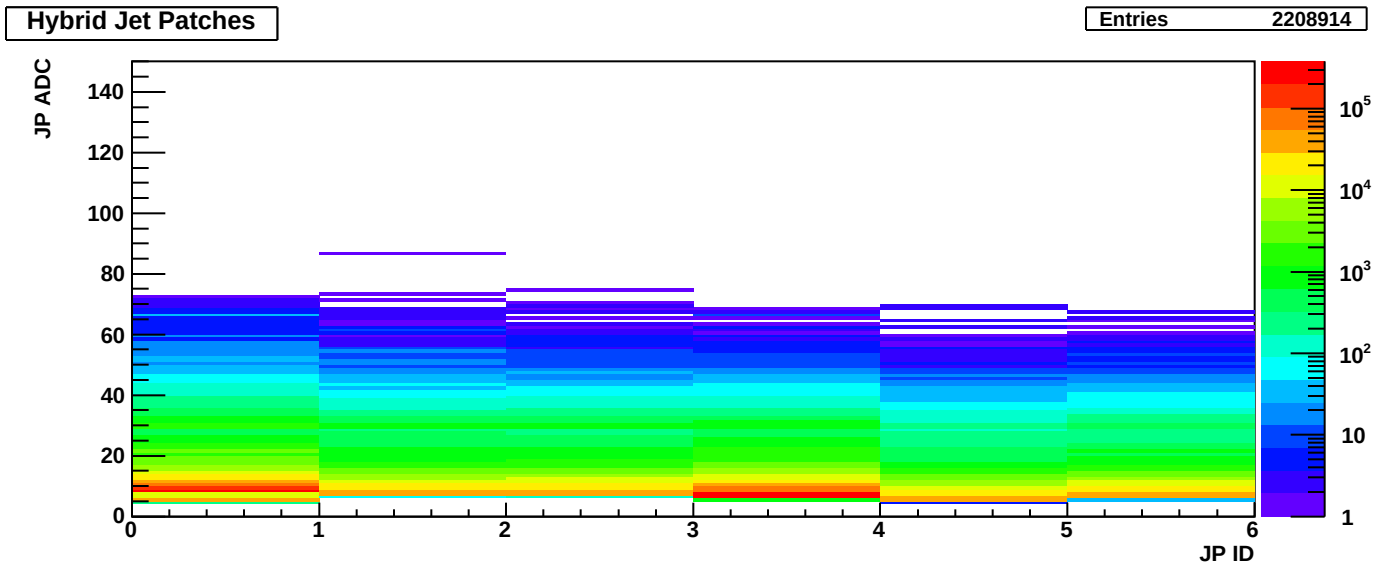

Barrel EMC L0 Input - Patch Sum
Entries 3.313371e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

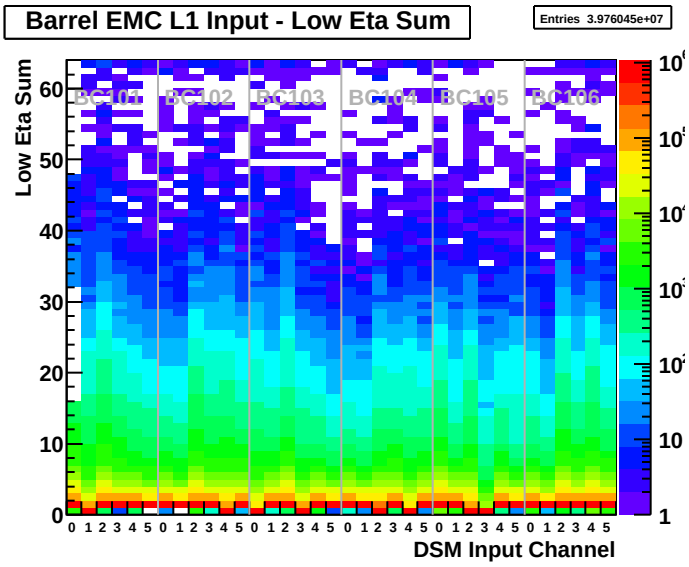

Endcap EMC L0 Input - High Tower
Entries 9.940113e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

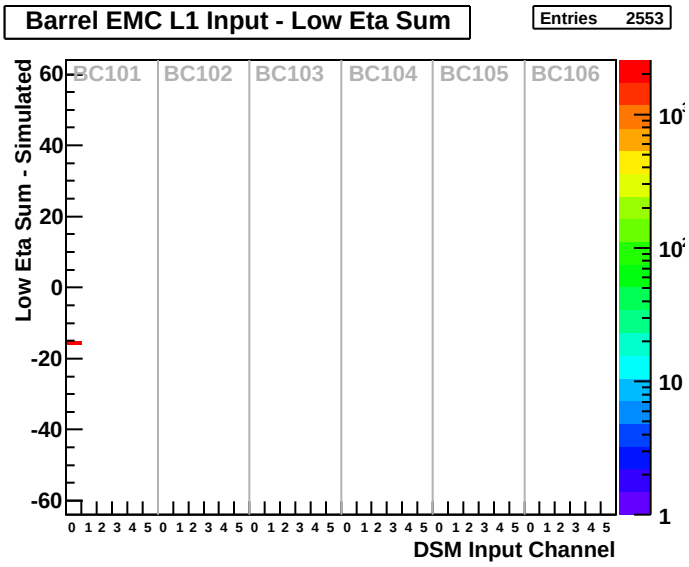

Endcap EMC L0 Input - Patch Sum
Entries 9.940113e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

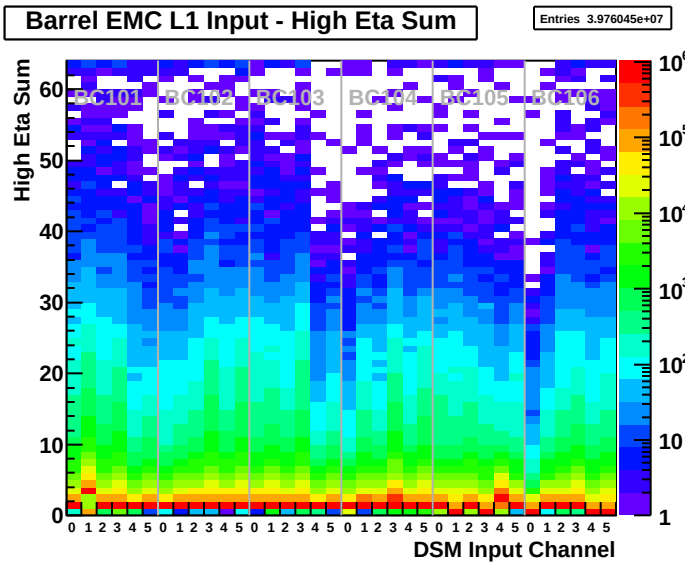

Barrel Jet Patches
Entries 1.988023e+07
JP ADC
JP ID

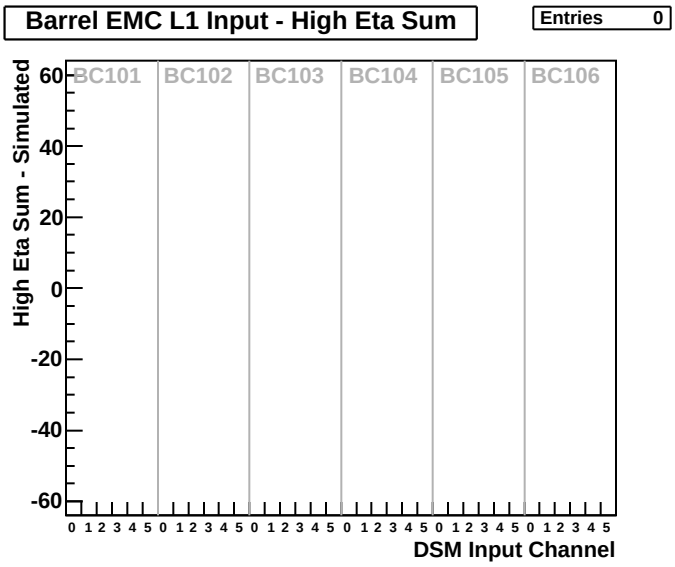

Endcap Jet Patches
Entries 6626742
JP ADC
JP ID

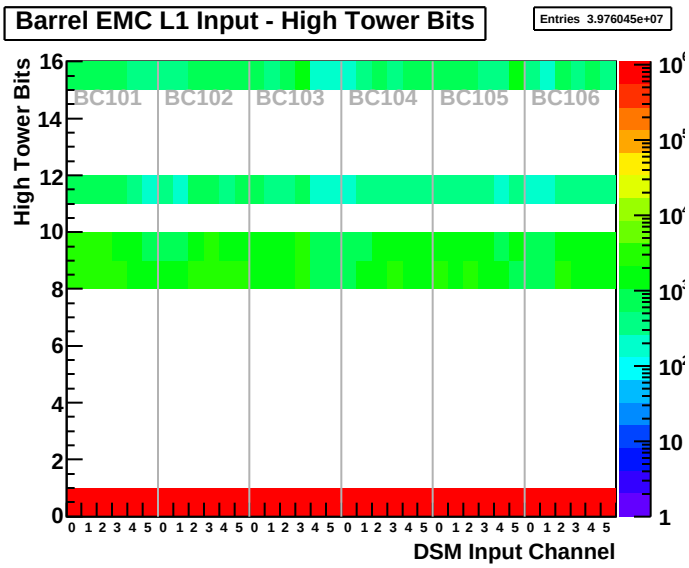

Hybrid Jet Patches
Entries 2208914
JP ADC
JP ID

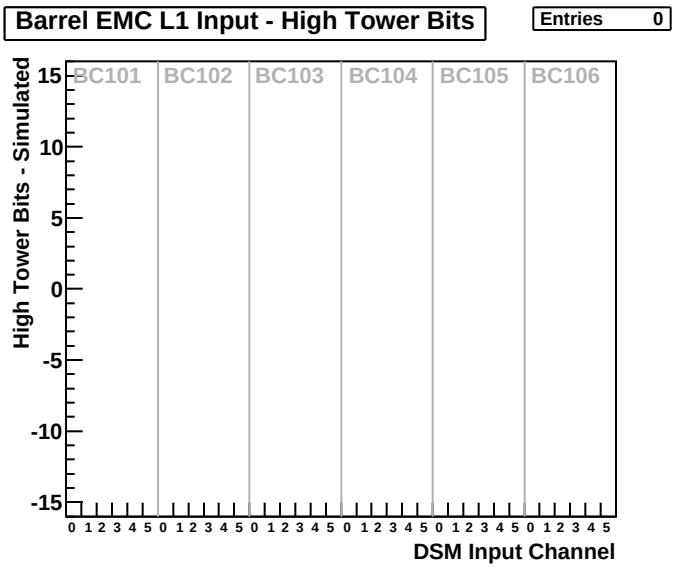

Barrel EMC L1 Input - Low Eta Sum
Entries 3.976045e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

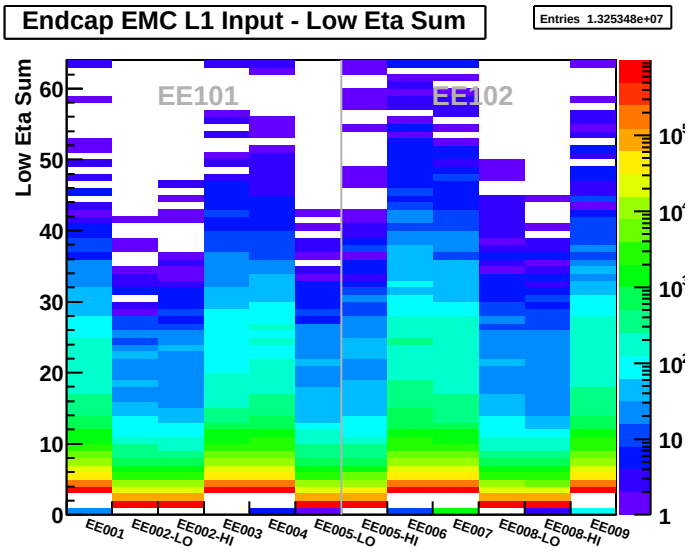

Barrel EMC L1 Input - Low Eta Sum
Entries 2553
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

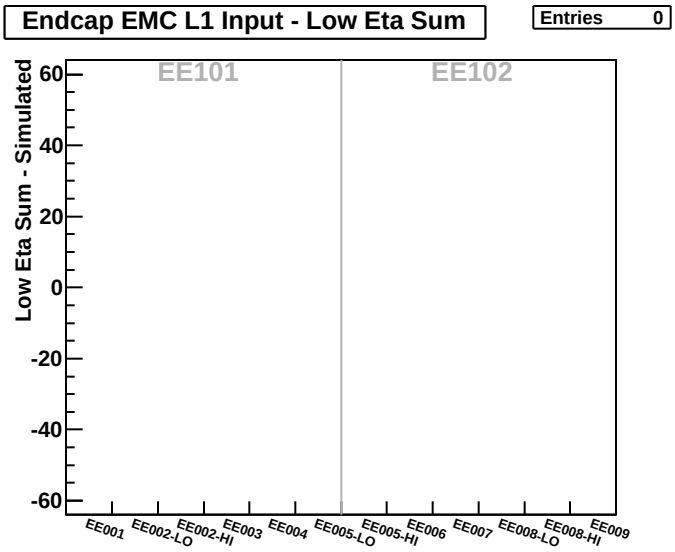

Barrel EMC L1 Input - High Eta Sum
Entries 3.976045e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

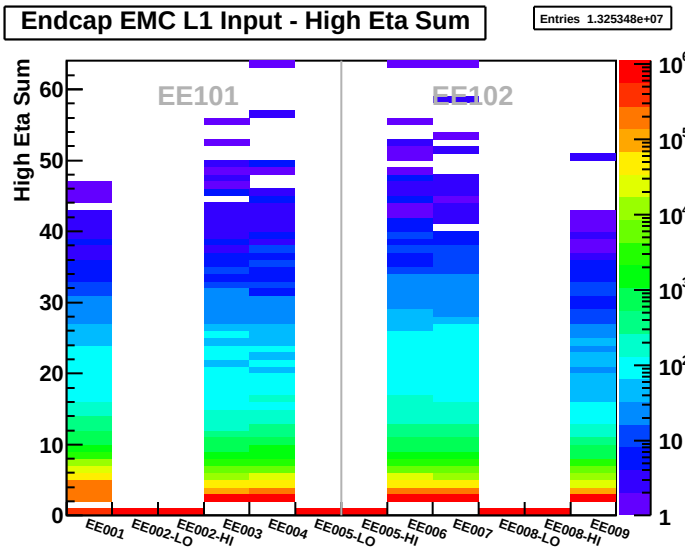

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

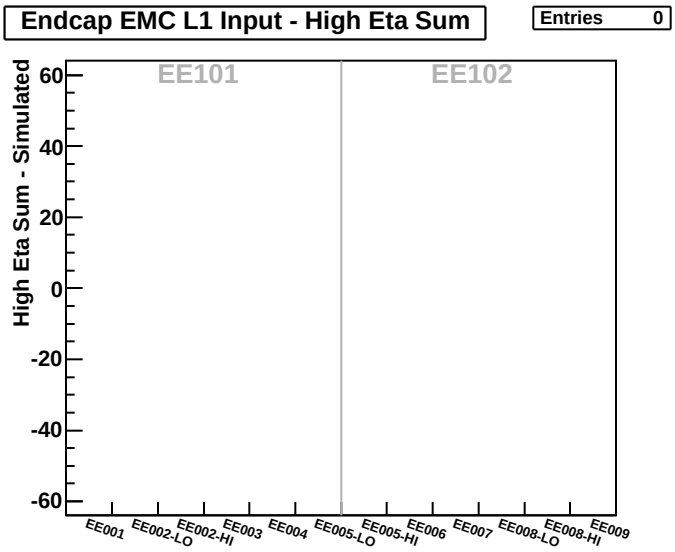

Barrel EMC L1 Input - High Tower Bits
Entries 3.976045e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

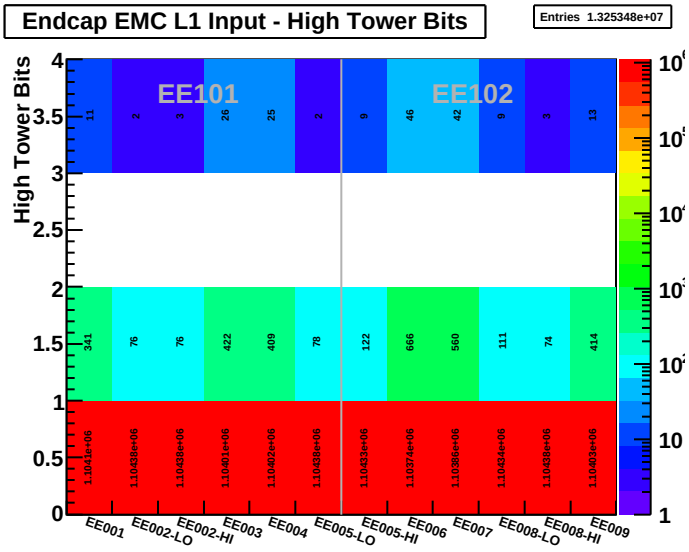

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

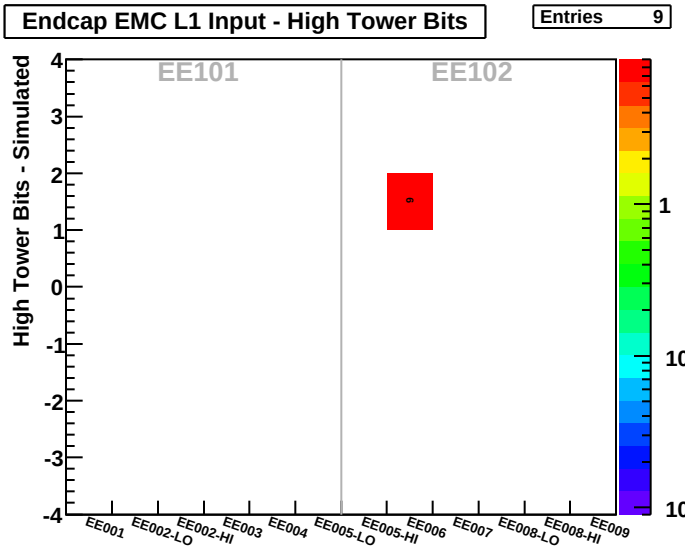

Endcap EMC L1 Input - Low Eta Sum
Entries 1.325348e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

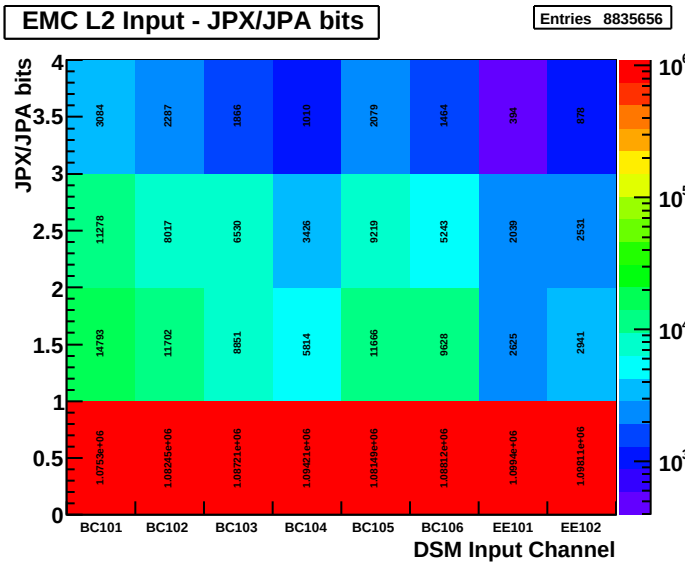

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

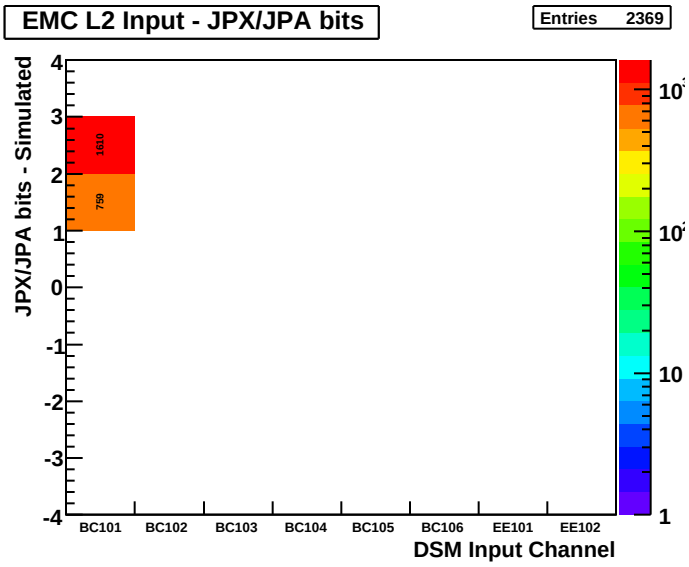

Endcap EMC L1 Input - High Eta Sum
Entries 1.325348e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

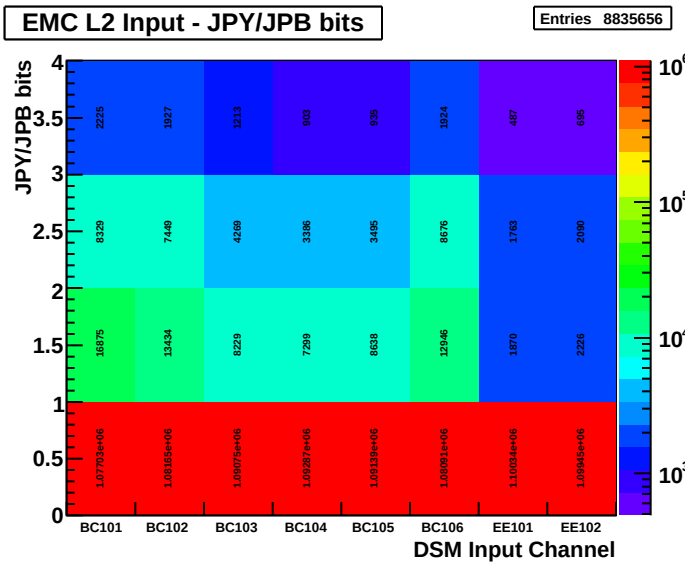

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

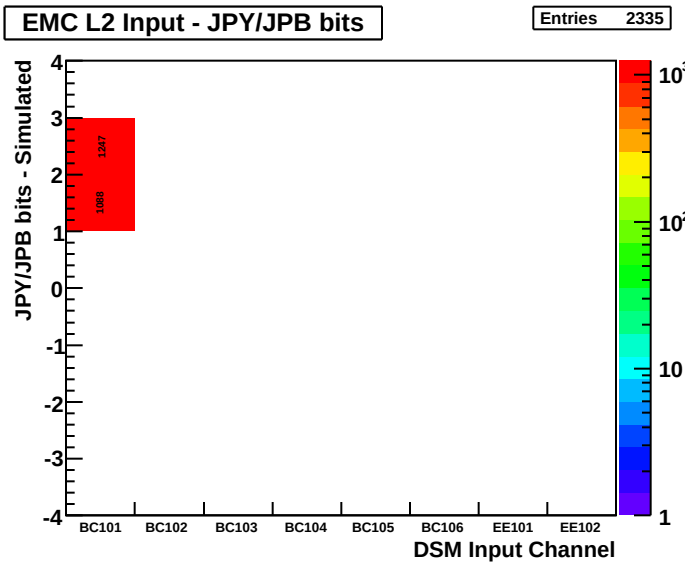

Endcap EMC L1 Input - High Tower Bits
Entries 1.325348e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

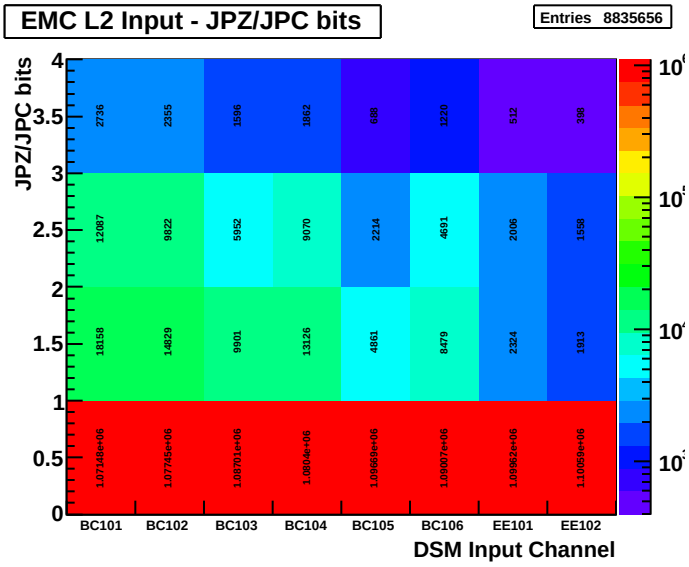

Endcap EMC L1 Input - High Tower Bits
Entries 9
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

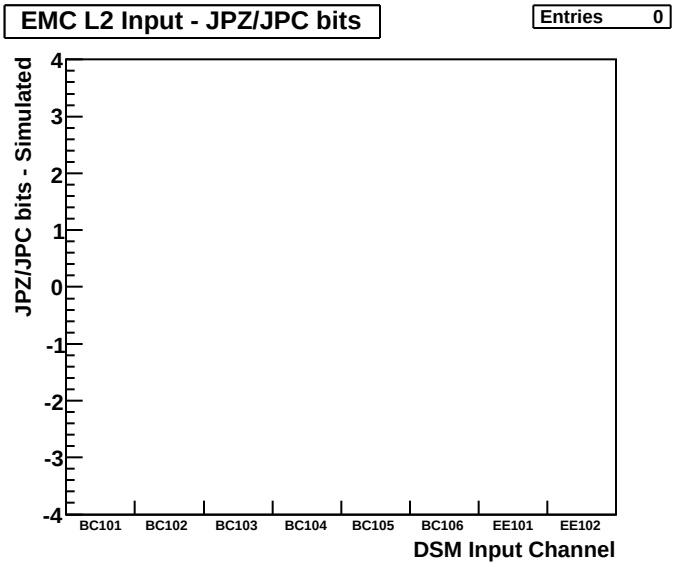

EMC L2 Input - JPX/JPA bits
Entries 8835656
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
3084 2287 1866 1010 2079 1464 394 878
11278 8017 6530 3426 9219 5243 2039 2531
14793 11702 8851 5814 11666 9628 2625 2941
1.0753e+06 1.08245e+06 1.08721e+06 1.09421e+06 1.08149e+06 1.08812e+06 1.0994e+06 1.09811e+06

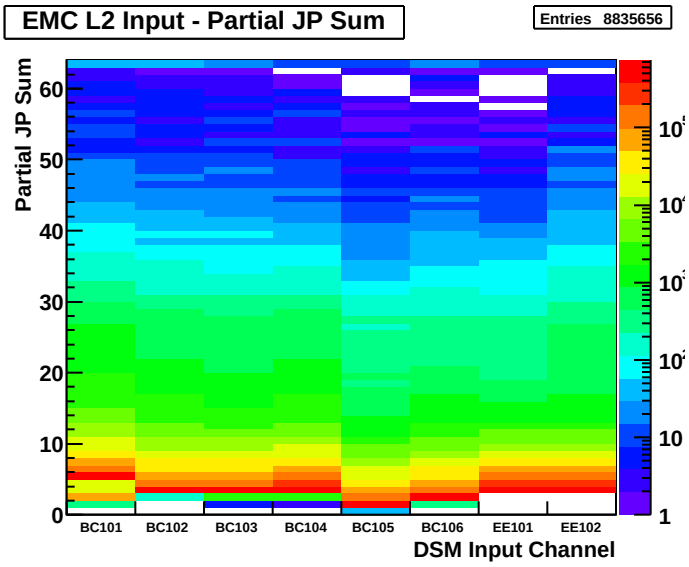

EMC L2 Input - JPX/JPA bits
Entries 2369
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1610
799

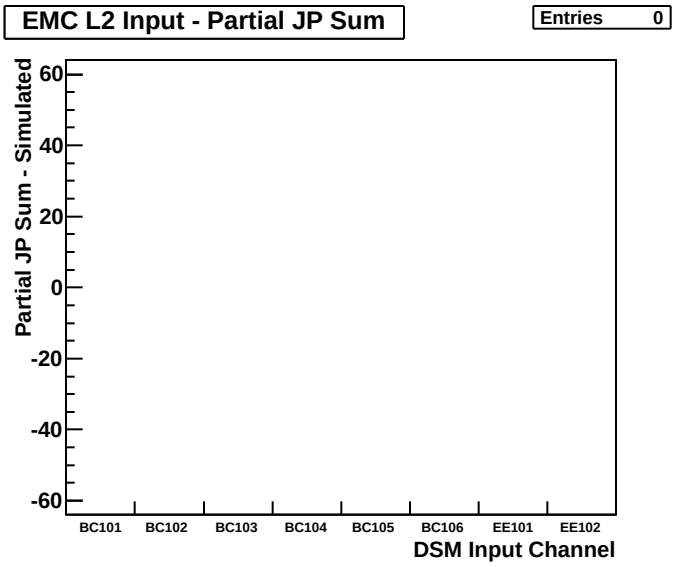

EMC L2 Input - JPY/JPB bits
Entries 8835656
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2225 1927 1213 903 935 1924 487 695
8329 7449 4269 3386 3495 8676 1763 2090
16875 13434 8229 7299 8538 12946 1870 2226
1.07703e+06 1.08165e+06 1.09075e+06 1.09287e+06 1.09139e+06 1.08091e+06 1.10034e+06 1.09945e+06

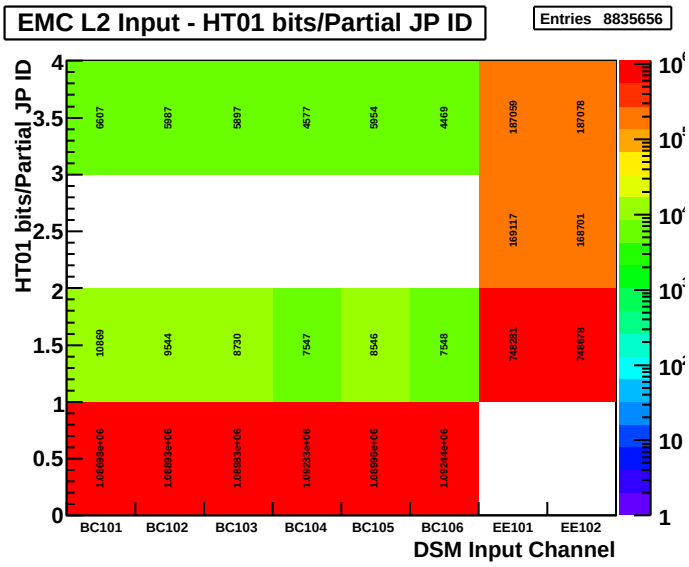

EMC L2 Input - JPY/JPB bits
Entries 2335
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1247
1088

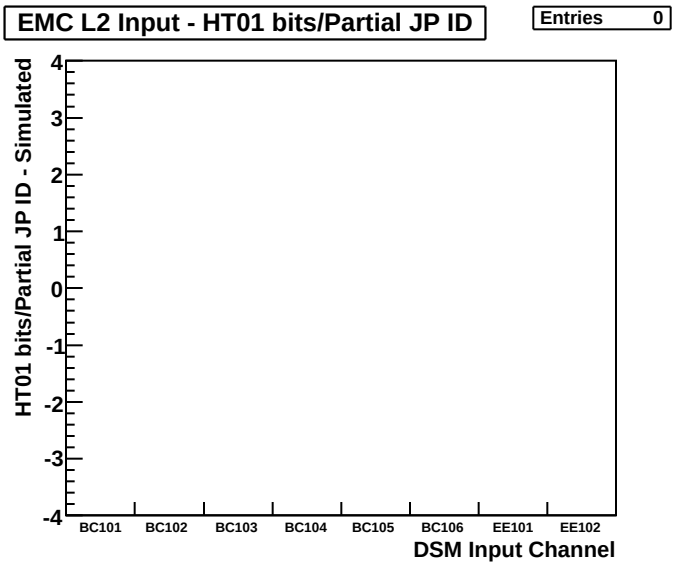

EMC L2 Input - JPZ/JPC bits
Entries 8835656
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2736 2355 1596 1862 688 1220 512 398
12087 9822 5952 9070 2214 4691 2006 1558
18158 14829 9901 13126 4961 8479 2324 1913
1.07148e+06 1.07745e+06 1.08701e+06 1.0804e+06 1.09669e+06 1.09007e+06 1.09862e+06 1.10059e+06

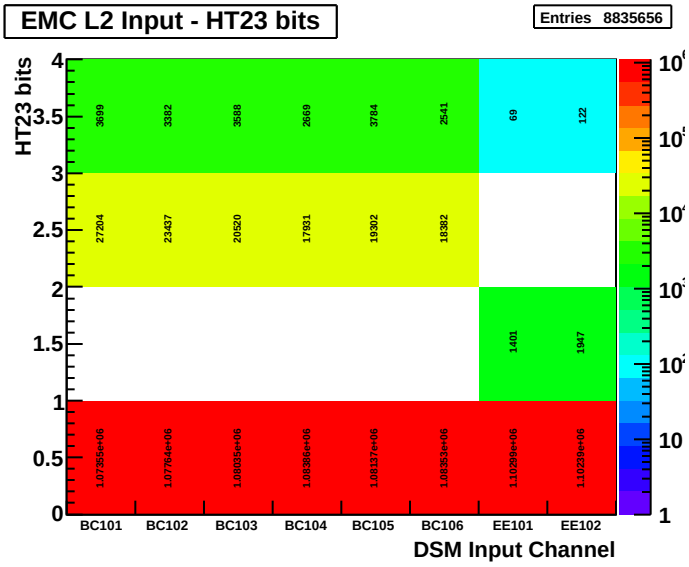

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

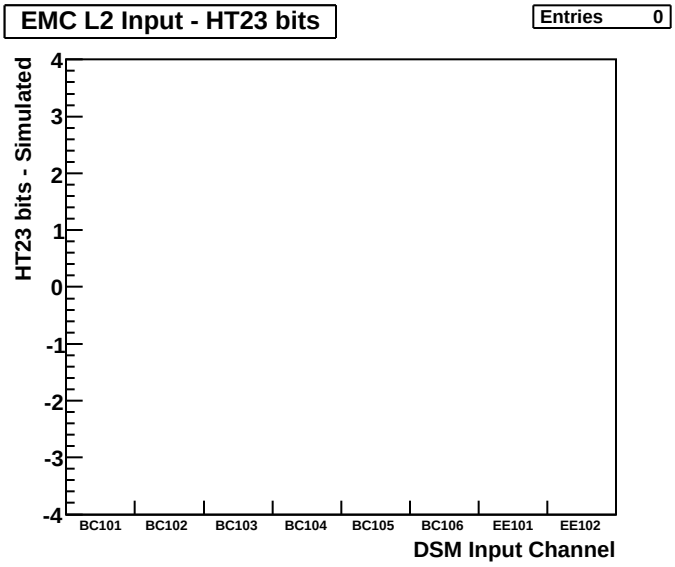

EMC L2 Input - Partial JP Sum
Entries 8835656
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

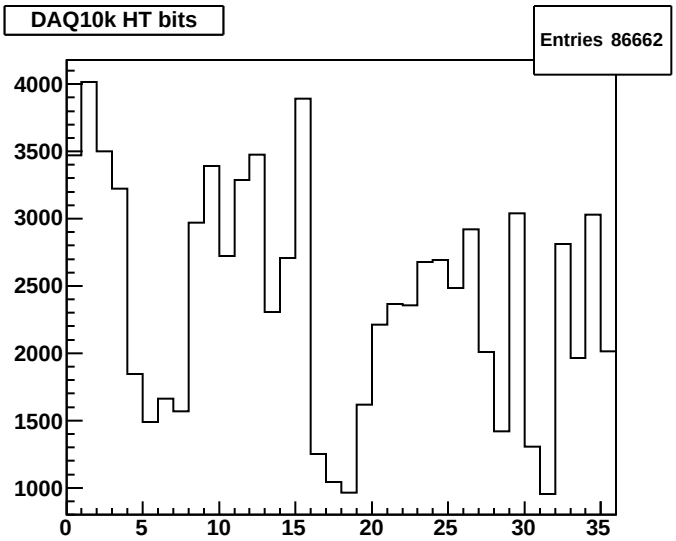

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

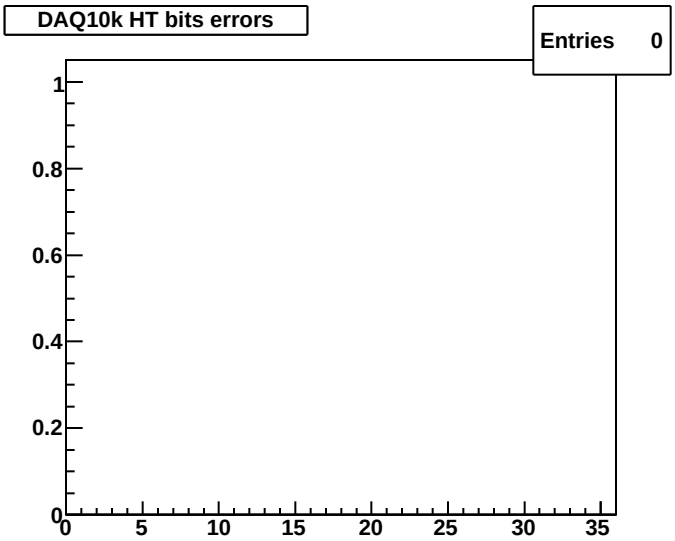

EMC L2 Input - HT01 bits/Partial JP ID
Entries 8835656
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

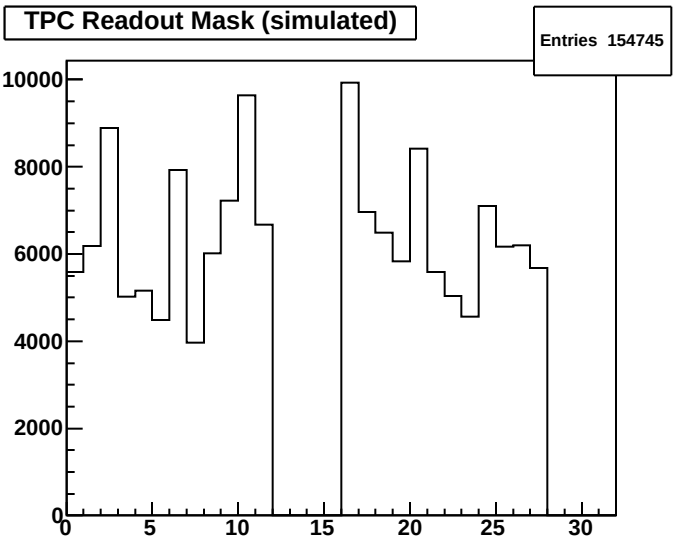

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

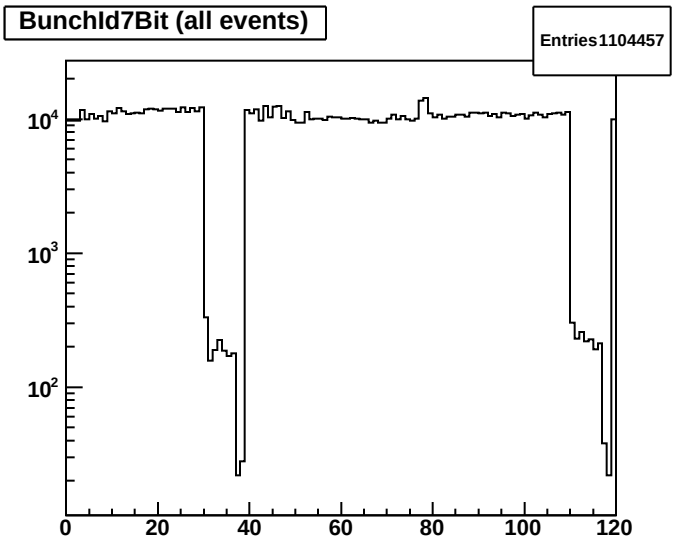

EMC L2 Input - HT23 bits
Entries 8835656
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

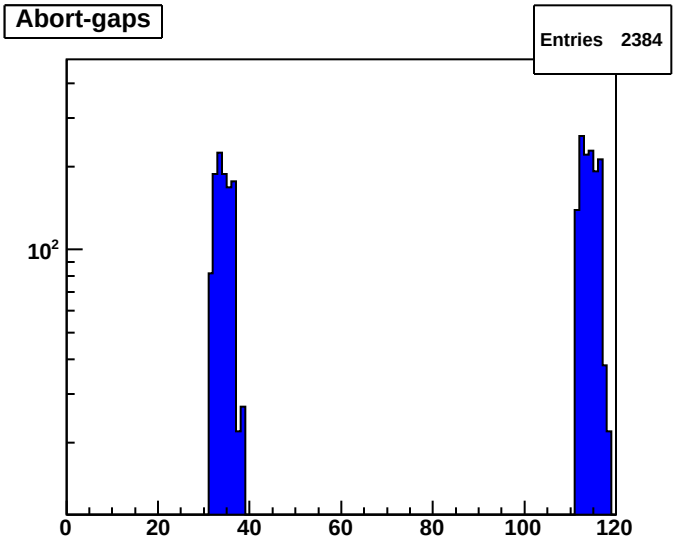

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

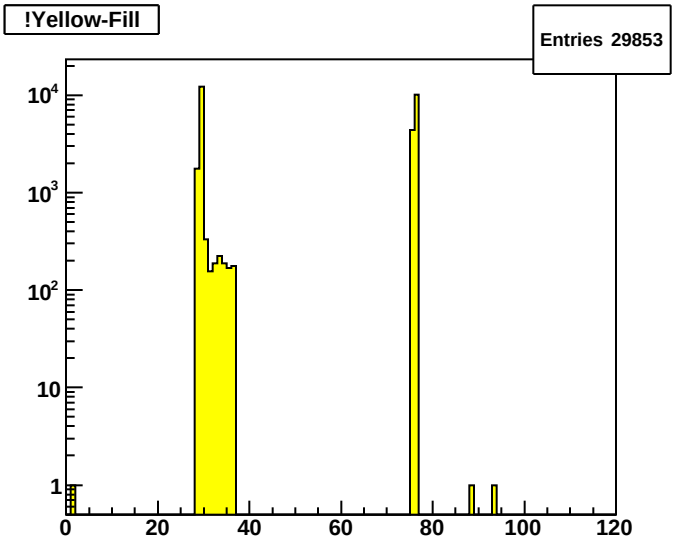

DAQ10k HT bits
Entries 86662
4000
3500
3000
2500
2000
1500
1000
0 5 10 15 20 25 30 35

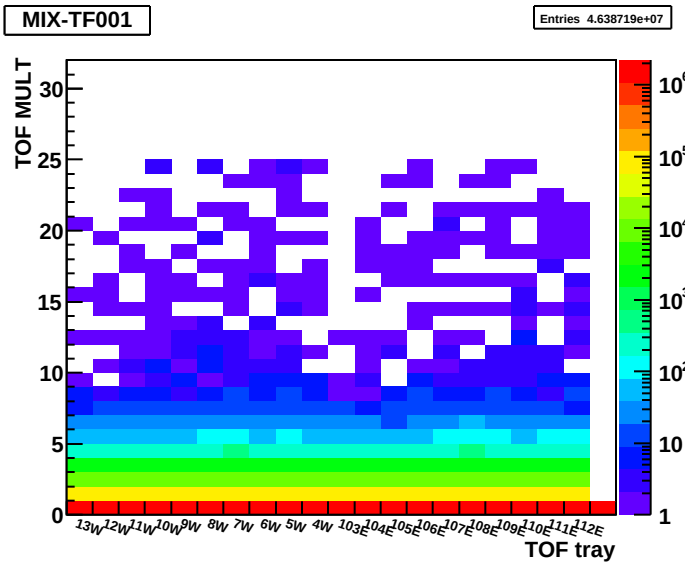

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

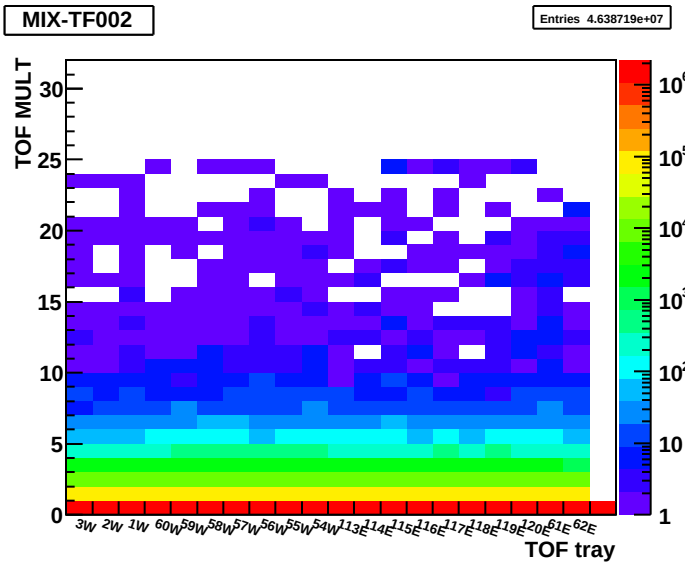

TPC Readout Mask (simulated)
Entries 154745
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

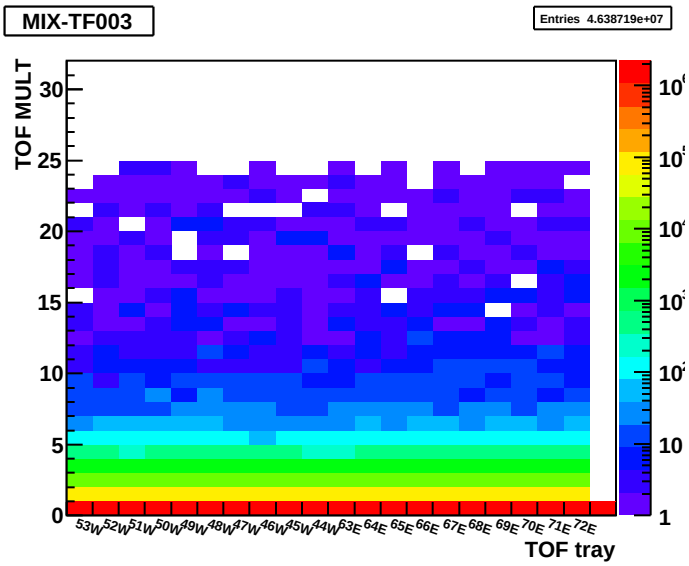

BunchId7Bit (all events)
Entries 1104457
10^4
10^3
10^2
0 20 40 60 80 100 120

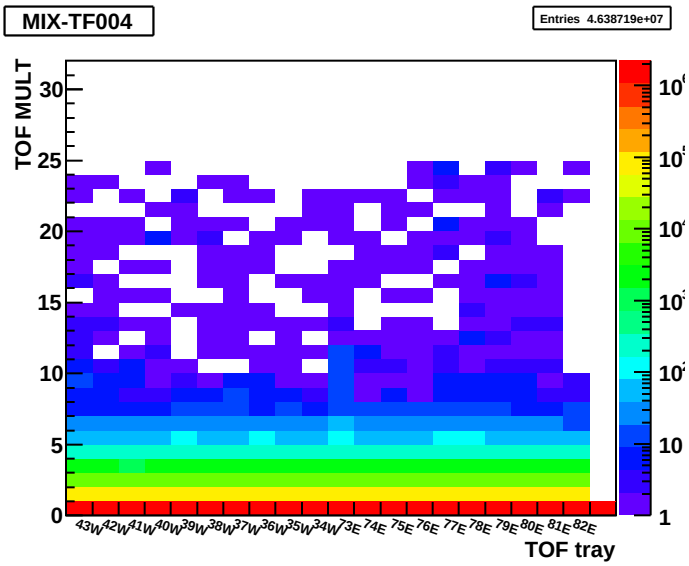

Abort-gaps
Entries 2384
10^2
0 20 40 60 80 100 120

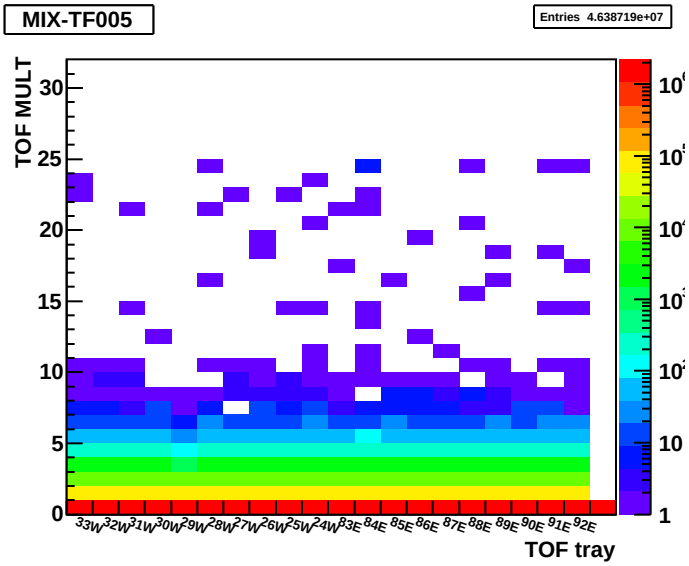

!Yellow-Fill
Entries 29853
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

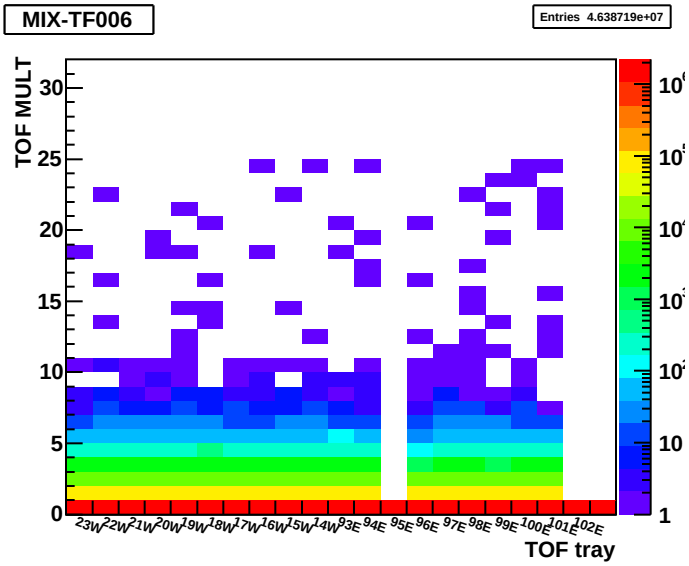

MIX-TF001
Entries 4.638719e+07
TOF MULT
TOF tray

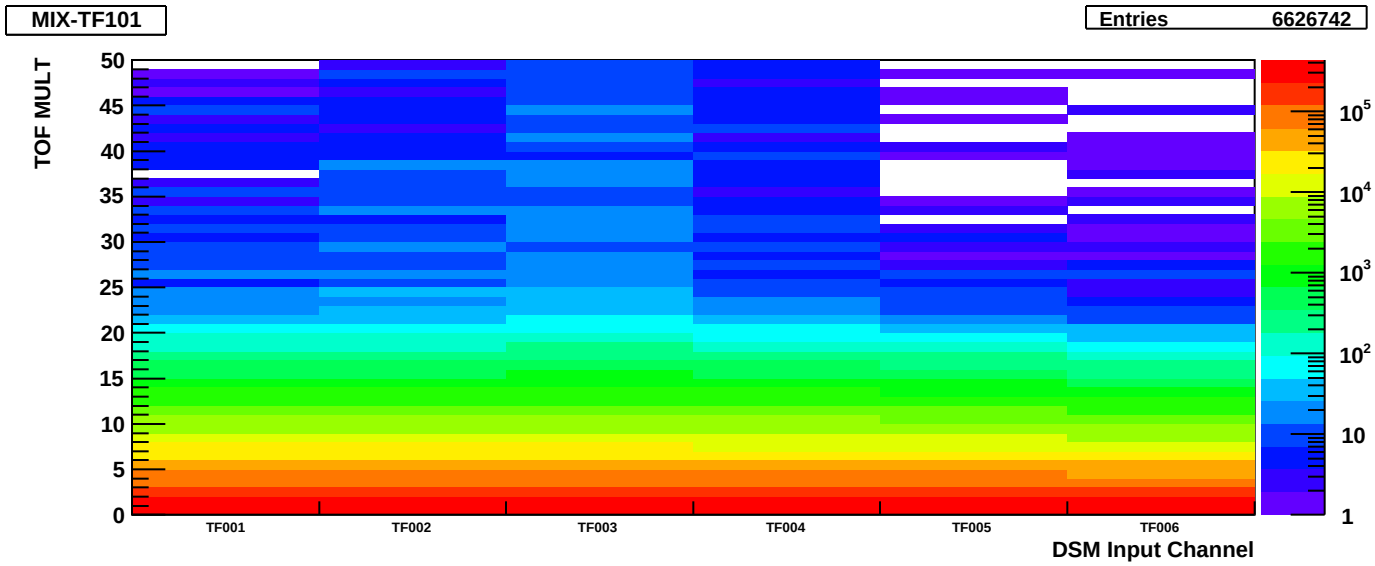

MIX-TF002
Entries 4.638719e+07
TOF MULT
TOF tray

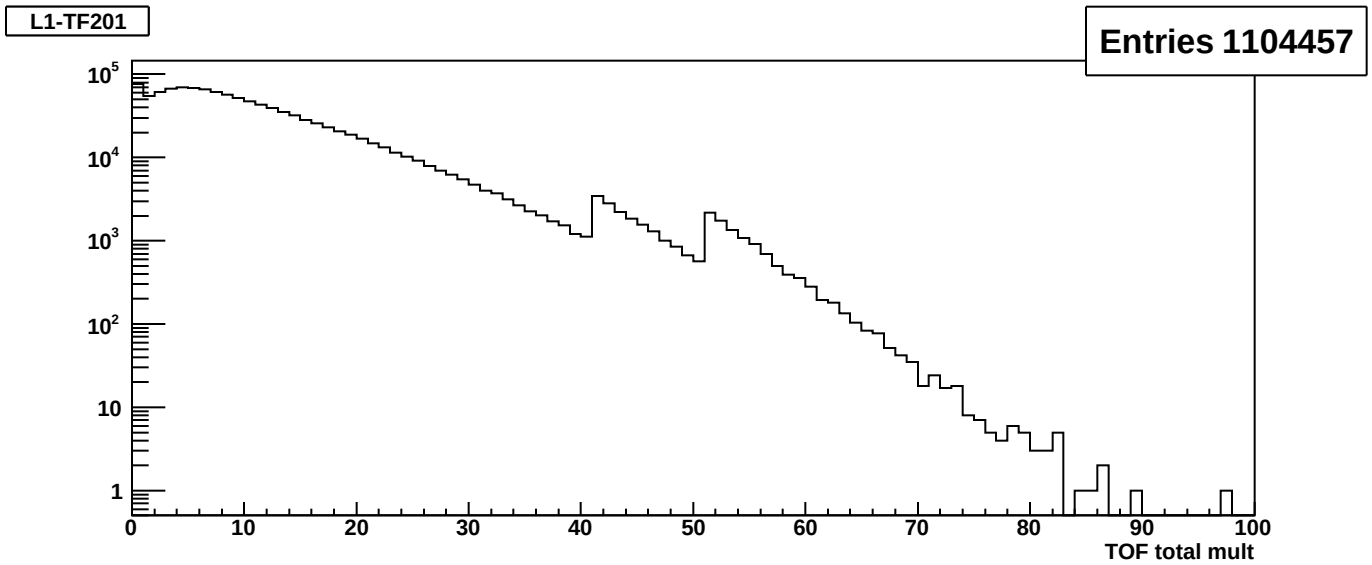

MIX-TF003
Entries 4.638719e+07
TOF MULT
TOF tray

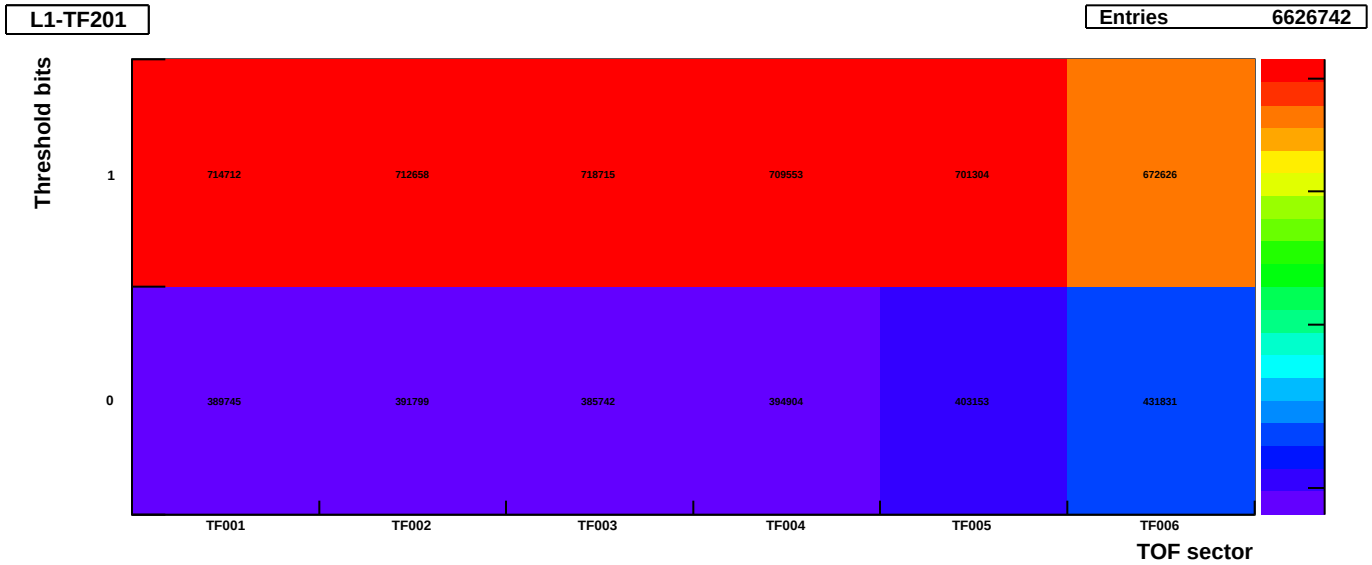

MIX-TF004
Entries 4.638719e+07
TOF MULT
TOF tray

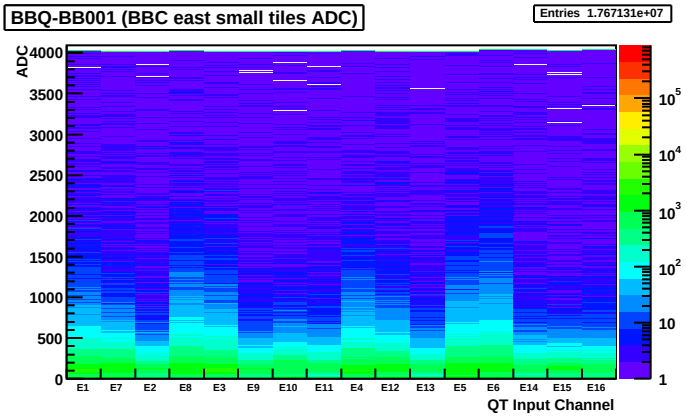

MIX-TF005
Entries 4.638719e+07
TOF MULT
TOF tray

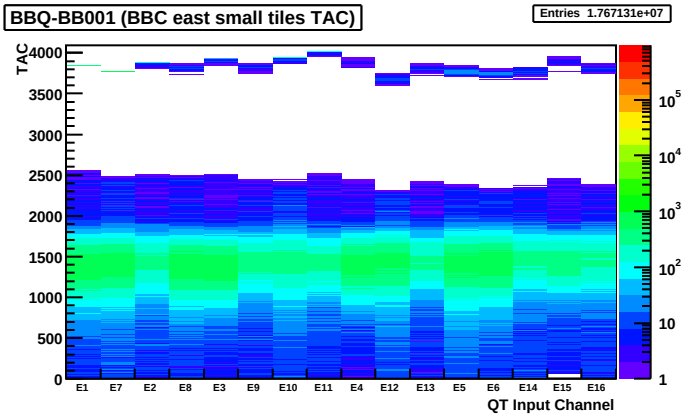

MIX-TF006
Entries 4.638719e+07
TOF MULT
TOF tray

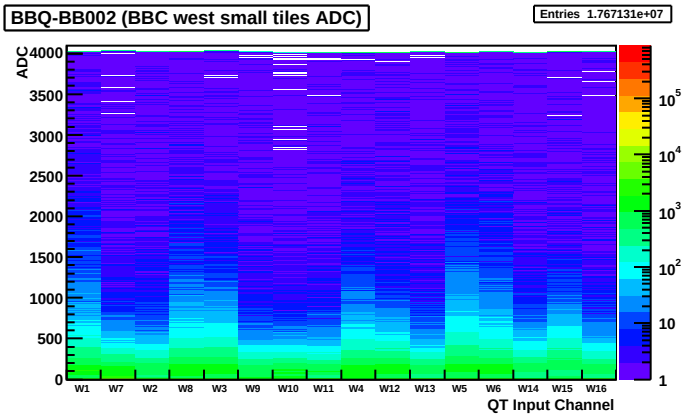

MIX-TF101
Entries 6626742
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

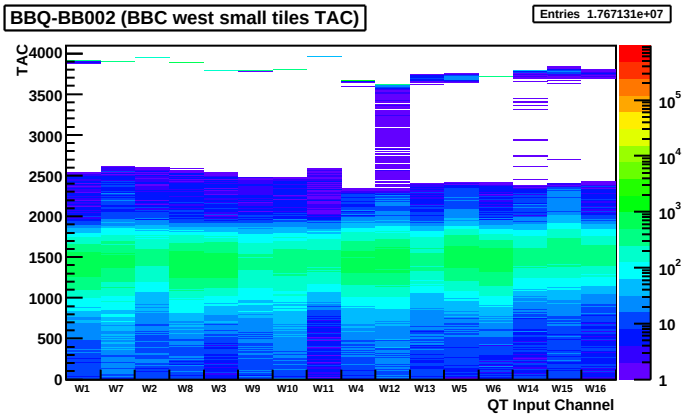

L1-TF201
Entries 1104457
TOF total mult

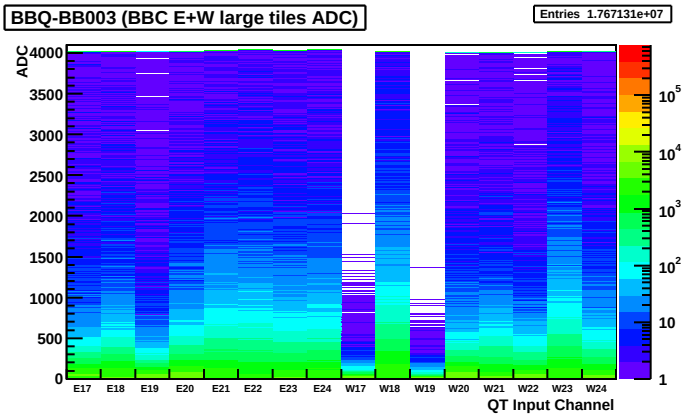

L1-TF201
Entries 6626742
Threshold bits
714712
712658
718715
709553
701304
672626
389745
391799
385742
394904
403153
431831
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

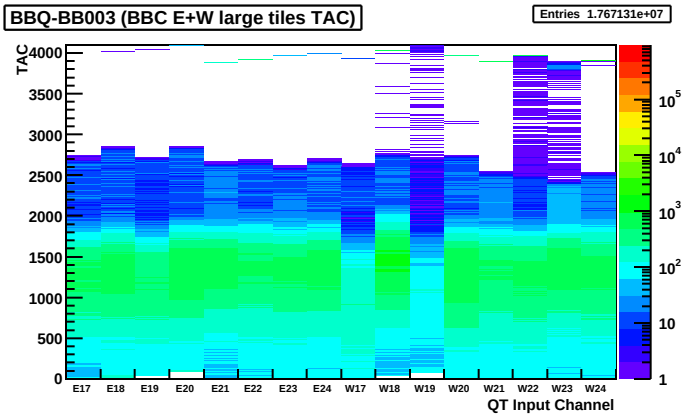

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.767131e+07
ADC
QT Input Channel

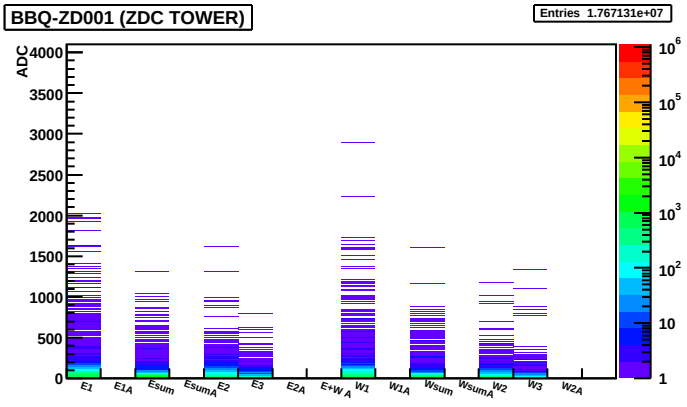

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.767131e+07
TAC
QT Input Channel

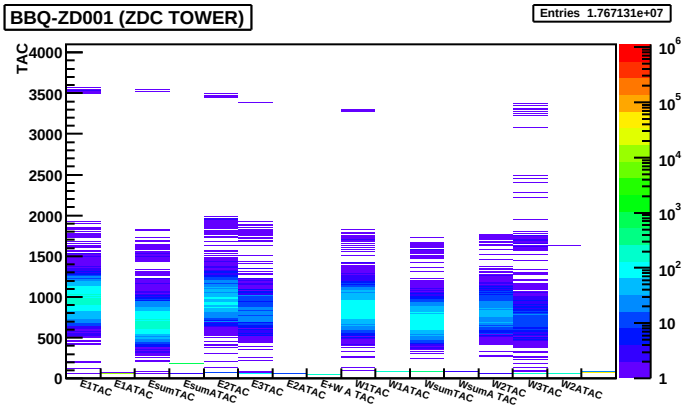

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.767131e+07
ADC
QT Input Channel

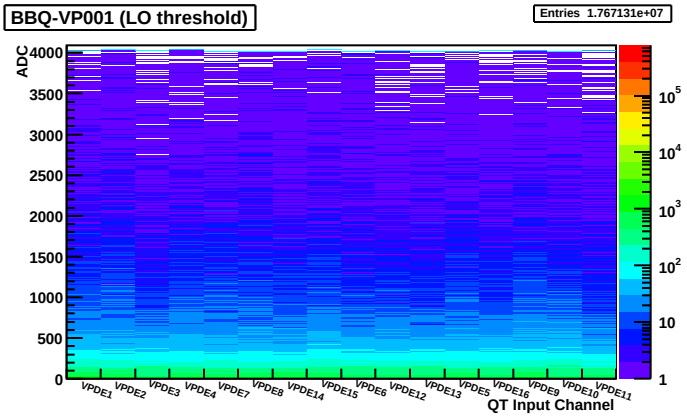

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.767131e+07
TAC
QT Input Channel

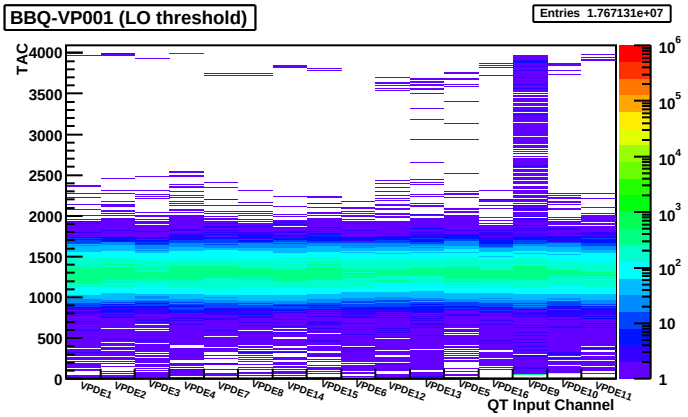

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.767131e+07
ADC
QT Input Channel

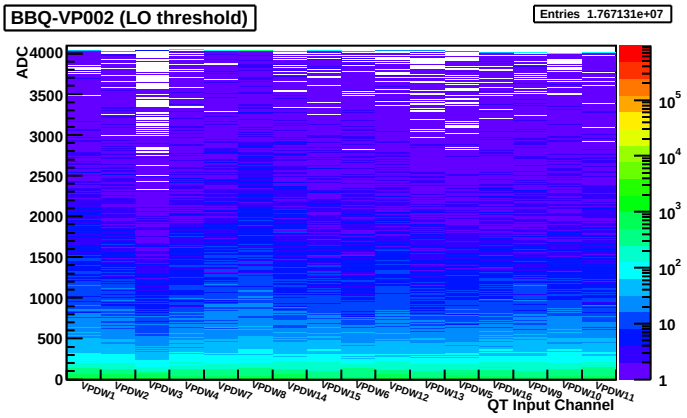

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.767131e+07
TAC
QT Input Channel

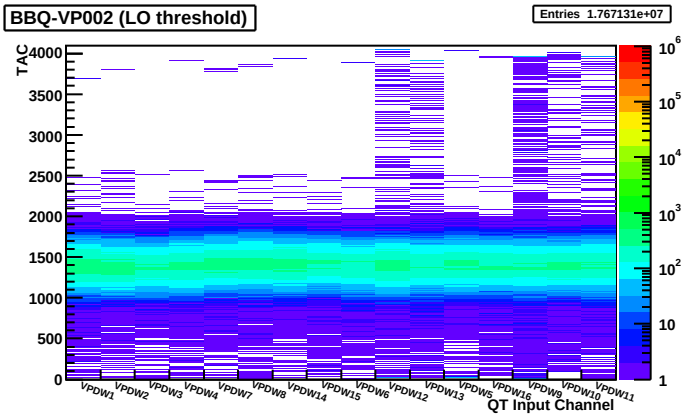

BBQ-ZD001 (ZDC TOWER)
Entries 1.767131e+07
ADC

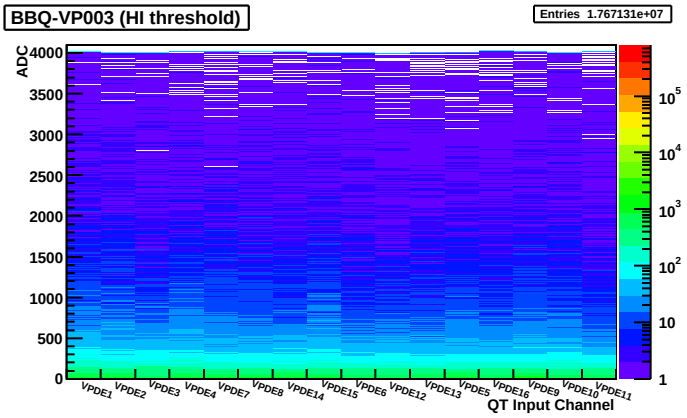

BBQ-ZD001 (ZDC TOWER)
Entries 1.767131e+07
TAC

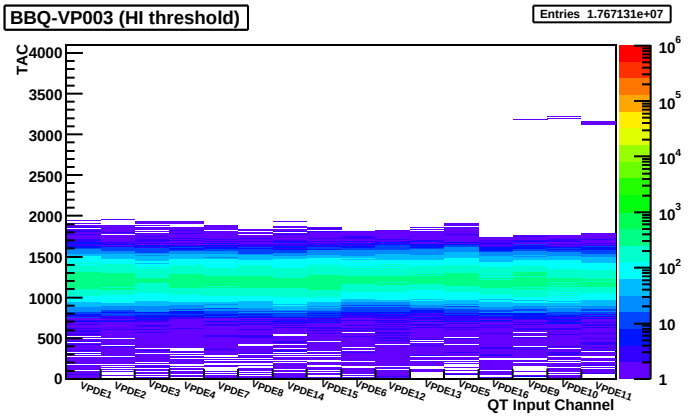

BBQ-VP001 (LO threshold)
Entries 1.767131e+07
ADC
QT Input Channel

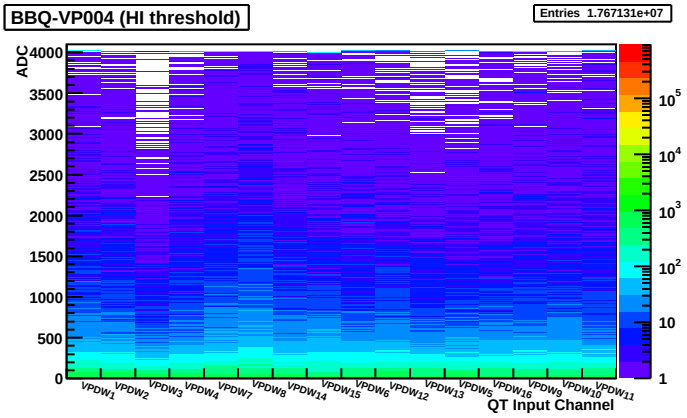

BBQ-VP001 (LO threshold)
Entries 1.767131e+07
TAC
QT Input Channel

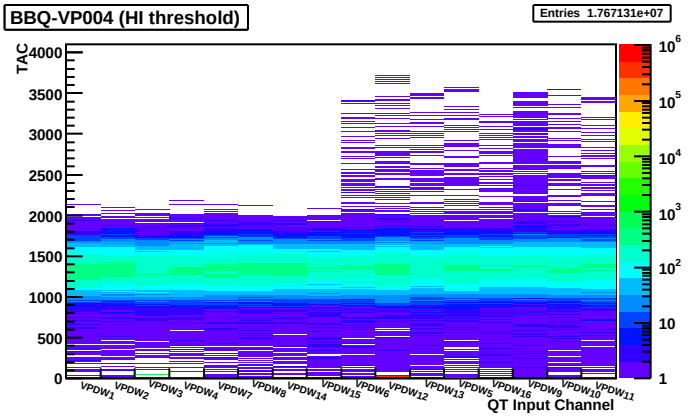

BBQ-VP002 (LO threshold)
Entries 1.767131e+07
ADC
QT Input Channel

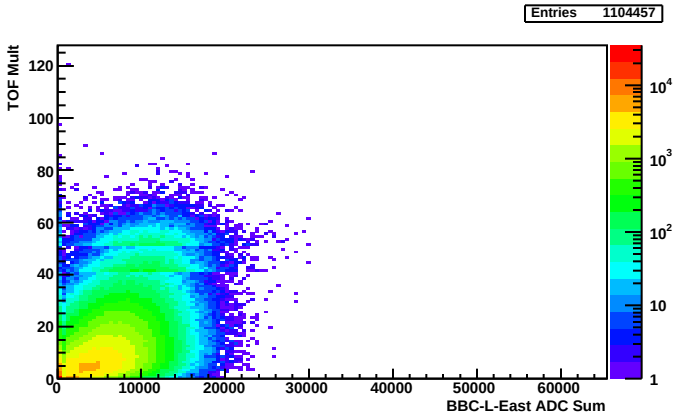

BBQ-VP002 (LO threshold)
Entries 1.767131e+07
TAC
QT Input Channel

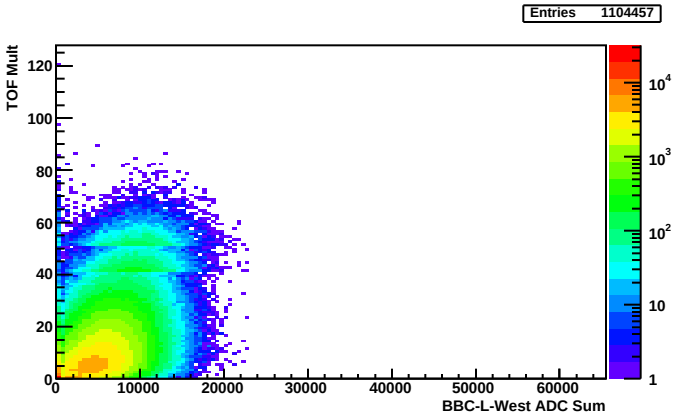

BBQ-VP003 (HI threshold)
Entries 1.767131e+07
ADC
QT Input Channel

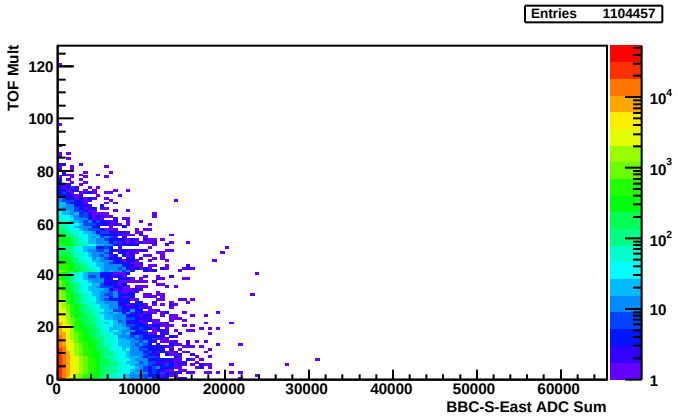

BBQ-VP003 (HI threshold)
Entries 1.767131e+07
TAC
QT Input Channel

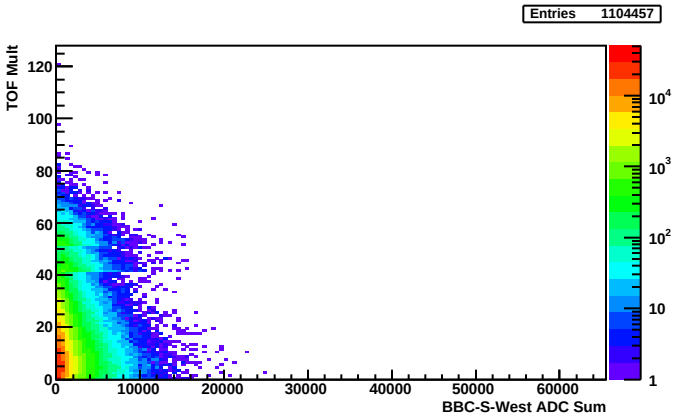

BBQ-VP004 (HI threshold)
Entries 1.767131e+07
ADC
QT Input Channel

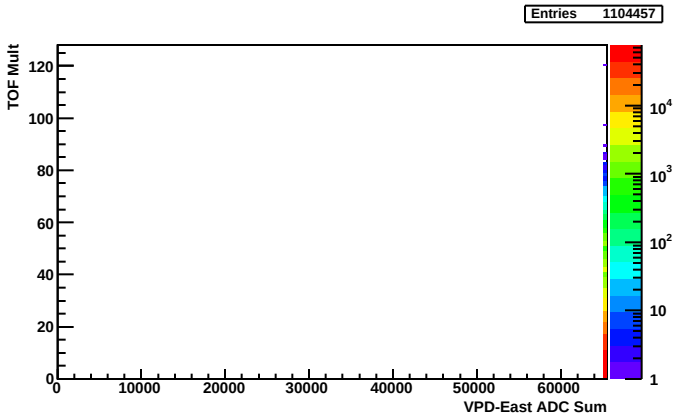

BBQ-VP004 (HI threshold)
Entries 1.767131e+07
TAC
QT Input Channel

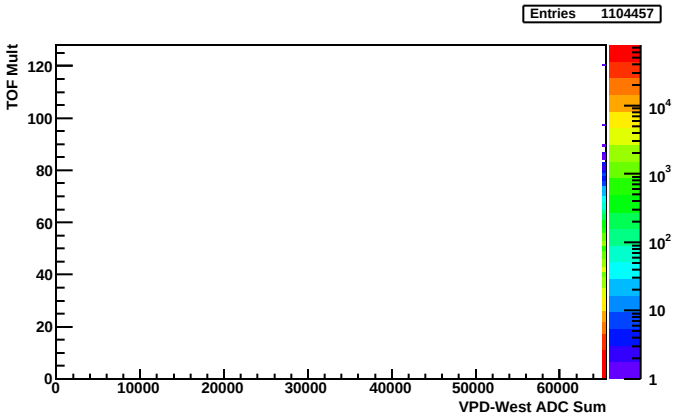

Entries 1104457
TOF Mult
BBC-L-East ADC Sum

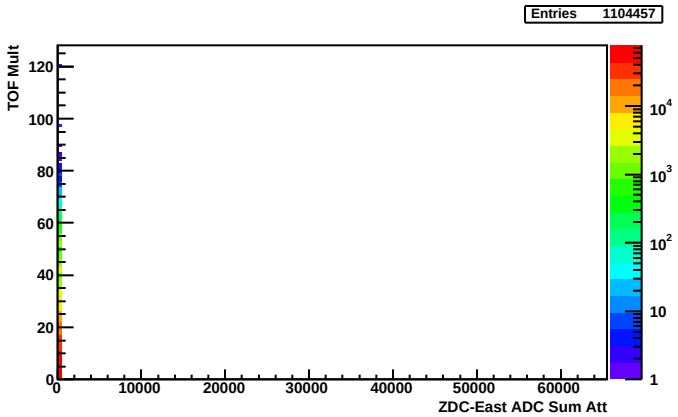

Entries 1104457
TOF Mult
BBC-L-West ADC Sum

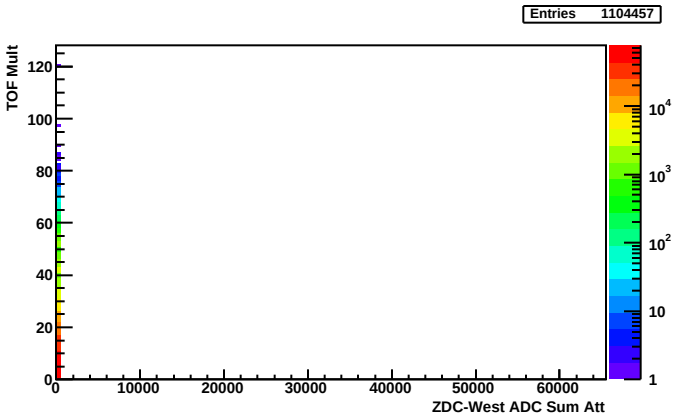

Entries 1104457
TOF Mult
BBC-S-East ADC Sum

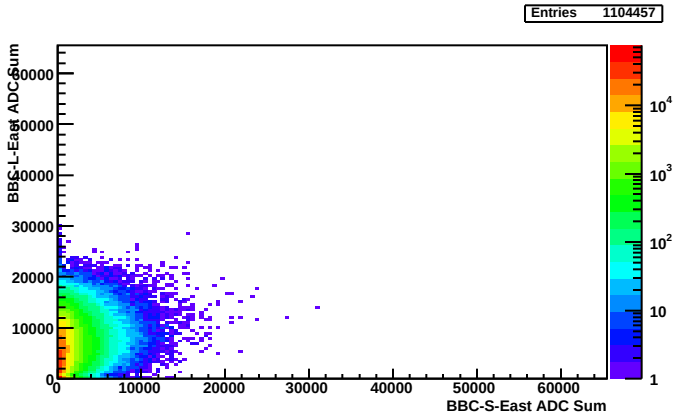

Entries 1104457
TOF Mult
BBC-S-West ADC Sum

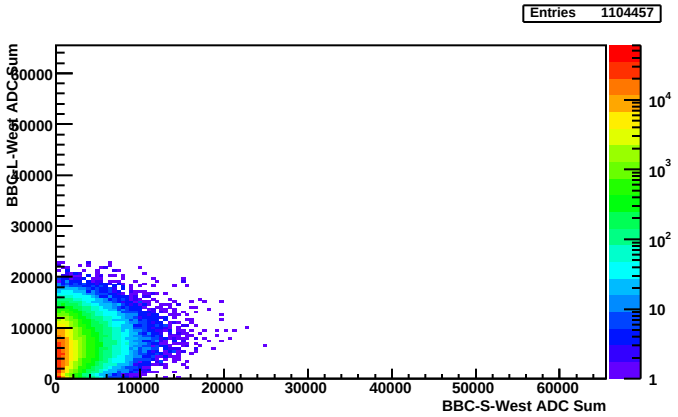

Entries 1104457
TOF Mult
VPD-East ADC Sum

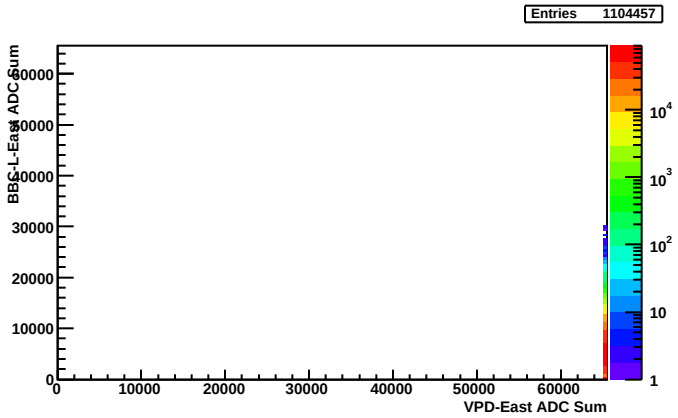

Entries 1104457
TOF Mult
VPD-West ADC Sum

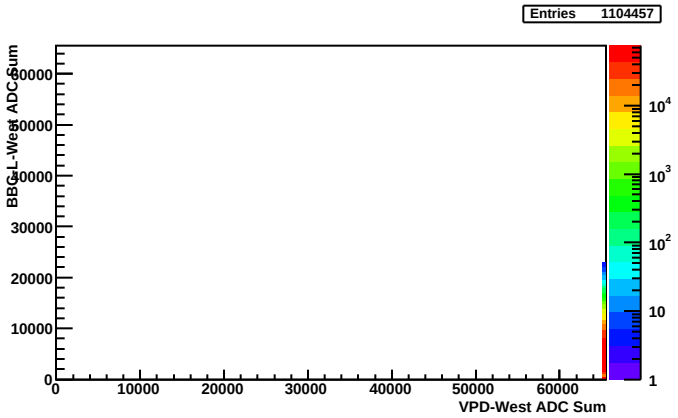

Entries 1104457
TOF Mult
ZDC-East ADC Sum Att


Entries 1104457
TOF Mult
ZDC-West ADC Sum Att


Entries 1104457
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 1104457
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 1104457
BBC-L-East ADC Sum
VPD-East ADC Sum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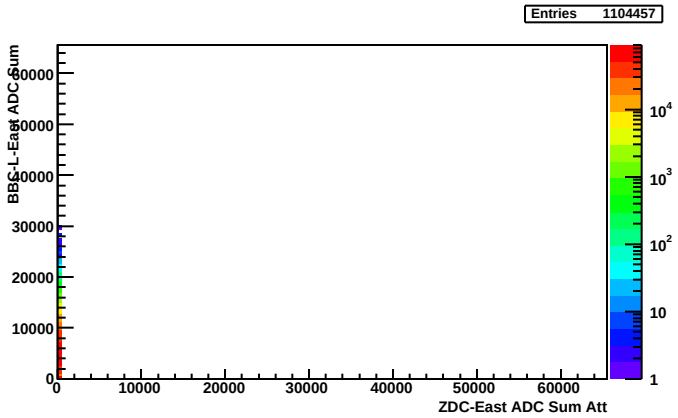
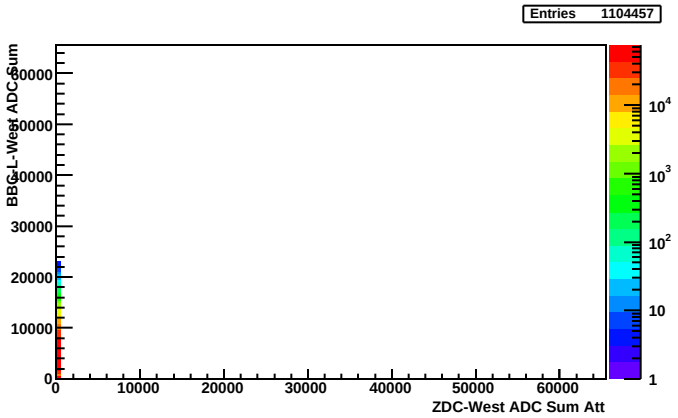
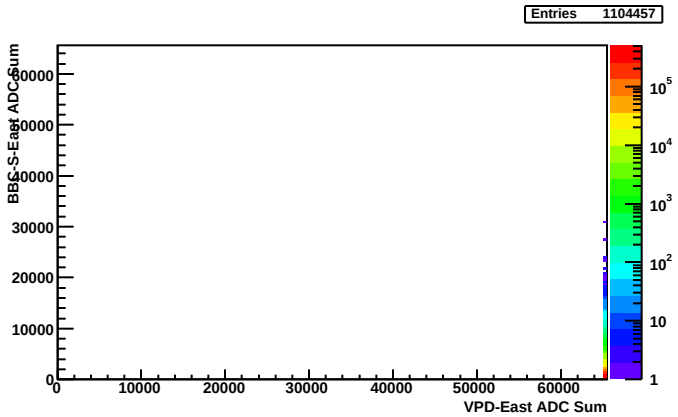
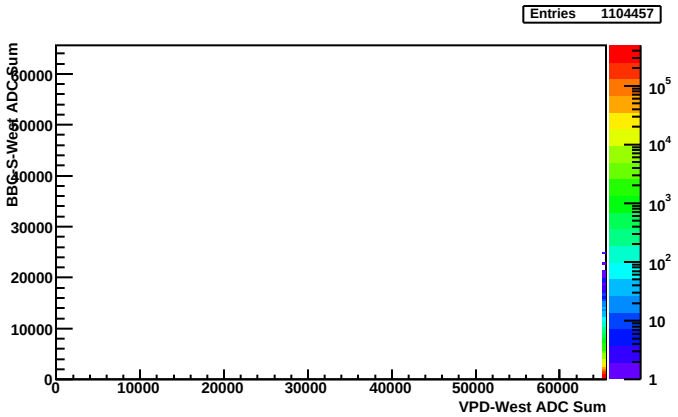
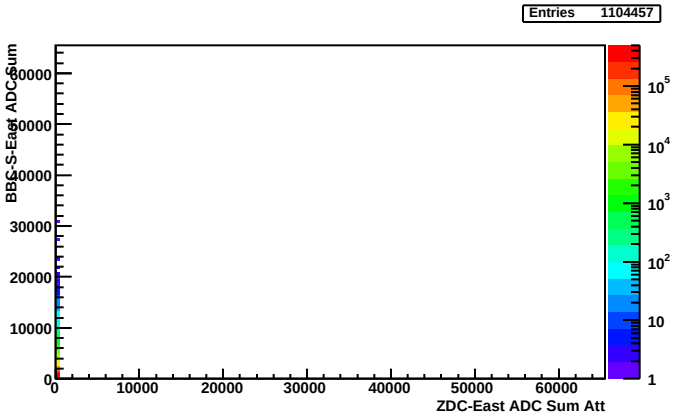
BBC-L-West ADC Sum
VPD-West ADC Sum

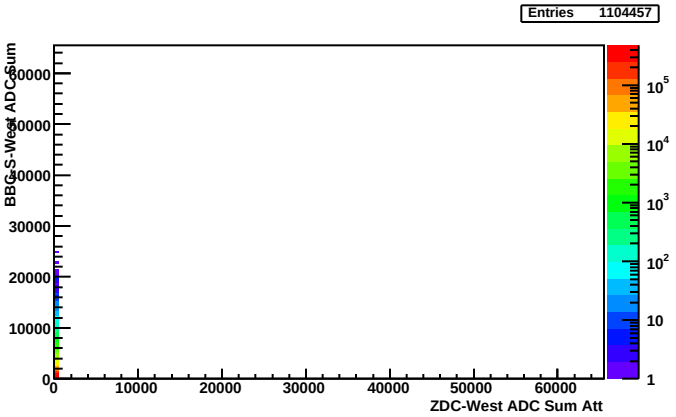

Entries 1104457
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

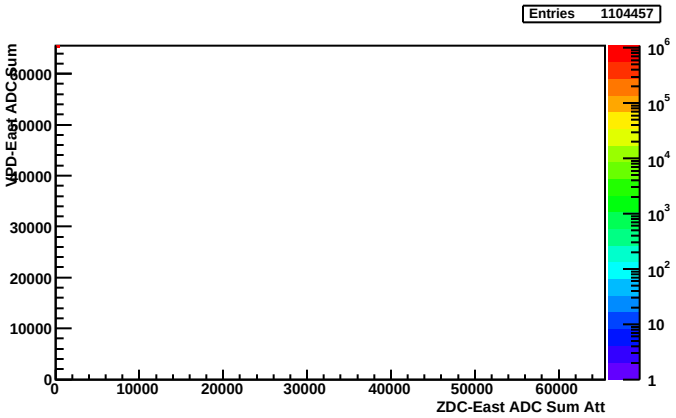

Entries 1104457
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

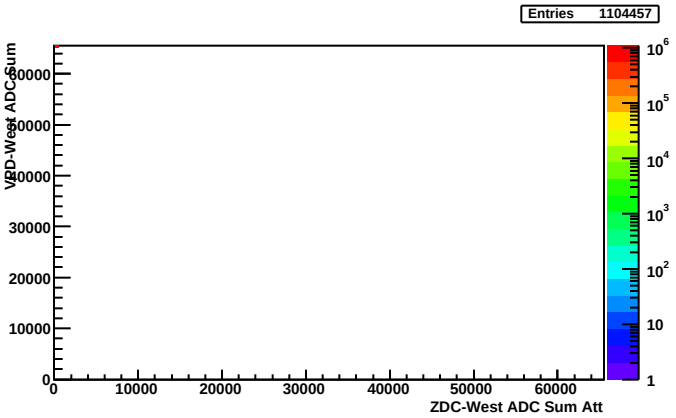

Entries 1104457
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 1104457
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 1104457
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 1104457
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 1104457
VPD-East ADC Sum
ZDC-East ADC Sum Att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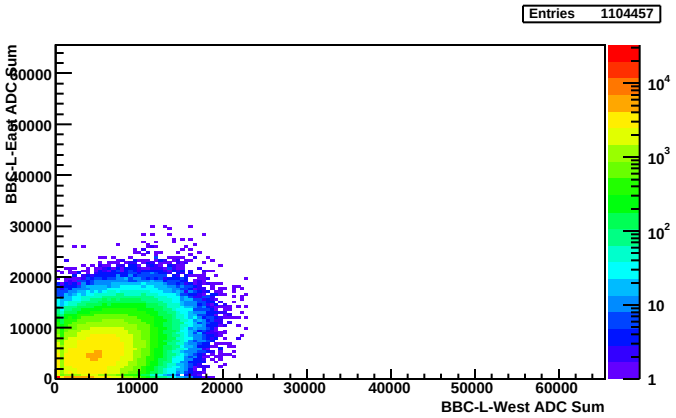
VPD-West ADC Sum
ZDC-West ADC Sum Att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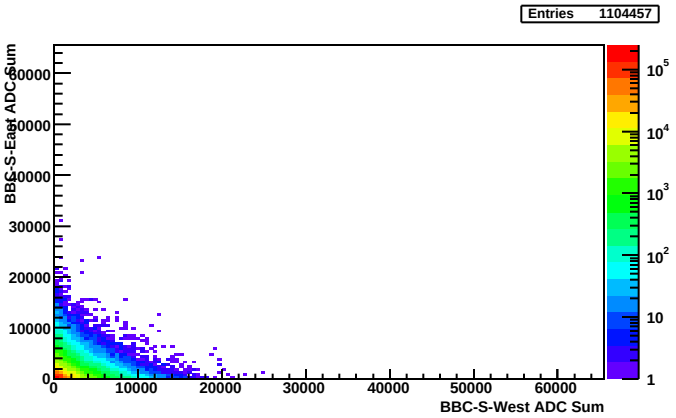
BBC-L-East ADC Sum
BBC-L-West ADC Sum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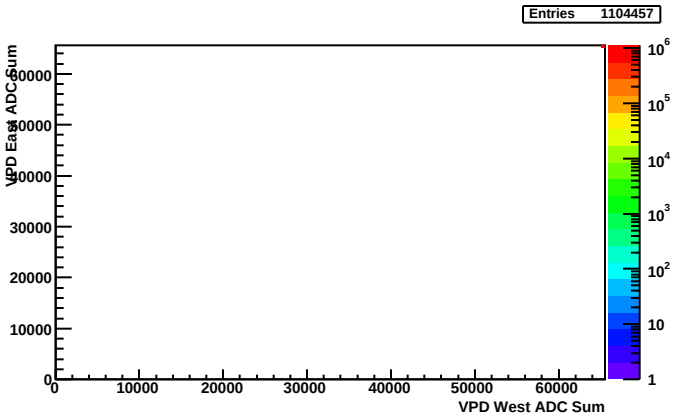
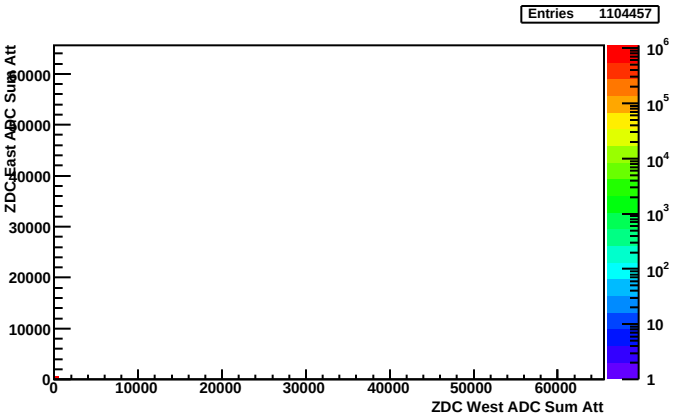
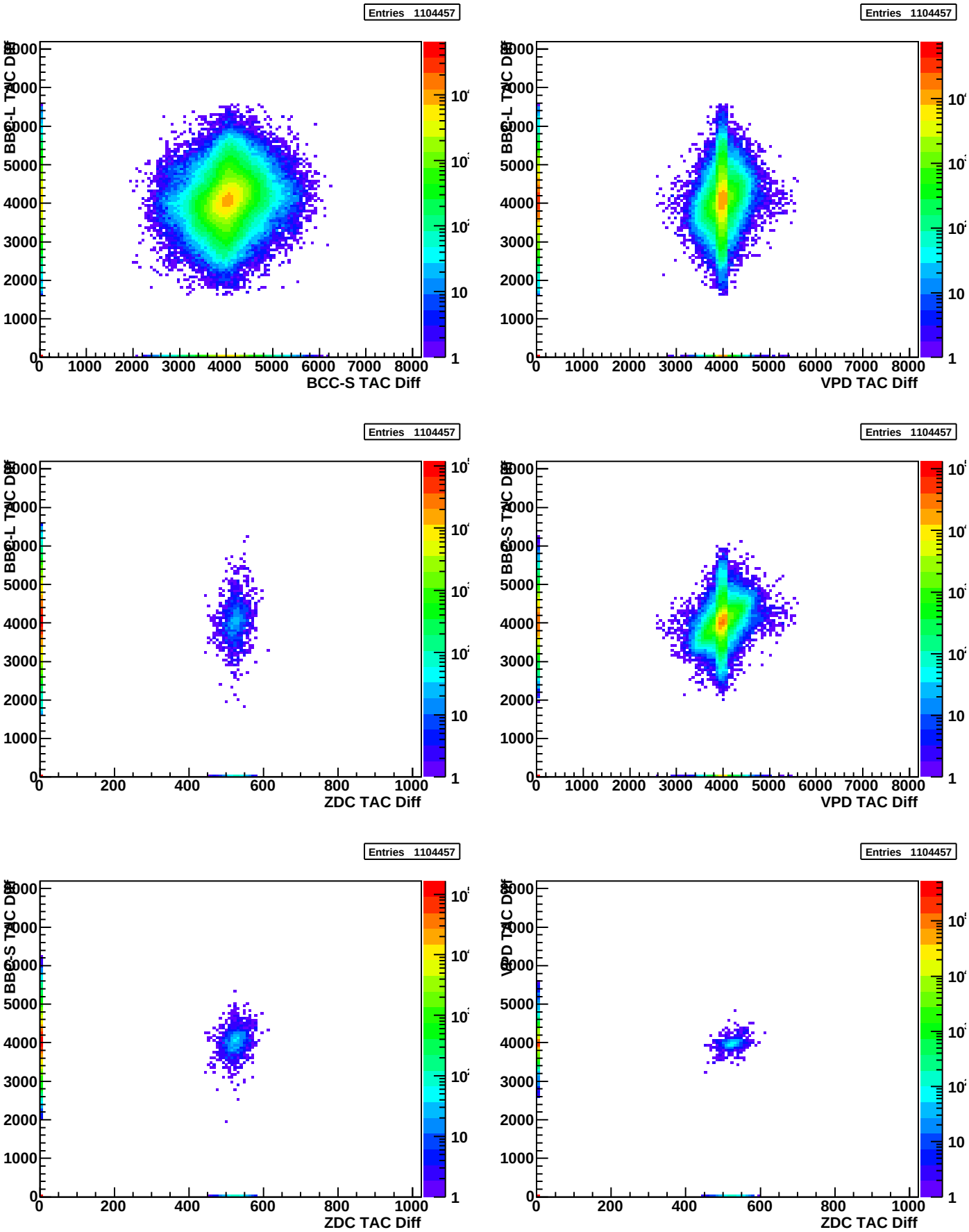
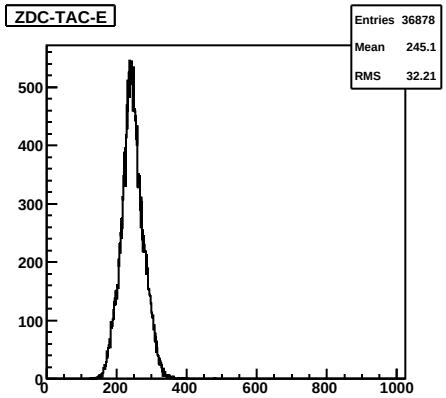
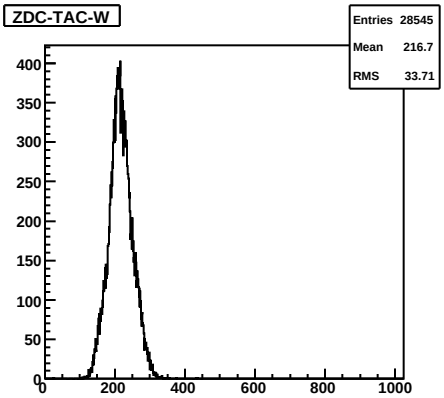
BBC-S-East ADC Sum
BBC-S-West ADC Sum

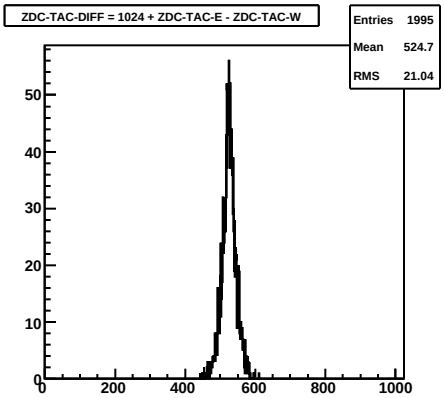

Entries 1104457
VPD East ADC Sum
VPD West ADC Sum

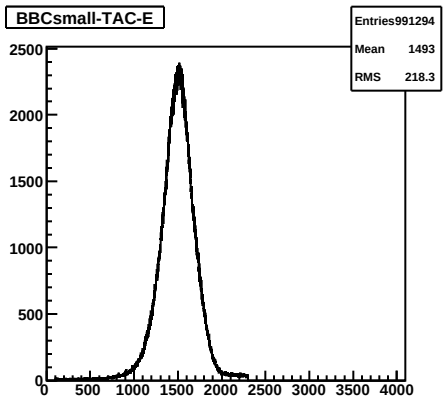

Entries 1104457
ZDC East ADC Sum Att
ZDC West ADC Sum Att

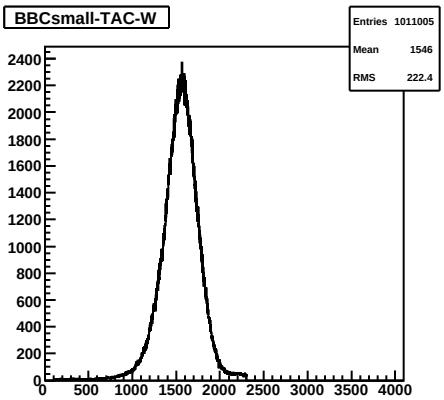

Entries 1104457
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1104457
BBC-L TAC Diff
VPD TAC Diff
Entries 1104457
BBC-L TAC Diff
ZDC TAC Diff
Entries 1104457
BBC-S TAC Diff
VPD TAC Diff
Entries 1104457
BBC-S TAC Diff
ZDC TAC Diff
Entries 1104457
VPD TAC Diff
ZDC TAC Diff

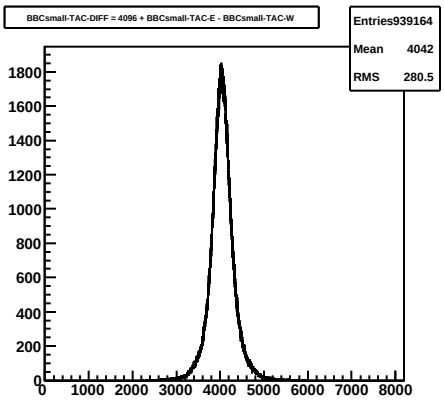

ZDC-TAC-E
Entries 36878
Mean 245.1
RMS 32.21

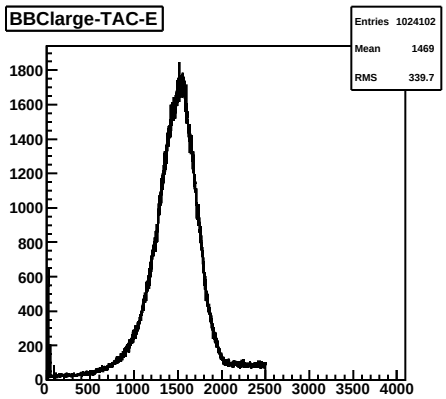

ZDC-TAC-W
Entries 28545
Mean 216.7
RMS 33.71

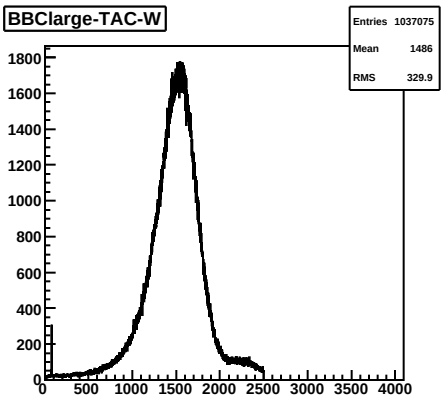

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1995
Mean 524.7
RMS 21.04

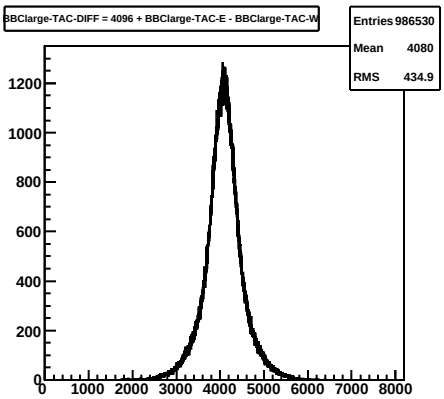

BBCsmall-TAC-E
Entries991294
Mean 1493
RMS 218.3

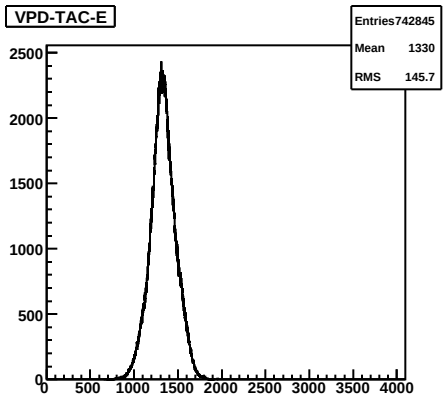

BBCsmall-TAC-W
Entries 1011005
Mean 1546
RMS 222.4

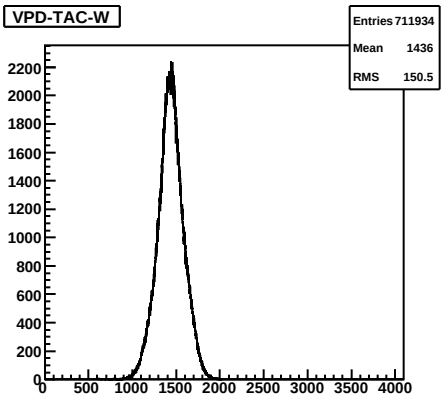

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries939164
Mean 4042
RMS 280.5

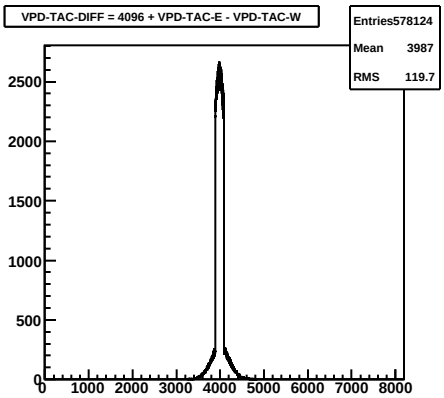

BBClarge-TAC-E
Entries 1024102
Mean 1469
RMS 339.7

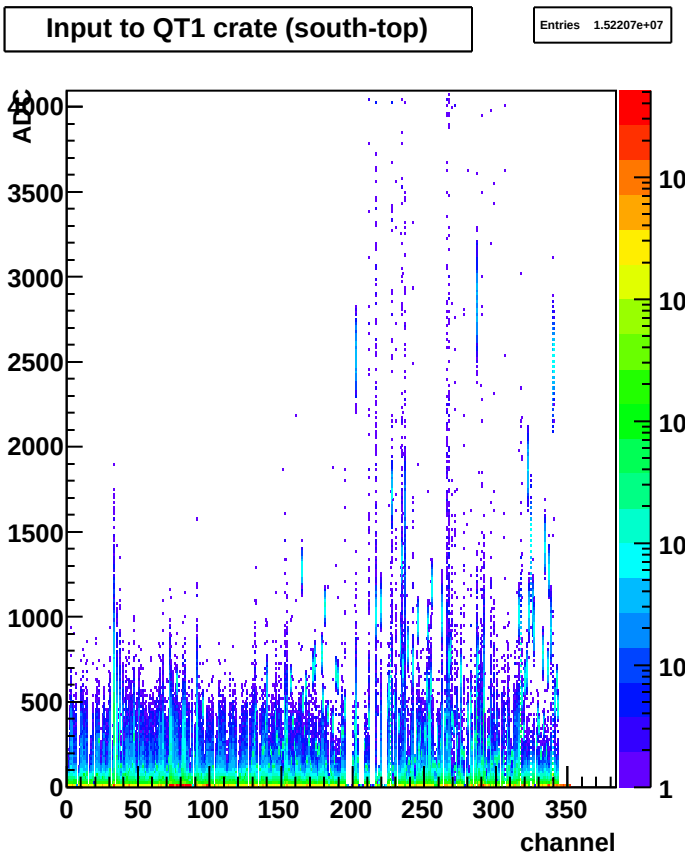

BBClarge-TAC-W
Entries 1037075
Mean 1486
RMS 329.9

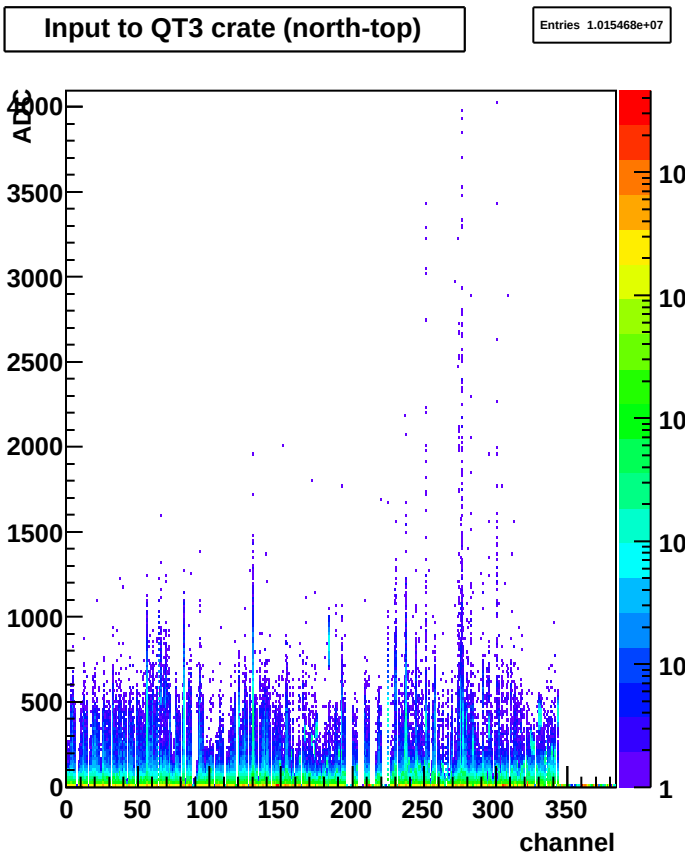

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries986530
Mean 4080
RMS 434.9

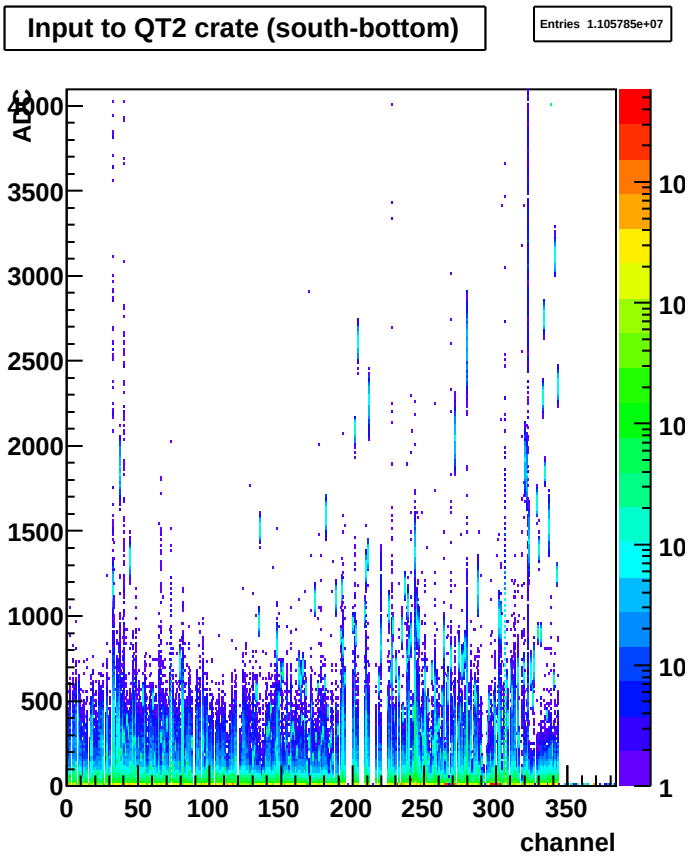

VPD-TAC-E
Entries742845
Mean 1330
RMS 145.7

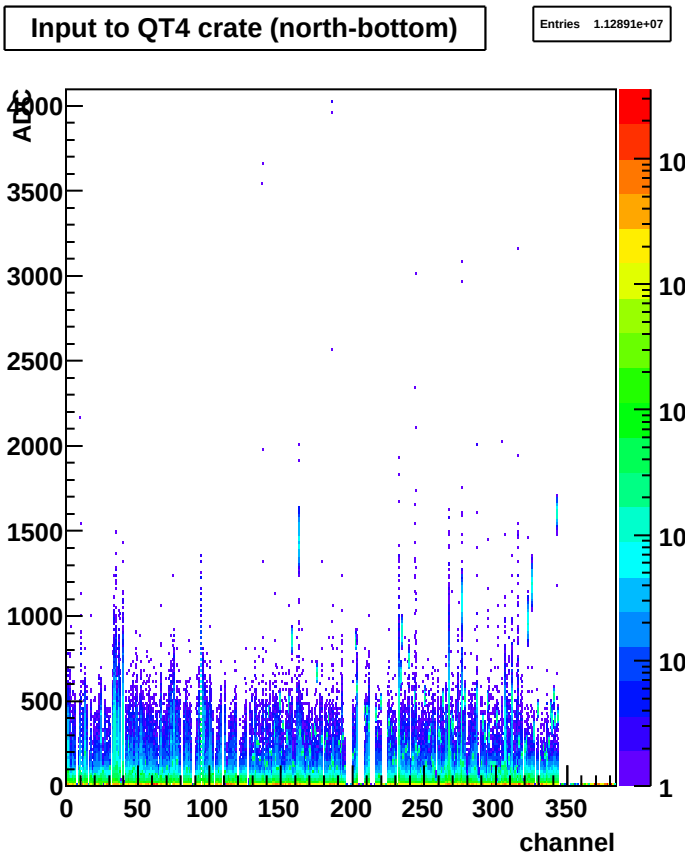

VPD-TAC-W
Entries 711934
Mean 1436
RMS 150.5

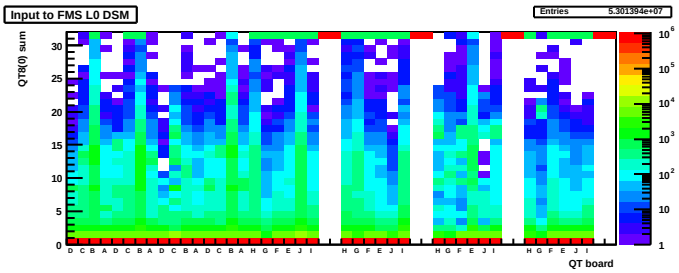

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries578124
Mean 3987
RMS 119.7

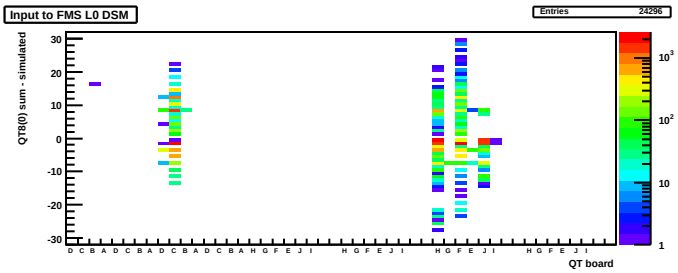

Input to QT1 crate (south-top)
Entries 1.52207e+07
ADC
channel

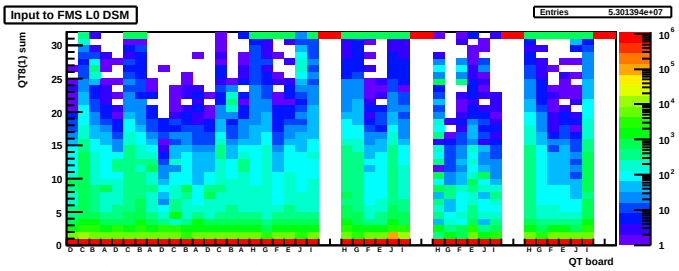

Input to QT3 crate (north-top)
Entries 1.015468e+07
ADC
channel

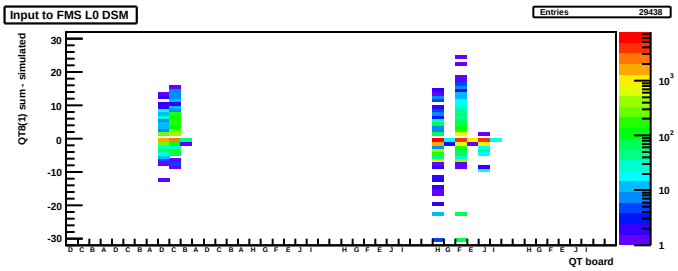

Input to QT2 crate (south-bottom)
Entries 1.105785e+07
ADC
channel

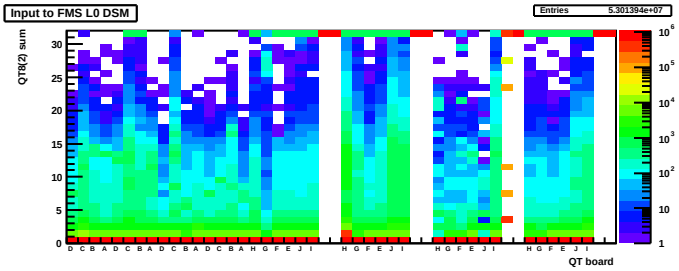

Input to QT4 crate (north-bottom)
Entries 1.12891e+07
ADC
channel

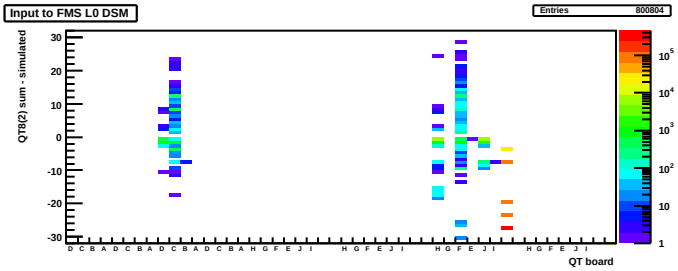

Input to FMS L0 DSM
Entries 5.301394e+07
QT8(0) sum
QT board

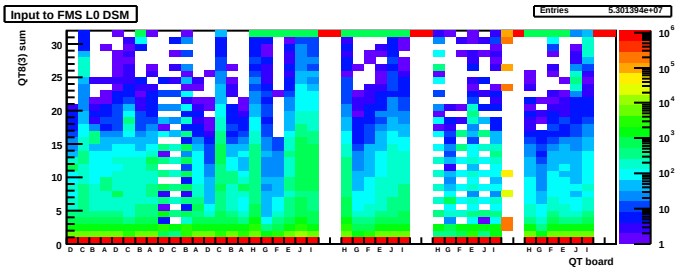

Input to FMS L0 DSM
Entries 24296
QT8(0) sum - simulated
QT board

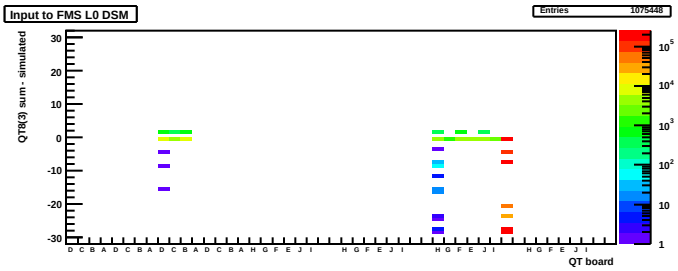

Input to FMS L0 DSM
Entries 5.301394e+07
QT8(1) sum
QT board

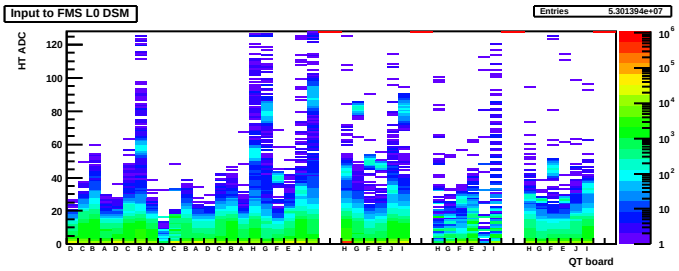

Input to FMS L0 DSM
Entries 29438
QT8(1) sum - simulated
QT board

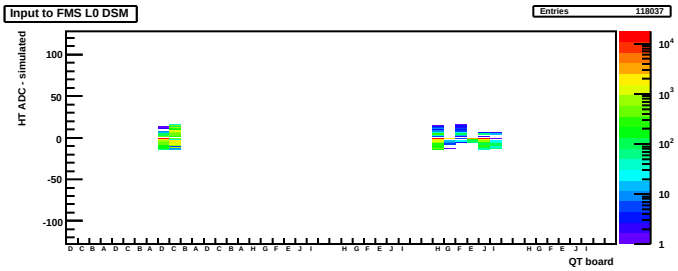

Input to FMS L0 DSM
Entries 5.301394e+07
QT8(2) sum
QT board

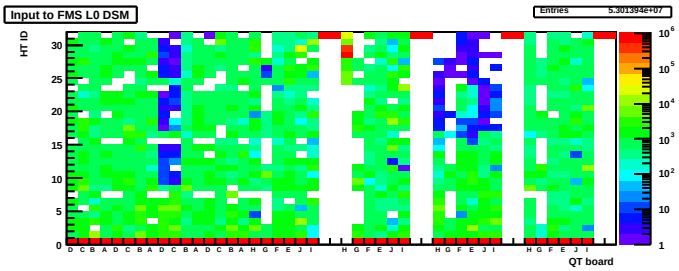

Input to FMS L0 DSM
Entries 800804
QT8(2) sum - simulated
QT board

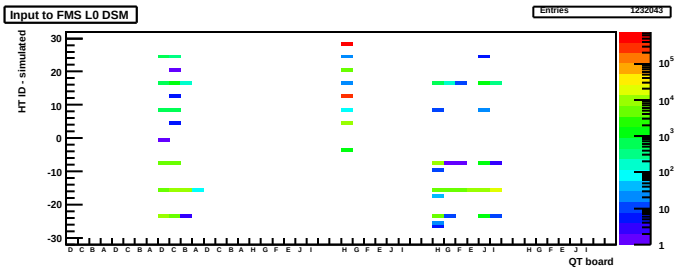

Input to FMS L0 DSM
Entries 5.301394e+07
QT8(3) sum
QT board

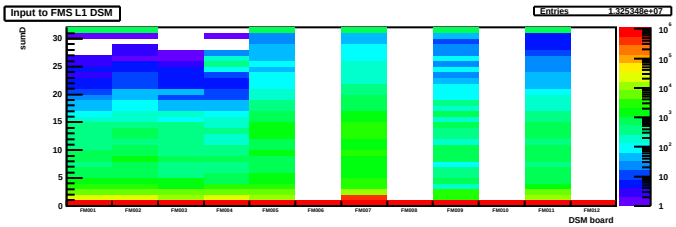

Input to FMS L0 DSM
Entries 1075448
QT8(3) sum - simulated
QT board

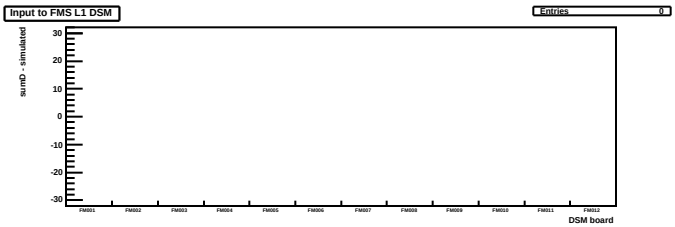

Input to FMS L0 DSM
Entries 5.301394e+07
HT ADC
QT board

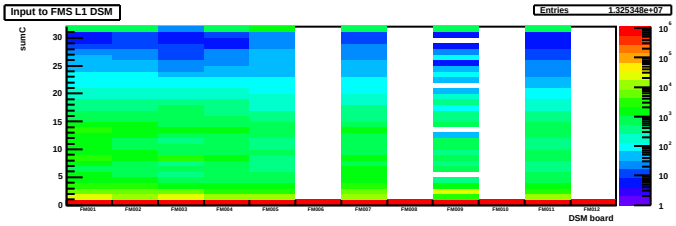

Input to FMS L0 DSM
Entries 118037
HT ADC - simulated
QT board

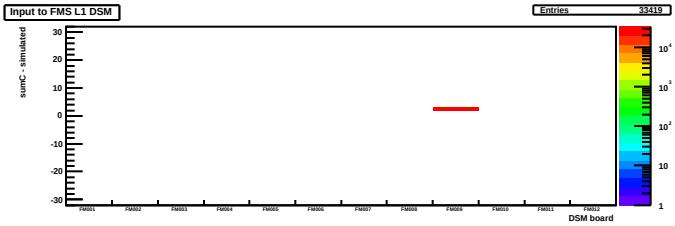

Input to FMS L0 DSM
Entries 5.301394e+07
HT ID
QT board

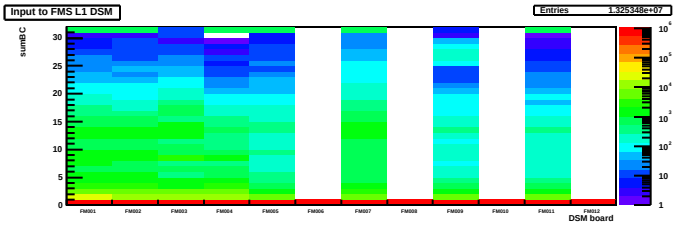

Input to FMS L0 DSM
Entries 1232043
HT ID - simulated
QT board

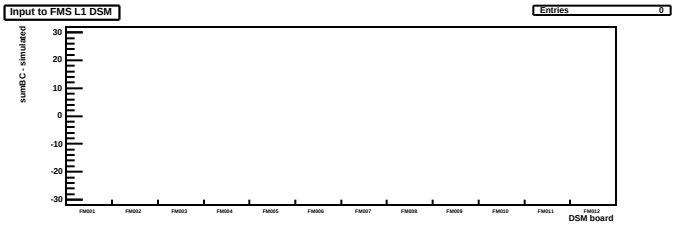

Input to FMS L1 DSM
Entries 1.325348e+07
sumD
DSM board

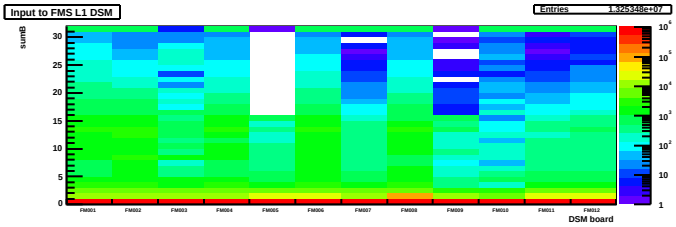

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

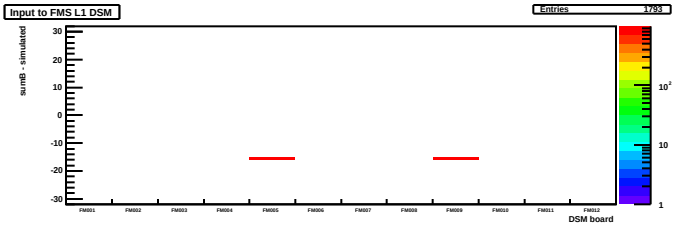

Input to FMS L1 DSM
Entries 1.325348e+07
sumC
DSM board

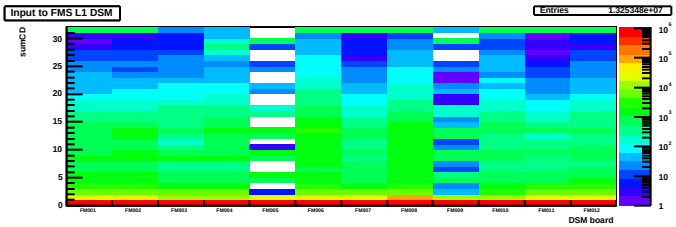

Input to FMS L1 DSM
Entries 33419
sumC - simulated
DSM board

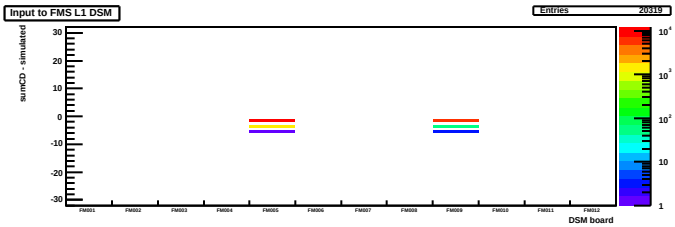

Input to FMS L1 DSM
Entries 1.325348e+07
sumBC
DSM board

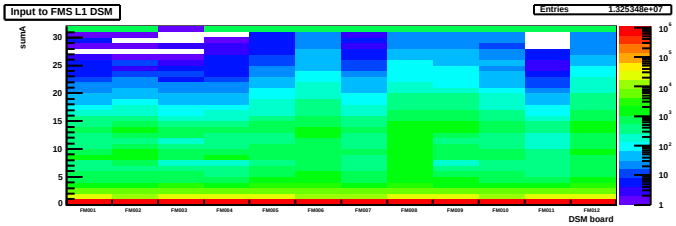

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

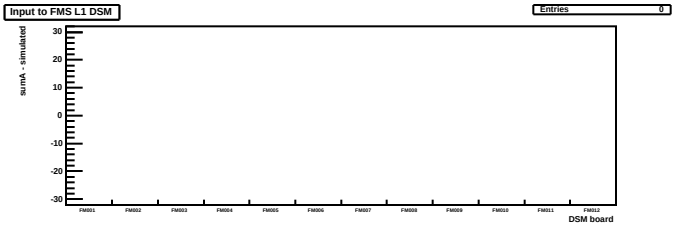

Input to FMS L1 DSM
Entries 1.325348e+07
sumB
DSM board

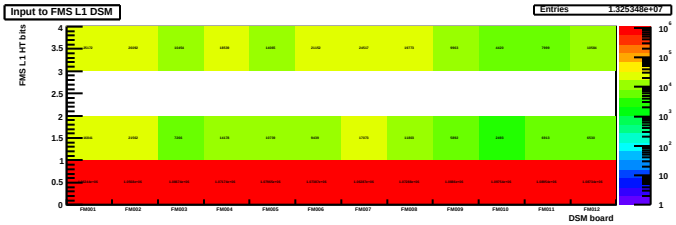

Input to FMS L1 DSM
Entries 1793
sumB - simulated
DSM board

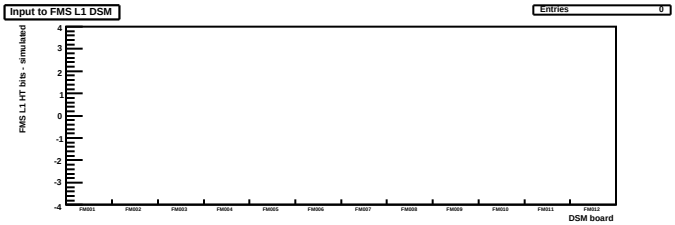

Input to FMS L1 DSM
Entries 1.325348e+07
sumCD
DSM board

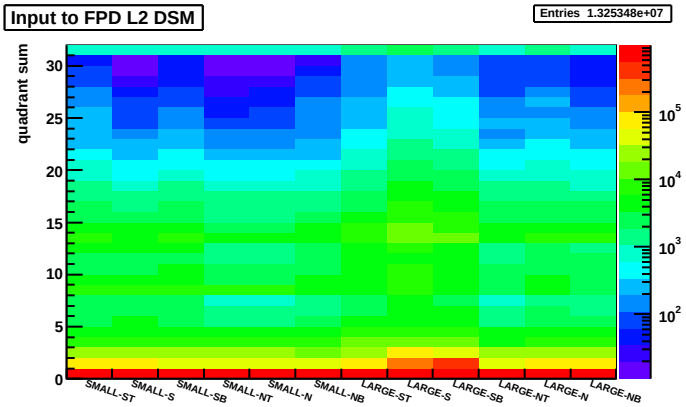

Input to FMS L1 DSM
Entries 20319
sumCD - simulated
DSM board

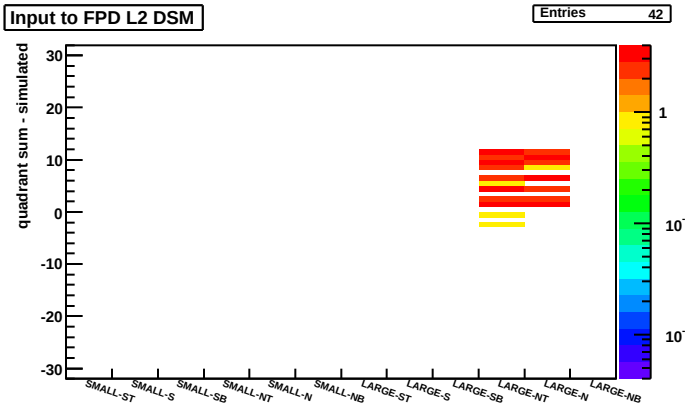

Input to FMS L1 DSM
Entries 1.325348e+07
sumA
DSM board

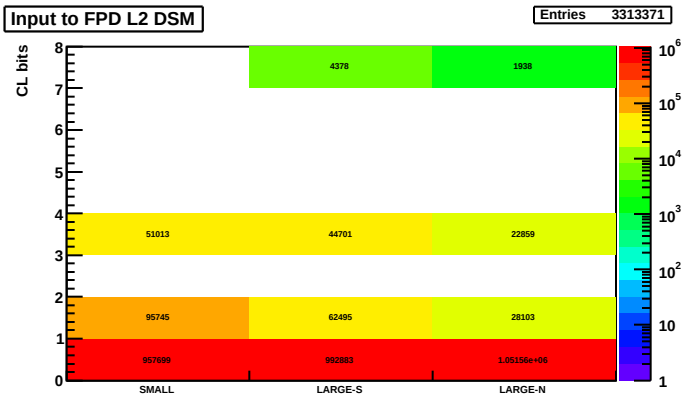

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

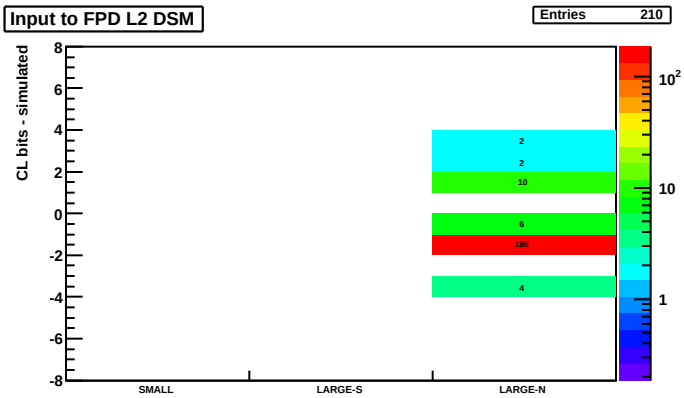

Input to FMS L1 DSM
Entries 1.325348e+07
FMS L1 HT bits
DSM board

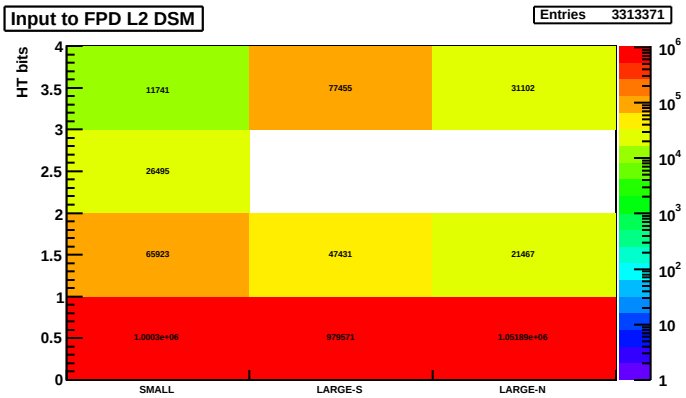

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

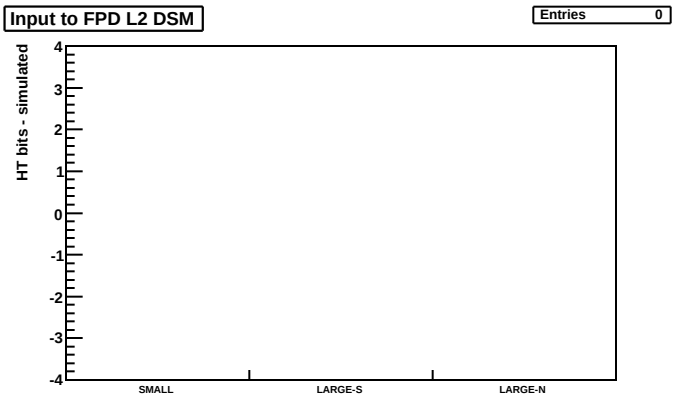

Input to FPD L2 DSM
Entries 1.325348e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

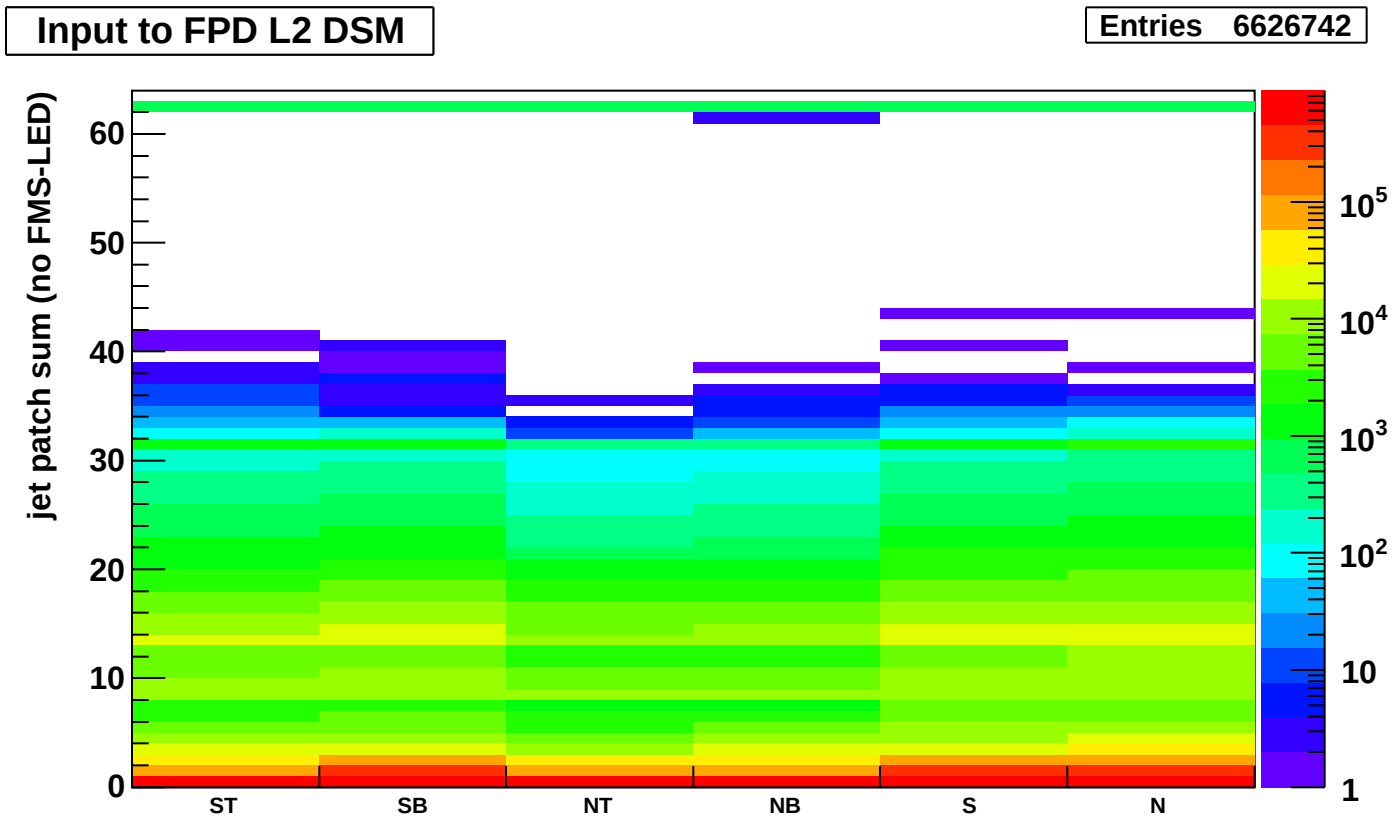

Input to FPD L2 DSM
Entries 42
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

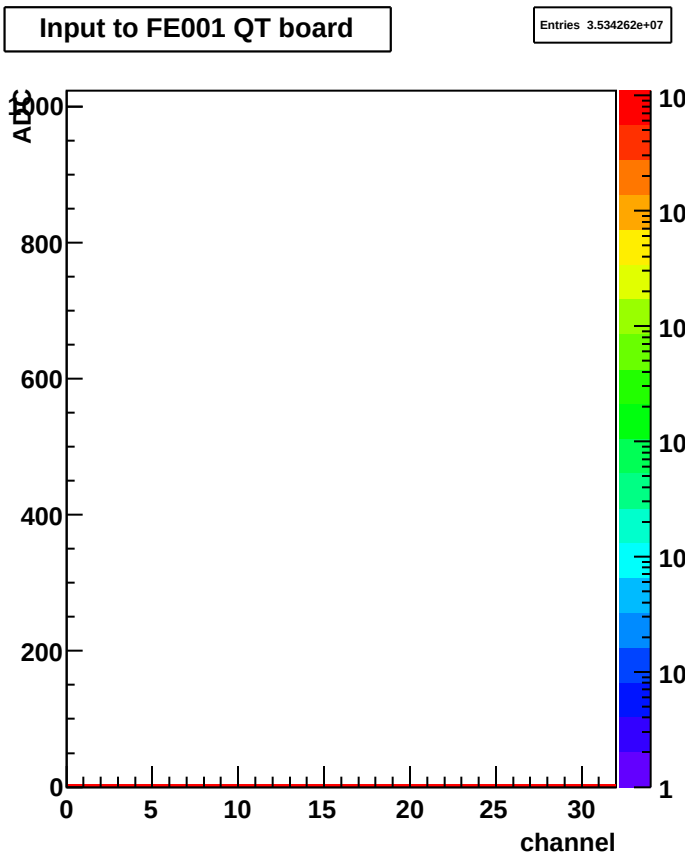

Input to FPD L2 DSM
Entries 3313371
CL bits
4378
1938
51013
44701
22859
95745
62495
28103
957699
992883
1.05156e+06
SMALL
LARGE-S
LARGE-N

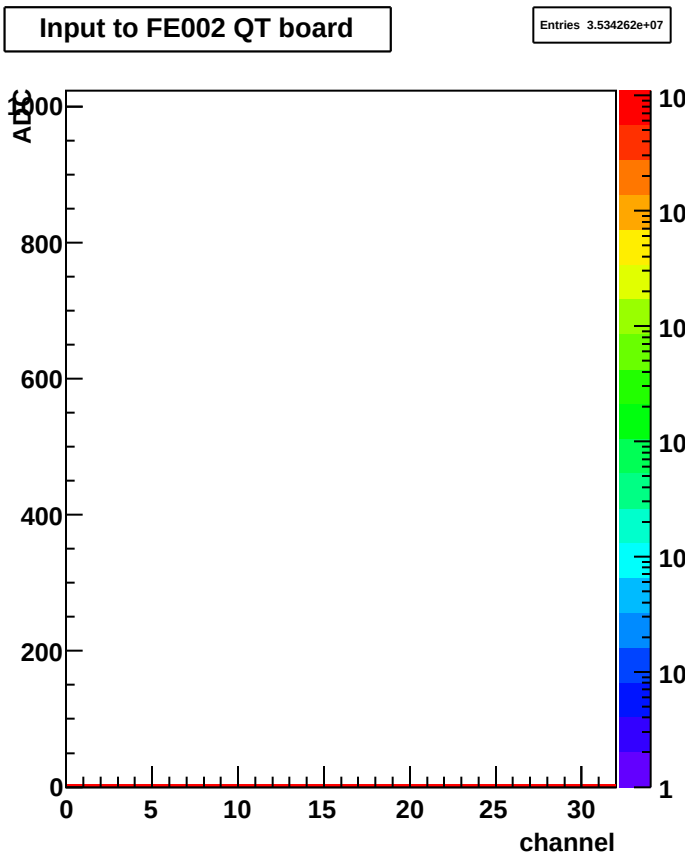

Input to FPD L2 DSM
Entries 210
CL bits - simulated
2
2
10
6
186
4
SMALL
LARGE-S
LARGE-N

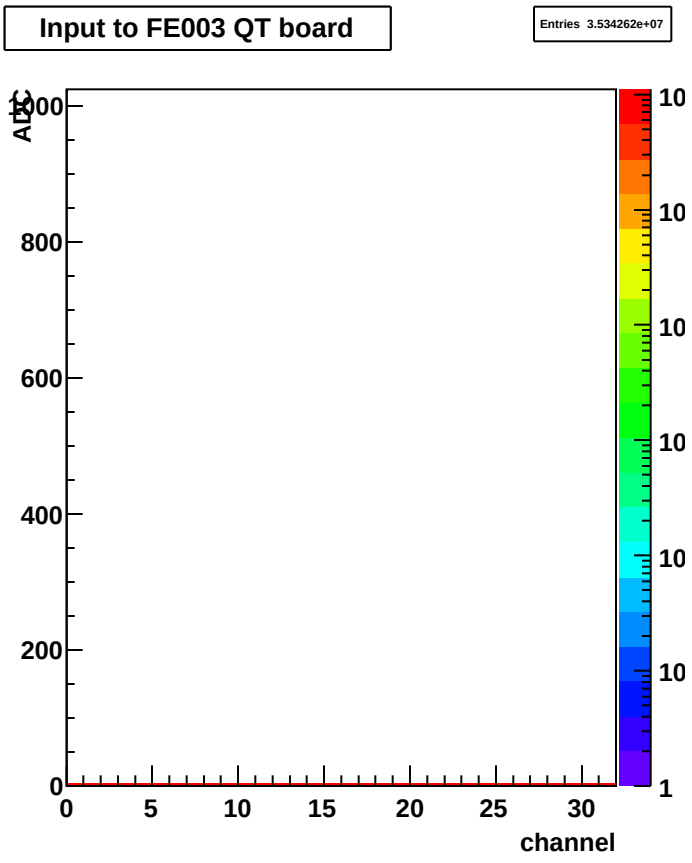

Input to FPD L2 DSM
Entries 3313371
HT bits
11741
77455
31102
26495
65923
47431
21467
1.0003e+06
979571
1.05189e+06
SMALL
LARGE-S
LARGE-N

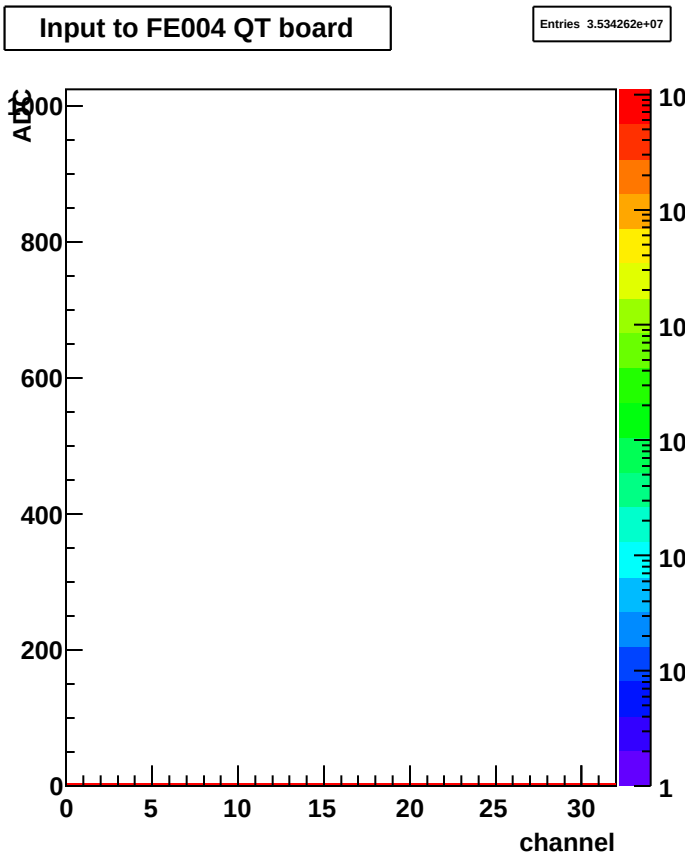

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

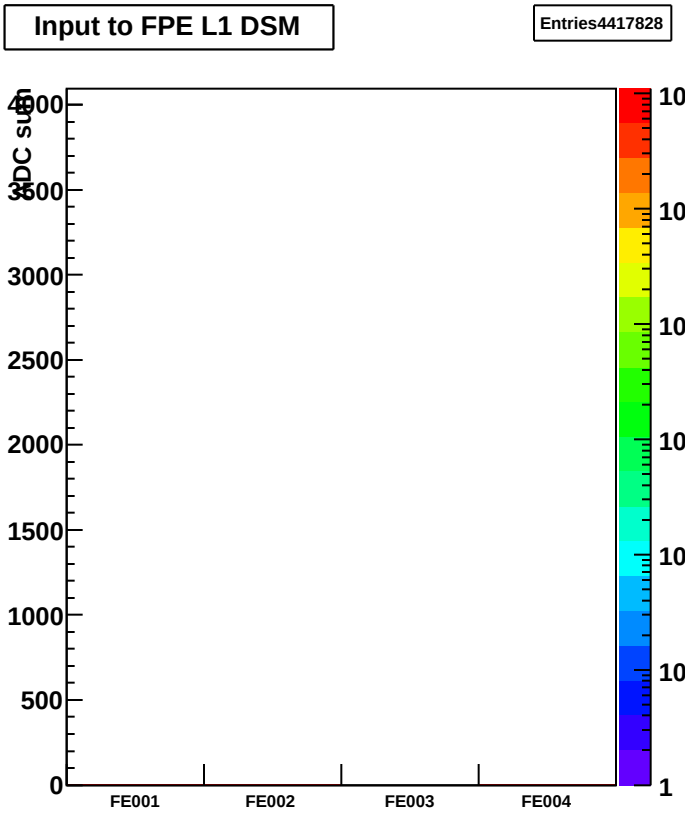

Input to FPD L2 DSM
Entries 6626742
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

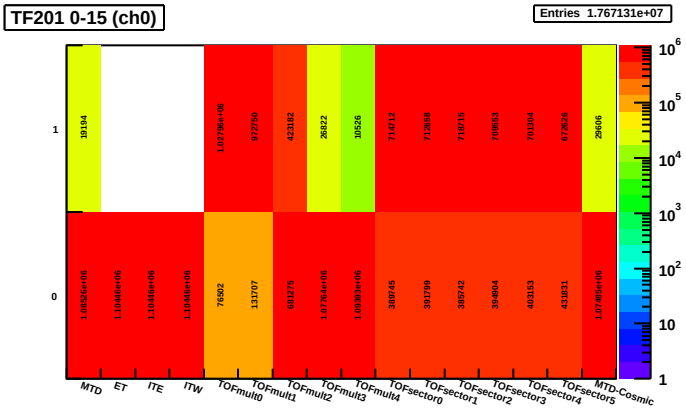

Input to FE001 QT board
Entries 3.534262e+07
ADC
channel

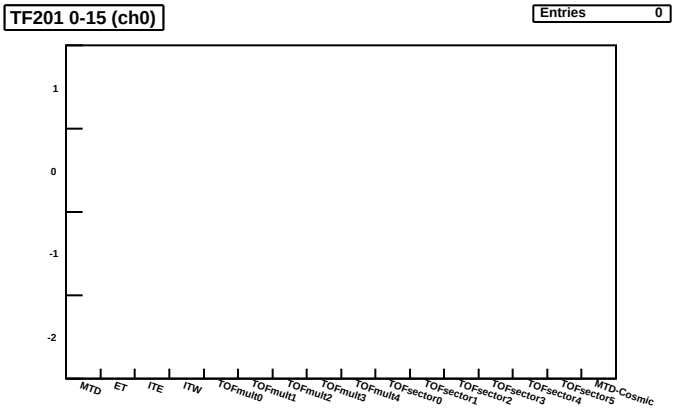

Input to FE002 QT board
Entries 3.534262e+07
ADC
channel

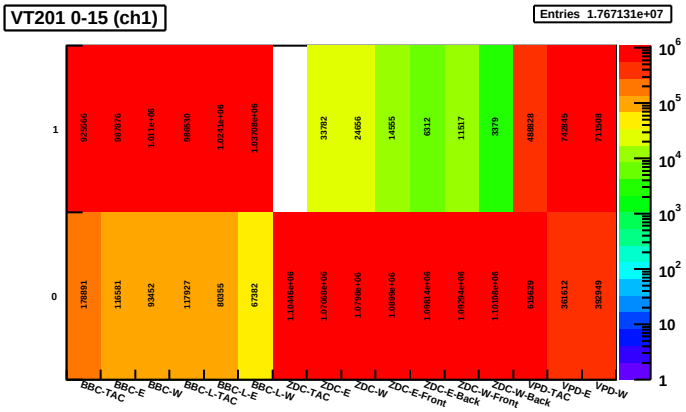

Input to FE003 QT board
Entries 3.534262e+07
ADC
channel

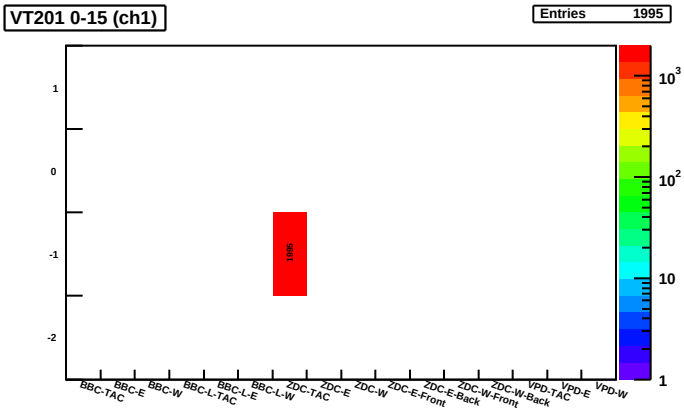

Input to FE004 QT board
Entries 3.534262e+07
ADC
channel

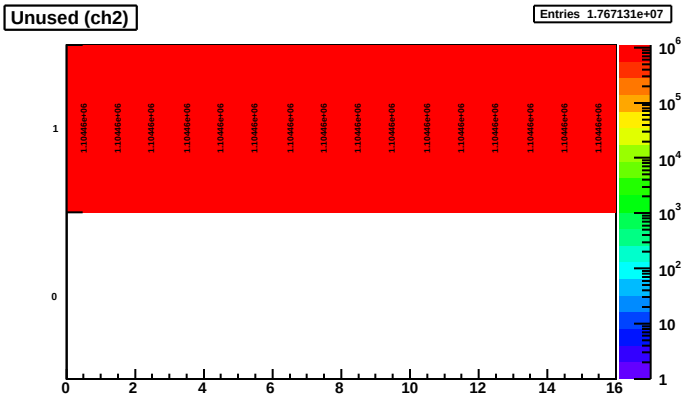

Input to FPE L1 DSM
Entries4417828
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

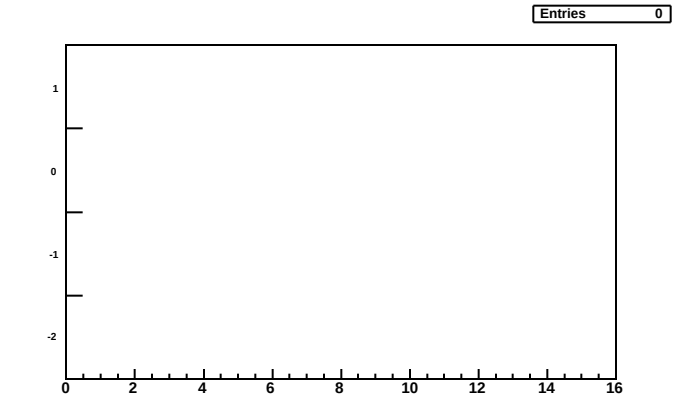

TF201 0-15 (ch0)
Entries 1.767131e+07
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

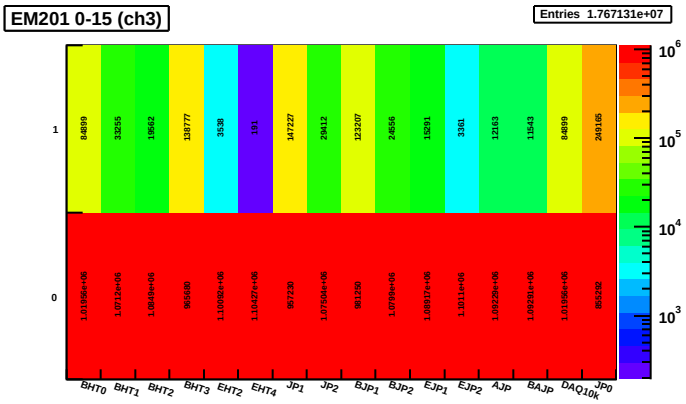

TF201 0-15 (ch0)
Entries 0
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

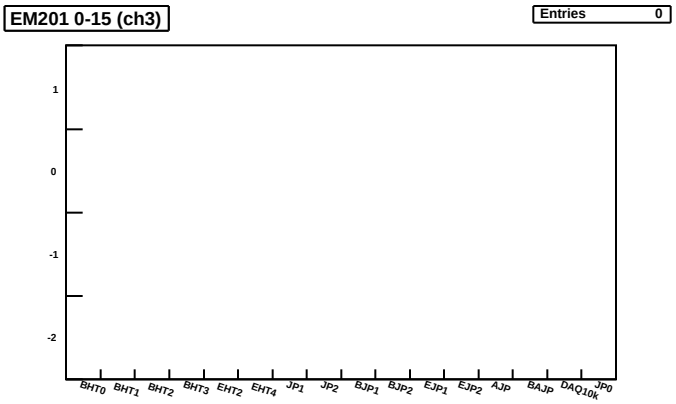

VT201 0-15 (ch1)
Entries 1.767131e+07
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

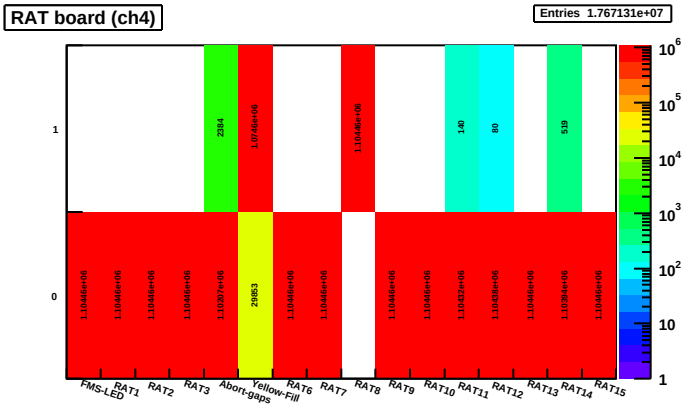

VT201 0-15 (ch1)
Entries 1995
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

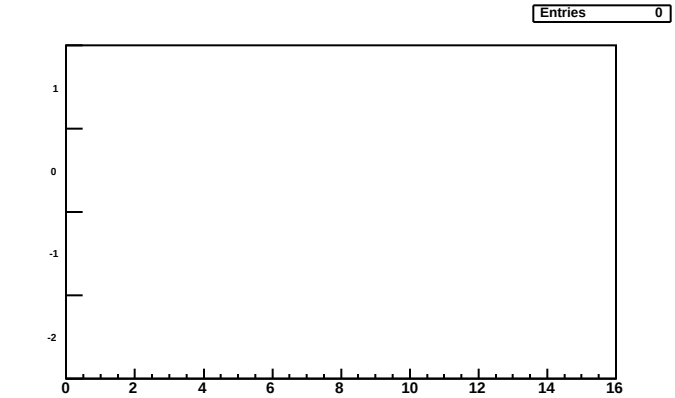

Unused (ch2)
Entries 1.767131e+07

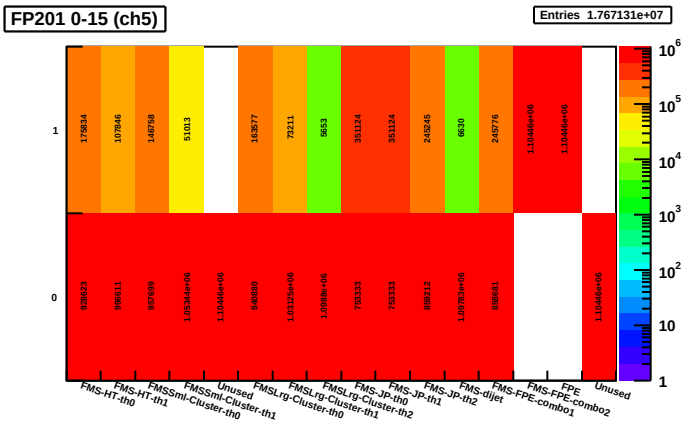

Entries 0

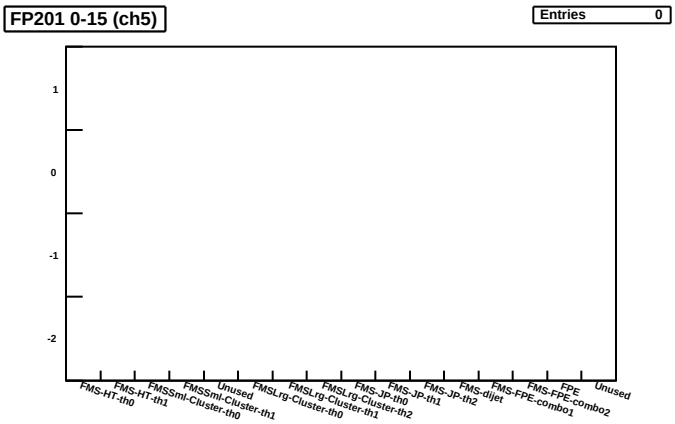

EM201 0-15 (ch3)
Entries 1.767131e+07
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

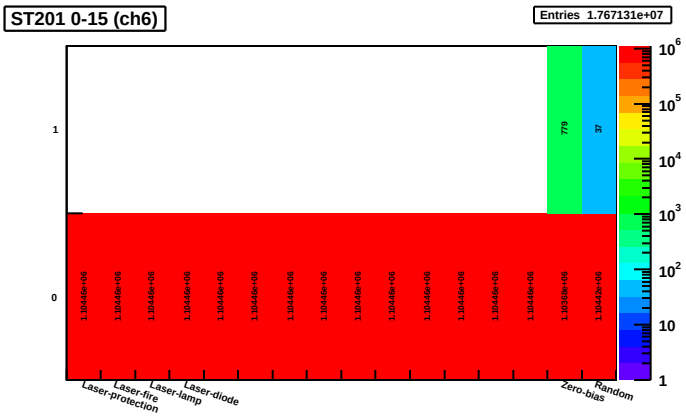

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

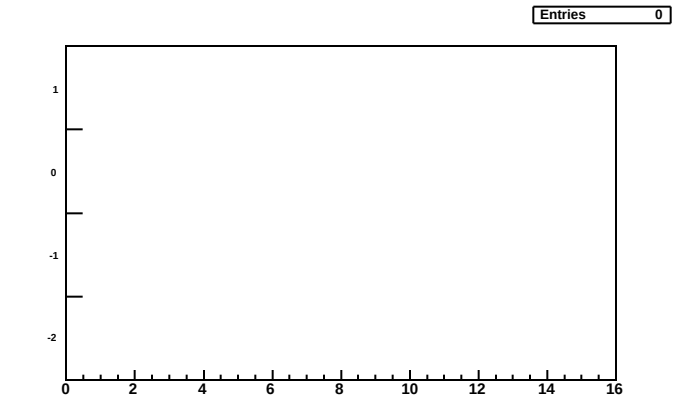

RAT board (ch4)
Entries 1.767131e+07
FMS-LED
RAT1
RAT2
RAT3
Abort-gaps
Yellow-Fill
RAT6
RAT7
RAT8
RAT9
RAT10
RAT11
RAT12
RAT13
RAT14
RAT15

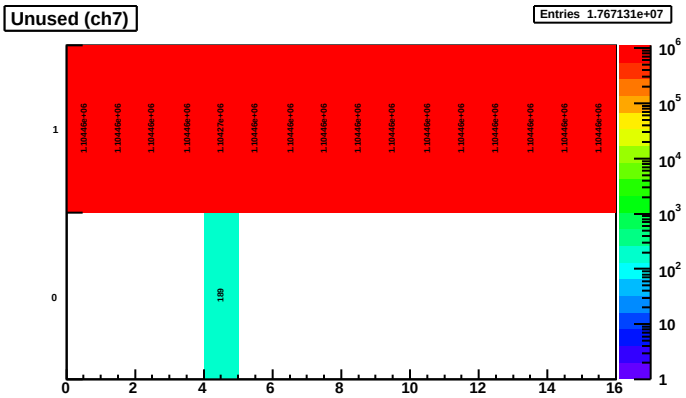

Entries 0

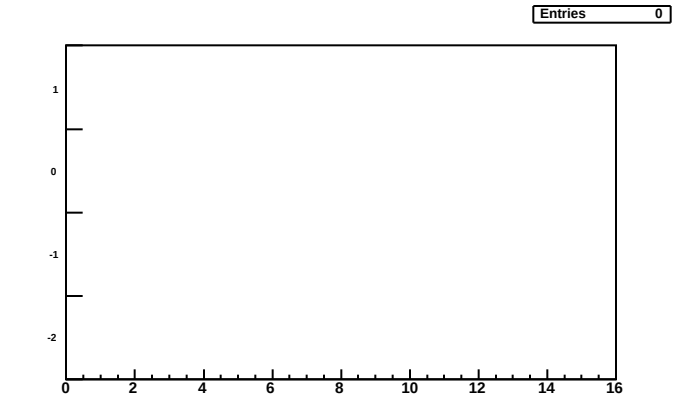

FP201 0-15 (ch5)
Entries 1.767131e+07
FMS-HT-th0
FMS-HT-th1
FMSSml-Cluster-th0
FMSSml-Cluster-th1
Unused
FMSLrg-Cluster-th0
FMSLrg-Cluster-th1
FMSLrg-Cluster-th2
FMS-JP-th0
FMS-JP-th1
FMS-JP-th2
FMS-diJet
FMS-FPE-combo1
FPE
FMS-FPE-combo2
Unused


FP201 0-15 (ch5)
Entries 0


ST201 0-15 (ch6)
Entries 1.767131e+07
Laser-protection
Laser-fire
Laser-lamp
Laser-diode
Zero-bias
Random


Entries 0


Unused (ch7)
Entries 1.767131e+07


Entries 0