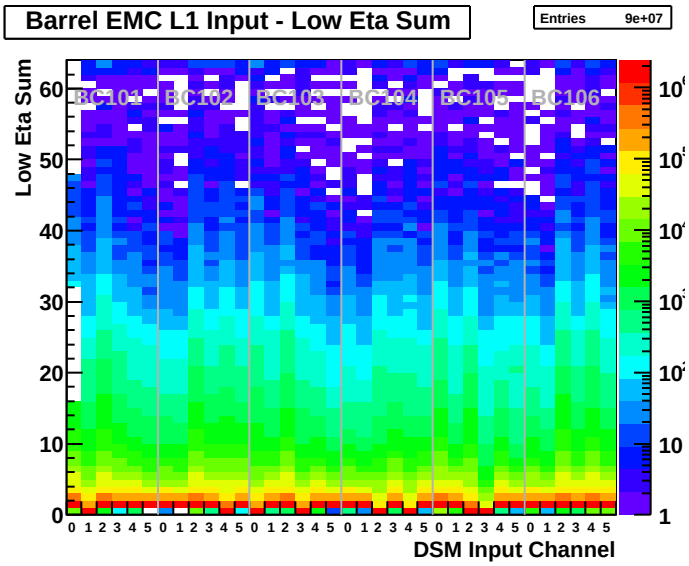
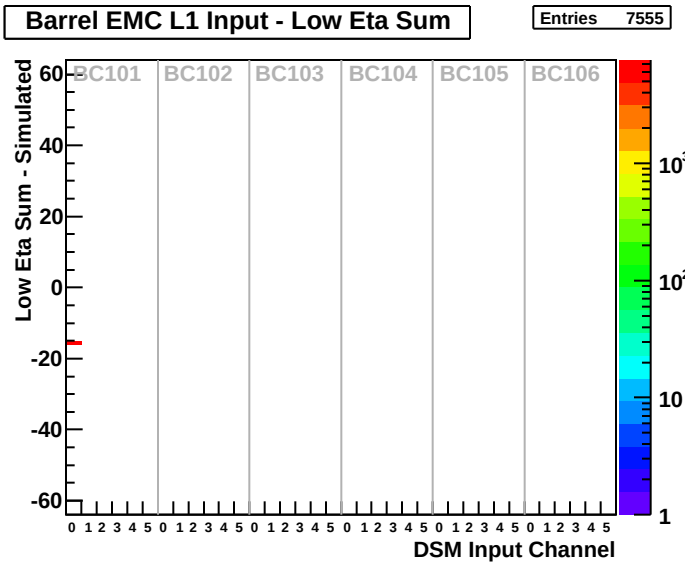
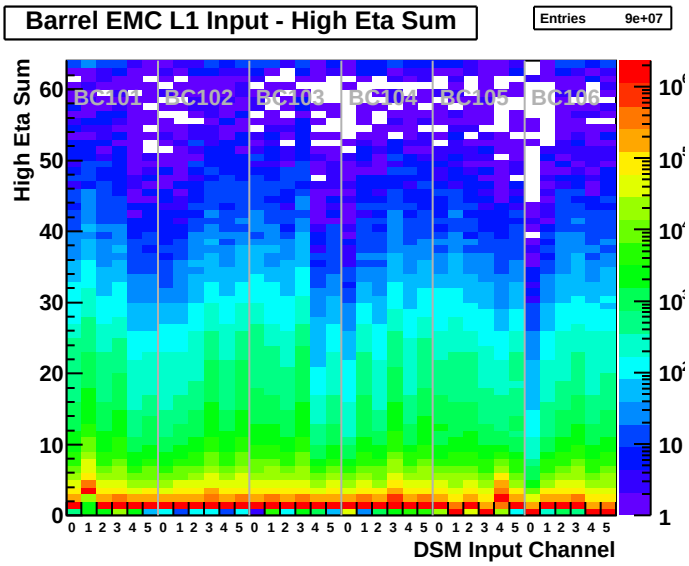
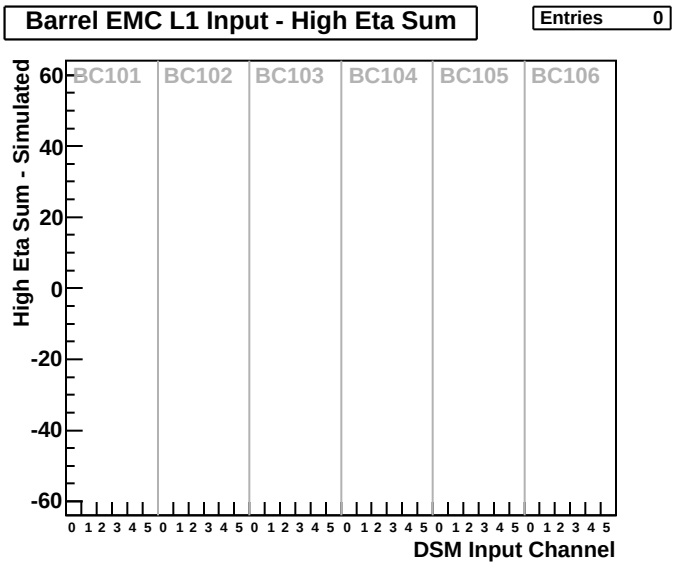
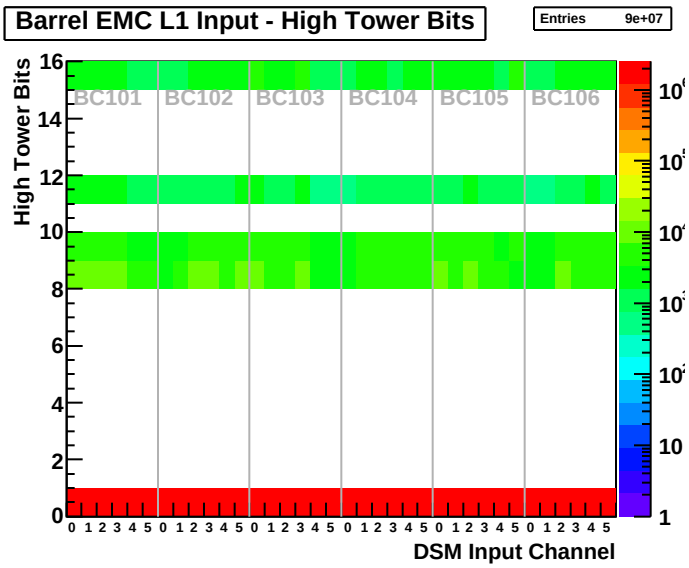
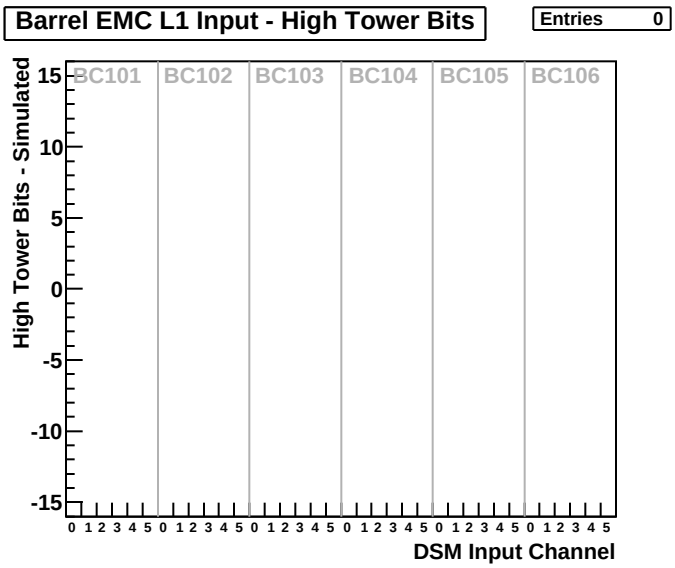

Barrel EMC L1 Input - Low Eta Sum
Entries 9e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

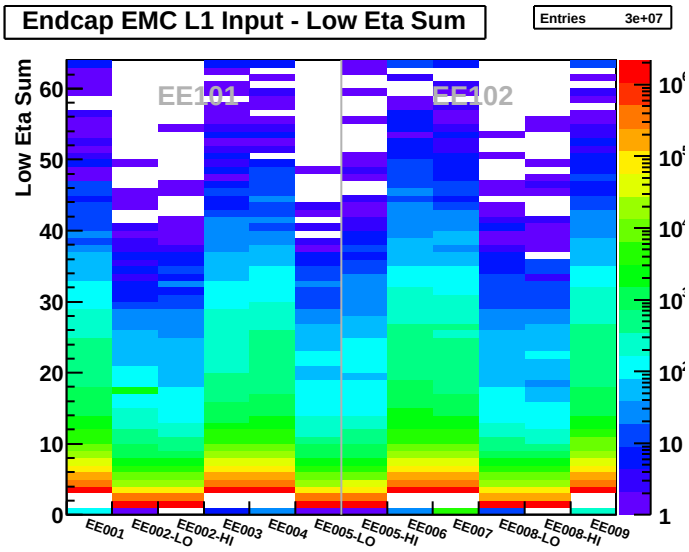

Barrel EMC L1 Input - Low Eta Sum
Entries 7555
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

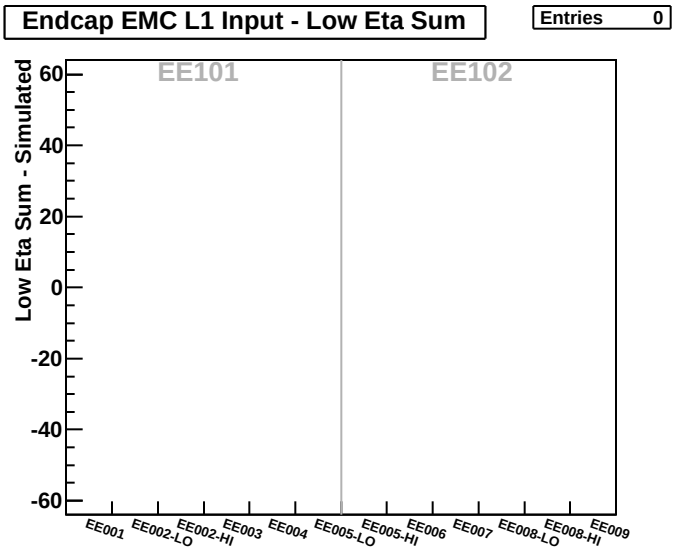

Barrel EMC L1 Input - High Eta Sum
Entries 9e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

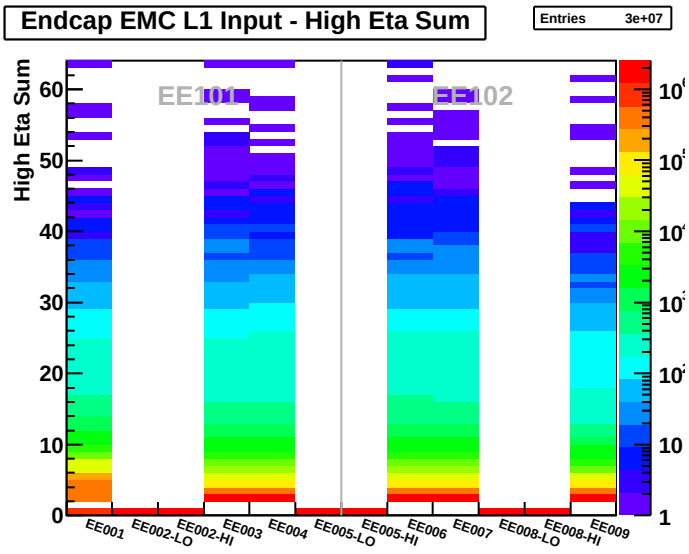

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

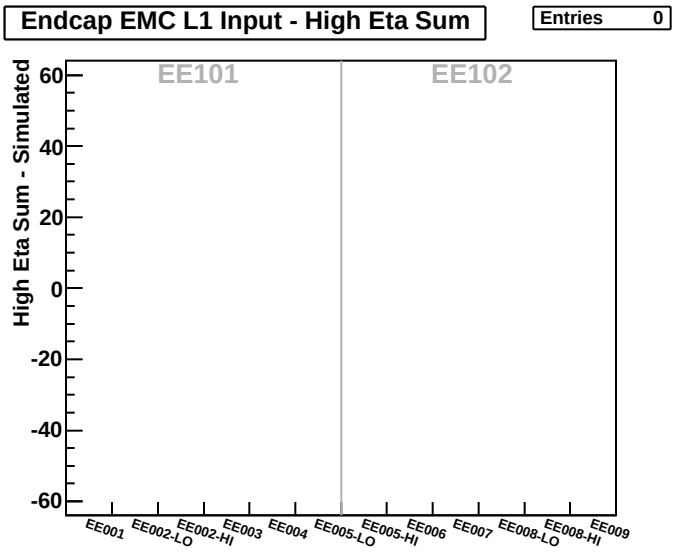

Barrel EMC L1 Input - High Tower Bits
Entries 9e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

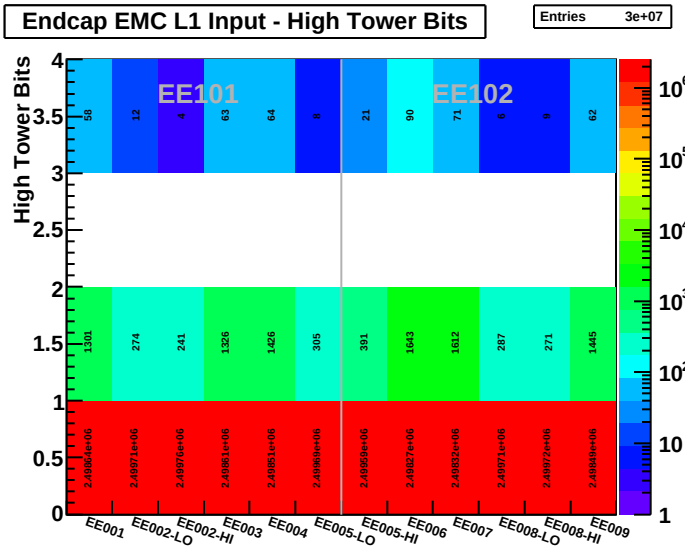

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

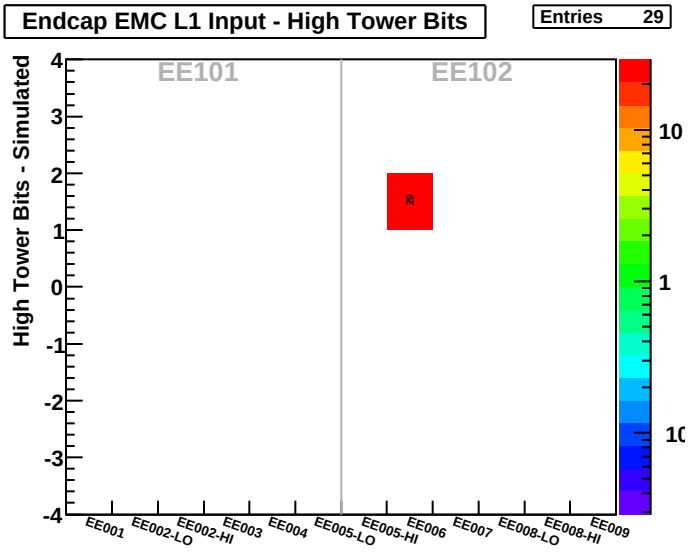

Endcap EMC L1 Input - Low Eta Sum
Entries 3e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

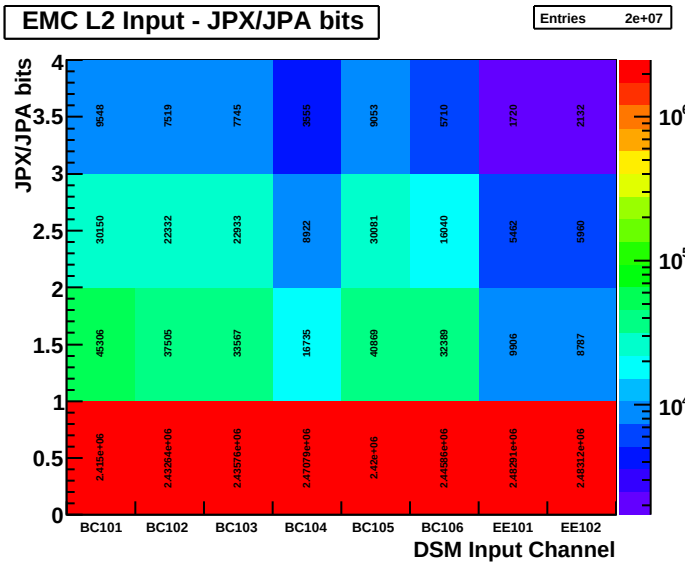

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

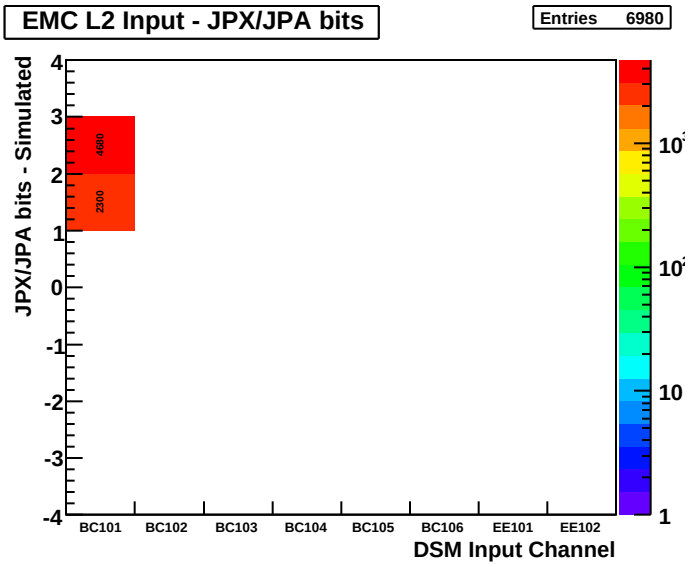

Endcap EMC L1 Input - High Eta Sum
Entries 3e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

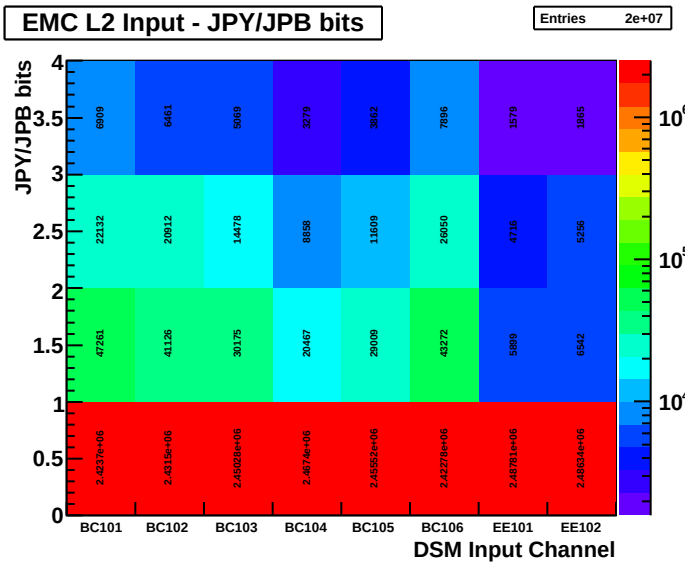

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

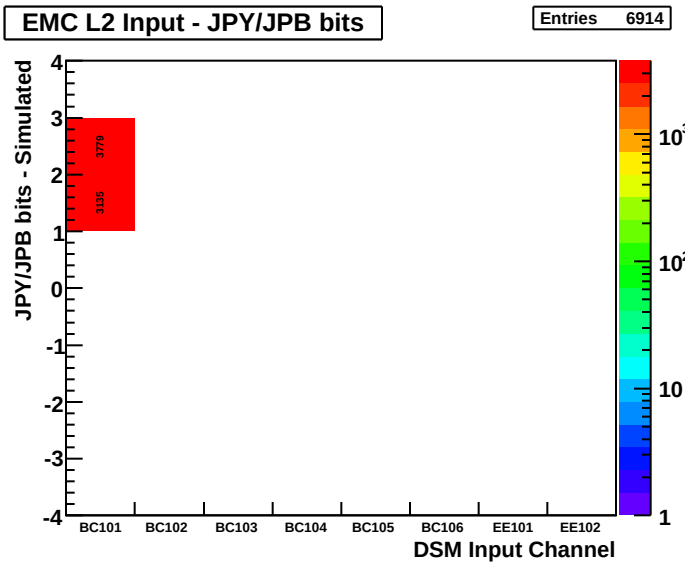

Endcap EMC L1 Input - High Tower Bits
Entries 3e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

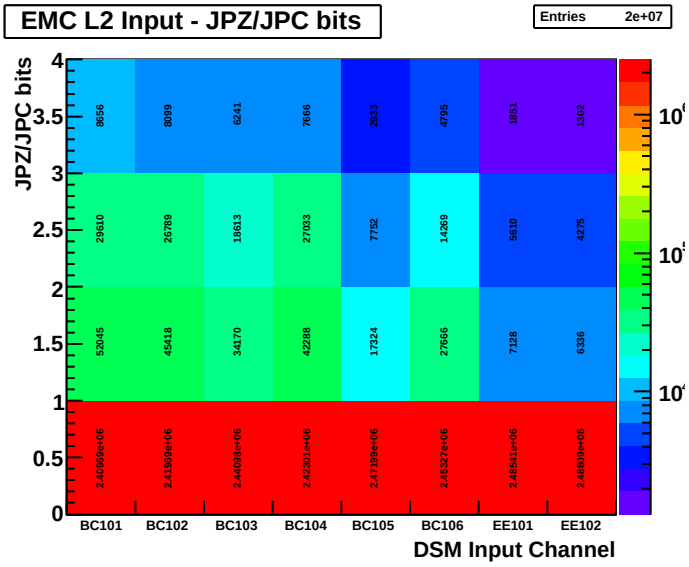

Endcap EMC L1 Input - High Tower Bits
Entries 29
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

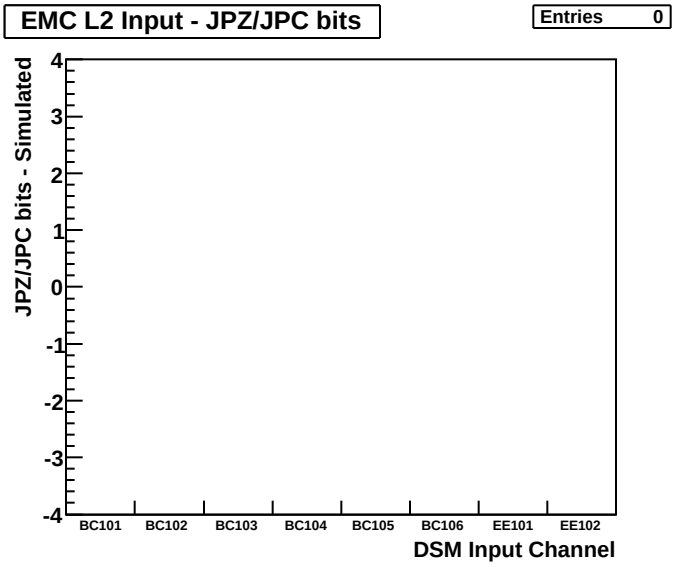

EMC L2 Input - JPX/JPA bits
Entries 2e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
9548 7519 7745 3555 9053 5710 1720 2132
30150 22332 22933 8922 30081 16040 5462 5960
45306 37505 33567 16735 40869 32389 9906 8787
2.415e+06 2.43234e+06 2.43576e+06 2.47079e+06 2.42e+06 2.44586e+06 2.48291e+06 2.48312e+06

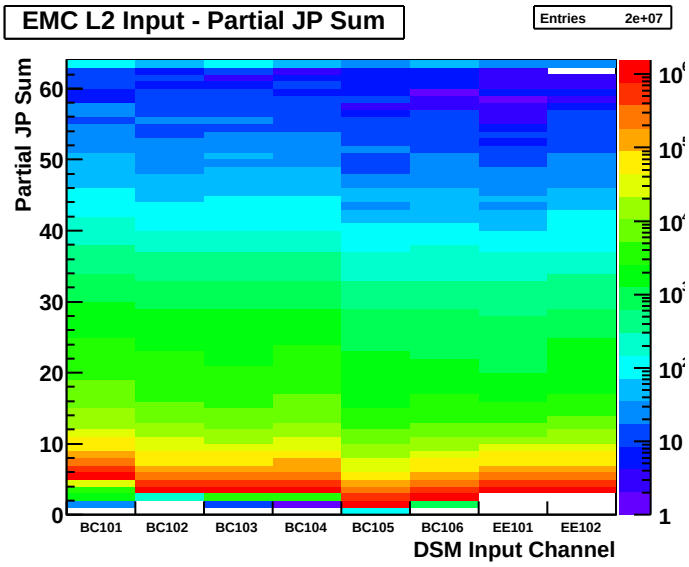

EMC L2 Input - JPX/JPA bits
Entries 6980
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4680
2300

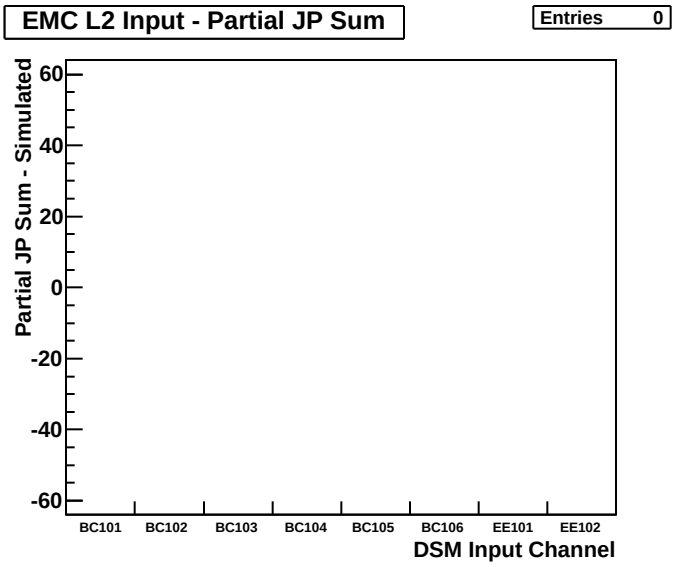

EMC L2 Input - JPY/JPB bits
Entries 2e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
6909 6461 5069 3270 3862 7896 1579 1865
22132 20912 14478 8858 11609 26050 4716 5256
47261 41126 30175 20467 29009 43272 5899 6542
2.4237e+06 2.4315e+06 2.45028e+06 2.4674e+06 2.45592e+06 2.42278e+06 2.48781e+06 2.48634e+06

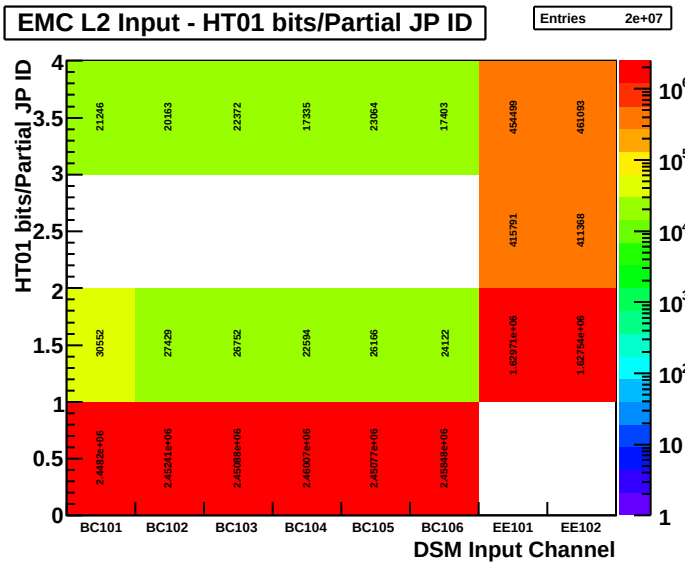

EMC L2 Input - JPY/JPB bits
Entries 6914
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
3779
3135

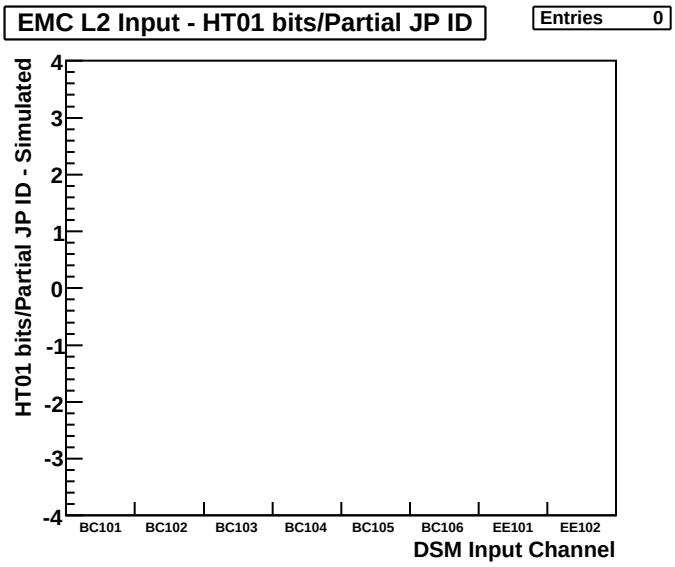

EMC L2 Input - JPZ/JPC bits
Entries 2e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
8656 8099 6241 7666 2933 4795 1851 1302
29610 26789 18613 27033 7752 14269 5610 4275
52045 45418 34170 42288 17324 27666 7128 6336
2.40969e+06 2.41969e+06 2.44098e+06 2.42301e+06 2.47199e+06 2.45327e+06 2.48541e+06 2.48809e+06

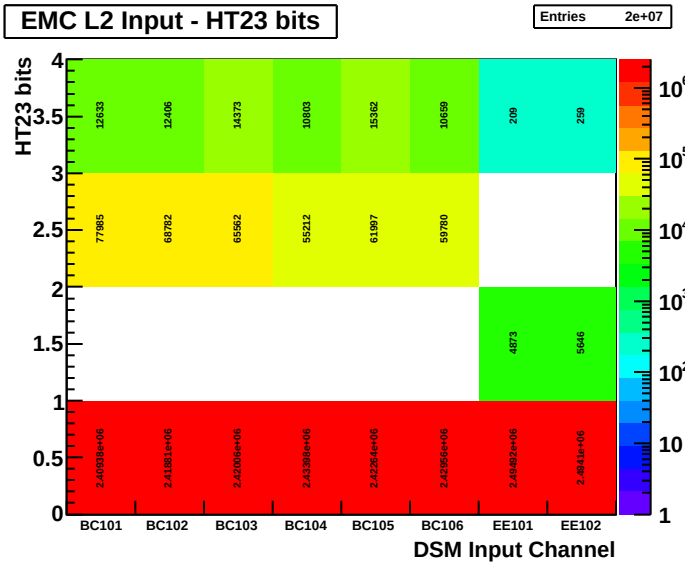

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

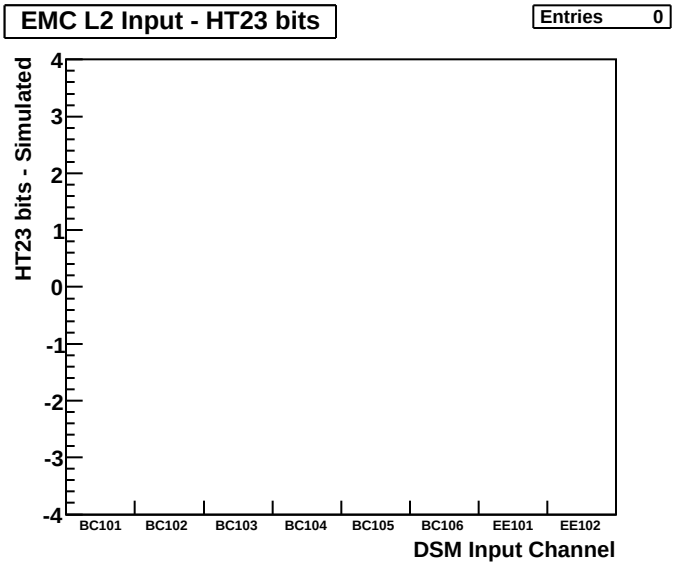

EMC L2 Input - Partial JP Sum
Entries 2e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

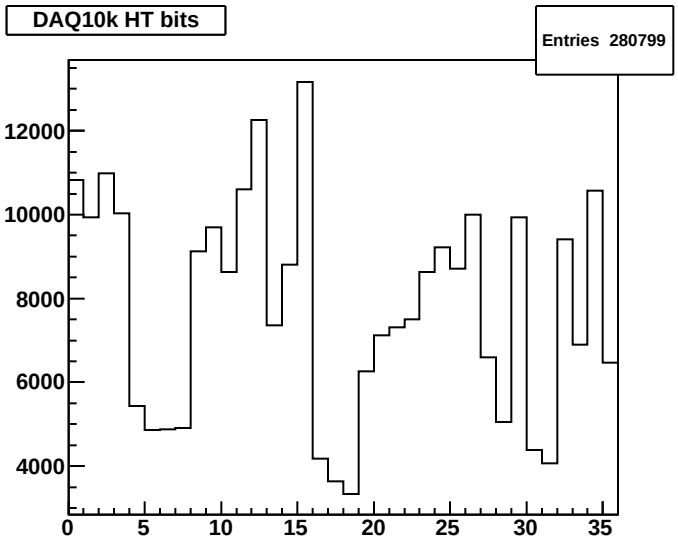

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

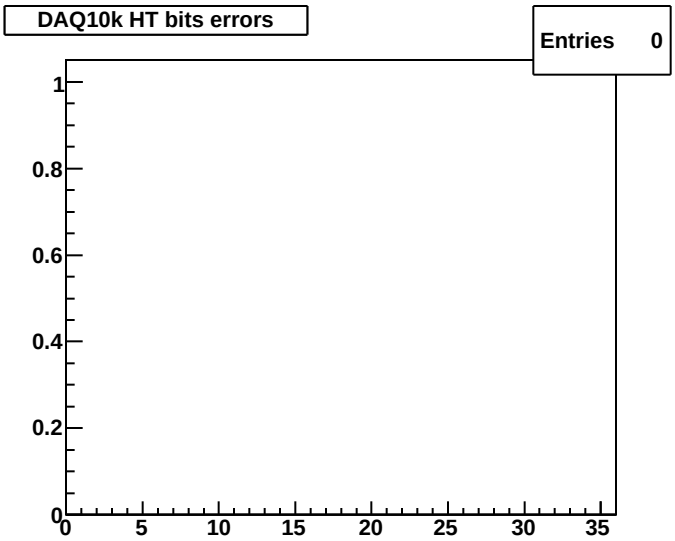

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

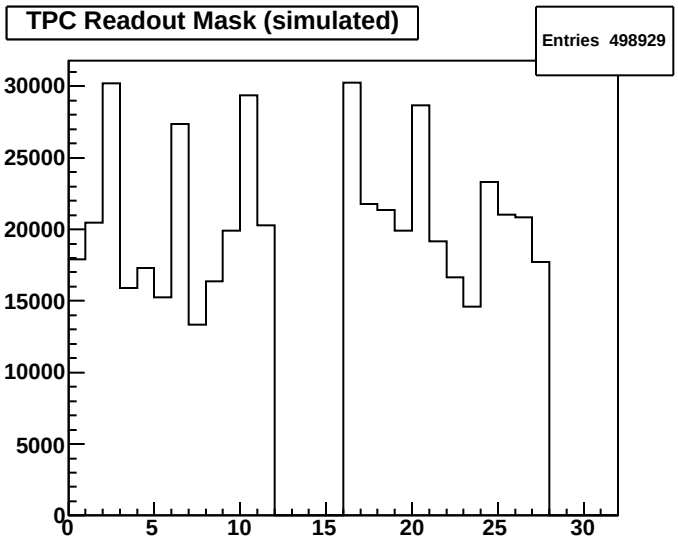

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

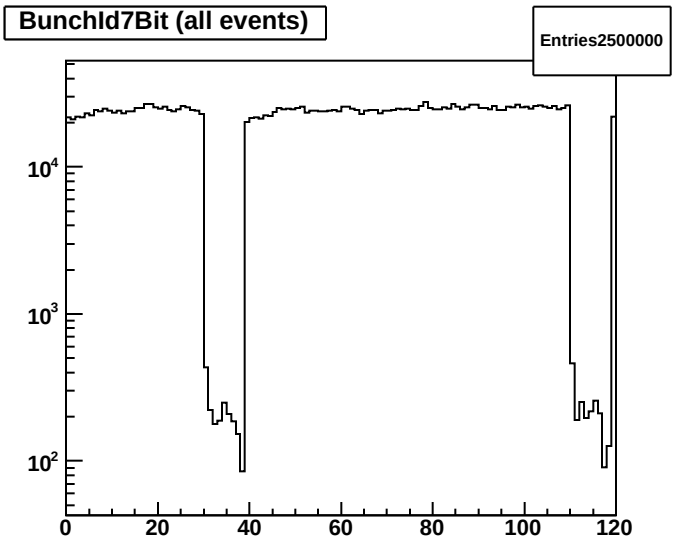

EMC L2 Input - HT23 bits
Entries 2e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

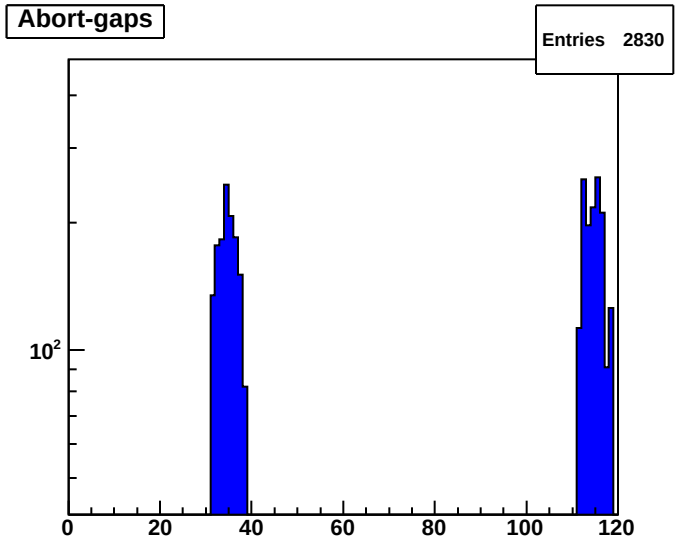

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

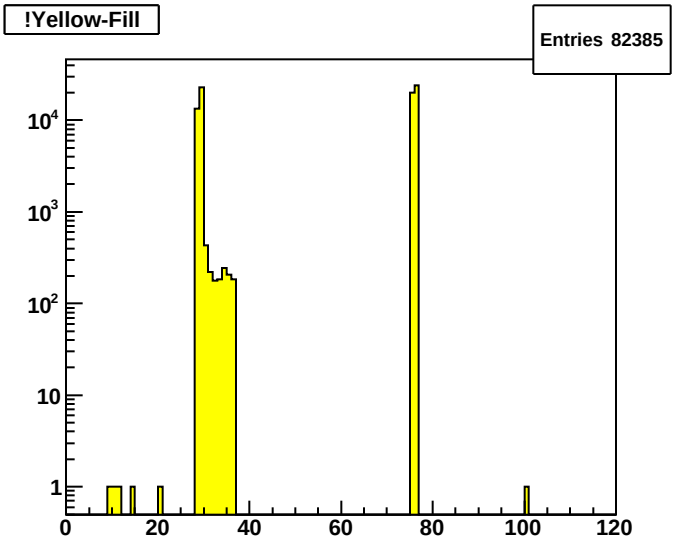

DAQ10k HT bits
Entries 280799
12000
10000
8000
6000
4000
0 5 10 15 20 25 30 35

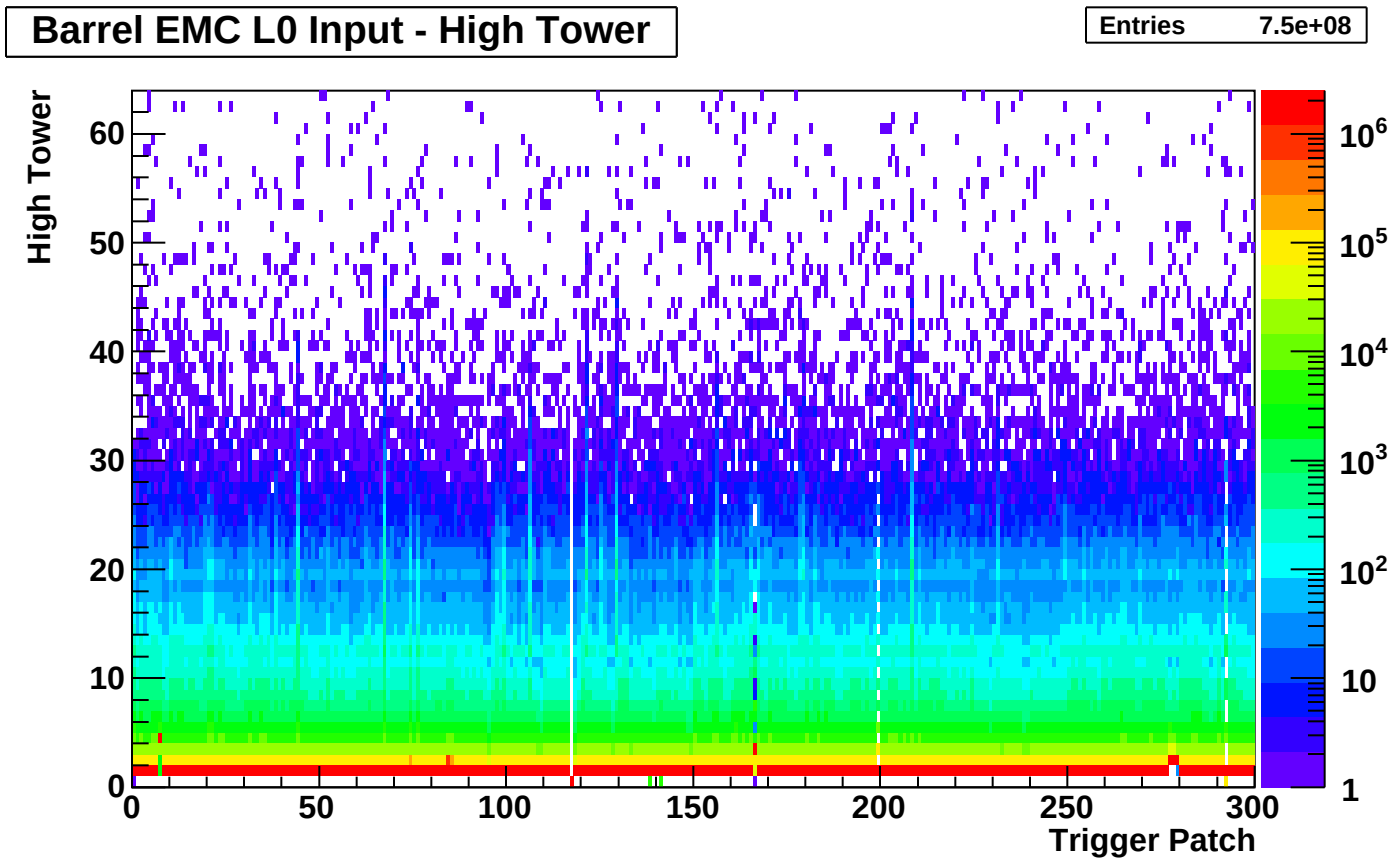

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

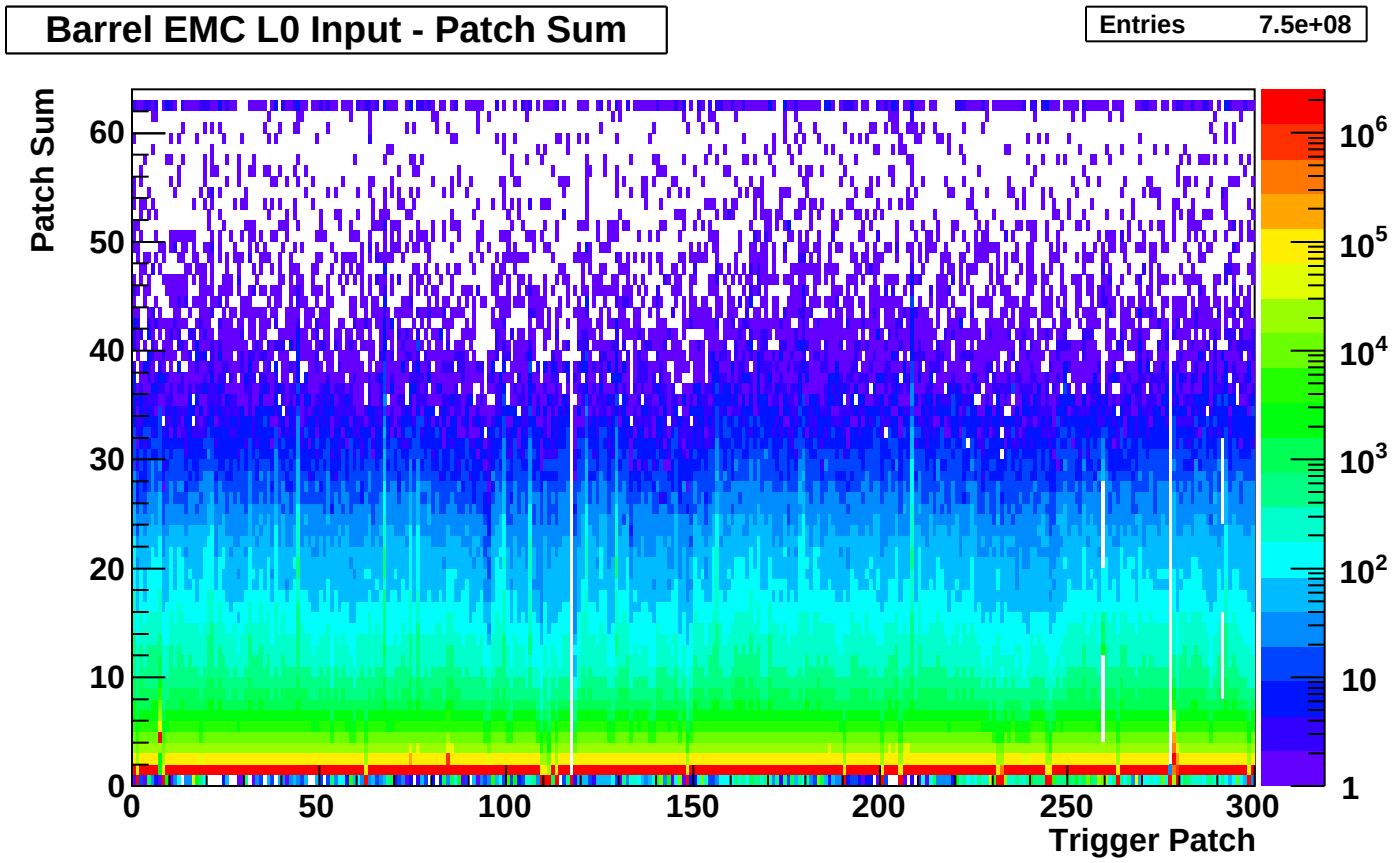

TPC Readout Mask (simulated)
Entries 498929
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

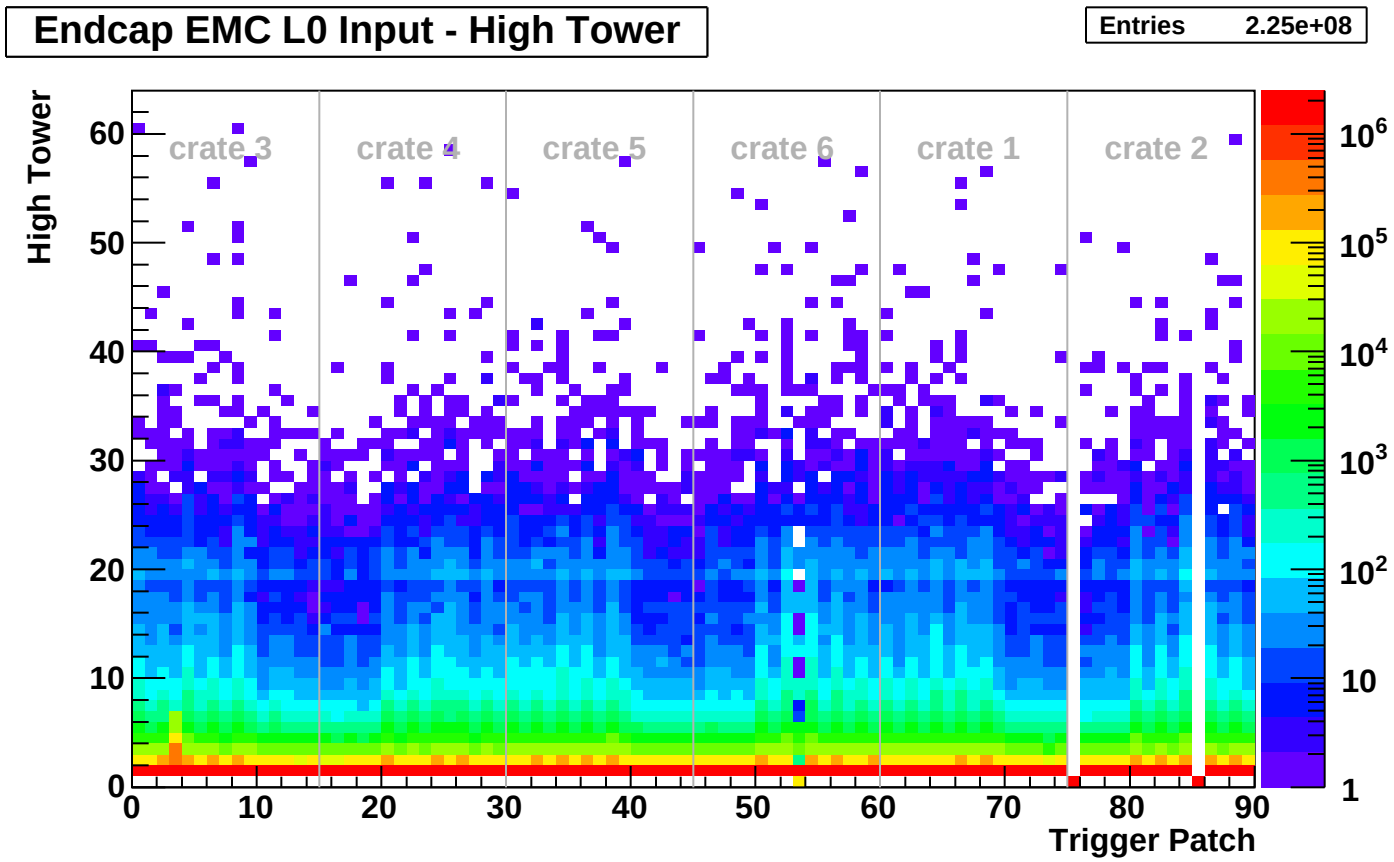

BunchId7Bit (all events)
Entries2500000
10^4
10^3
10^2
0 20 40 60 80 100 120

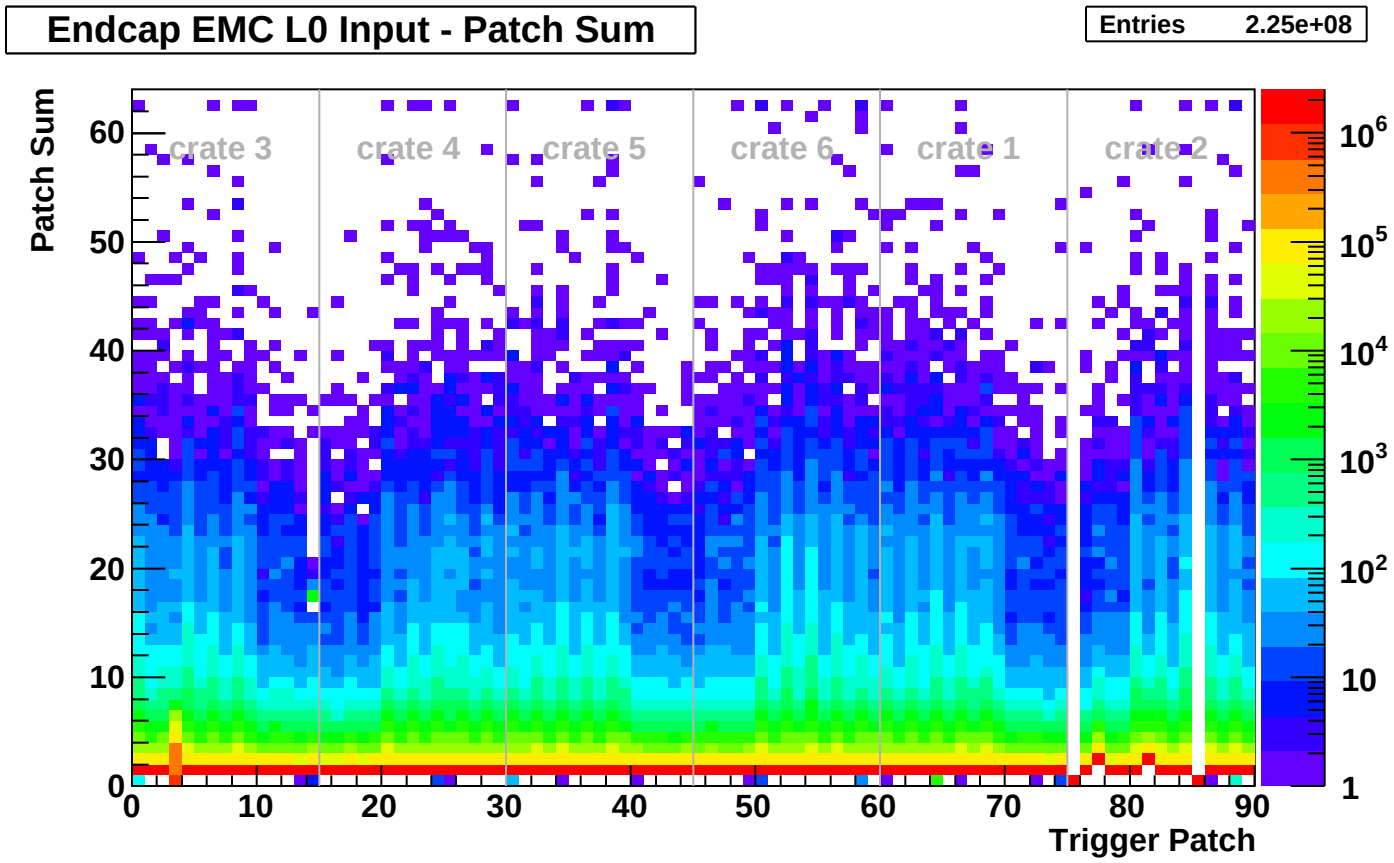

Abort-gaps
Entries 2830
10^2
0 20 40 60 80 100 120

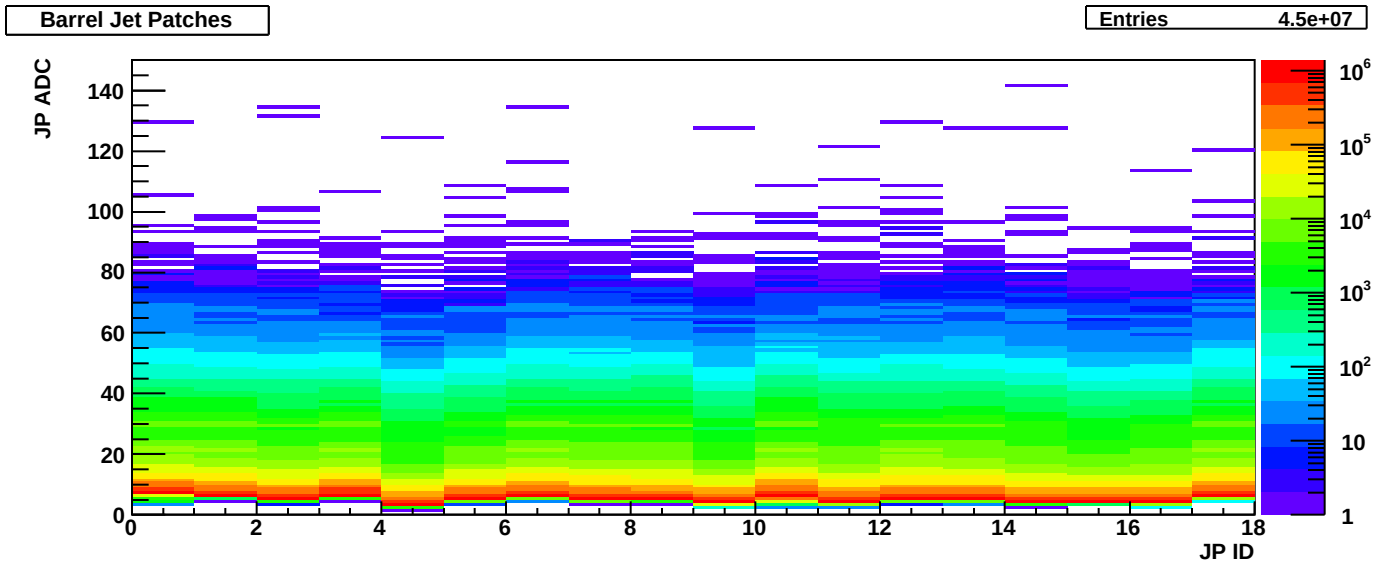

!Yellow-Fill
Entries 82385
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

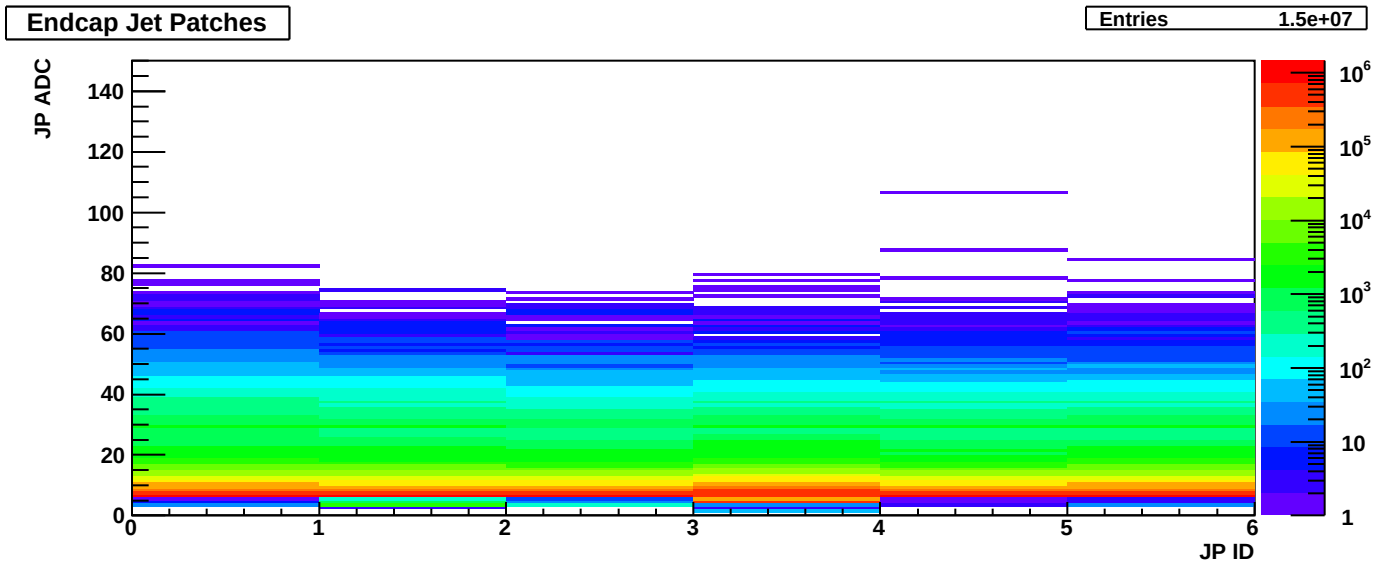

Barrel EMC L0 Input - High Tower
Entries 7.5e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

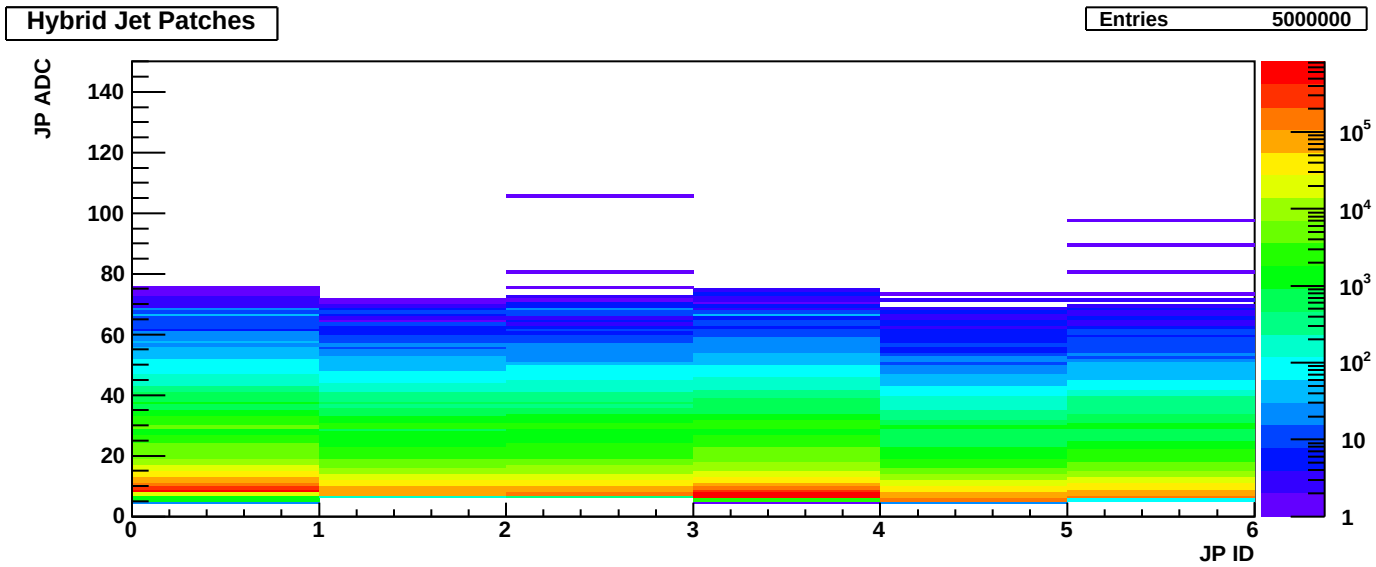

Barrel EMC L0 Input - Patch Sum
Entries 7.5e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

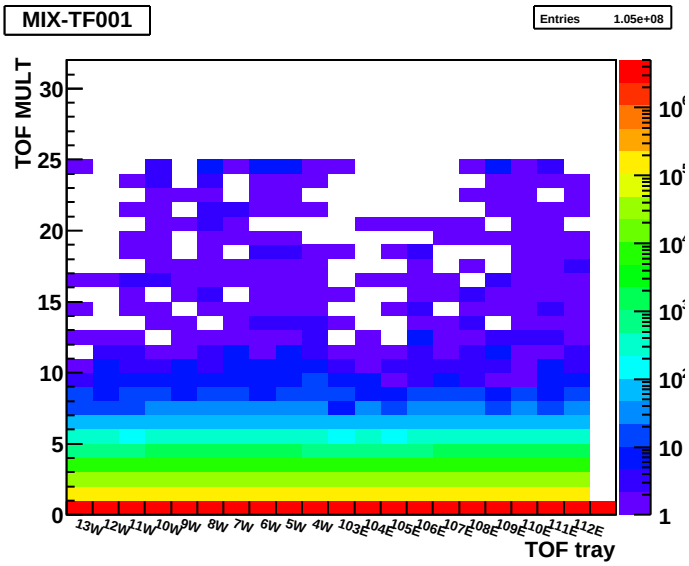

Endcap EMC L0 Input - High Tower
Entries 2.25e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

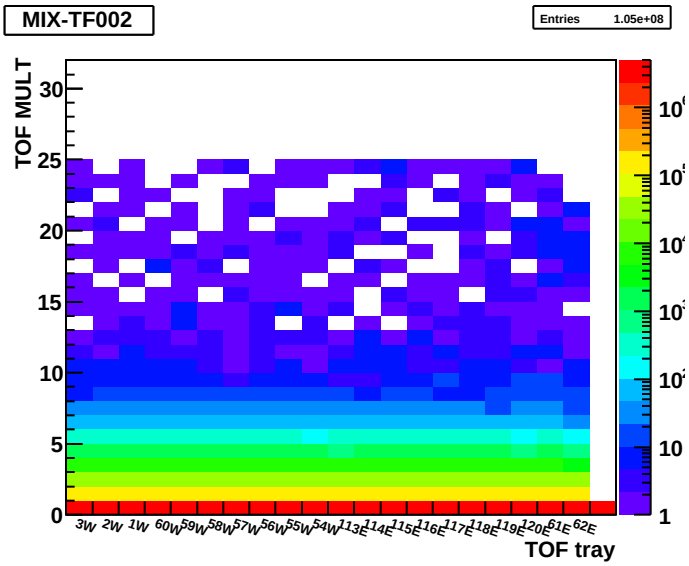

Endcap EMC L0 Input - Patch Sum
Entries 2.25e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

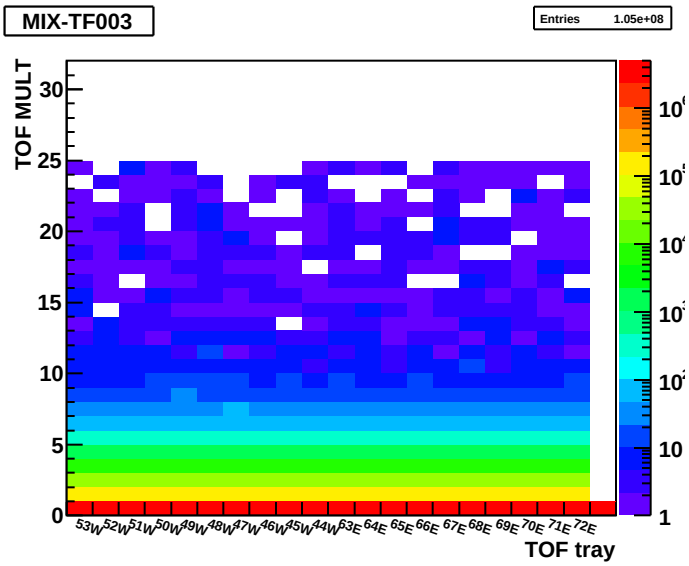

Barrel Jet Patches
Entries 4.5e+07
JP ADC
JP ID

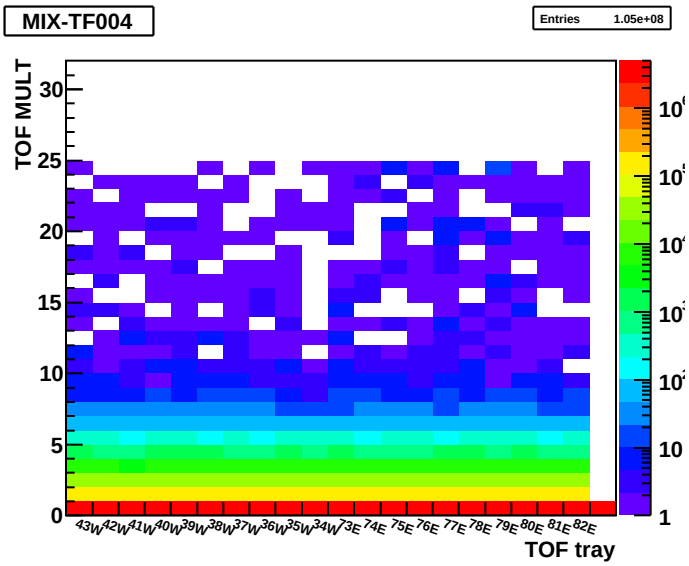

Endcap Jet Patches
Entries 1.5e+07
JP ADC
JP ID

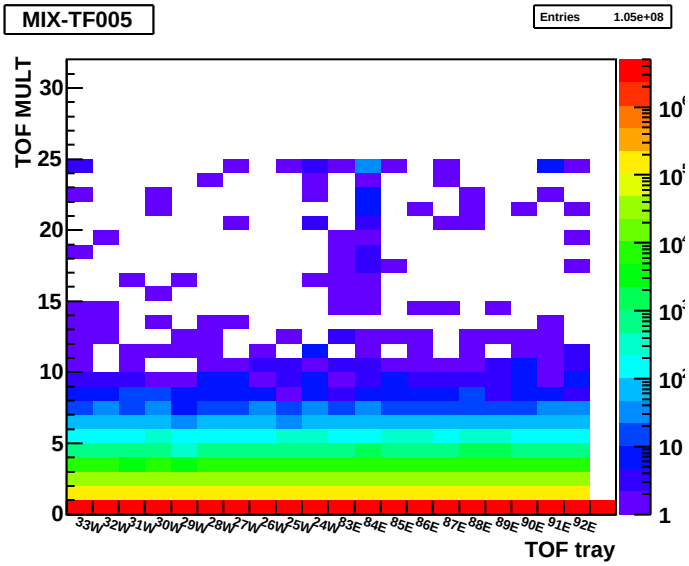

Hybrid Jet Patches
Entries 5000000
JP ADC
JP ID

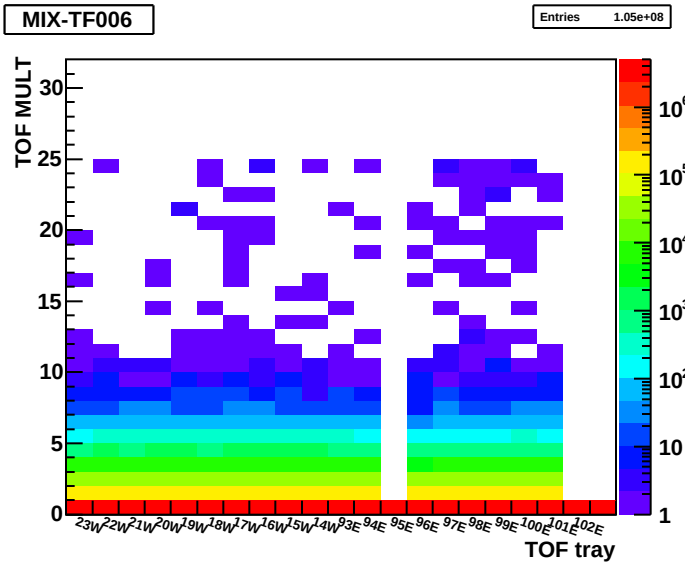

MIX-TF001
Entries 1.05e+08
TOF MULT
TOF tray

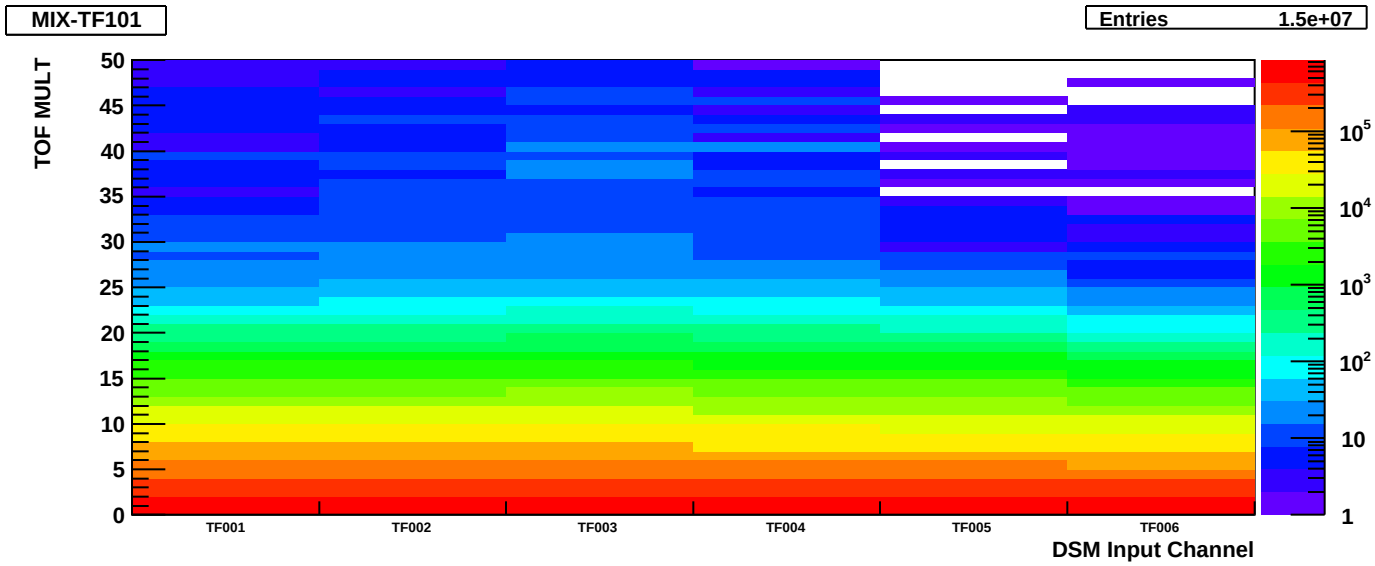

MIX-TF002
Entries 1.05e+08
TOF MULT
TOF tray

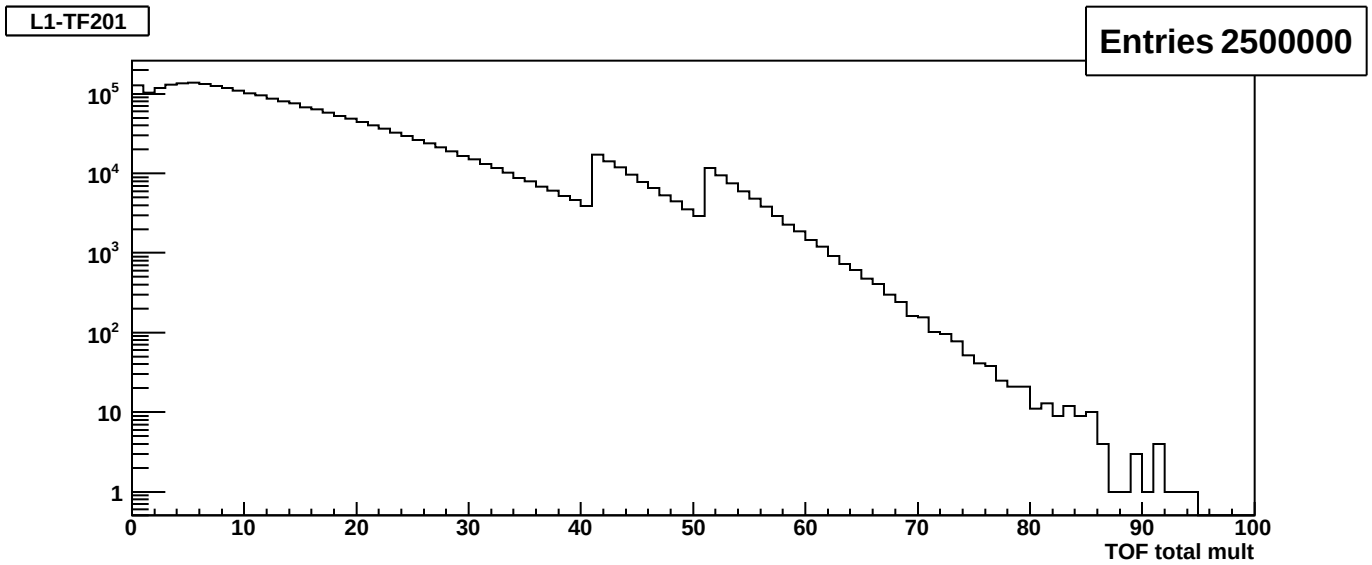

MIX-TF003
Entries 1.05e+08
TOF MULT
TOF tray

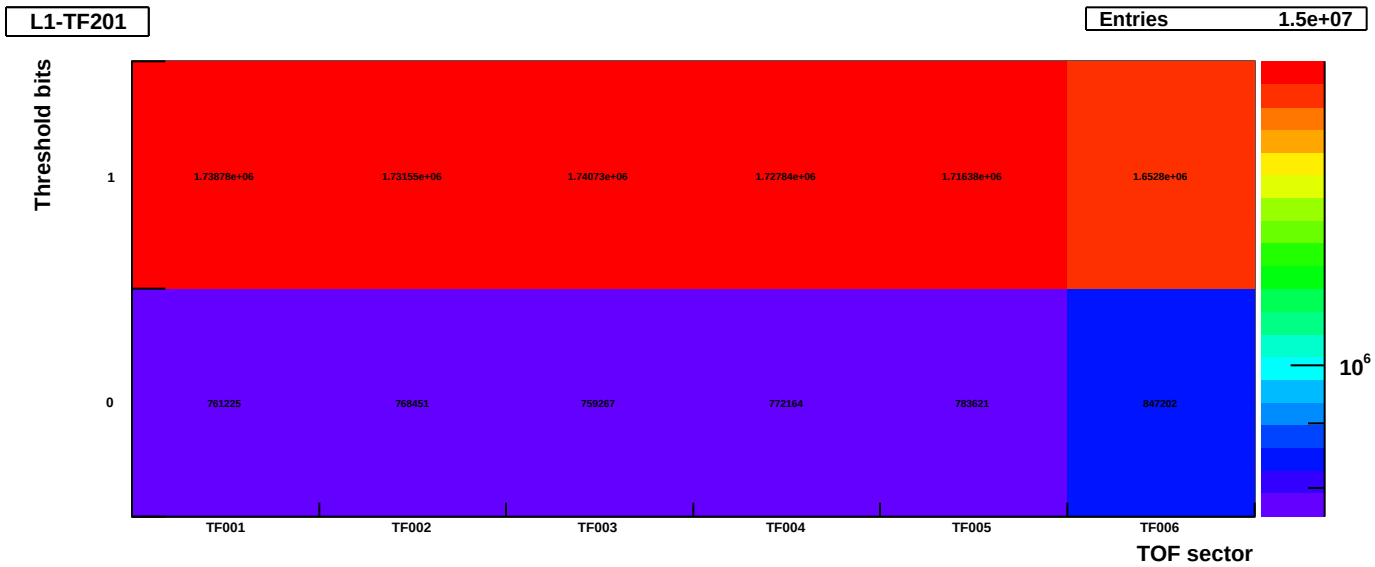

MIX-TF004
Entries 1.05e+08
TOF MULT
TOF tray

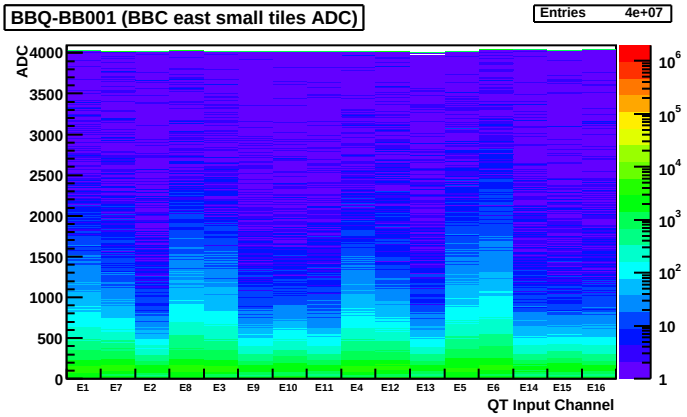

MIX-TF005
Entries 1.05e+08
TOF MULT
TOF tray

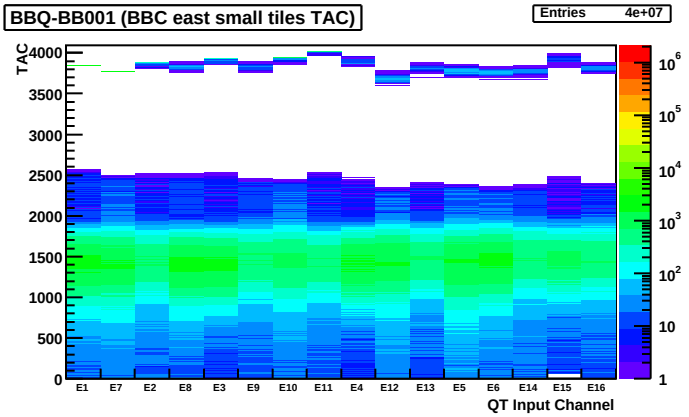

MIX-TF006
Entries 1.05e+08
TOF MULT
TOF tray

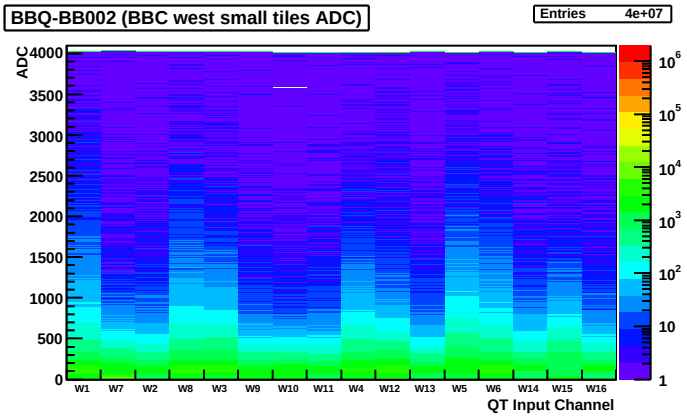

MIX-TF101
Entries 1.5e+07
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

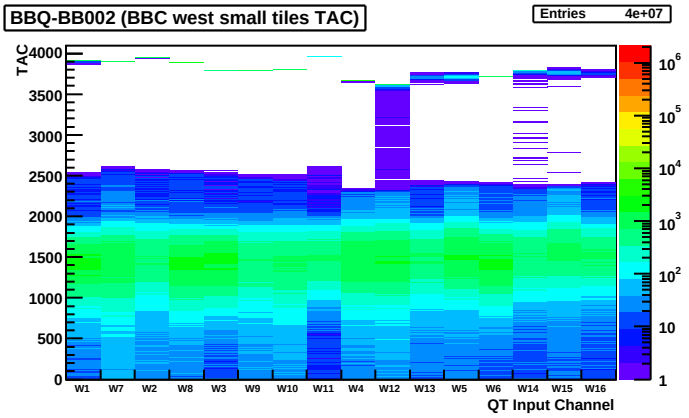

L1-TF201
Entries 2500000
10^5
10^4
10^3
10^2
10
1
0
10
20
30
40
50
60
70
80
90
100
TOF total mult

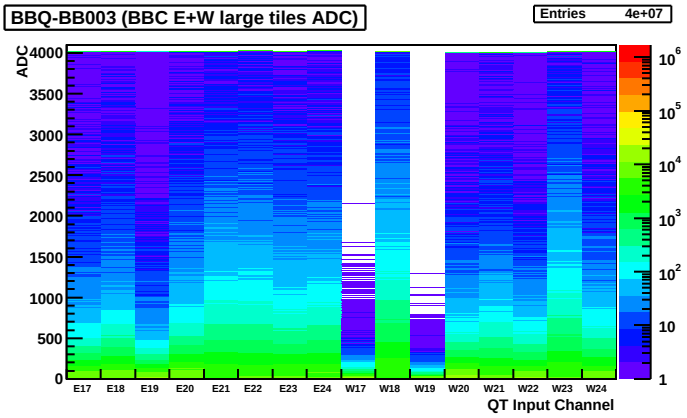

L1-TF201
Entries 1.5e+07
Threshold bits
1
0
1.73878e+06
1.73155e+06
1.74073e+06
1.72784e+06
1.71638e+06
1.6528e+06
761225
768451
759267
772164
783621
847202
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^6

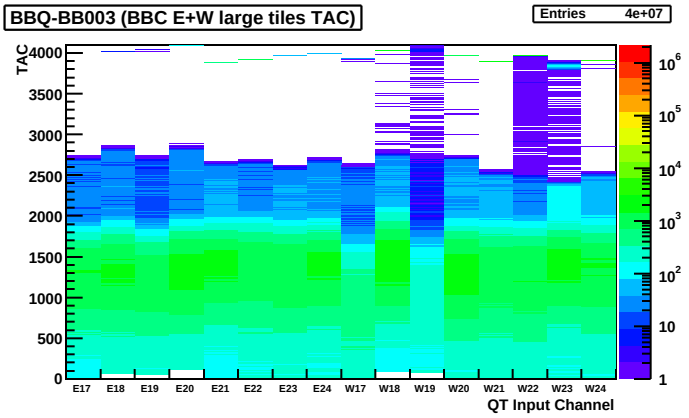

BBQ-BB001 (BBC east small tiles ADC)
Entries 4e+07
ADC
QT Input Channel

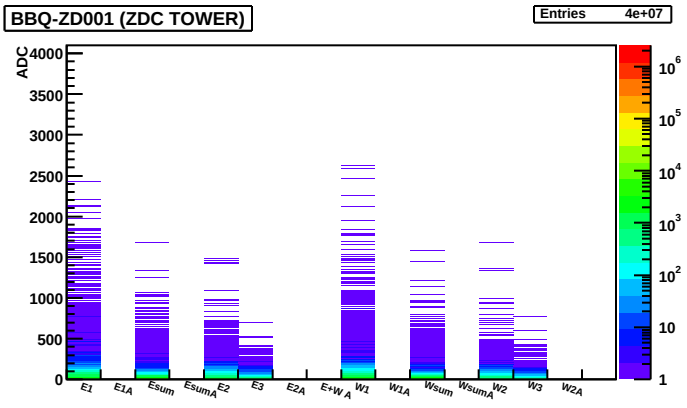

BBQ-BB001 (BBC east small tiles TAC)
Entries 4e+07
TAC
QT Input Channel

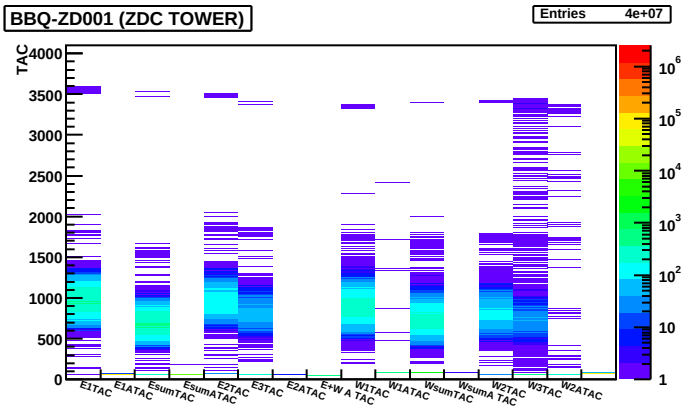

BBQ-BB002 (BBC west small tiles ADC)
Entries 4e+07
ADC
QT Input Channel

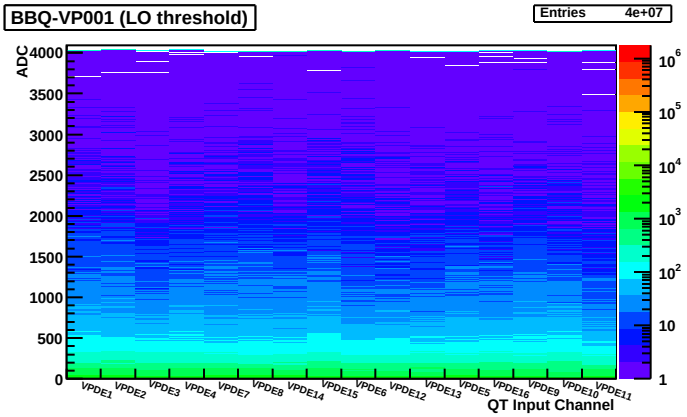

BBQ-BB002 (BBC west small tiles TAC)
Entries 4e+07
TAC
QT Input Channel

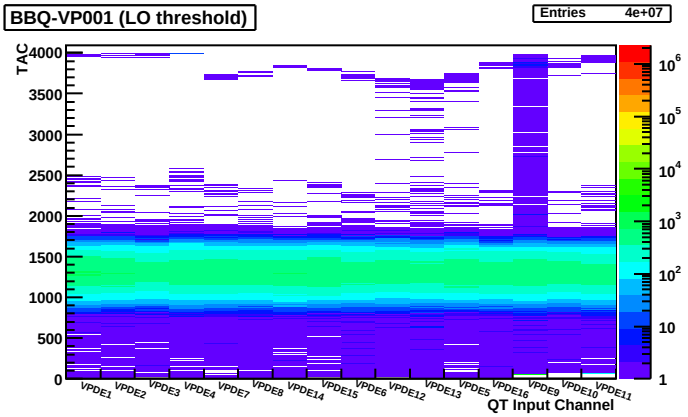

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4e+07
ADC
QT Input Channel

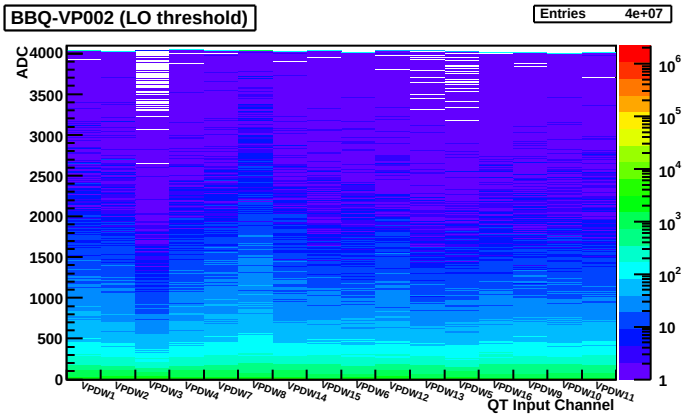

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4e+07
TAC
QT Input Channel

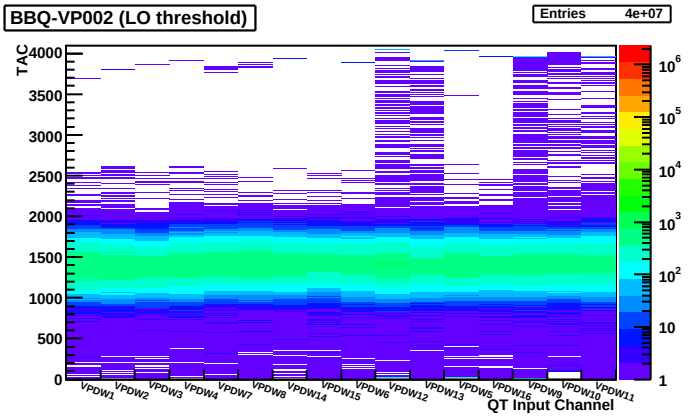

BBQ-ZD001 (ZDC TOWER)
Entries 4e+07
ADC

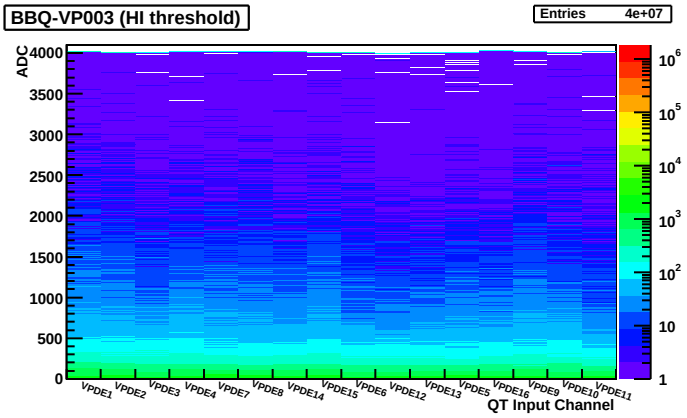

BBQ-ZD001 (ZDC TOWER)
Entries 4e+07
TAC

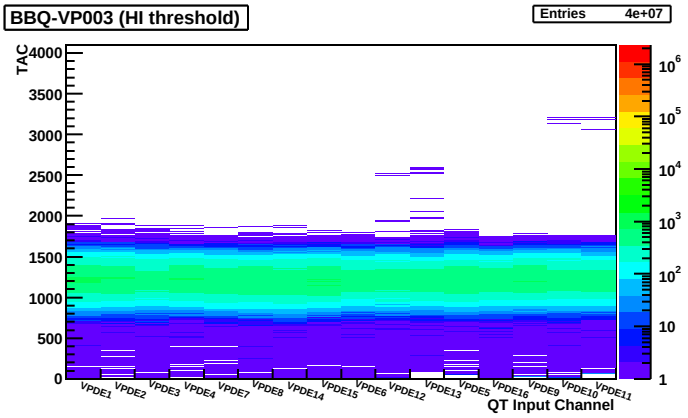

BBQ-VP001 (LO threshold)
Entries 4e+07
ADC
QT Input Channel

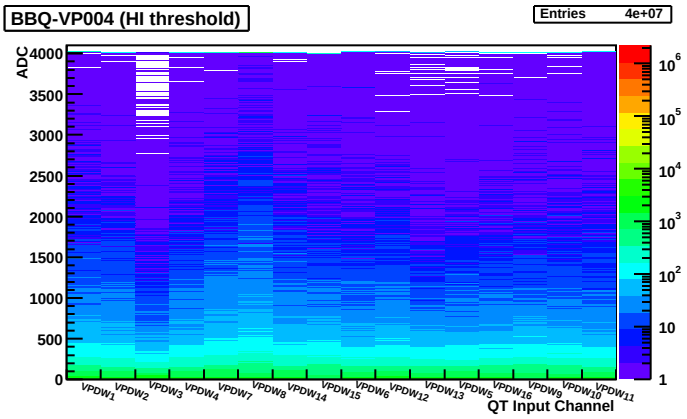

BBQ-VP001 (LO threshold)
Entries 4e+07
TAC
QT Input Channel

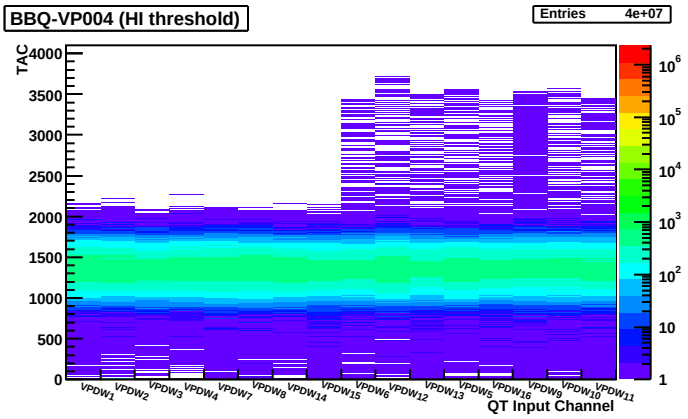

BBQ-VP002 (LO threshold)
Entries 4e+07
ADC
QT Input Channel

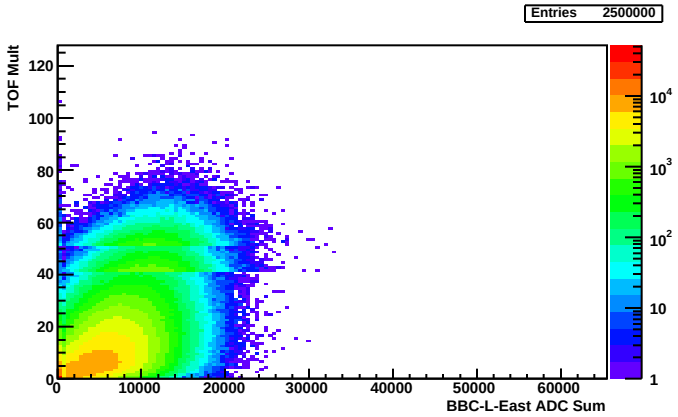

BBQ-VP002 (LO threshold)
Entries 4e+07
TAC
QT Input Channel

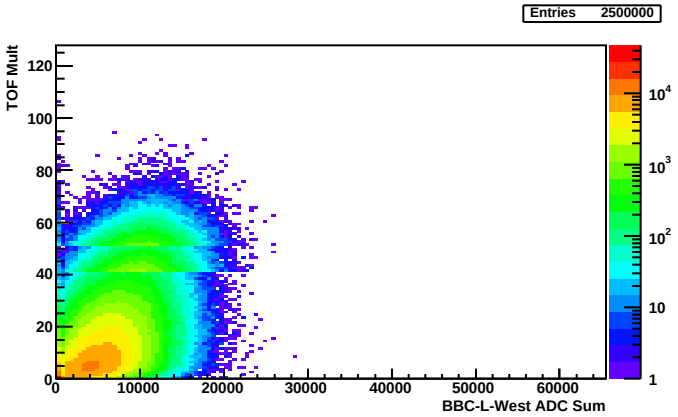

BBQ-VP003 (HI threshold)
Entries 4e+07
ADC
QT Input Channel

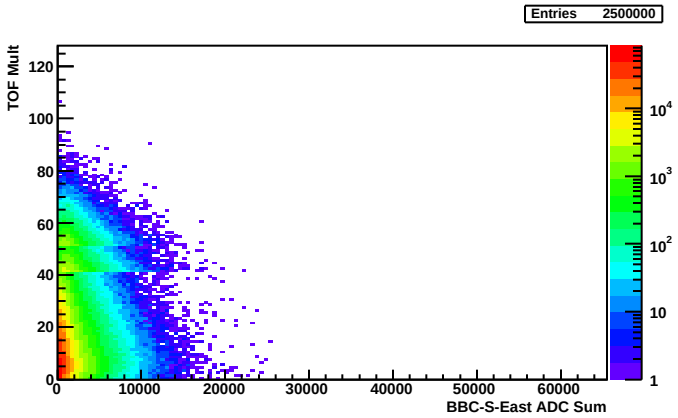

BBQ-VP003 (HI threshold)
Entries 4e+07
TAC
QT Input Channel

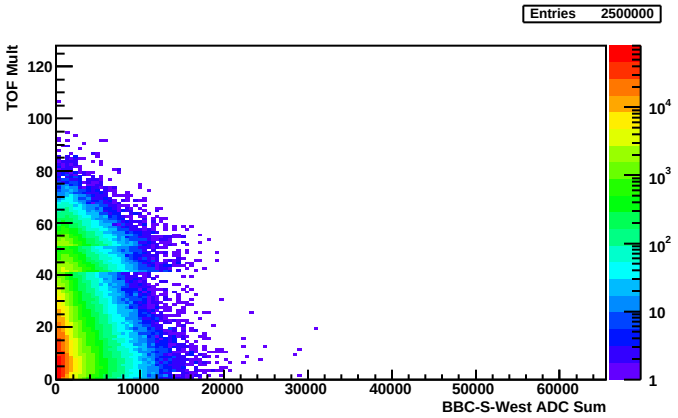

BBQ-VP004 (HI threshold)
Entries 4e+07
ADC
QT Input Channel

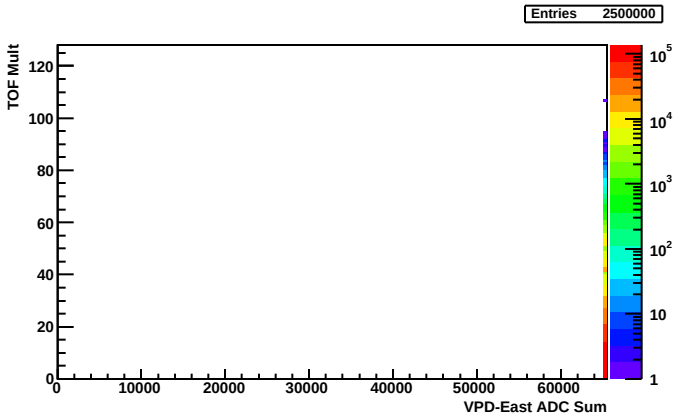

BBQ-VP004 (HI threshold)
Entries 4e+07
TAC
QT Input Channel

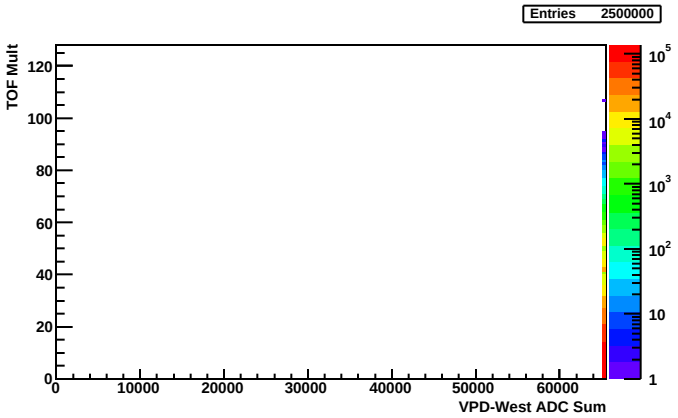

Entries 2500000
TOF Mult
BBC-L-East ADC Sum

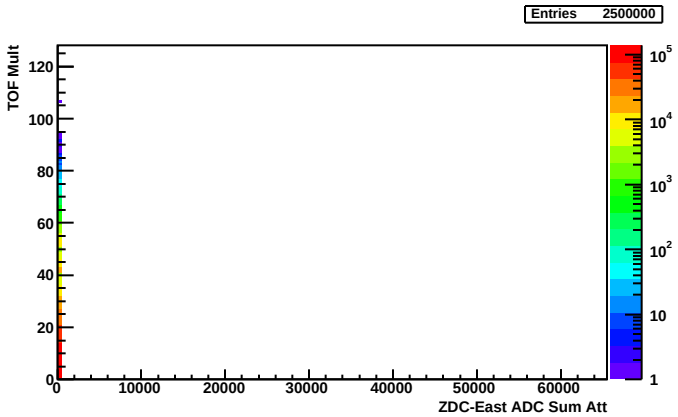

Entries 2500000
TOF Mult
BBC-L-West ADC Sum

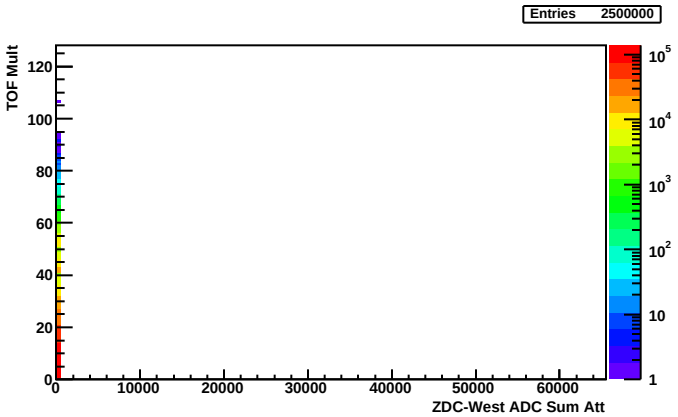

Entries 2500000
TOF Mult
BBC-S-East ADC Sum

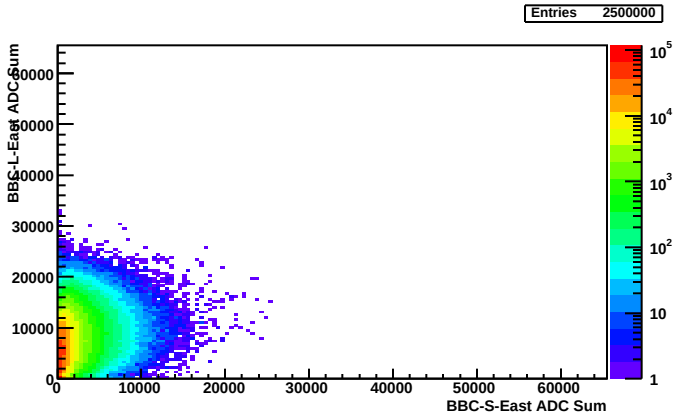

Entries 2500000
TOF Mult
BBC-S-West ADC Sum

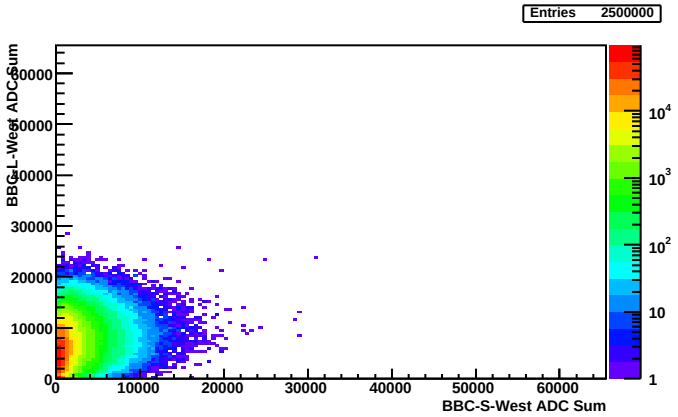

Entries 2500000
TOF Mult
VPD-East ADC Sum

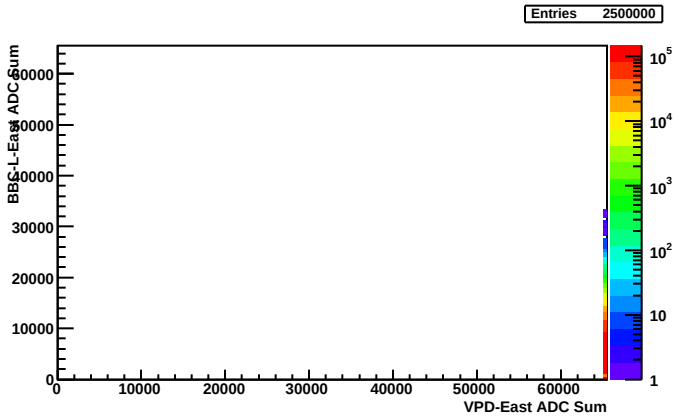

Entries 2500000
TOF Mult
VPD-West ADC Sum

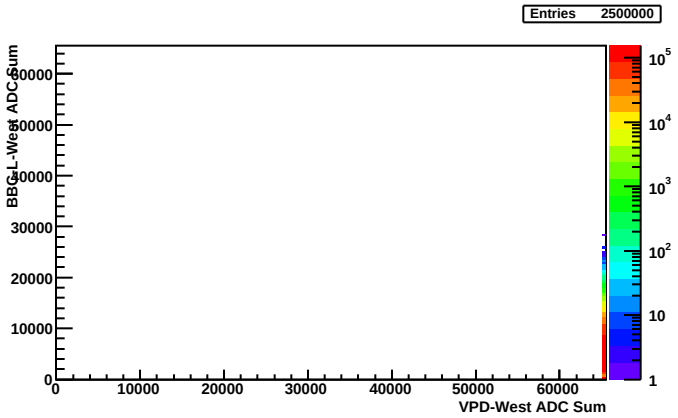

Entries 2500000
TOF Mult
ZDC-East ADC Sum Att

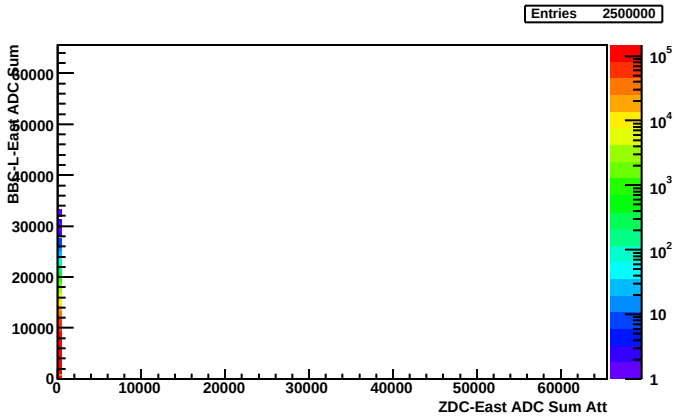

Entries 2500000
TOF Mult
ZDC-West ADC Sum Att

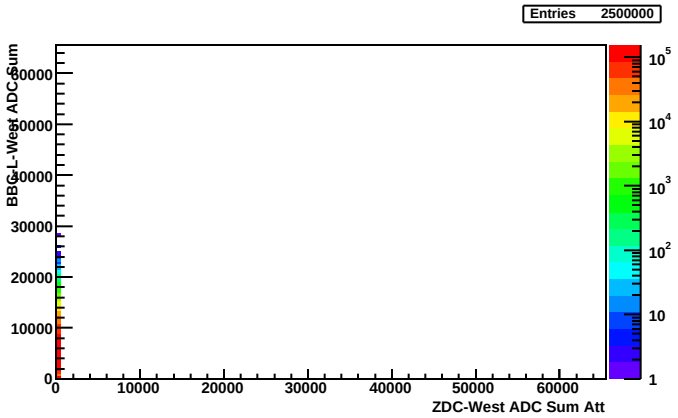

Entries 2500000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

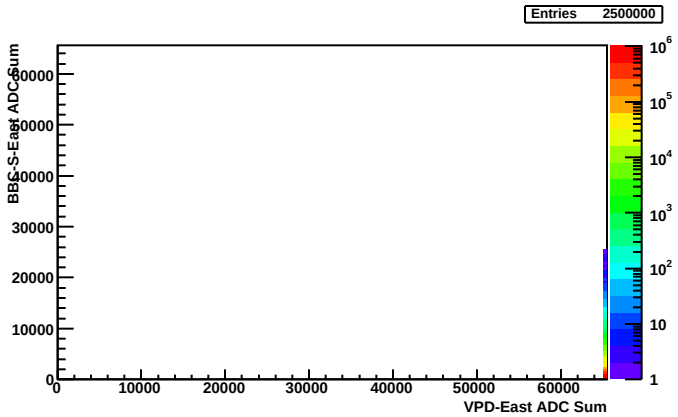

Entries 2500000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

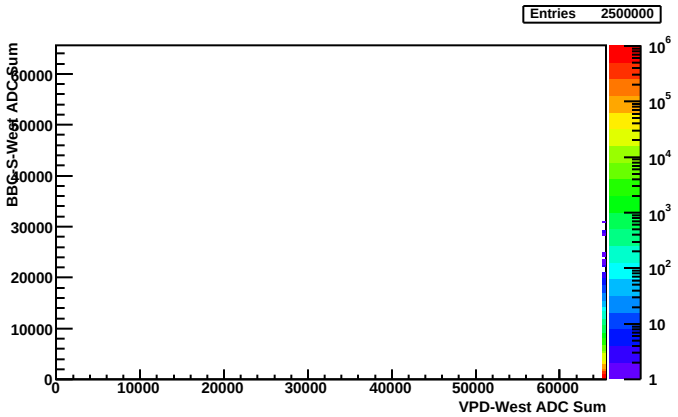

Entries 2500000
BBC-L-East ADC Sum
VPD-East ADC Sum

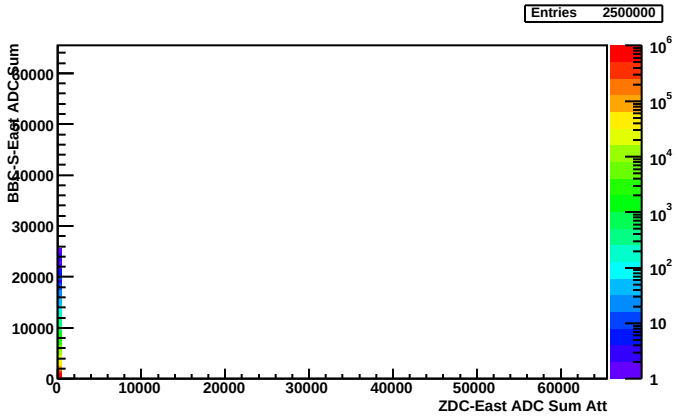

Entries 2500000
BBC-L-West ADC Sum
VPD-West ADC Sum

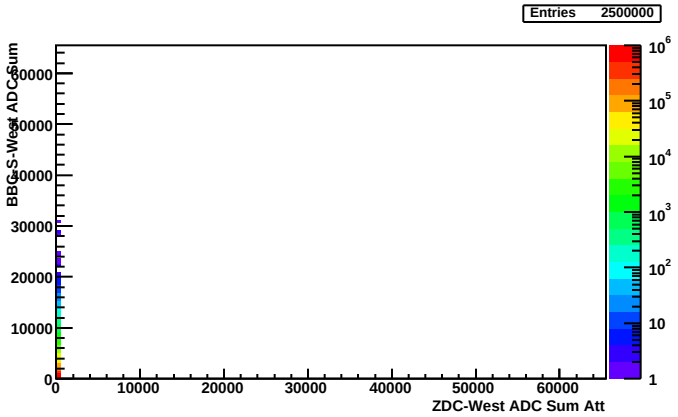

Entries 2500000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

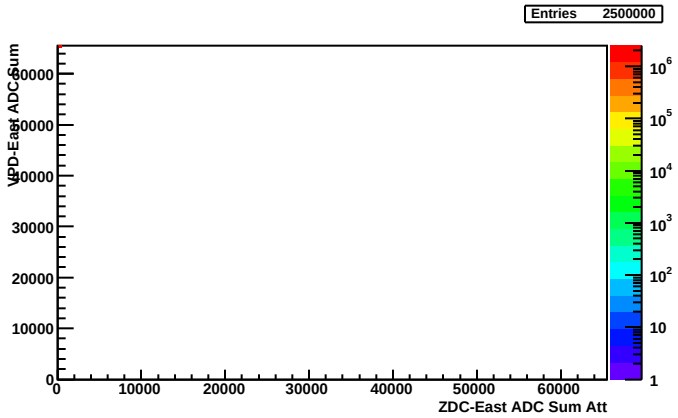

Entries 2500000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

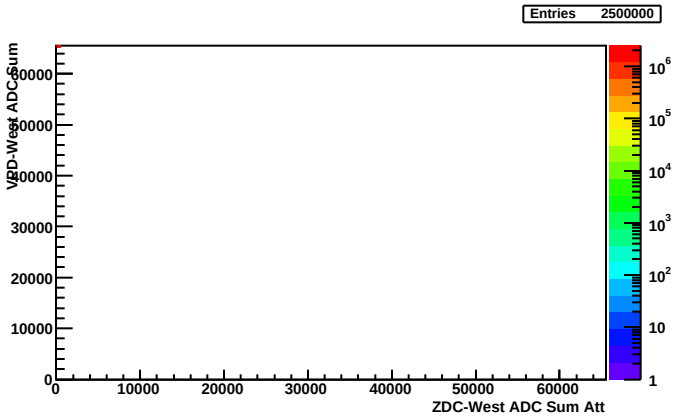

Entries 2500000
BBC-S-East ADC Sum
VPD-East ADC Sum

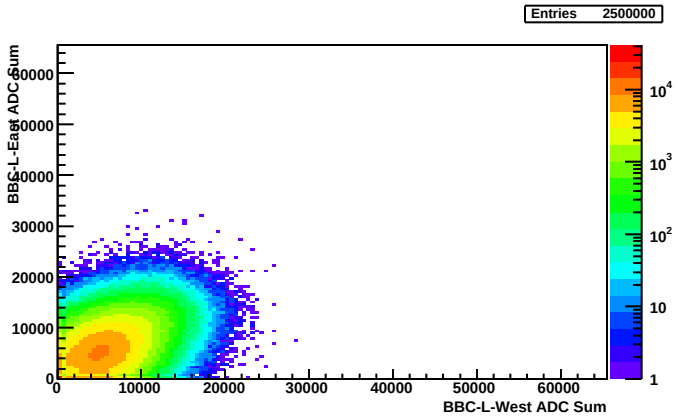

Entries 2500000
BBC-S-West ADC Sum
VPD-West ADC Sum

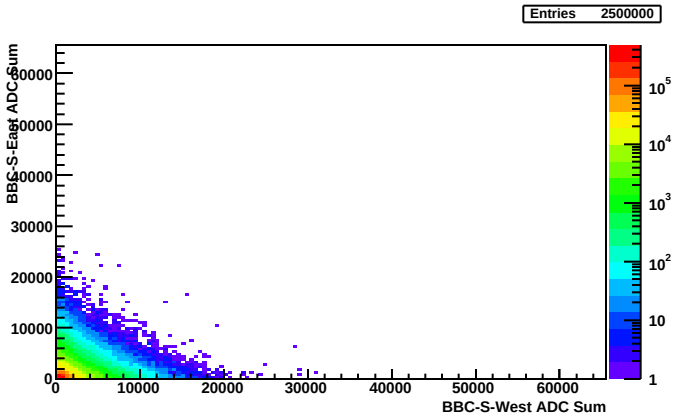

Entries 2500000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

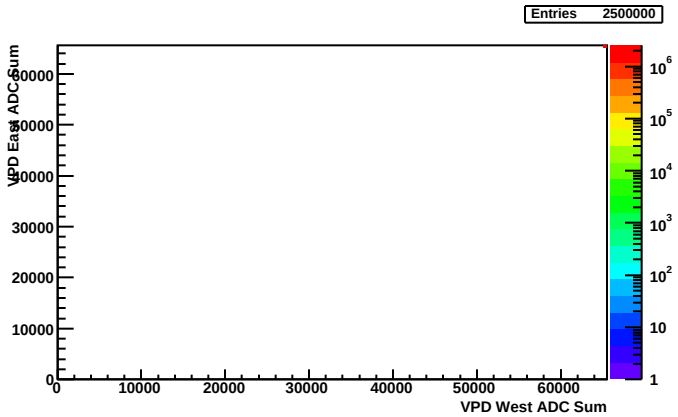

Entries 2500000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

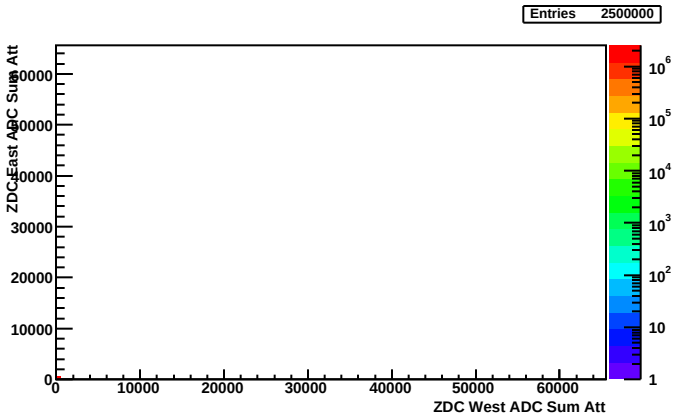

Entries 2500000
VPD-East ADC Sum
ZDC-East ADC Sum Att

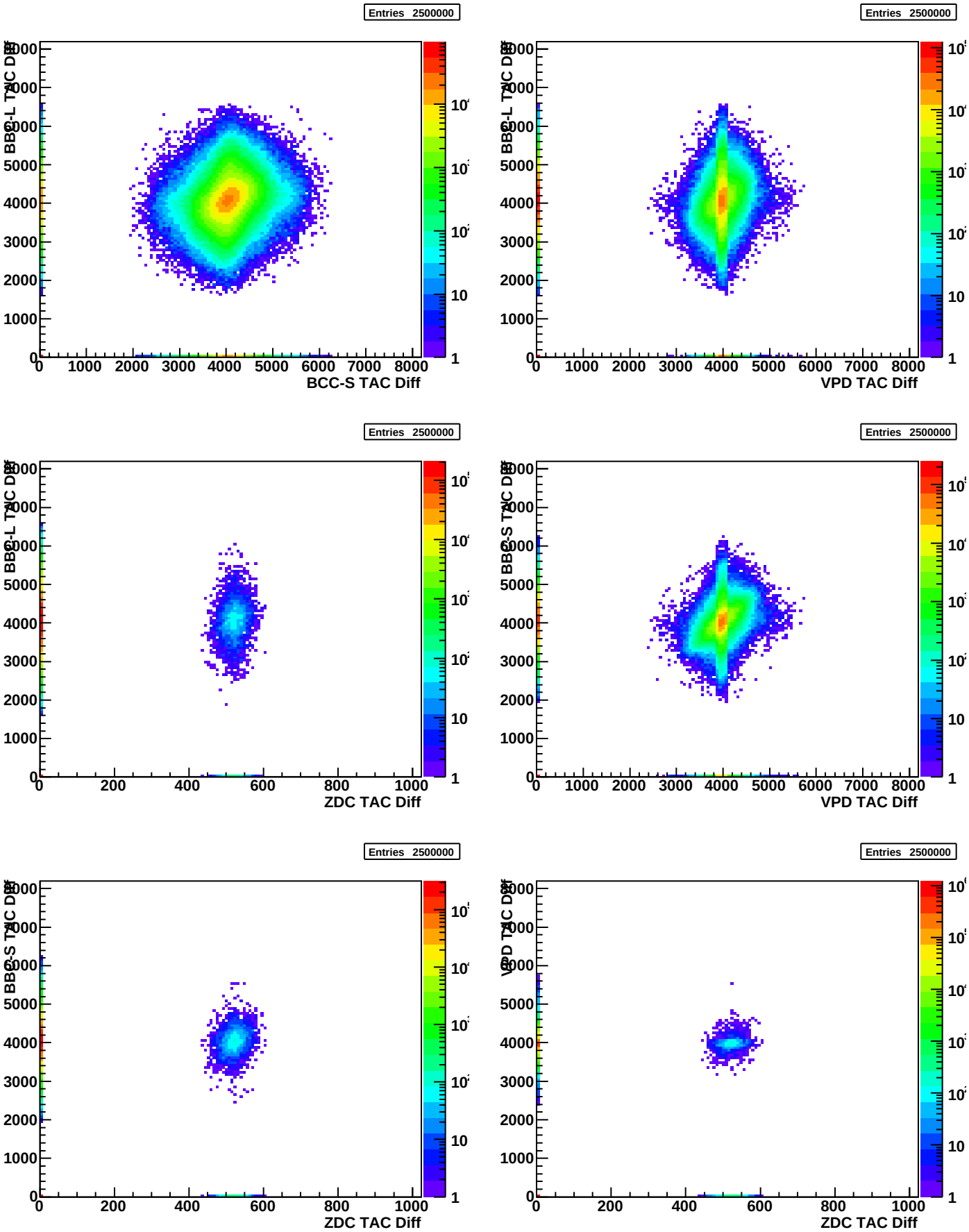

Entries 2500000
VPD-West ADC Sum
ZDC-West ADC Sum Att

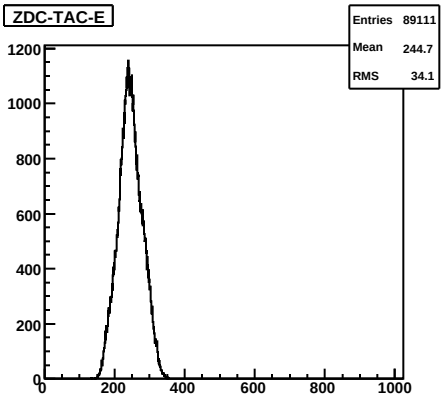

Entries 2500000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

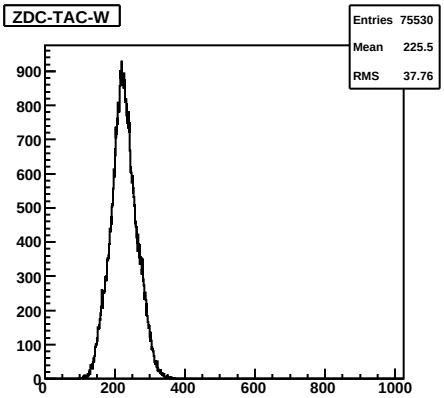

Entries 2500000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

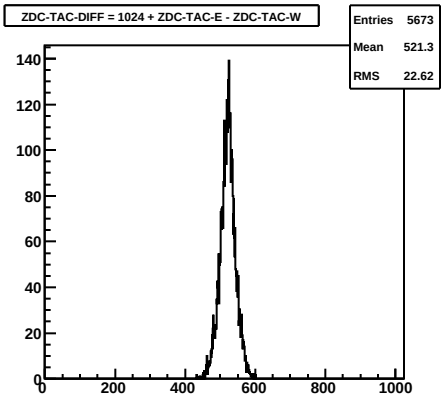

Entries 2500000
VPD East ADC Sum
VPD West ADC Sum

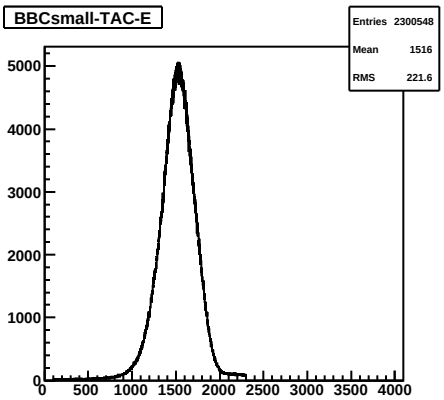

Entries 2500000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

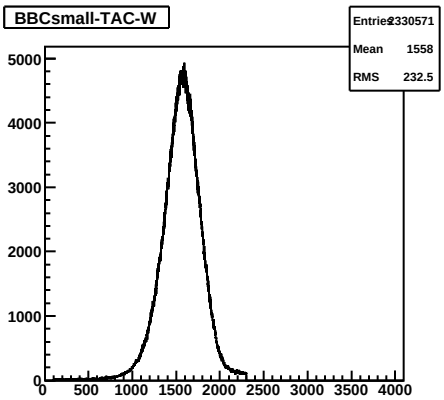

Entries 2500000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 2500000
BBC-L TAC Diff
VPD TAC Diff
Entries 2500000
BBC-L TAC Diff
ZDC TAC Diff
Entries 2500000
BBC-S TAC Diff
VPD TAC Diff
Entries 2500000
BBC-S TAC Diff
ZDC TAC Diff
Entries 2500000
VPD TAC Diff
ZDC TAC Diff

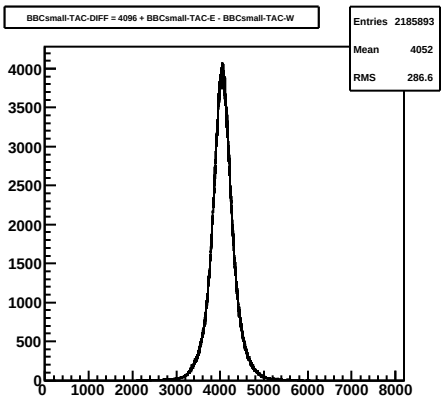

ZDC-TAC-E
Entries 89111
Mean 244.7
RMS 34.1

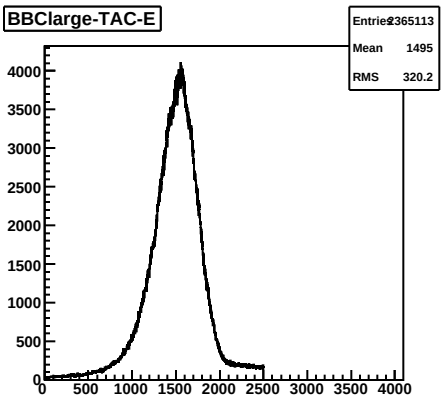

ZDC-TAC-W
Entries 75530
Mean 225.5
RMS 37.76

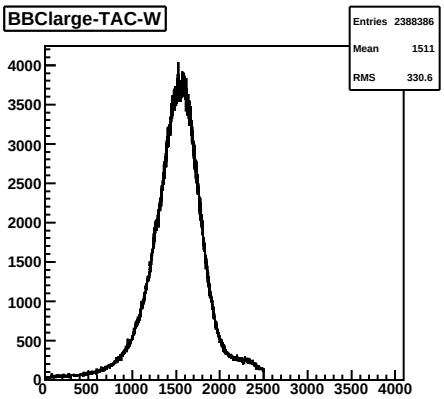

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 5673
Mean 521.3
RMS 22.62

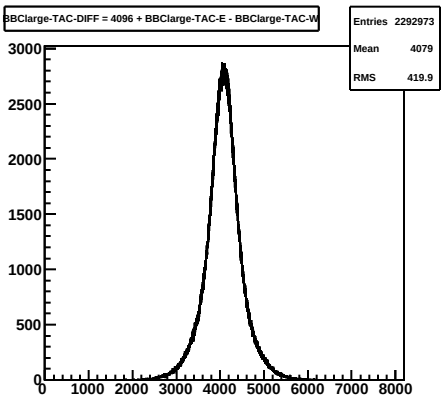

BBCsmall-TAC-E
Entries 2300548
Mean 1516
RMS 221.6

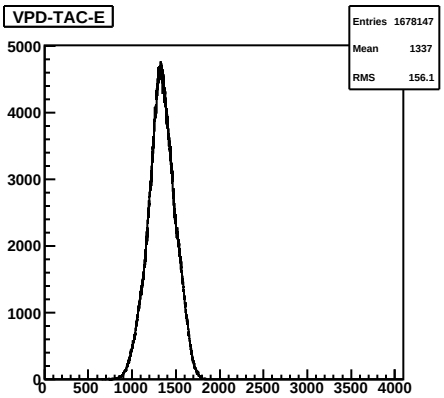

BBCsmall-TAC-W
Entries 2330571
Mean 1558
RMS 232.5

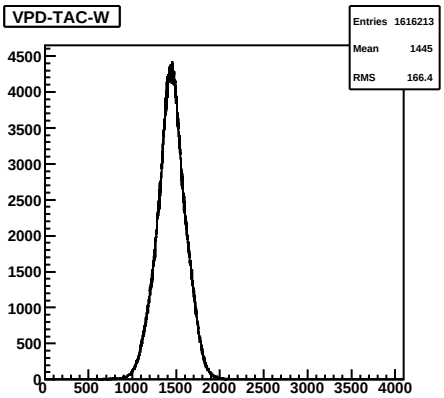

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 2185893
Mean 4052
RMS 286.6

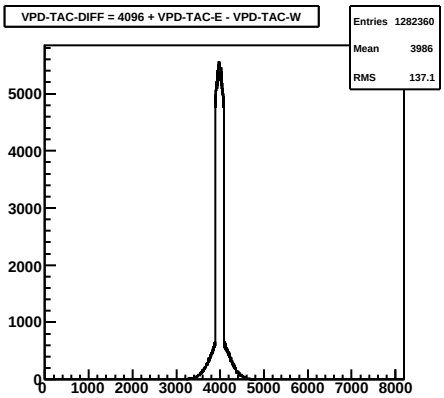

BBClarge-TAC-E
Entries 2365113
Mean 1495
RMS 320.2

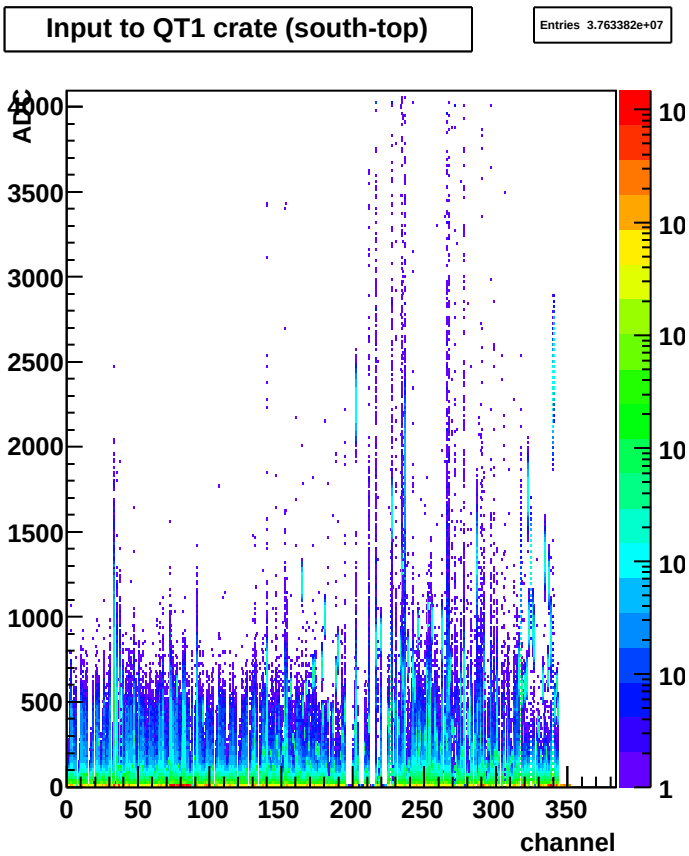

BBClarge-TAC-W
Entries 2388386
Mean 1511
RMS 330.6

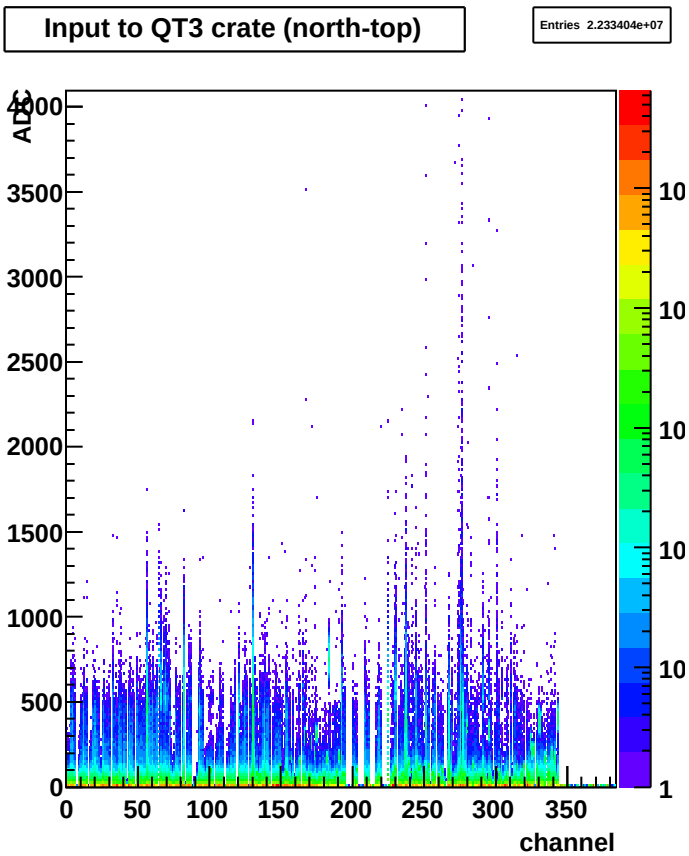

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 2292973
Mean 4079
RMS 419.9

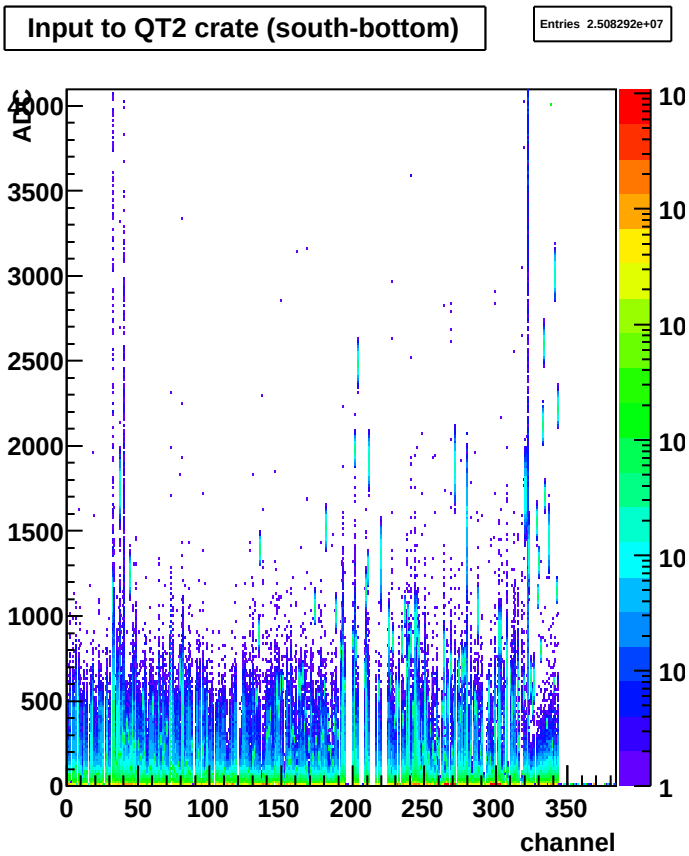

VPD-TAC-E
Entries 1678147
Mean 1337
RMS 156.1

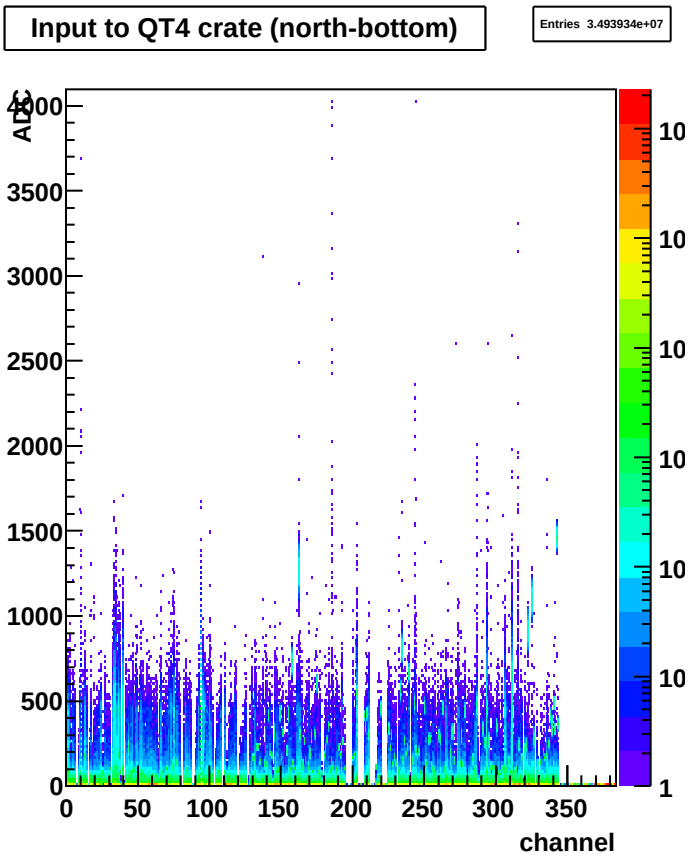

VPD-TAC-W
Entries 1616213
Mean 1445
RMS 166.4

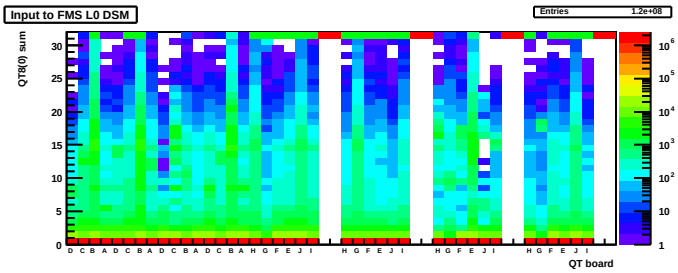

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1282360
Mean 3986
RMS 137.1

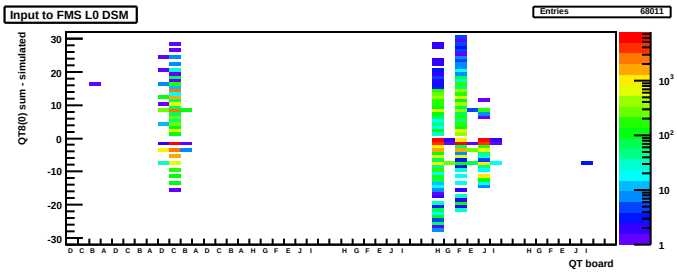

Input to QT1 crate (south-top)
Entries 3.763382e+07
ADC
channel

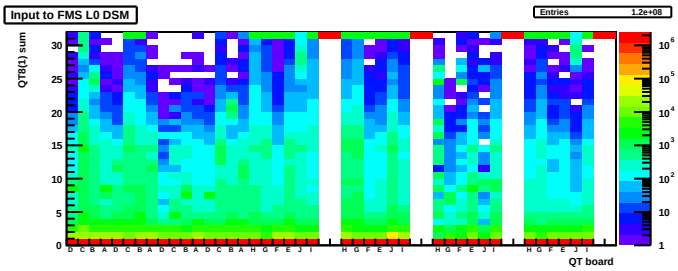

Input to QT3 crate (north-top)
Entries 2.233404e+07
ADC
channel

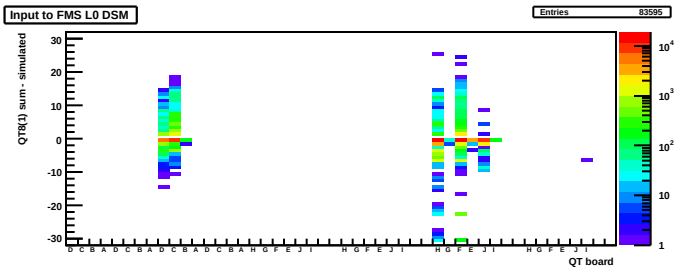

Input to QT2 crate (south-bottom)
Entries 2.508292e+07
ADC
channel

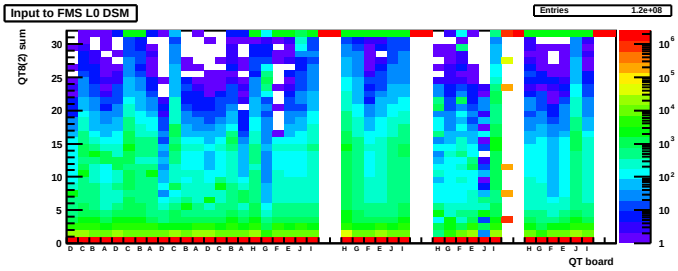

Input to QT4 crate (north-bottom)
Entries 3.493934e+07
ADC
channel

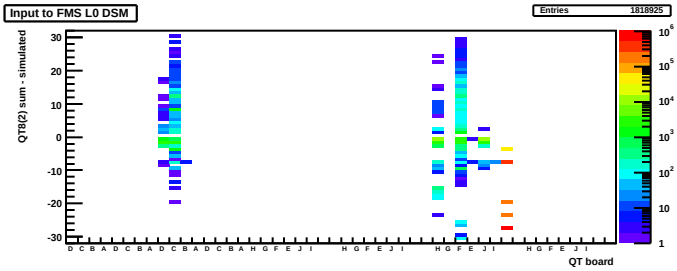

Input to FMS L0 DSM
Entries 1.2e+08
QT8(0) sum
QT board

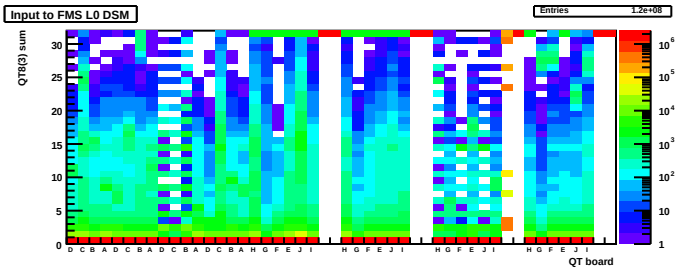

Input to FMS L0 DSM
Entries 68011
QT8(0) sum - simulated
QT board

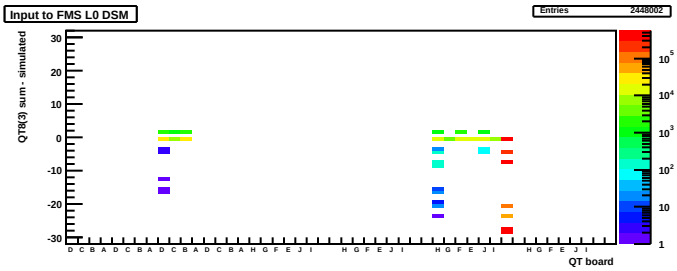

Input to FMS L0 DSM
Entries 1.2e+08
QT8(1) sum
QT board

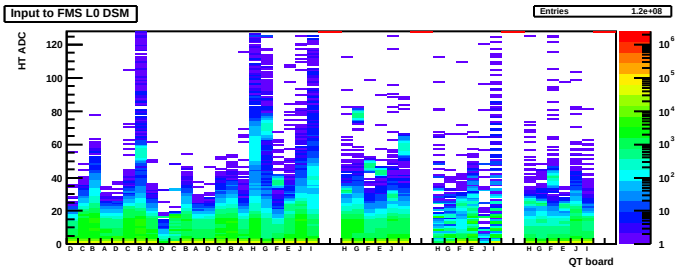

Input to FMS L0 DSM
Entries 83595
QT8(1) sum - simulated
QT board

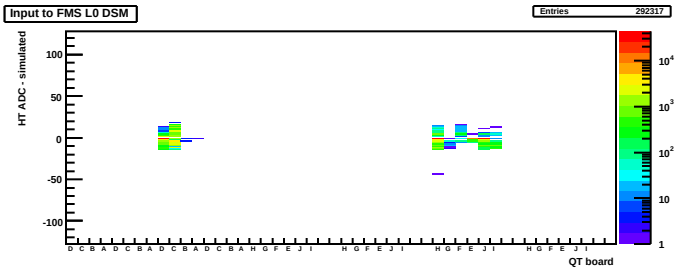

Input to FMS L0 DSM
Entries 1.2e+08
QT8(2) sum
QT board

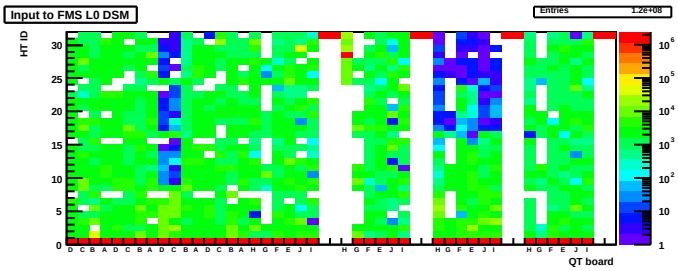

Input to FMS L0 DSM
Entries 1818925
QT8(2) sum - simulated
QT board

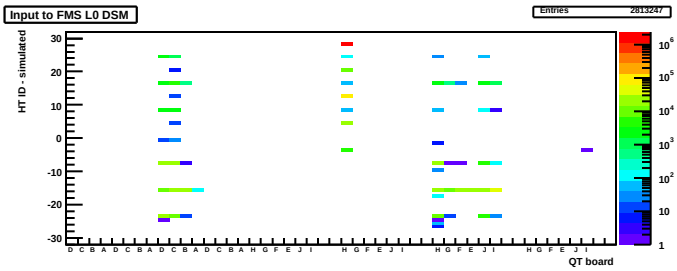

Input to FMS L0 DSM
Entries 1.2e+08
QT8(3) sum
QT board

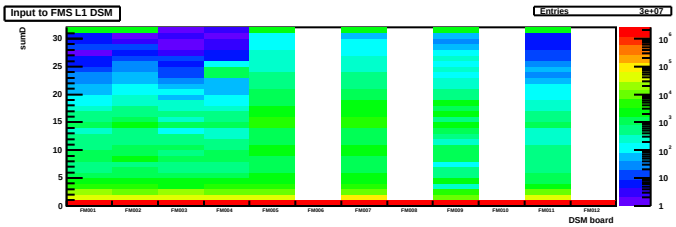

Input to FMS L0 DSM
Entries 2448002
QT8(3) sum - simulated
QT board

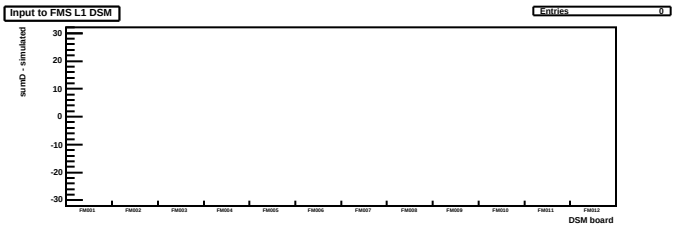

Input to FMS L0 DSM
Entries 1.2e+08
HT ADC
QT board

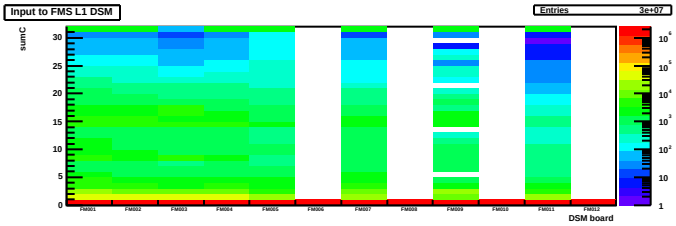

Input to FMS L0 DSM
Entries 292317
HT ADC - simulated
QT board

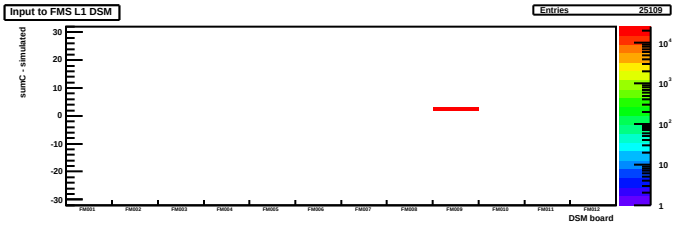

Input to FMS L0 DSM
Entries 1.2e+08
HT ID
QT board

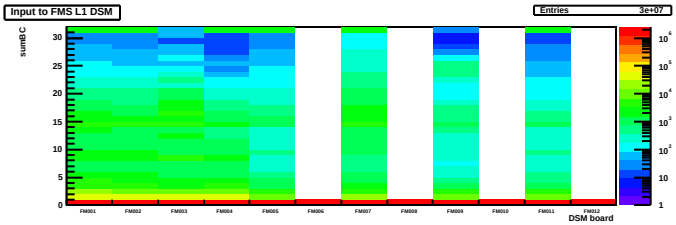

Input to FMS L0 DSM
Entries 2813247
HT ID - simulated
QT board

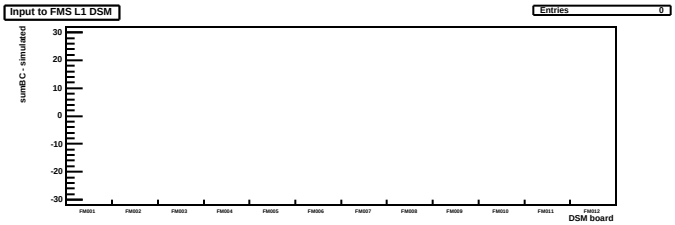

Input to FMS L1 DSM
Entries 3e+07
sumD
DSM board

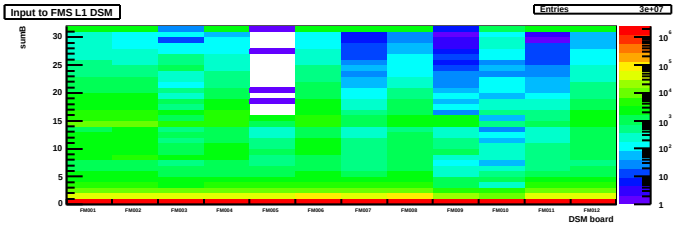

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

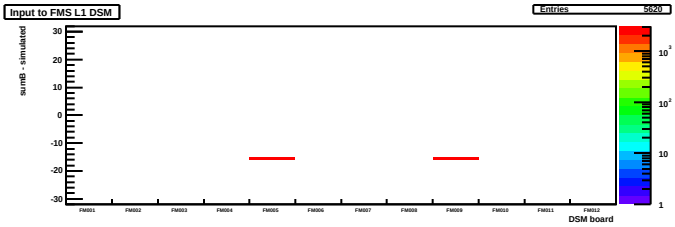

Input to FMS L1 DSM
Entries 3e+07
sumC
DSM board

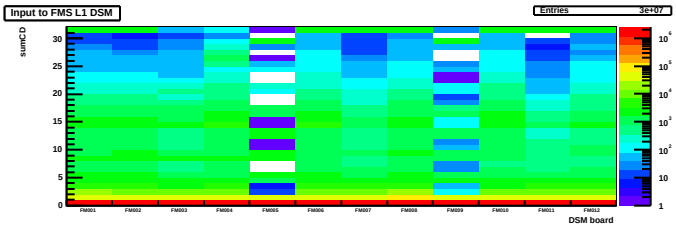

Input to FMS L1 DSM
Entries 25109
sumC - simulated
DSM board

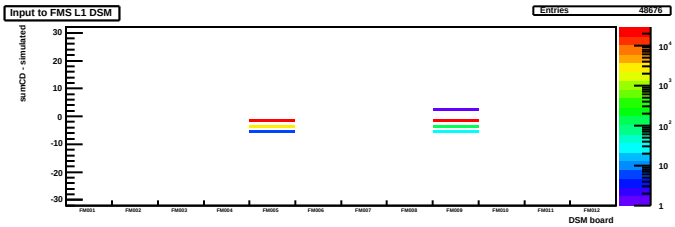

Input to FMS L1 DSM
Entries 3e+07
sumBC
DSM board

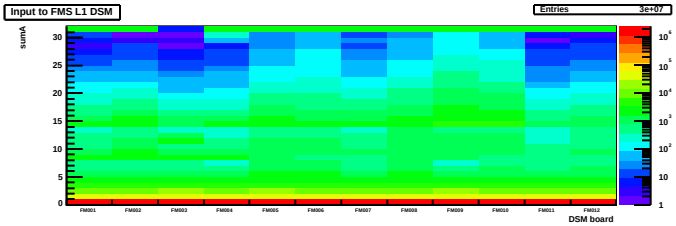

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

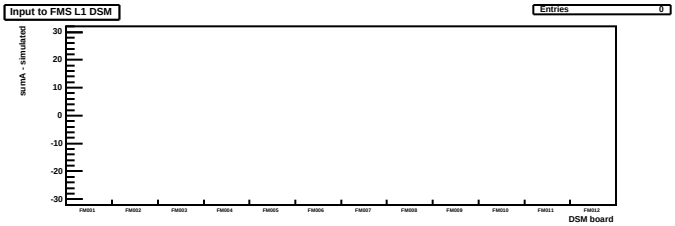

Input to FMS L1 DSM
Entries 3e+07
sumB
DSM board

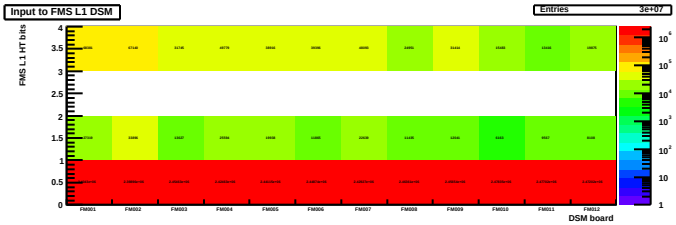

Input to FMS L1 DSM
Entries 5620
sumB - simulated
DSM board

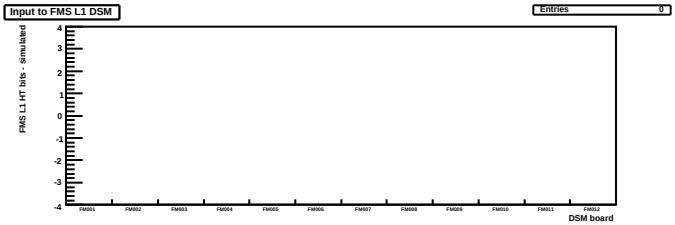

Input to FMS L1 DSM
Entries 3e+07
sumCD
DSM board

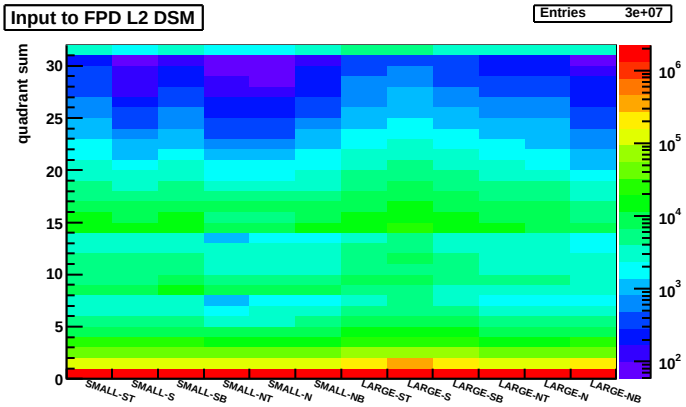

Input to FMS L1 DSM
Entries 48676
sumCD - simulated
DSM board

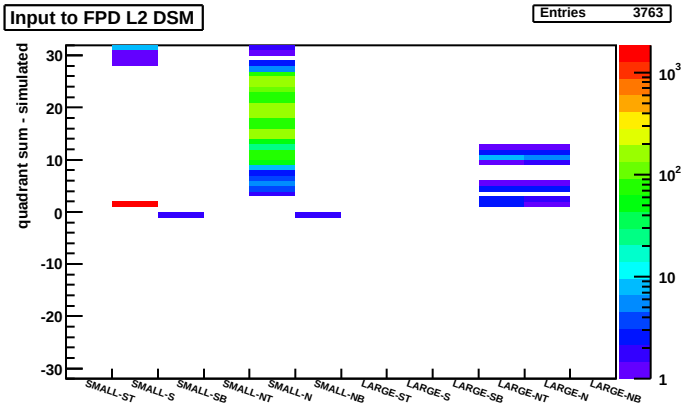

Input to FMS L1 DSM
Entries 3e+07
sumA
DSM board

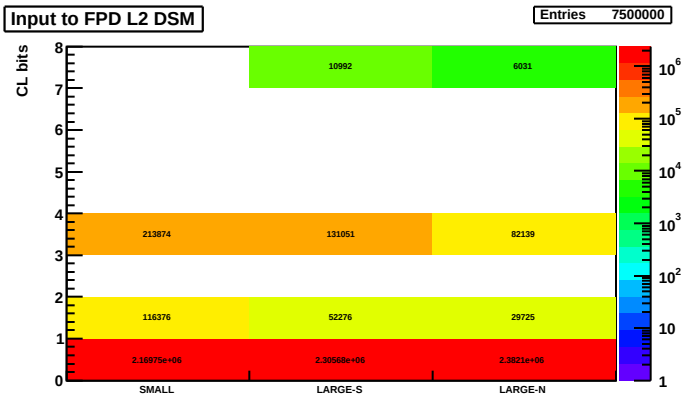

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

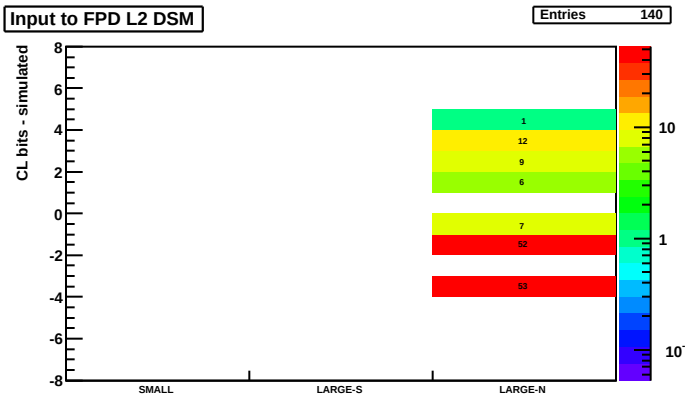

Input to FMS L1 DSM
Entries 3e+07
FMS L1 HT bits
DSM board

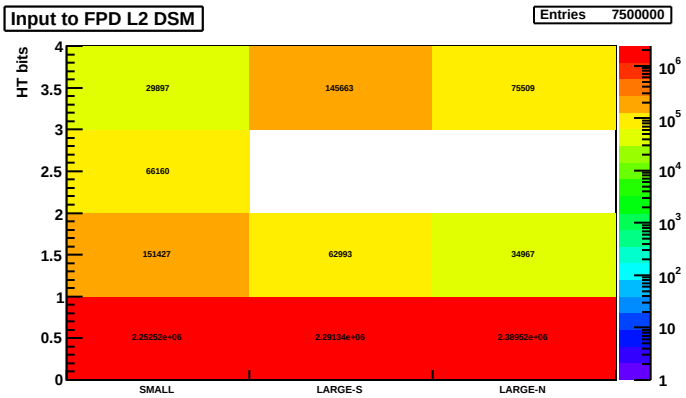

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

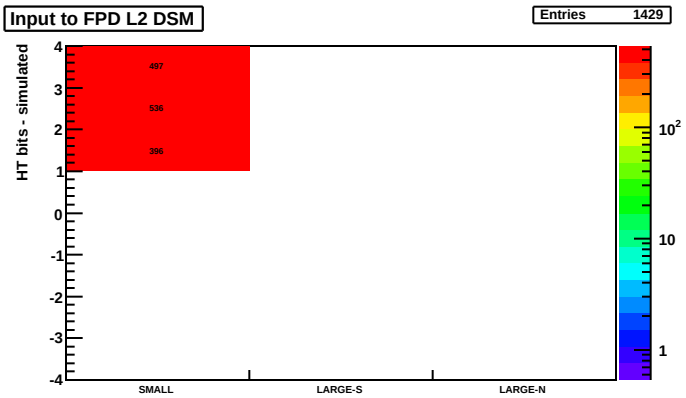

Input to FPD L2 DSM
Entries 3e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

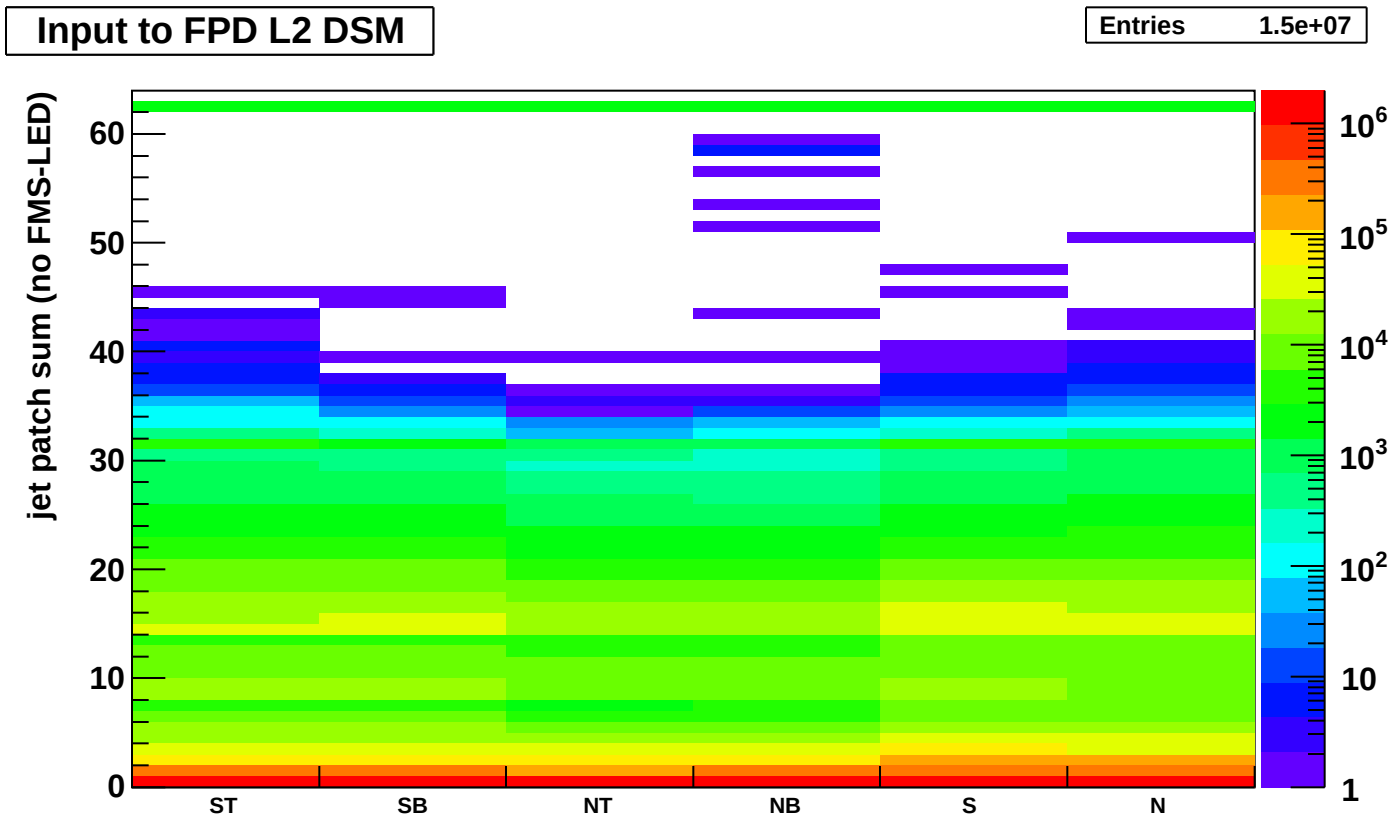

Input to FPD L2 DSM
Entries 3763
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

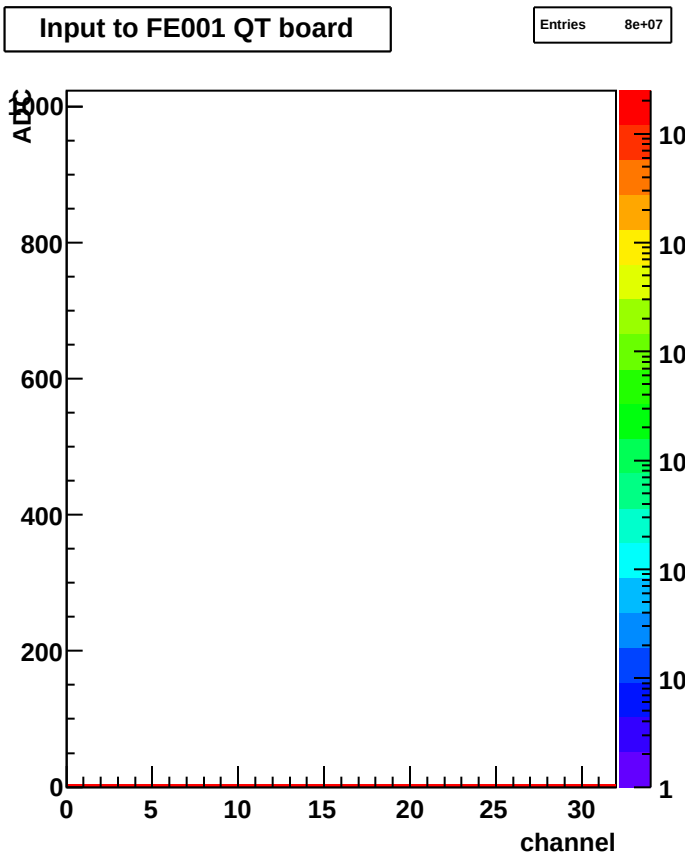

Input to FPD L2 DSM
Entries 7500000
CL bits
10992
6031
213874
131051
82139
116376
52276
29725
2.16975e+06
2.30568e+06
2.3821e+06
SMALL
LARGE-S
LARGE-N

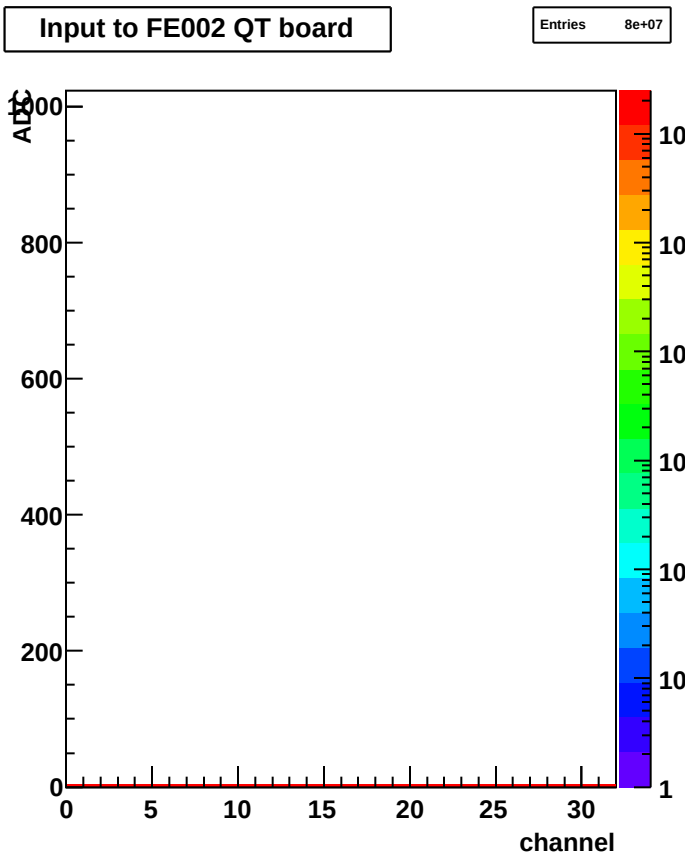

Input to FPD L2 DSM
Entries 140
CL bits - simulated
1
12
9
6
7
52
53
SMALL
LARGE-S
LARGE-N

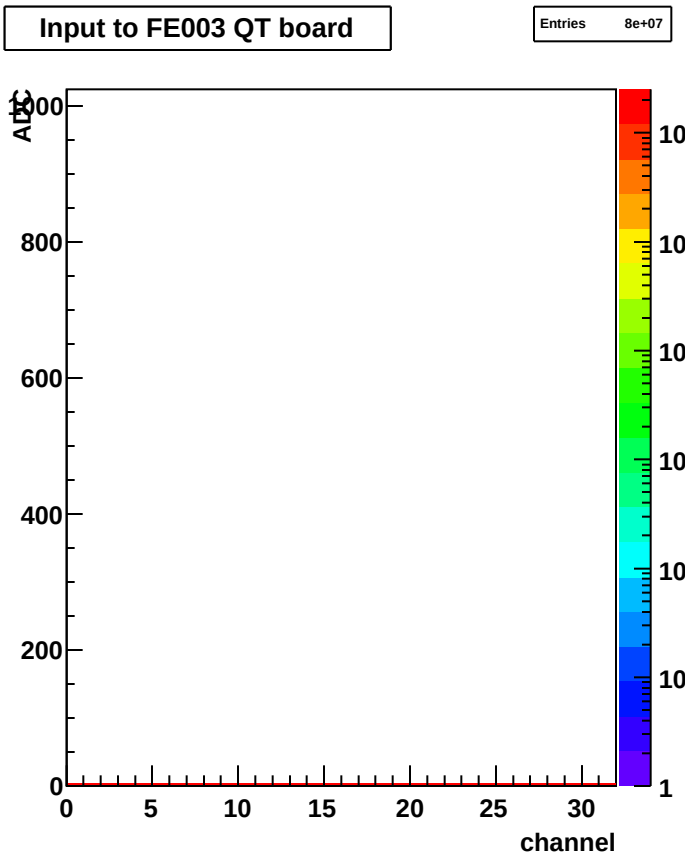

Input to FPD L2 DSM
Entries 7500000
HT bits
29897
145663
75509
66160
151427
62993
34967
2.25252e+06
2.29134e+06
2.38952e+06
SMALL
LARGE-S
LARGE-N

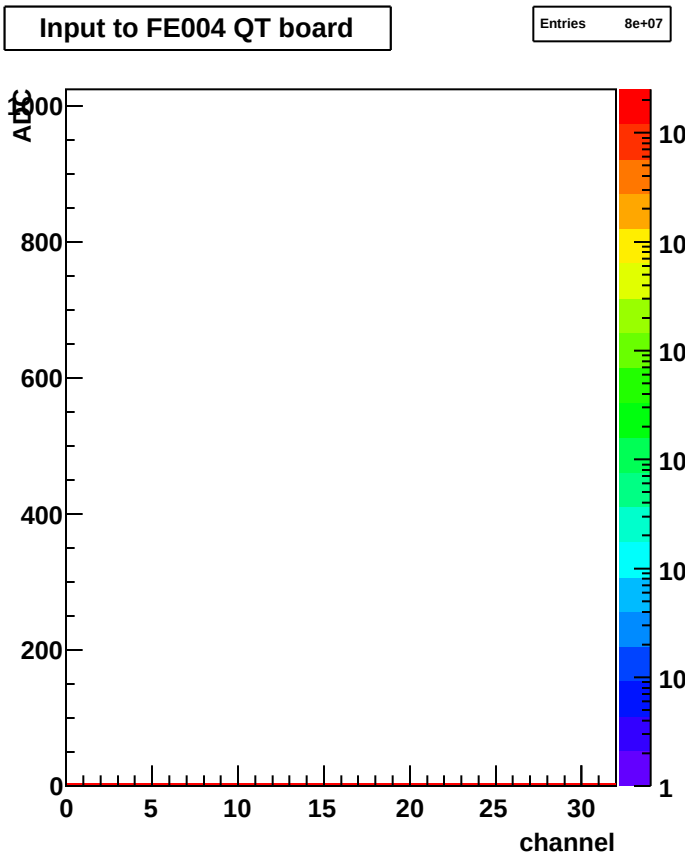

Input to FPD L2 DSM
Entries 1429
HT bits - simulated
497
536
396
SMALL
LARGE-S
LARGE-N

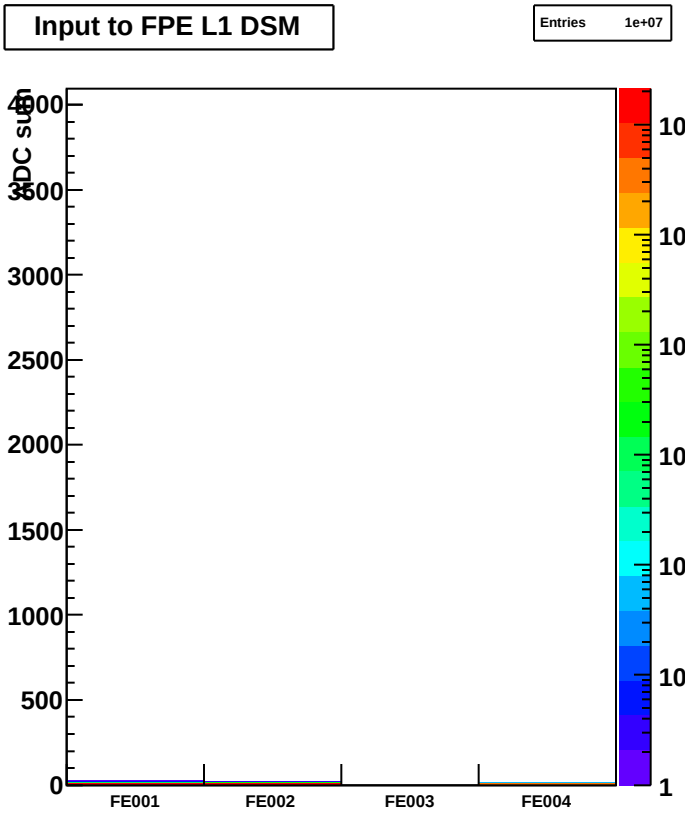

Input to FPD L2 DSM
Entries 1.5e+07
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6

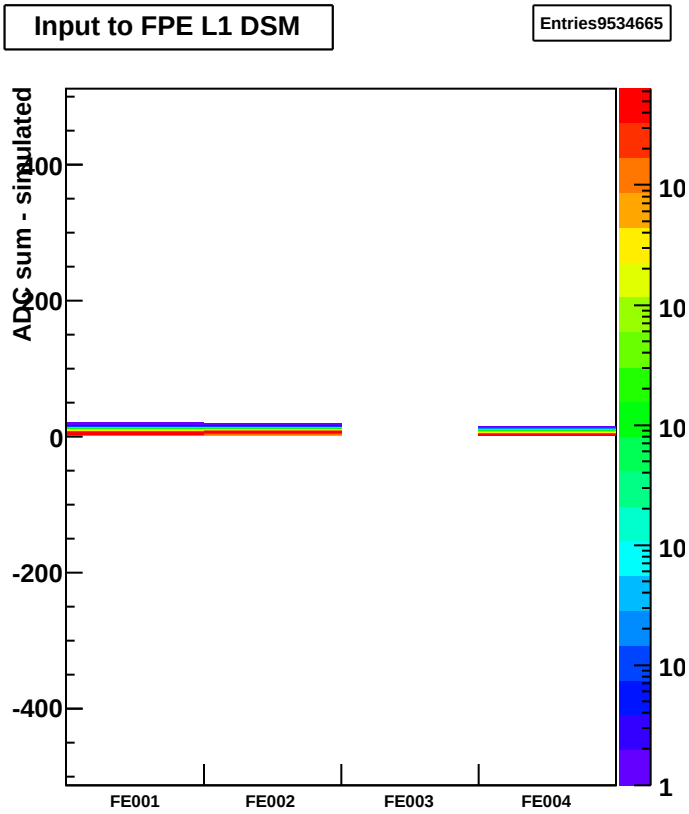

Input to FE001 QT board
Entries 8e+07
ADC
channel

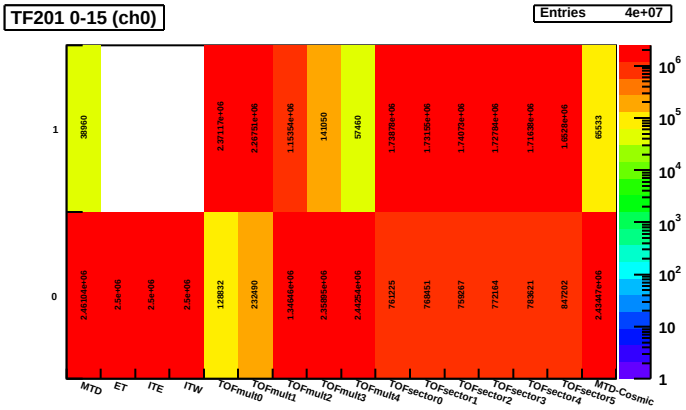

Input to FE002 QT board
Entries 8e+07
ADC
channel

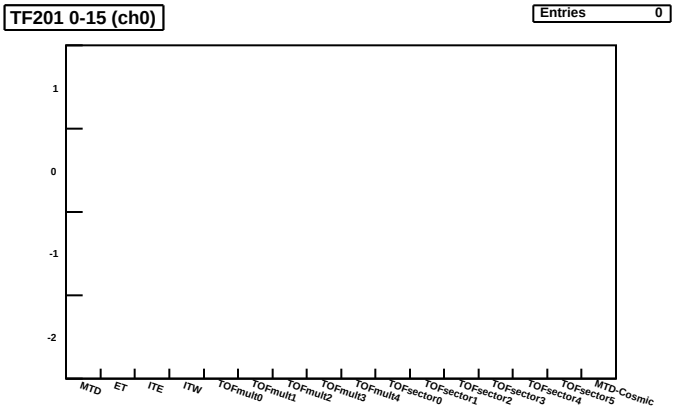

Input to FE003 QT board
Entries 8e+07
ADC
channel

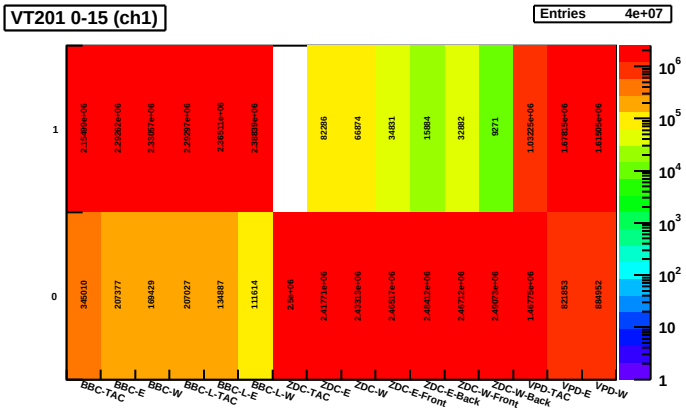

Input to FE004 QT board
Entries 8e+07
ADC
channel

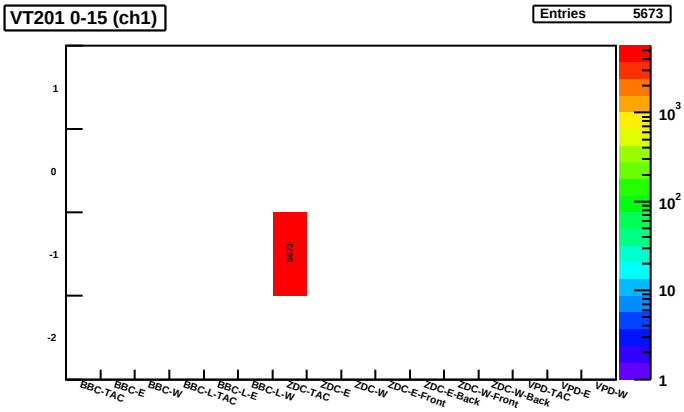

Input to FPE L1 DSM
Entries 1e+07
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

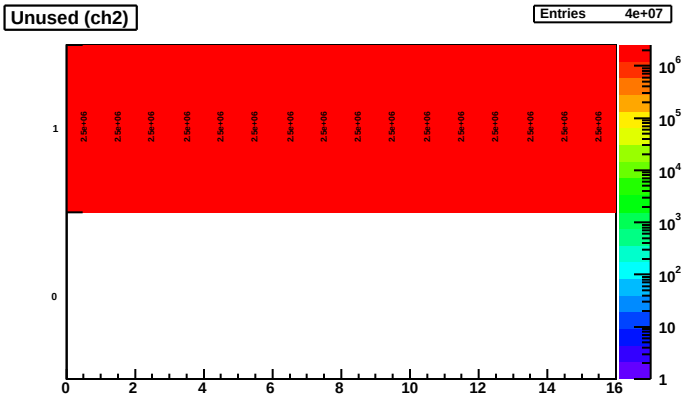

Input to FPE L1 DSM
Entries9534665
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

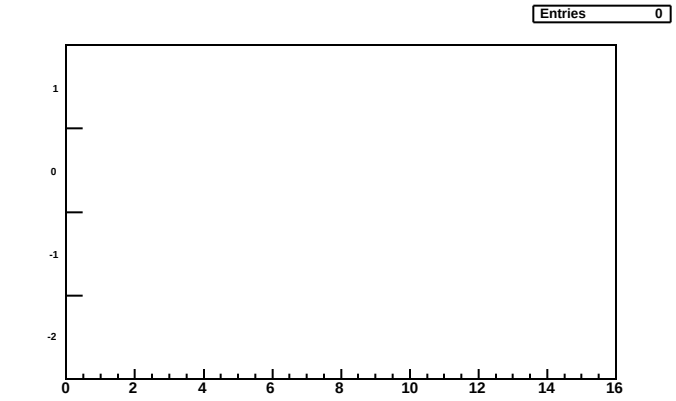

TF201 0-15 (ch0)
Entries 4e+07
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

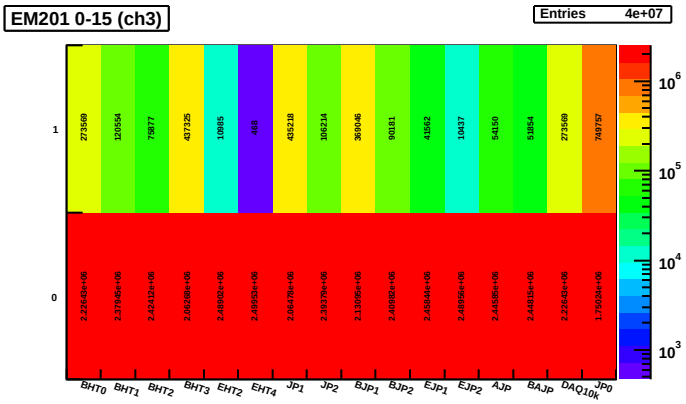

TF201 0-15 (ch0)
Entries 0
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

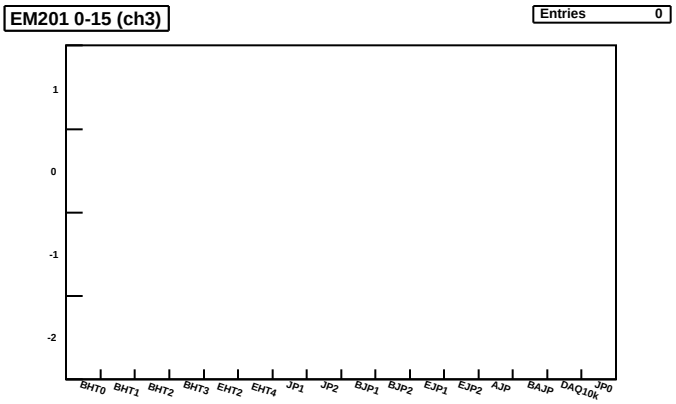

VT201 0-15 (ch1)
Entries 4e+07
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 5673
5673
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

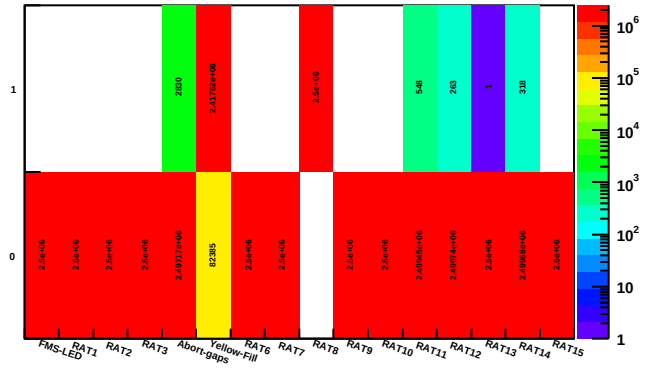

Unused (ch2)
Entries 4e+07

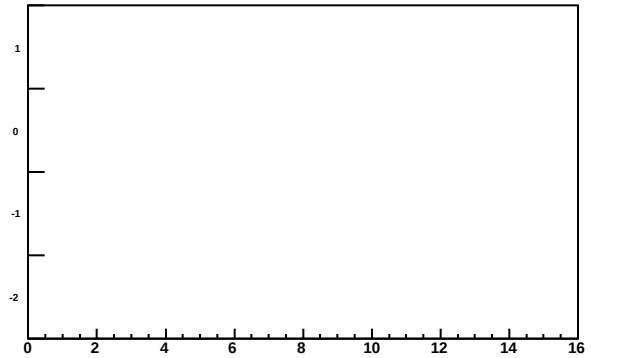

Entries 0


EM201 0-15 (ch3)
Entries 4e+07
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

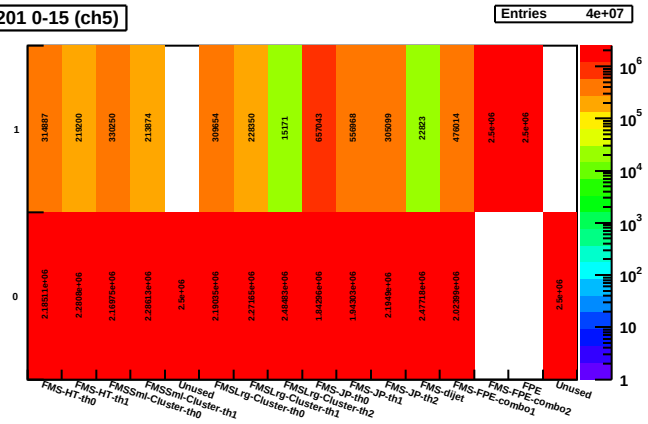

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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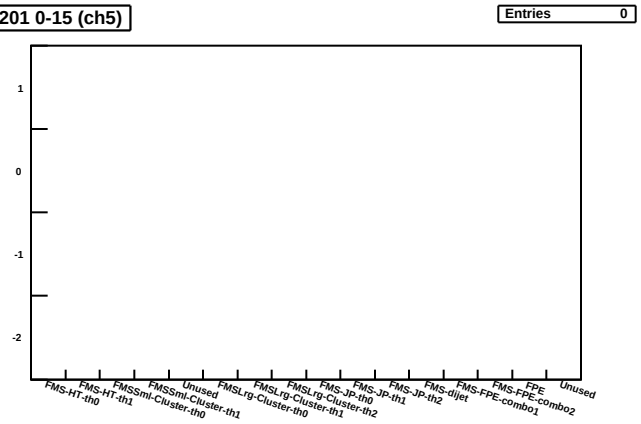
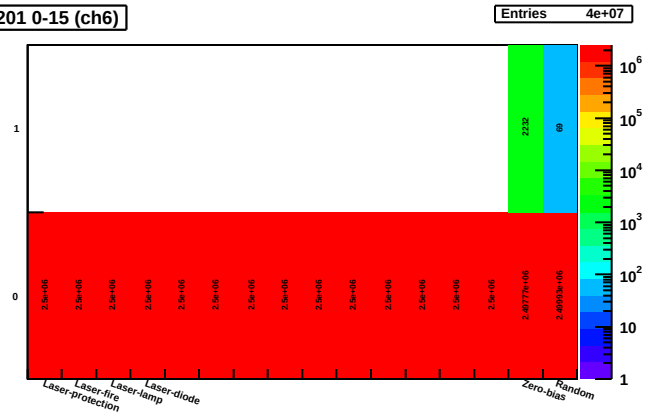
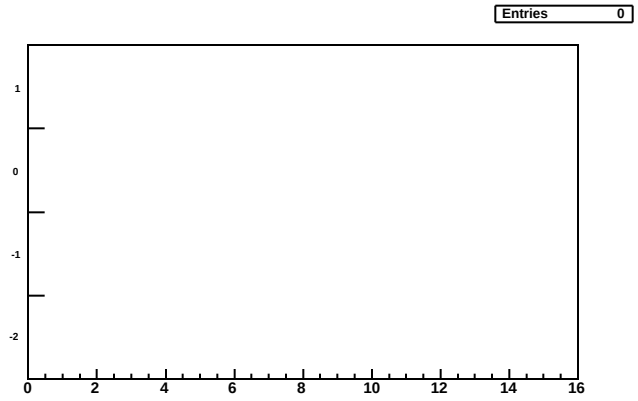
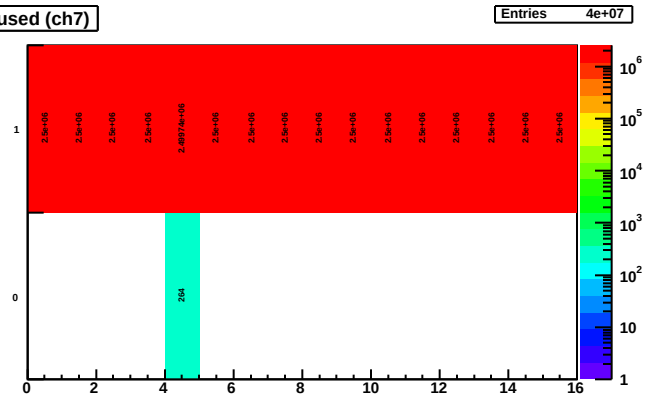
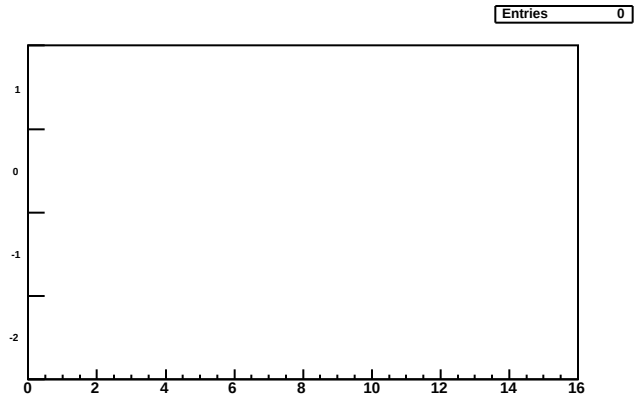


ST201 0-15 (ch6)





Unused (ch7)