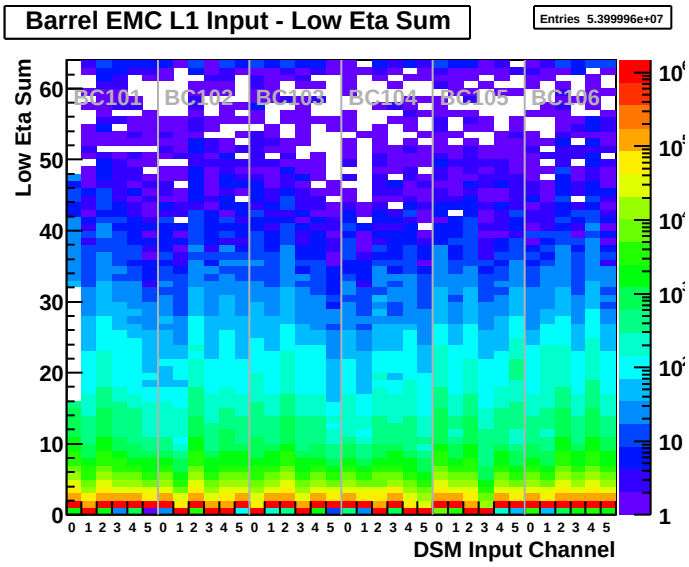
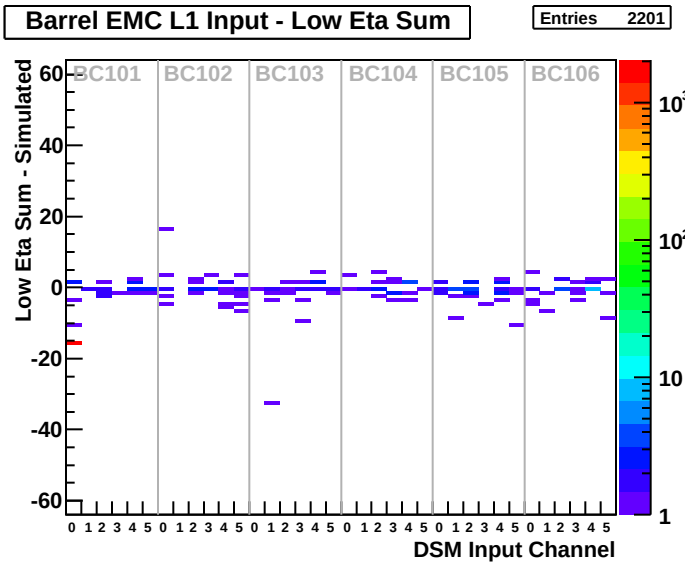
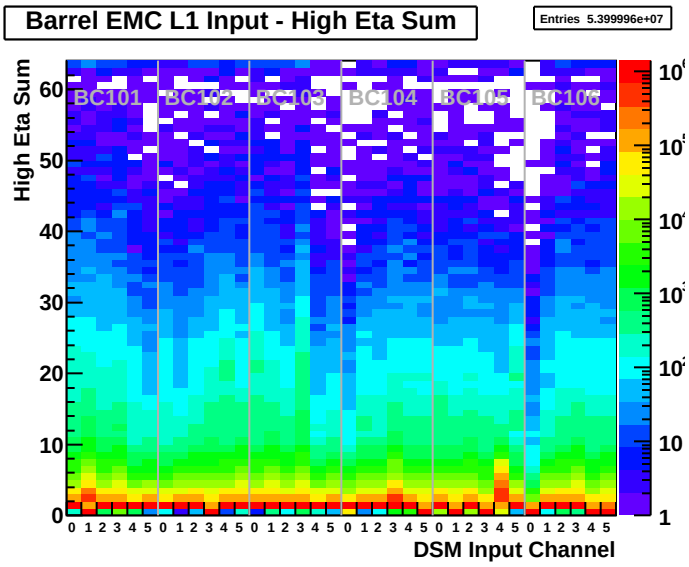
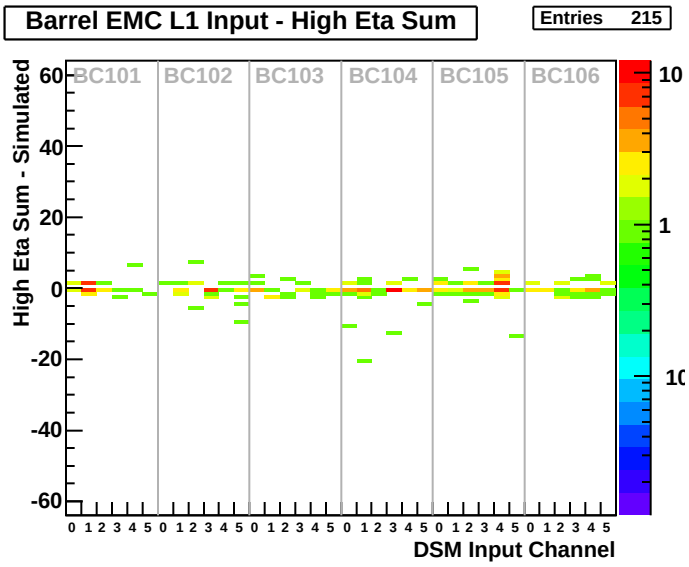
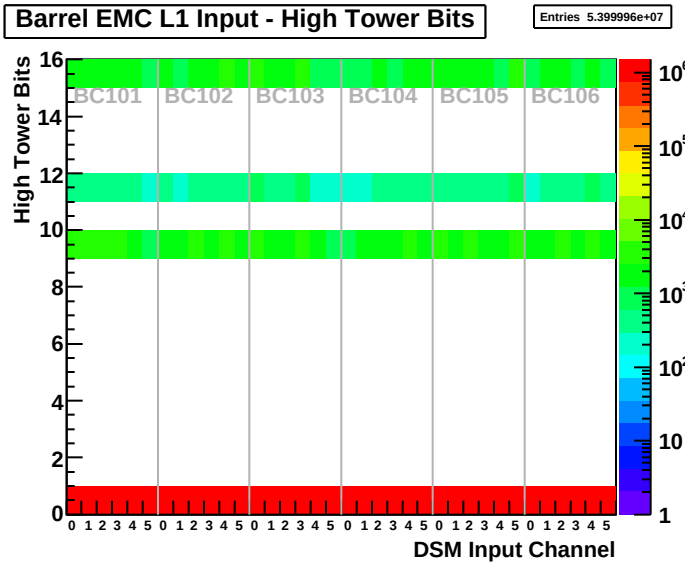
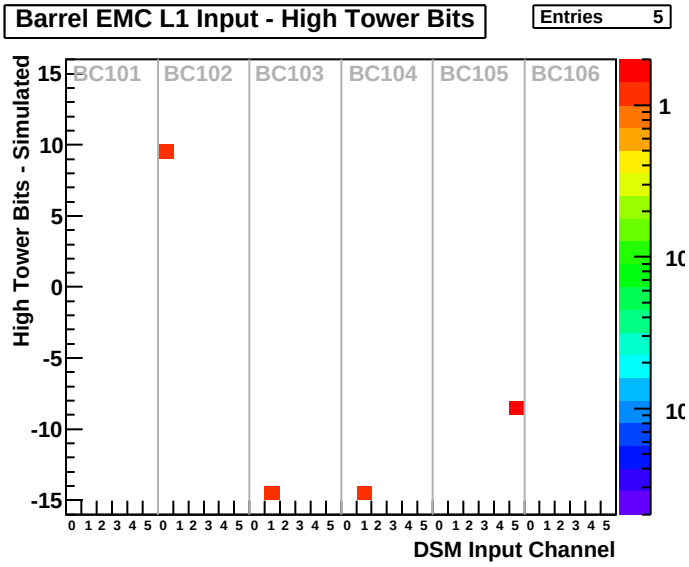

Barrel EMC L1 Input - Low Eta Sum
Entries 5.399996e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

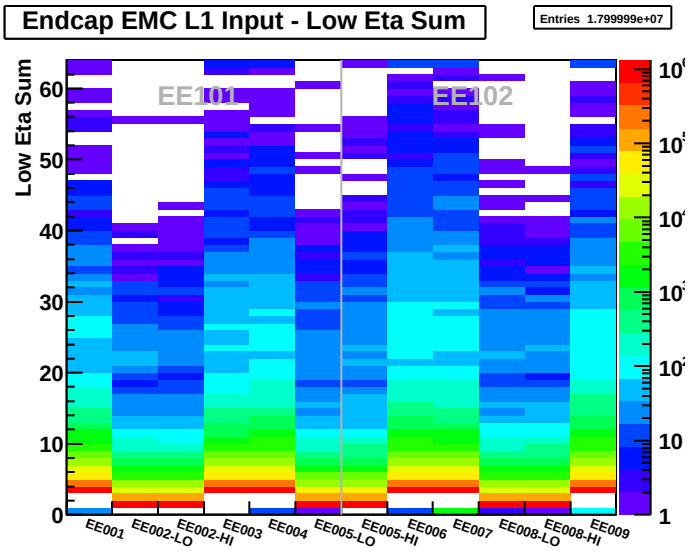

Barrel EMC L1 Input - Low Eta Sum
Entries 2201
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

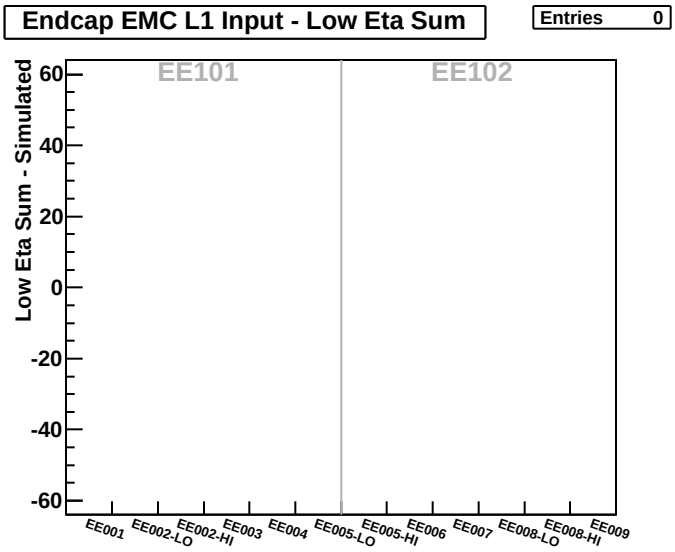

Barrel EMC L1 Input - High Eta Sum
Entries 5.399996e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

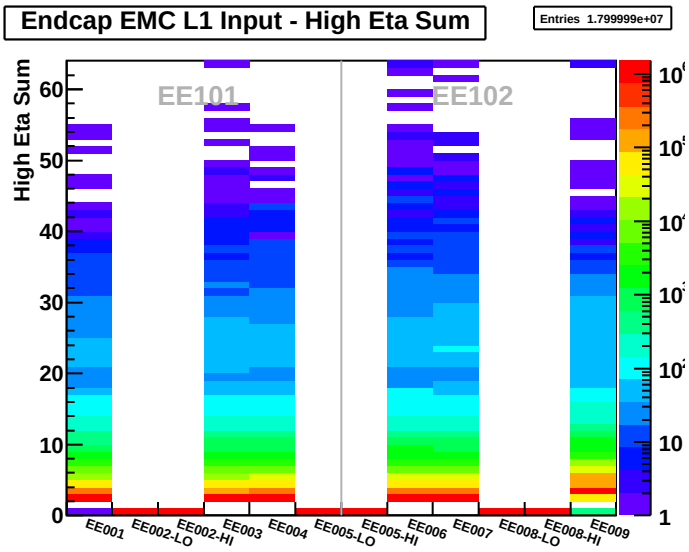

Barrel EMC L1 Input - High Eta Sum
Entries 215
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

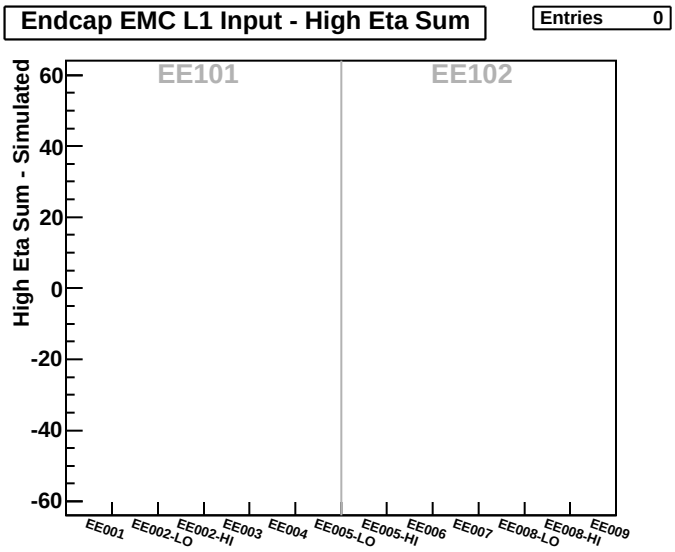

Barrel EMC L1 Input - High Tower Bits
Entries 5.399996e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

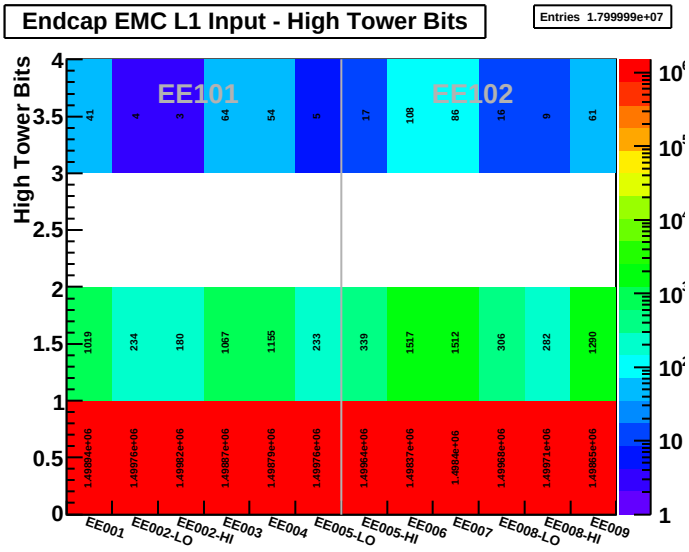

Barrel EMC L1 Input - High Tower Bits
Entries 5
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

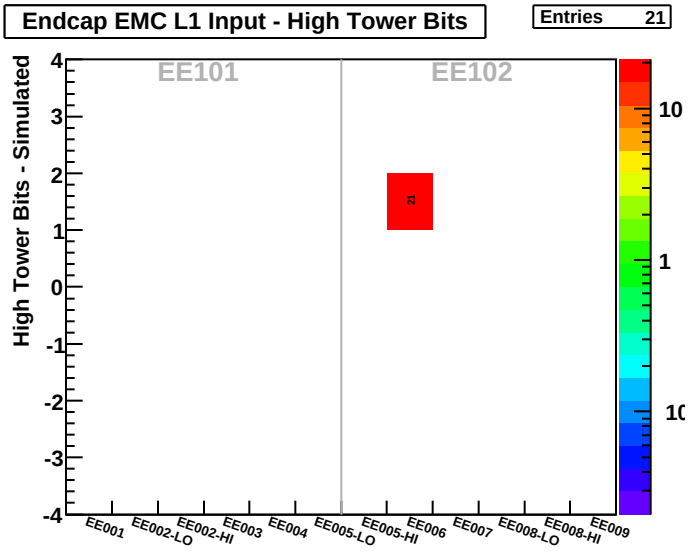

Endcap EMC L1 Input - Low Eta Sum
Entries 1.799999e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

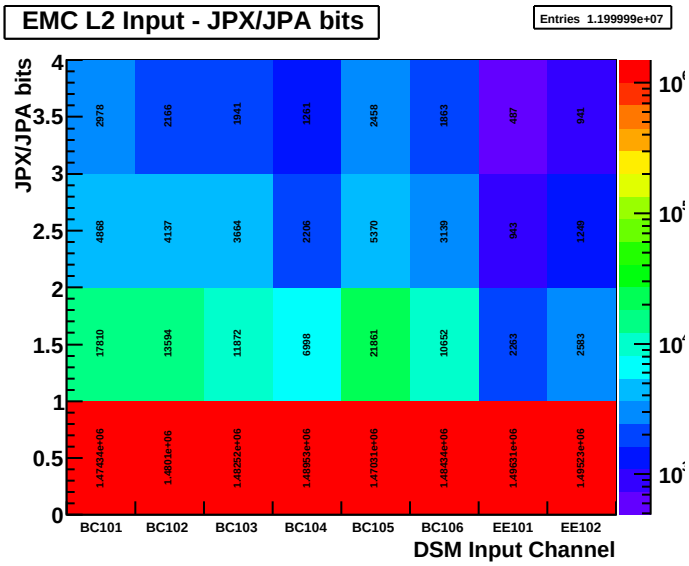

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

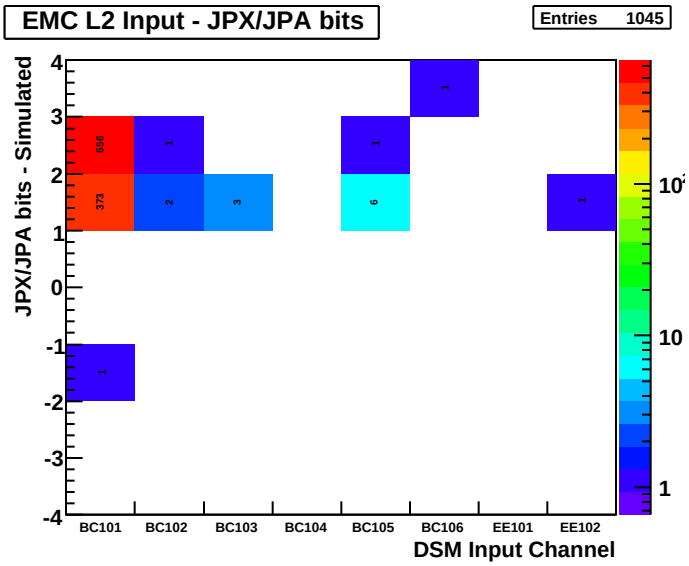

Endcap EMC L1 Input - High Eta Sum
Entries 1.799999e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

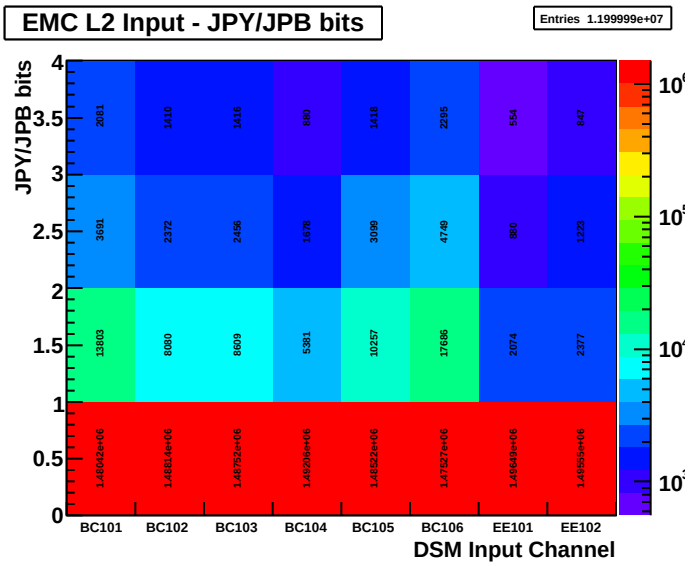

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

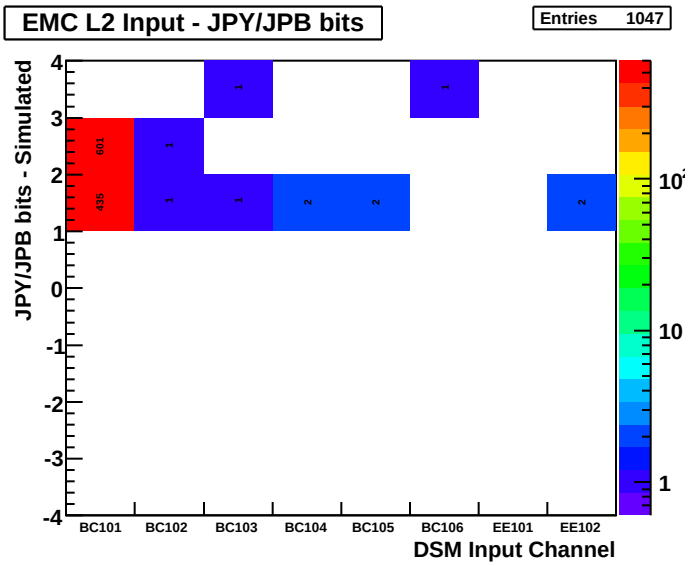

Endcap EMC L1 Input - High Tower Bits
Entries 1.799999e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

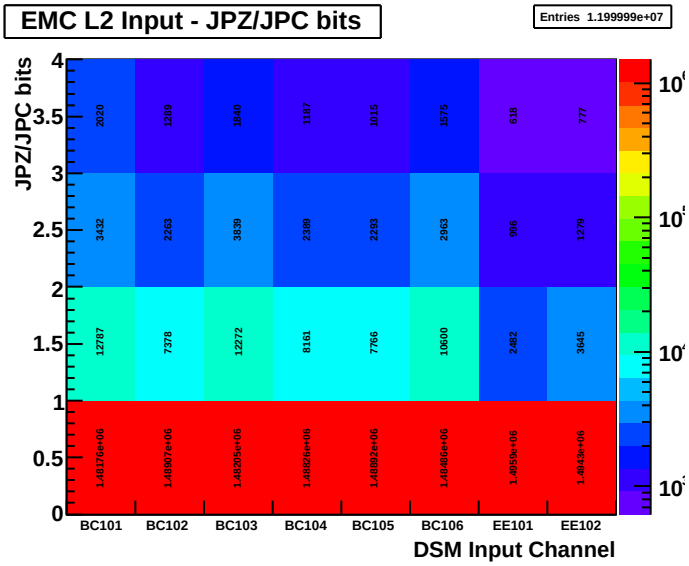

Endcap EMC L1 Input - High Tower Bits
Entries 21
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

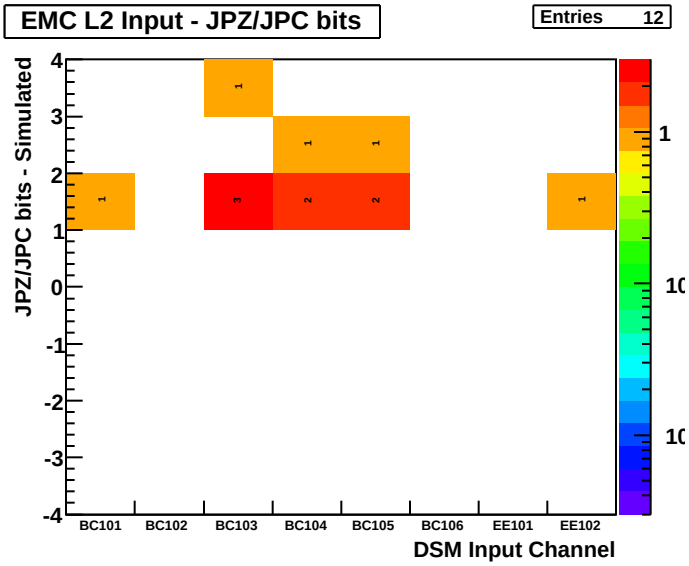

EMC L2 Input - JPX/JPA bits
Entries 1.199999e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

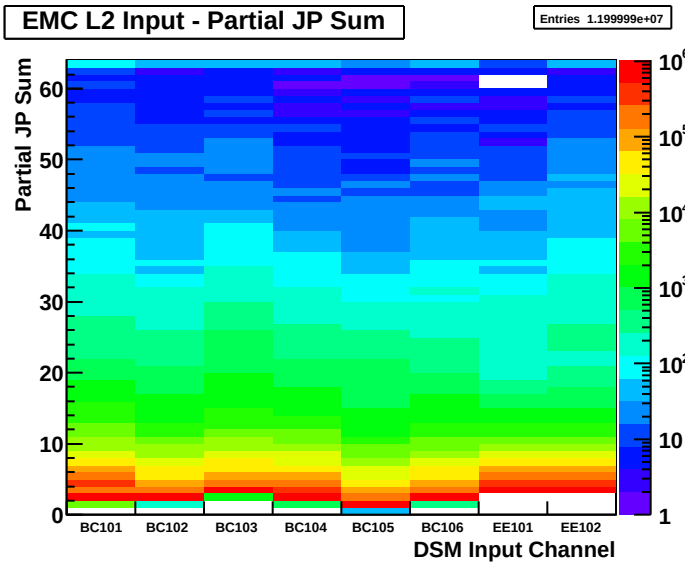

EMC L2 Input - JPX/JPA bits
Entries 1045
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

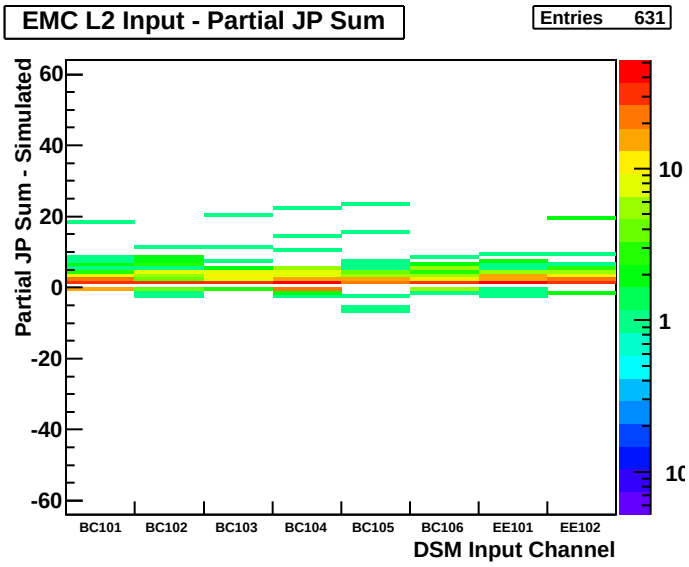

EMC L2 Input - JPY/JPB bits
Entries 1.199999e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

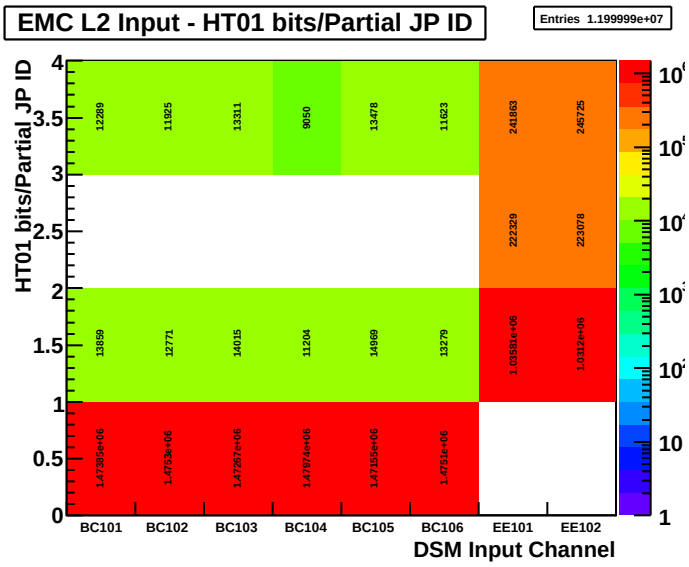

EMC L2 Input - JPY/JPB bits
Entries 1047
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

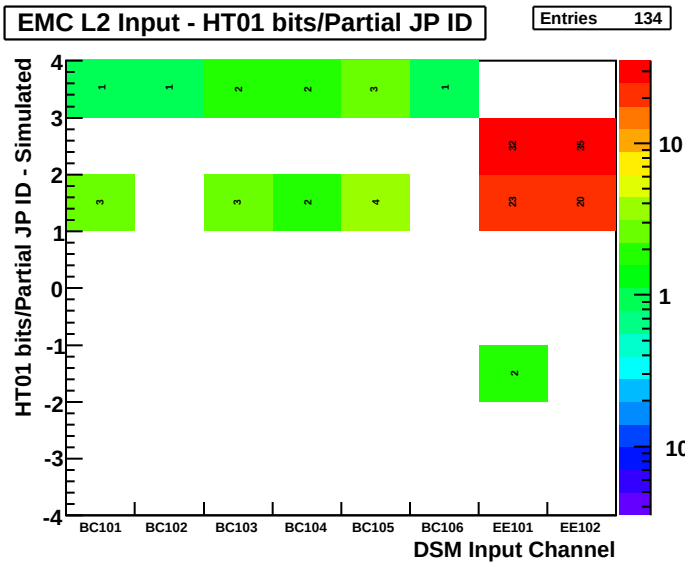

EMC L2 Input - JPZ/JPC bits
Entries 1.199999e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

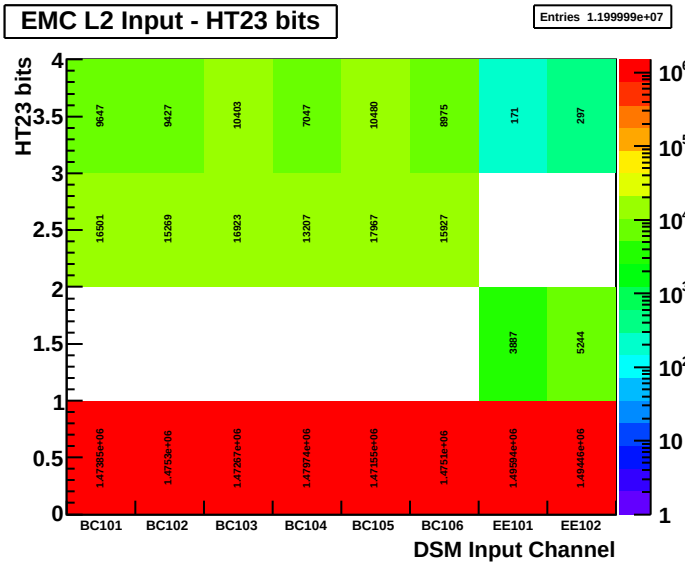

EMC L2 Input - JPZ/JPC bits
Entries 12
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

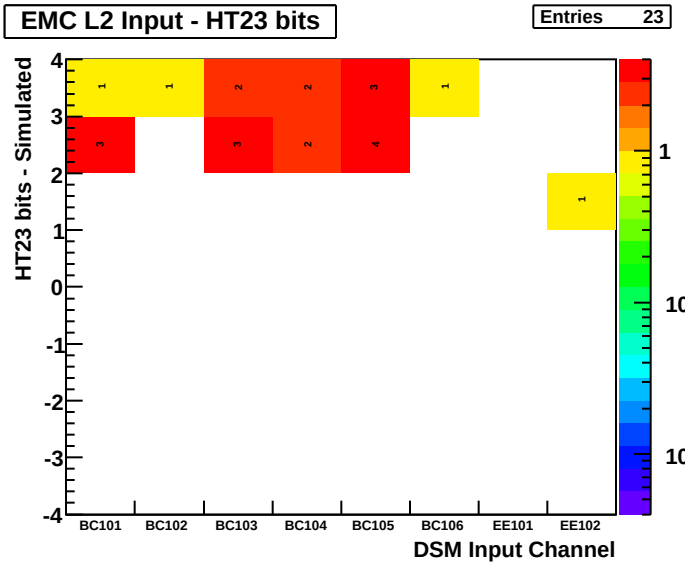

EMC L2 Input - Partial JP Sum
Entries 1.199999e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

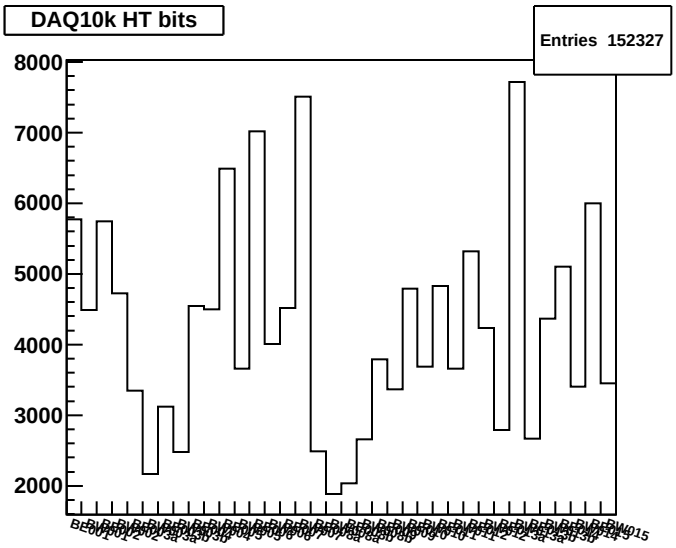

EMC L2 Input - Partial JP Sum
Entries 631
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

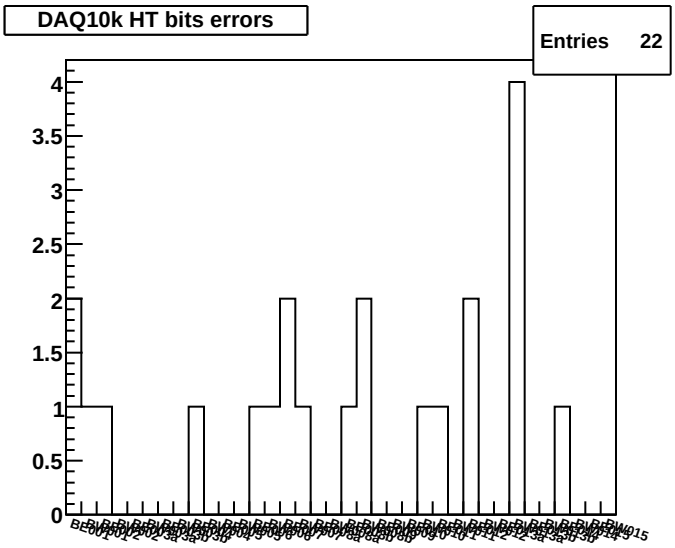

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1.199999e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

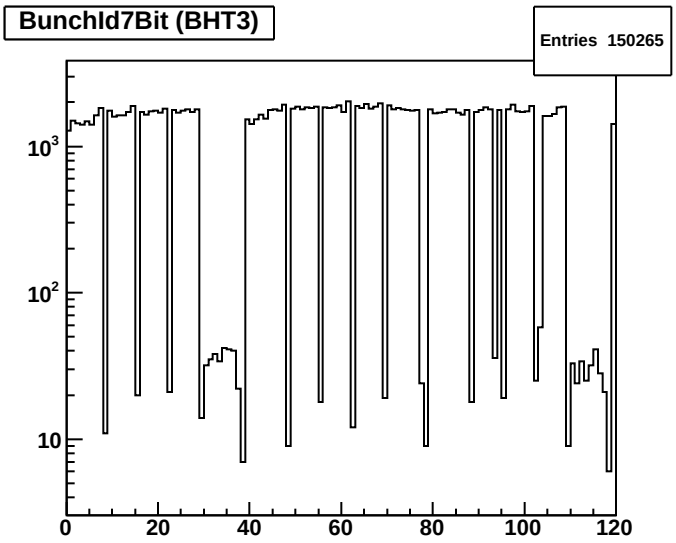

EMC L2 Input - HT01 bits/Partial JP ID
Entries 134
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

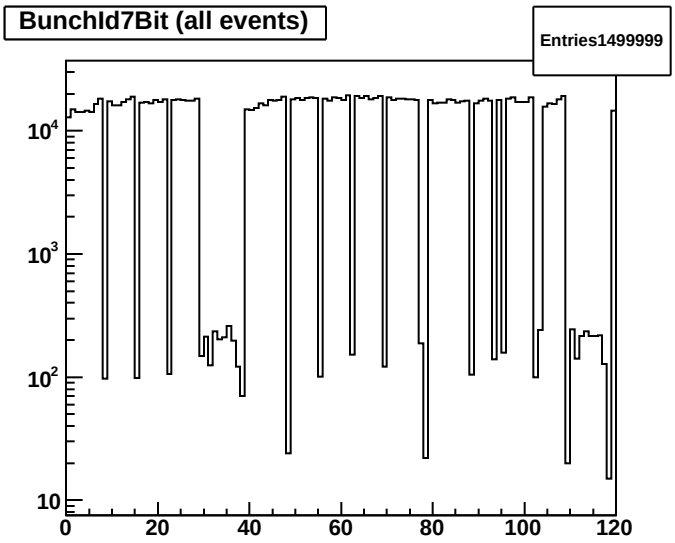

EMC L2 Input - HT23 bits
Entries 1.199999e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

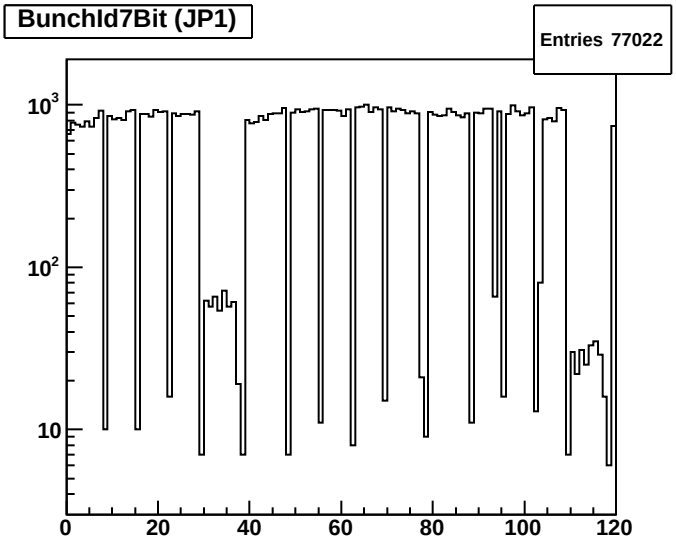

EMC L2 Input - HT23 bits
Entries 23
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

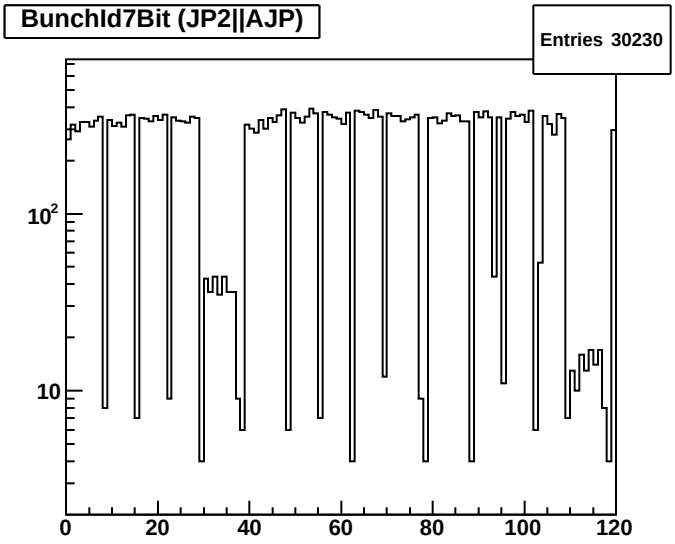

DAQ10k HT bits
Entries 152327
8000
7000
6000
5000
4000
3000
2000

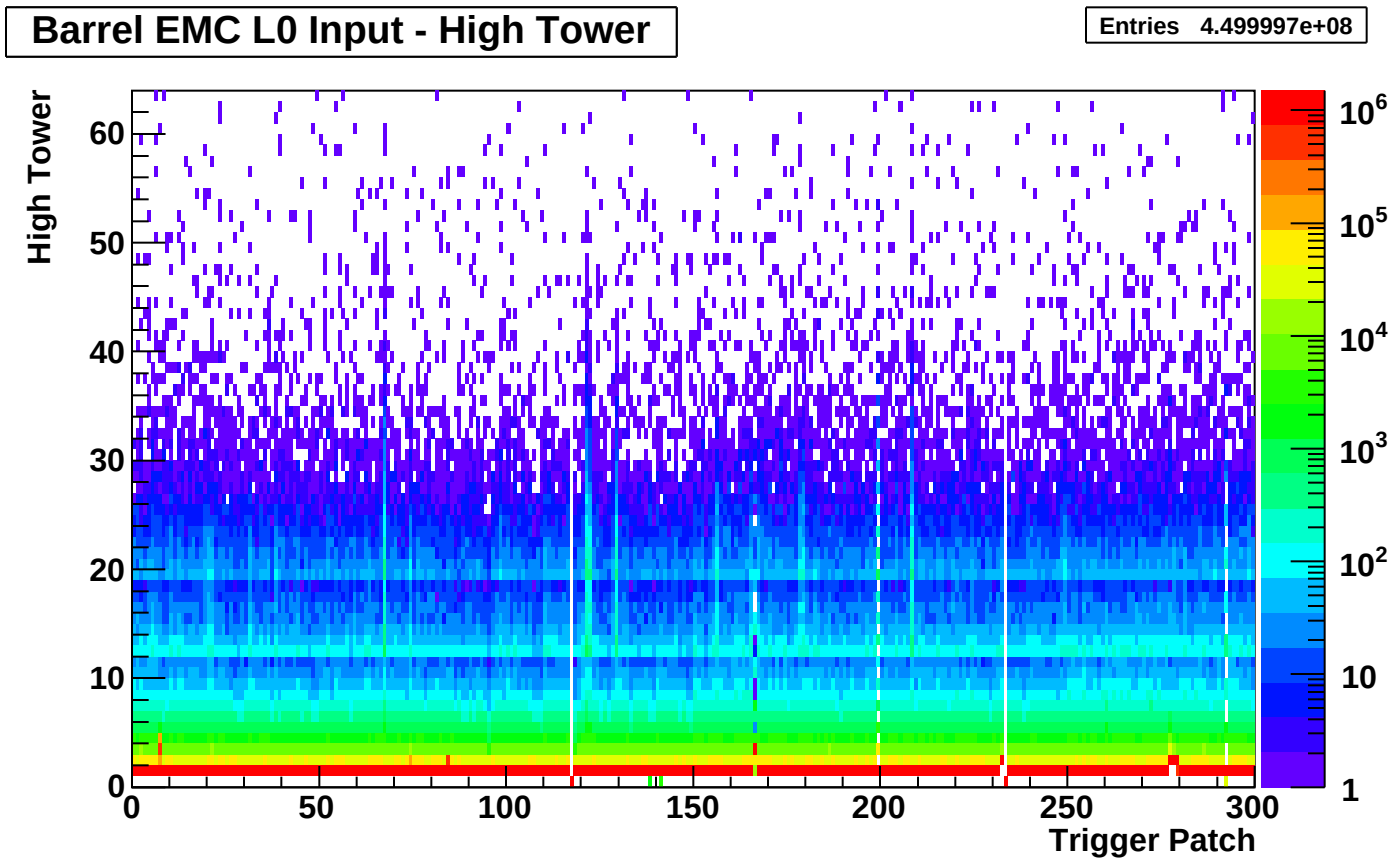

DAQ10k HT bits errors
Entries 22
4
3.5
3
2.5
2
1.5
1
0.5
0

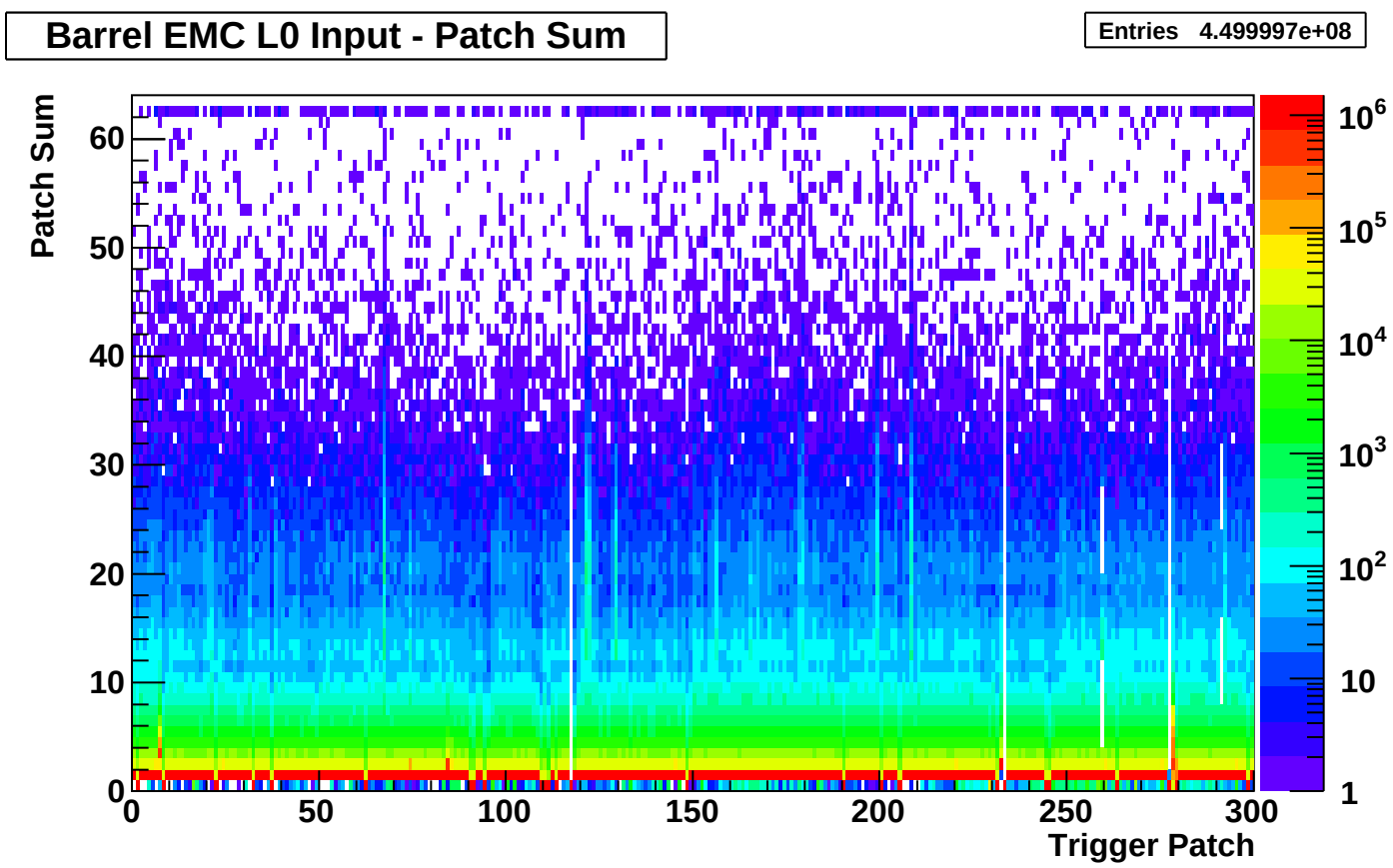

BunchId7Bit (BHT3)
Entries 150265
10^3
10^2
10
0
20
40
60
80
100
120

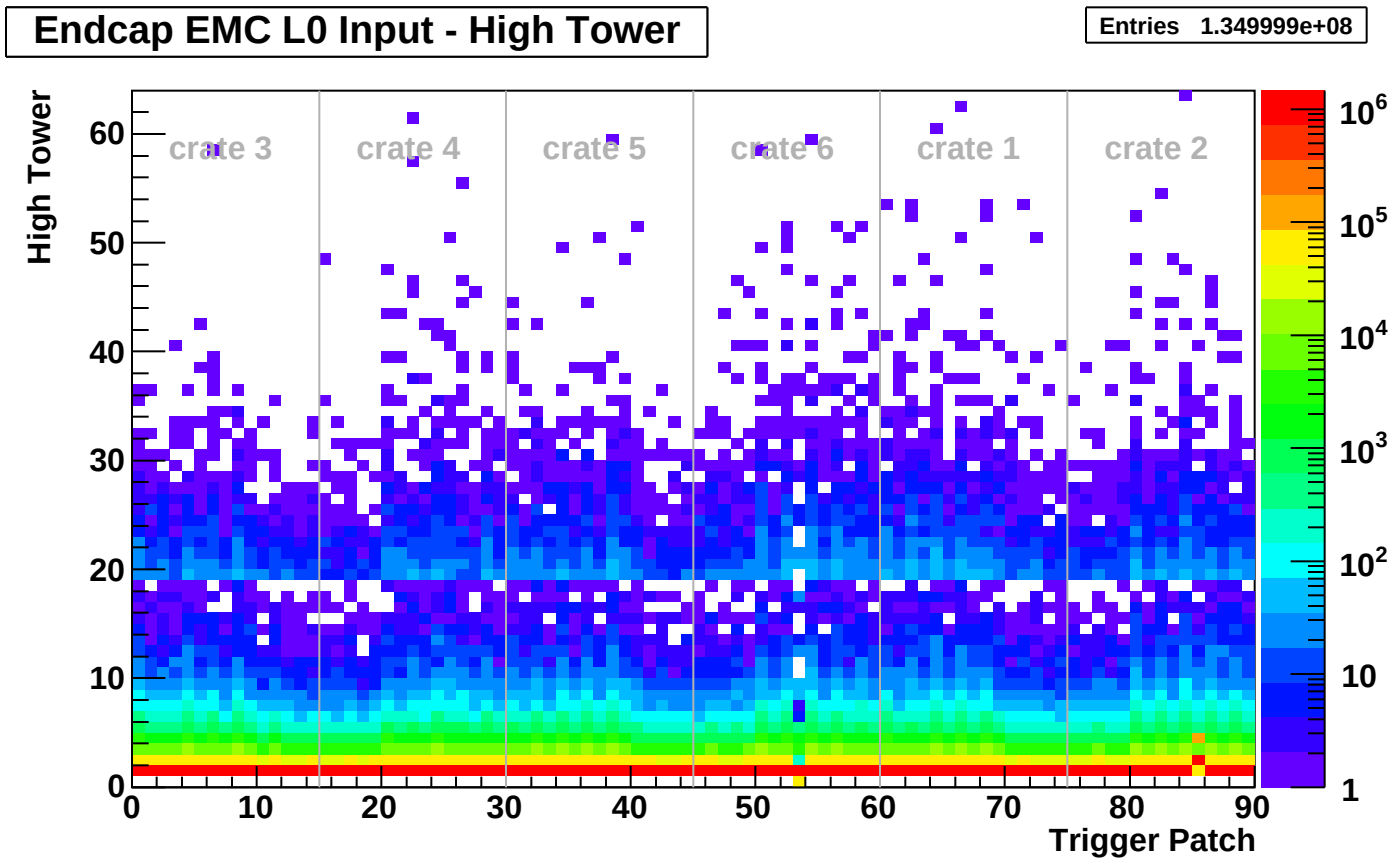

BunchId7Bit (all events)
Entries1499999
10^4
10^3
10^2
10
0
20
40
60
80
100
120

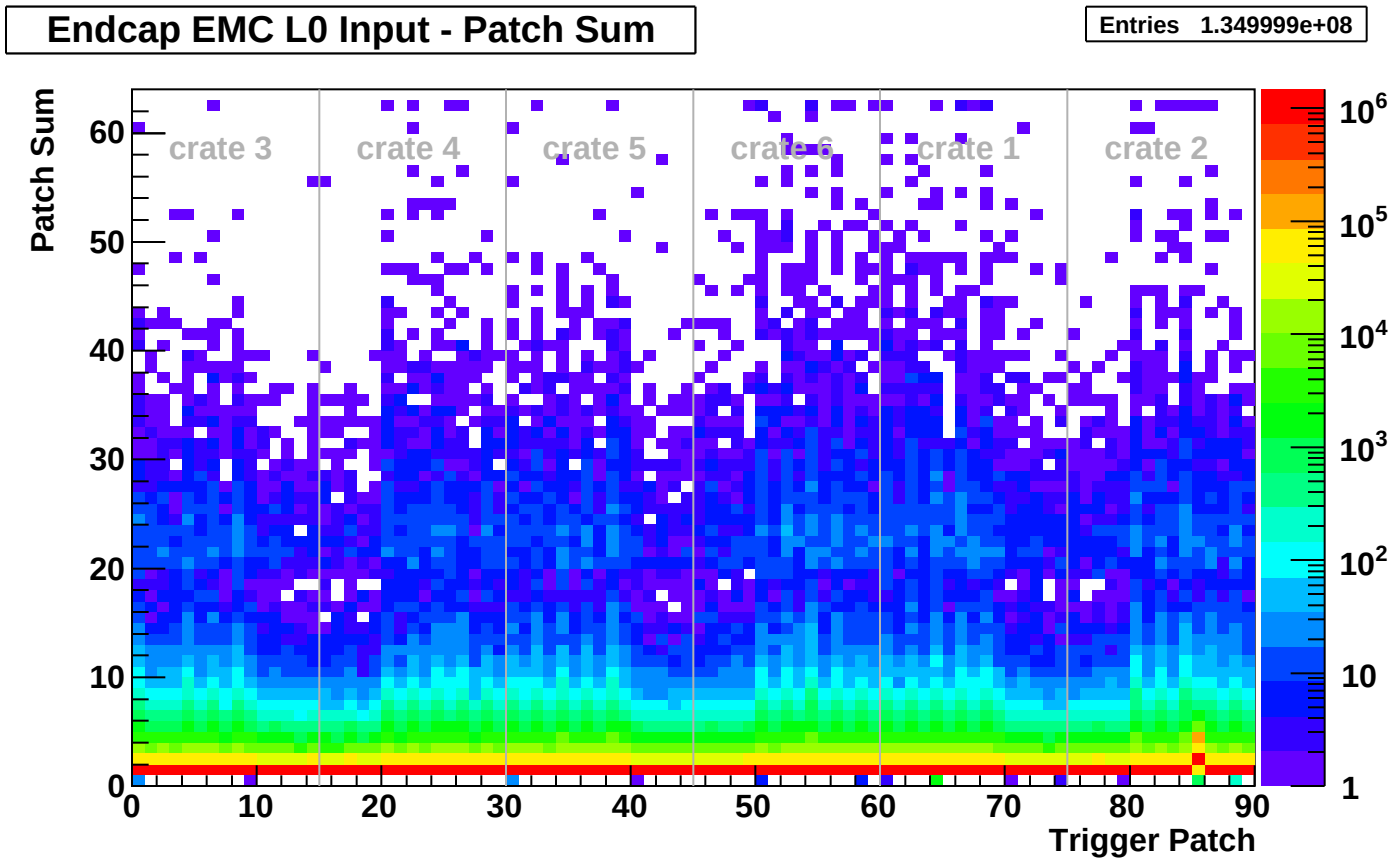

BunchId7Bit (JP1)
Entries 77022
10^3
10^2
10
0
20
40
60
80
100
120

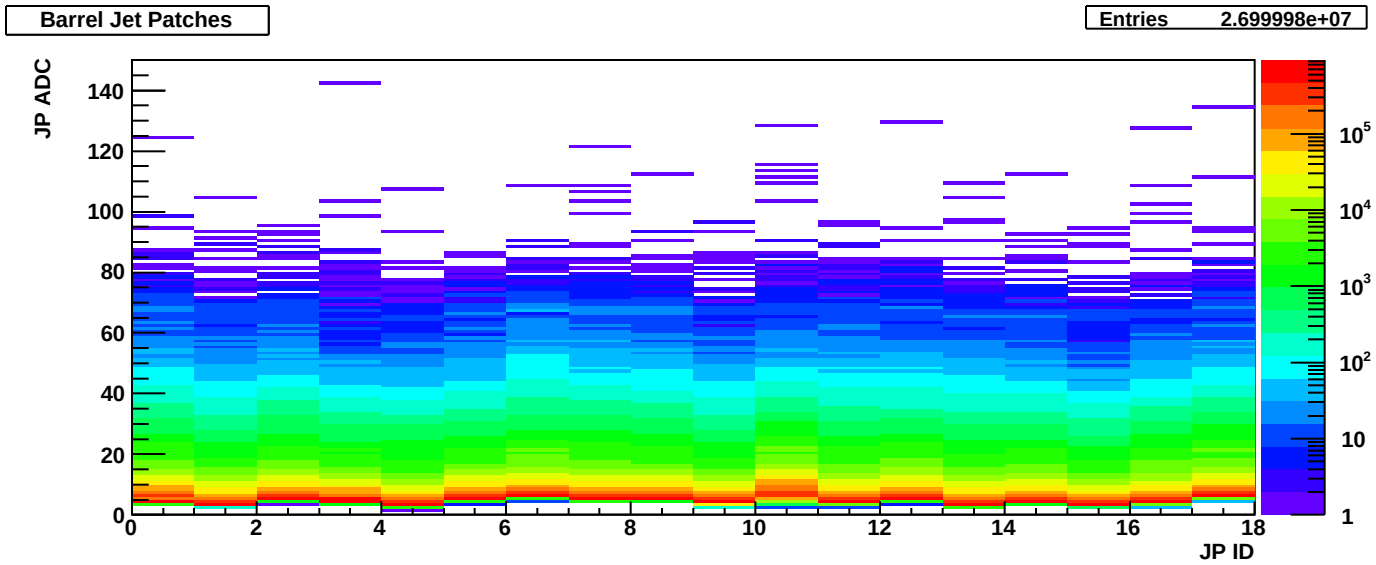

BunchId7Bit (JP2||AJP)
Entries 30230
10^2
10
0
20
40
60
80
100
120

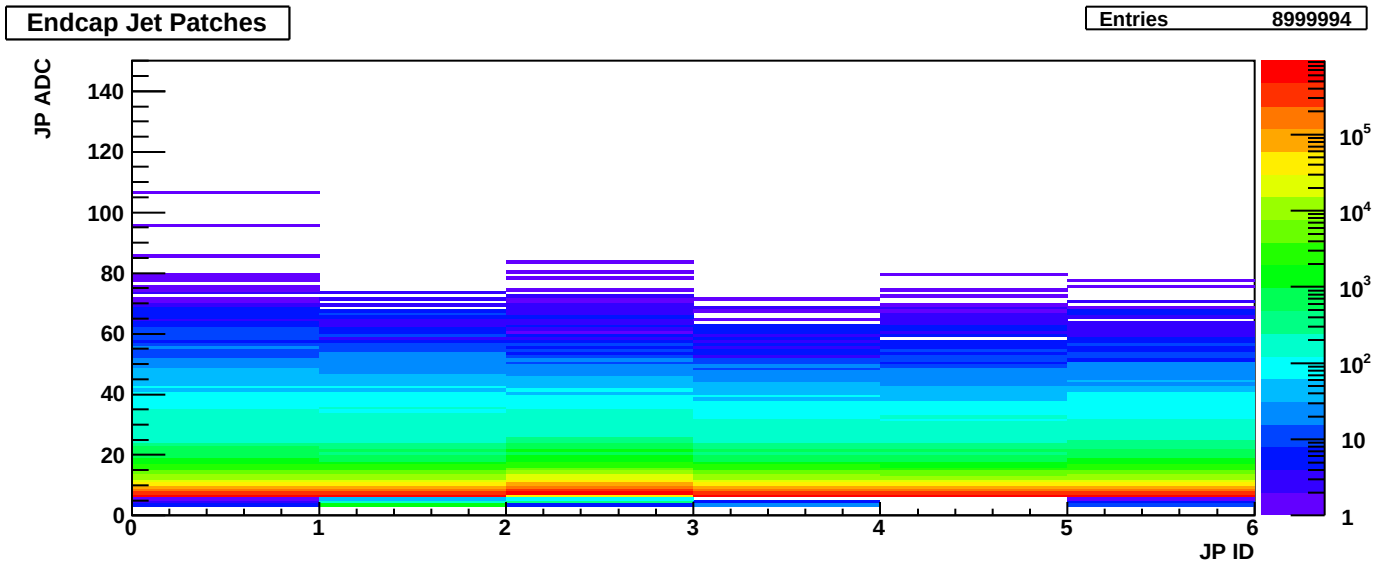

Barrel EMC L0 Input - High Tower
Entries 4.499997e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

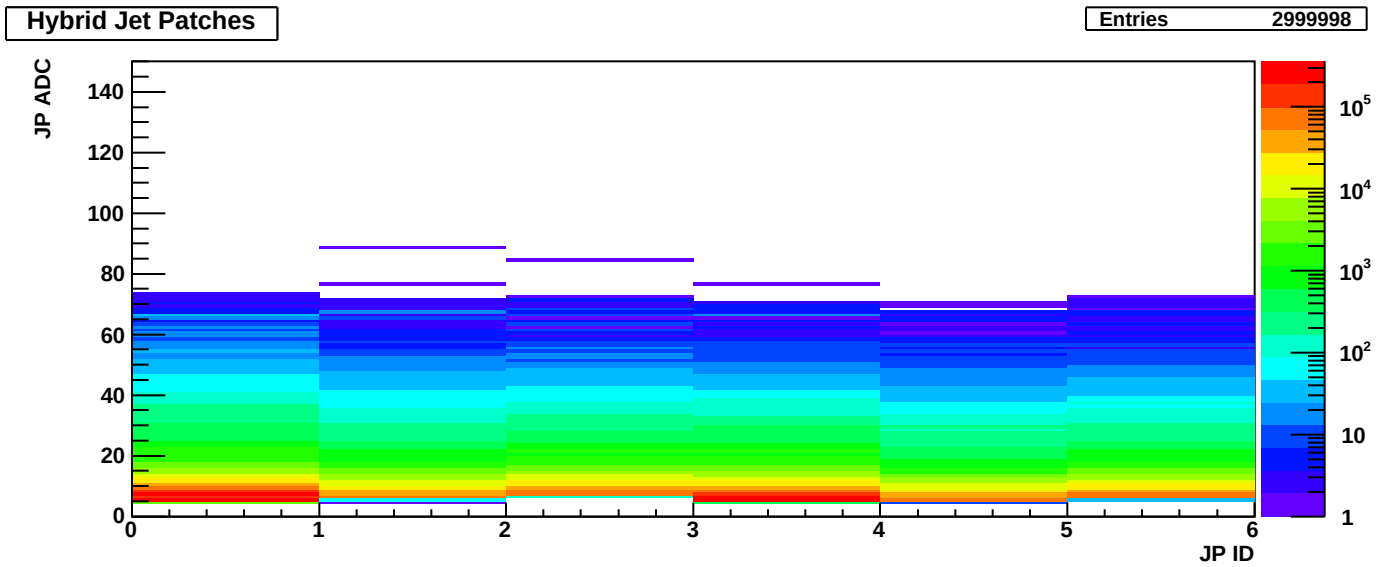

Barrel EMC L0 Input - Patch Sum
Entries 4.499997e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

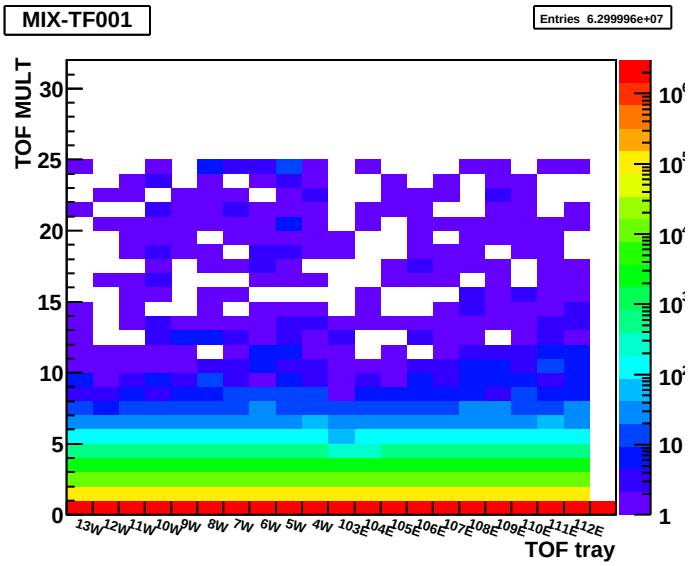

Endcap EMC L0 Input - High Tower
Entries 1.349999e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

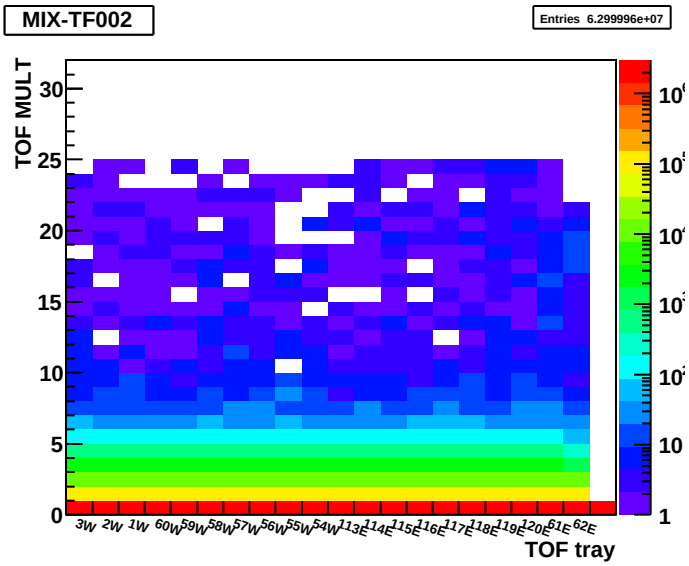

Endcap EMC L0 Input - Patch Sum
Entries 1.349999e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

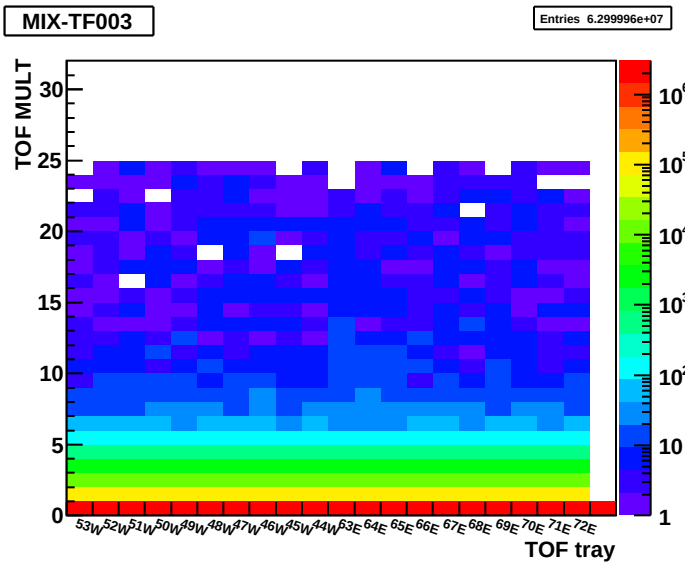

Barrel Jet Patches
Entries 2.699998e+07
JP ADC
JP ID

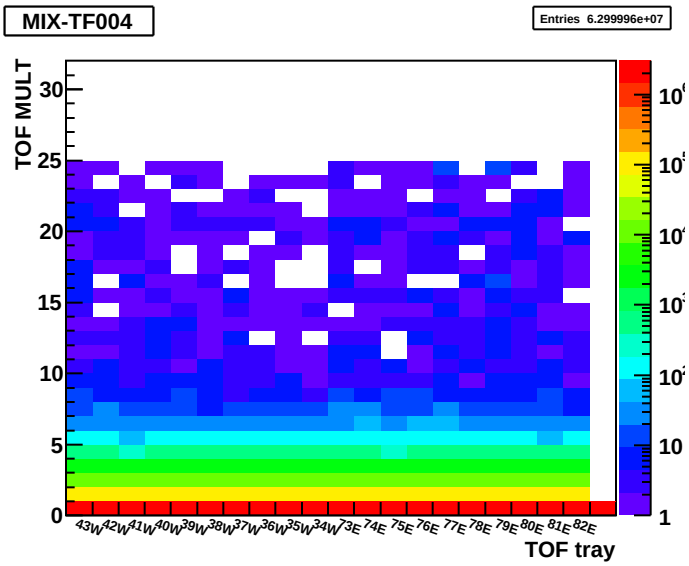

Endcap Jet Patches
Entries 8999994
JP ADC
JP ID

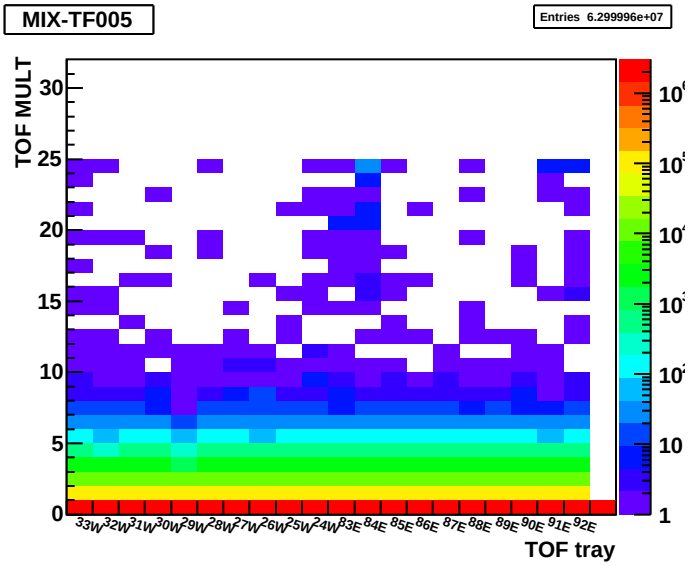

Hybrid Jet Patches
Entries 2999998
JP ADC
JP ID

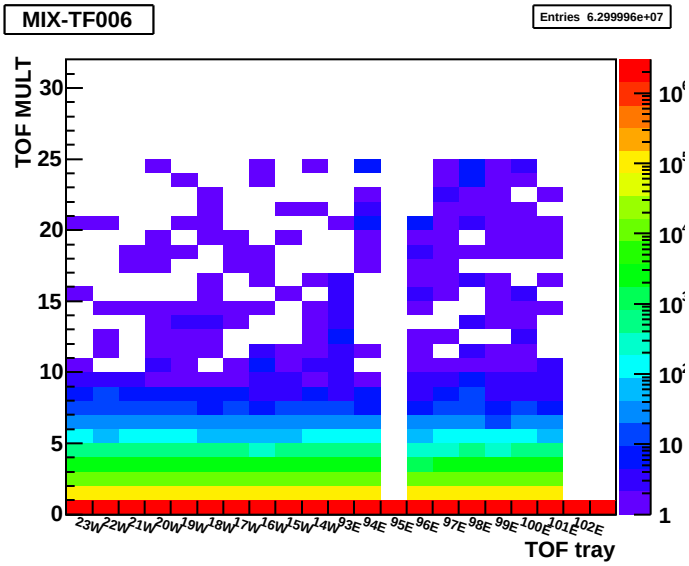

MIX-TF001
Entries 6.299996e+07
TOF MULT
TOF tray

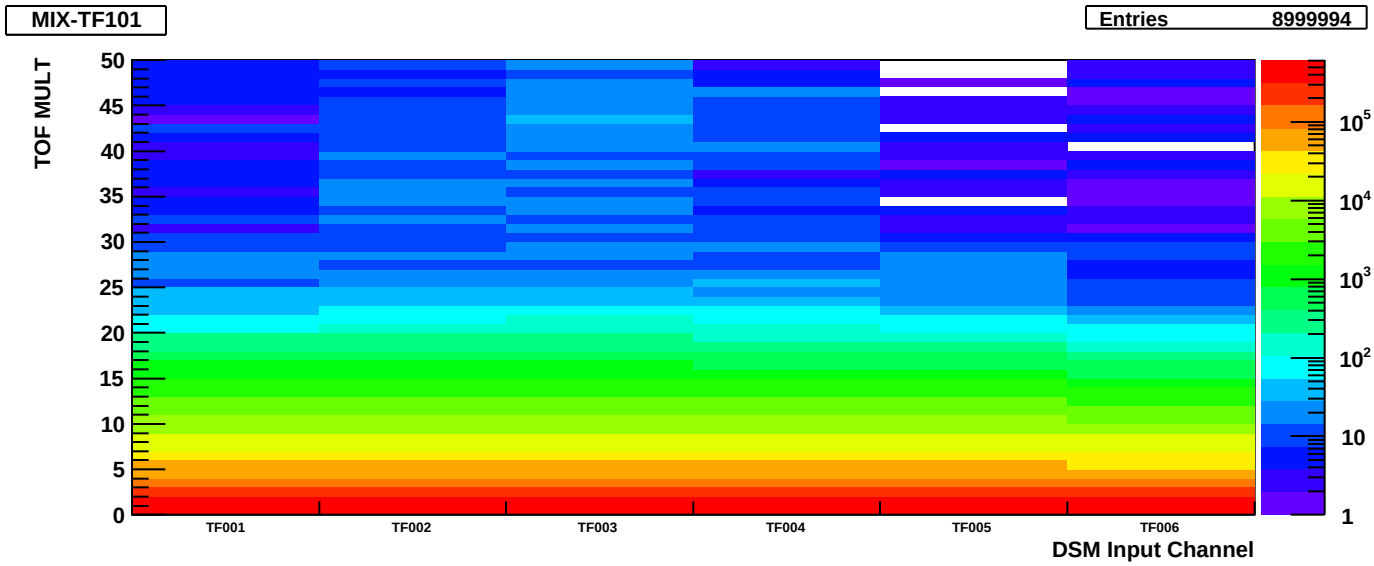

MIX-TF002
Entries 6.299996e+07
TOF MULT
TOF tray

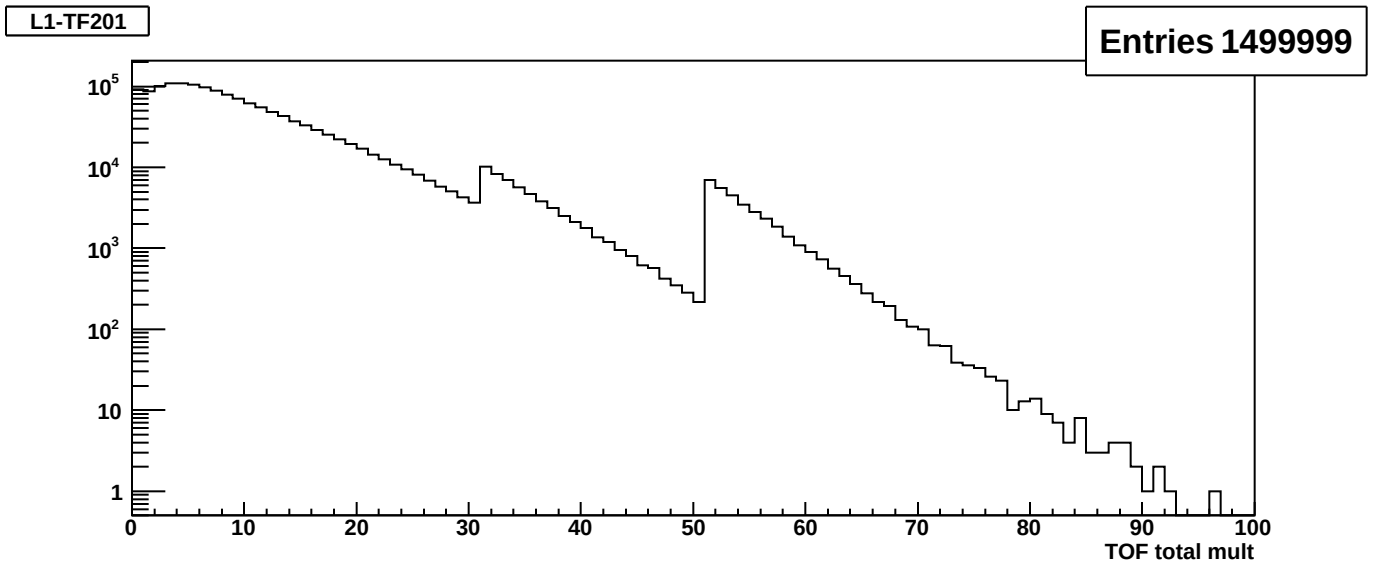

MIX-TF003
Entries 6.299996e+07
TOF MULT
TOF tray

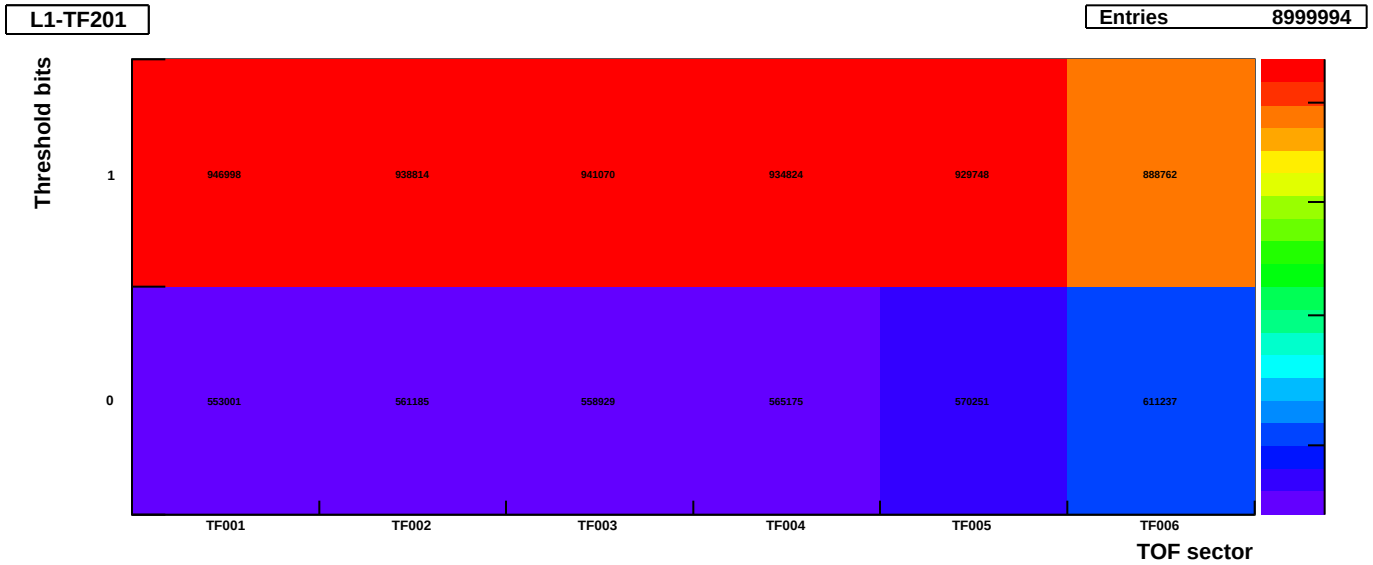

MIX-TF004
Entries 6.299996e+07
TOF MULT
TOF tray

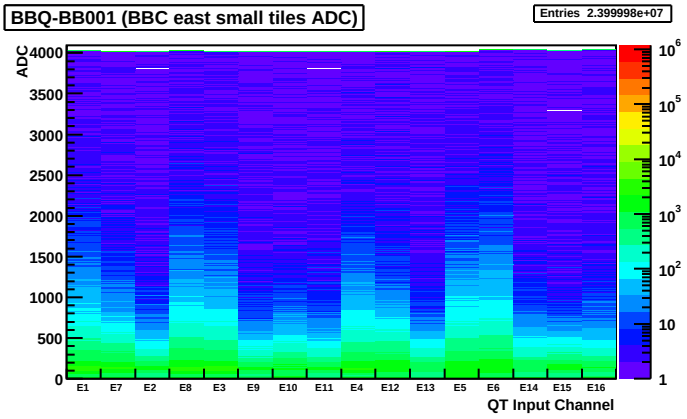

MIX-TF005
Entries 6.299996e+07
TOF MULT
TOF tray

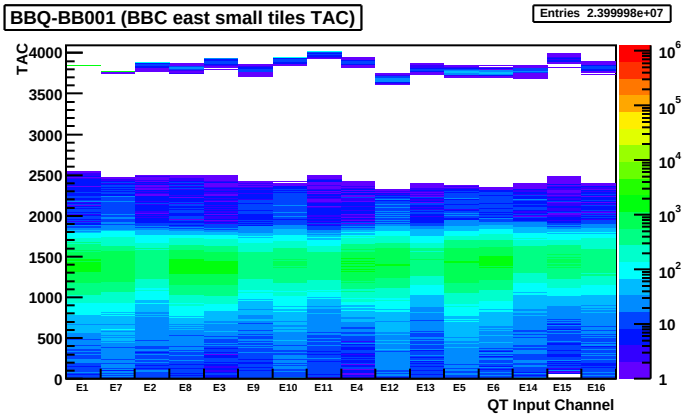

MIX-TF006
Entries 6.299996e+07
TOF MULT
TOF tray

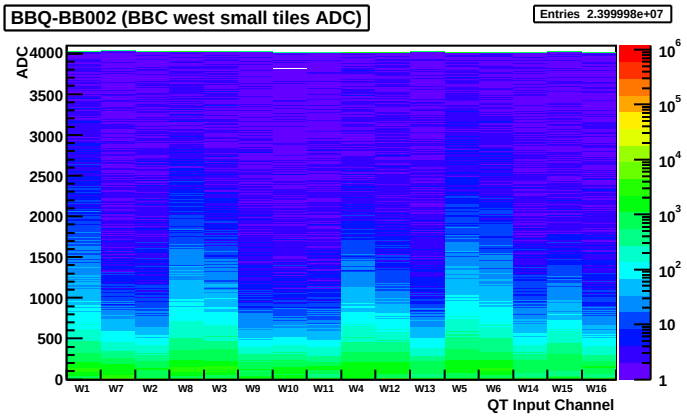

MIX-TF101
Entries 8999994
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

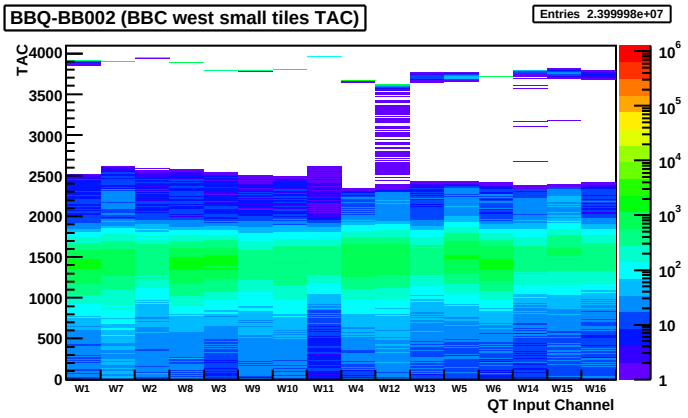

L1-TF201
Entries 1499999
10^5
10^4
10^3
10^2
10
1
0
10
20
30
40
50
60
70
80
90
100
TOF total mult

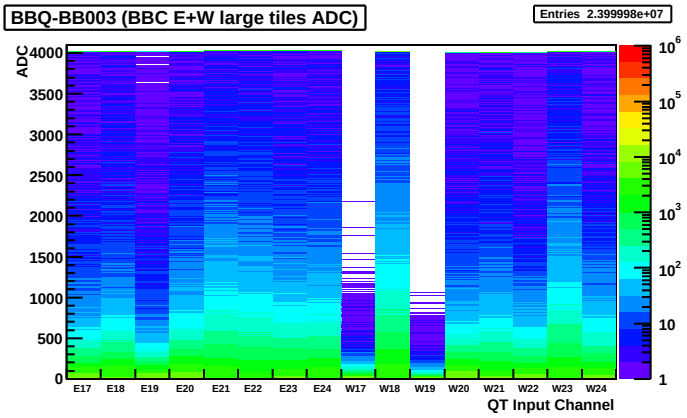

L1-TF201
Entries 8999994
Threshold bits
1
0
946998
938814
941070
934824
929748
888762
553001
561185
558929
565175
570251
611237
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

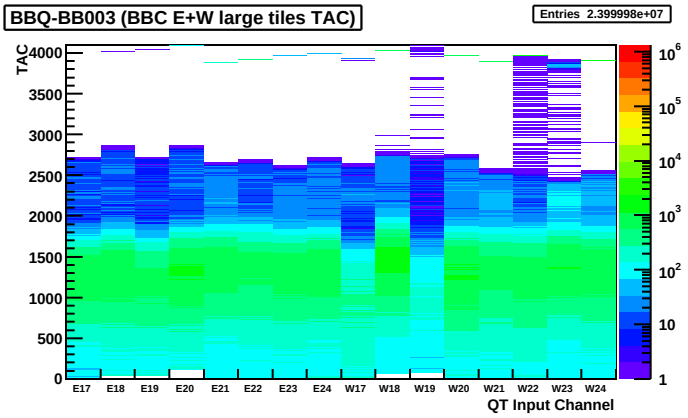

BBQ-BB001 (BBC east small tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

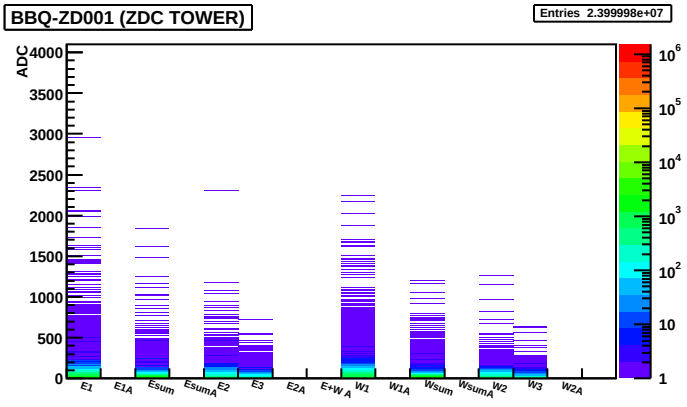

BBQ-BB001 (BBC east small tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

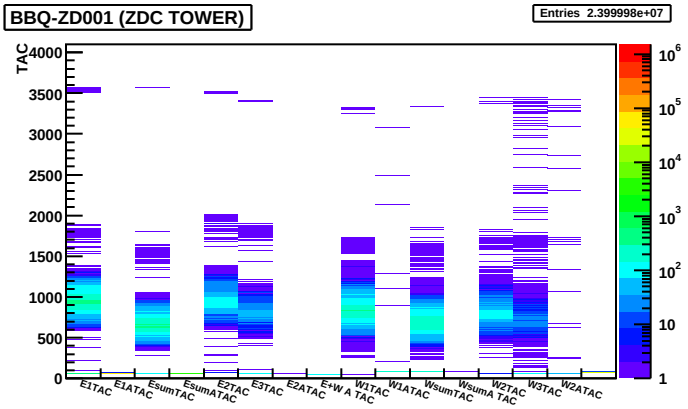

BBQ-BB002 (BBC west small tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

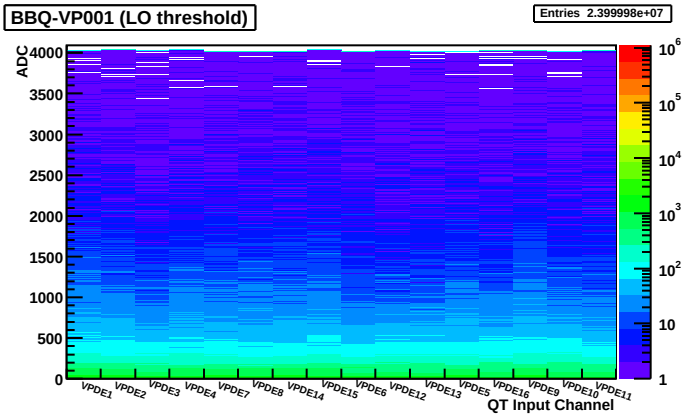

BBQ-BB002 (BBC west small tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

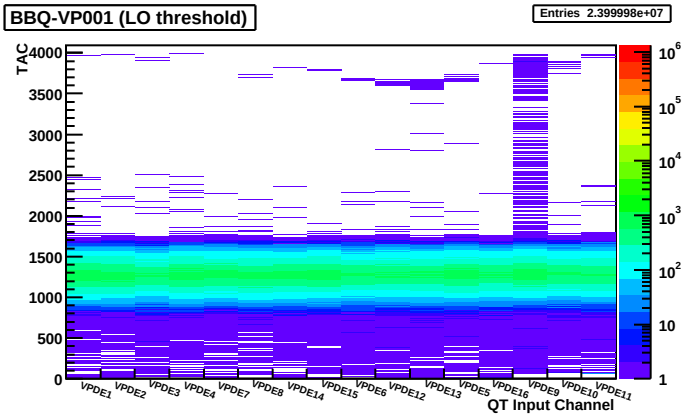

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

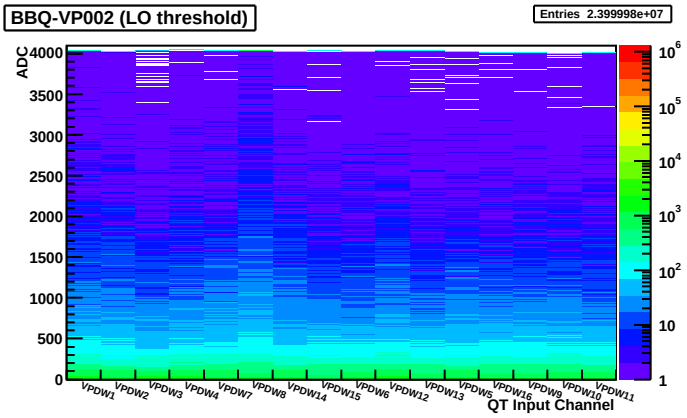

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

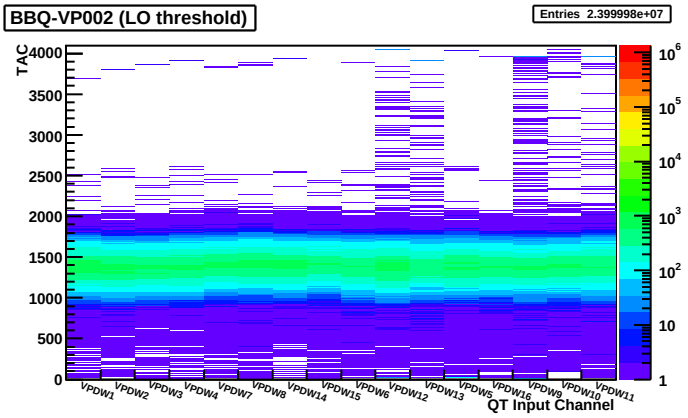

BBQ-ZD001 (ZDC TOWER)
Entries 2.399998e+07
ADC

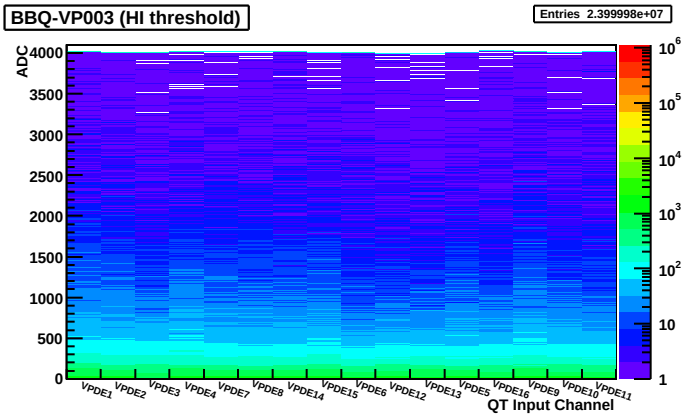

BBQ-ZD001 (ZDC TOWER)
Entries 2.399998e+07
TAC

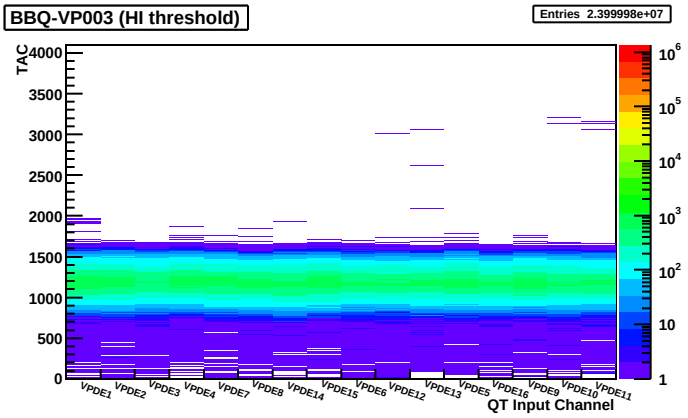

BBQ-VP001 (LO threshold)
Entries 2.399998e+07
ADC
QT Input Channel

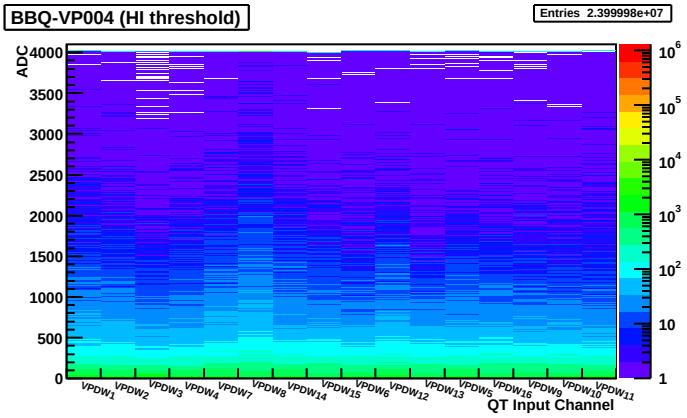

BBQ-VP001 (LO threshold)
Entries 2.399998e+07
TAC
QT Input Channel

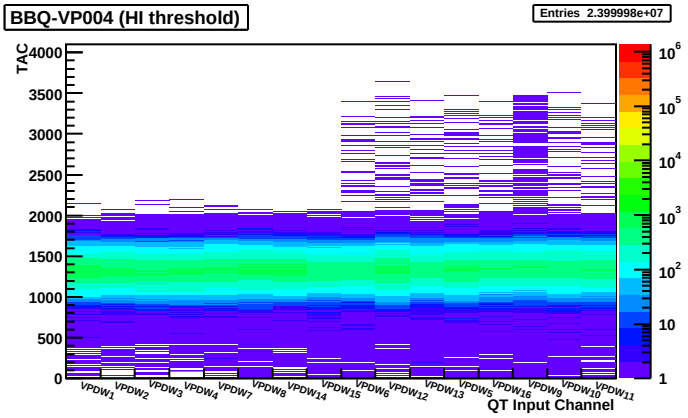

BBQ-VP002 (LO threshold)
Entries 2.399998e+07
ADC
QT Input Channel

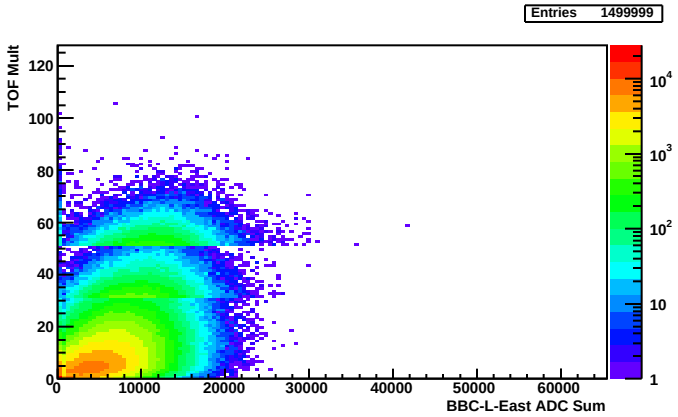

BBQ-VP002 (LO threshold)
Entries 2.399998e+07
TAC
QT Input Channel

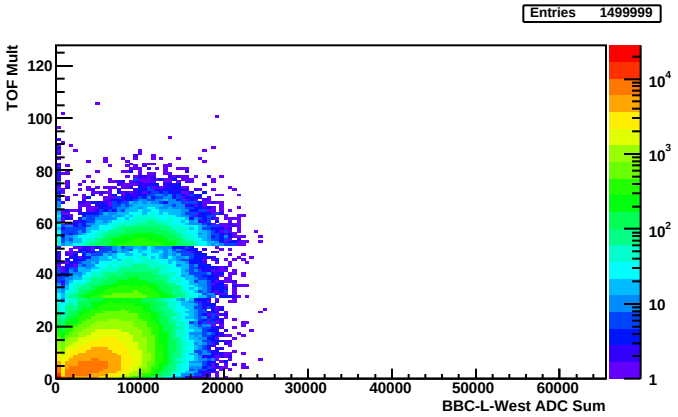

BBQ-VP003 (HI threshold)
Entries 2.399998e+07
ADC
QT Input Channel

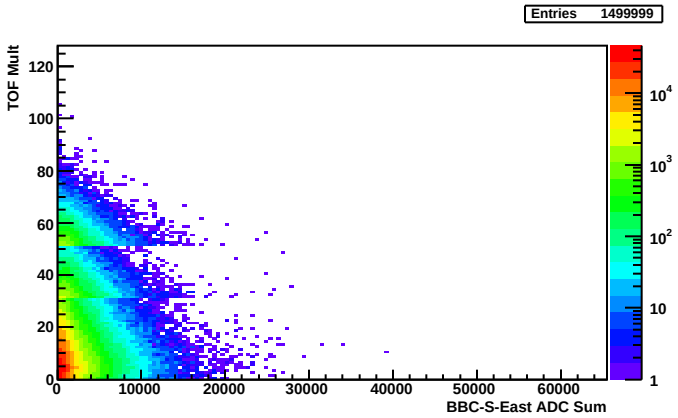

BBQ-VP003 (HI threshold)
Entries 2.399998e+07
TAC
QT Input Channel

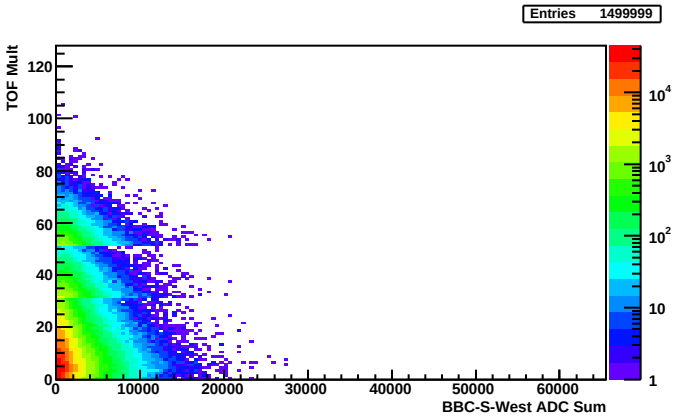

BBQ-VP004 (HI threshold)
Entries 2.399998e+07
ADC
QT Input Channel

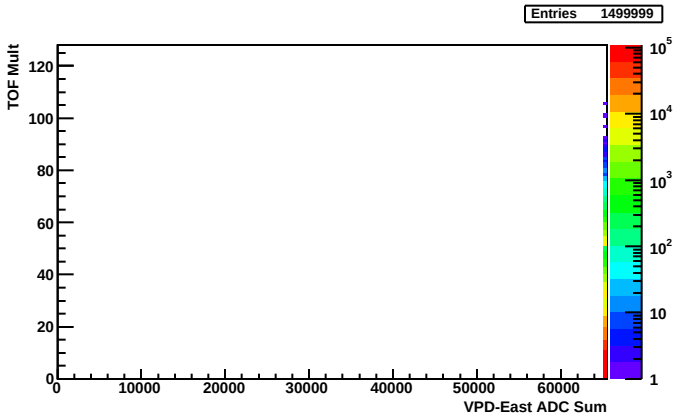

BBQ-VP004 (HI threshold)
Entries 2.399998e+07
TAC
QT Input Channel

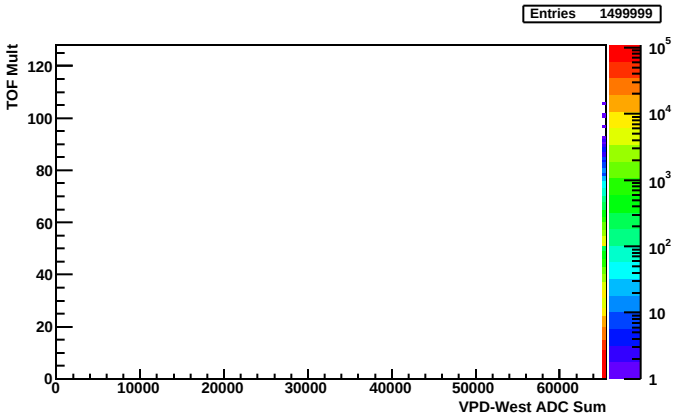

Entries 1499999
TOF Mult
BBC-L-East ADC Sum

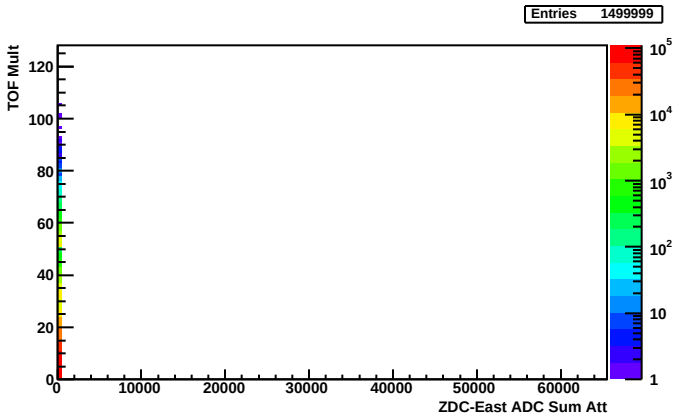

Entries 1499999
TOF Mult
BBC-L-West ADC Sum

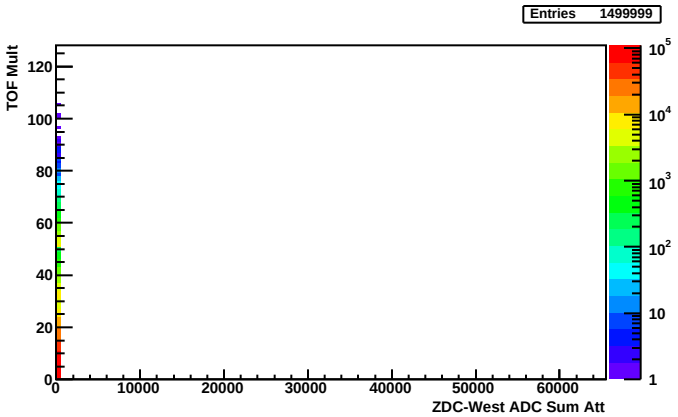

Entries 1499999
TOF Mult
BBC-S-East ADC Sum

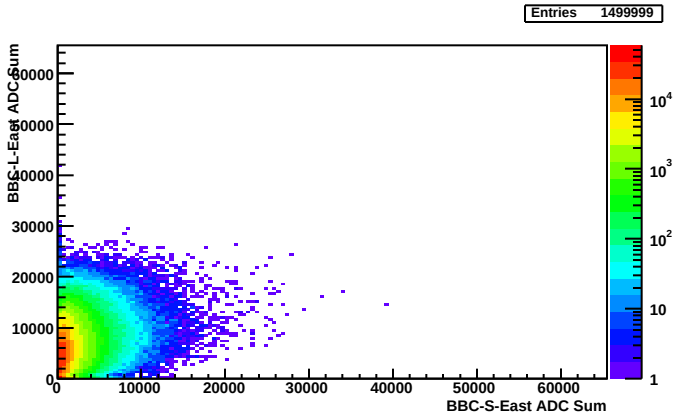

Entries 1499999
TOF Mult
BBC-S-West ADC Sum

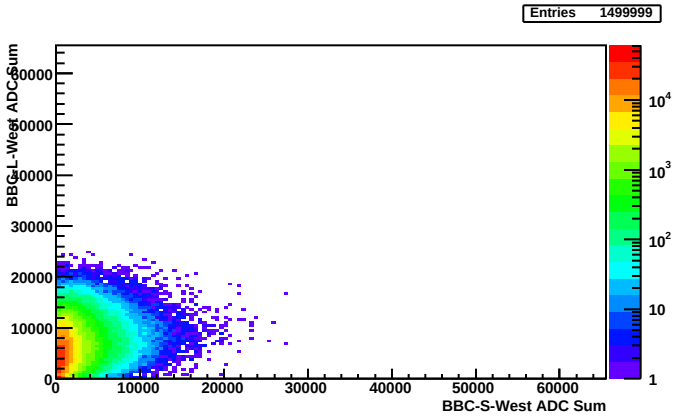

Entries 1499999
TOF Mult
VPD-East ADC Sum

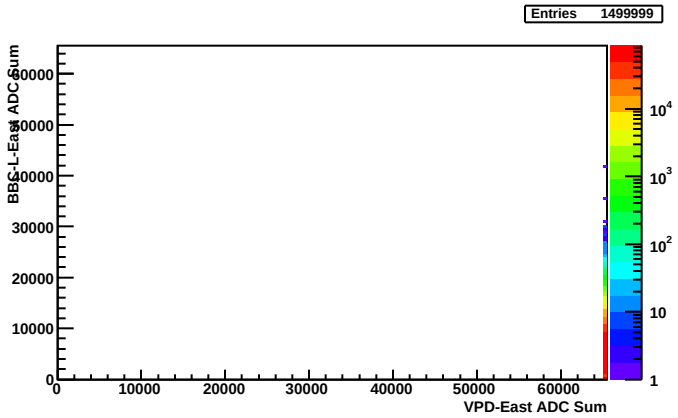

Entries 1499999
TOF Mult
VPD-West ADC Sum

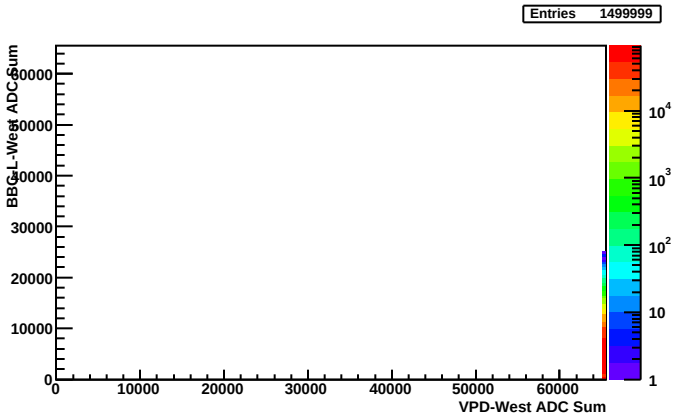

Entries 1499999
TOF Mult
ZDC-East ADC Sum Att

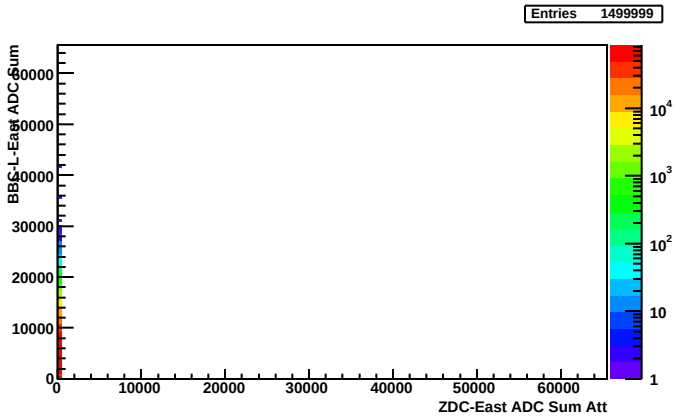

Entries 1499999
TOF Mult
ZDC-West ADC Sum Att

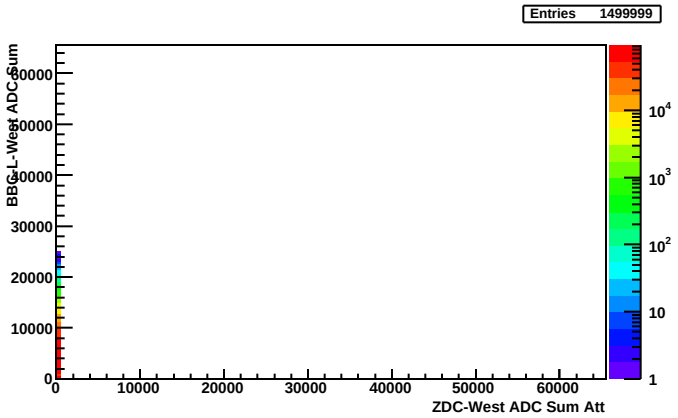

Entries 1499999
BBC-L-East ADC Sum
BBC-S-East ADC Sum

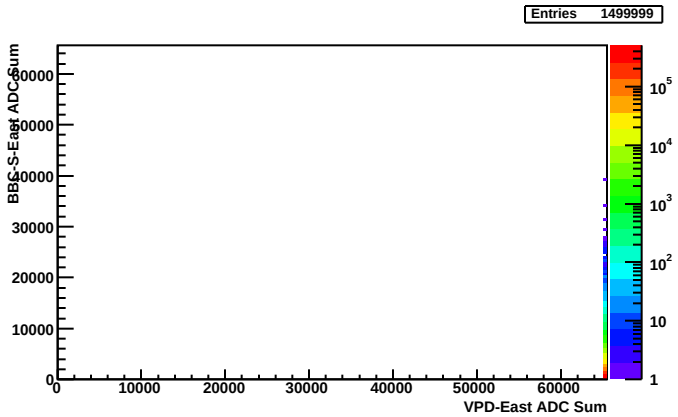

Entries 1499999
BBC-L-West ADC Sum
BBC-S-West ADC Sum

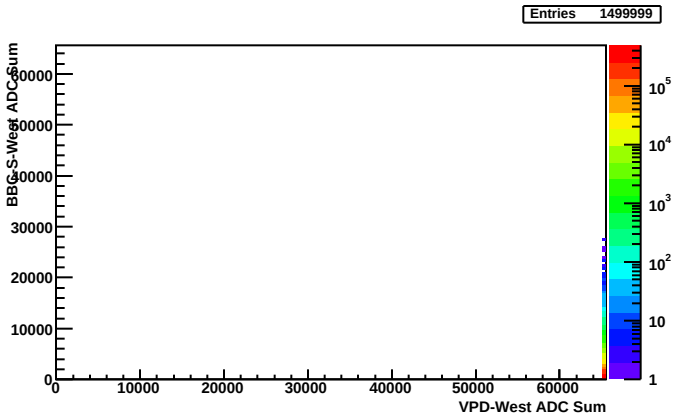

Entries 1499999
BBC-L-East ADC Sum
VPD-East ADC Sum

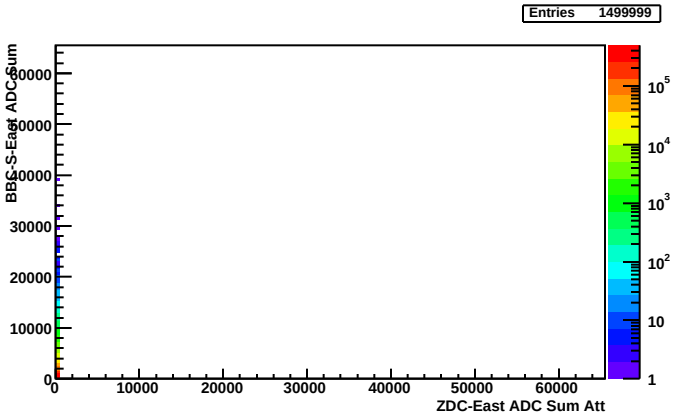

Entries 1499999
BBC-L-West ADC Sum
VPD-West ADC Sum

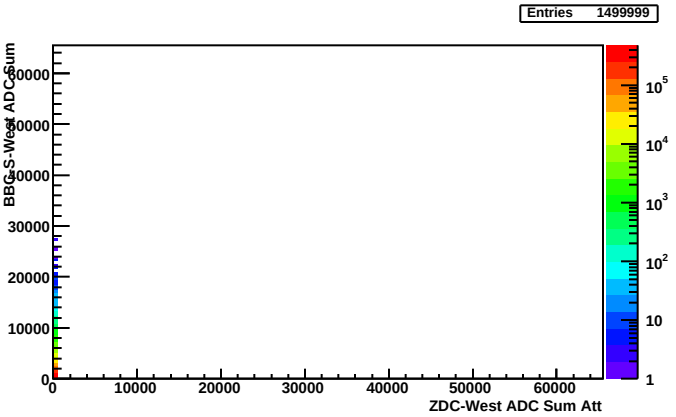

Entries 1499999
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

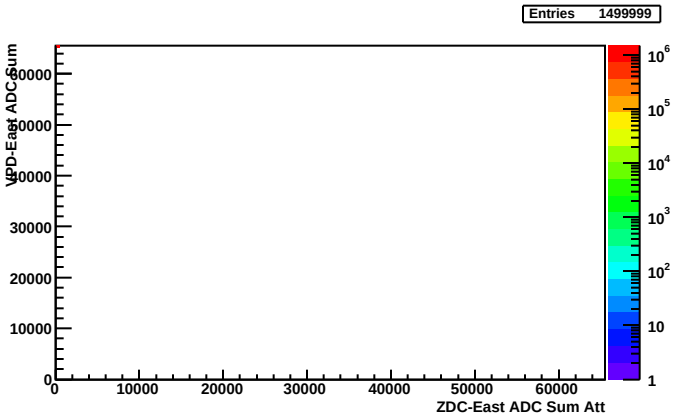

Entries 1499999
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

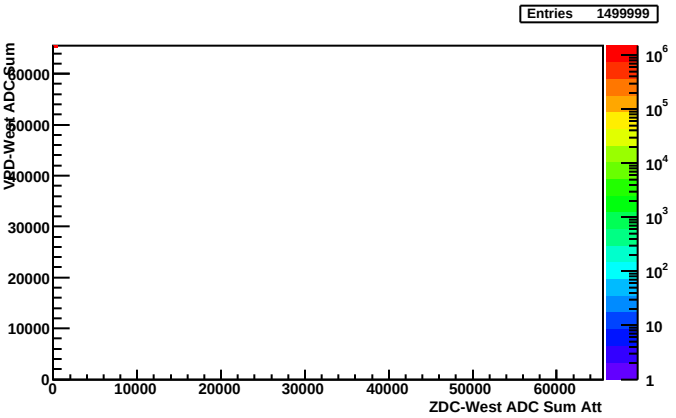

Entries 1499999
BBC-S-East ADC Sum
VPD-East ADC Sum

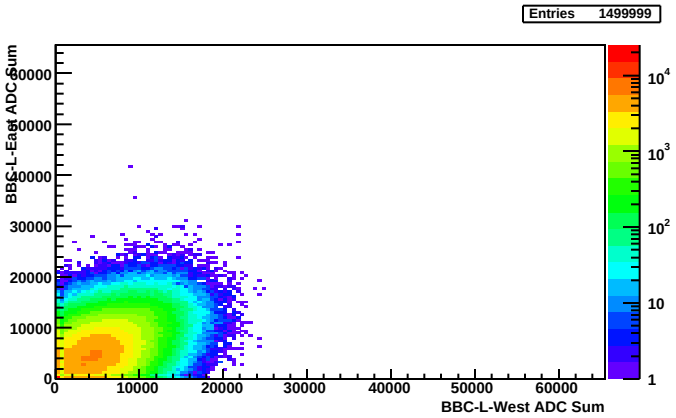

Entries 1499999
BBC-S-West ADC Sum
VPD-West ADC Sum

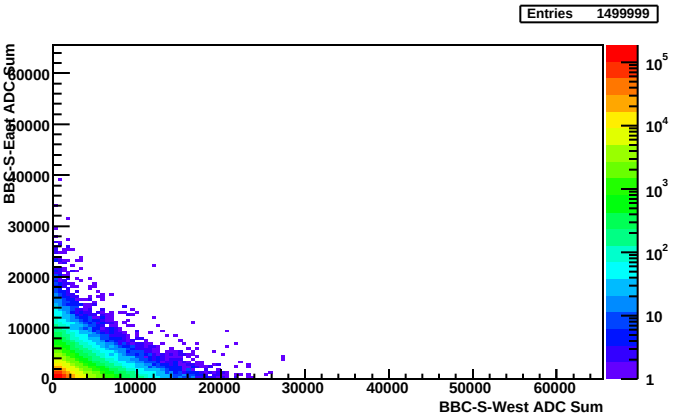

Entries 1499999
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

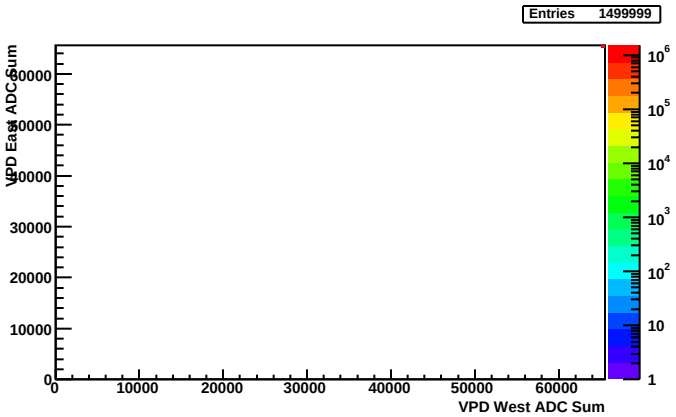

Entries 1499999
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

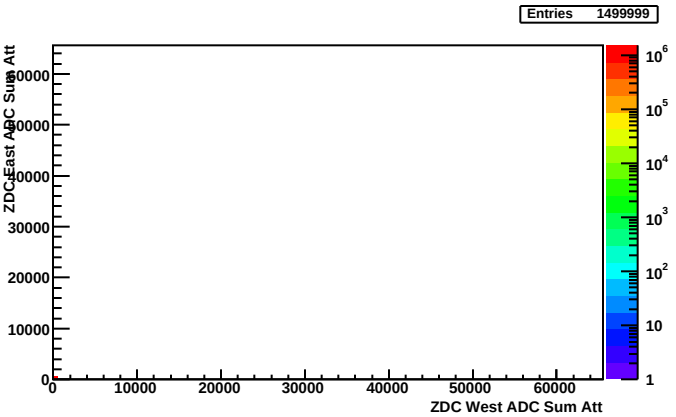

Entries 1499999
VPD-East ADC Sum
ZDC-East ADC Sum Att

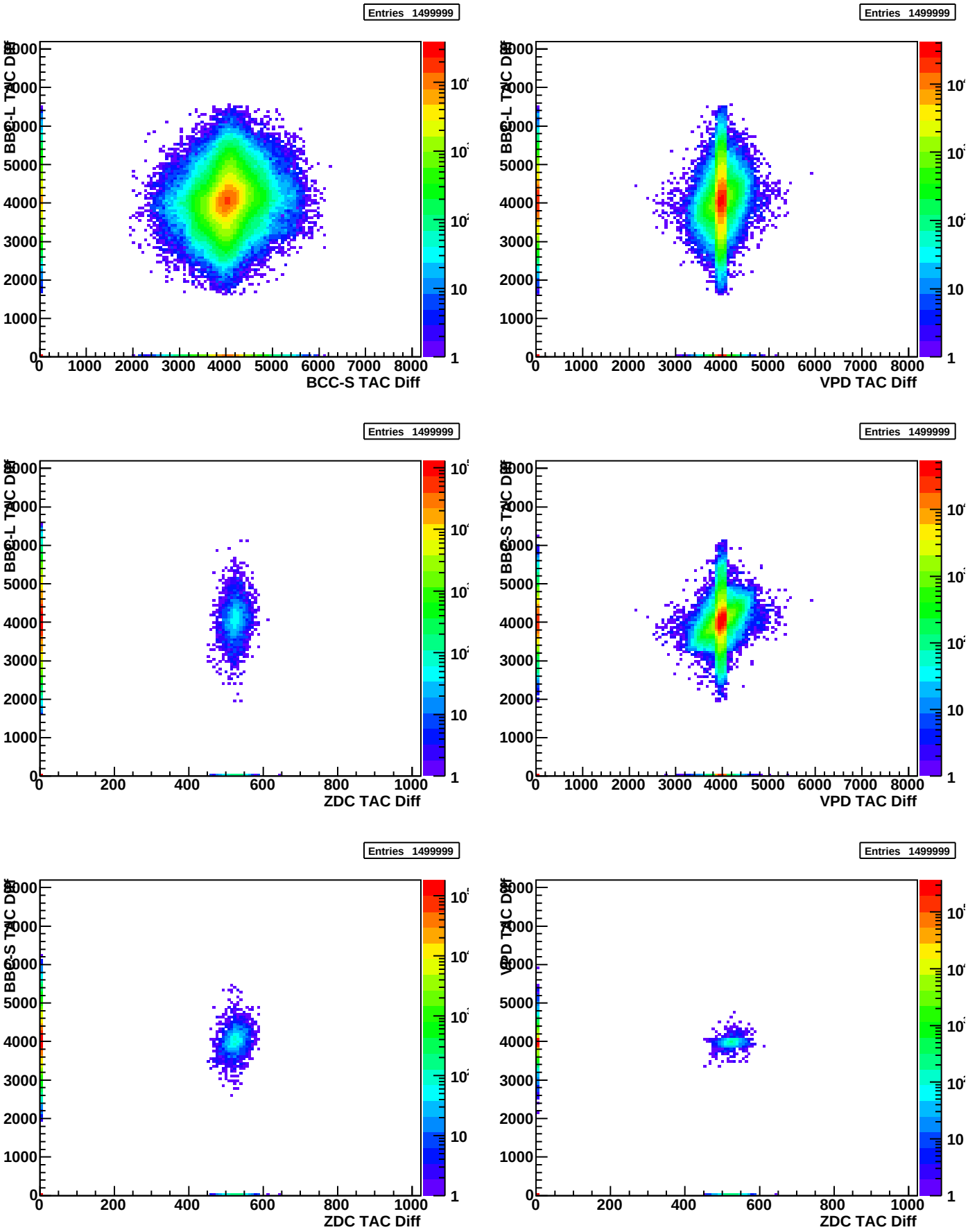

Entries 1499999
VPD-West ADC Sum
ZDC-West ADC Sum Att

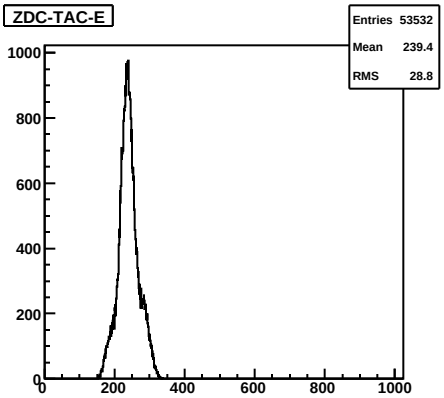

Entries 1499999
BBC-L-East ADC Sum
BBC-L-West ADC Sum

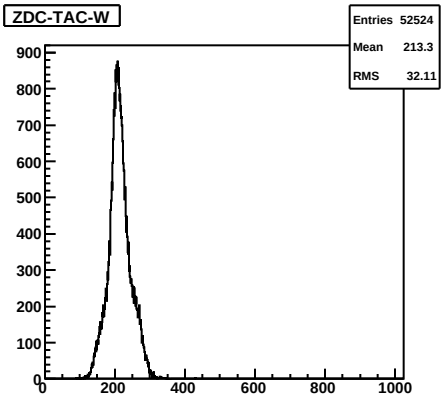

Entries 1499999
BBC-S-East ADC Sum
BBC-S-West ADC Sum

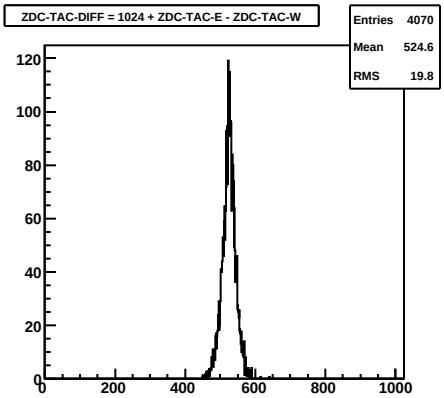

Entries 1499999
VPD East ADC Sum
VPD West ADC Sum

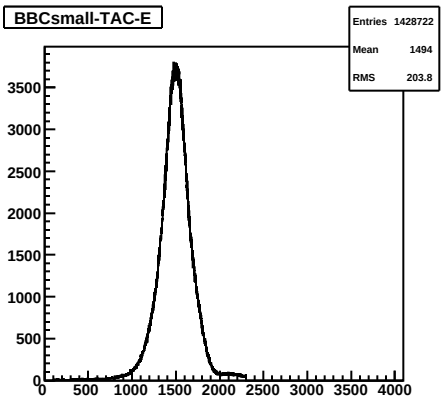

Entries 1499999
ZDC East ADC Sum Att
ZDC West ADC Sum Att

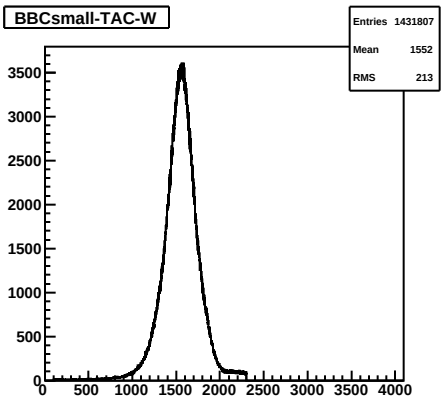

Entries 1499999
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1499999
BBC-L TAC Diff
VPD TAC Diff
Entries 1499999
BBC-L TAC Diff
ZDC TAC Diff
Entries 1499999
BBC-S TAC Diff
VPD TAC Diff
Entries 1499999
BBC-S TAC Diff
ZDC TAC Diff
Entries 1499999
VPD TAC Diff
ZDC TAC Diff

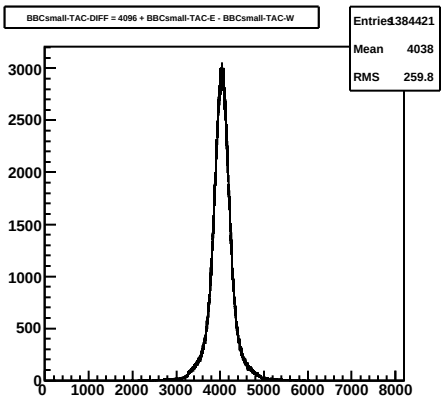

ZDC-TAC-E
Entries 53532
Mean 239.4
RMS 28.8

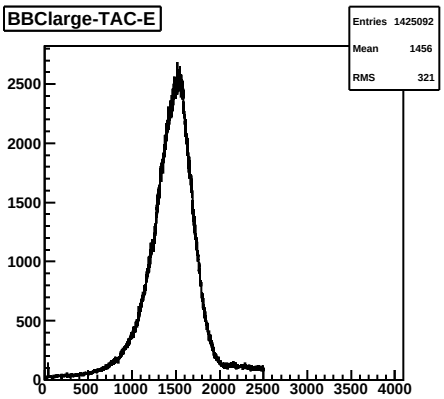

ZDC-TAC-W
Entries 52524
Mean 213.3
RMS 32.11

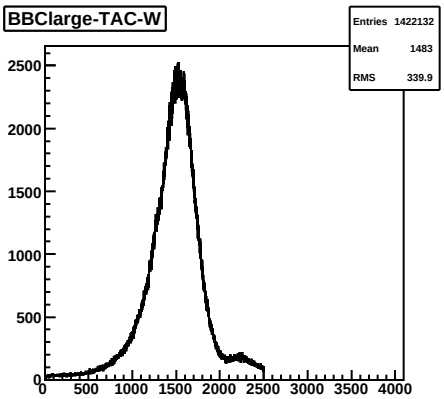

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 4070
Mean 524.6
RMS 19.8

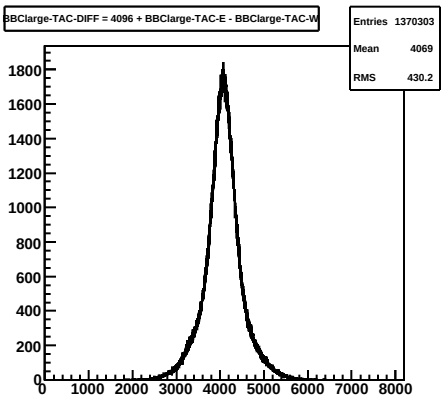

BBCsmall-TAC-E
Entries 1428722
Mean 1494
RMS 203.8

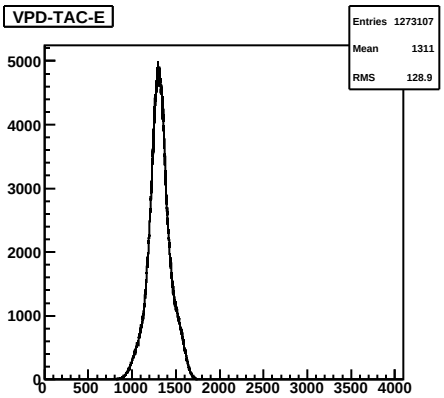

BBCsmall-TAC-W
Entries 1431807
Mean 1552
RMS 213

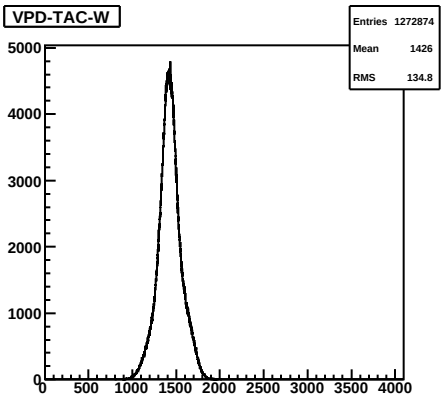

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1384421
Mean 4038
RMS 259.8

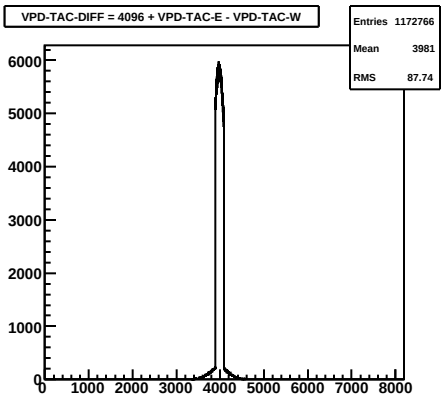

BBClarge-TAC-E
Entries 1425092
Mean 1456
RMS 321

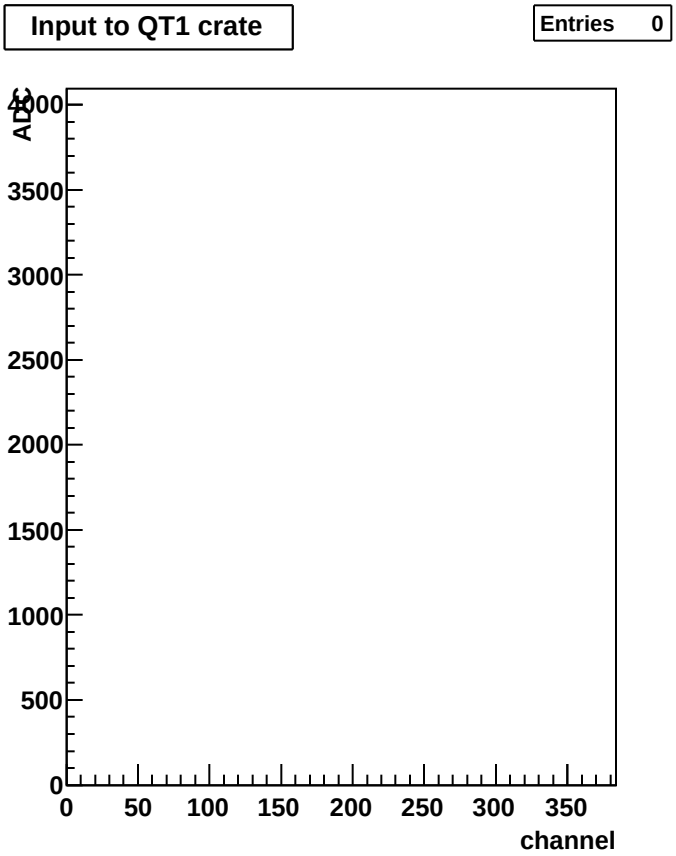

BBClarge-TAC-W
Entries 1422132
Mean 1483
RMS 339.9

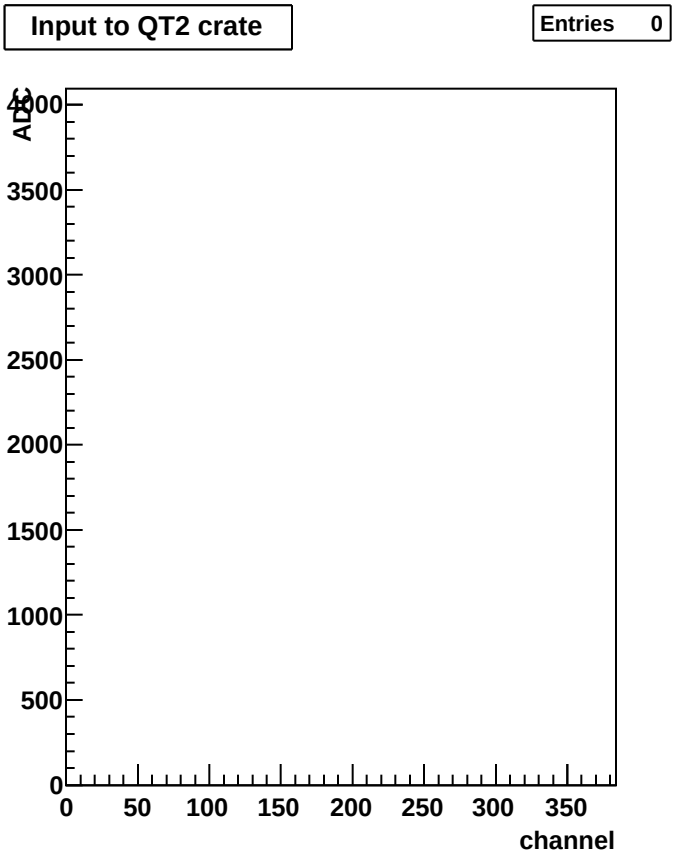

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1370303
Mean 4069
RMS 430.2

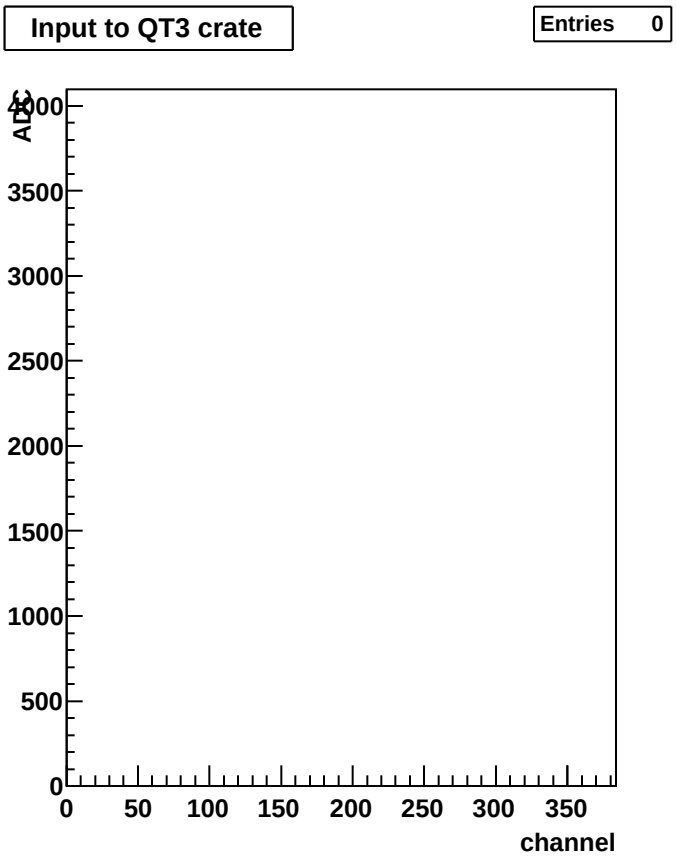

VPD-TAC-E
Entries 1273107
Mean 1311
RMS 128.9

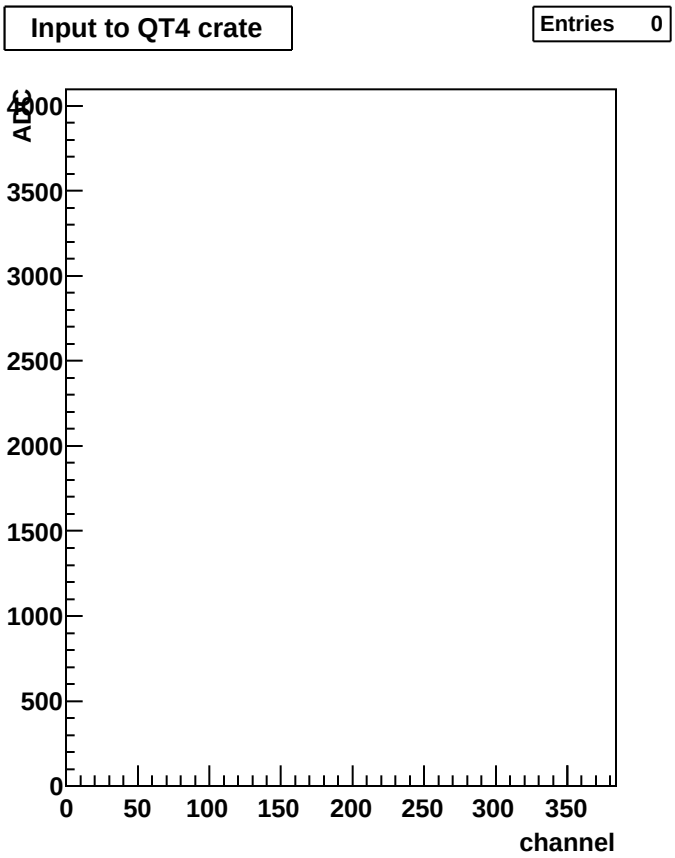

VPD-TAC-W
Entries 1272874
Mean 1426
RMS 134.8

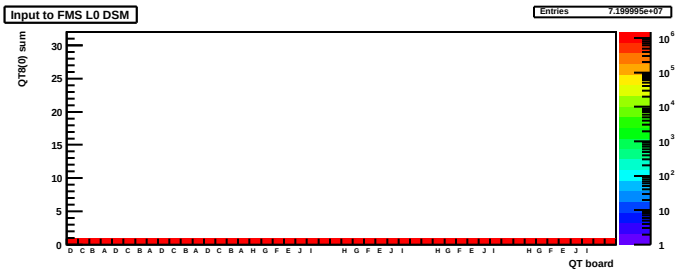

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1172766
Mean 3981
RMS 87.74

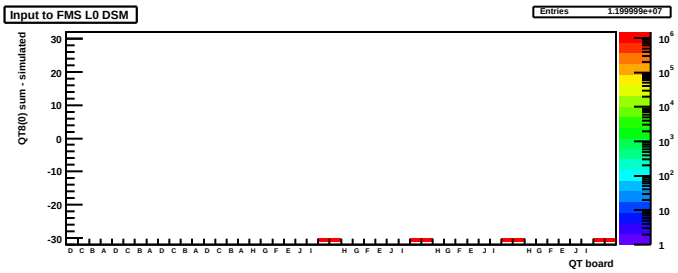

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

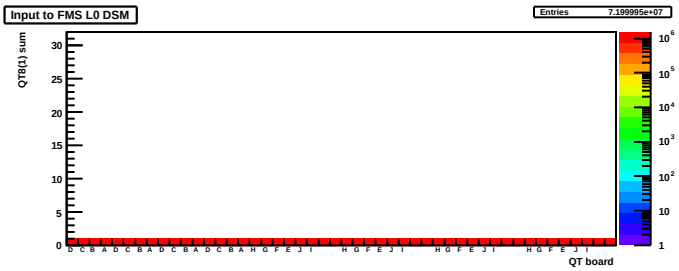

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

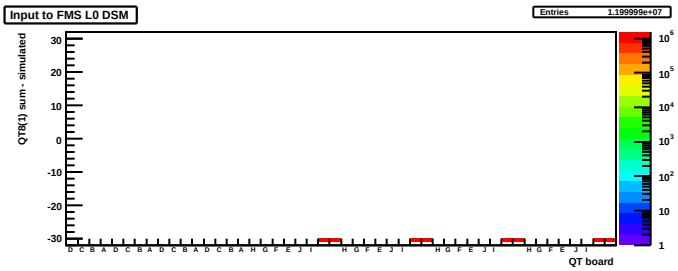

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

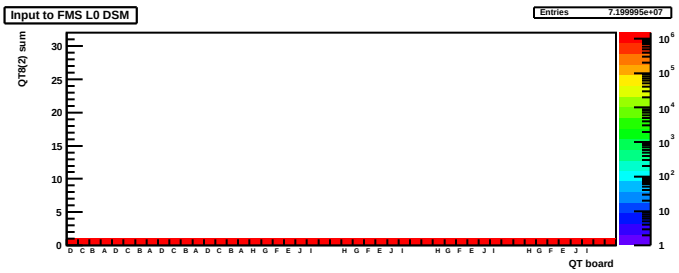

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

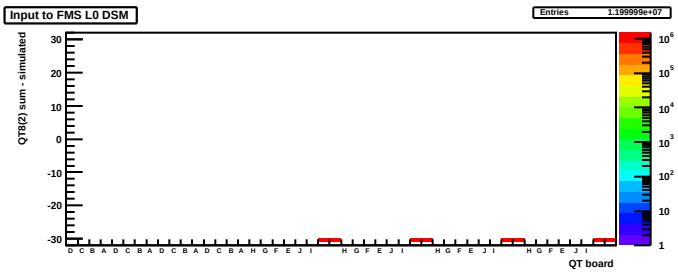

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(0) sum
QT board

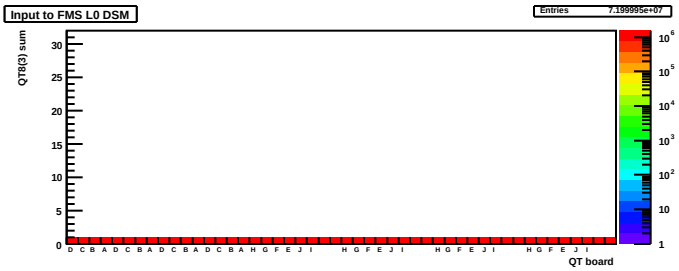

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(0) sum - simulated
QT board

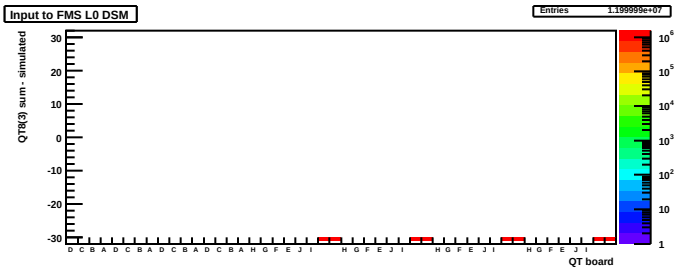

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(1) sum
QT board

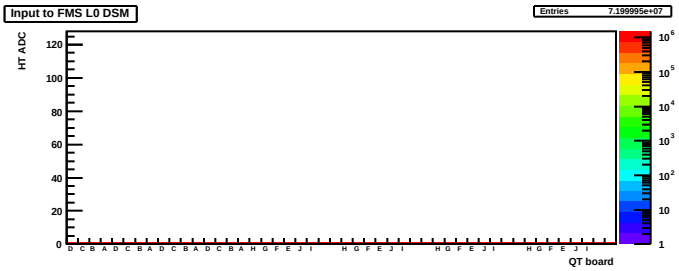

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(1) sum - simulated
QT board

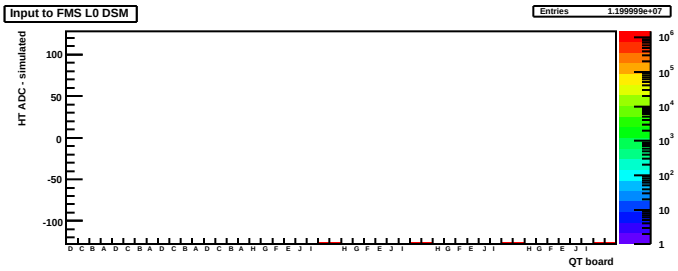

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(2) sum
QT board

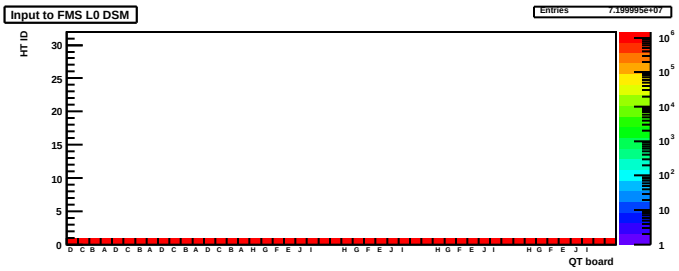

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(2) sum - simulated
QT board

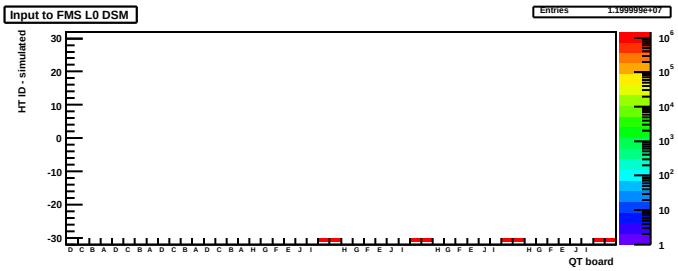

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(3) sum
QT board

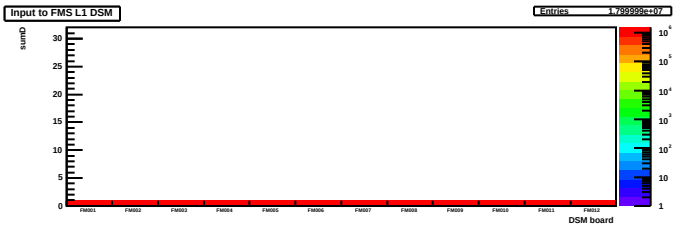

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(3) sum - simulated
QT board

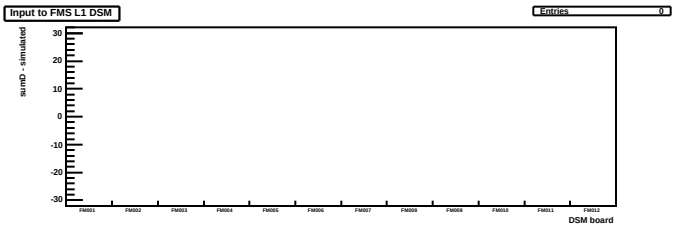

Input to FMS L0 DSM
Entries 7.199995e+07
HT ADC
QT board

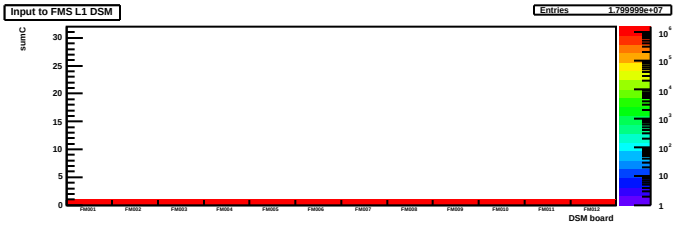

Input to FMS L0 DSM
Entries 1.199999e+07
HT ADC - simulated
QT board

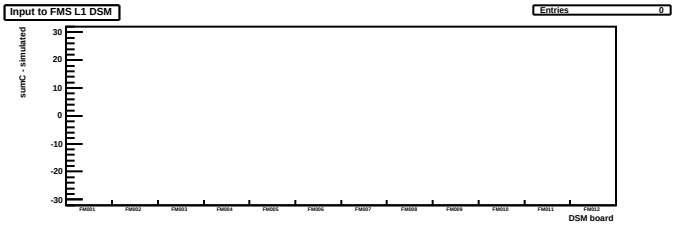

Input to FMS L0 DSM
Entries 7.199995e+07
HT ID
QT board

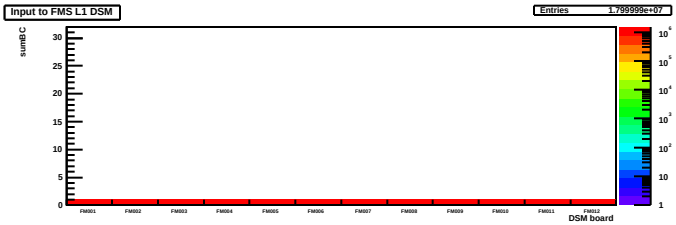

Input to FMS L0 DSM
Entries 1.199999e+07
HT ID - simulated
QT board

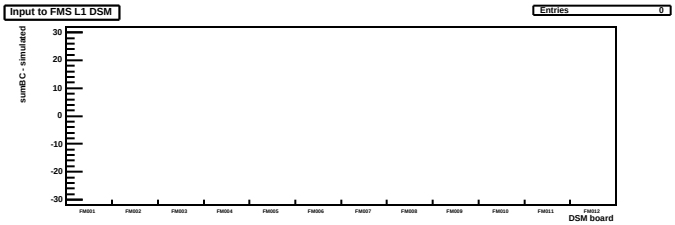

Input to FMS L1 DSM
Entries 1.799999e+07
sumD
DSM board

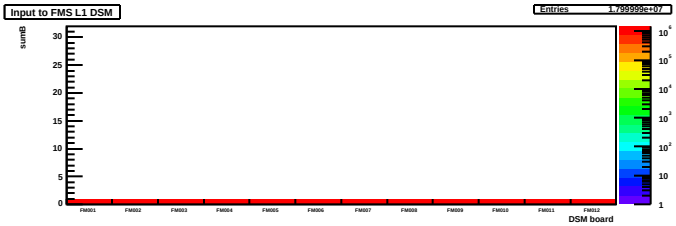

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

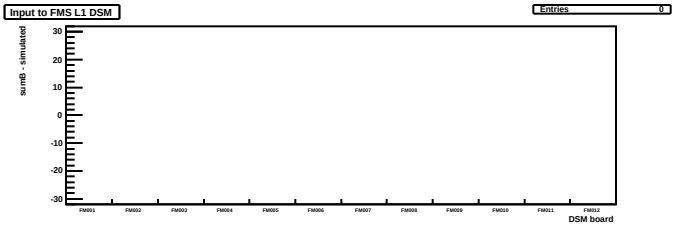

Input to FMS L1 DSM
Entries 1.799999e+07
sumC
DSM board

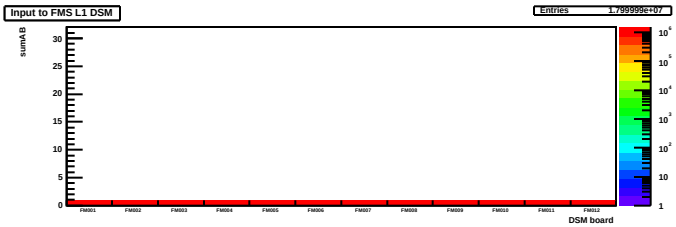

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

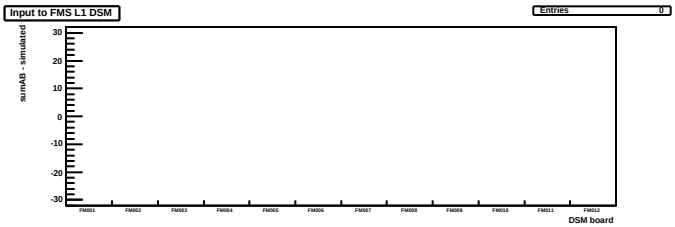

Input to FMS L1 DSM
Entries 1.799999e+07
sumBC
DSM board

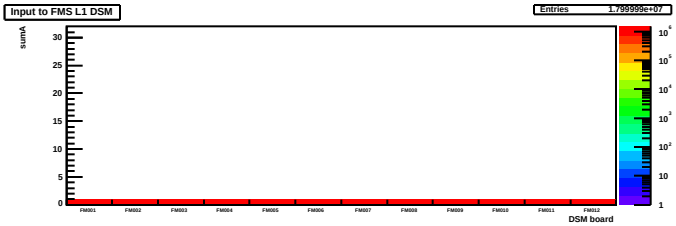

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

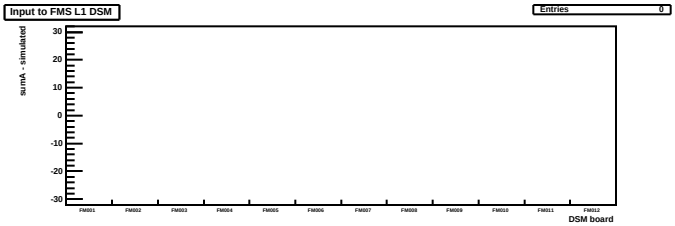

Input to FMS L1 DSM
Entries 1.799999e+07
sumB
DSM board

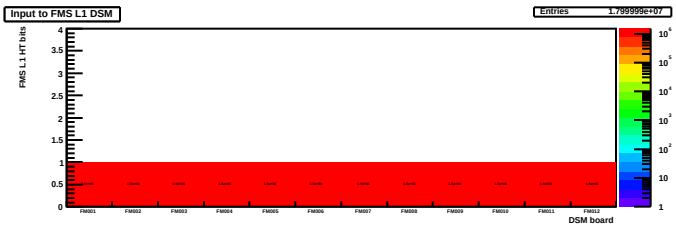

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

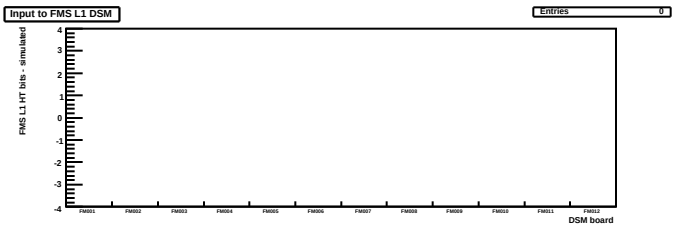

Input to FMS L1 DSM
Entries 1.799999e+07
sumAB
DSM board

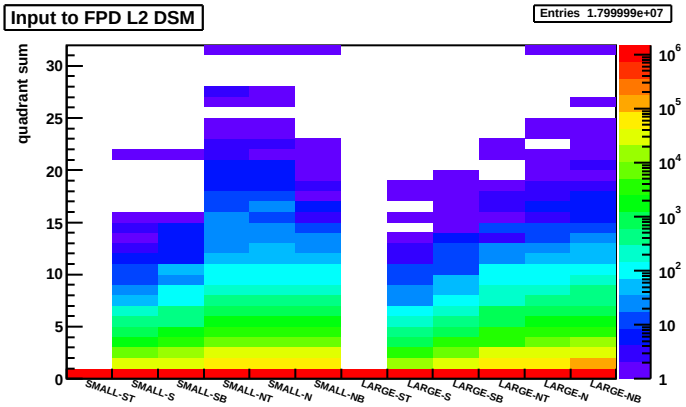

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

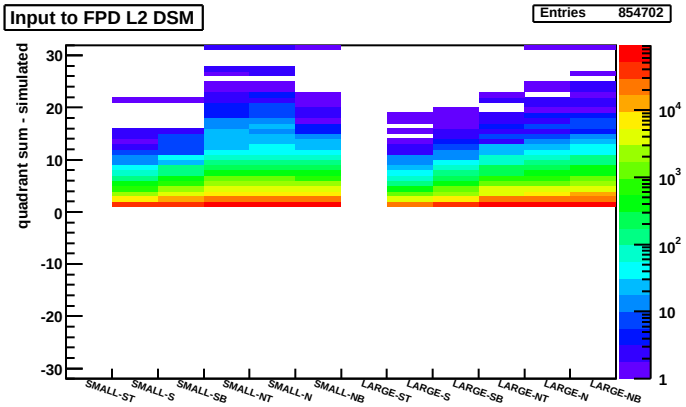

Input to FMS L1 DSM
Entries 1.799999e+07
sumA
DSM board

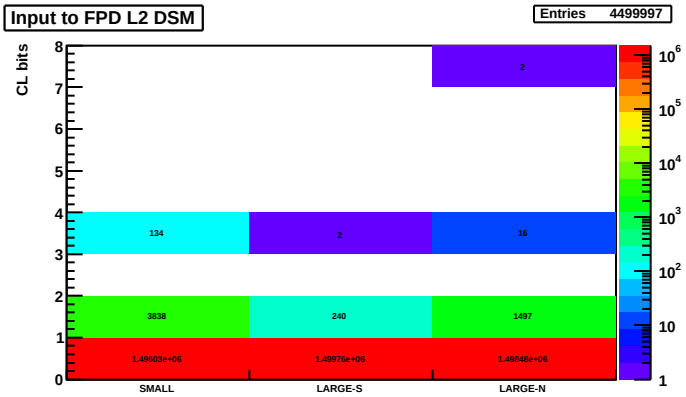

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

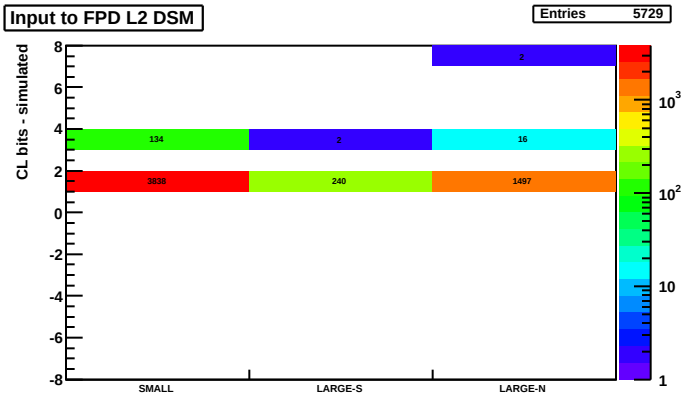

Input to FMS L1 DSM
Entries 1.799999e+07
FMS L1 HT bits
DSM board

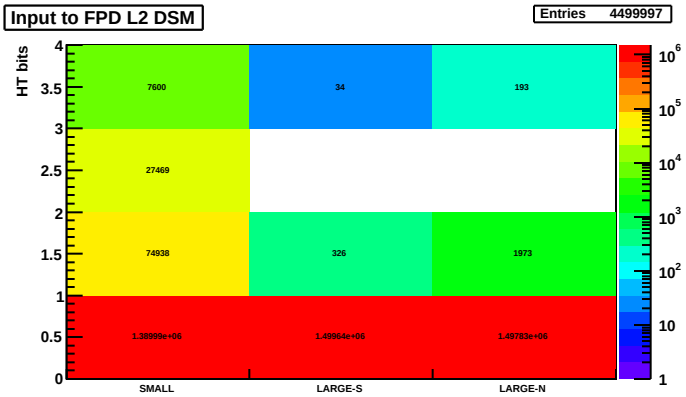

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

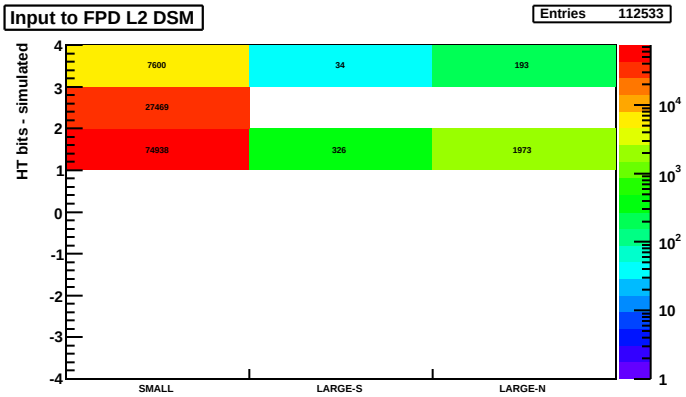

Input to FPD L2 DSM
Entries 1.799999e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

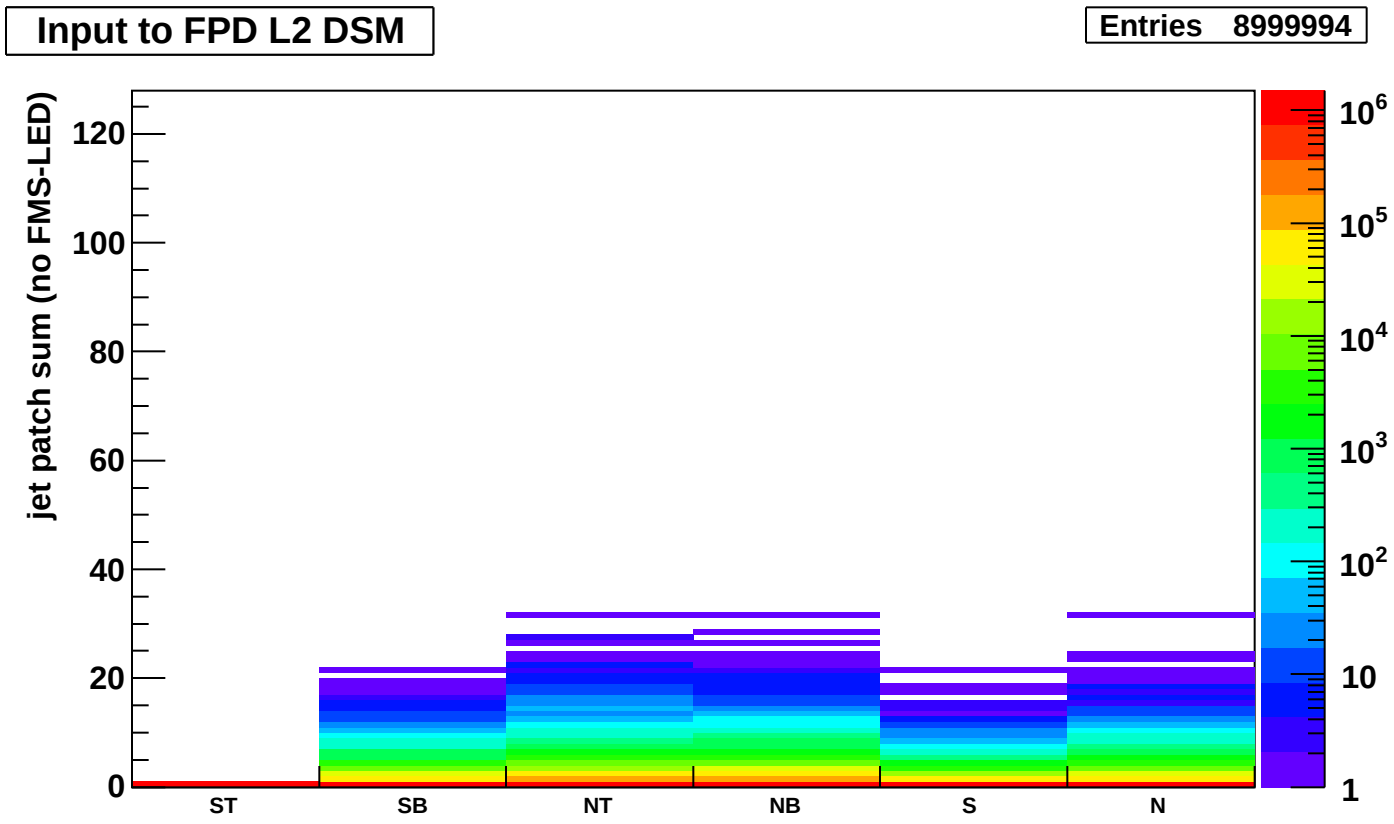

Input to FPD L2 DSM
Entries 854702
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

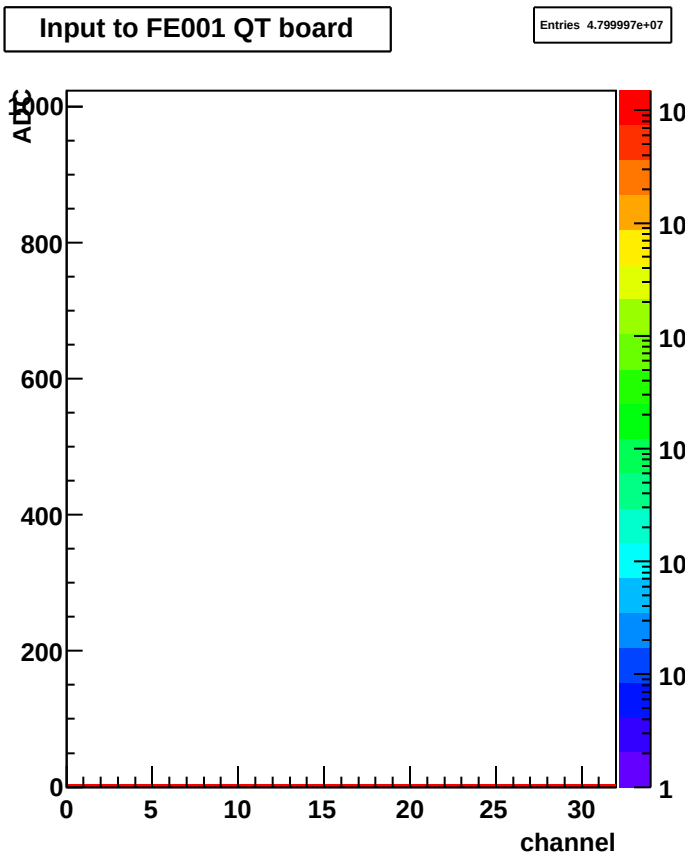

Input to FPD L2 DSM
Entries 4499997
CL bits
2
134
2
16
3838
240
1497
1.49603e+06
1.49976e+06
1.49848e+06
SMALL
LARGE-S
LARGE-N

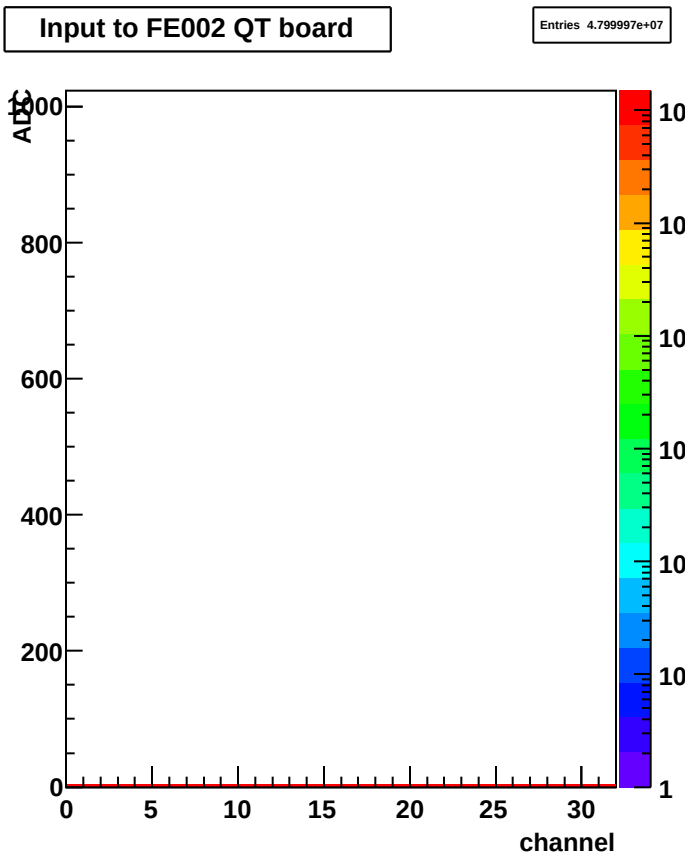

Input to FPD L2 DSM
Entries 5729
CL bits - simulated
2
134
2
16
3838
240
1497
SMALL
LARGE-S
LARGE-N

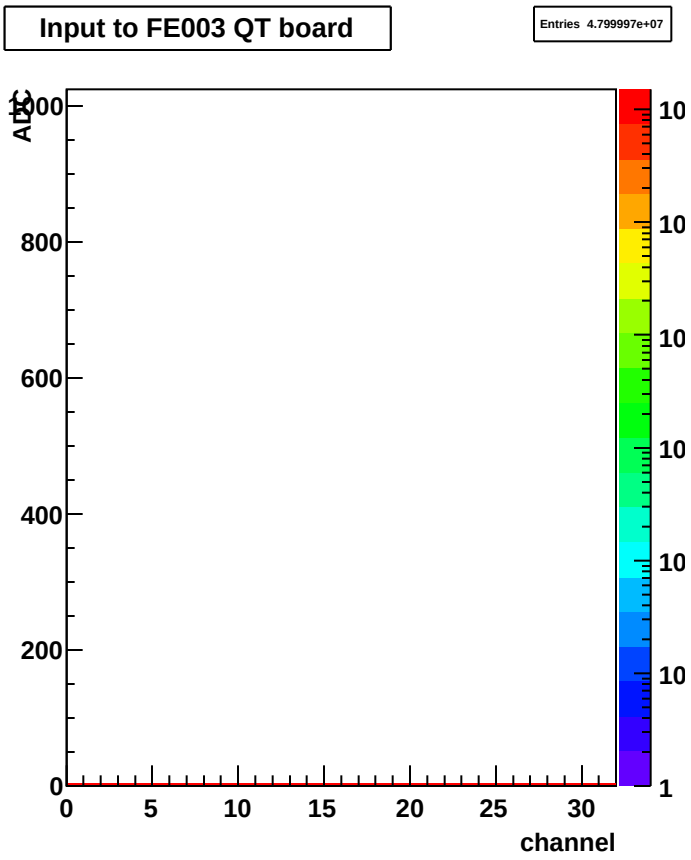

Input to FPD L2 DSM
Entries 4499997
HT bits
7600
34
193
27469
74938
326
1973
1.38999e+06
1.49964e+06
1.49783e+06
SMALL
LARGE-S
LARGE-N

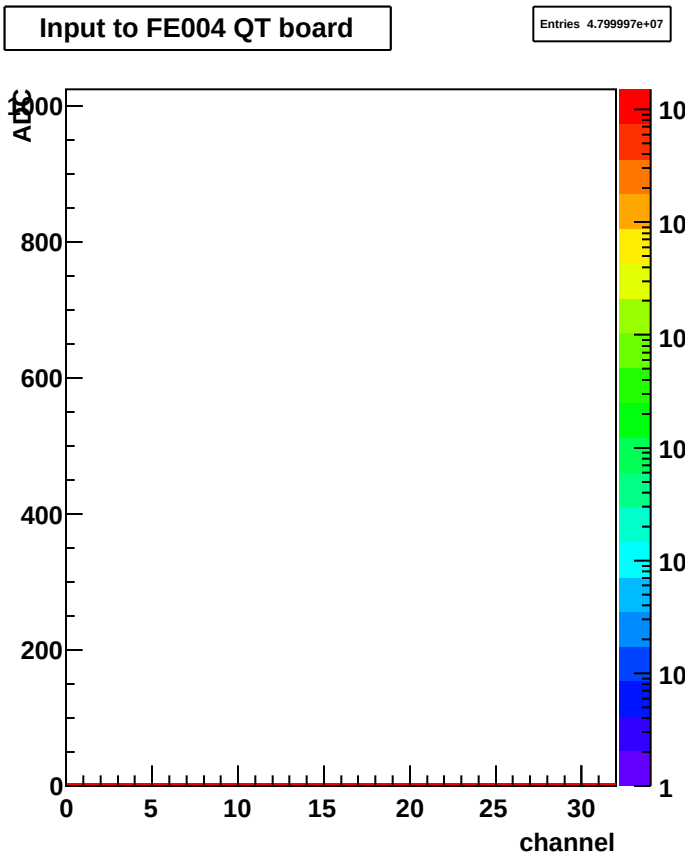

Input to FPD L2 DSM
Entries 112533
HT bits - simulated
7600
34
193
27469
74938
326
1973
SMALL
LARGE-S
LARGE-N

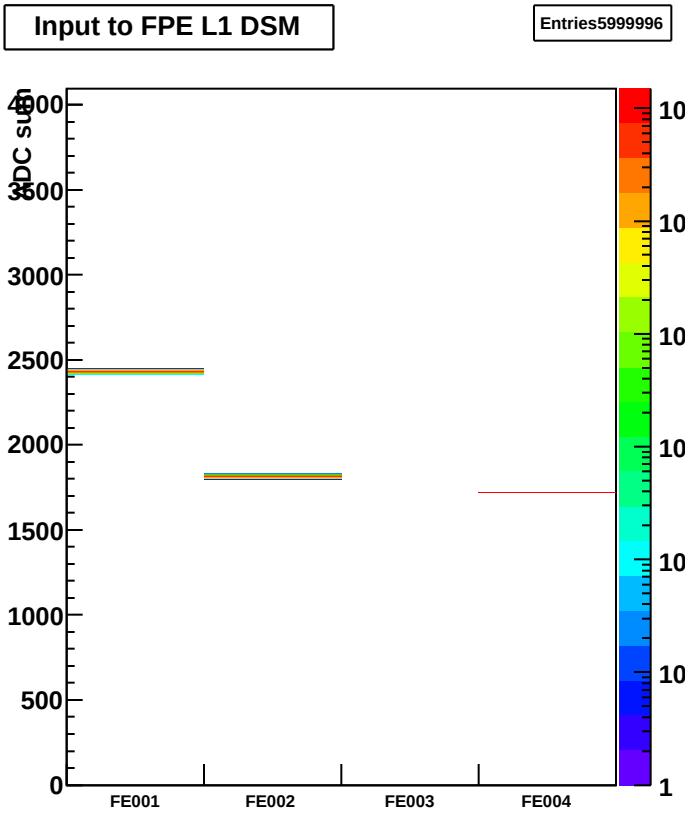

Input to FPD L2 DSM
Entries 8999994
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6

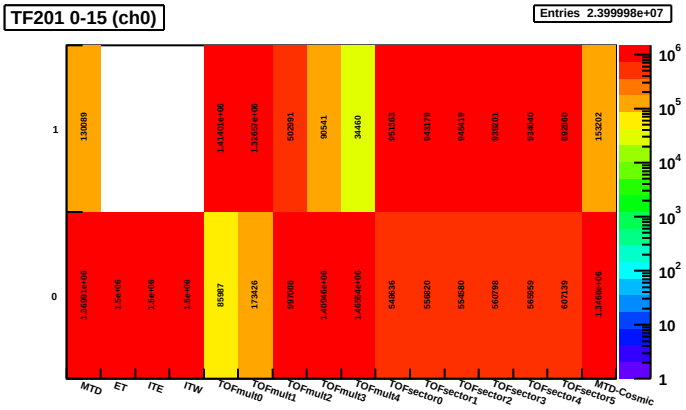

Input to FE001 QT board
Entries 4.799997e+07
ADC
channel

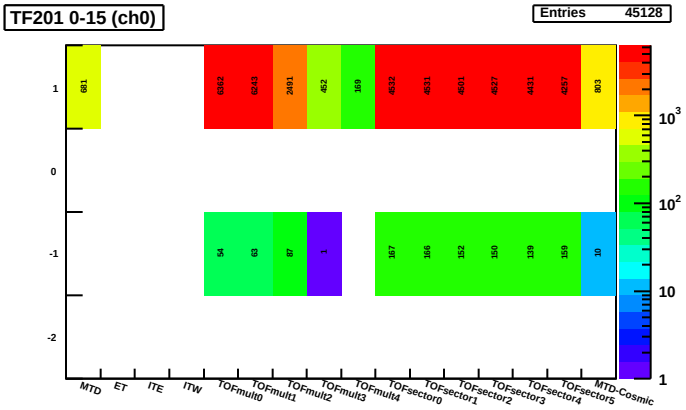

Input to FE002 QT board
Entries 4.799997e+07
ADC
channel

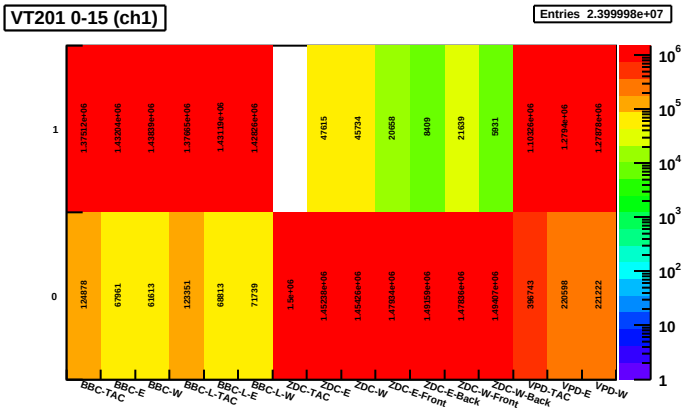

Input to FE003 QT board
Entries 4.799997e+07
ADC
channel

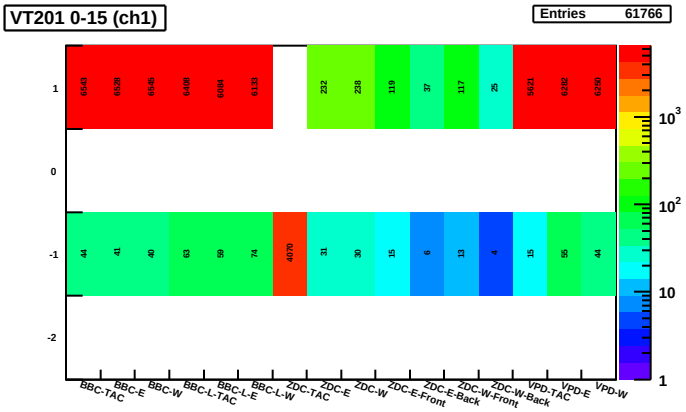

Input to FE004 QT board
Entries 4.799997e+07
ADC
channel

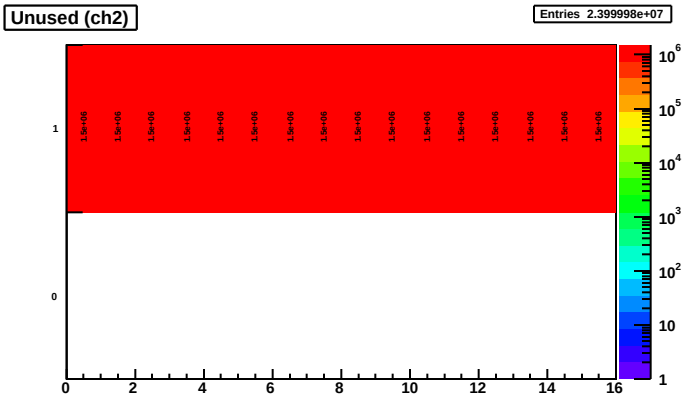

Input to FPE L1 DSM
Entries5999996
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

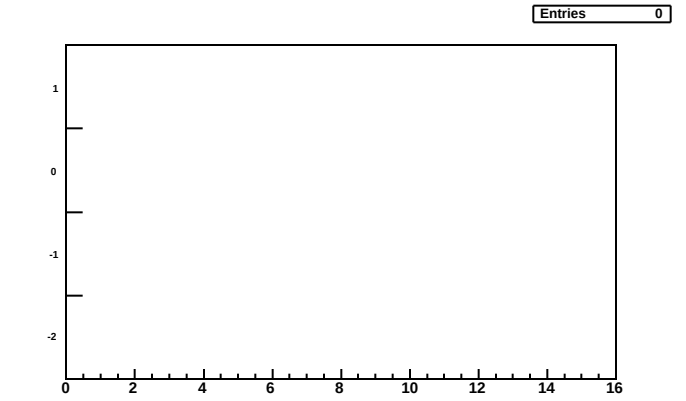

TF201 0-15 (ch0)
Entries 2.399998e+07
MTD
ET
ITE
ITW
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5
MTD-Cosmic

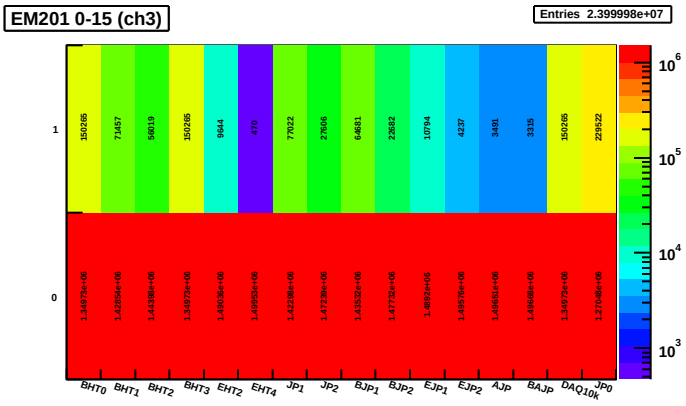

TF201 0-15 (ch0)
Entries 45128
MTD
ET
ITE
ITW
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5
MTD-Cosmic

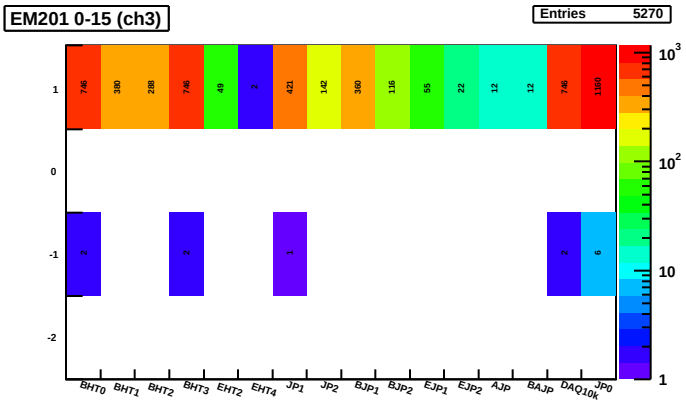

VT201 0-15 (ch1)
Entries 2.399998e+07
BBC-TAC
BBC-E
BBC-W
BBC-L-TAC
BBC-L-E
BBC-L-W
ZDC-TAC
ZDC-E
ZDC-W
ZDC-E-Front
ZDC-E-Back
ZDC-W-Front
ZDC-W-Back
VPD-TAC
VPD-E
VPD-W


VT201 0-15 (ch1)
Entries 61766
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

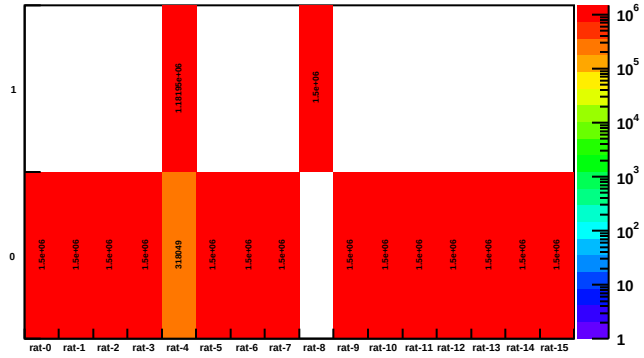

Unused (ch2)
Entries 2.399998e+07

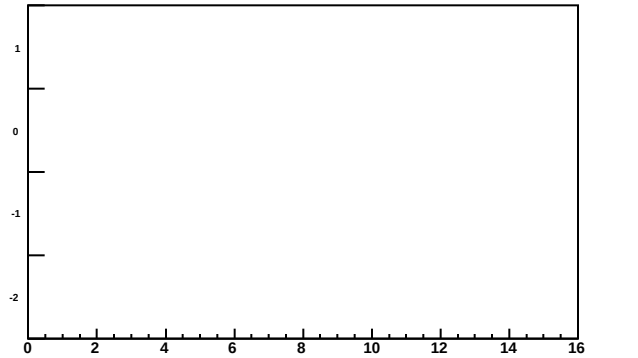

Entries 0


EM201 0-15 (ch3)
Entries 2.399998e+07
BHT0
BHT1
BHT2
BHT3
EHT2
EHT4
JP1
JP2
BJP1
BJP2
EJP1
EJP2
AJP
BAJP
DAQ10k
JP0

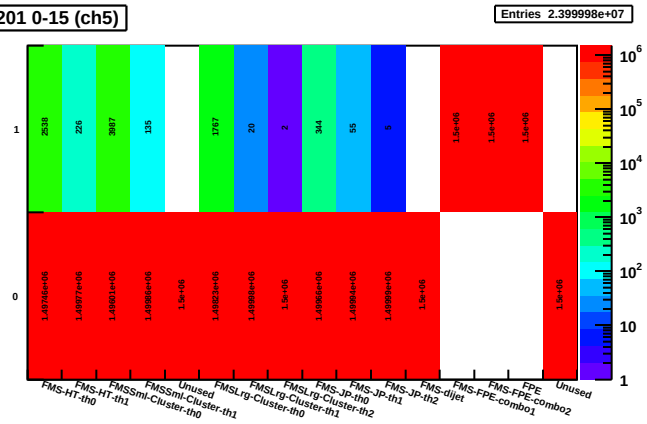

EM201 0-15 (ch3)
Entries 5270
BHT0
BHT1
BHT2
BHT3
EHT2
EHT4
JP1
JP2
BJP1
BJP2
EJP1
EJP2
AJP
BAJP
DAQ10k
JP0

RAT board (ch4)

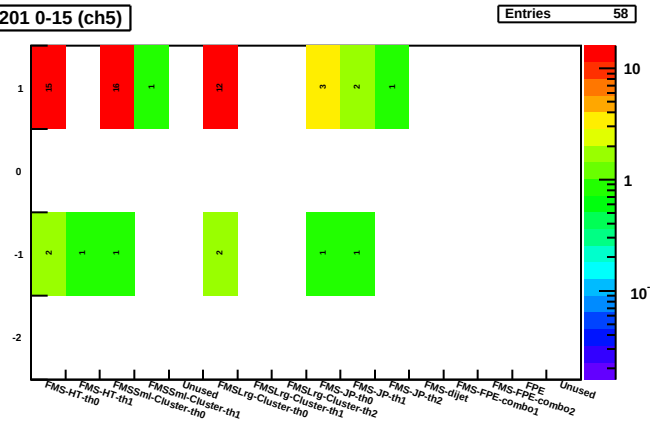




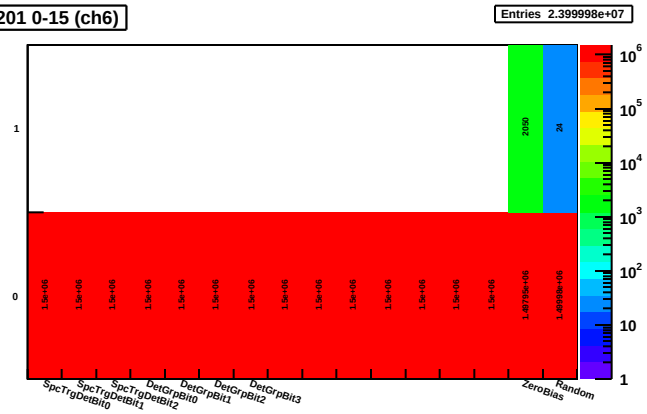
FP201 0-15 (ch5)

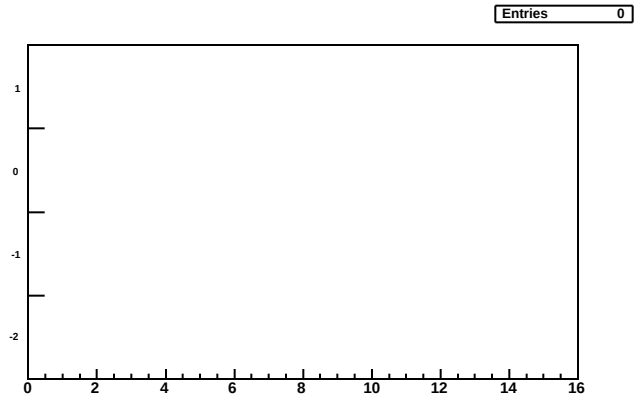
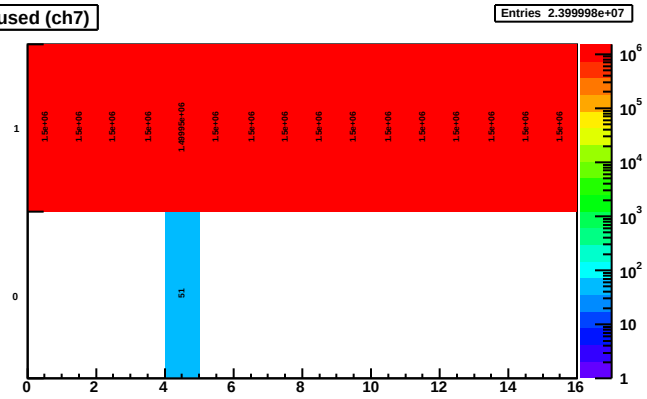
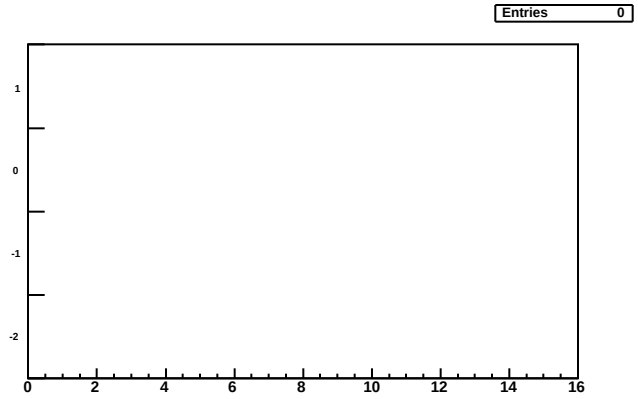


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)