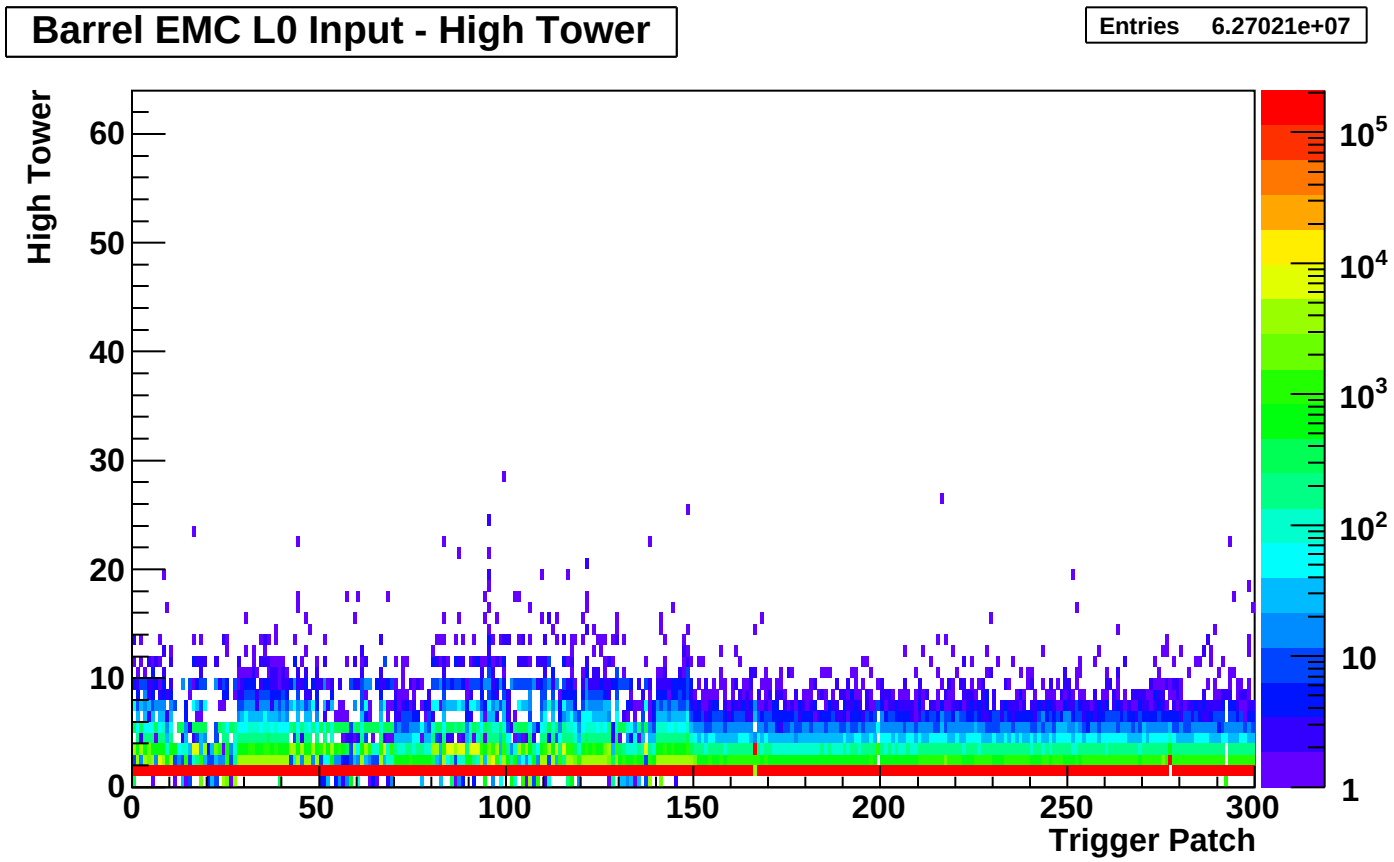
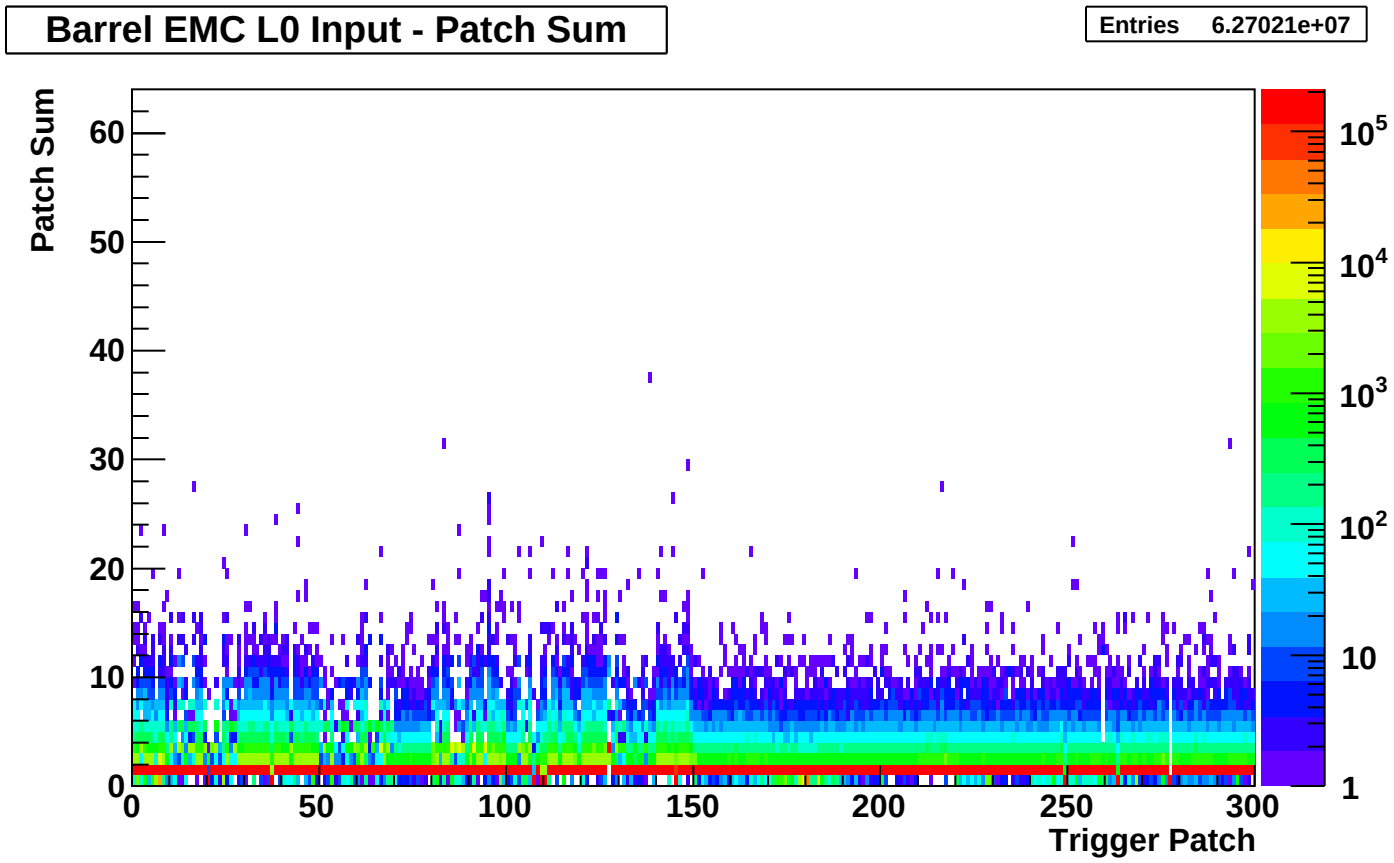
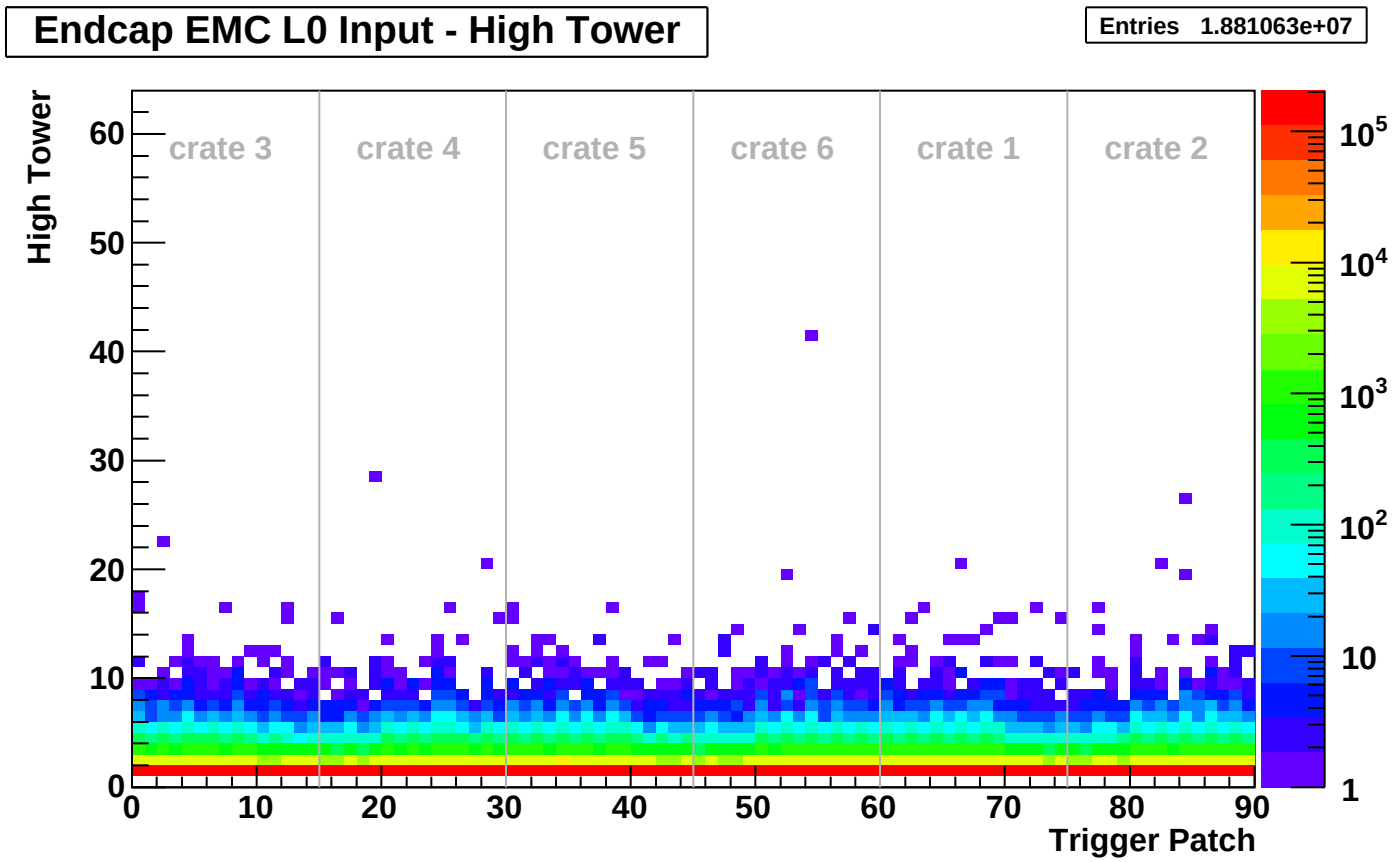
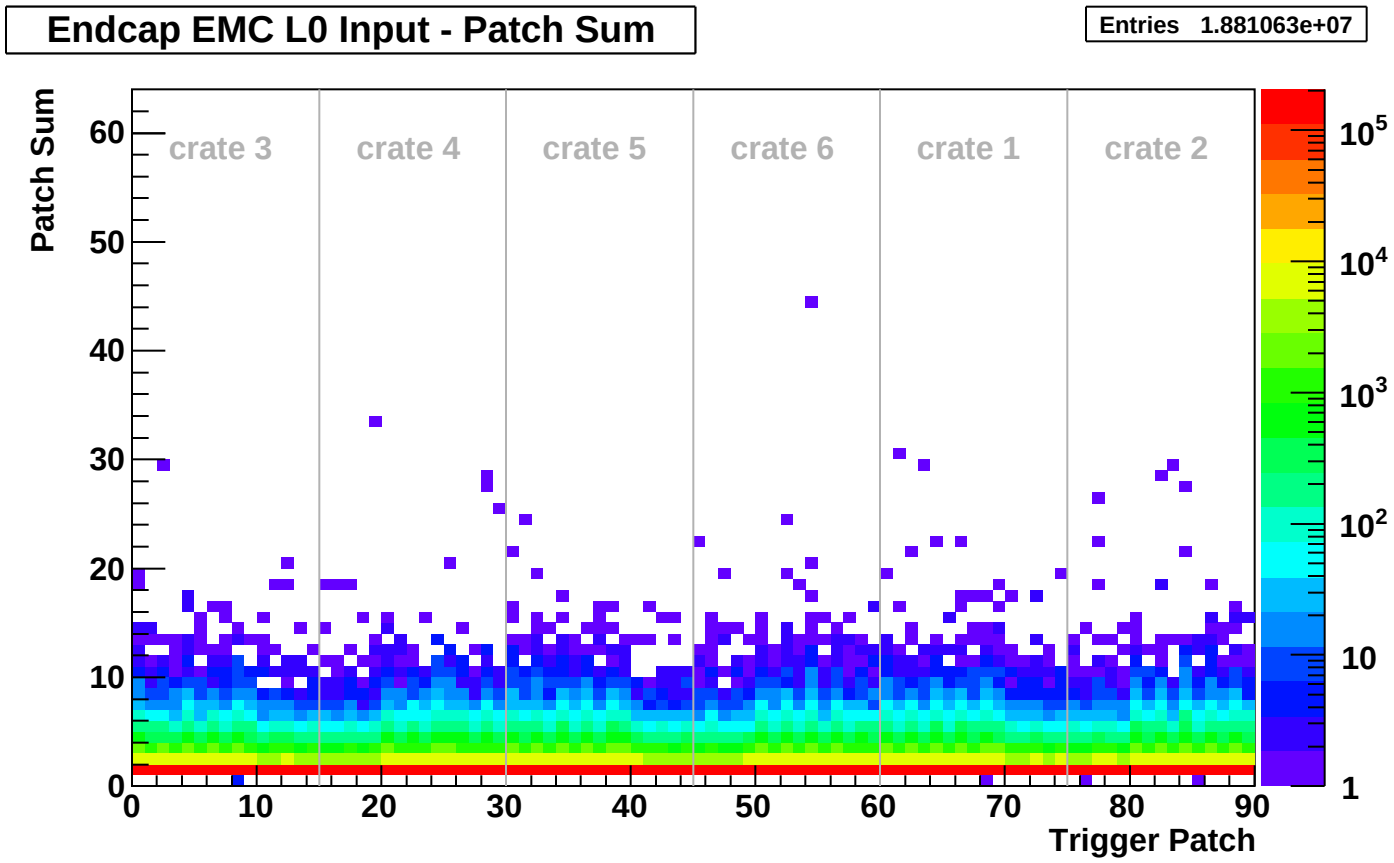
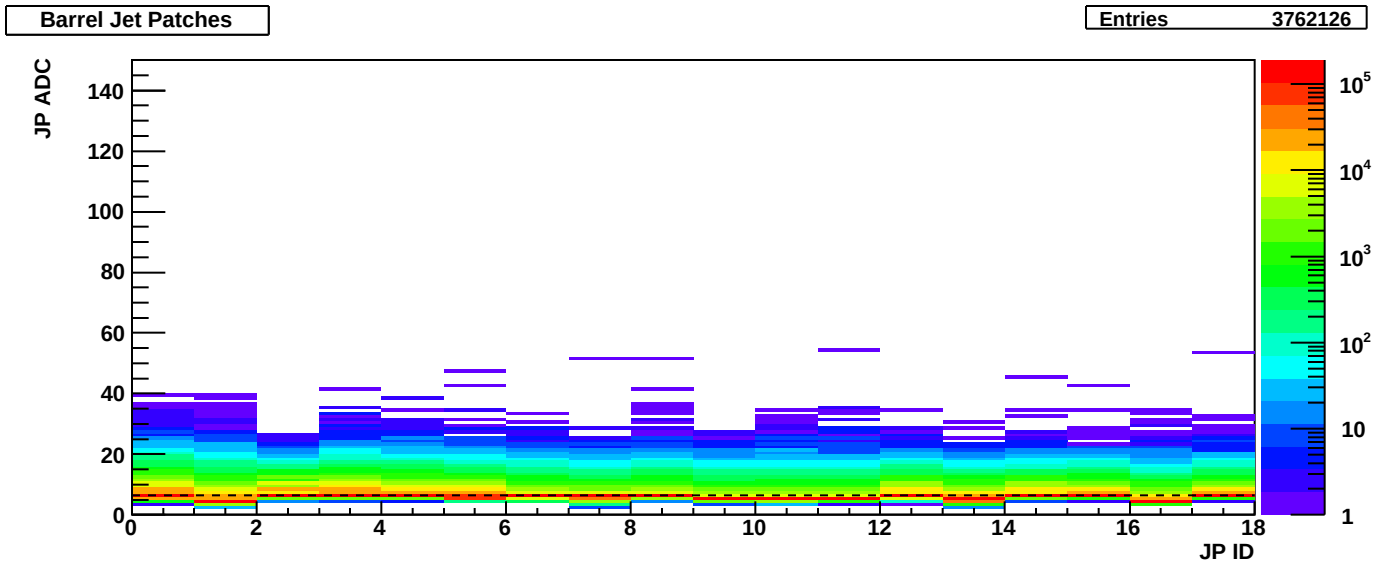
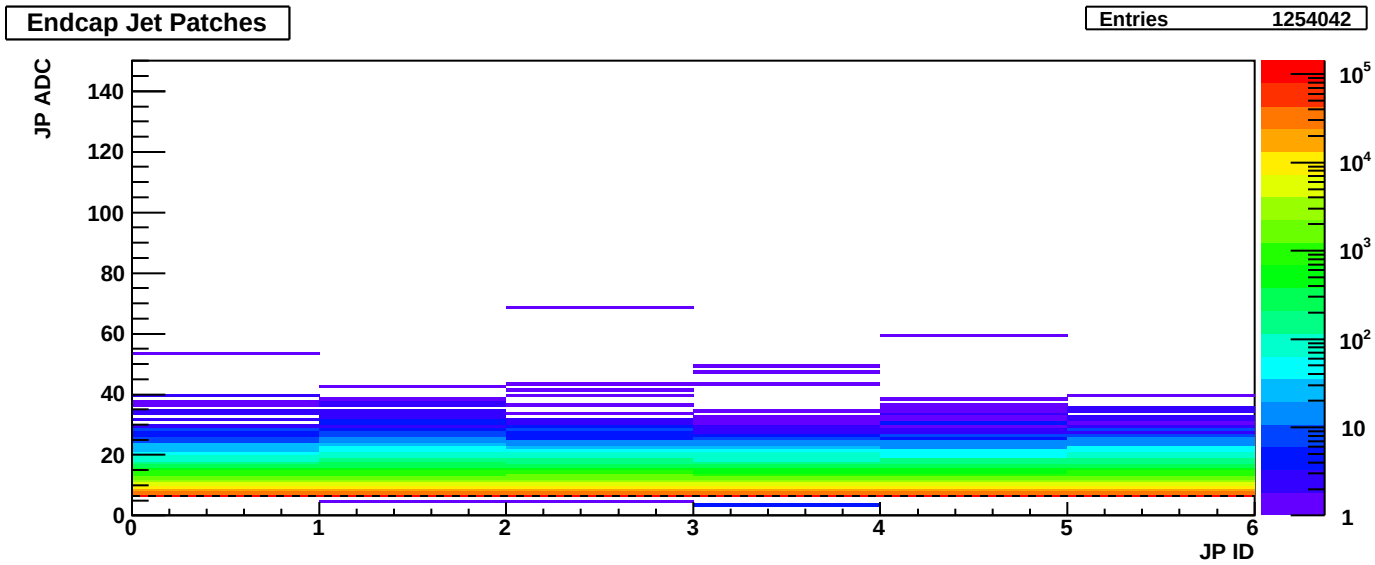

Barrel EMC L0 Input - High Tower
Entries 6.27021e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

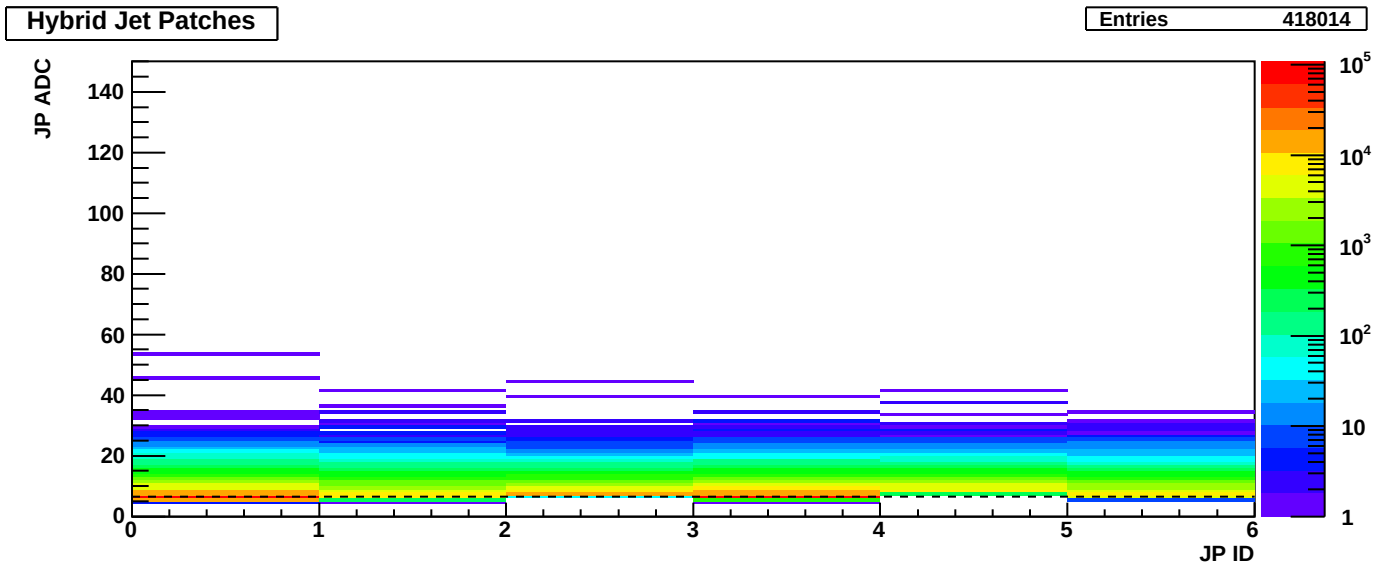

Barrel EMC L0 Input - Patch Sum
Entries 6.27021e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

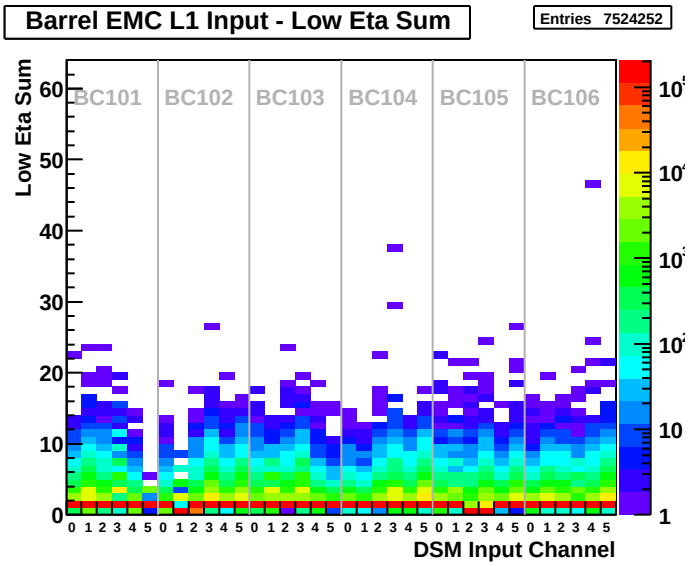

Endcap EMC L0 Input - High Tower
Entries 1.881063e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

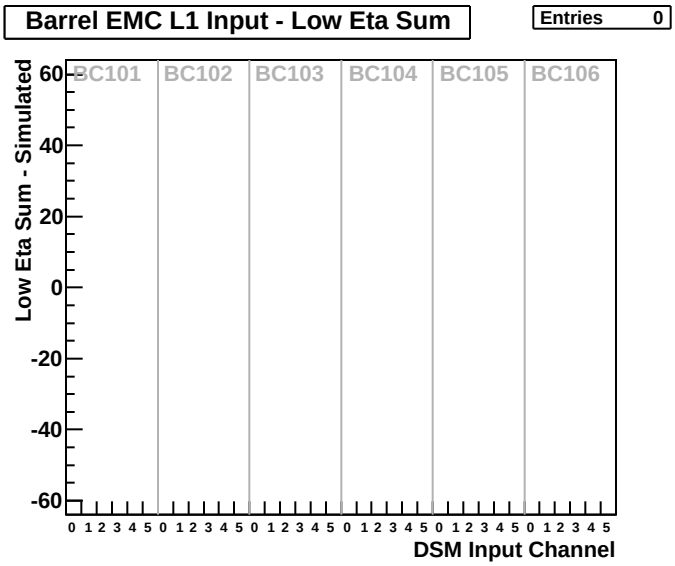

Endcap EMC L0 Input - Patch Sum
Entries 1.881063e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

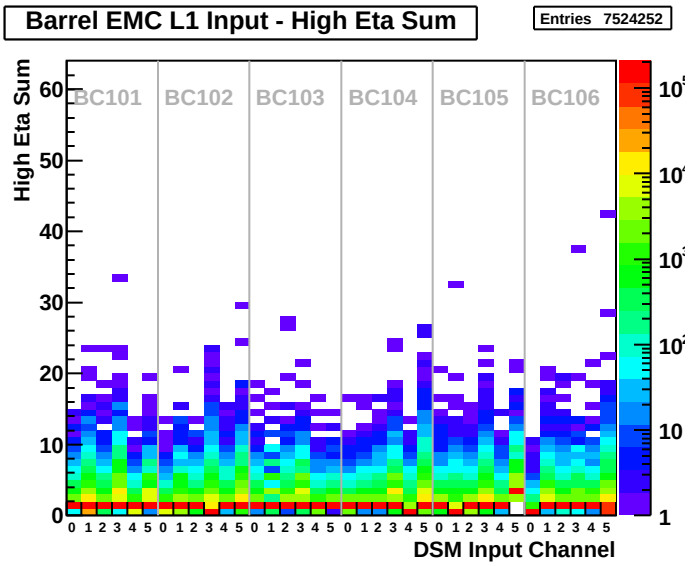

Barrel Jet Patches
Entries 3762126
JP ADC
JP ID

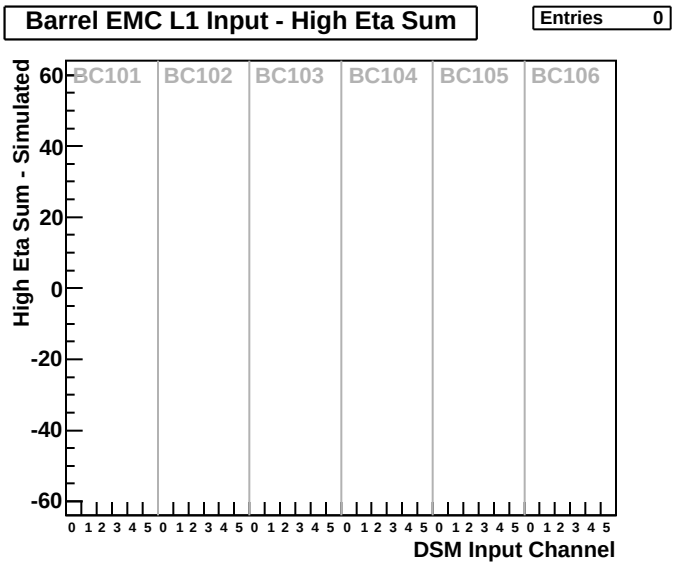

Endcap Jet Patches
Entries 1254042
JP ADC
JP ID

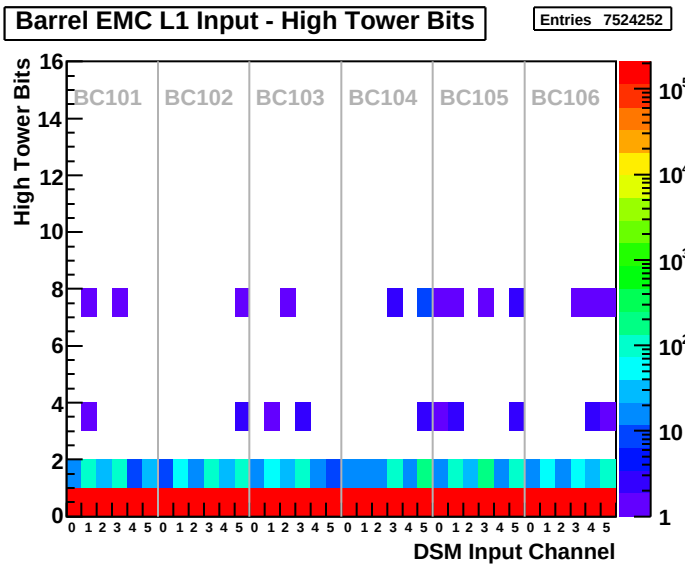

Hybrid Jet Patches
Entries 418014
JP ADC
JP ID

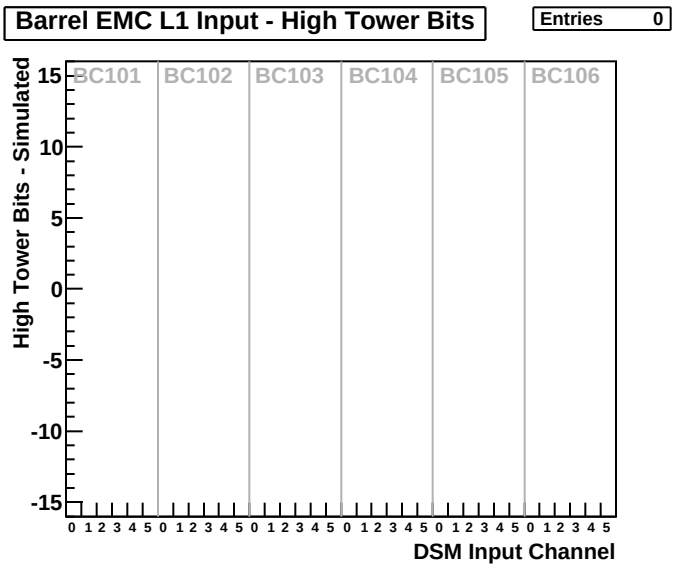

Barrel EMC L1 Input - Low Eta Sum
Entries 7524252
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

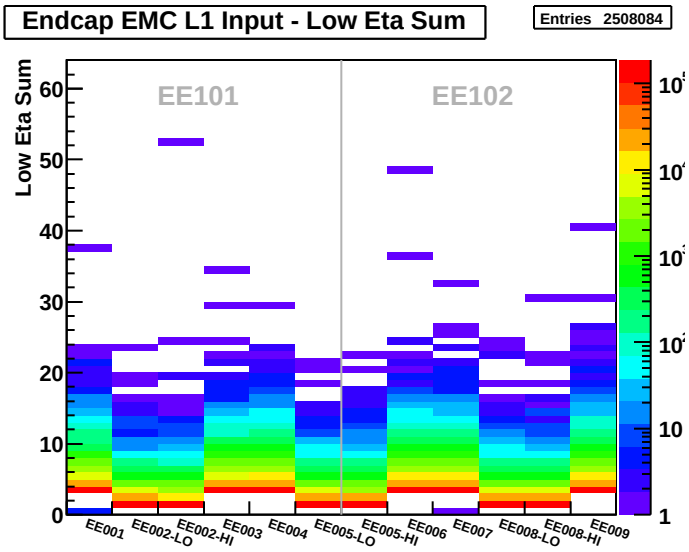

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

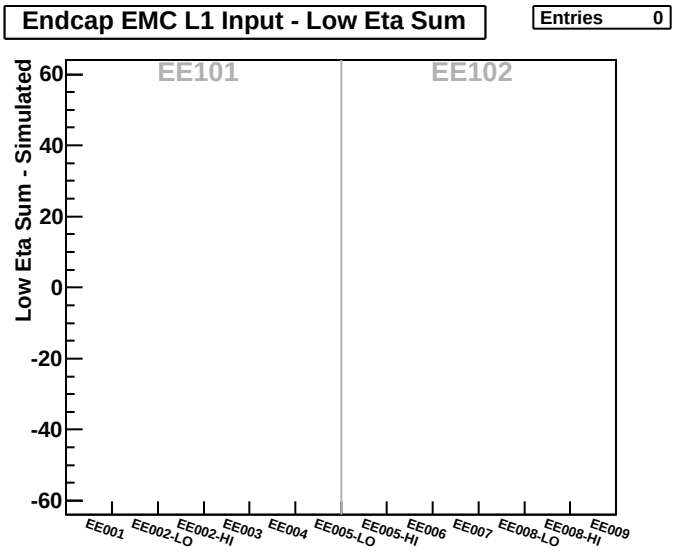

Barrel EMC L1 Input - High Eta Sum
Entries 7524252
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

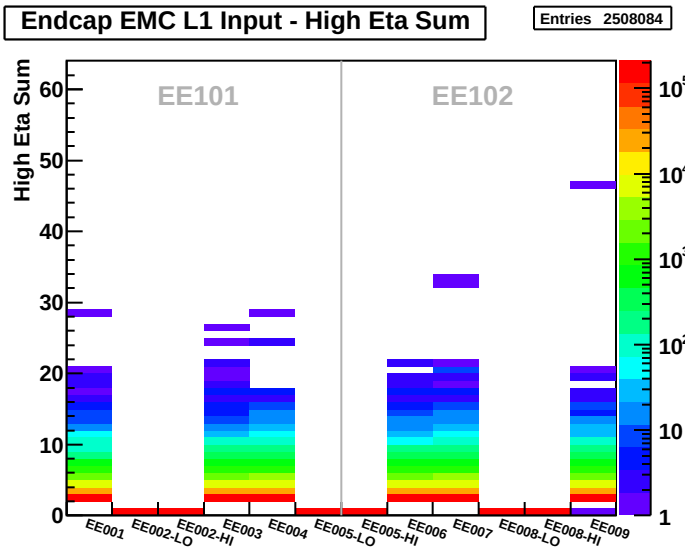

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

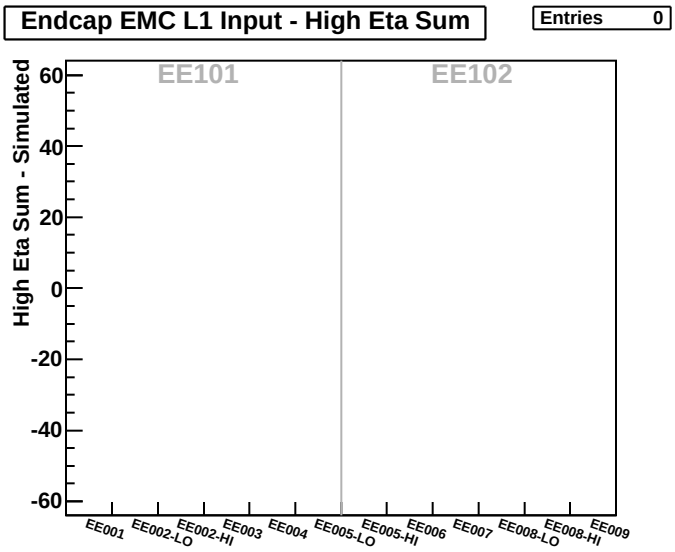

Barrel EMC L1 Input - High Tower Bits
Entries 7524252
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

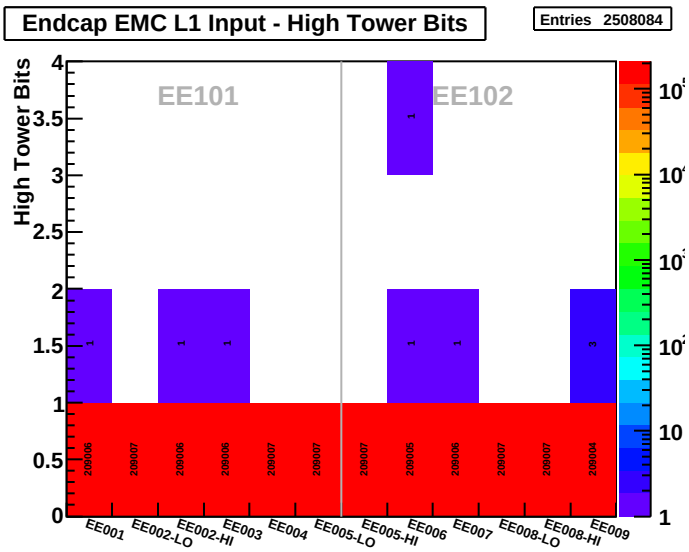

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

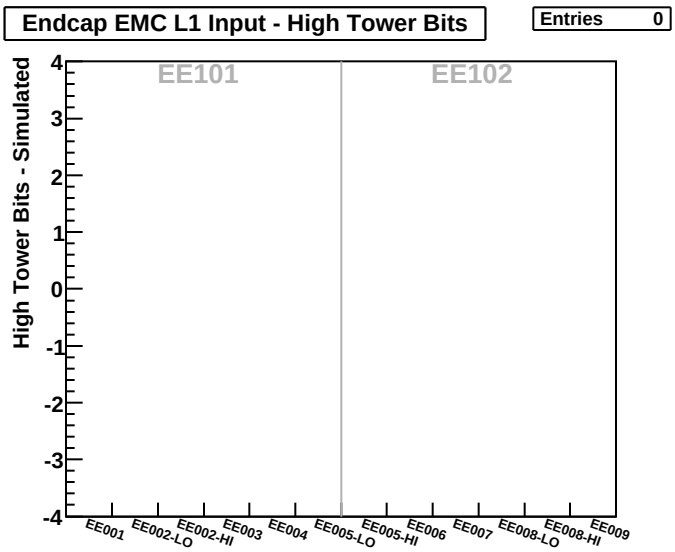

Endcap EMC L1 Input - Low Eta Sum
Entries 2508084
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

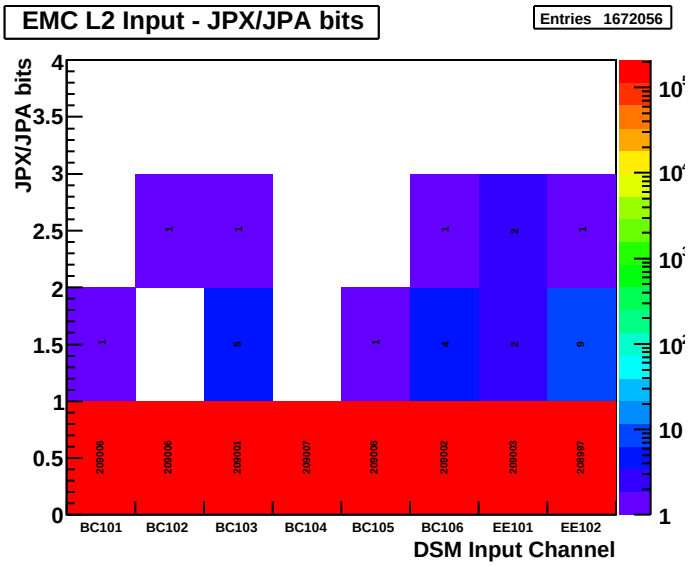

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

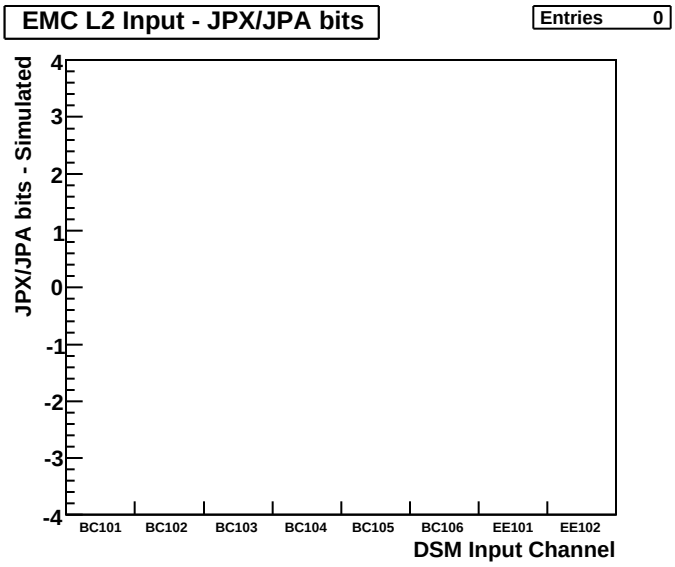

Endcap EMC L1 Input - High Eta Sum
Entries 2508084
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

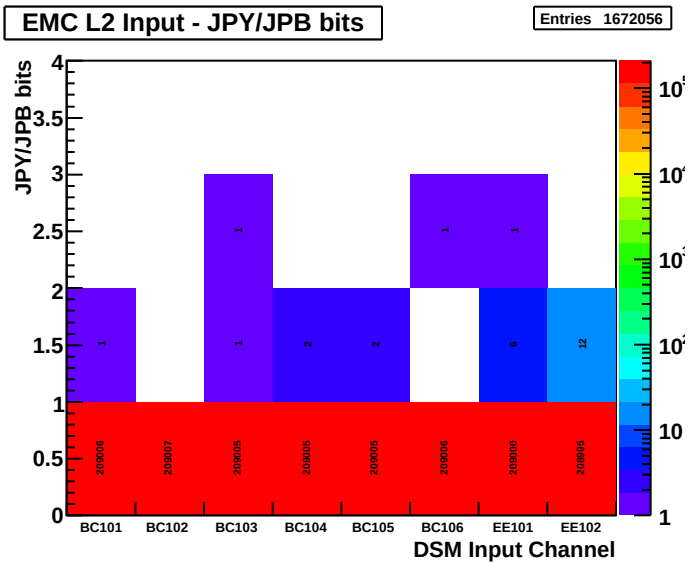

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

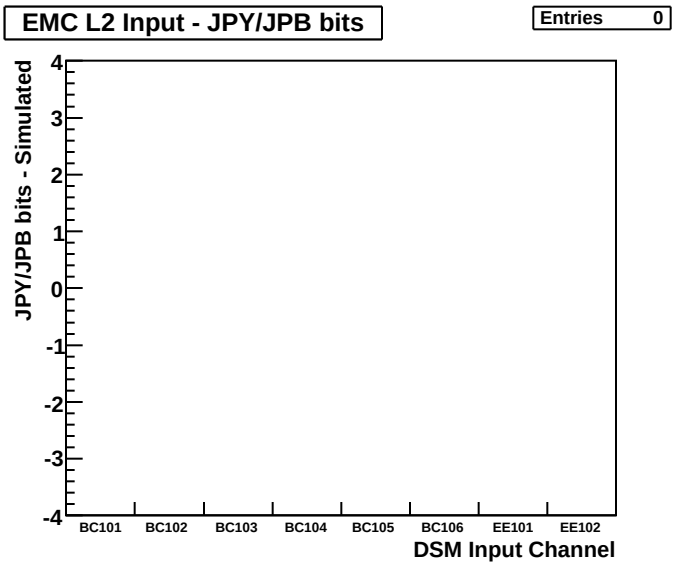

Endcap EMC L1 Input - High Tower Bits
Entries 2508084
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

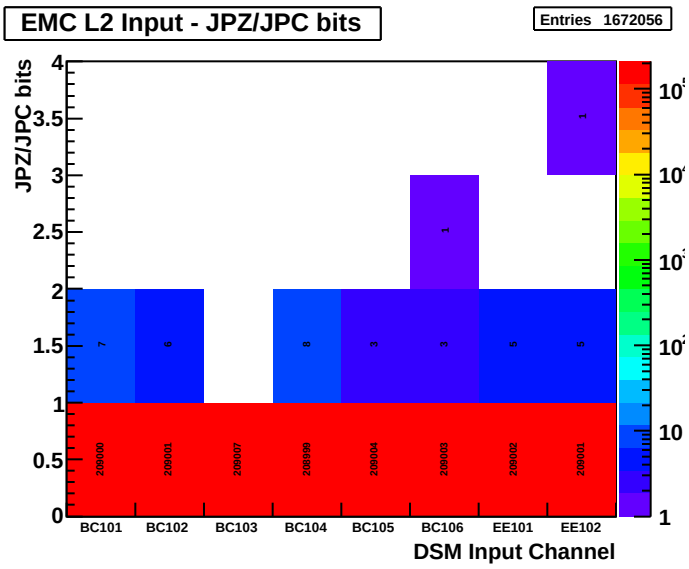

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

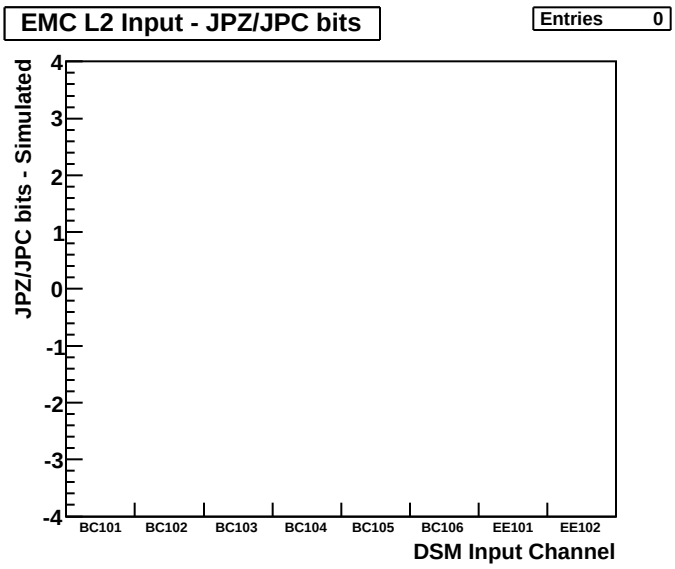

EMC L2 Input - JPX/JPA bits
Entries 1672056
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

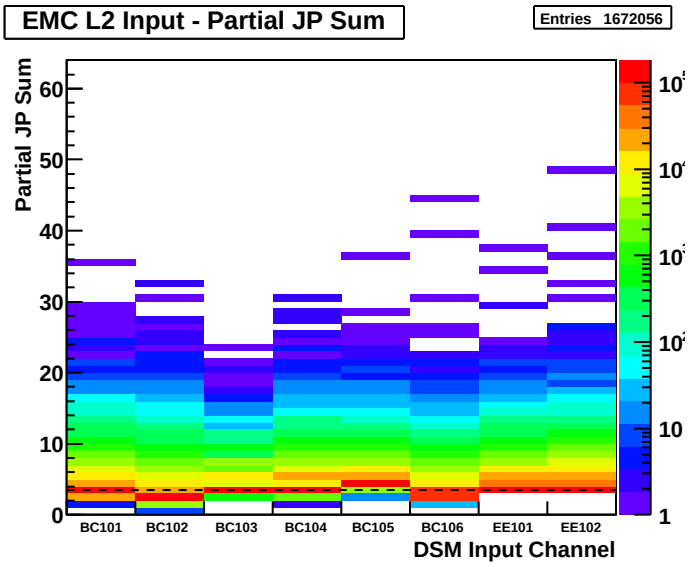

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

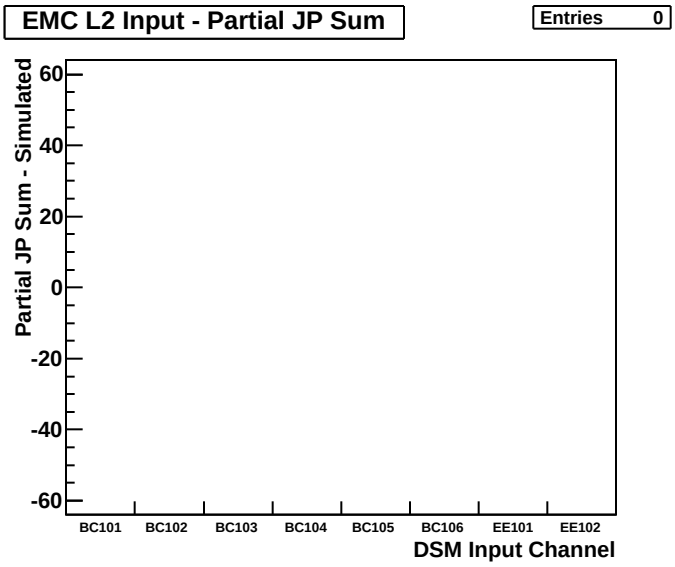

EMC L2 Input - JPY/JPB bits
Entries 1672056
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

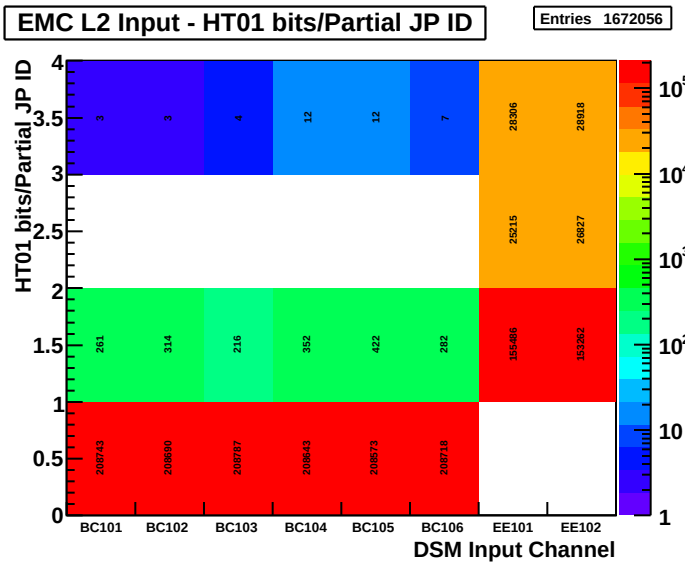

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

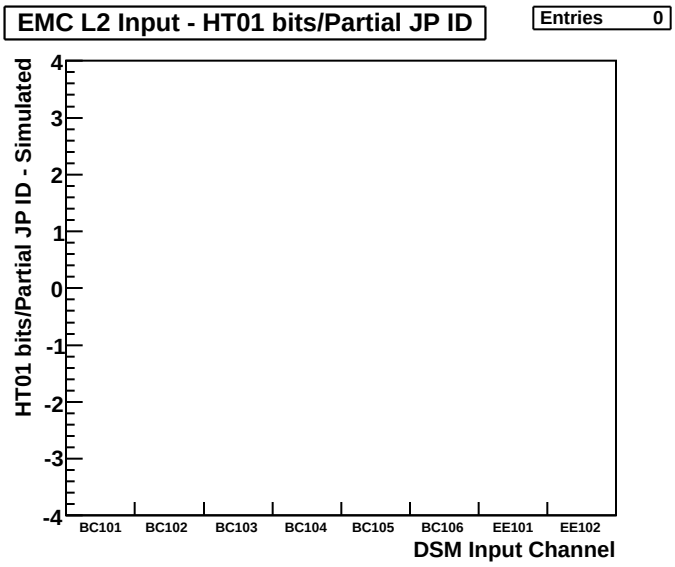

EMC L2 Input - JPZ/JPC bits
Entries 1672056
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

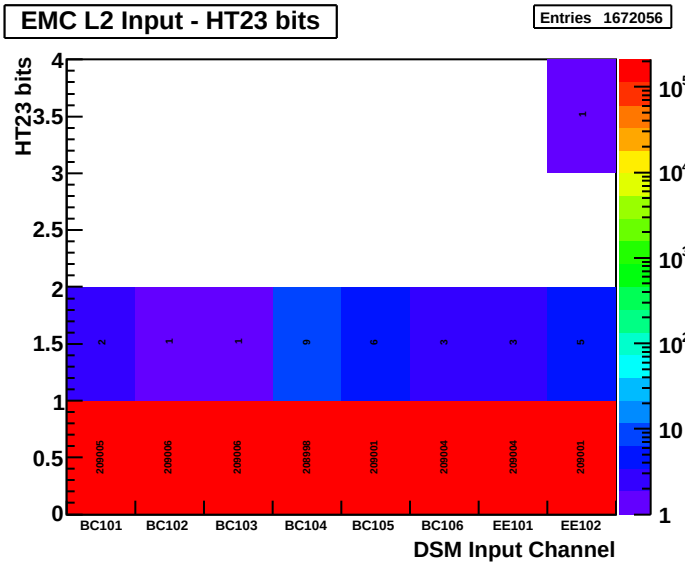

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

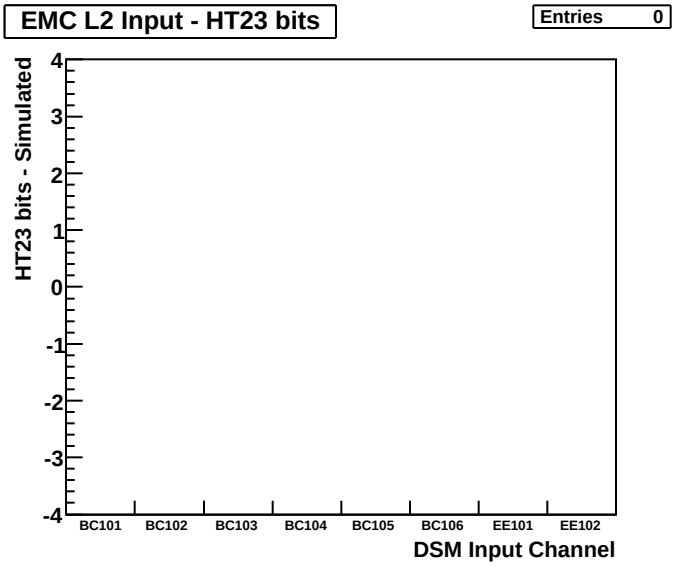

EMC L2 Input - Partial JP Sum
Entries 1672056
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

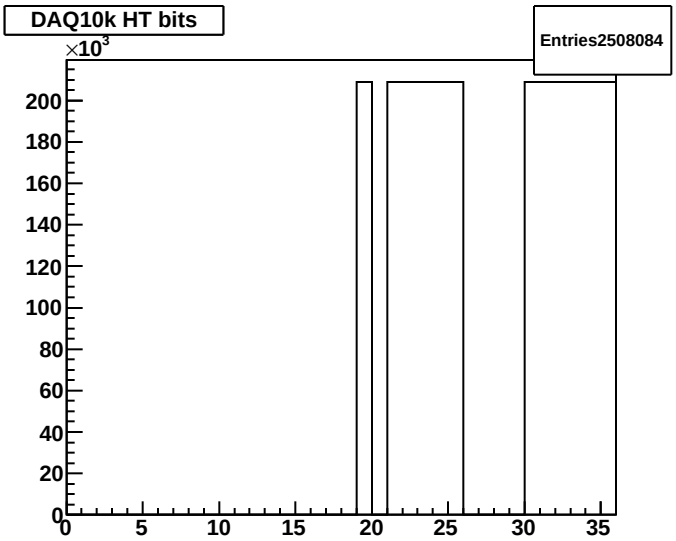

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

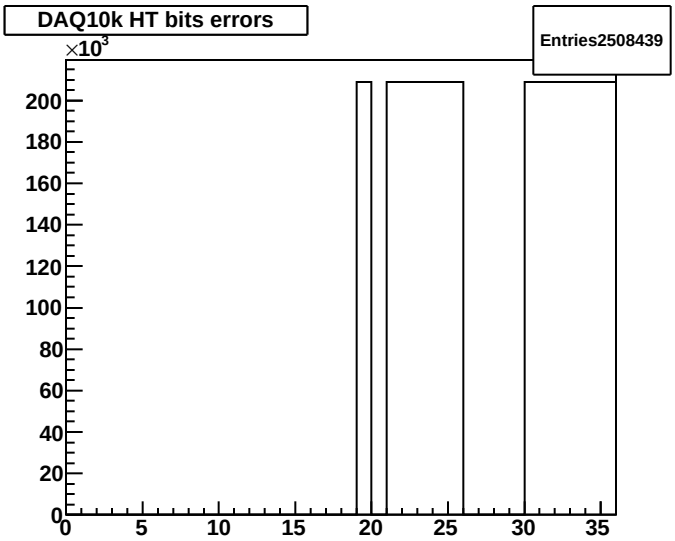

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1672056
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

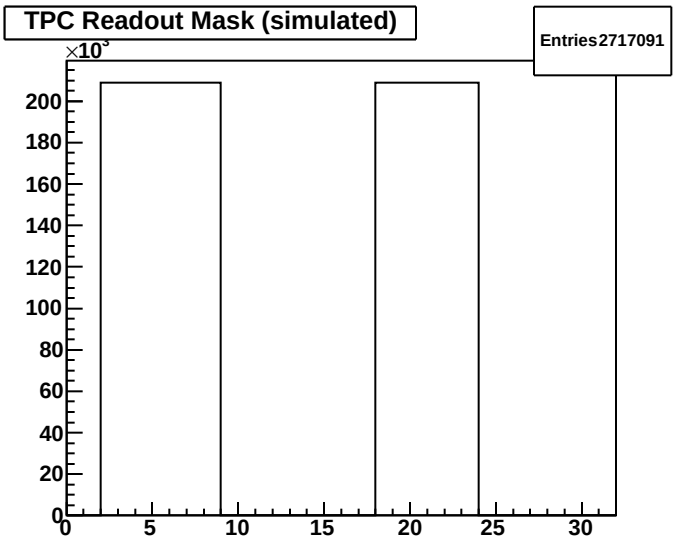

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

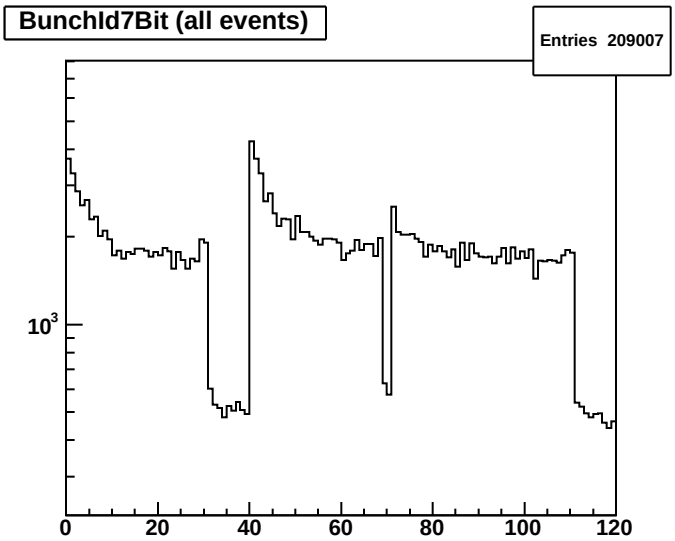

EMC L2 Input - HT23 bits
Entries 1672056
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

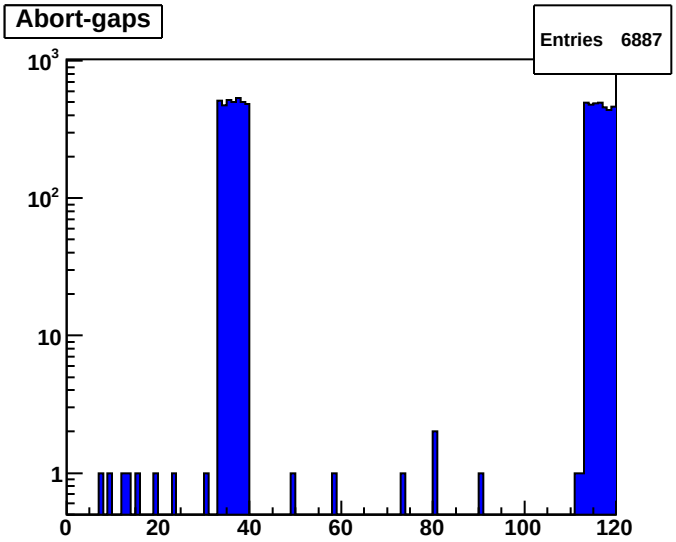

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

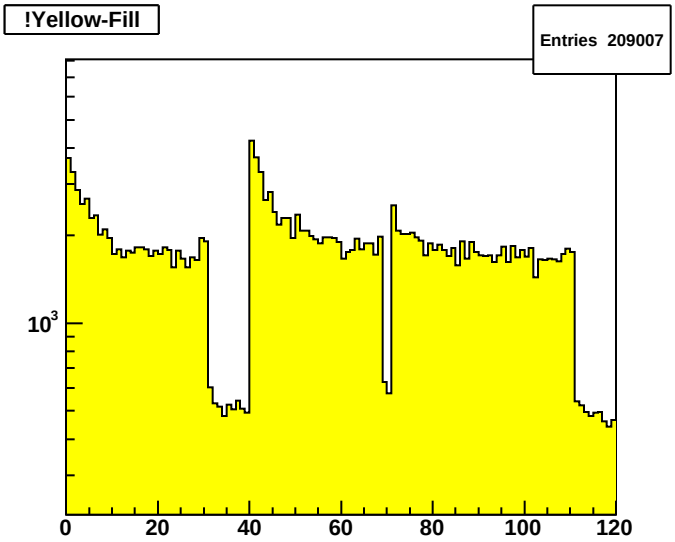

DAQ10k HT bits
Entries2508084
×10^3
200
180
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

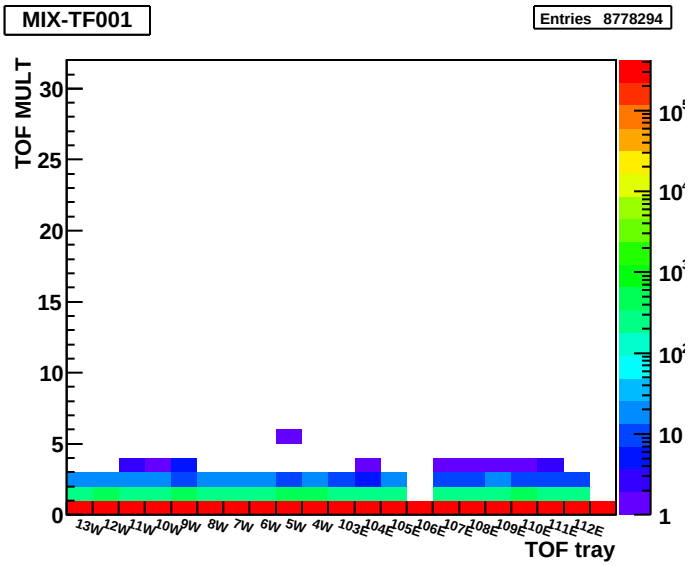

DAQ10k HT bits errors
Entries2508439
×10^3
200
180
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

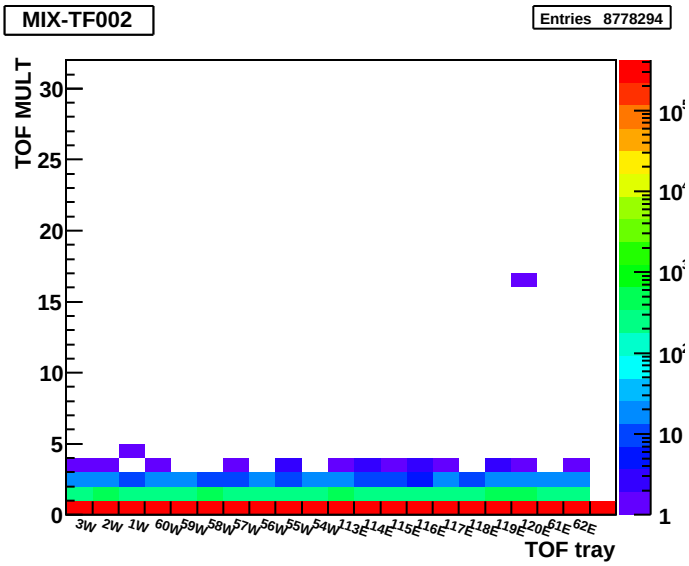

TPC Readout Mask (simulated)
Entries2717091
×10^3
200
180
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30

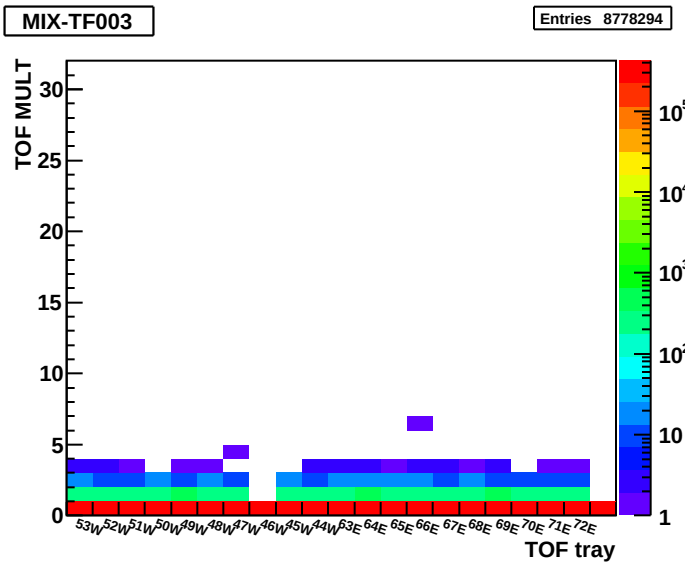

BunchId7Bit (all events)
Entries 209007
10^3
0 20 40 60 80 100 120

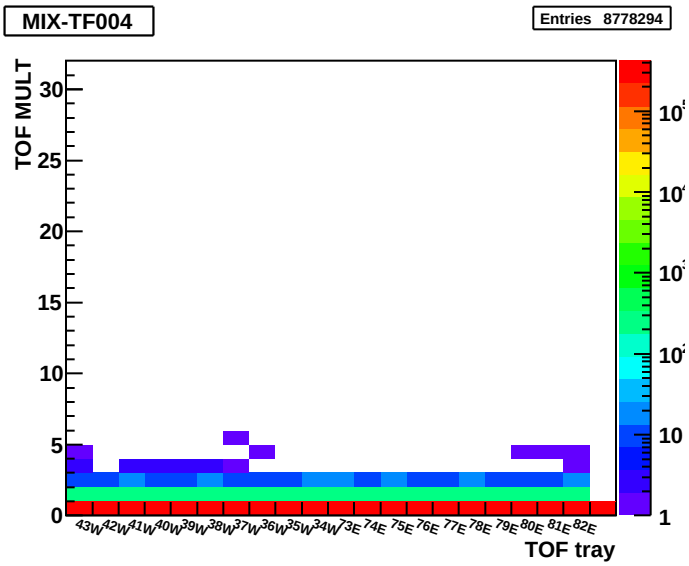

Abort-gaps
Entries 6887
10^3
10^2
10
1
0 20 40 60 80 100 120

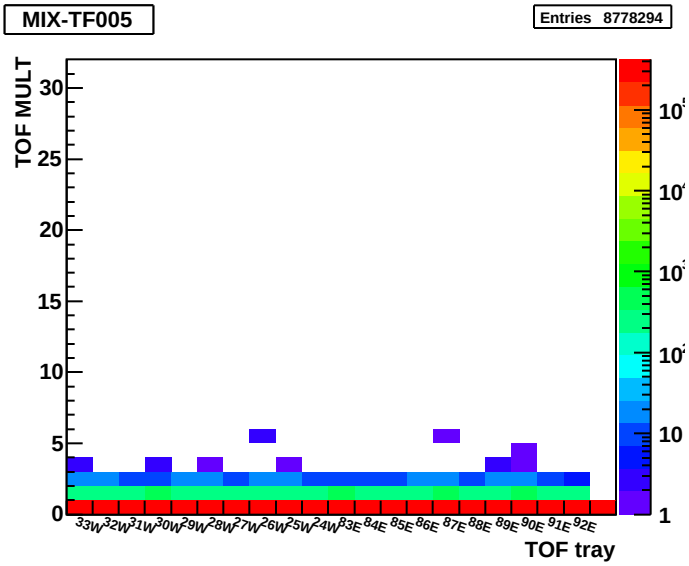

!Yellow-Fill
Entries 209007
10^3
0 20 40 60 80 100 120

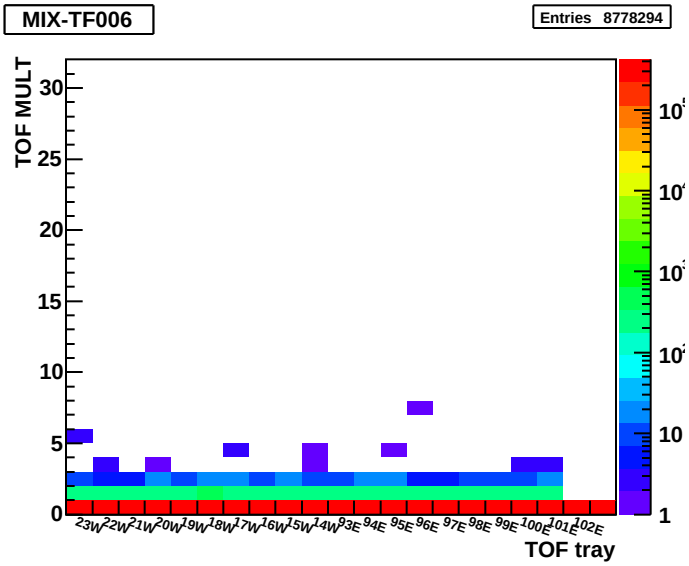

MIX-TF001
Entries 8778294
TOF MULT
TOF tray

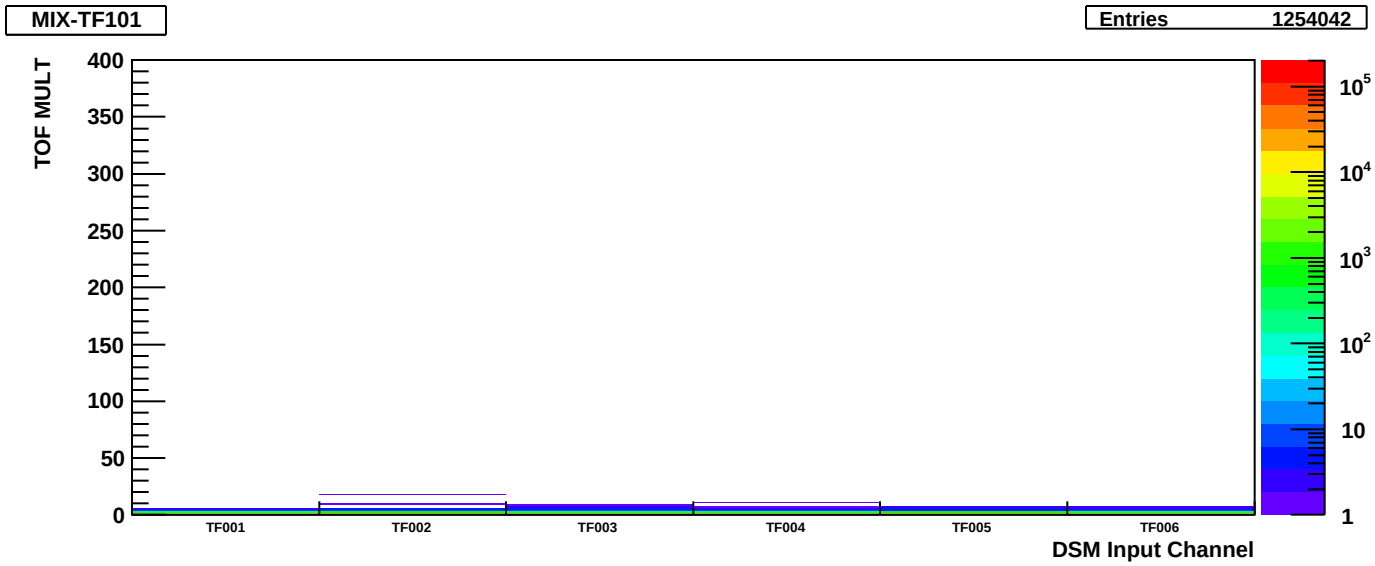

MIX-TF002
Entries 8778294
TOF MULT
TOF tray

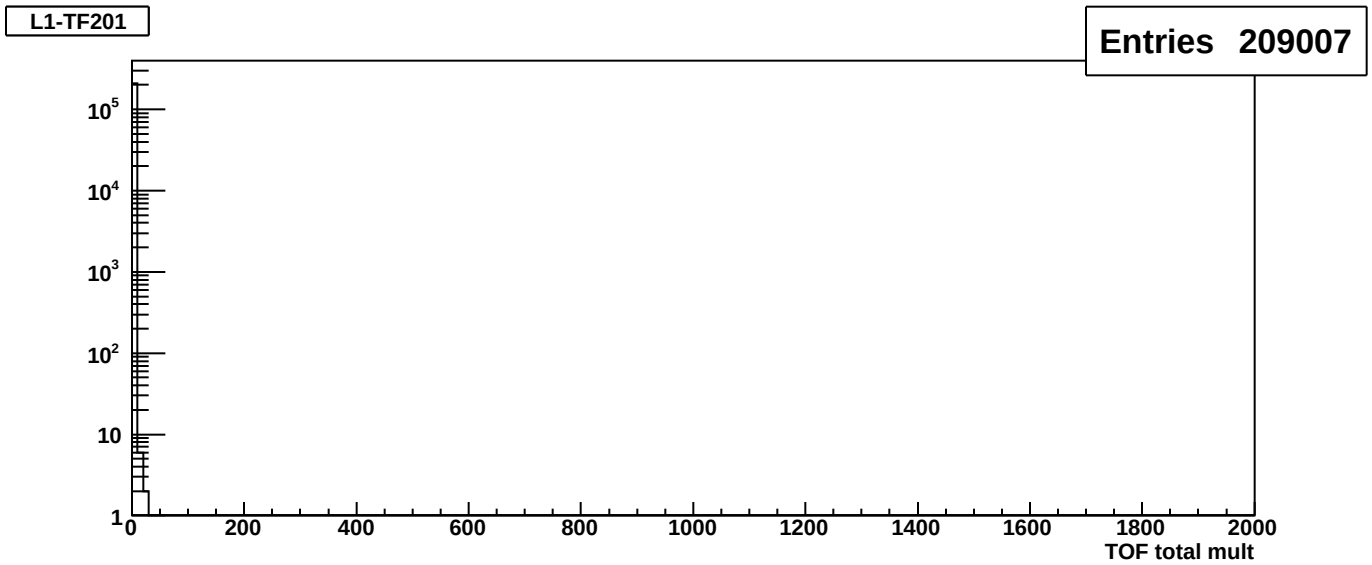

MIX-TF003
Entries 8778294
TOF MULT
TOF tray

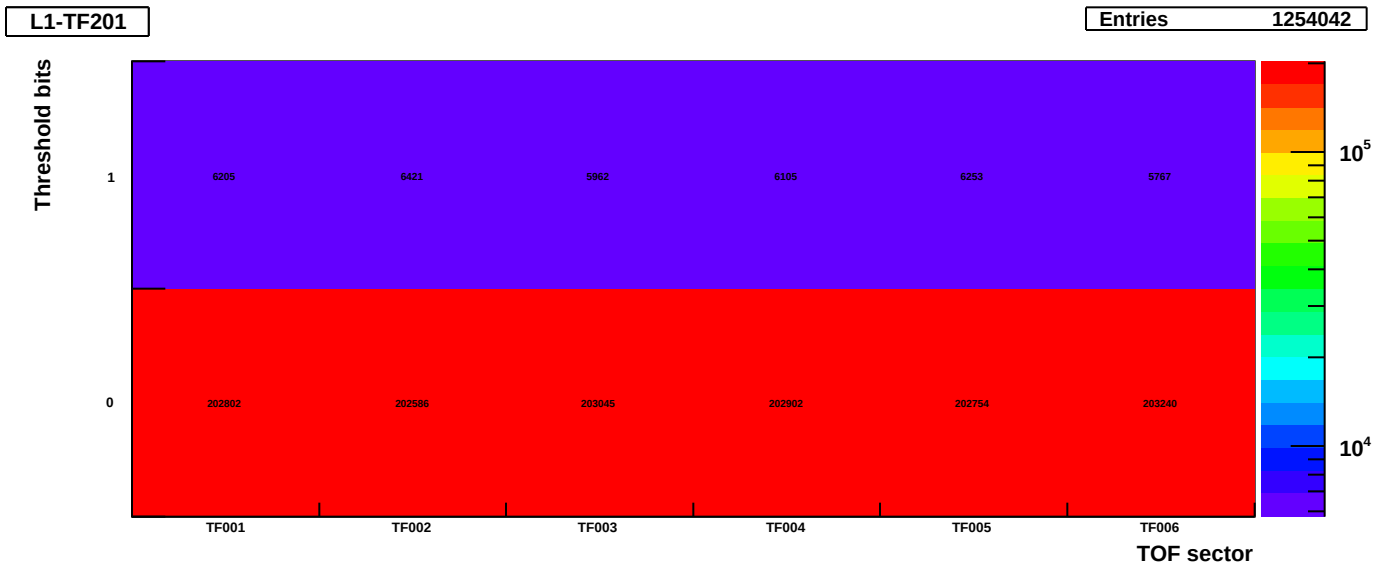

MIX-TF004
Entries 8778294
TOF MULT
TOF tray

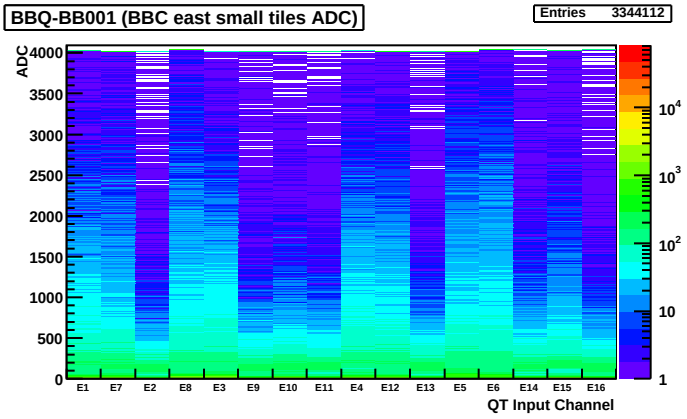

MIX-TF005
Entries 8778294
TOF MULT
TOF tray

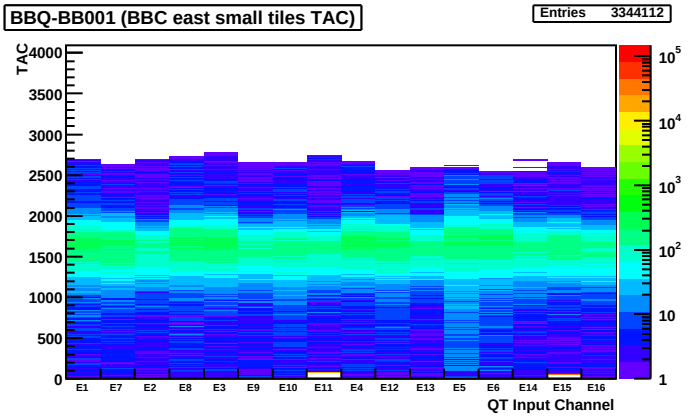

MIX-TF006
Entries 8778294
TOF MULT
TOF tray

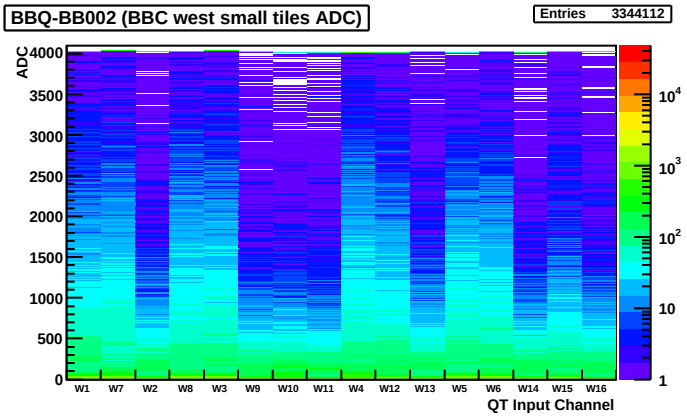

MIX-TF101
Entries 1254042
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

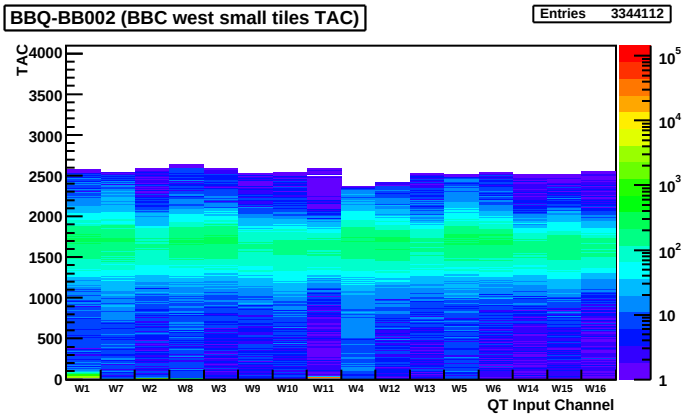

L1-TF201
Entries 209007
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

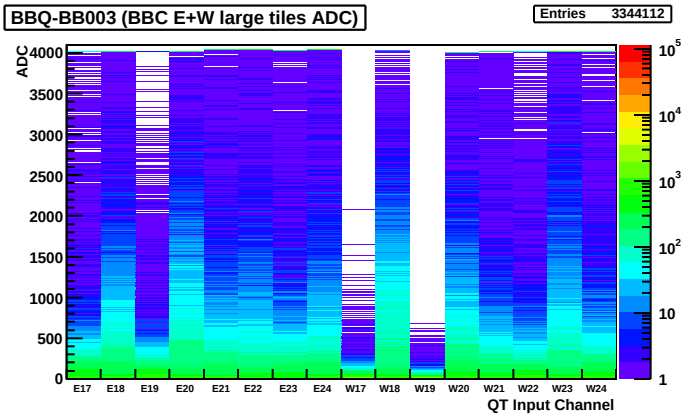

L1-TF201
Entries 1254042
Threshold bits
1
0
6205
6421
5962
6105
6253
5767
202802
202586
203045
202902
202754
203240
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4

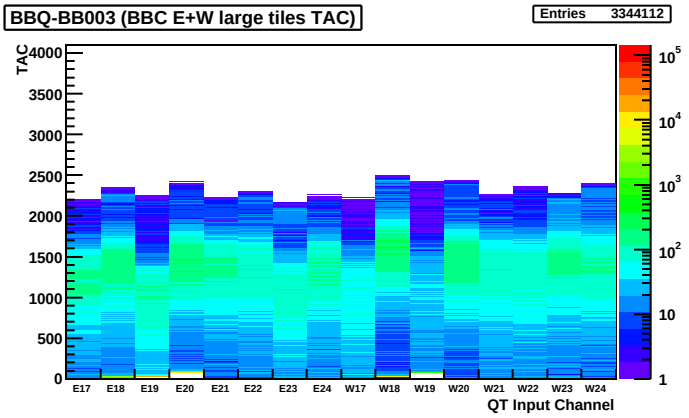

BBQ-BB001 (BBC east small tiles ADC)
Entries 3344112
ADC
QT Input Channel

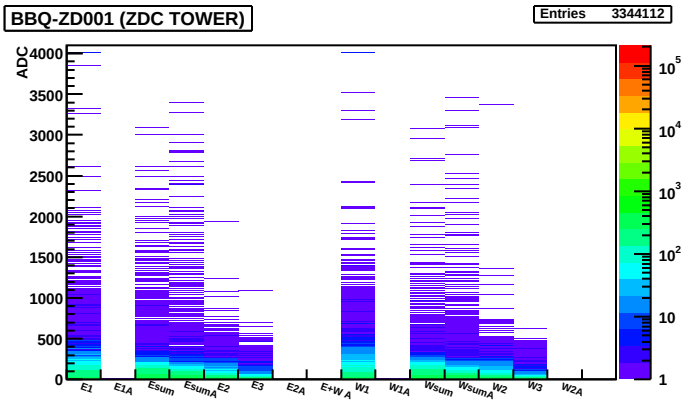

BBQ-BB001 (BBC east small tiles TAC)
Entries 3344112
TAC
QT Input Channel

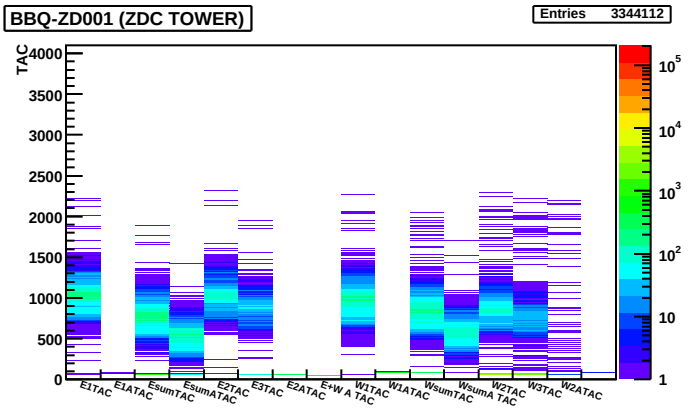

BBQ-BB002 (BBC west small tiles ADC)
Entries 3344112
ADC
QT Input Channel

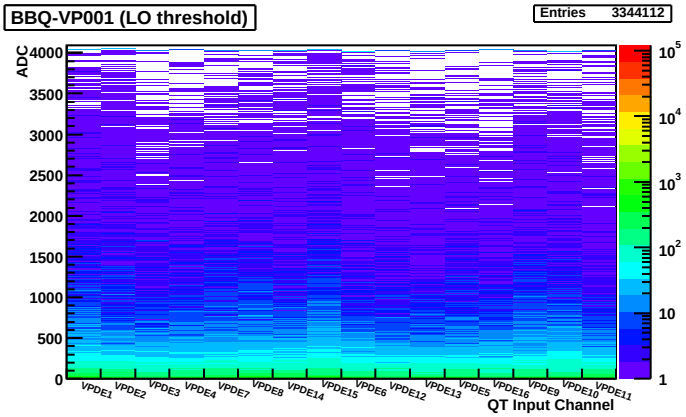

BBQ-BB002 (BBC west small tiles TAC)
Entries 3344112
TAC
QT Input Channel

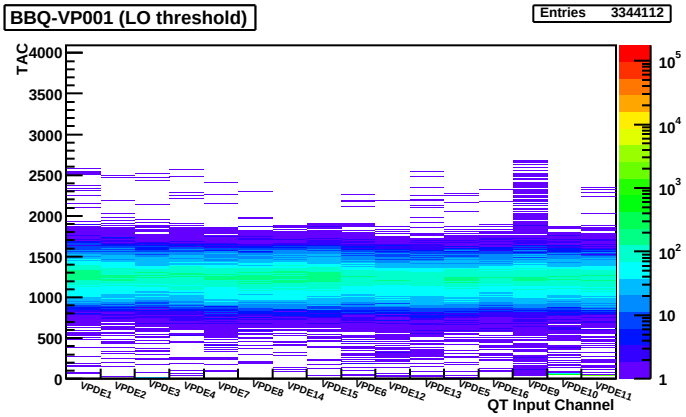

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3344112
ADC
QT Input Channel

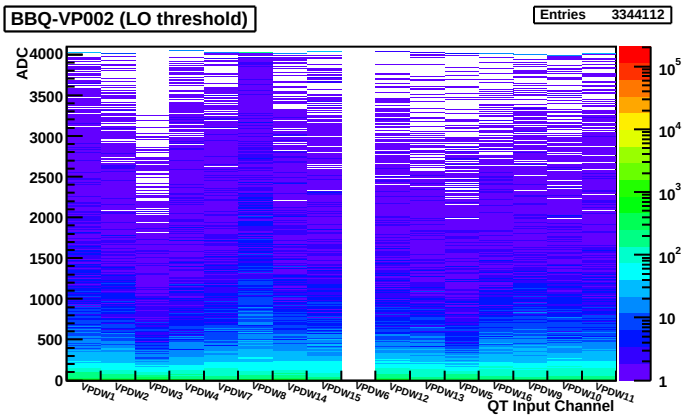

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3344112
TAC
QT Input Channel

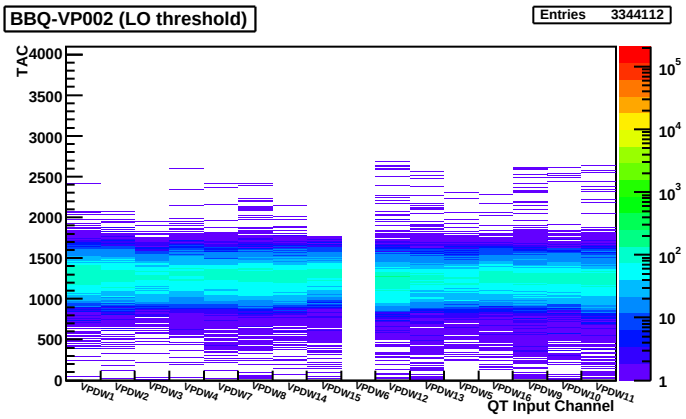

BBQ-ZD001 (ZDC TOWER)
Entries 3344112
ADC

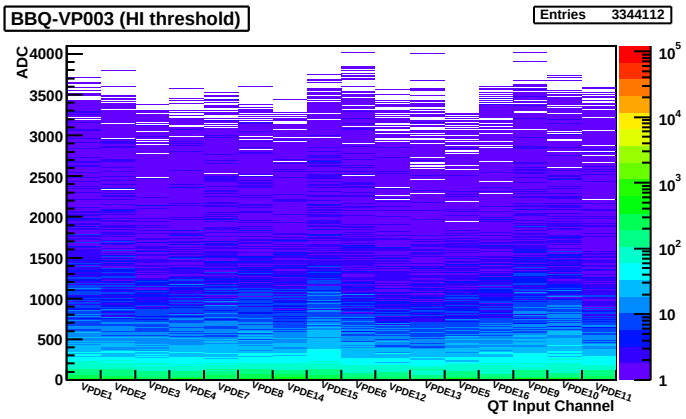

BBQ-ZD001 (ZDC TOWER)
Entries 3344112
TAC

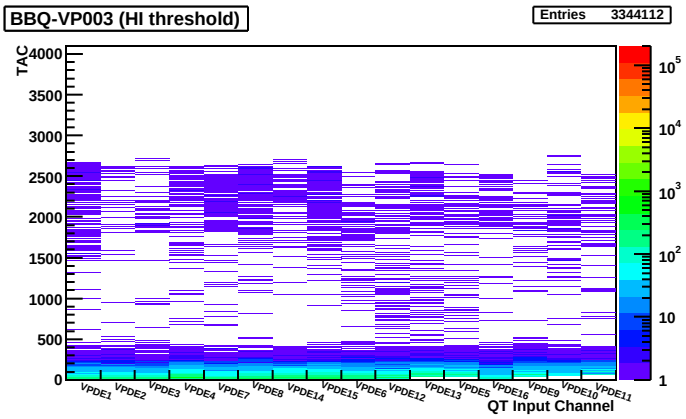

BBQ-VP001 (LO threshold)
Entries 3344112
ADC
QT Input Channel

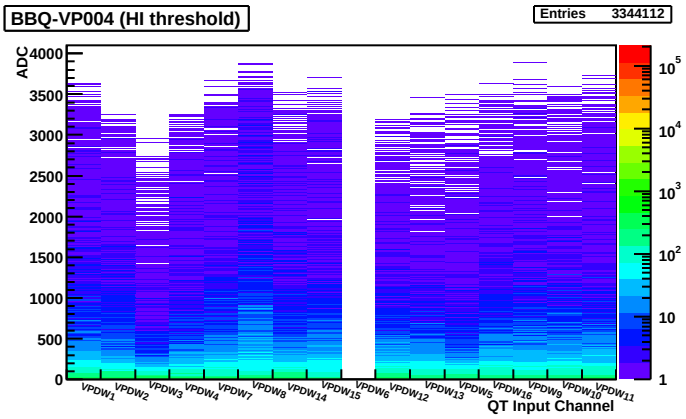

BBQ-VP001 (LO threshold)
Entries 3344112
TAC
QT Input Channel

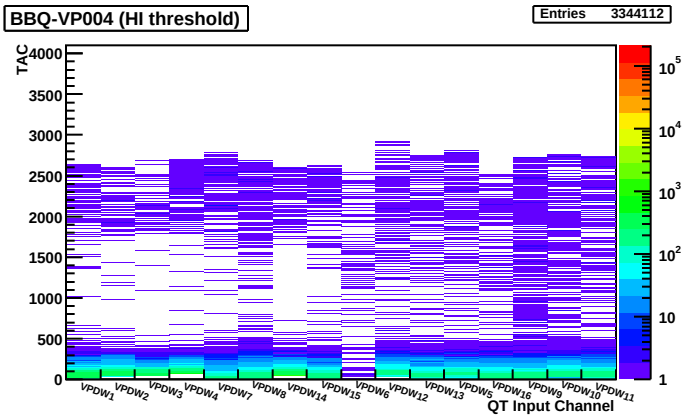

BBQ-VP002 (LO threshold)
Entries 3344112
ADC
QT Input Channel

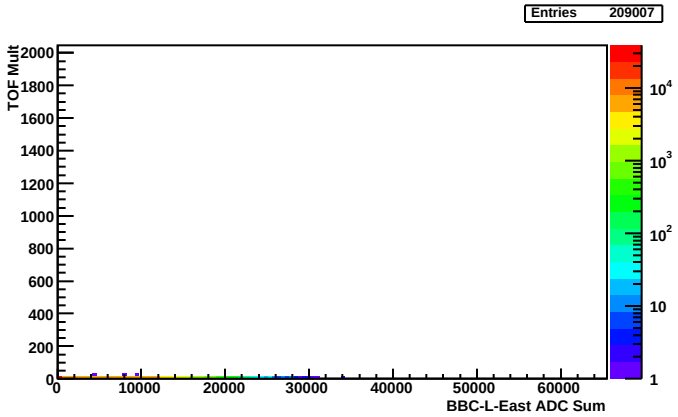

BBQ-VP002 (LO threshold)
Entries 3344112
TAC
QT Input Channel

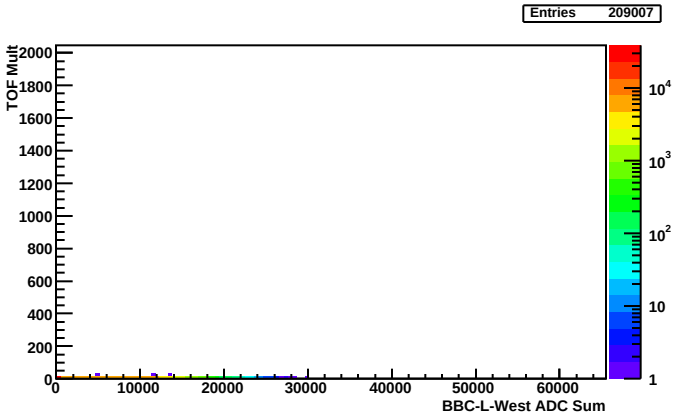

BBQ-VP003 (HI threshold)
Entries 3344112
ADC
QT Input Channel

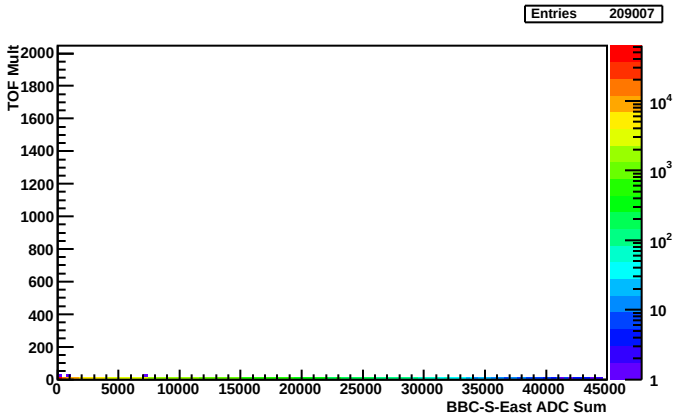

BBQ-VP003 (HI threshold)
Entries 3344112
TAC
QT Input Channel

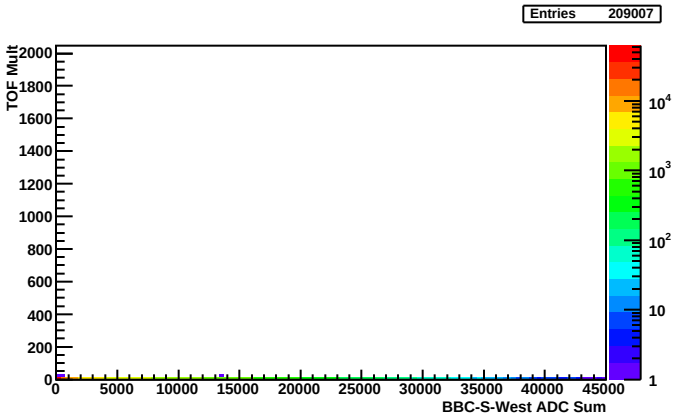

BBQ-VP004 (HI threshold)
Entries 3344112
ADC
QT Input Channel

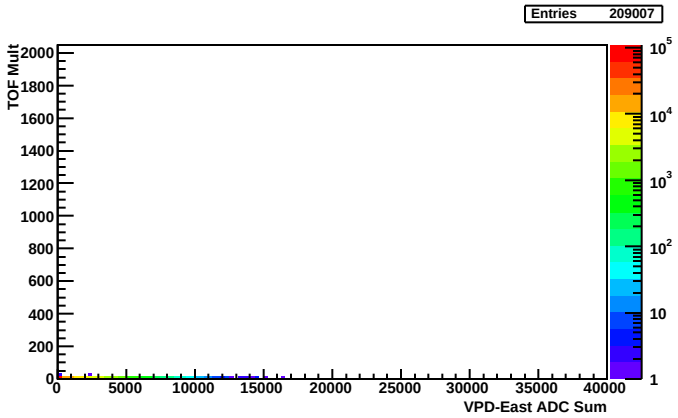

BBQ-VP004 (HI threshold)
Entries 3344112
TAC
QT Input Channel

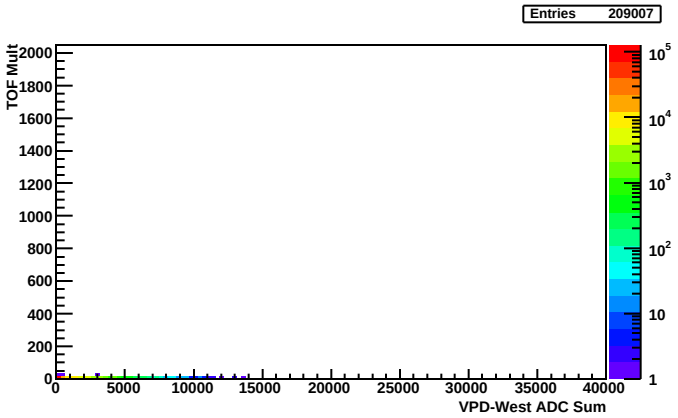

Entries 209007
TOF Mult
BBC-L-East ADC Sum

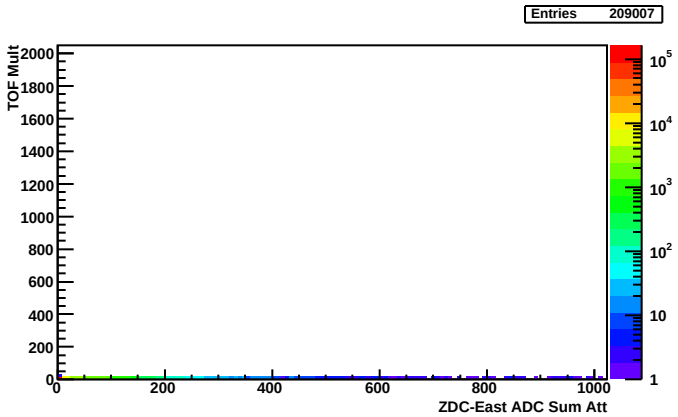

Entries 209007
TOF Mult
BBC-L-West ADC Sum

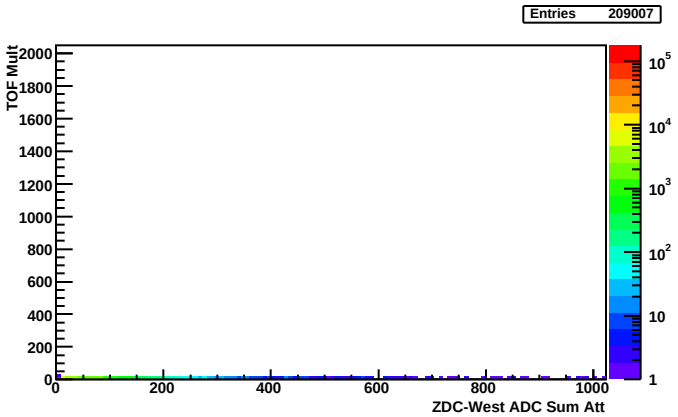

Entries 209007
TOF Mult
BBC-S-East ADC Sum

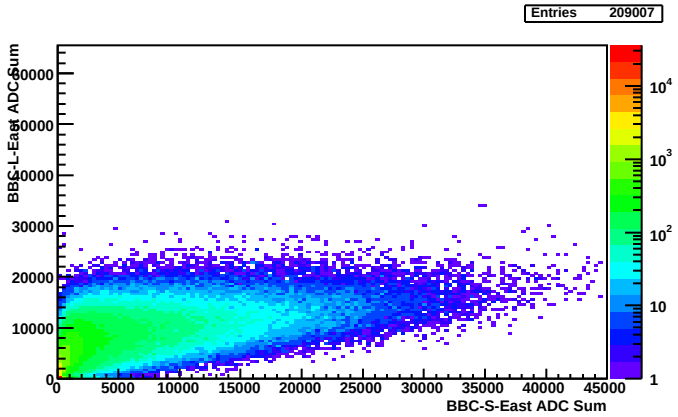

Entries 209007
TOF Mult
BBC-S-West ADC Sum

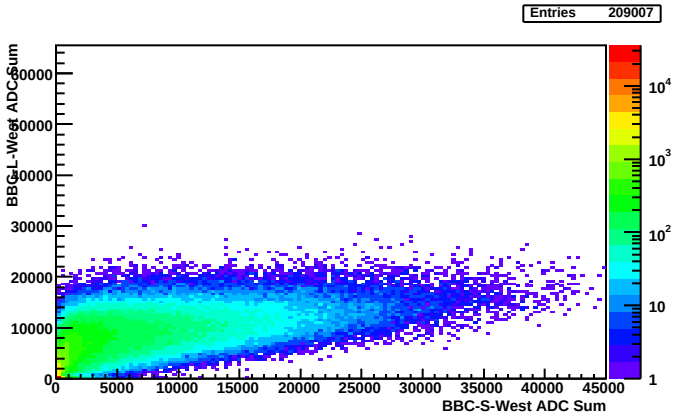

Entries 209007
TOF Mult
VPD-East ADC Sum

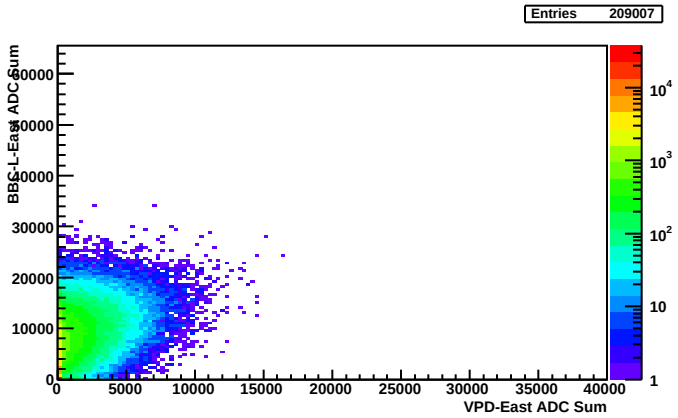

Entries 209007
TOF Mult
VPD-West ADC Sum

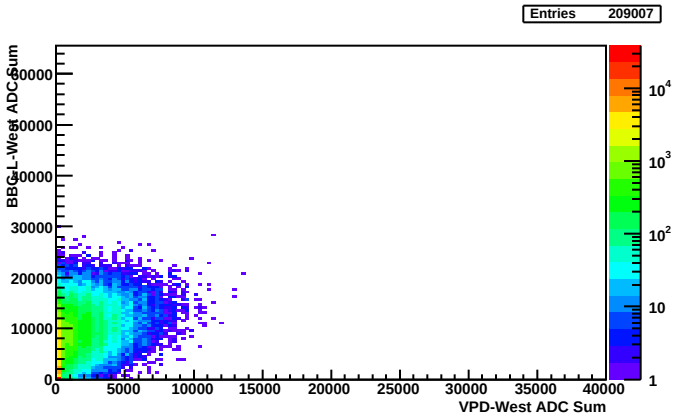

Entries 209007
TOF Mult
ZDC-East ADC Sum Att

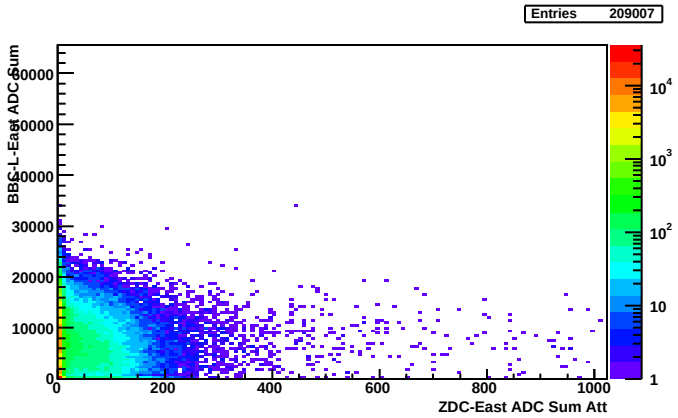

Entries 209007
TOF Mult
ZDC-West ADC Sum Att

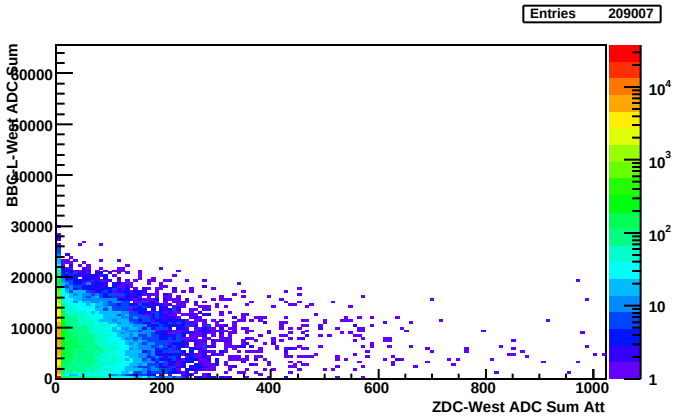

Entries 209007
BBC-L-East ADC Sum
BBC-S-East ADC Sum

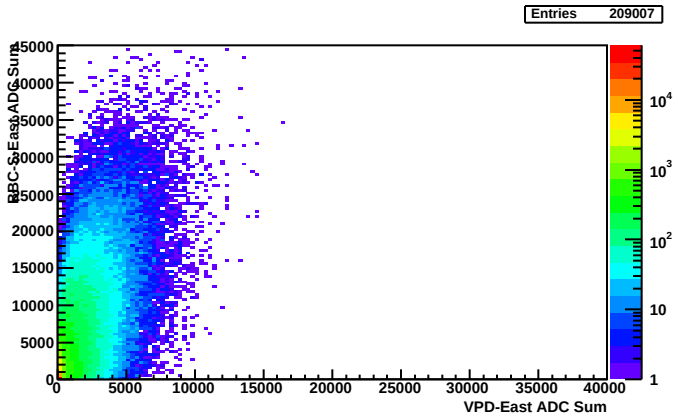

Entries 209007
BBC-L-West ADC Sum
BBC-S-West ADC Sum

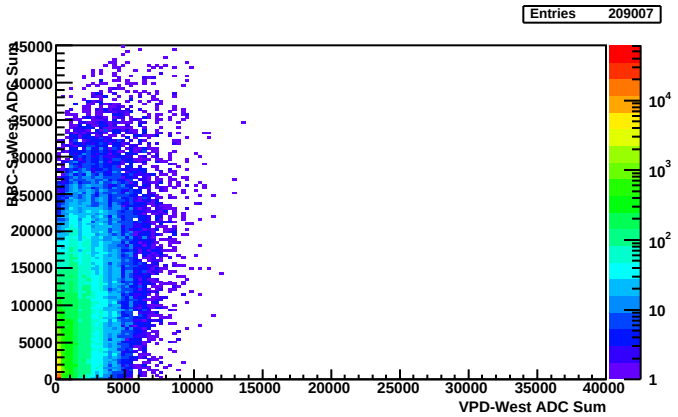

Entries 209007
BBC-L-East ADC Sum
VPD-East ADC Sum

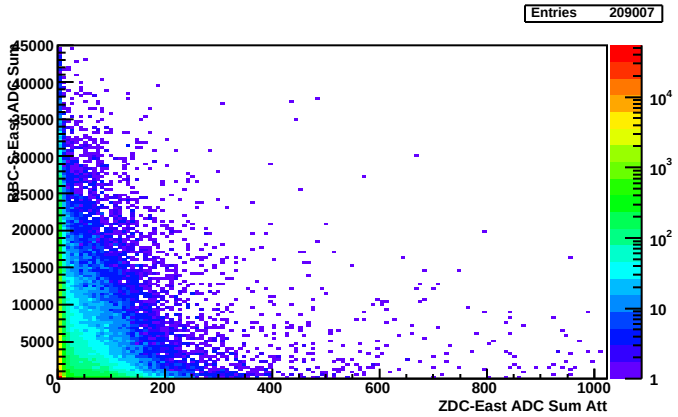

Entries 209007
BBC-L-West ADC Sum
VPD-West ADC Sum

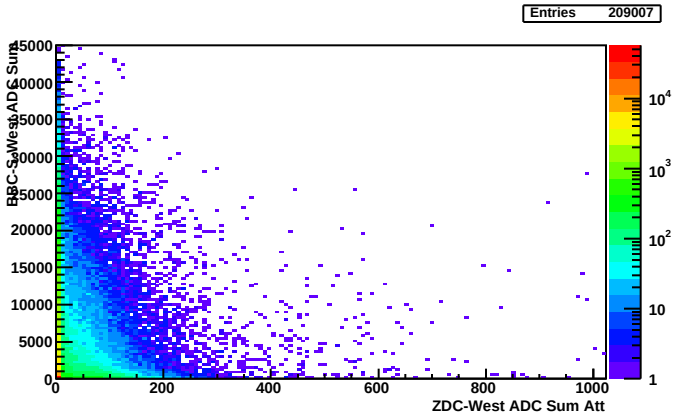

Entries 209007
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

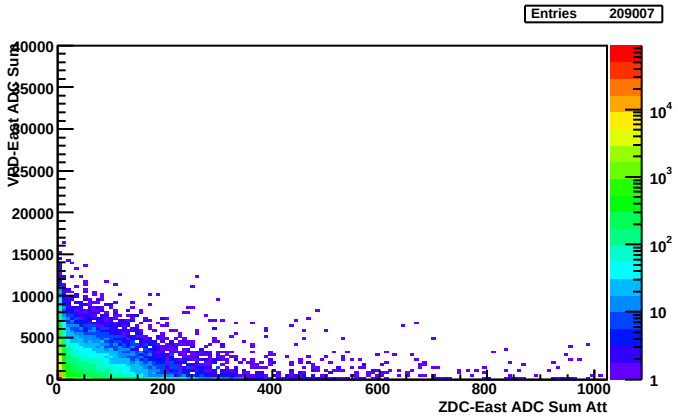

Entries 209007
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

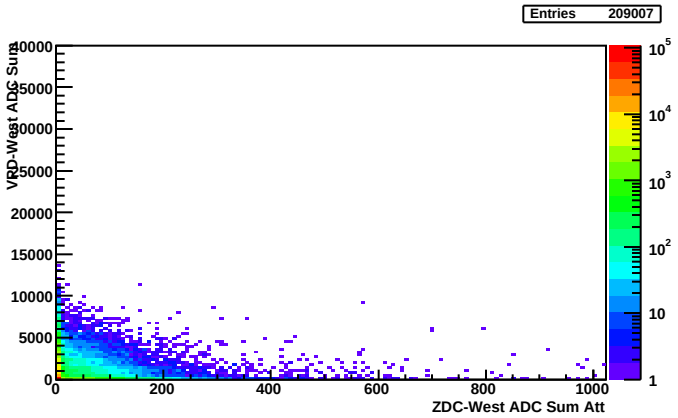

Entries 209007
BBC-S-East ADC Sum
VPD-East ADC Sum

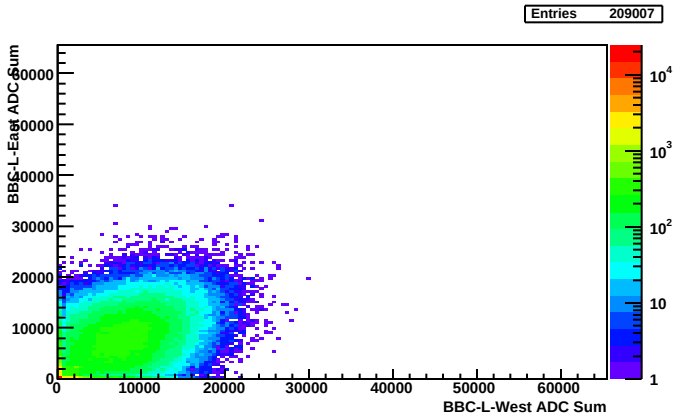

Entries 209007
BBC-S-West ADC Sum
VPD-West ADC Sum

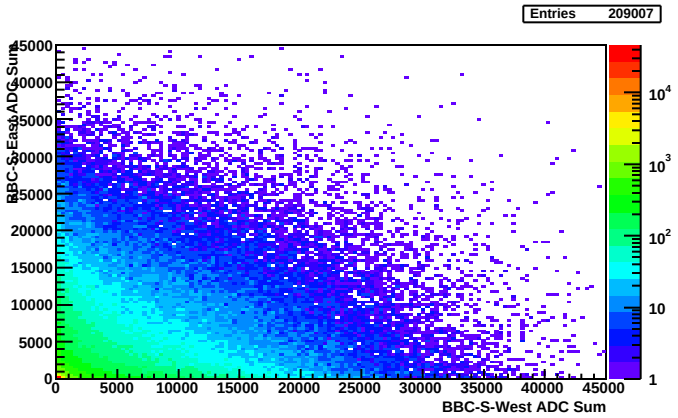

Entries 209007
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

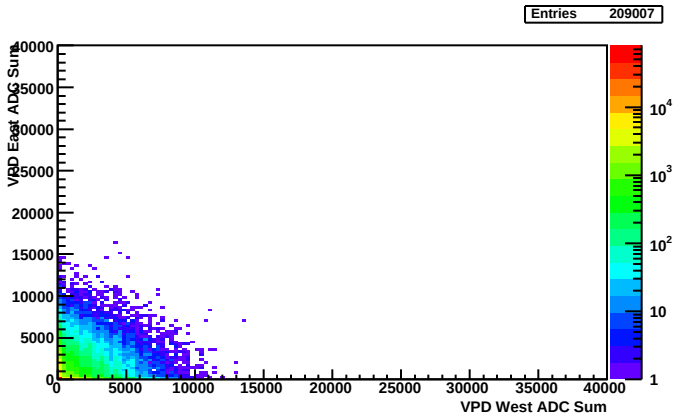

Entries 209007
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

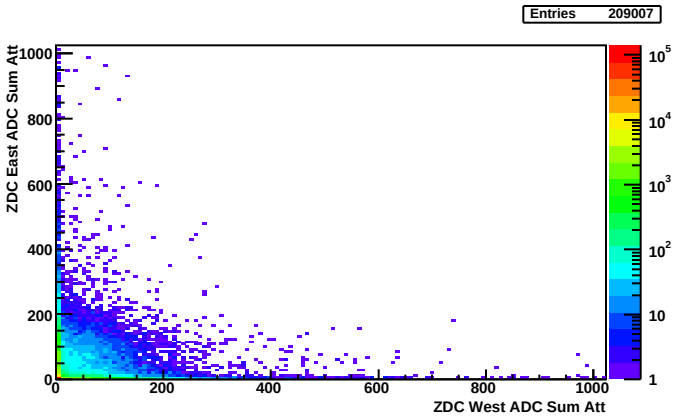

Entries 209007
VPD-East ADC Sum
ZDC-East ADC Sum Att

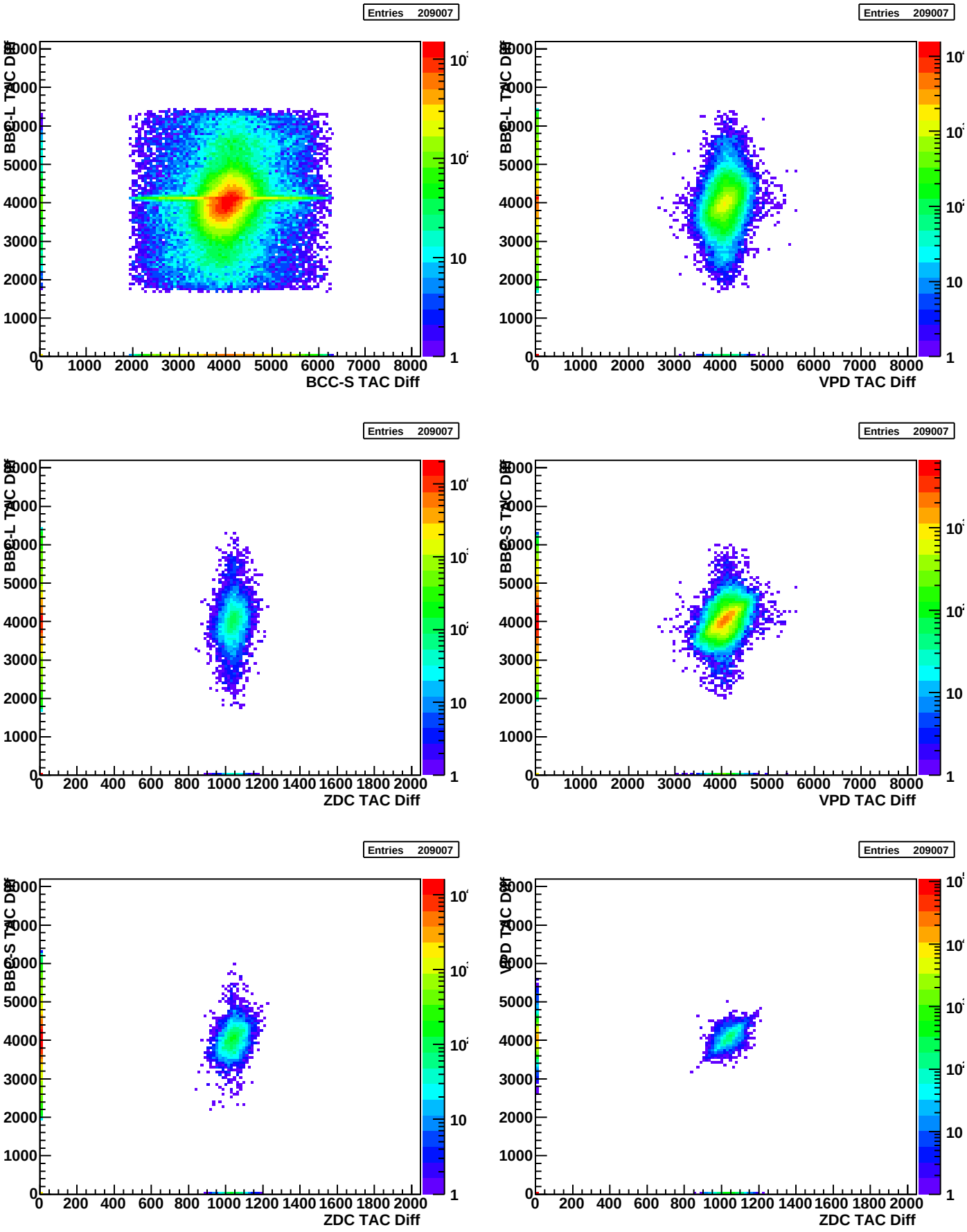

Entries 209007
VPD-West ADC Sum
ZDC-West ADC Sum Att

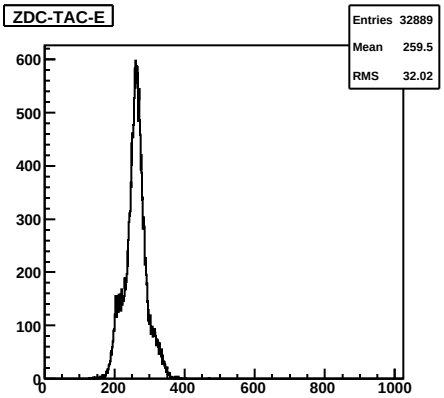

Entries 209007
BBC-L-East ADC Sum
BBC-L-West ADC Sum

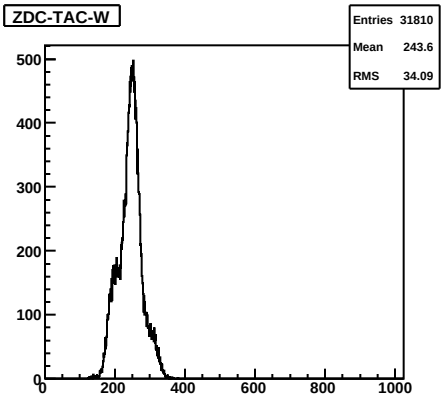

Entries 209007
BBC-S-East ADC Sum
BBC-S-West ADC Sum

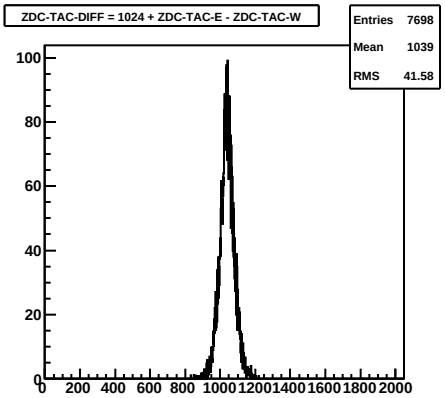

Entries 209007
VPD East ADC Sum
VPD West ADC Sum

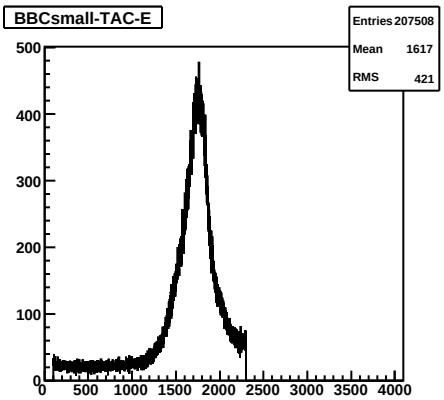

Entries 209007
ZDC East ADC Sum Att
ZDC West ADC Sum Att

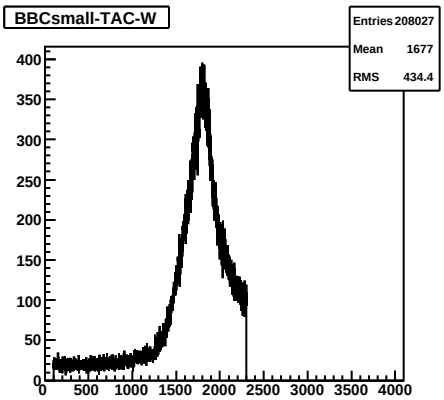

Entries 209007
BBC-L TAC Diff
BCC-S TAC Diff
Entries 209007
BBC-L TAC Diff
VPD TAC Diff
Entries 209007
BBC-L TAC Diff
ZDC TAC Diff
Entries 209007
BBC-S TAC Diff
VPD TAC Diff
Entries 209007
BBC-S TAC Diff
ZDC TAC Diff
Entries 209007
VPD TAC Diff
ZDC TAC Diff

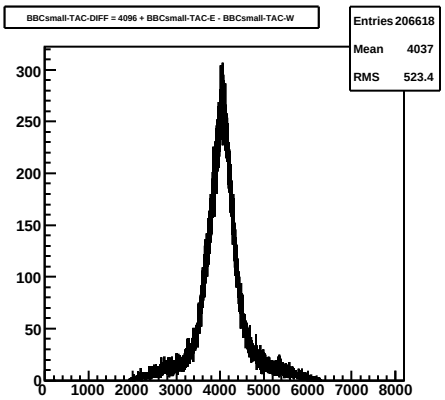

ZDC-TAC-E
Entries 32889
Mean 259.5
RMS 32.02

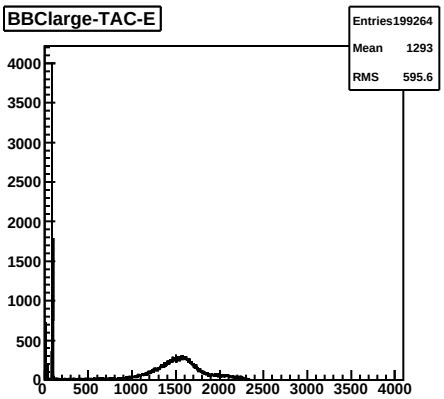

ZDC-TAC-W
Entries 31810
Mean 243.6
RMS 34.09

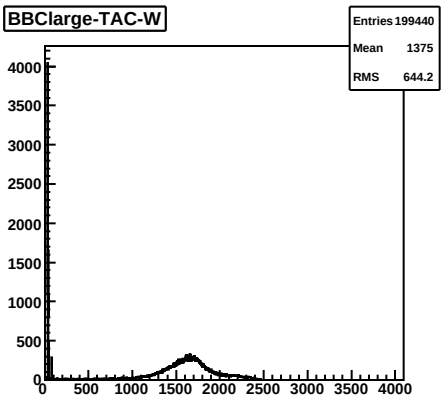

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 7698
Mean 1039
RMS 41.58

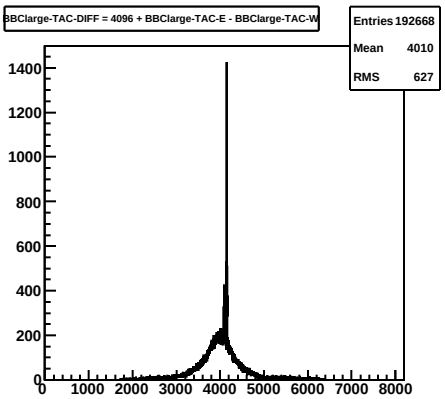

BBCsmall-TAC-E
Entries 207508
Mean 1617
RMS 421

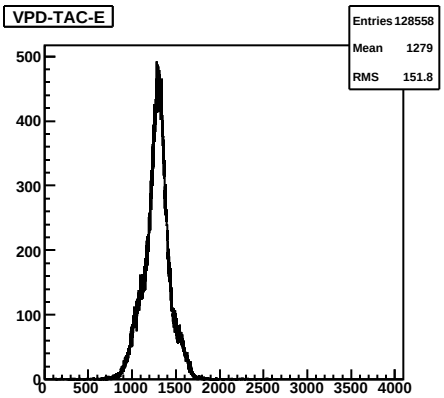

BBCsmall-TAC-W
Entries 208027
Mean 1677
RMS 434.4

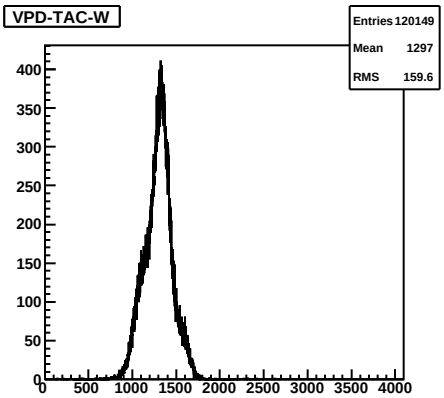

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 206618
Mean 4037
RMS 523.4

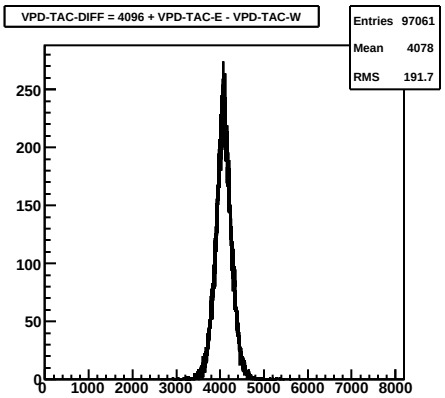

BBClarge-TAC-E
Entries 199264
Mean 1293
RMS 595.6

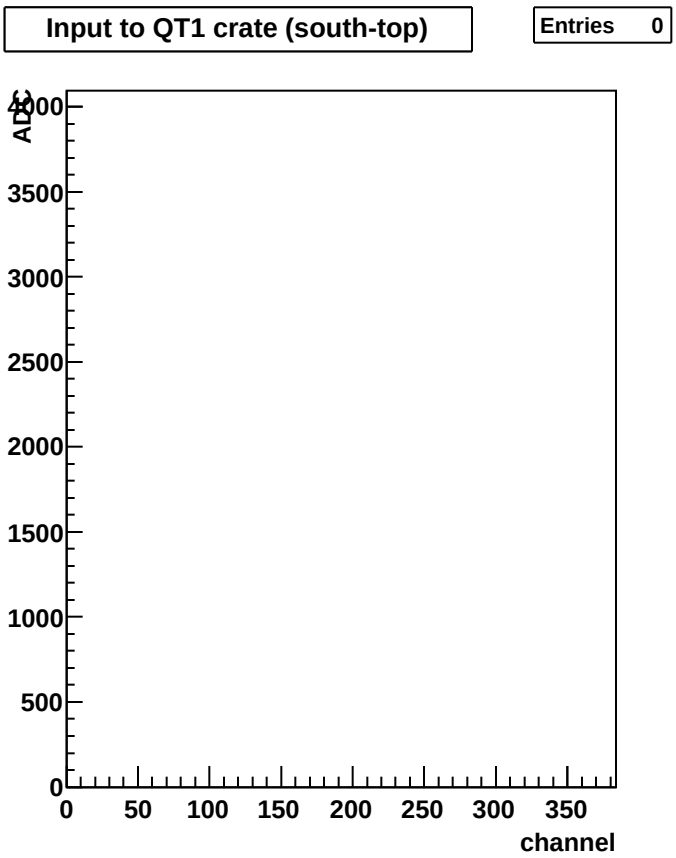

BBClarge-TAC-W
Entries 199440
Mean 1375
RMS 644.2

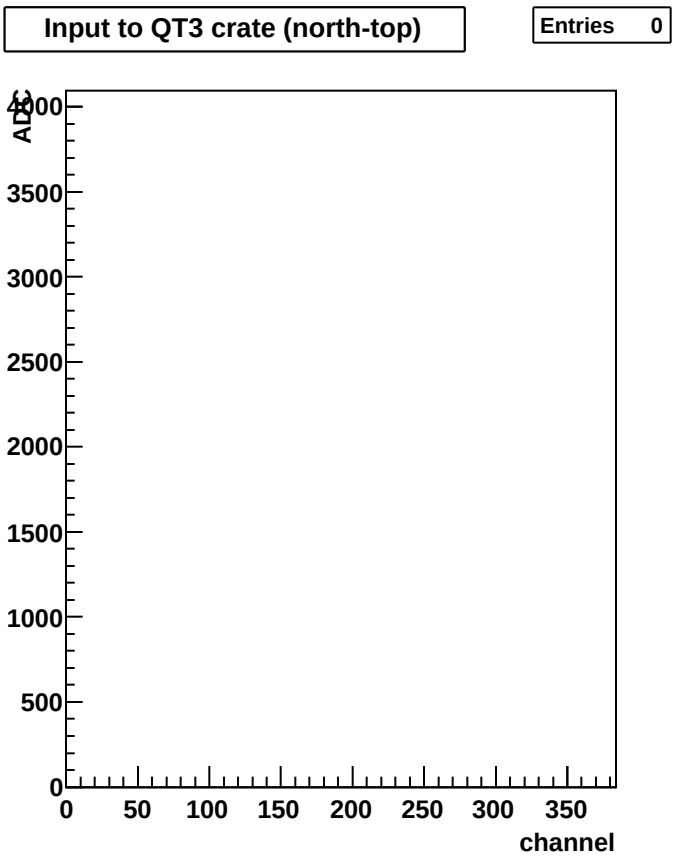

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 192668
Mean 4010
RMS 627

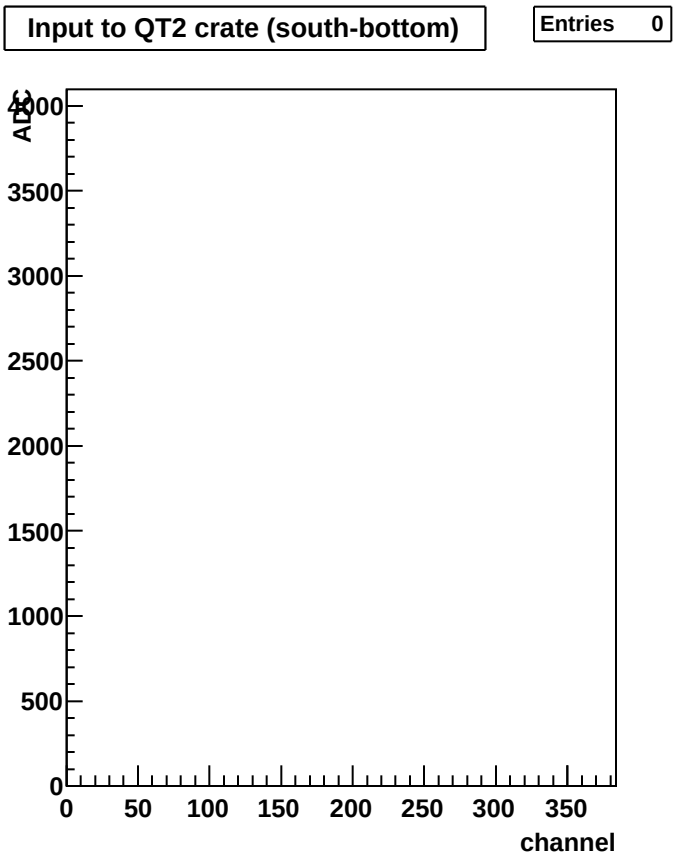

VPD-TAC-E
Entries 128558
Mean 1279
RMS 151.8

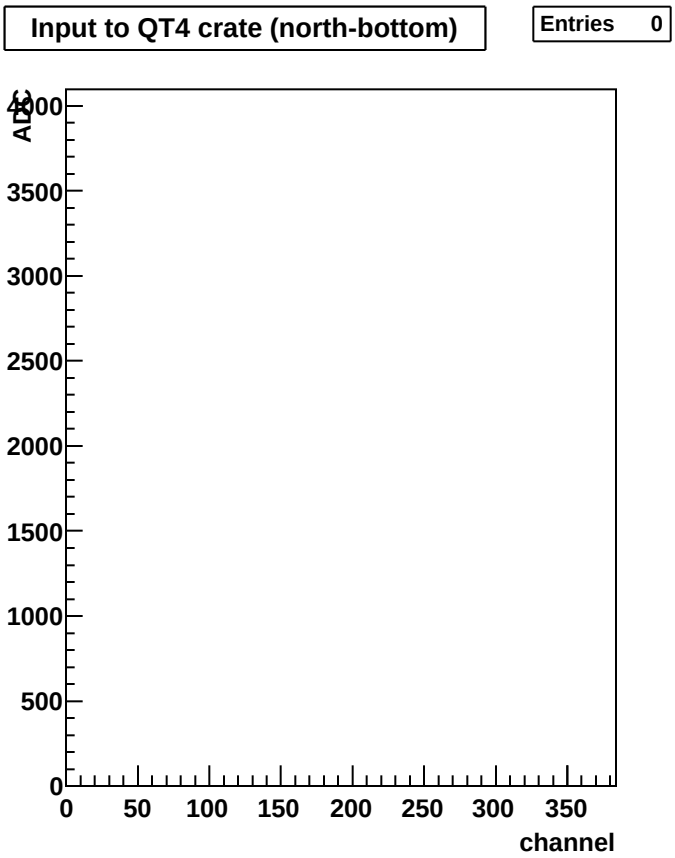

VPD-TAC-W
Entries 120149
Mean 1297
RMS 159.6

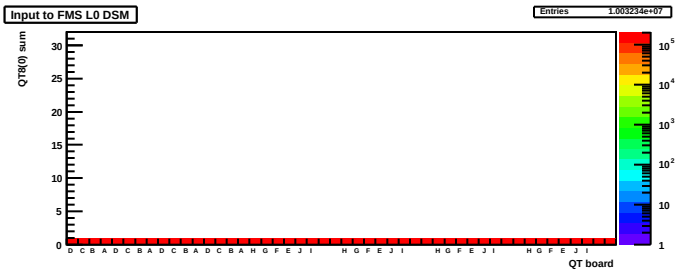

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 97061
Mean 4078
RMS 191.7

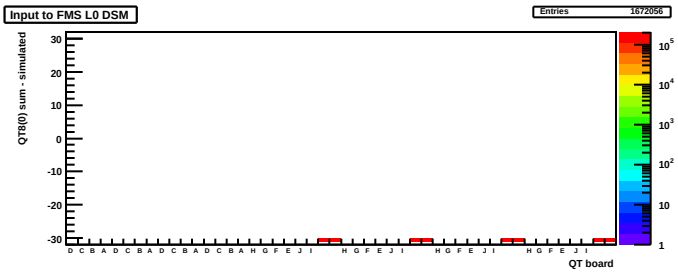

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

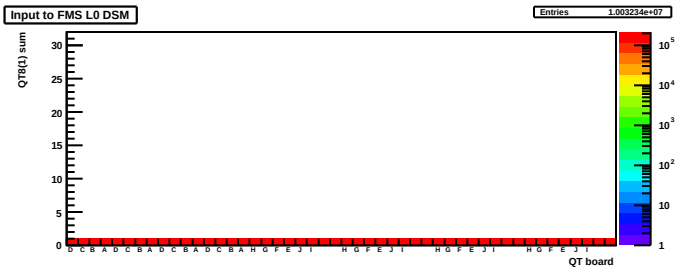

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

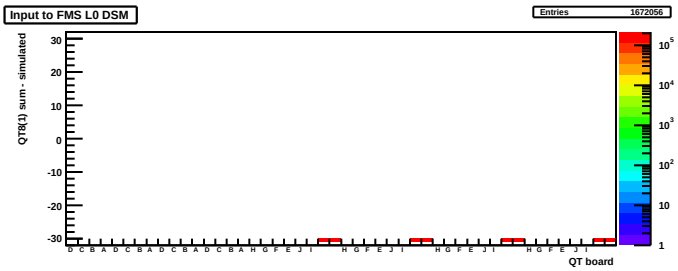

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

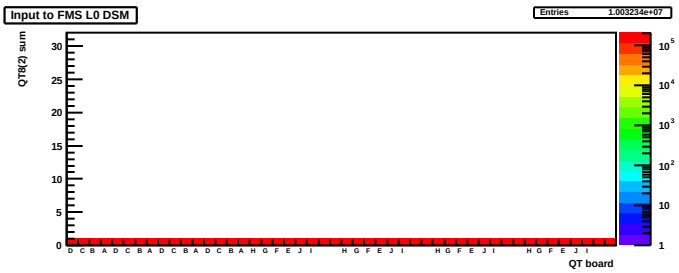

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

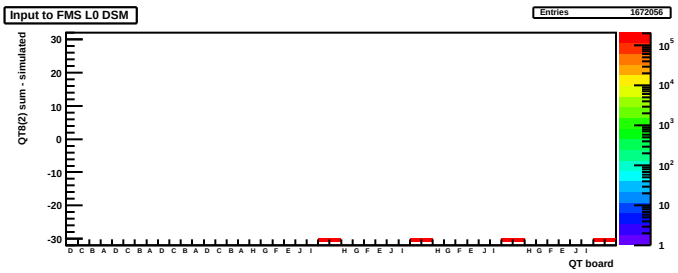

Input to FMS L0 DSM
Entries 1.003234e+07
QT8(0) sum
QT board

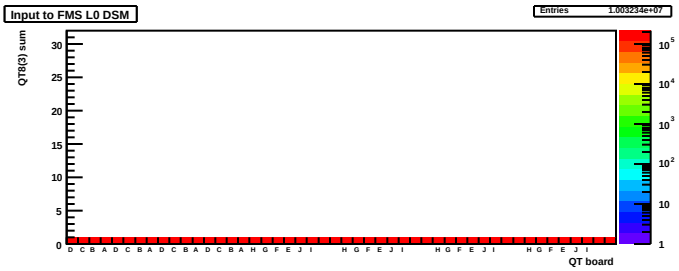

Input to FMS L0 DSM
Entries 1672056
QT8(0) sum - simulated
QT board

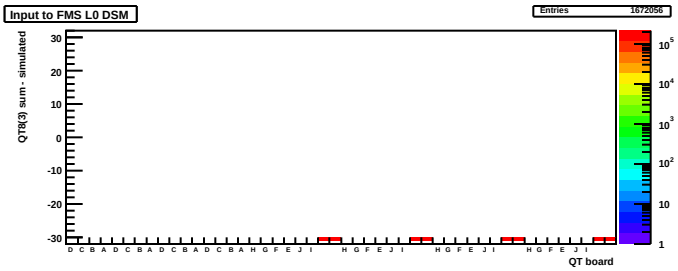

Input to FMS L0 DSM
Entries 1.003234e+07
QT8(1) sum
QT board

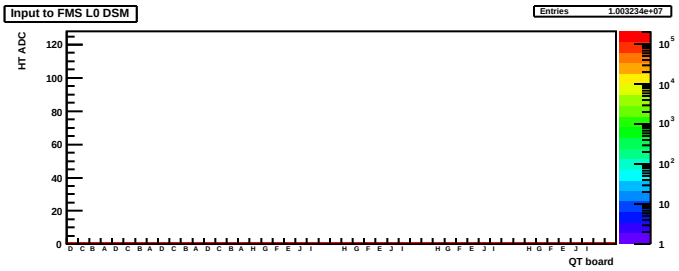

Input to FMS L0 DSM
Entries 1672056
QT8(1) sum - simulated
QT board

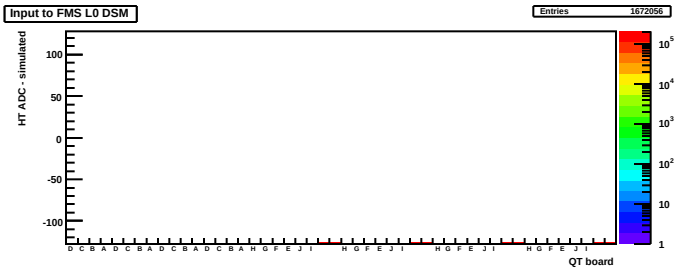

Input to FMS L0 DSM
Entries 1.003234e+07
QT8(2) sum
QT board

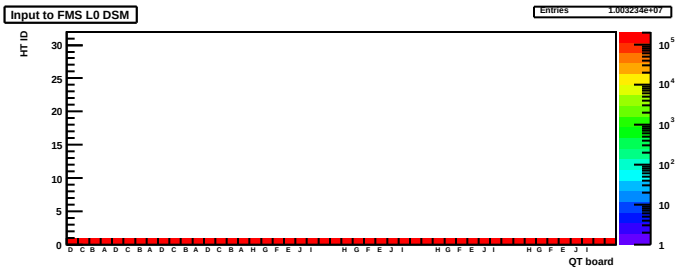

Input to FMS L0 DSM
Entries 1672056
QT8(2) sum - simulated
QT board

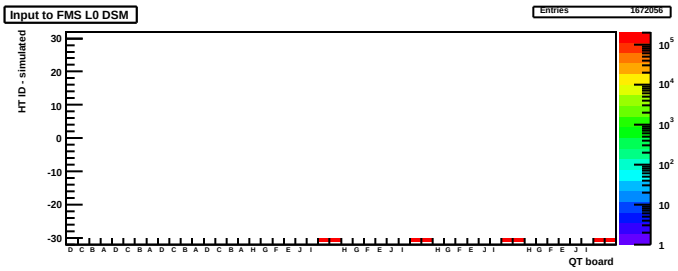

Input to FMS L0 DSM
Entries 1.003234e+07
QT8(3) sum
QT board

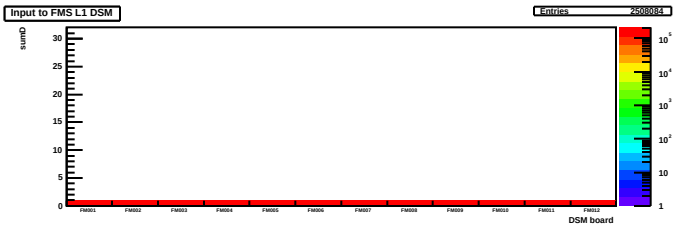

Input to FMS L0 DSM
Entries 1672056
QT8(3) sum - simulated
QT board

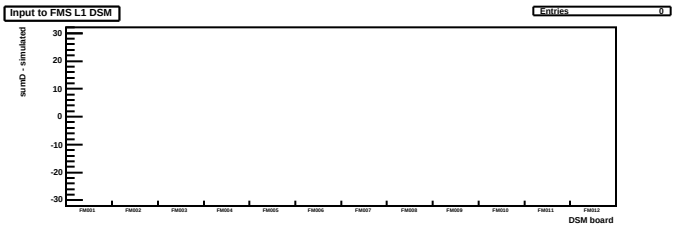

Input to FMS L0 DSM
Entries 1.003234e+07
HT ADC
QT board

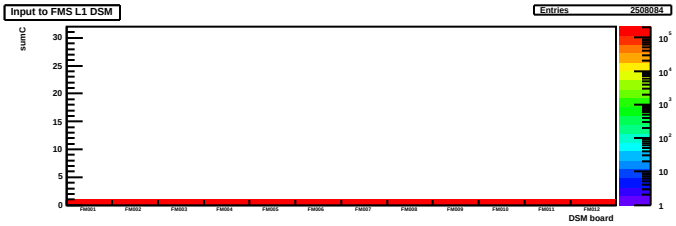

Input to FMS L0 DSM
Entries 1672056
HT ADC - simulated
QT board

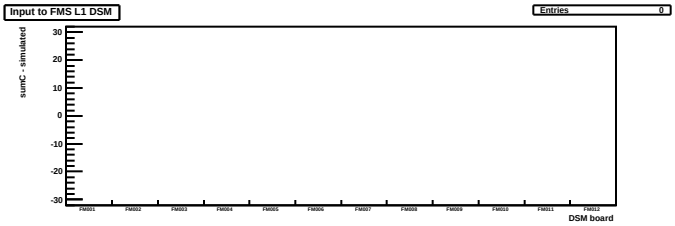

Input to FMS L0 DSM
Entries 1.003234e+07
HT ID
QT board

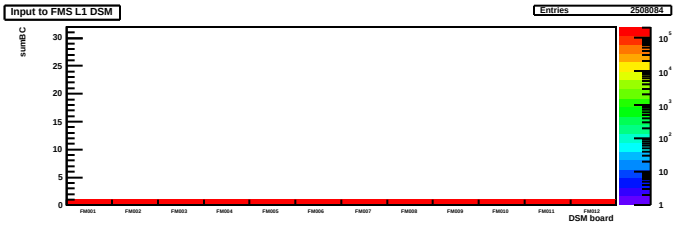

Input to FMS L0 DSM
Entries 1672056
HT ID - simulated
QT board

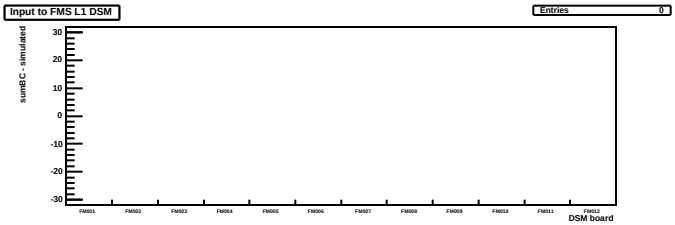

Input to FMS L1 DSM
Entries 2508084
sumD
DSM board

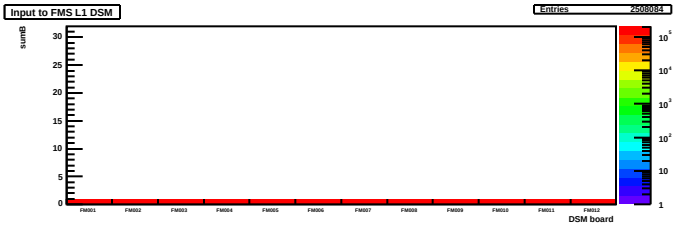

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

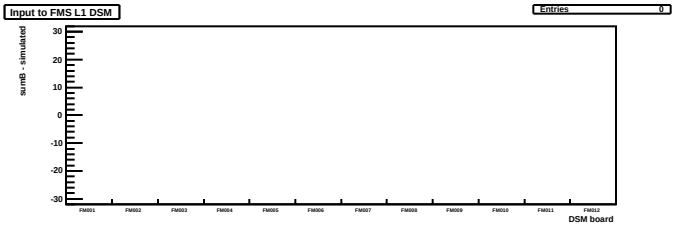

Input to FMS L1 DSM
Entries 2508084
sumC
DSM board

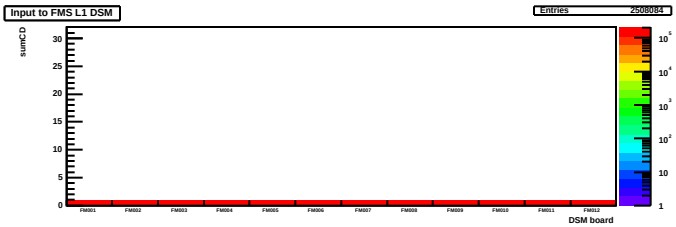

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

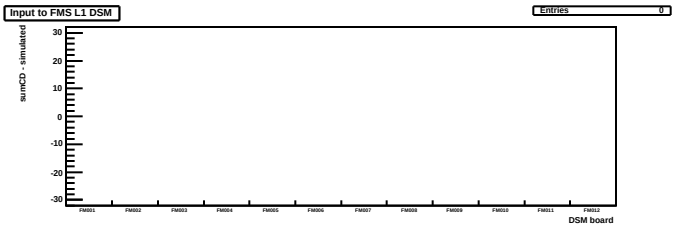

Input to FMS L1 DSM
Entries 2508084
sumBC
DSM board

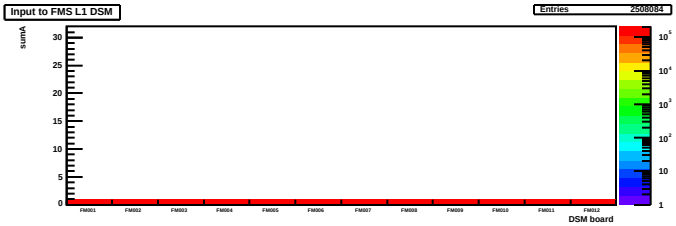

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

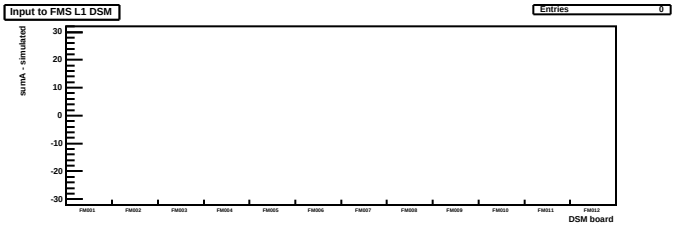

Input to FMS L1 DSM
Entries 2508084
sumB
DSM board

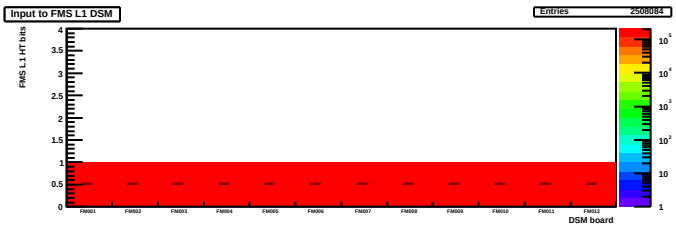

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

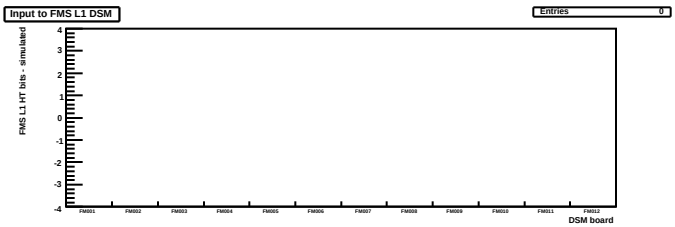

Input to FMS L1 DSM
Entries 2508084
sumCD
DSM board

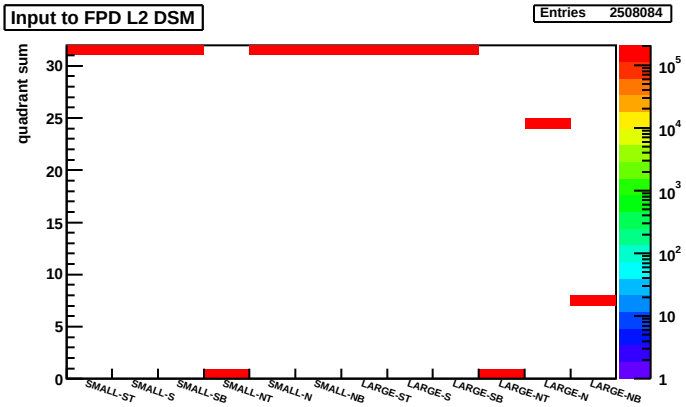

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

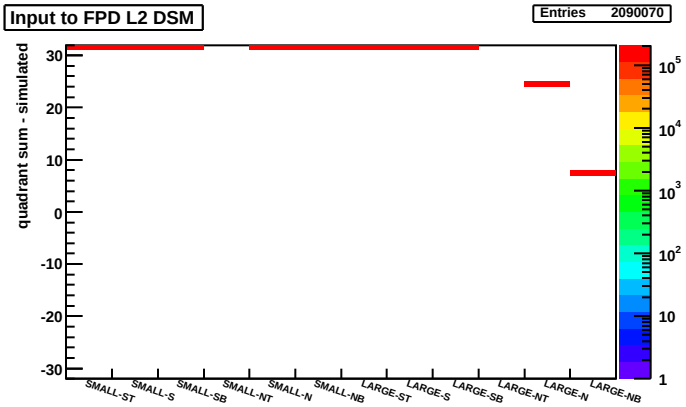

Input to FMS L1 DSM
Entries 2508084
sumA
DSM board

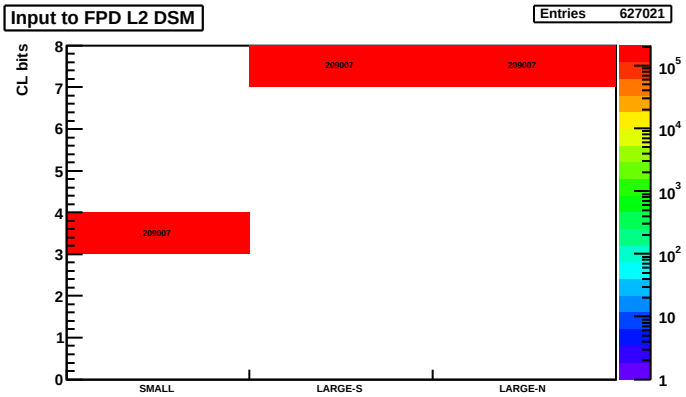

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

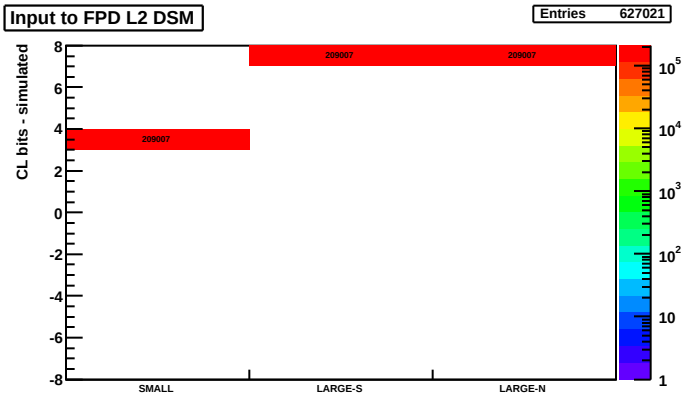

Input to FMS L1 DSM
Entries 2508084
FMS L1 HT bits
DSM board

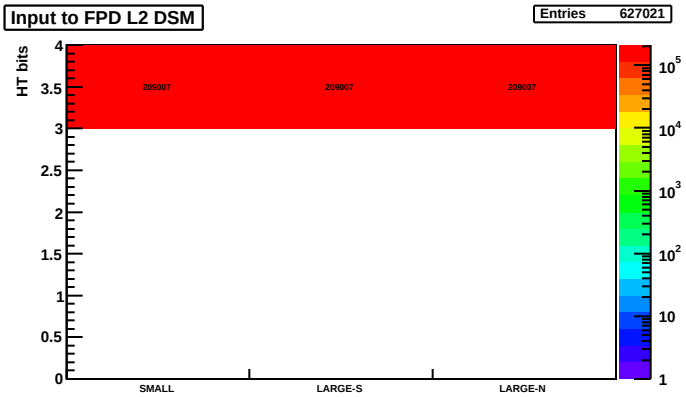

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

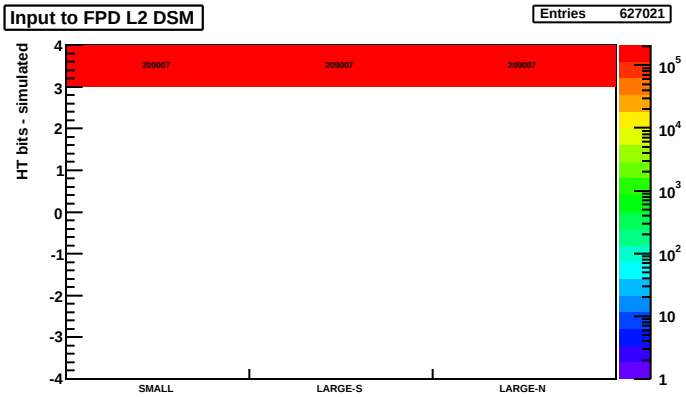

Input to FPD L2 DSM
Entries 2508084
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

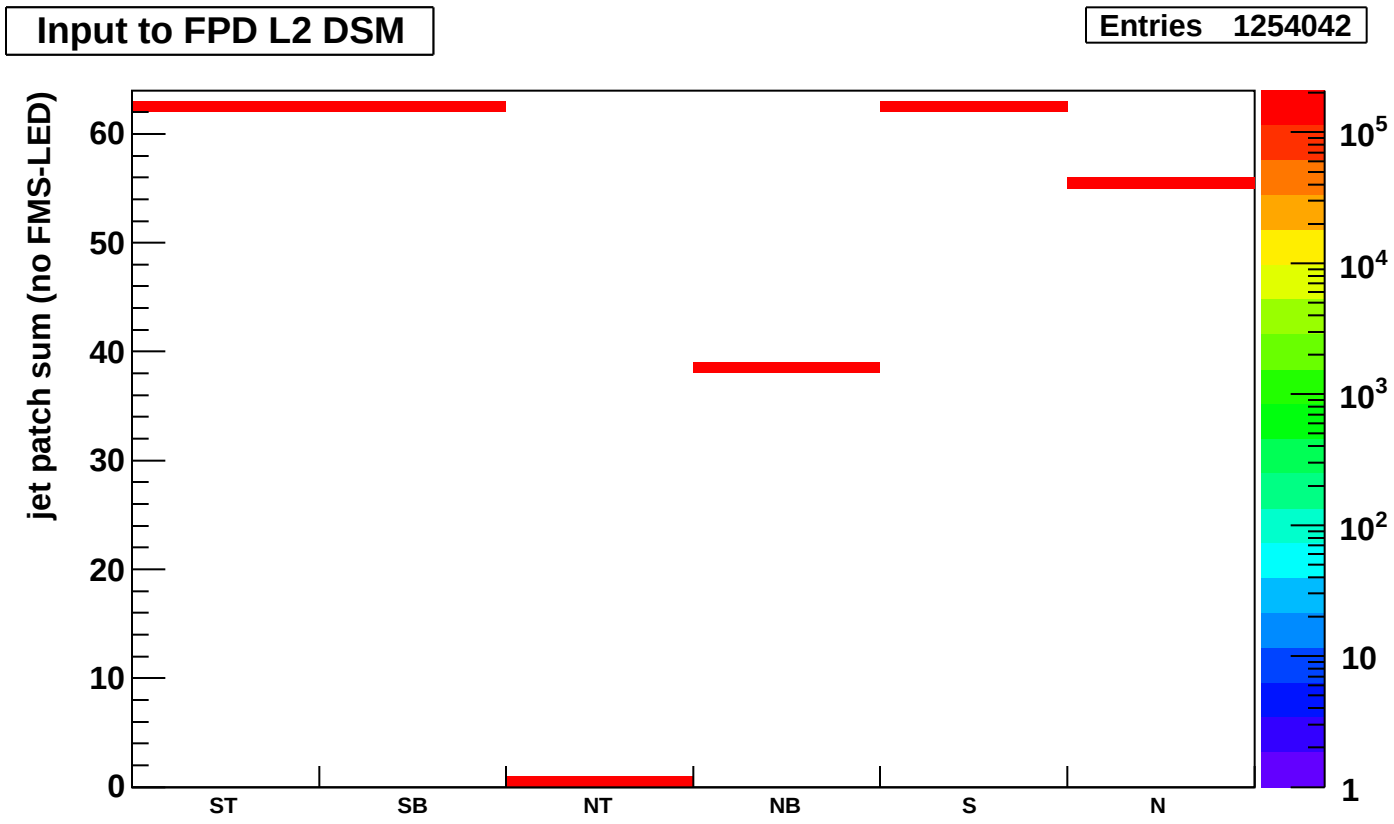

Input to FPD L2 DSM
Entries 2090070
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

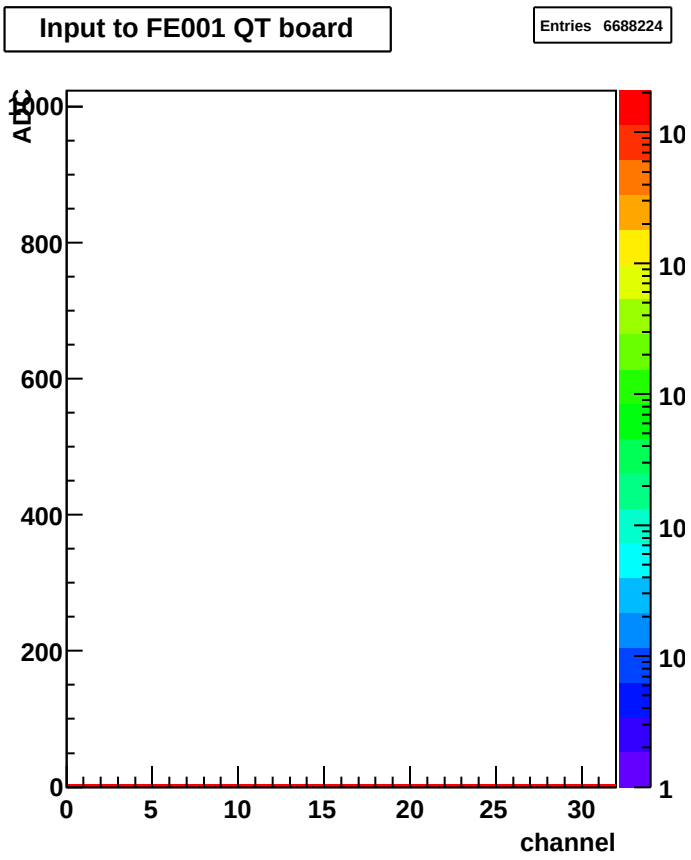

Input to FPD L2 DSM
Entries 627021
CL bits
209007
209007
209007
SMALL
LARGE-S
LARGE-N

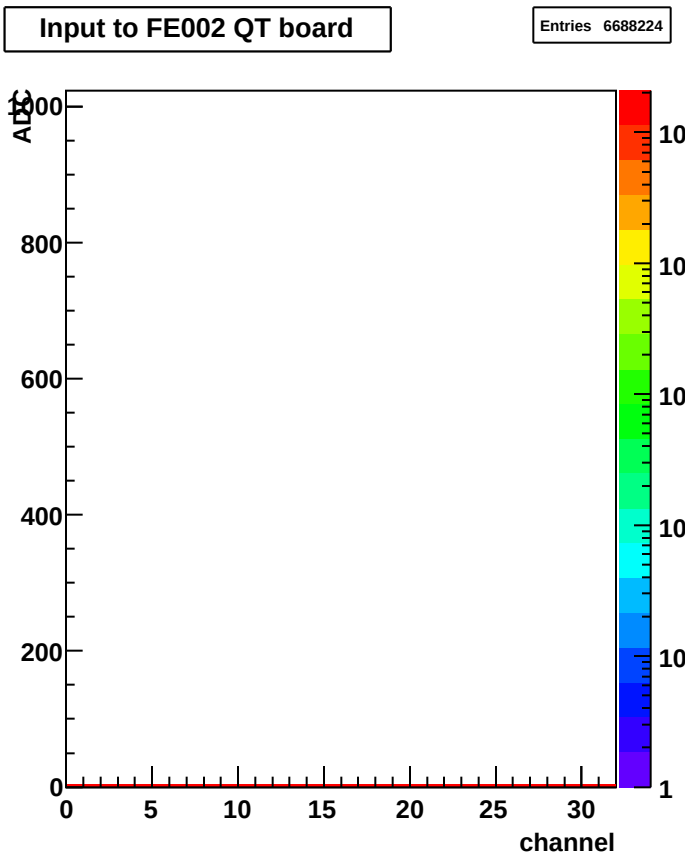

Input to FPD L2 DSM
Entries 627021
CL bits - simulated
209007
209007
209007
SMALL
LARGE-S
LARGE-N

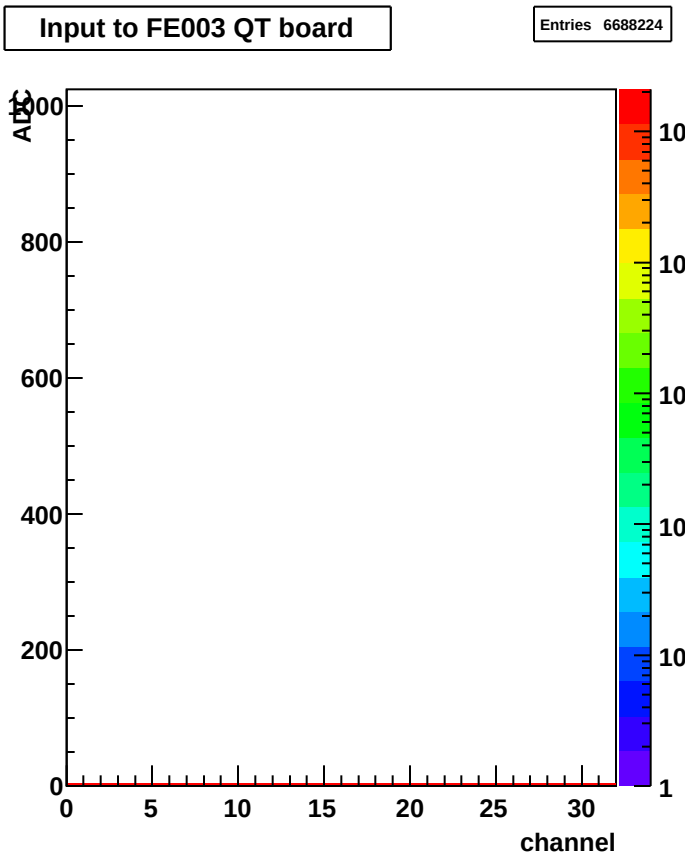

Input to FPD L2 DSM
Entries 627021
HT bits
209007
209007
209007
SMALL
LARGE-S
LARGE-N

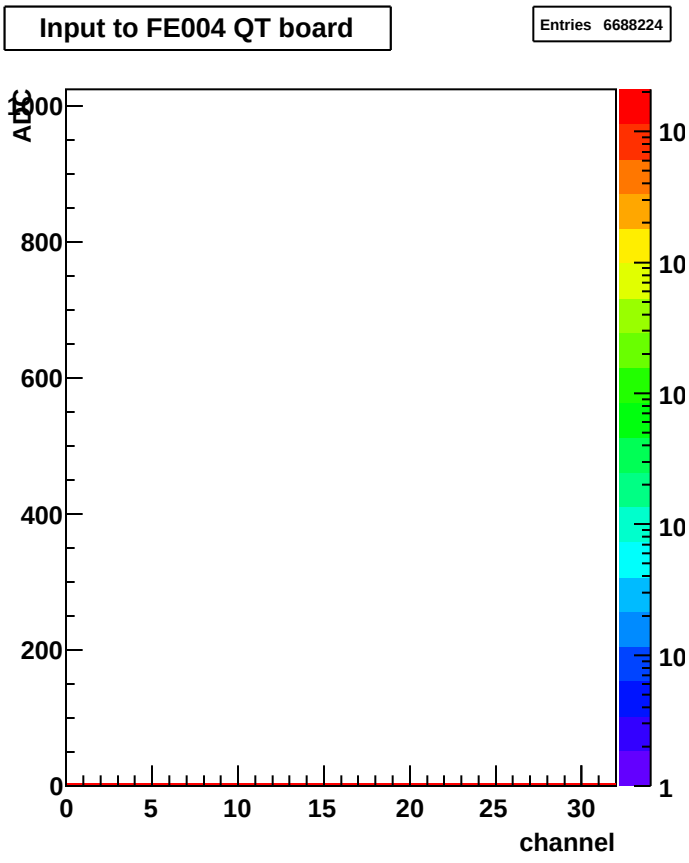

Input to FPD L2 DSM
Entries 627021
HT bits - simulated
209007
209007
209007
SMALL
LARGE-S
LARGE-N

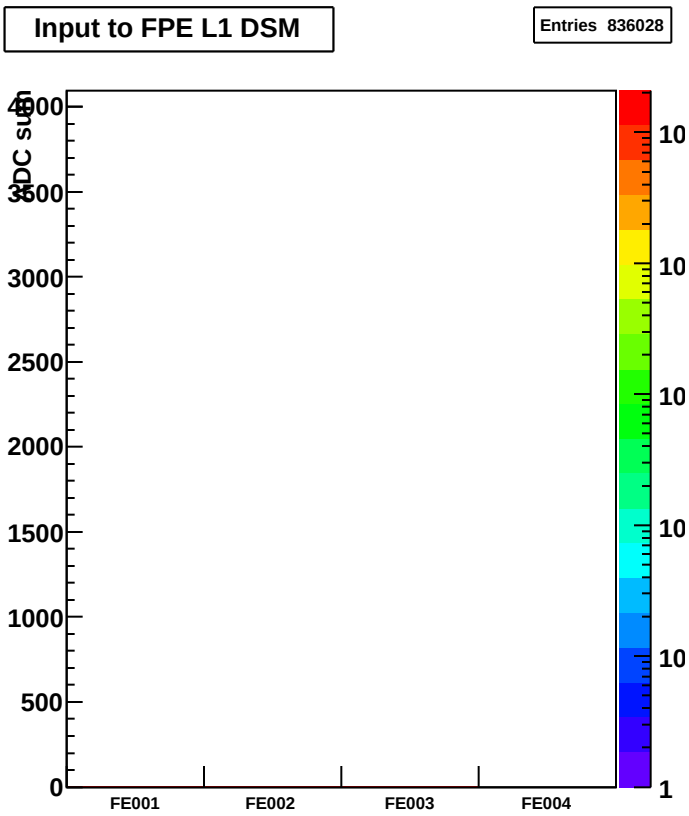

Input to FPD L2 DSM
Entries 1254042
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

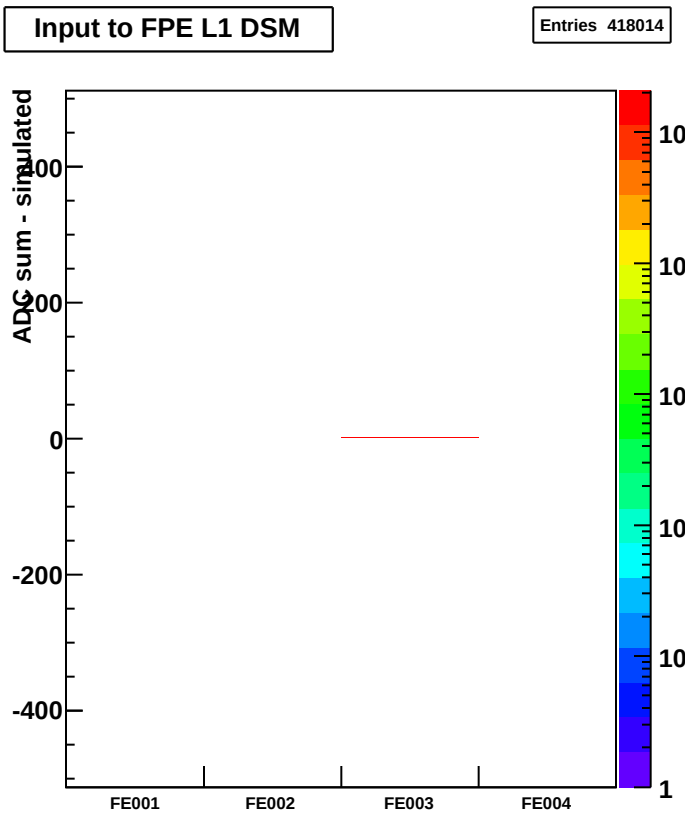

Input to FE001 QT board
Entries 6688224
ADC
channel

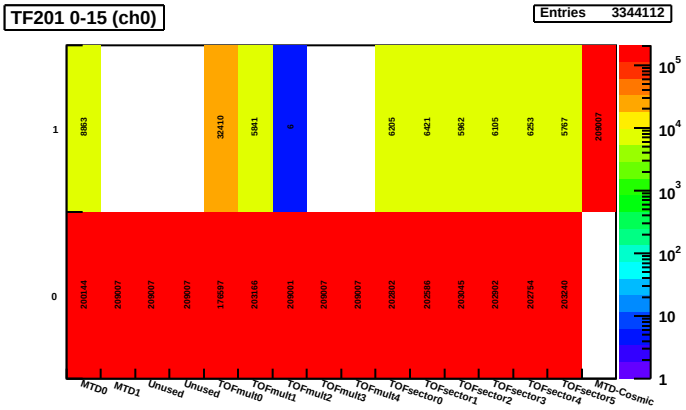

Input to FE002 QT board
Entries 6688224
ADC
channel

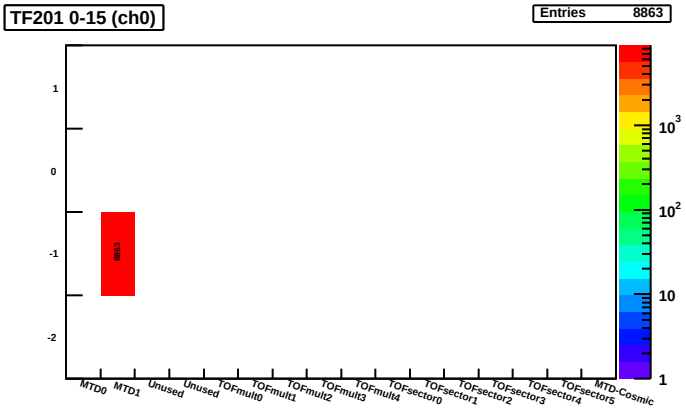

Input to FE003 QT board
Entries 6688224
ADC
channel

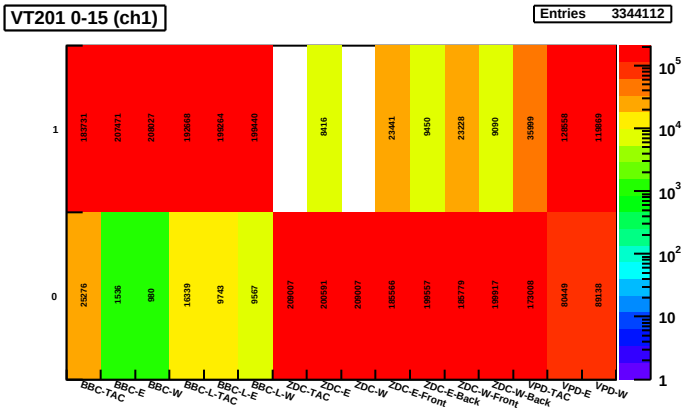

Input to FE004 QT board
Entries 6688224
ADC
channel

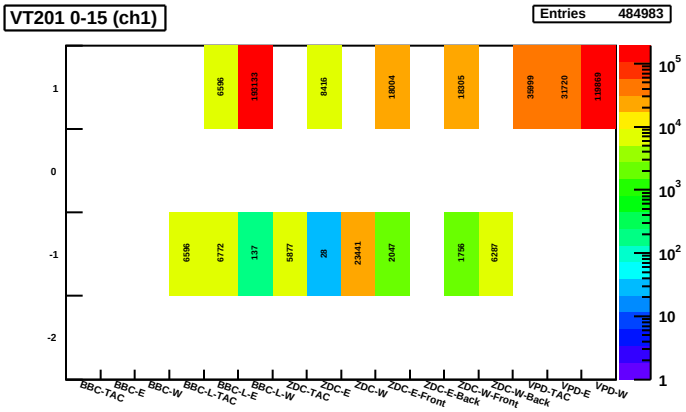

Input to FPE L1 DSM
Entries 836028
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 418014
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1


TF201 0-15 (ch0)
Entries 3344112
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 8863
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 3344112
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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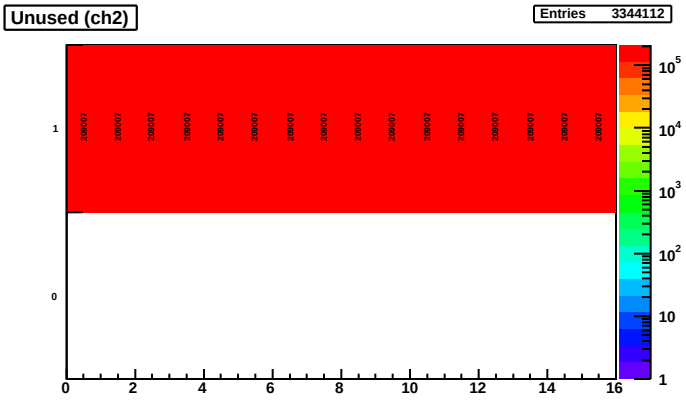
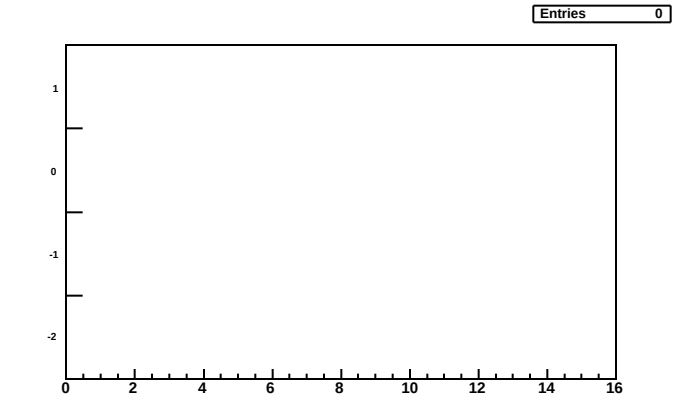
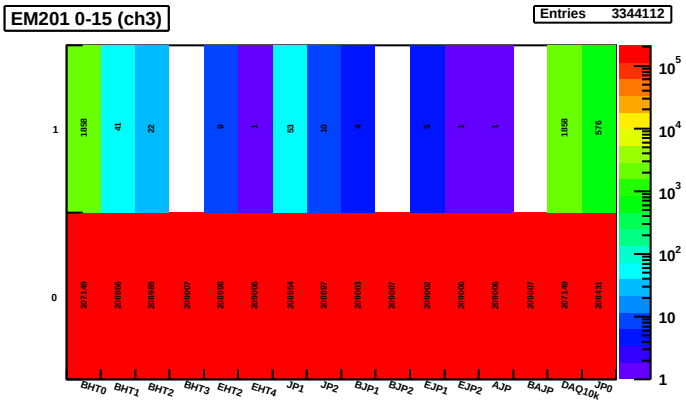
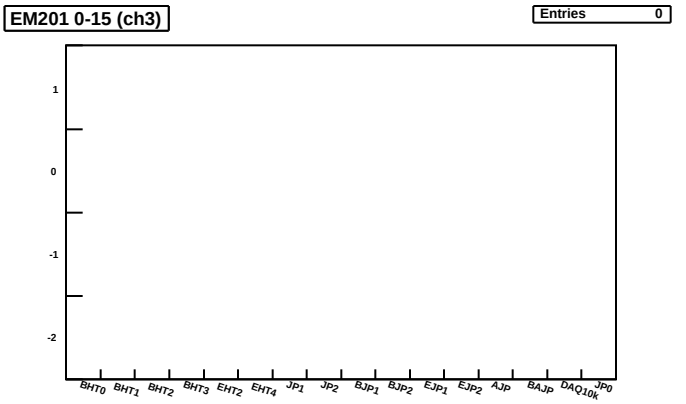
Entries 484983
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


Unused (ch2)
Entries 3344112


Entries 0


EM201 0-15 (ch3)
Entries 3344112
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0


EM201 0-15 (ch3)
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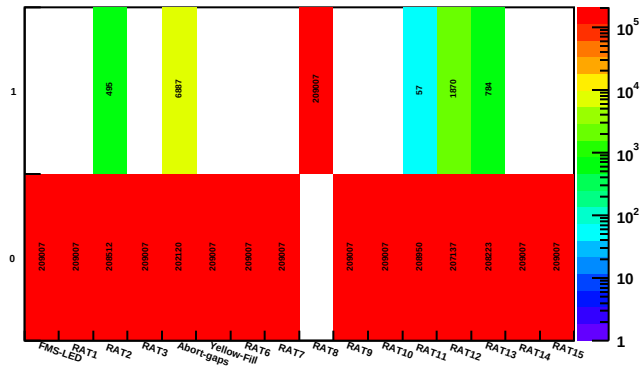
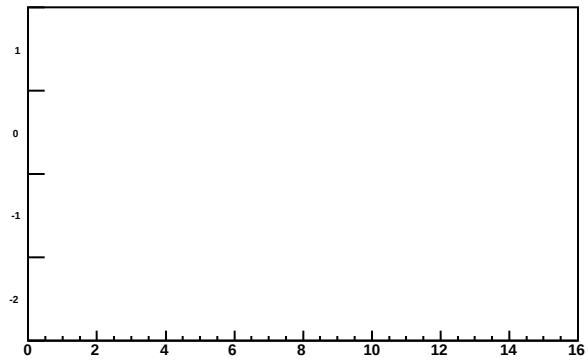
RAT board (ch4)





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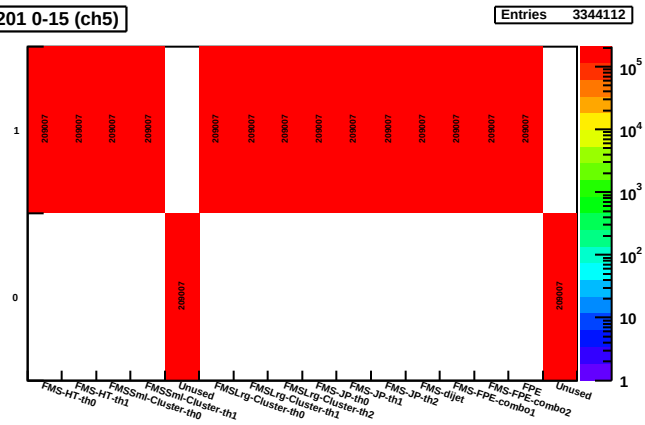

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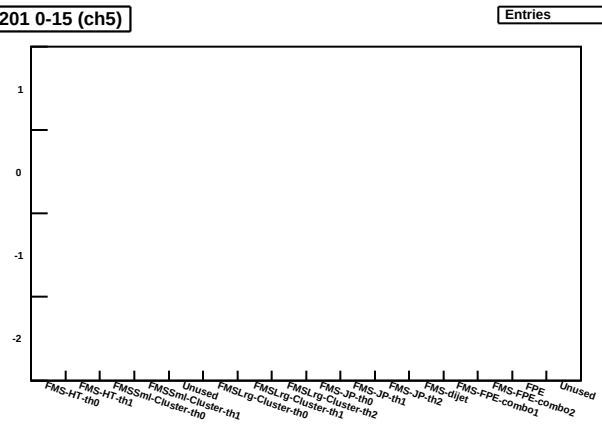
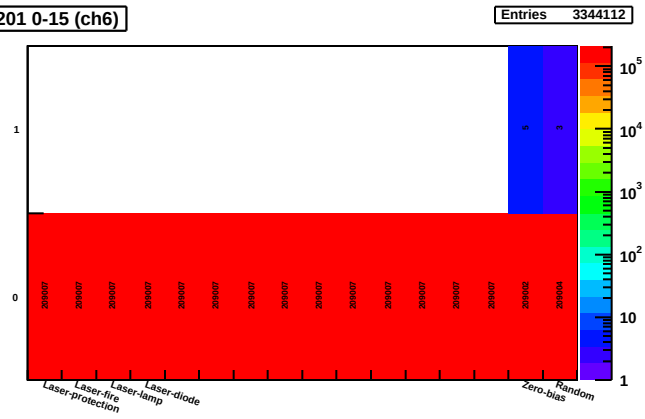
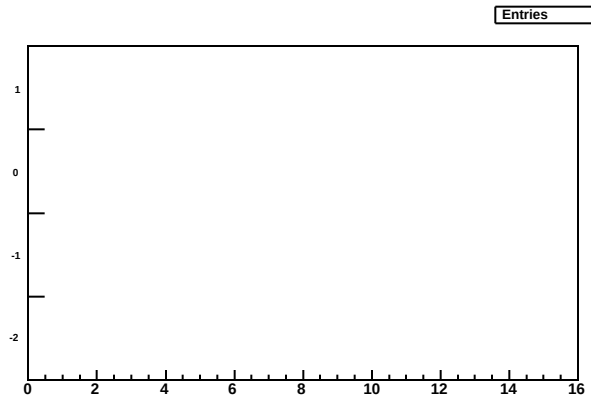
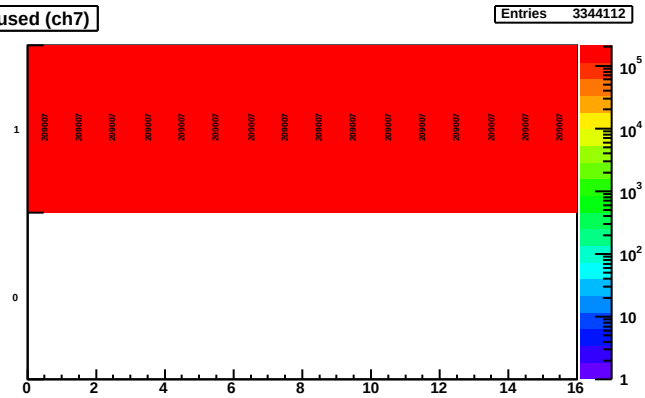
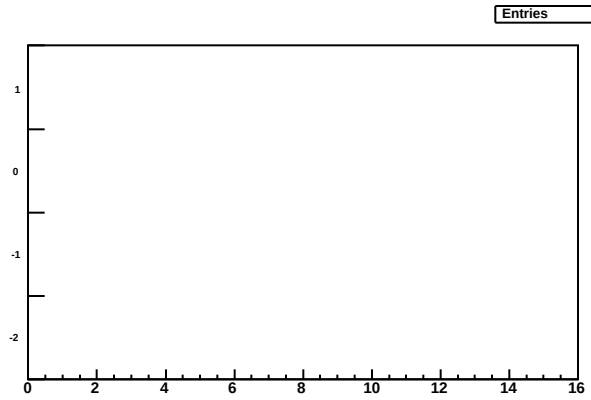


ST201 0-15 (ch6)





Unused (ch7)