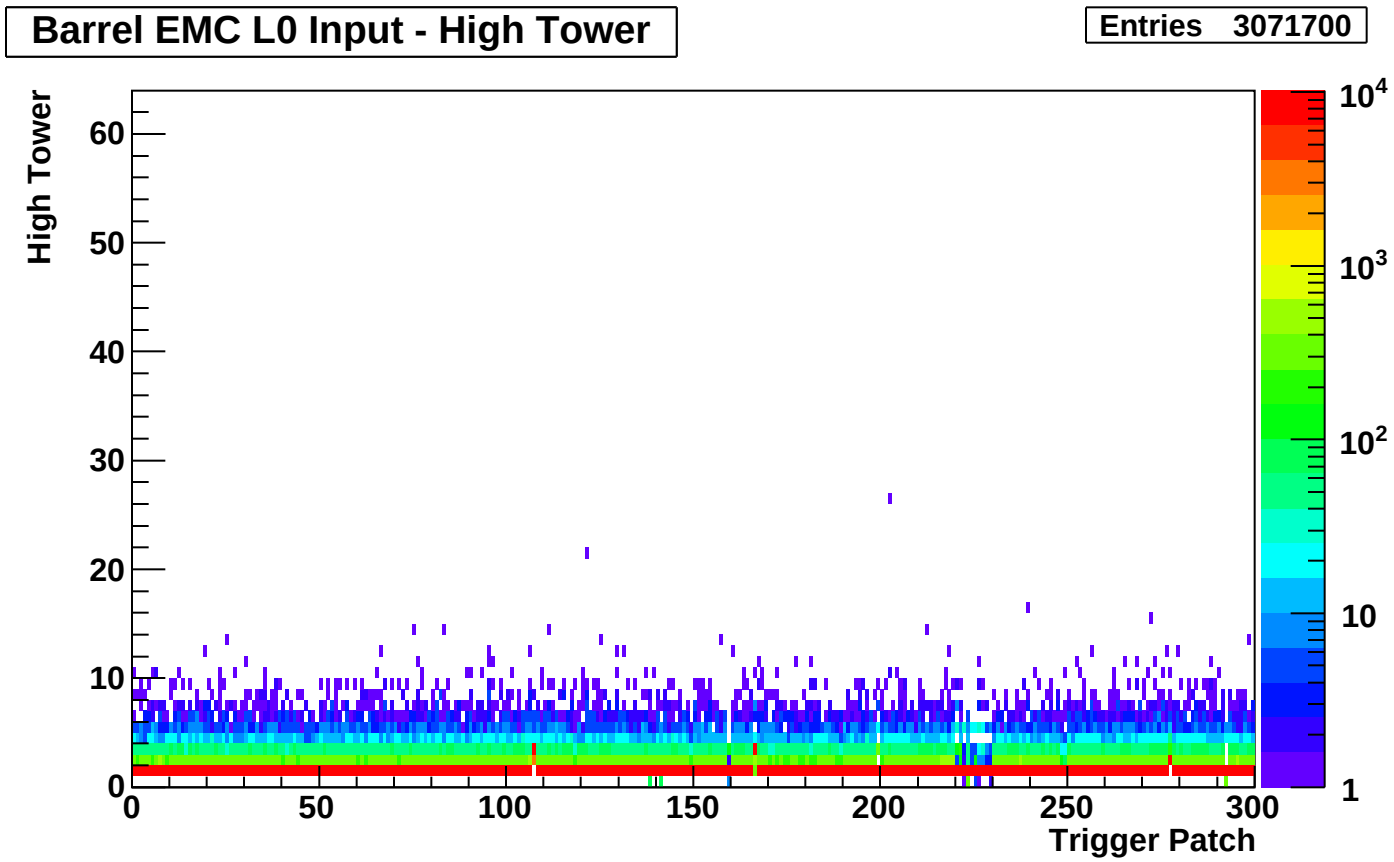
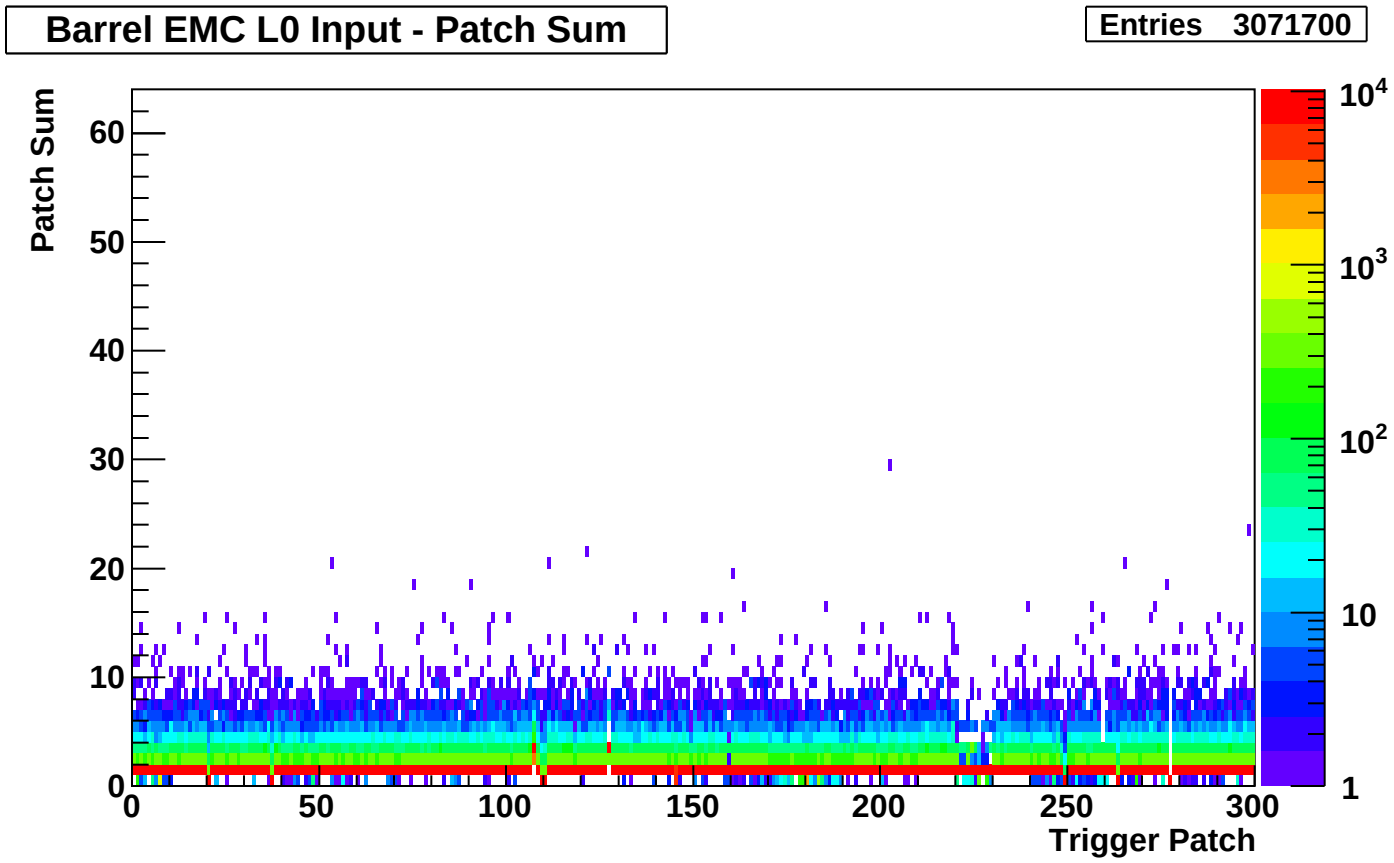
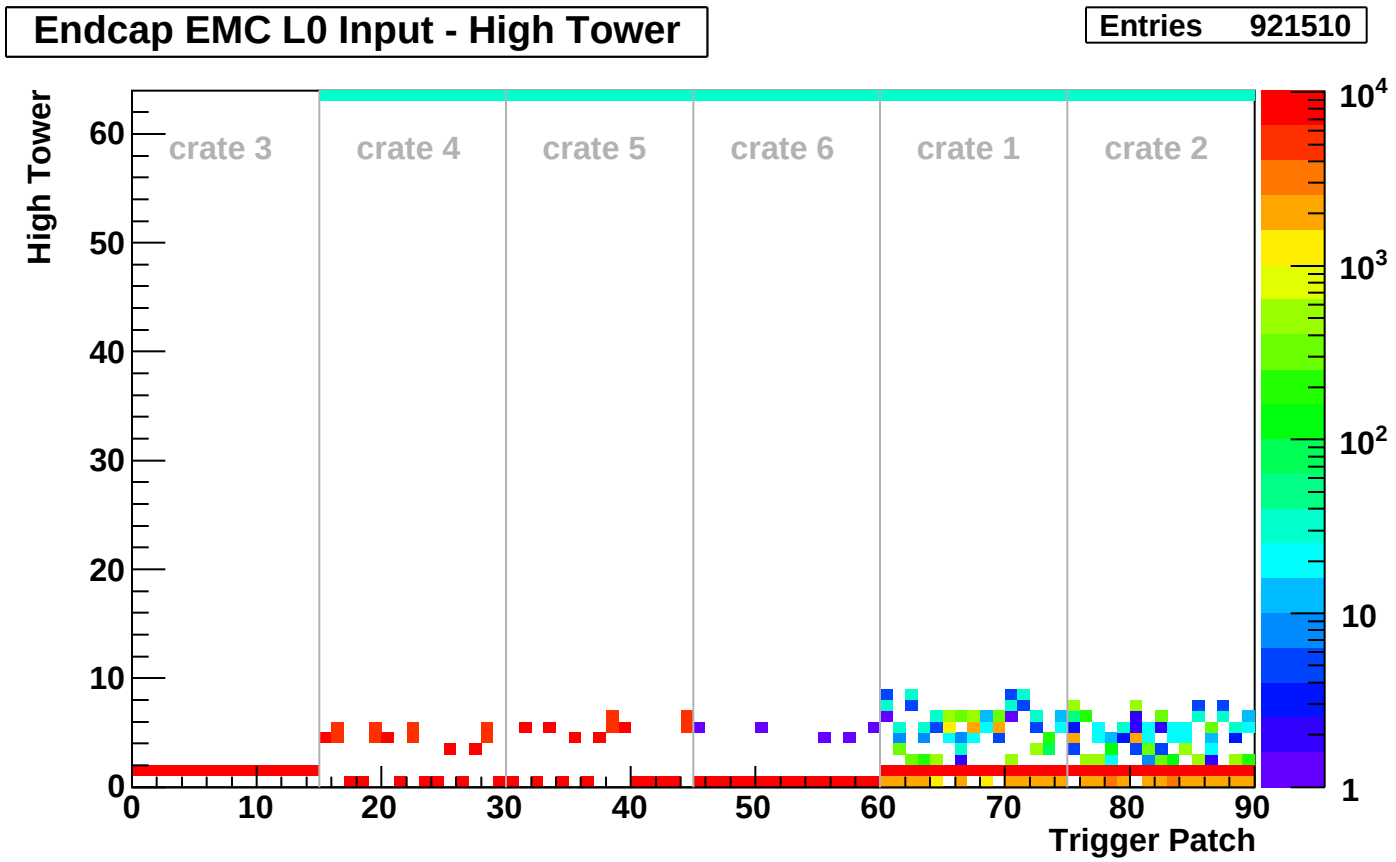
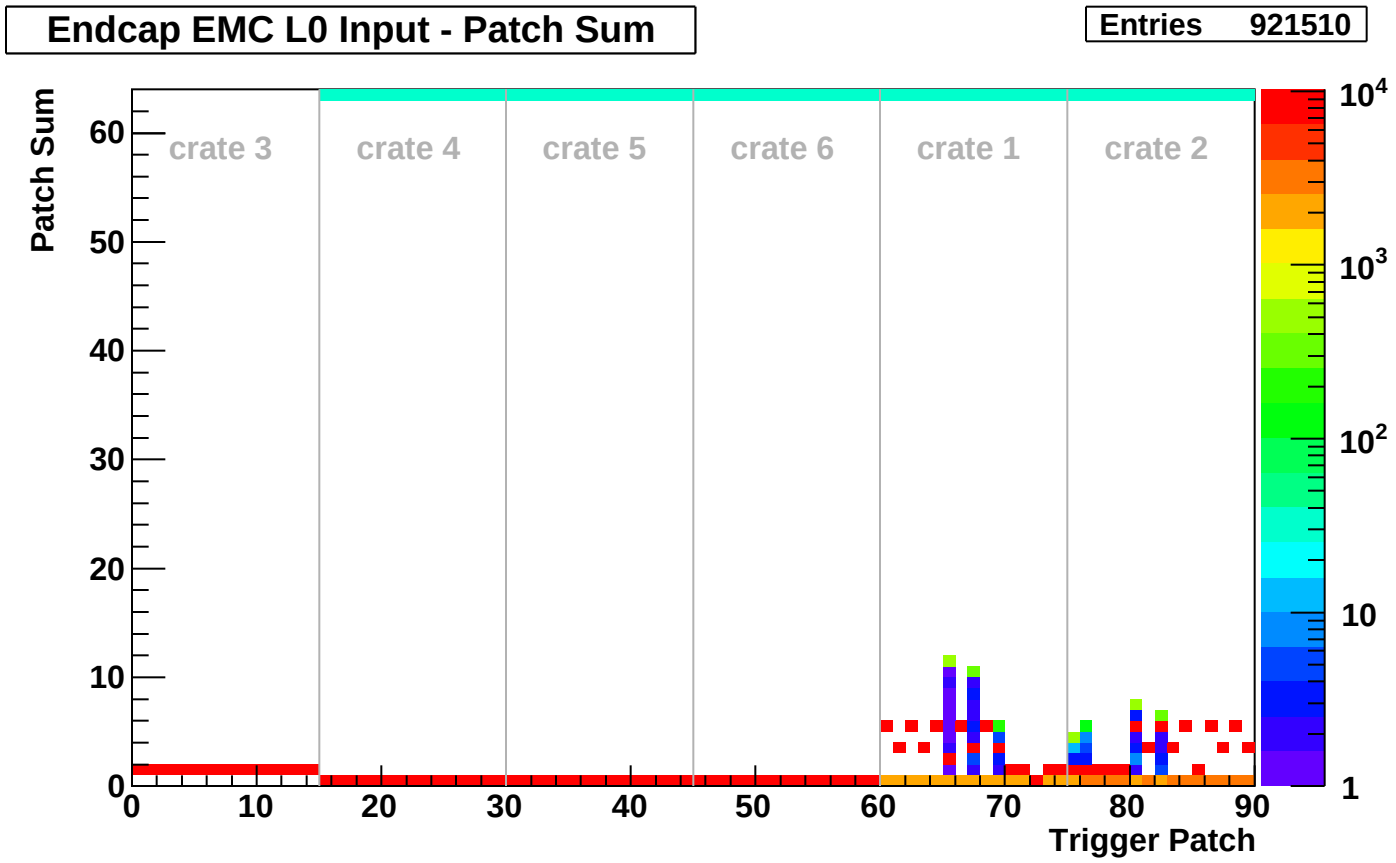
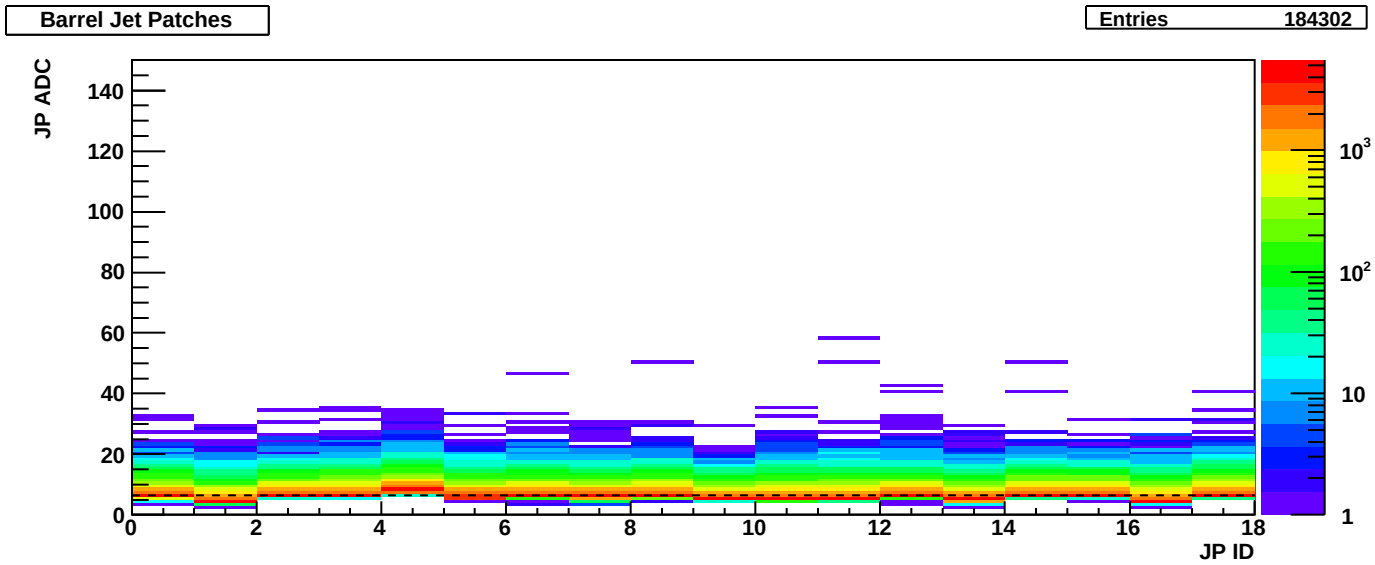
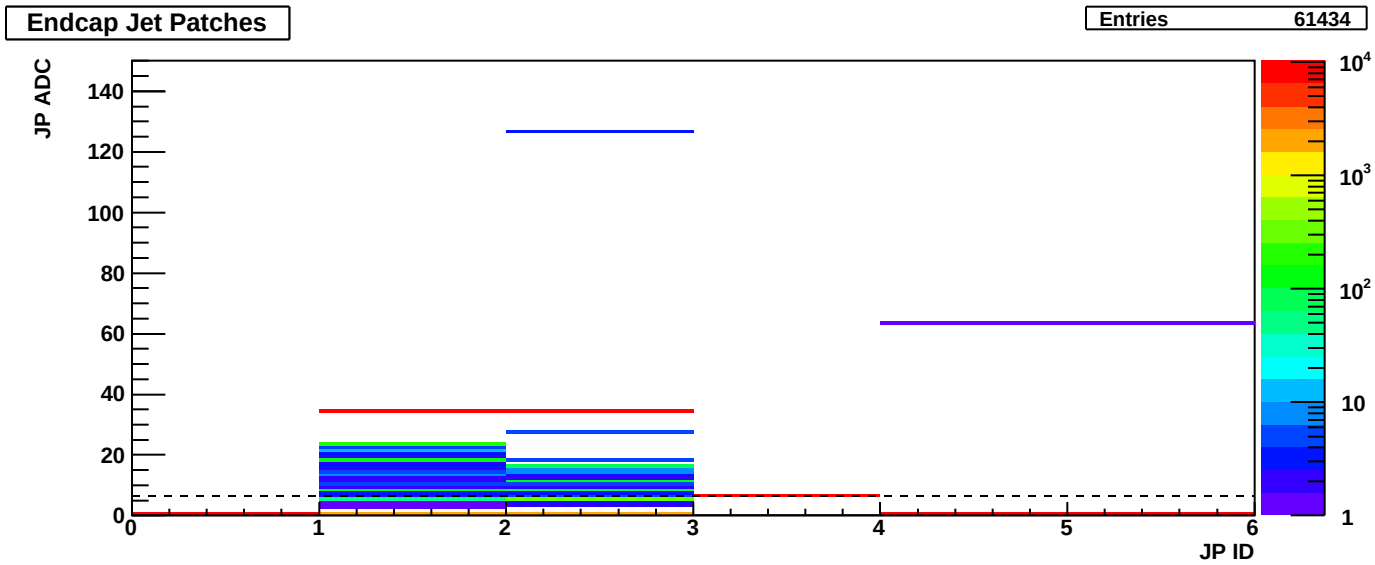

Barrel EMC L0 Input - High Tower
Entries 3071700
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

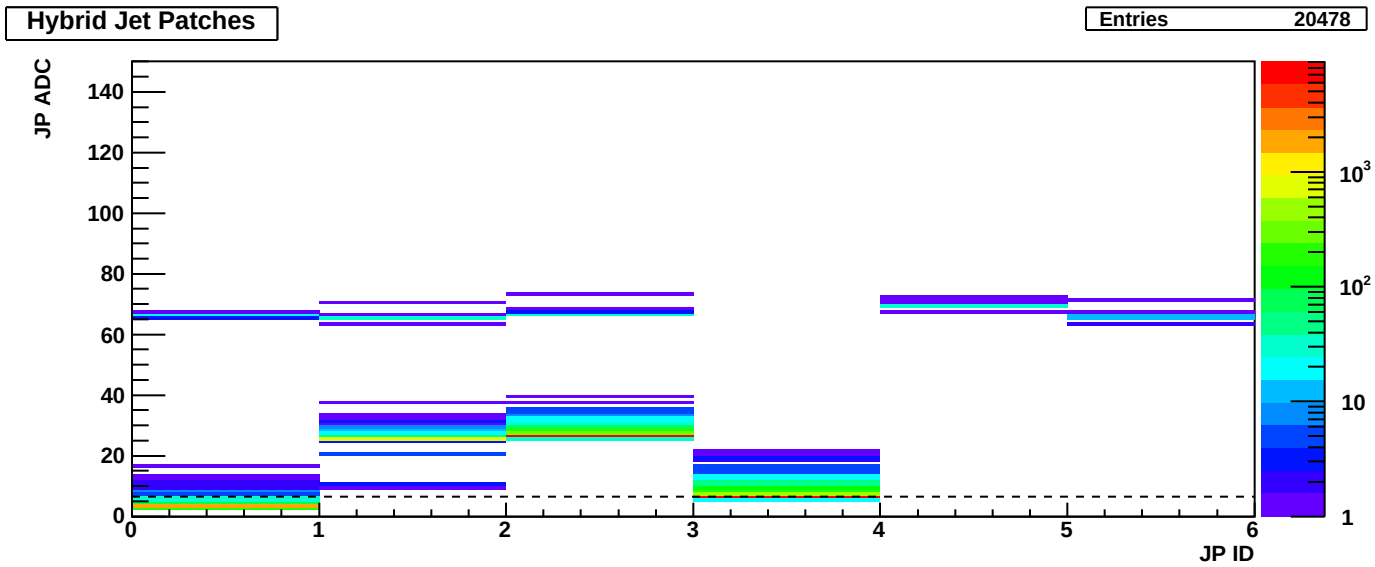

Barrel EMC L0 Input - Patch Sum
Entries 3071700
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

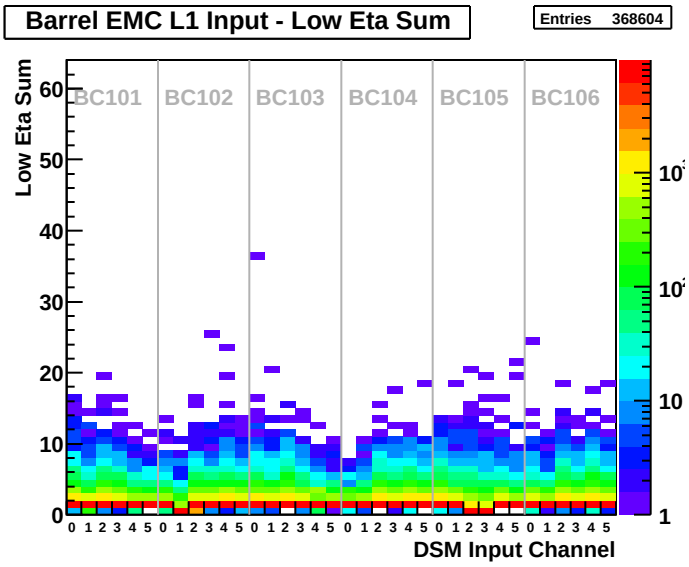

Endcap EMC L0 Input - High Tower
Entries 921510
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

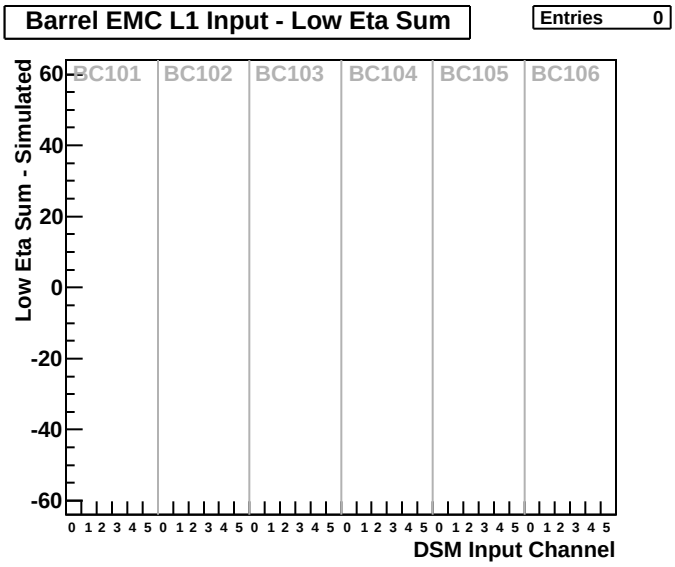

Endcap EMC L0 Input - Patch Sum
Entries 921510
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

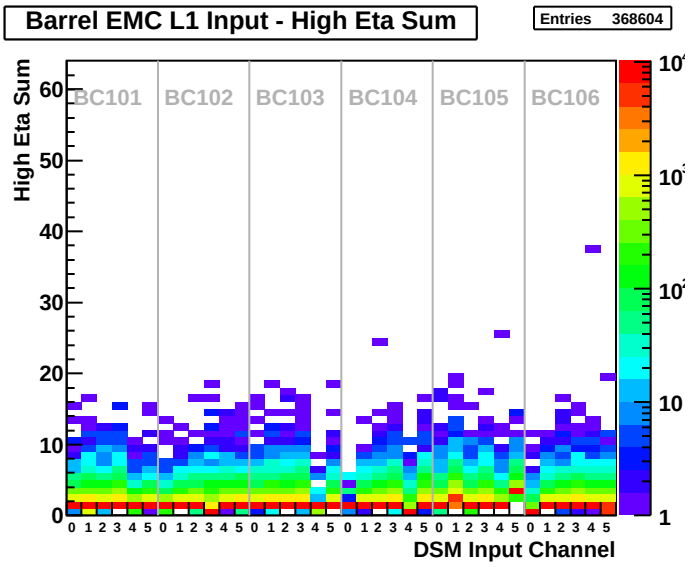

Barrel Jet Patches
Entries 184302
JP ADC
JP ID

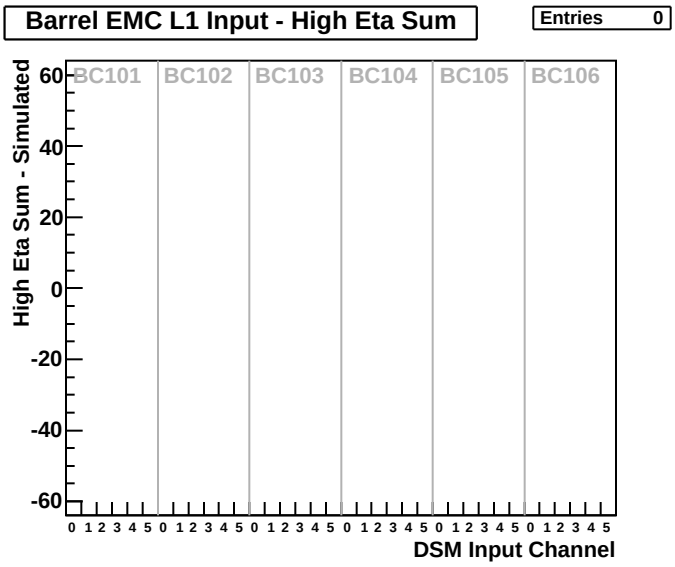

Endcap Jet Patches
Entries 61434
JP ADC
JP ID

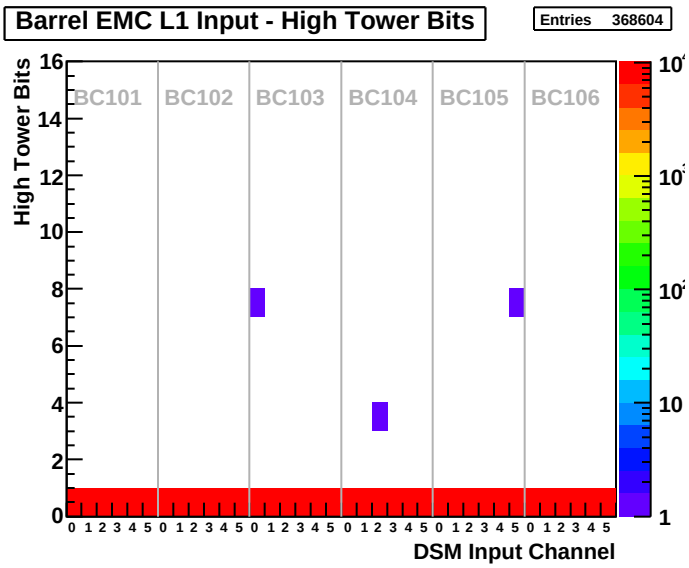

Hybrid Jet Patches
Entries 20478
JP ADC
JP ID

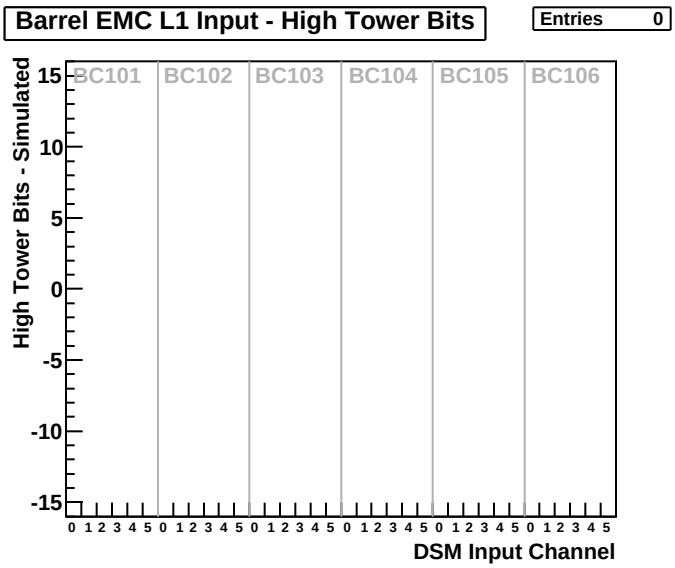

Barrel EMC L1 Input - Low Eta Sum
Entries 368604
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

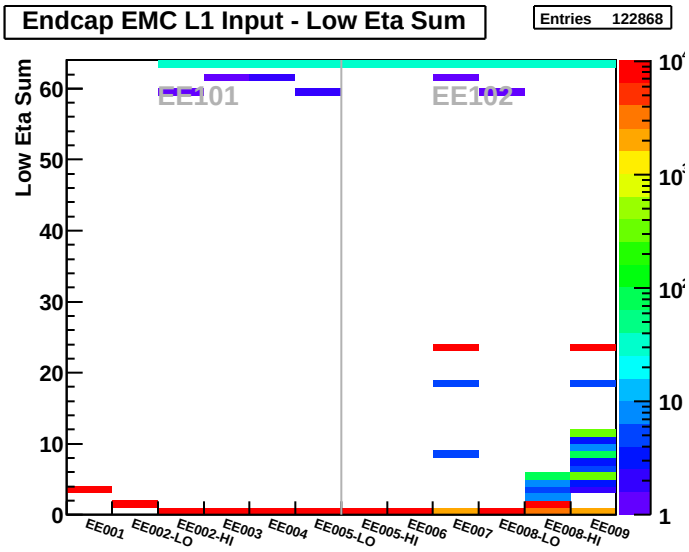

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

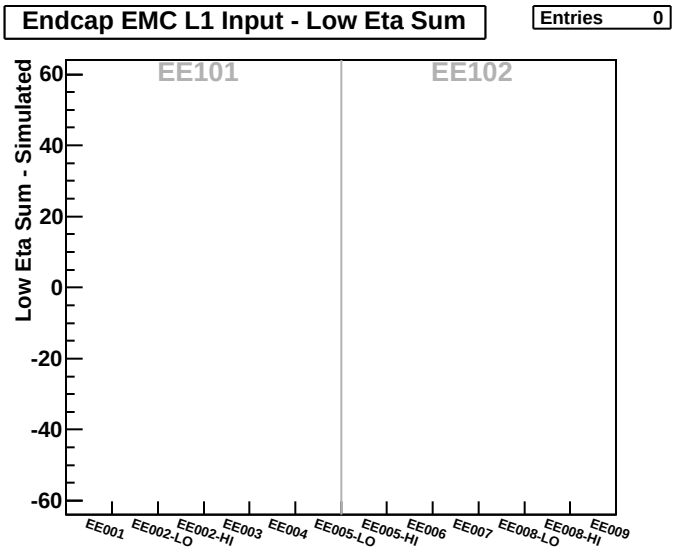

Barrel EMC L1 Input - High Eta Sum
Entries 368604
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

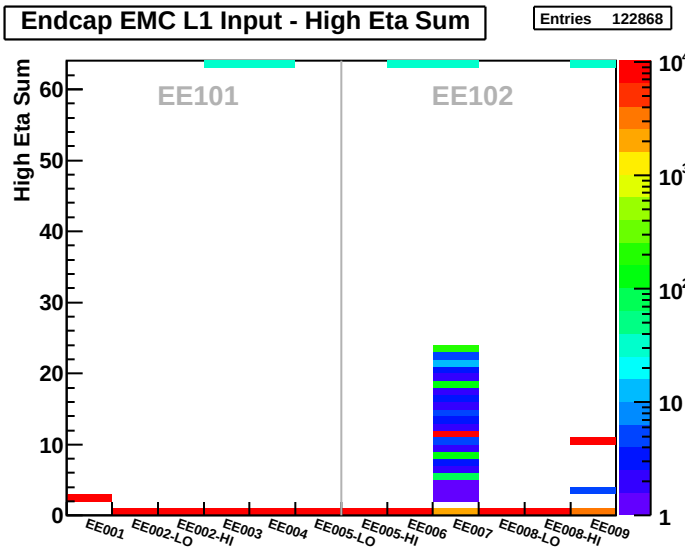

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

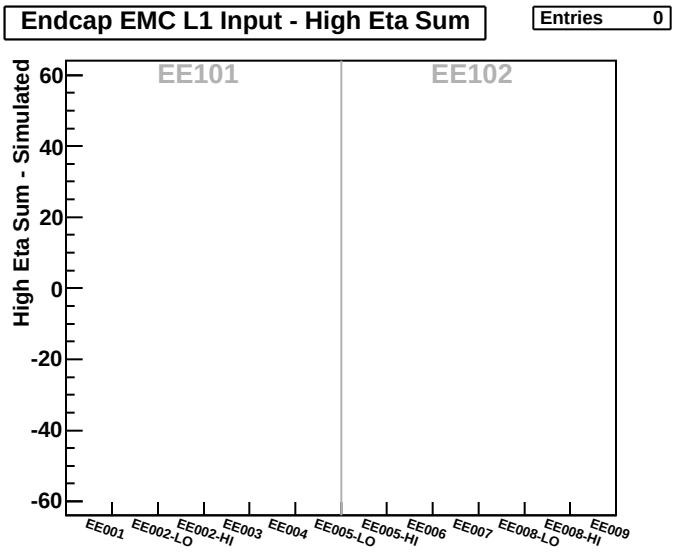

Barrel EMC L1 Input - High Tower Bits
Entries 368604
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

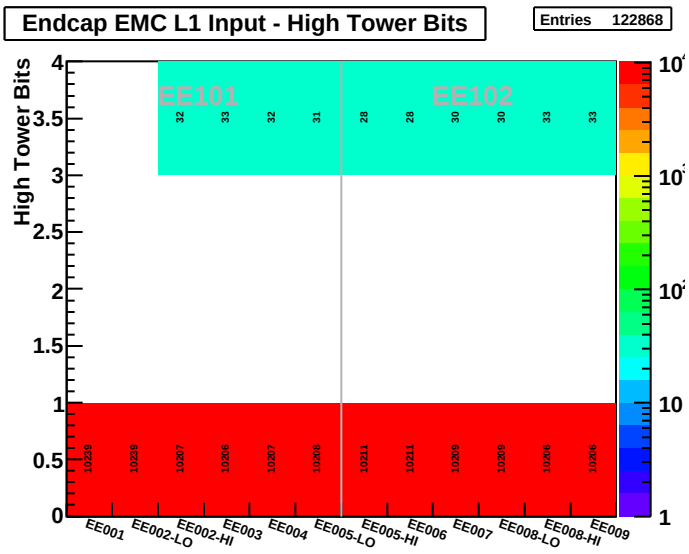

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

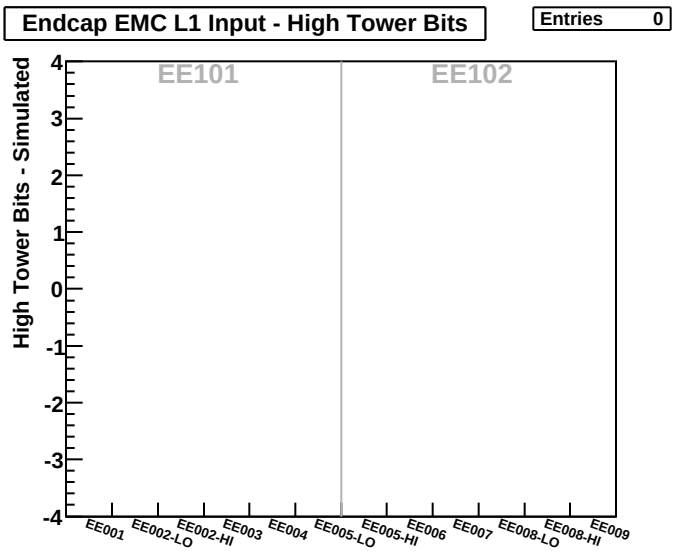

Endcap EMC L1 Input - Low Eta Sum
Entries 122868
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

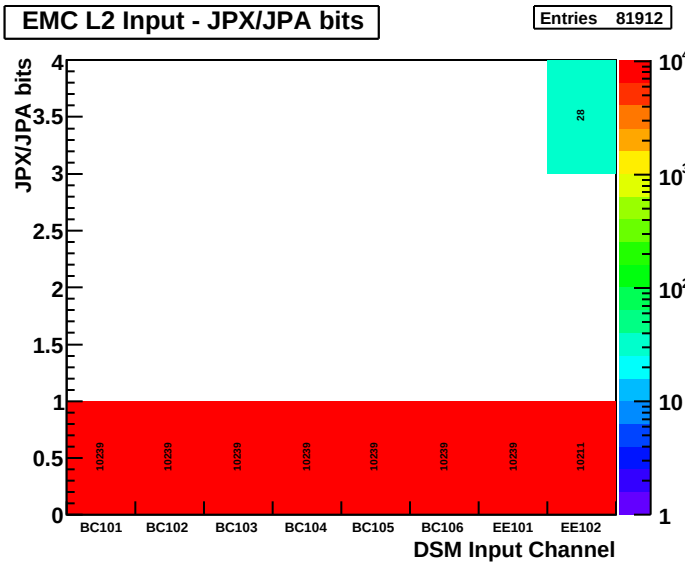

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

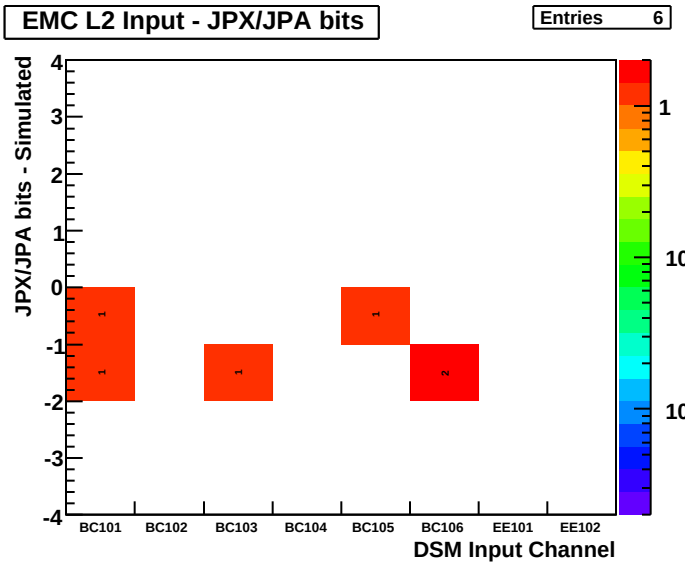

Endcap EMC L1 Input - High Eta Sum
Entries 122868
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

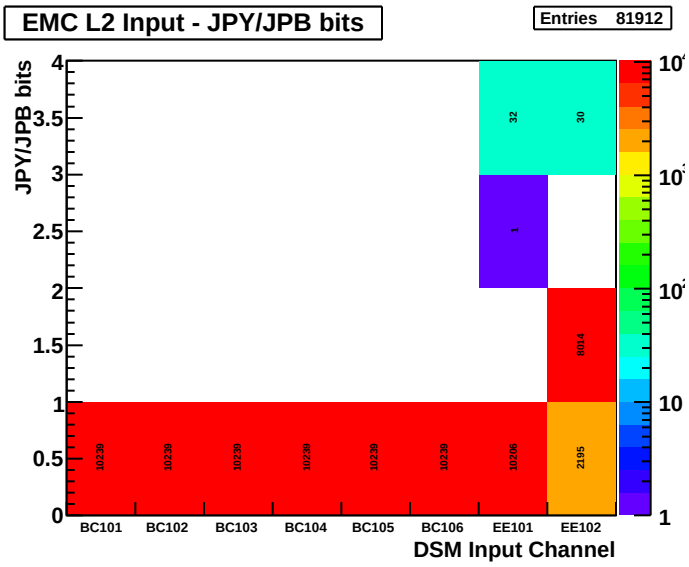

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

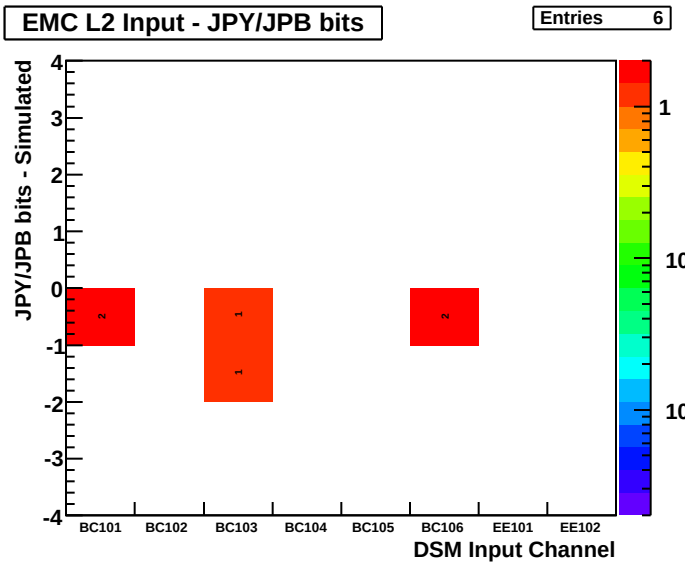

Endcap EMC L1 Input - High Tower Bits
Entries 122868
High Tower Bits
EE101
EE102
32 33 32 31 28 28 30 30 33 33
10239 10239 10207 10206 10207 10208 10211 10211 10209 10209 10206 10206
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

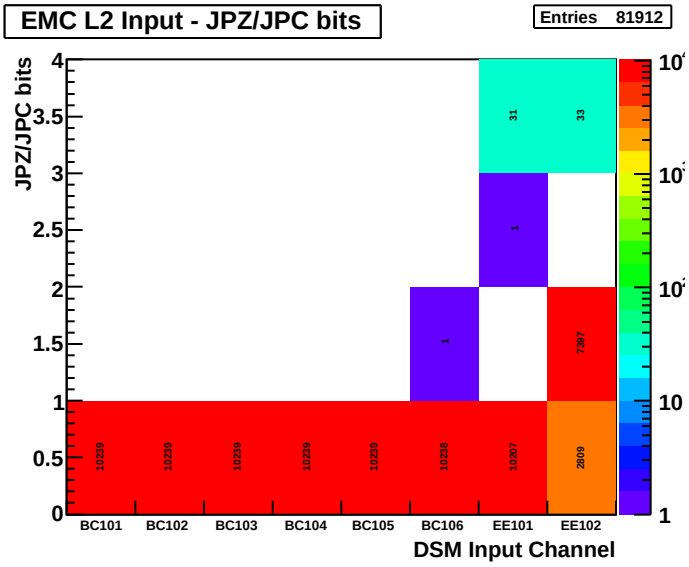

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

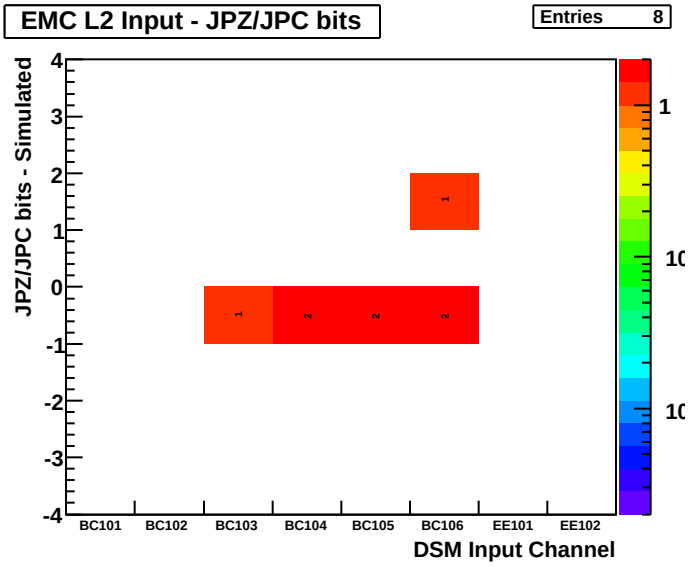

EMC L2 Input - JPX/JPA bits
Entries 81912
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
10239 10239 10239 10239 10239 10239 10239 10211
28

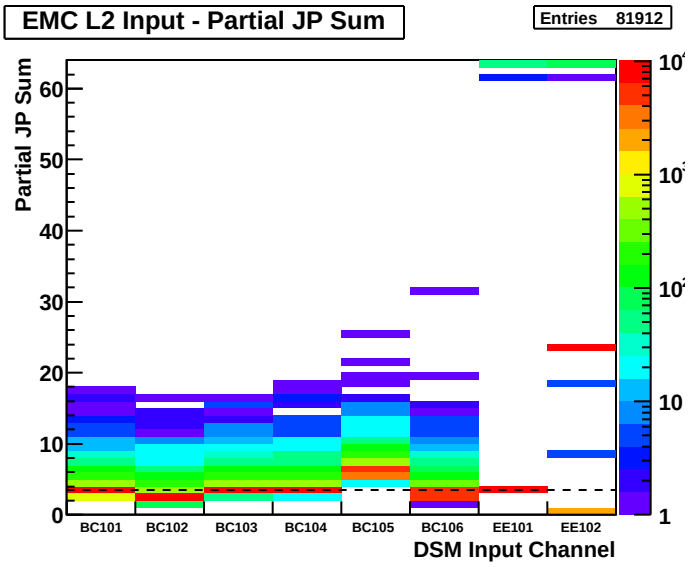

EMC L2 Input - JPX/JPA bits
Entries 6
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1 1 1 2

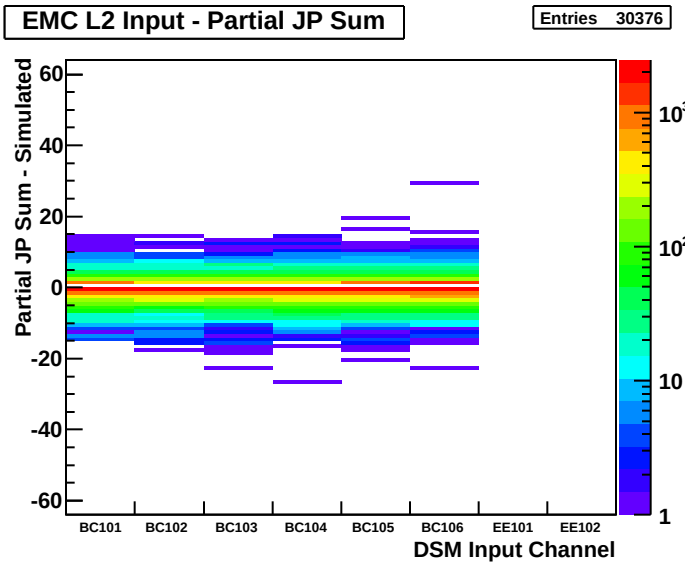

EMC L2 Input - JPY/JPB bits
Entries 81912
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
10239 10239 10239 10239 10239 10239 10206 2195
32 30 1 8014

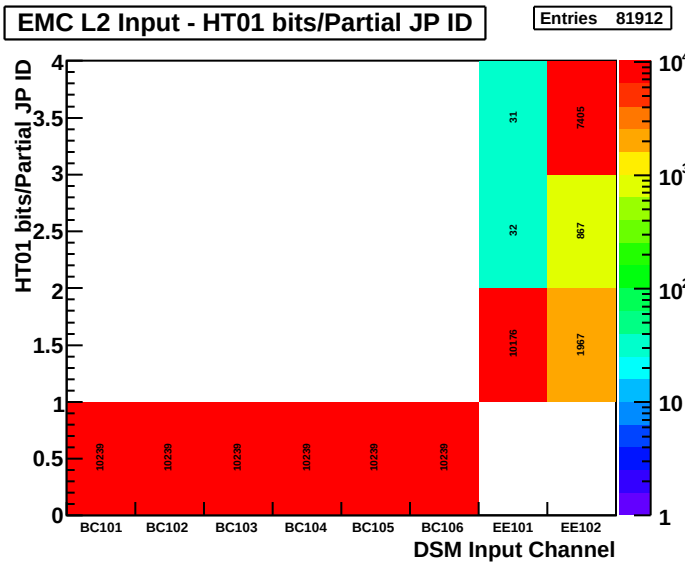

EMC L2 Input - JPY/JPB bits
Entries 6
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2 1 1 2

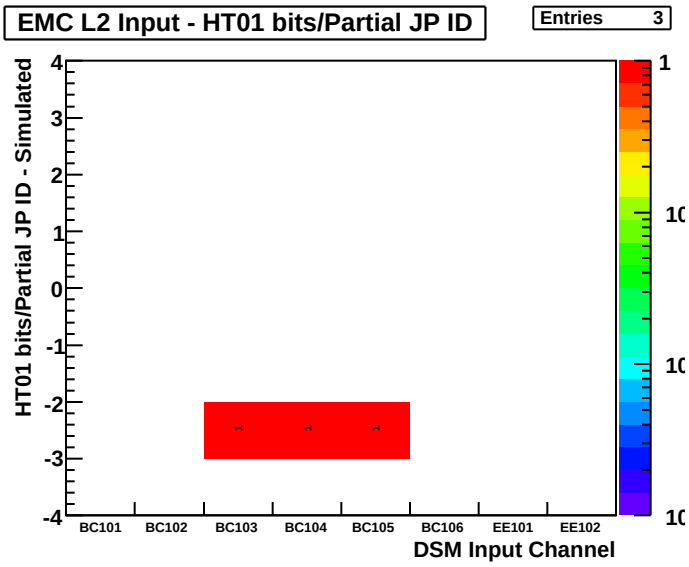

EMC L2 Input - JPZ/JPC bits
Entries 81912
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
10239 10239 10239 10239 10239 10238 10207 2809
31 33 1 1 7397

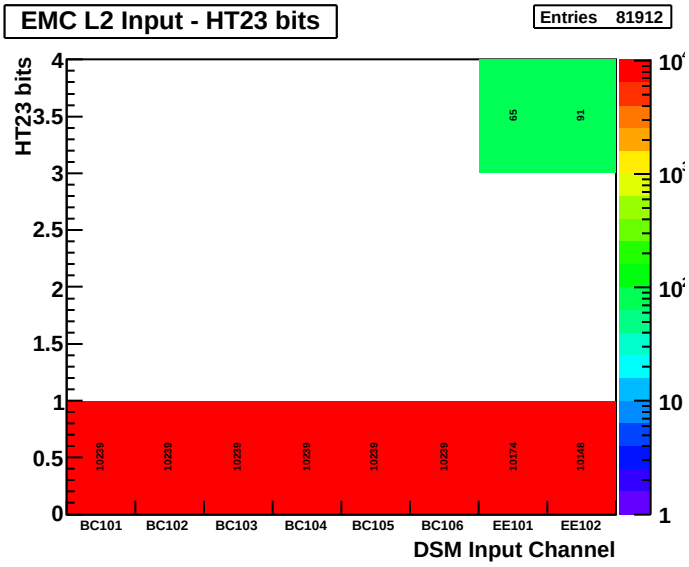

EMC L2 Input - JPZ/JPC bits
Entries 8
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1 2 2 2

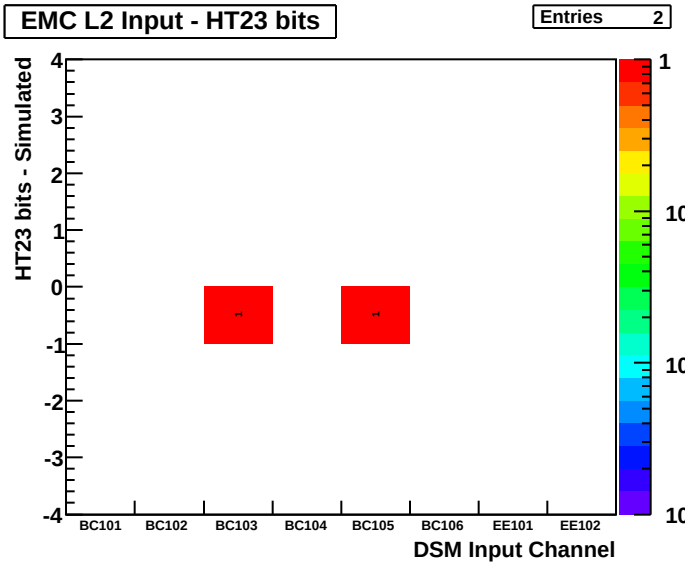

EMC L2 Input - Partial JP Sum
Entries 81912
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

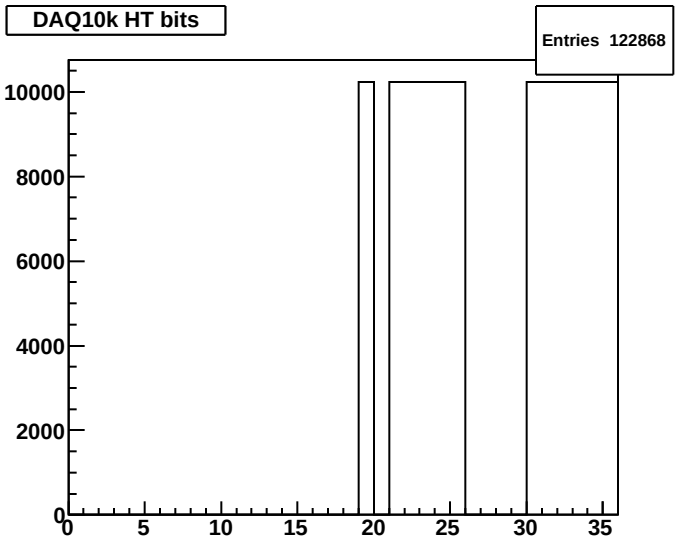

EMC L2 Input - Partial JP Sum
Entries 30376
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

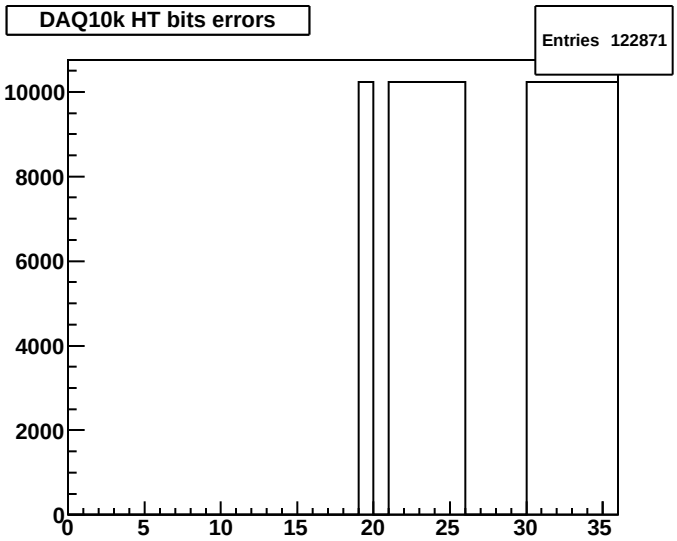

EMC L2 Input - HT01 bits/Partial JP ID
Entries 81912
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

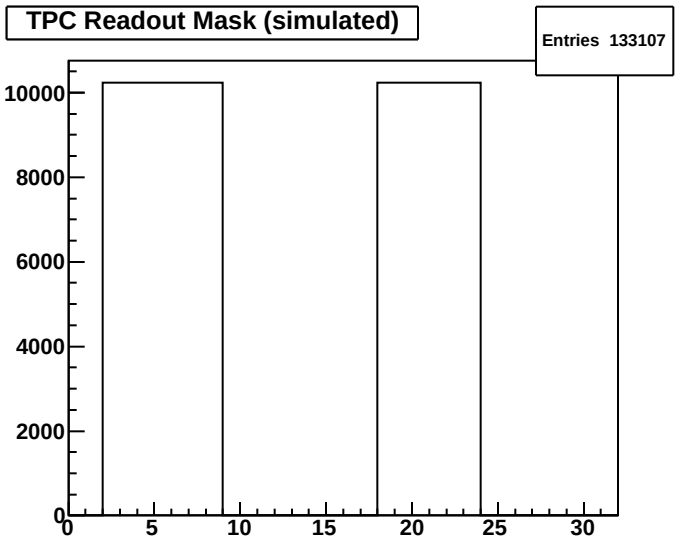

EMC L2 Input - HT01 bits/Partial JP ID
Entries 3
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

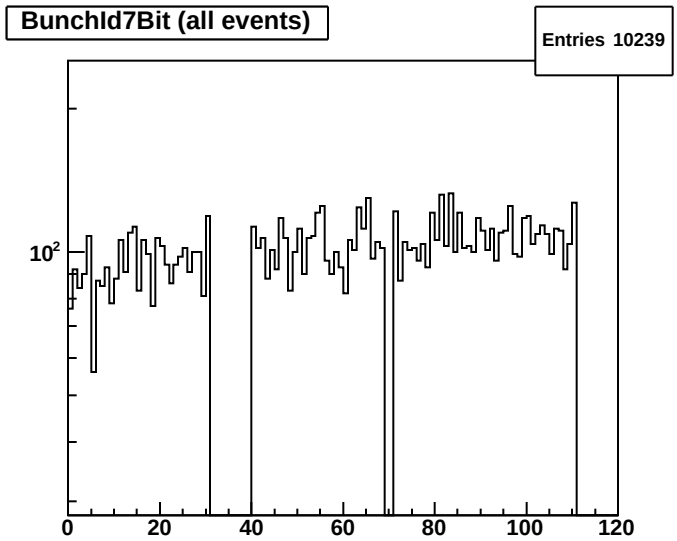

EMC L2 Input - HT23 bits
Entries 81912
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

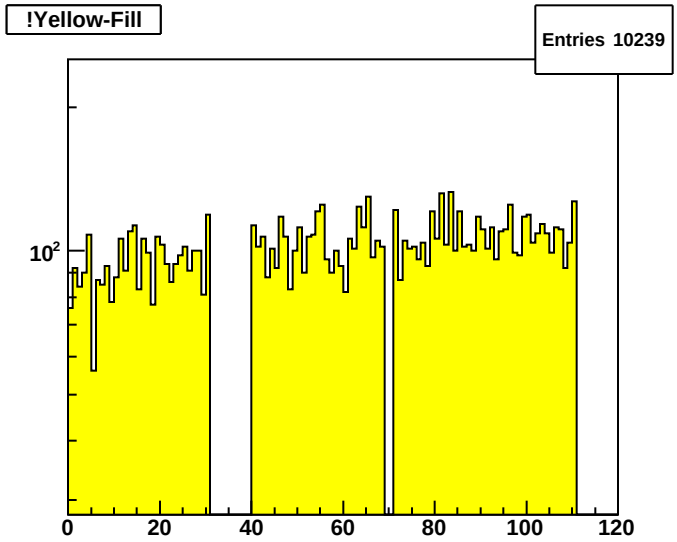

EMC L2 Input - HT23 bits
Entries 2
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

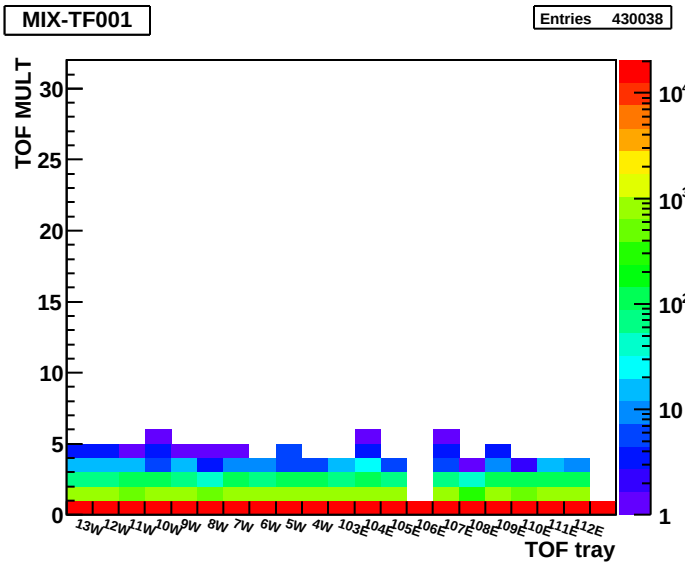

DAQ10k HT bits
Entries 122868
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

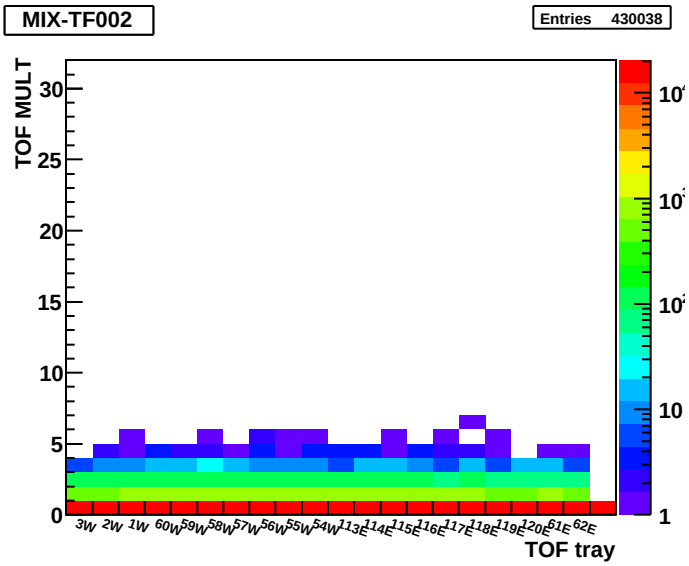

DAQ10k HT bits errors
Entries 122871
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

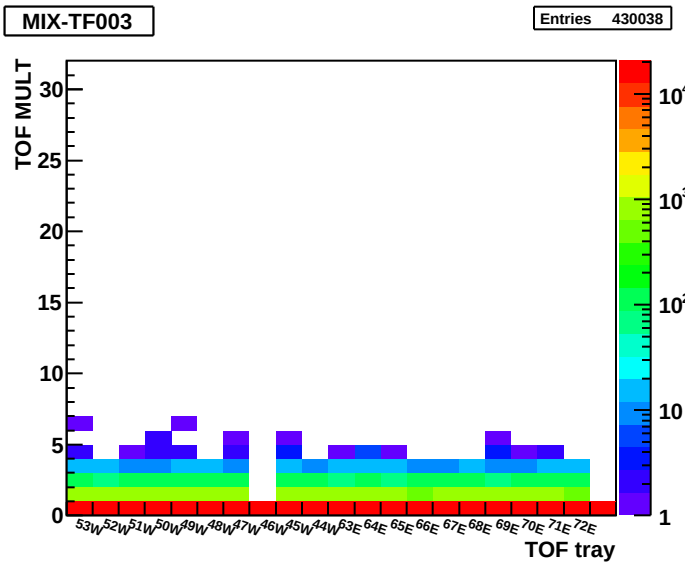

TPC Readout Mask (simulated)
Entries 133107
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

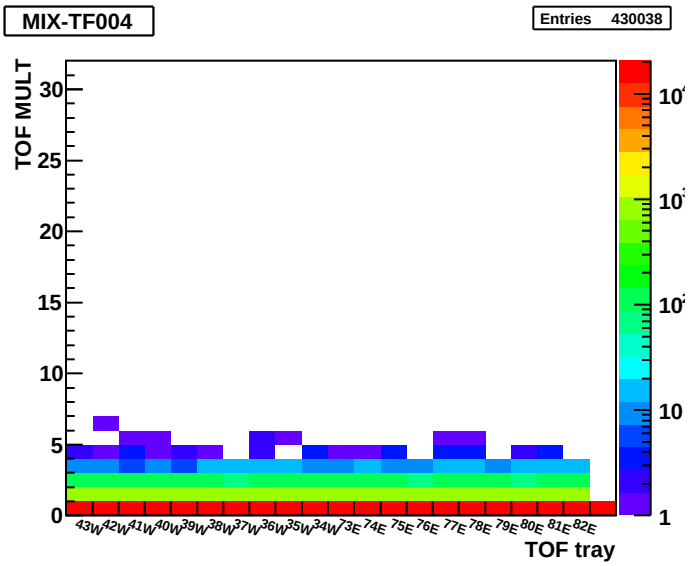

BunchId7Bit (all events)
Entries 10239
10^2
0 20 40 60 80 100 120

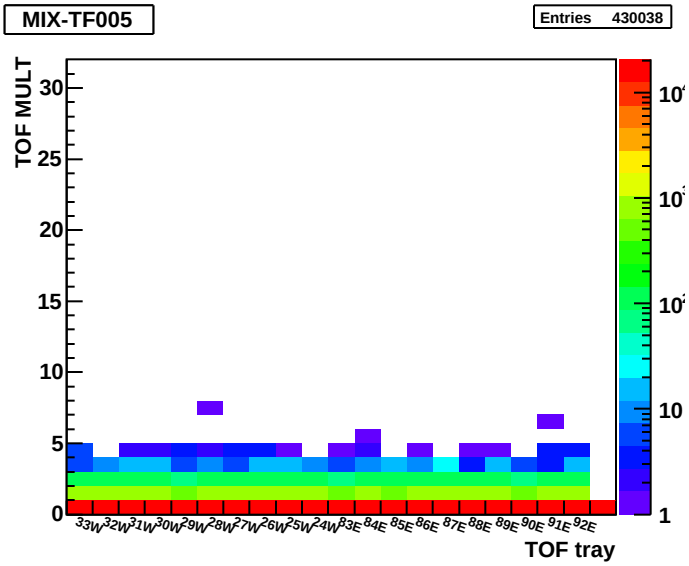

!Yellow-Fill
Entries 10239
10^2
0 20 40 60 80 100 120

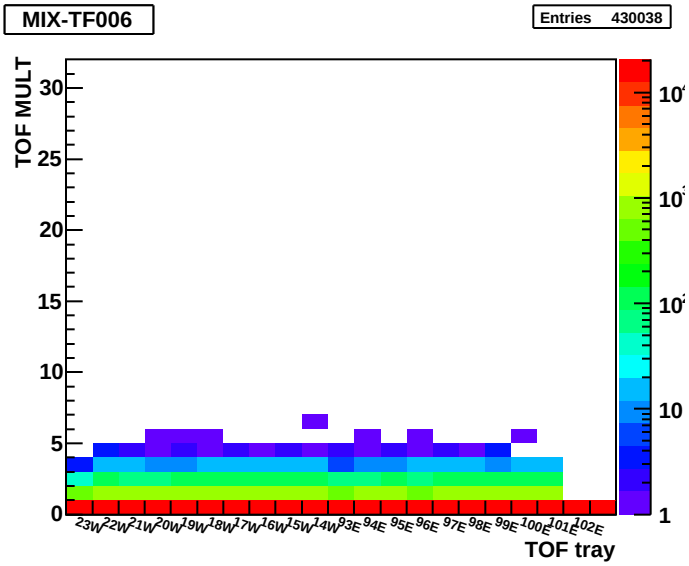

MIX-TF001
Entries 430038
TOF MULT
TOF tray

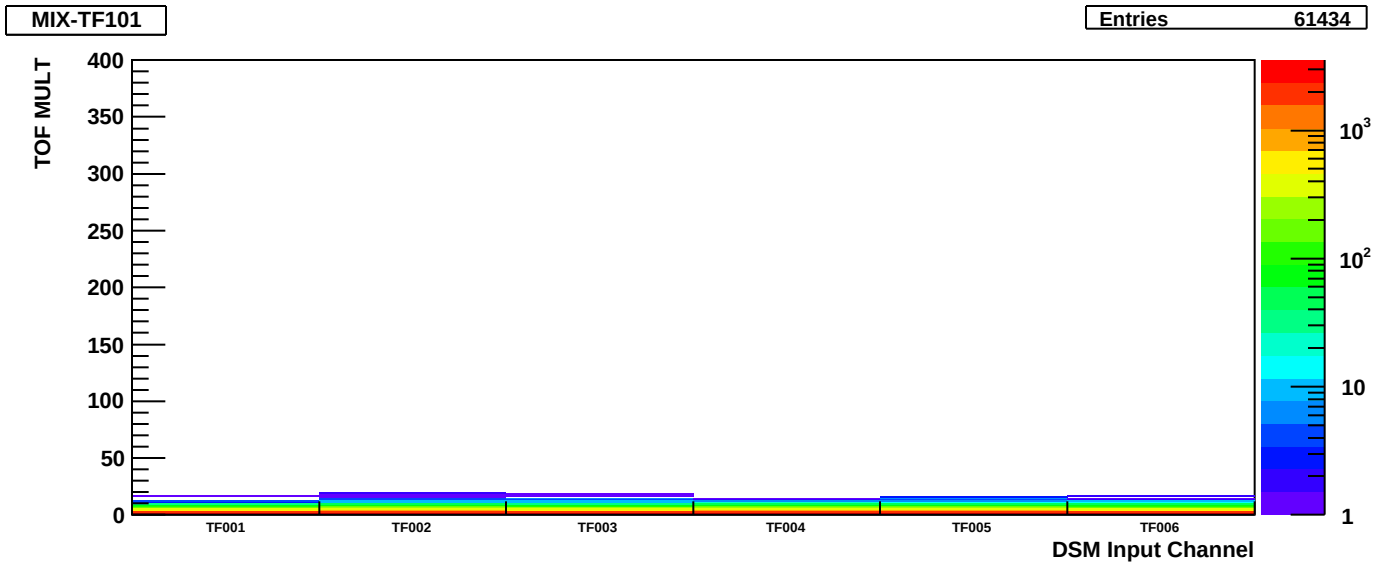

MIX-TF002
Entries 430038
TOF MULT
TOF tray

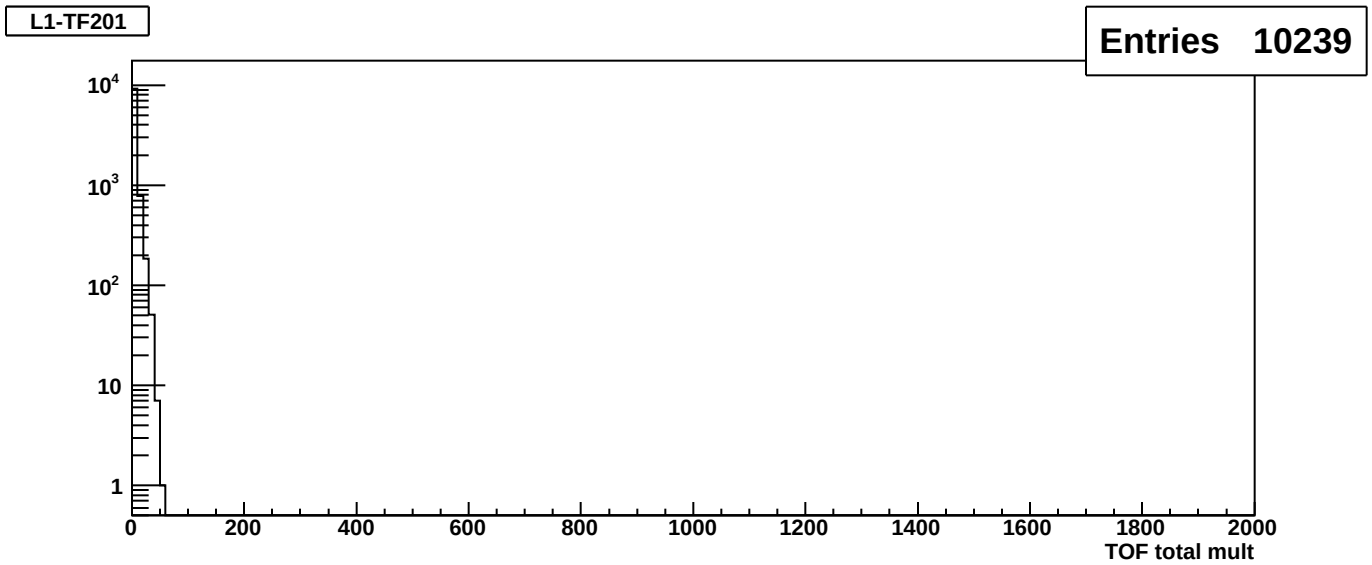

MIX-TF003
Entries 430038
TOF MULT
TOF tray

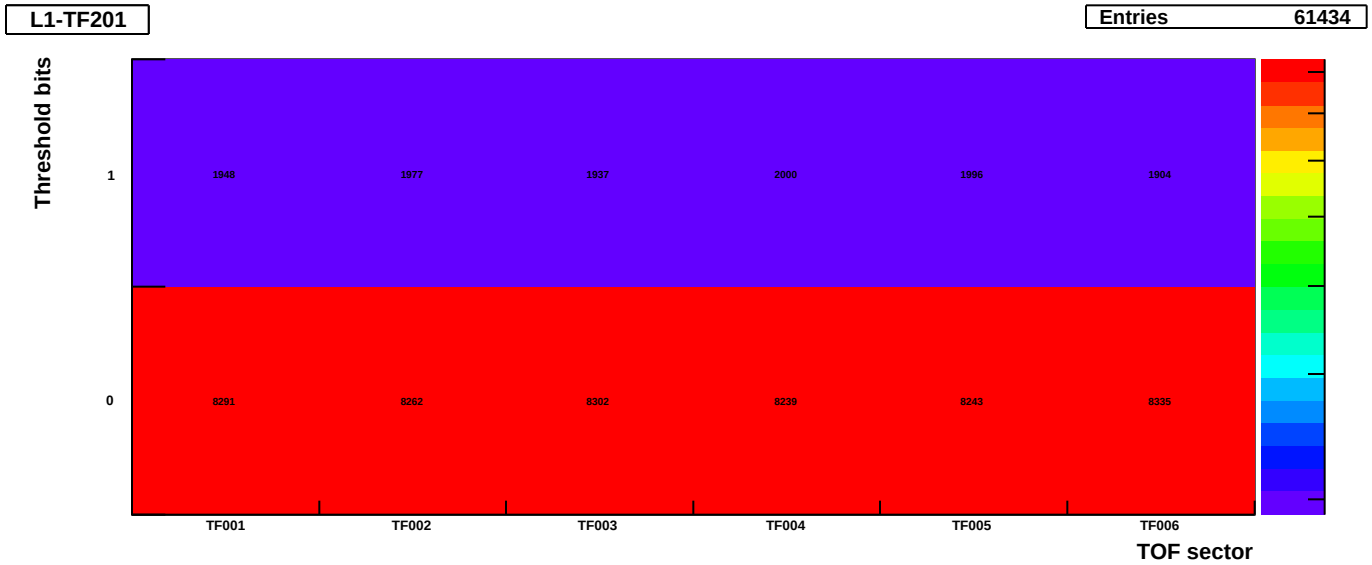

MIX-TF004
Entries 430038
TOF MULT
TOF tray

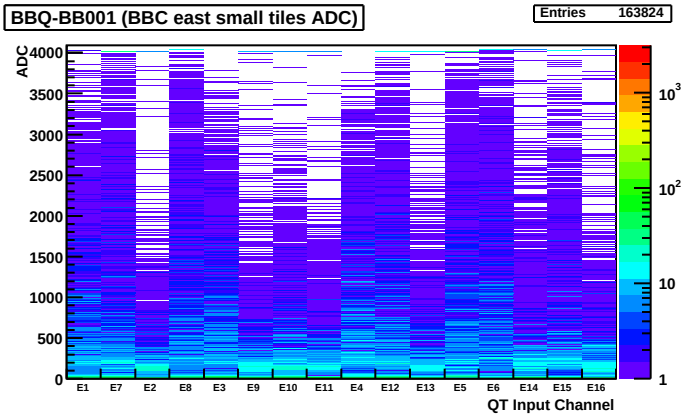

MIX-TF005
Entries 430038
TOF MULT
TOF tray

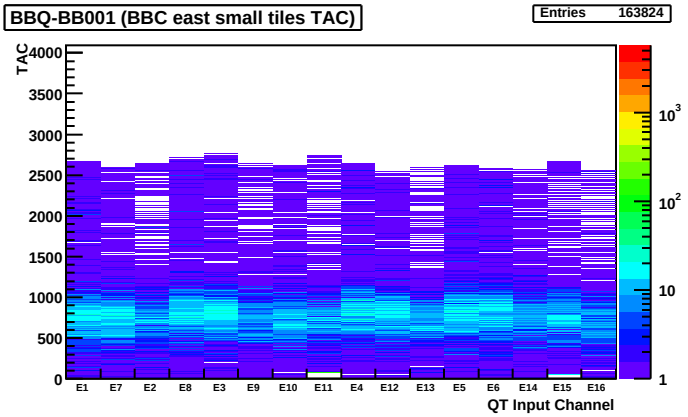

MIX-TF006
Entries 430038
TOF MULT
TOF tray

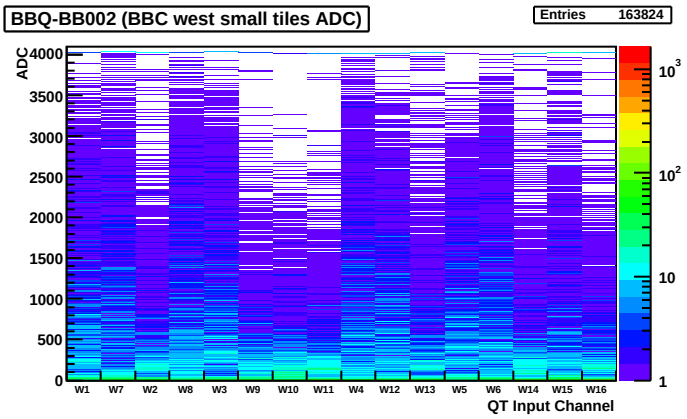

MIX-TF101
Entries 61434
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

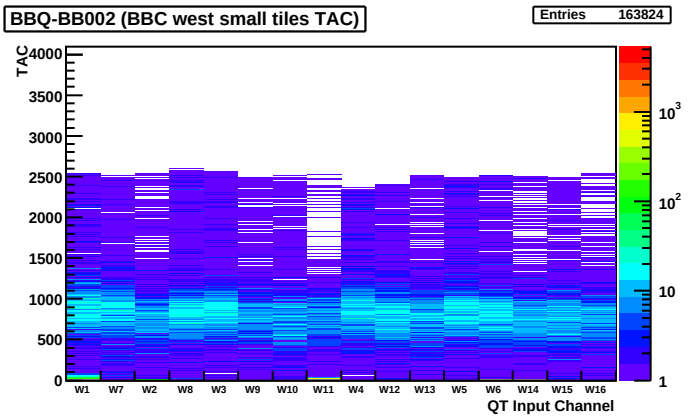

L1-TF201
Entries 10239
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

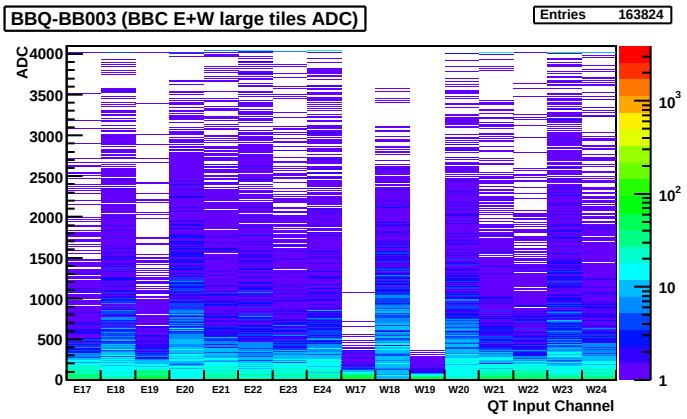

L1-TF201
Entries 61434
Threshold bits
1
0
1948
1977
1937
2000
1996
1904
8291
8262
8302
8239
8243
8335
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

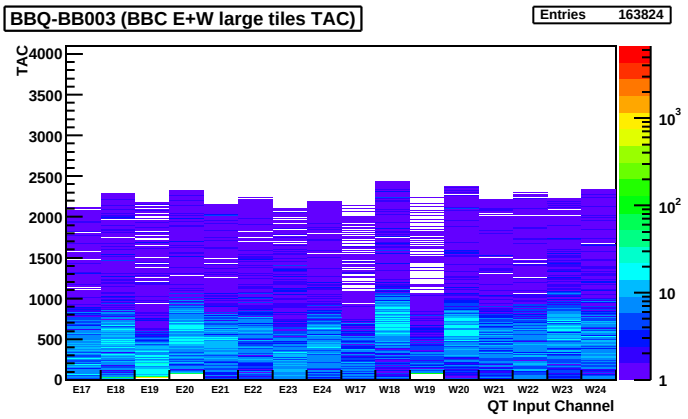

BBQ-BB001 (BBC east small tiles ADC)
Entries 163824
ADC
QT Input Channel

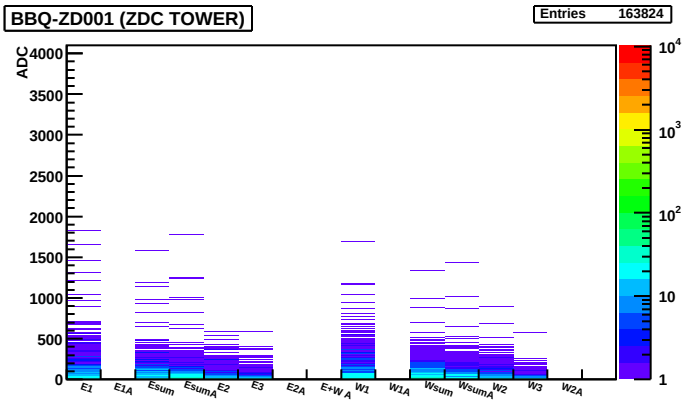

BBQ-BB001 (BBC east small tiles TAC)
Entries 163824
TAC
QT Input Channel

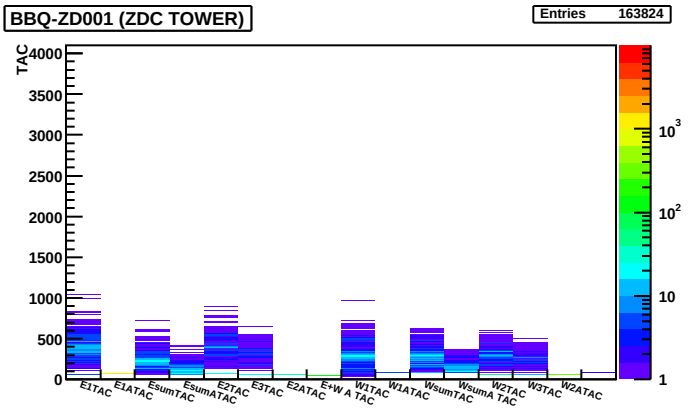

BBQ-BB002 (BBC west small tiles ADC)
Entries 163824
ADC
QT Input Channel

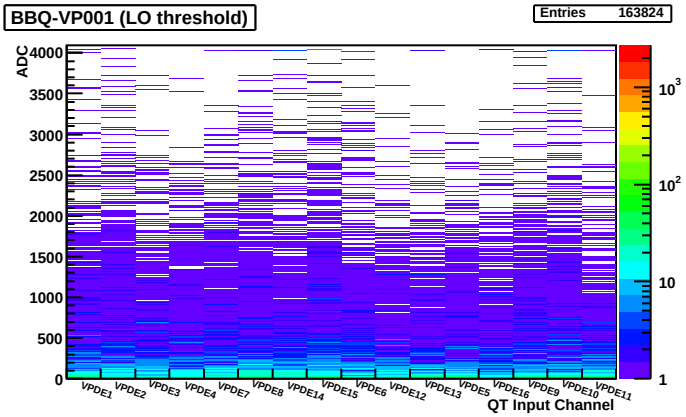

BBQ-BB002 (BBC west small tiles TAC)
Entries 163824
TAC
QT Input Channel

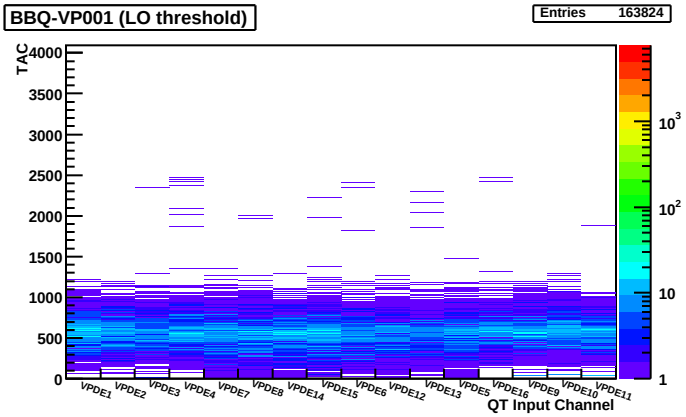

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 163824
ADC
QT Input Channel

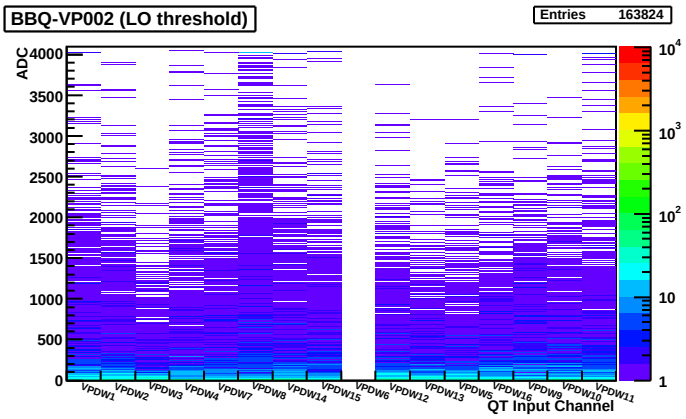

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 163824
TAC
QT Input Channel

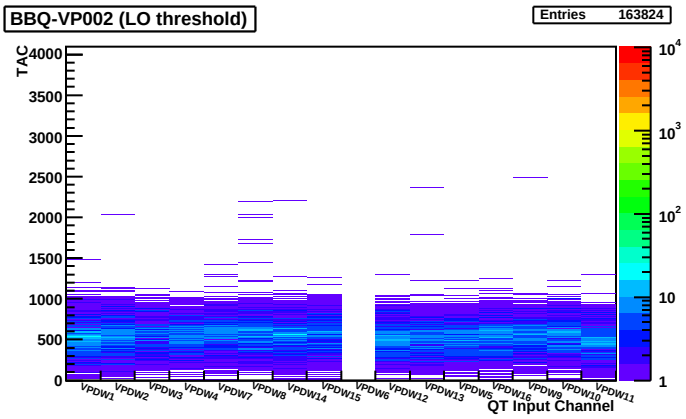

BBQ-ZD001 (ZDC TOWER)
Entries 163824
ADC

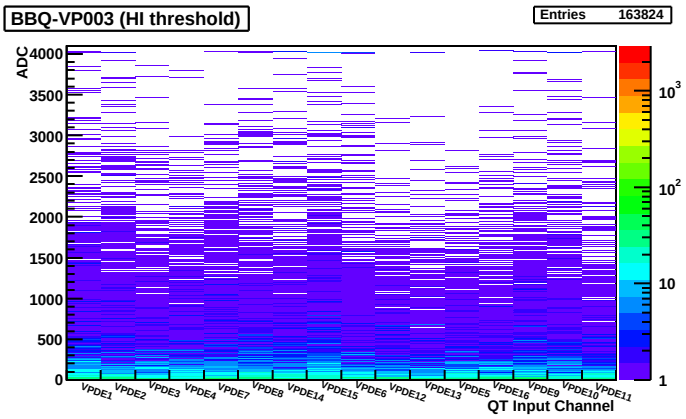

BBQ-ZD001 (ZDC TOWER)
Entries 163824
TAC

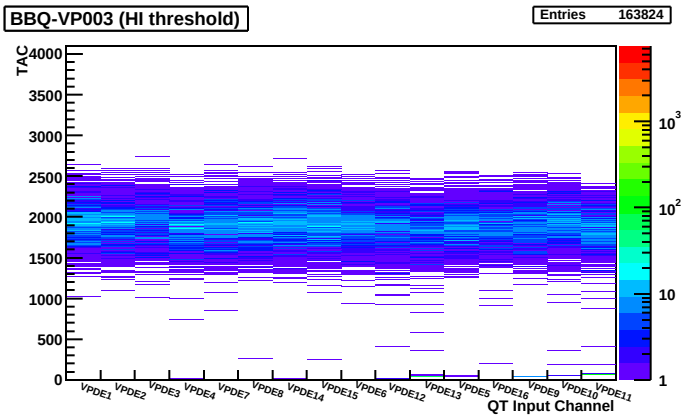

BBQ-VP001 (LO threshold)
Entries 163824
ADC
QT Input Channel

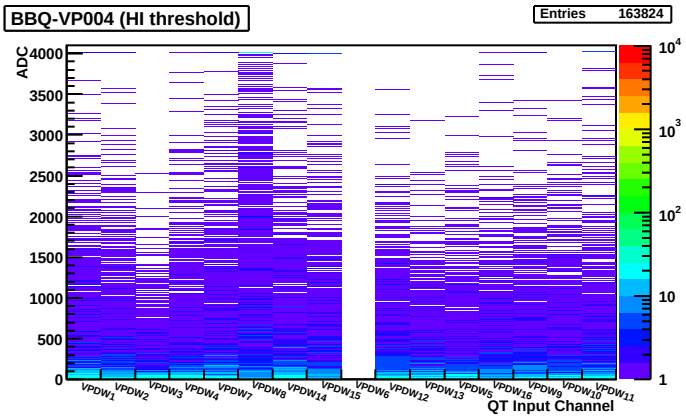

BBQ-VP001 (LO threshold)
Entries 163824
TAC
QT Input Channel

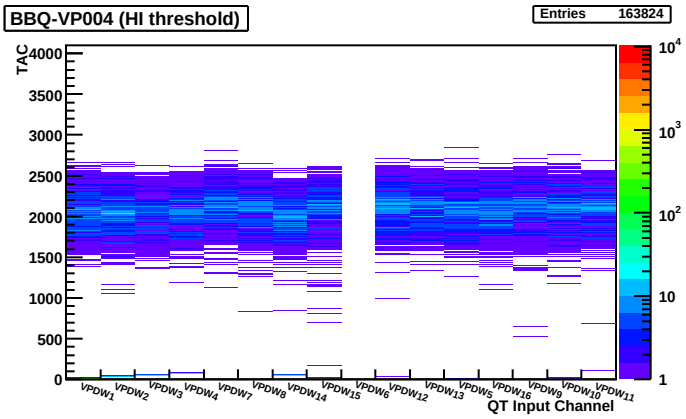

BBQ-VP002 (LO threshold)
Entries 163824
ADC
QT Input Channel

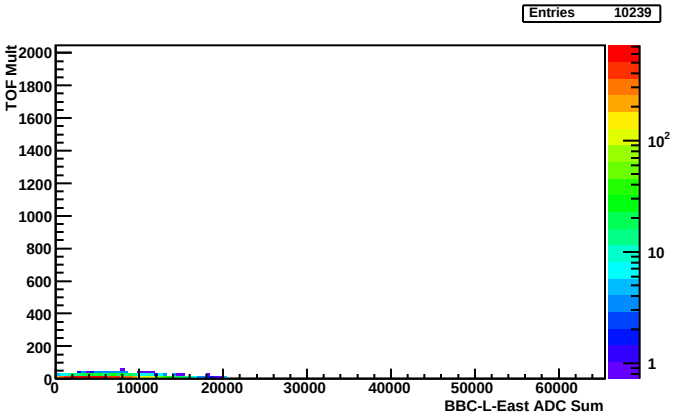

BBQ-VP002 (LO threshold)
Entries 163824
TAC
QT Input Channel

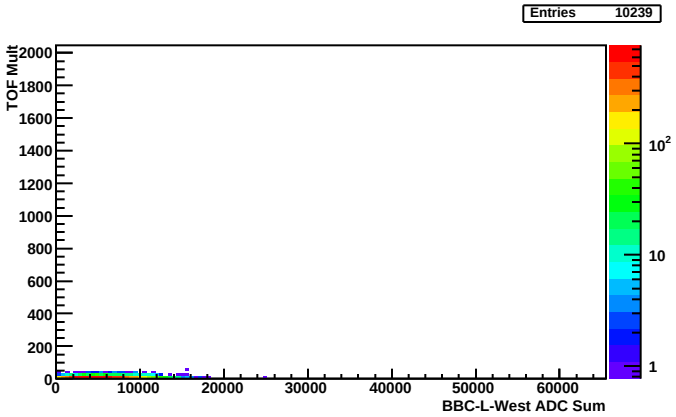

BBQ-VP003 (HI threshold)
Entries 163824
ADC
QT Input Channel

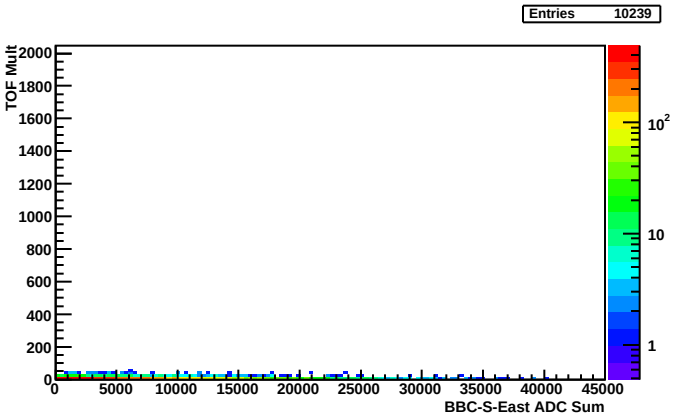

BBQ-VP003 (HI threshold)
Entries 163824
TAC
QT Input Channel

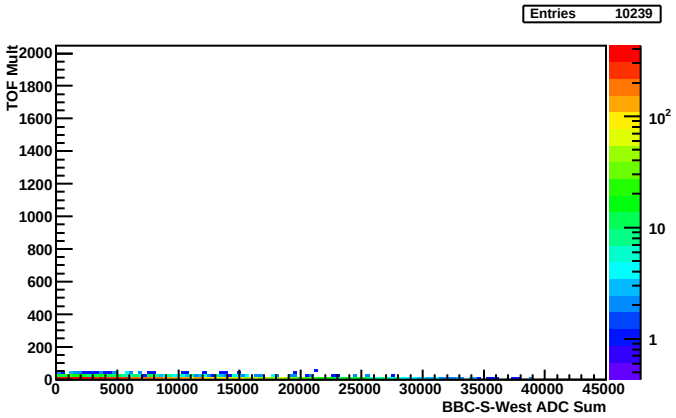

BBQ-VP004 (HI threshold)
Entries 163824
ADC
QT Input Channel

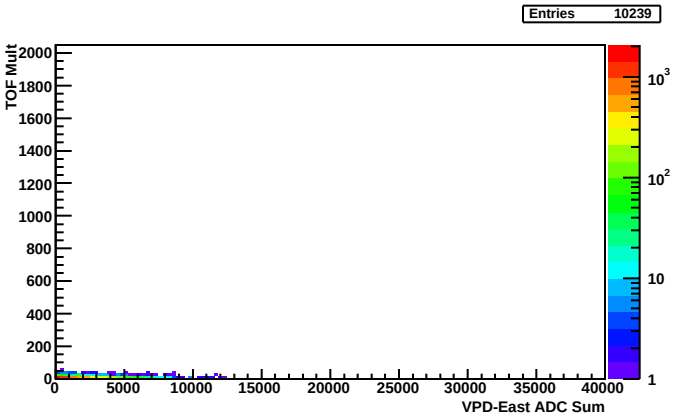

BBQ-VP004 (HI threshold)
Entries 163824
TAC
QT Input Channel

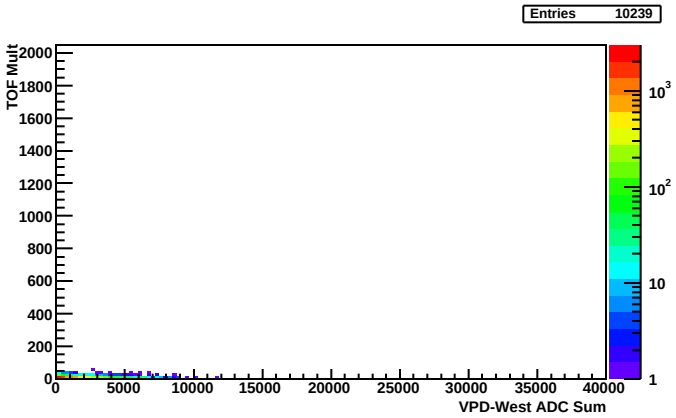

Entries 10239
TOF Mult
BBC-L-East ADC Sum

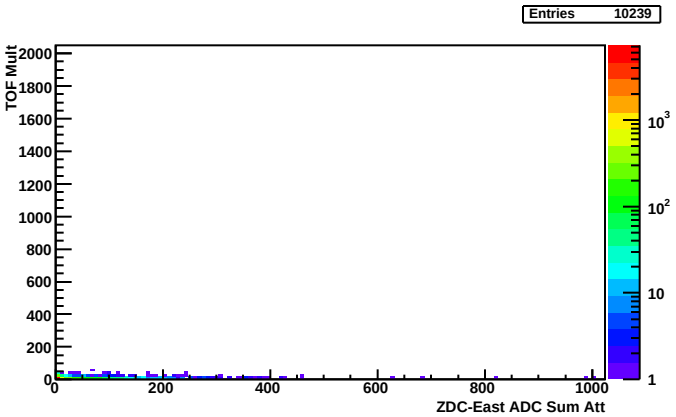

Entries 10239
TOF Mult
BBC-L-West ADC Sum

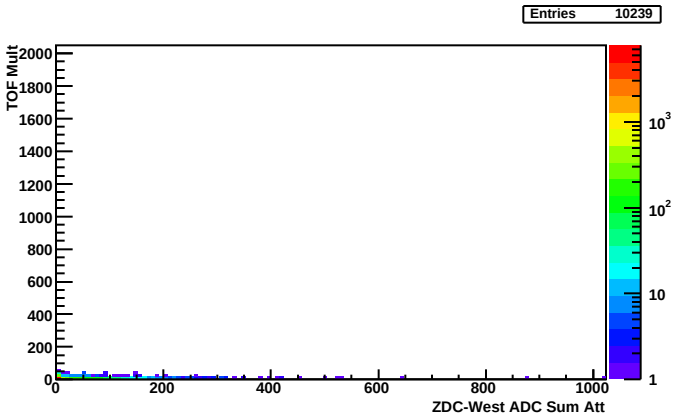

Entries 10239
TOF Mult
BBC-S-East ADC Sum

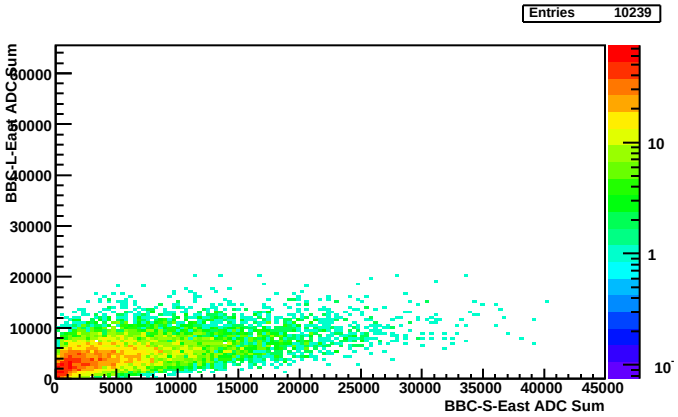

Entries 10239
TOF Mult
BBC-S-West ADC Sum

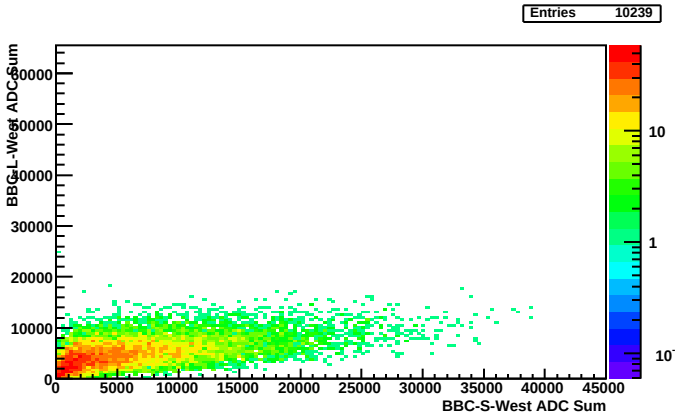

Entries 10239
TOF Mult
VPD-East ADC Sum

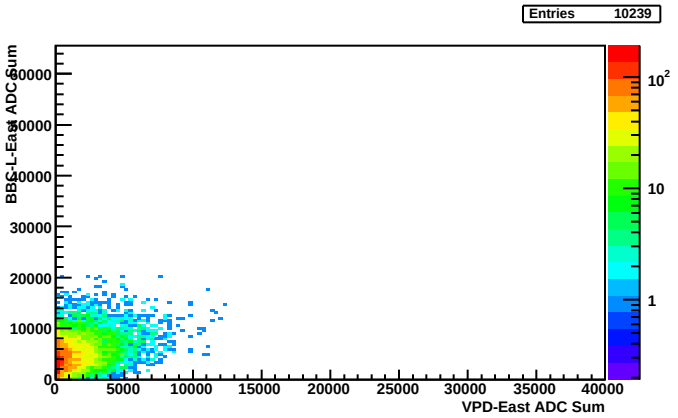

Entries 10239
TOF Mult
VPD-West ADC Sum

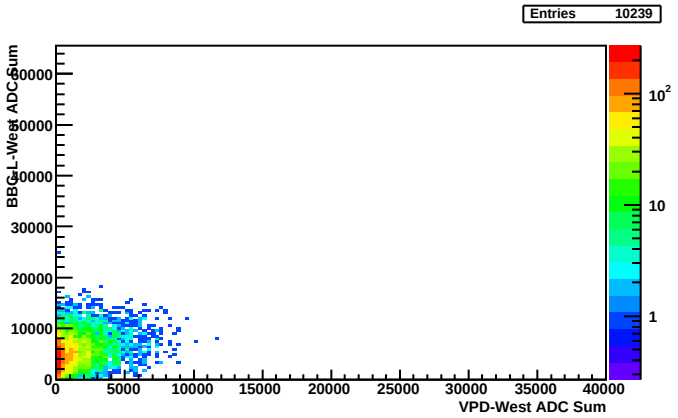

Entries 10239
TOF Mult
ZDC-East ADC Sum Att

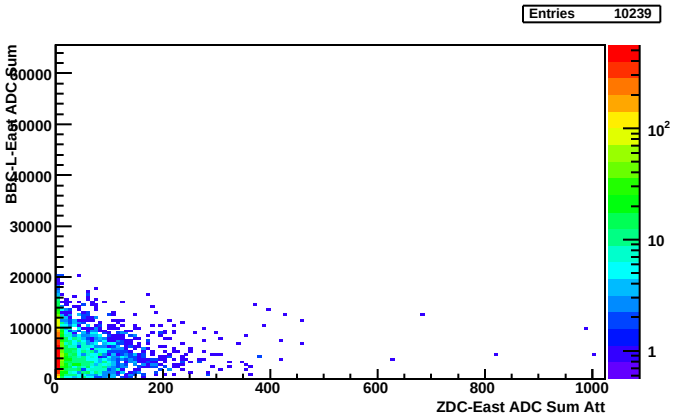

Entries 10239
TOF Mult
ZDC-West ADC Sum Att

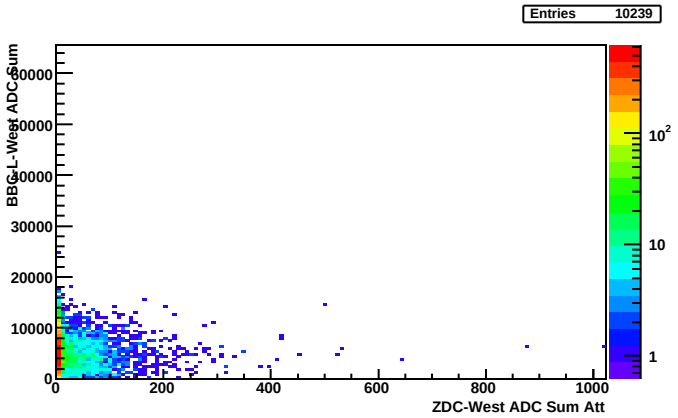

Entries 10239
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 10239
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 10239
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 10239
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 10239
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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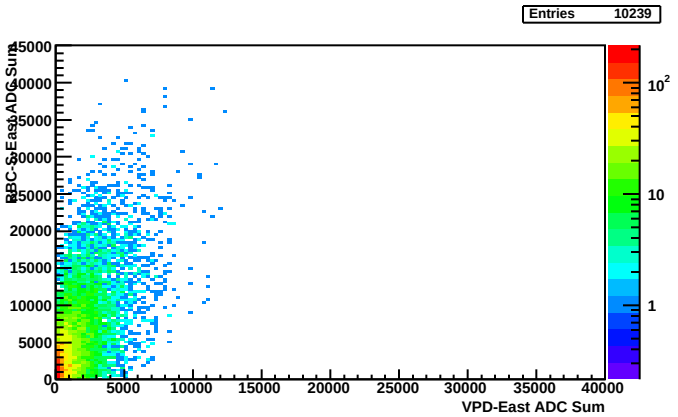
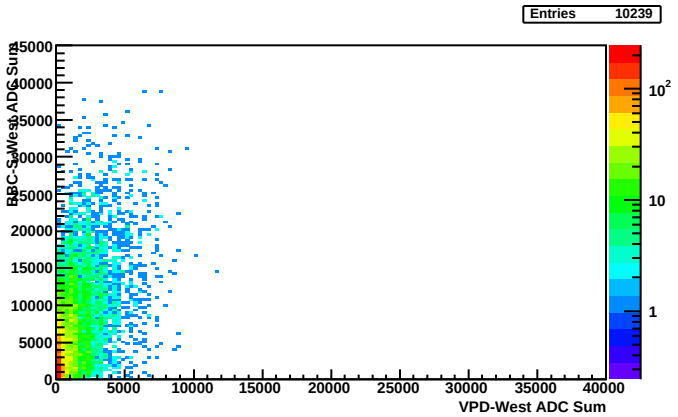
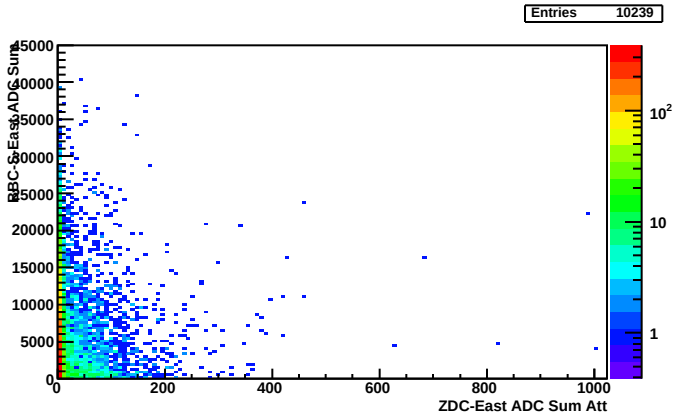
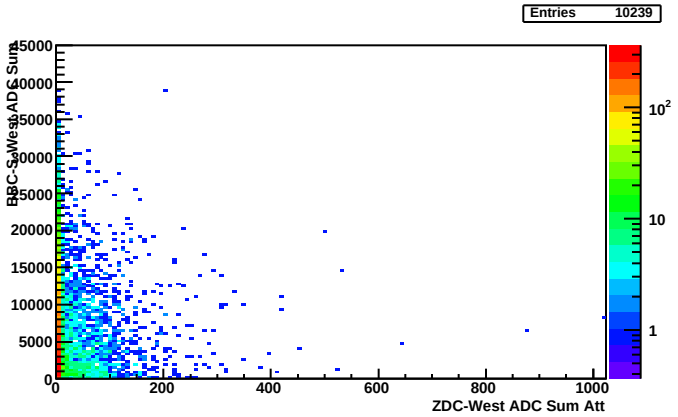
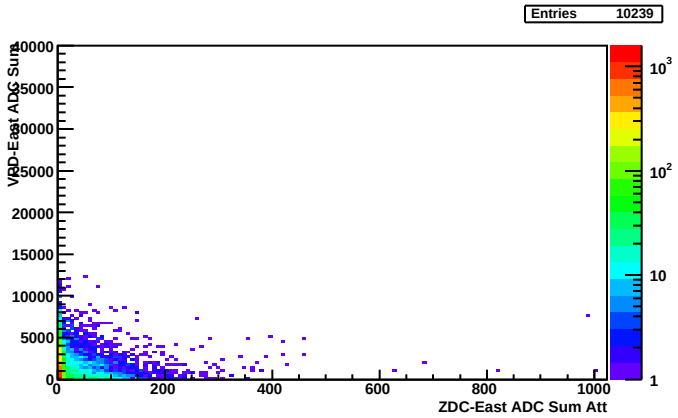
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

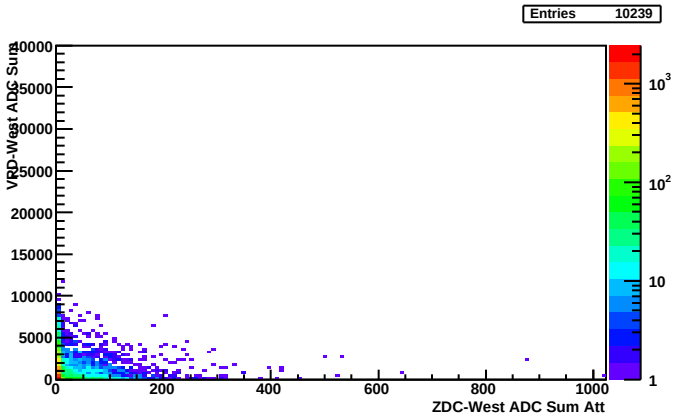

Entries 10239
BBC-S-East ADC Sum
VPD-East ADC Sum

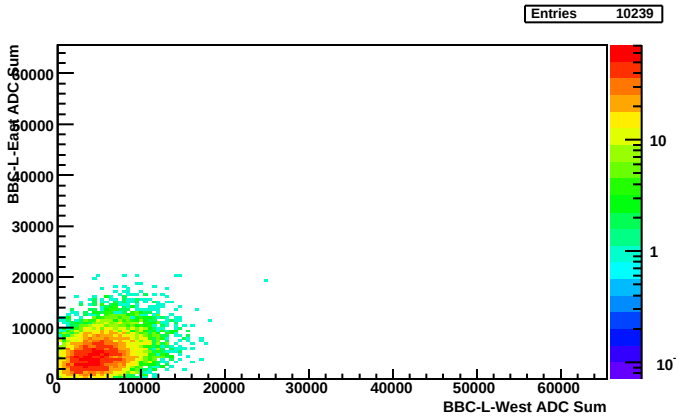

Entries 10239
BBC-S-West ADC Sum
VPD-West ADC Sum

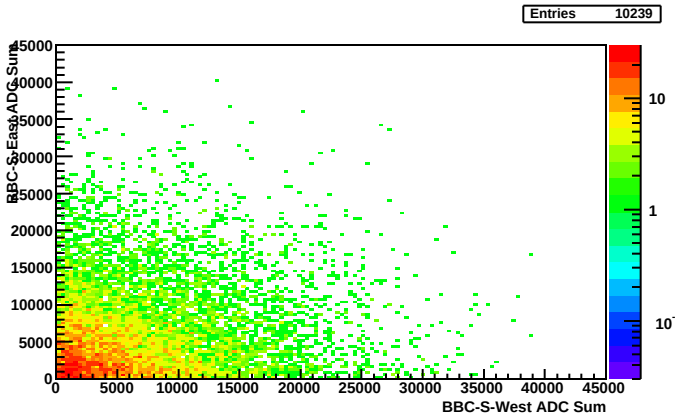

Entries 10239
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

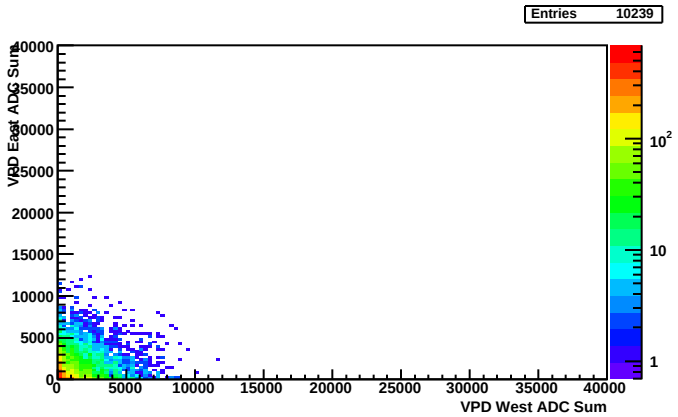

Entries 10239
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

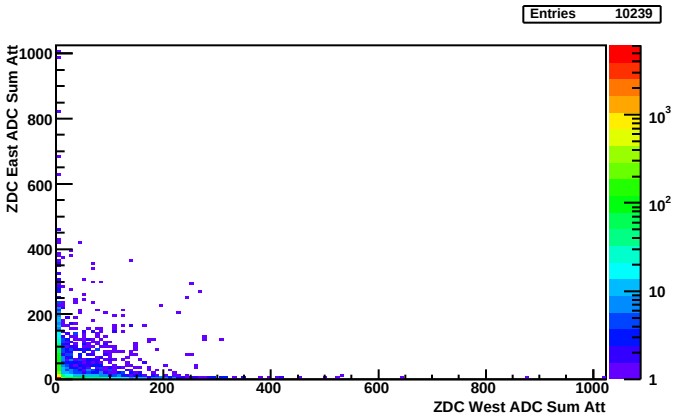

Entries 10239
VPD-East ADC Sum
ZDC-East ADC Sum Att

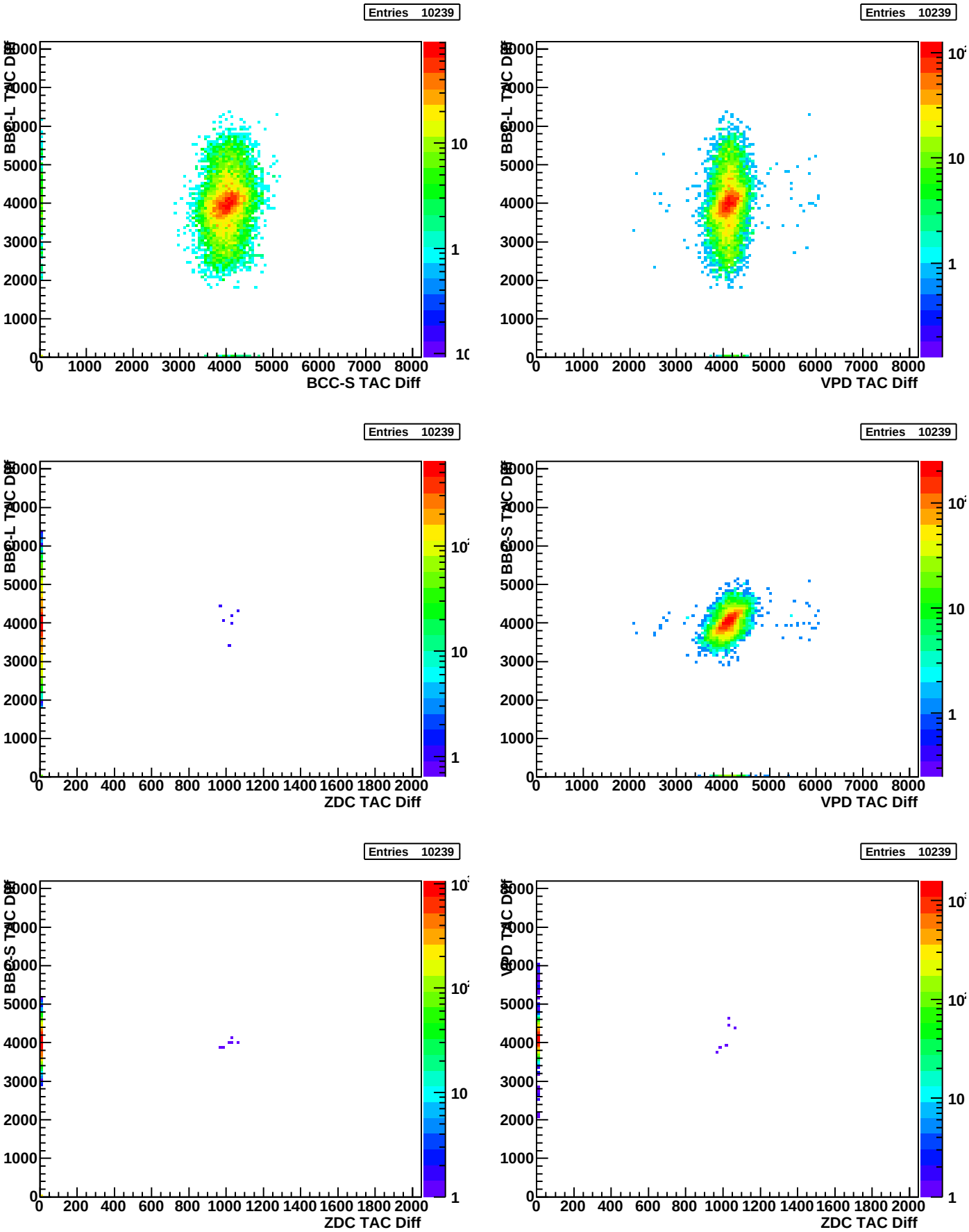

Entries 10239
VPD-West ADC Sum
ZDC-West ADC Sum Att

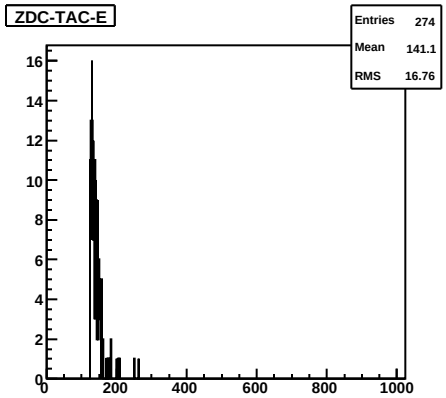

Entries 10239
BBC-L-East ADC Sum
BBC-L-West ADC Sum

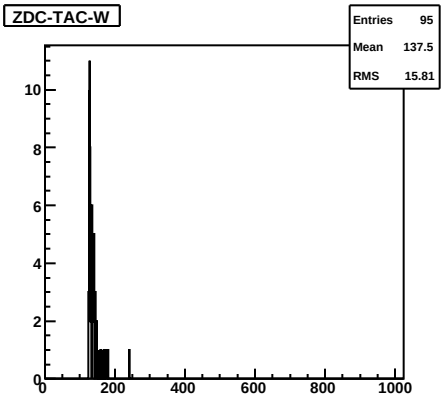

Entries 10239
BBC-S-East ADC Sum
BBC-S-West ADC Sum

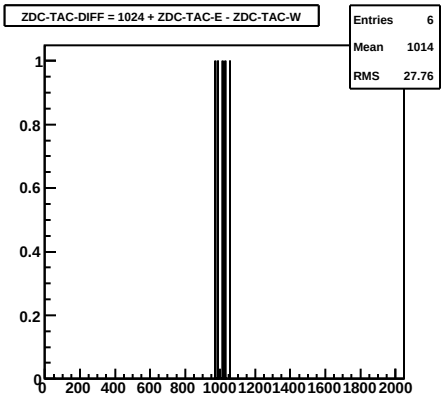

Entries 10239
VPD East ADC Sum
VPD West ADC Sum

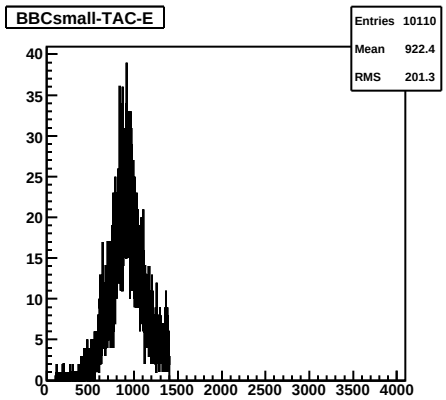

Entries 10239
ZDC East ADC Sum Att
ZDC West ADC Sum Att

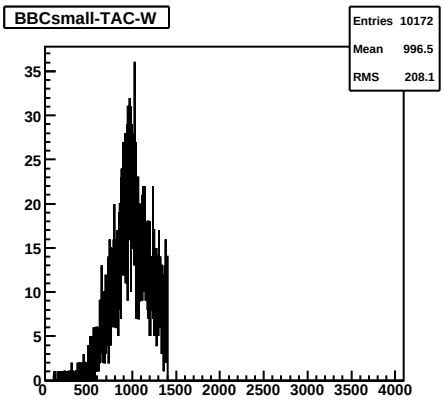

Entries 10239
BBC-L TAC Diff
BCC-S TAC Diff
Entries 10239
BBC-L TAC Diff
VPD TAC Diff
Entries 10239
BBC-L TAC Diff
ZDC TAC Diff
Entries 10239
BBC-S TAC Diff
VPD TAC Diff
Entries 10239
BBC-S TAC Diff
ZDC TAC Diff
Entries 10239
VPD TAC Diff
ZDC TAC Diff

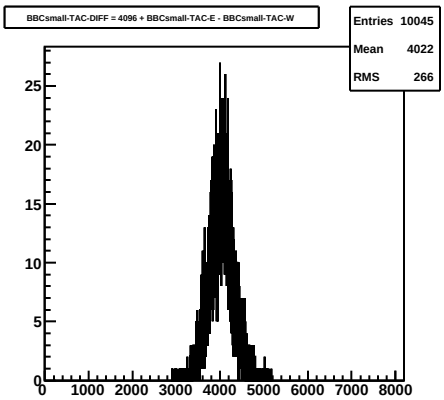

ZDC-TAC-E
Entries 274
Mean 141.1
RMS 16.76

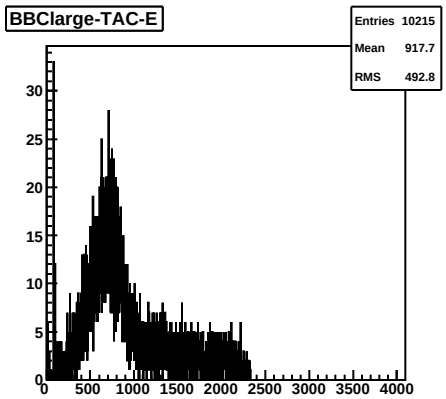

ZDC-TAC-W
Entries 95
Mean 137.5
RMS 15.81

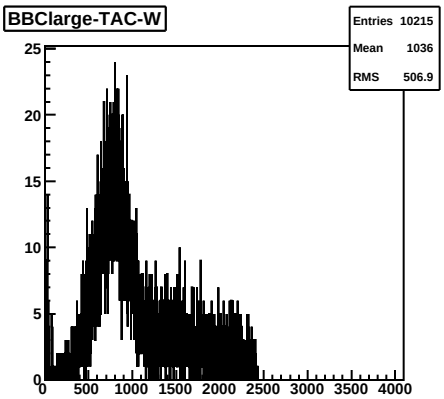

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 6
Mean 1014
RMS 27.76

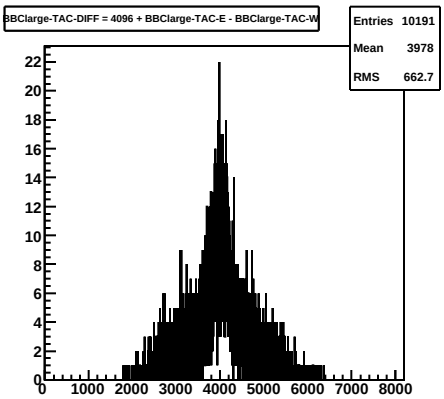

BBCsmall-TAC-E
Entries 10110
Mean 922.4
RMS 201.3

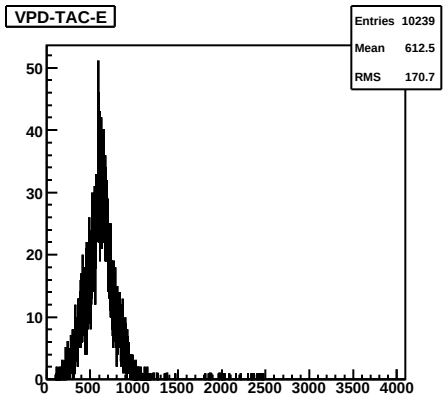

BBCsmall-TAC-W
Entries 10172
Mean 996.5
RMS 208.1

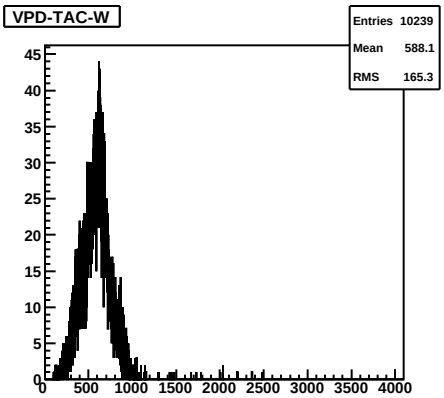

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 10045
Mean 4022
RMS 266

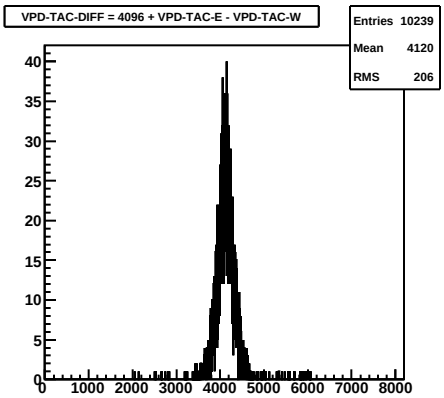

BBClarge-TAC-E
Entries 10215
Mean 917.7
RMS 492.8

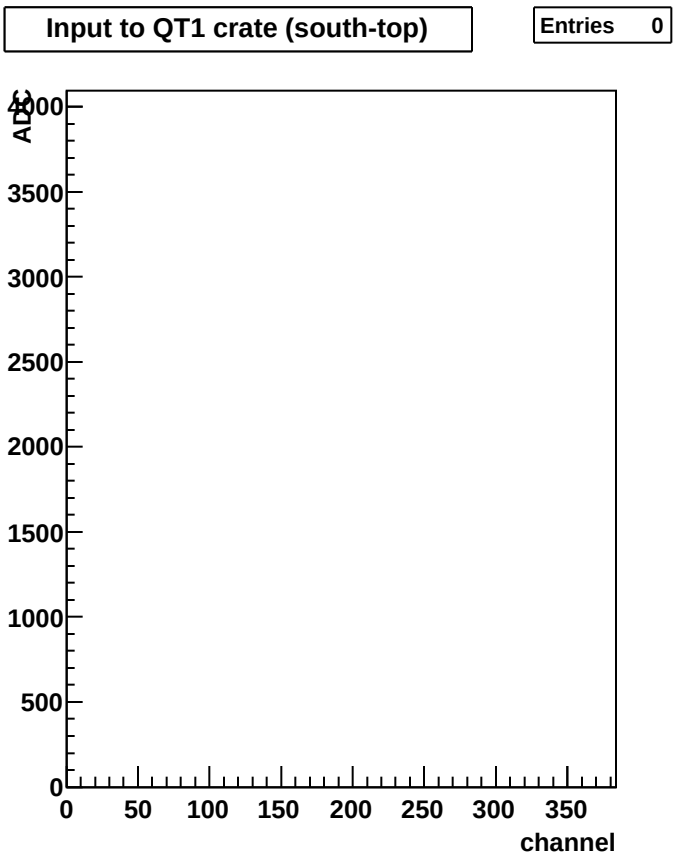

BBClarge-TAC-W
Entries 10215
Mean 1036
RMS 506.9

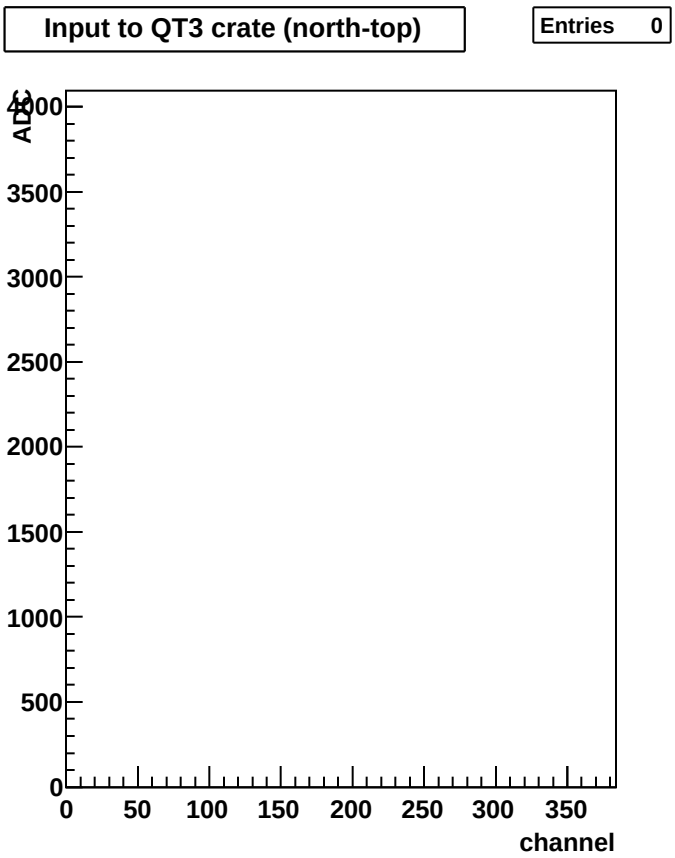

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 10191
Mean 3978
RMS 662.7

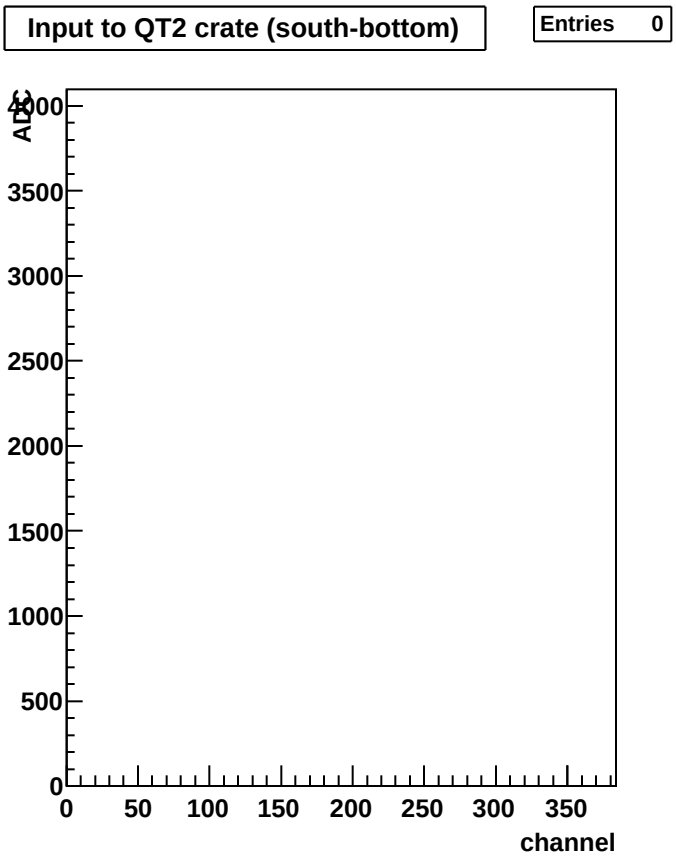

VPD-TAC-E
Entries 10239
Mean 612.5
RMS 170.7

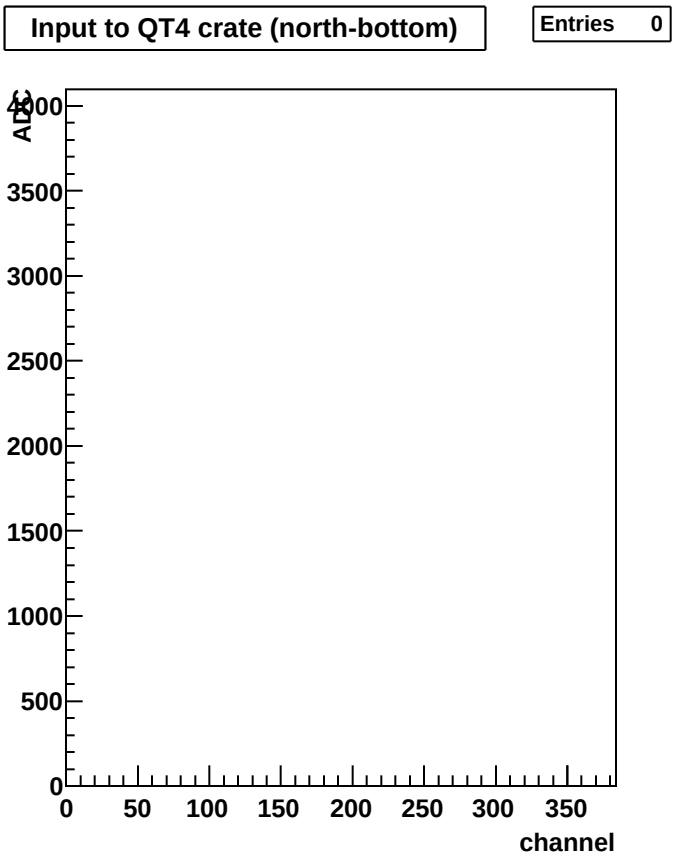

VPD-TAC-W
Entries 10239
Mean 588.1
RMS 165.3

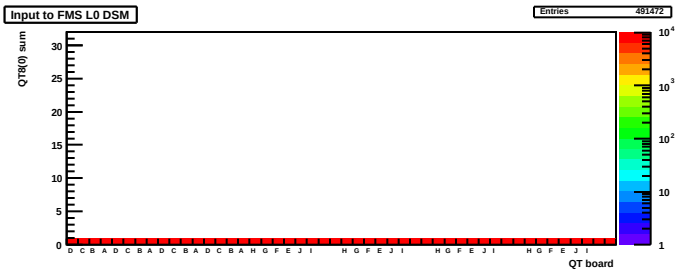

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 10239
Mean 4120
RMS 206

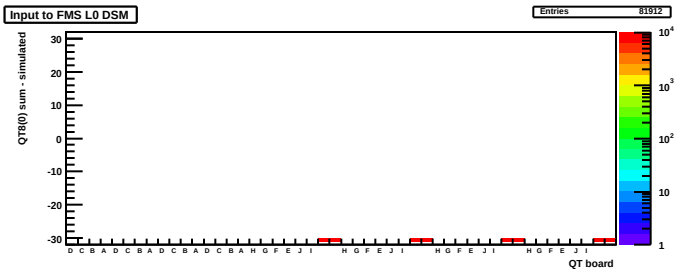

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

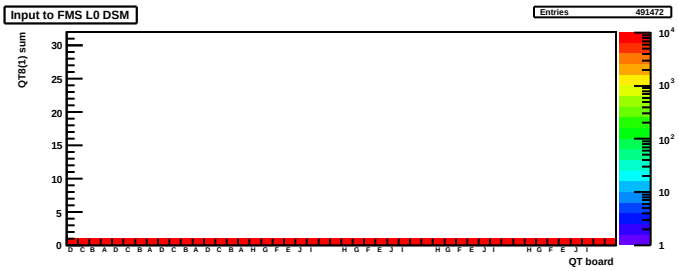

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

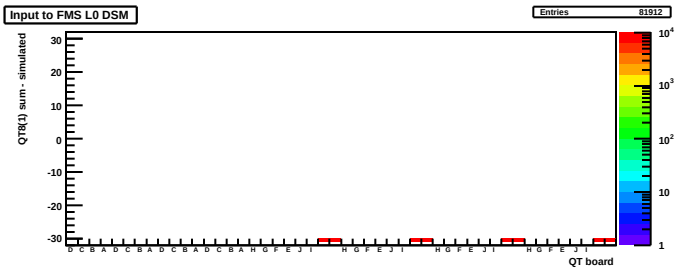

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

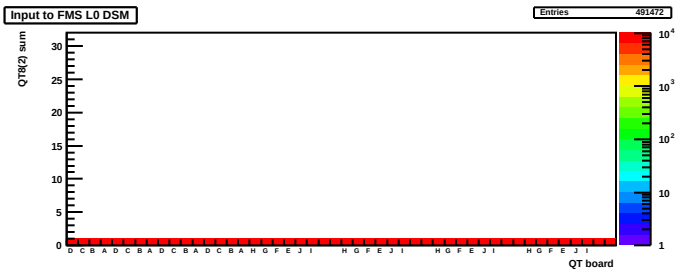

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

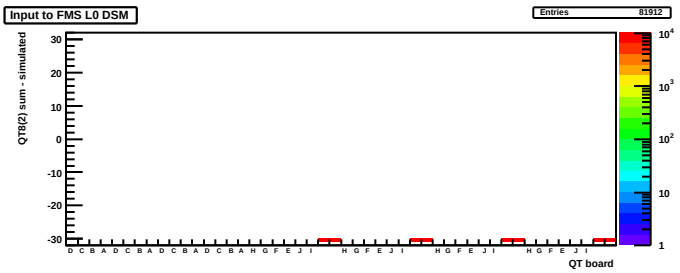

Input to FMS L0 DSM
Entries 491472
QT8(0) sum
QT board

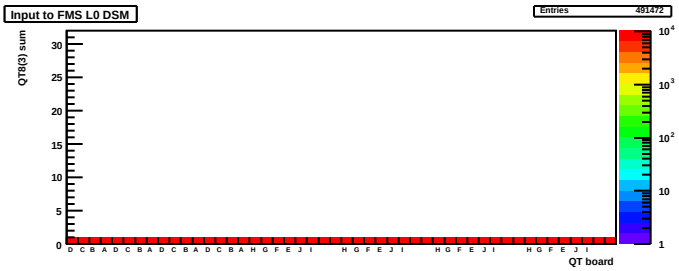

Input to FMS L0 DSM
Entries 81912
QT8(0) sum - simulated
QT board

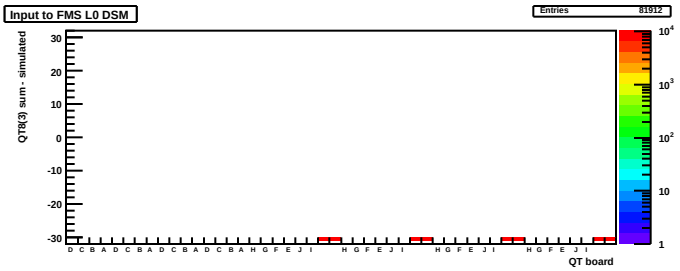

Input to FMS L0 DSM
Entries 491472
QT8(1) sum
QT board

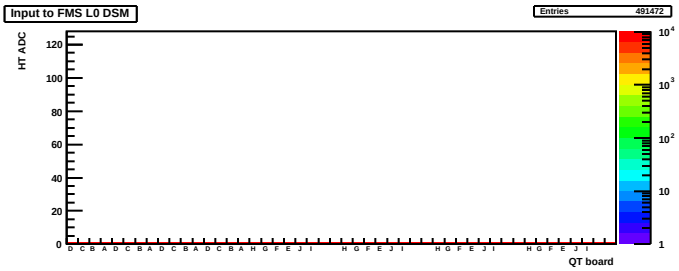

Input to FMS L0 DSM
Entries 81912
QT8(1) sum - simulated
QT board

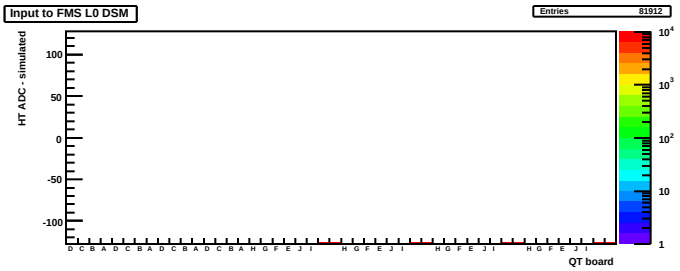

Input to FMS L0 DSM
Entries 491472
QT8(2) sum
QT board

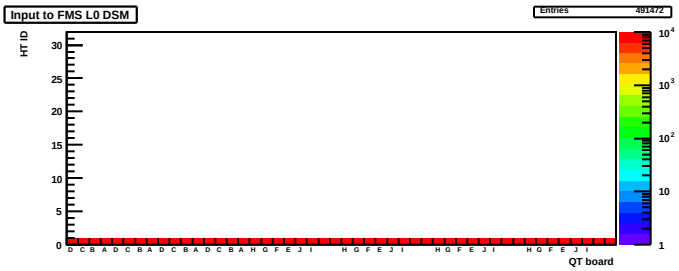

Input to FMS L0 DSM
Entries 81912
QT8(2) sum - simulated
QT board

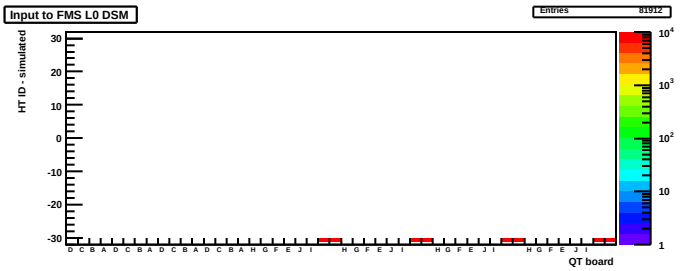

Input to FMS L0 DSM
Entries 491472
QT8(3) sum
QT board

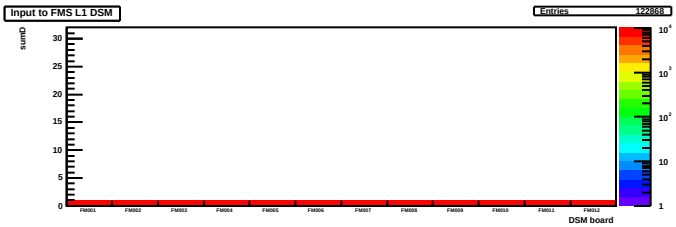

Input to FMS L0 DSM
Entries 81912
QT8(3) sum - simulated
QT board

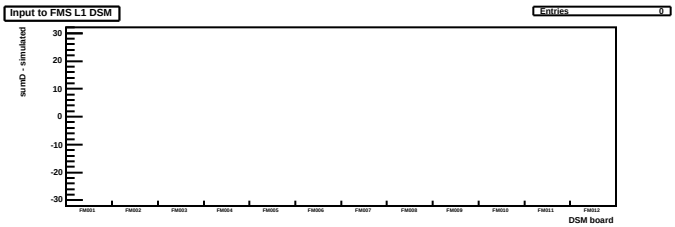

Input to FMS L0 DSM
Entries 491472
HT ADC
QT board

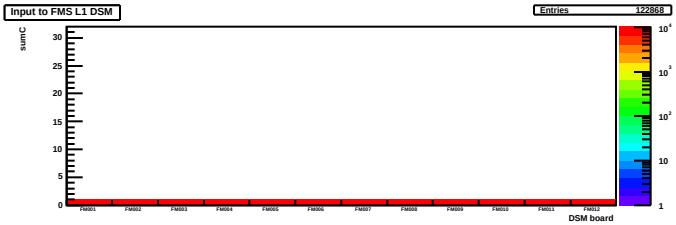

Input to FMS L0 DSM
Entries 81912
HT ADC - simulated
QT board

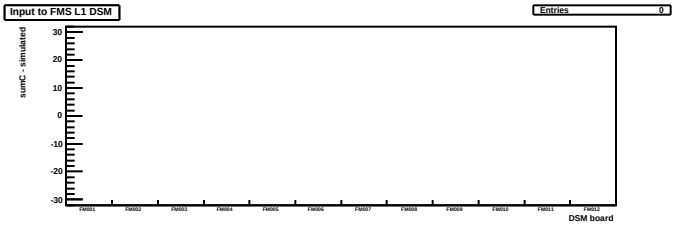

Input to FMS L0 DSM
Entries 491472
HT ID
QT board

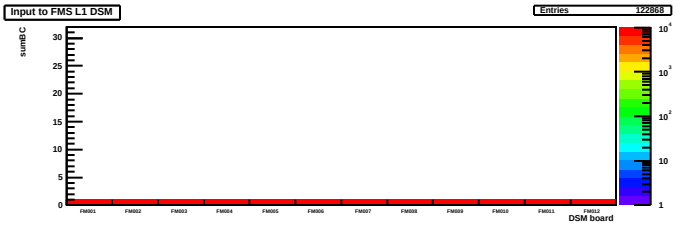

Input to FMS L0 DSM
Entries 81912
HT ID - simulated
QT board

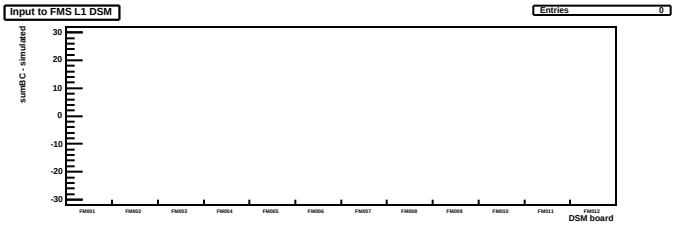

Input to FMS L1 DSM
Entries 122868
sumD
DSM board

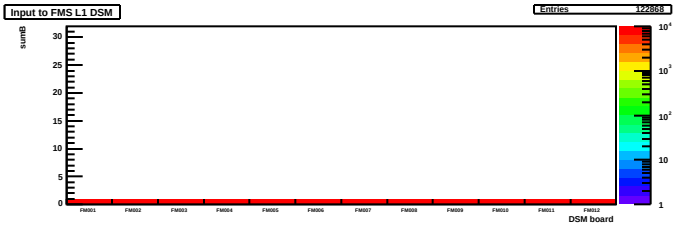

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

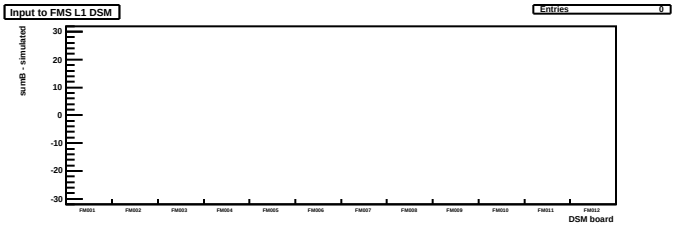

Input to FMS L1 DSM
Entries 122868
sumC
DSM board

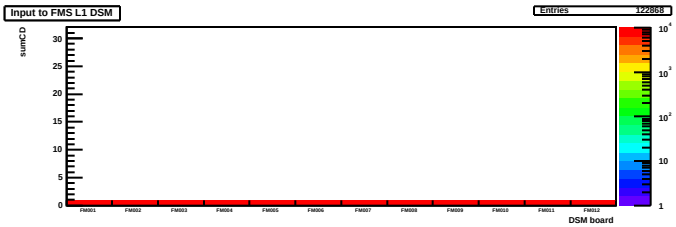

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

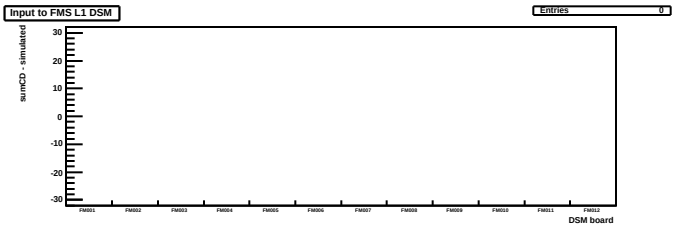

Input to FMS L1 DSM
Entries 122868
sumBC
DSM board

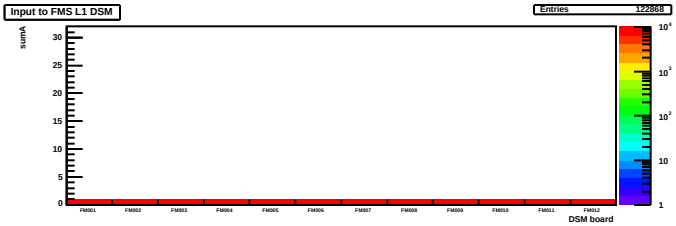

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

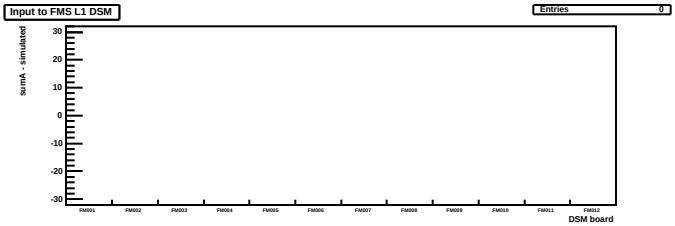

Input to FMS L1 DSM
Entries 122868
sumB
DSM board

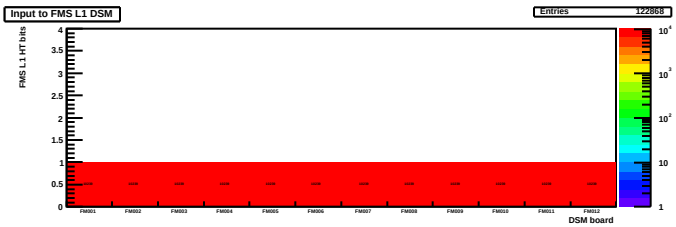

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

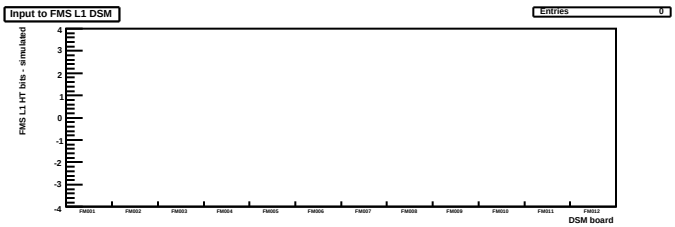

Input to FMS L1 DSM
Entries 122868
sumCD
DSM board

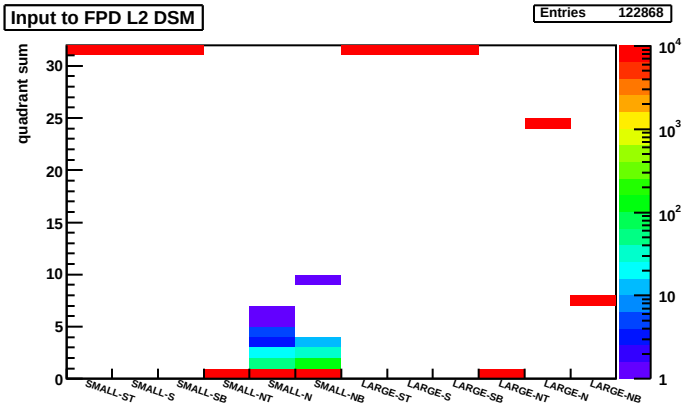

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

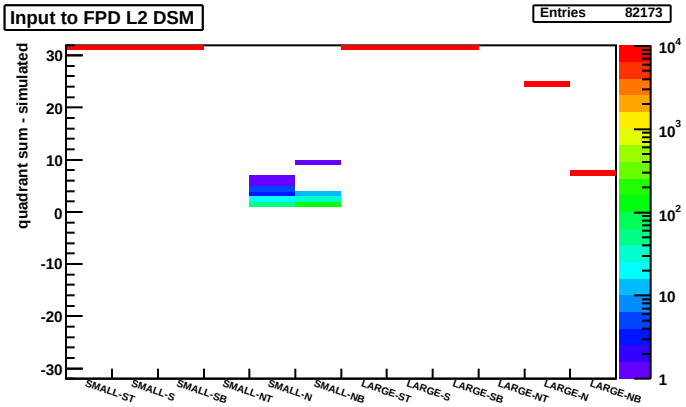

Input to FMS L1 DSM
Entries 122868
sumA
DSM board

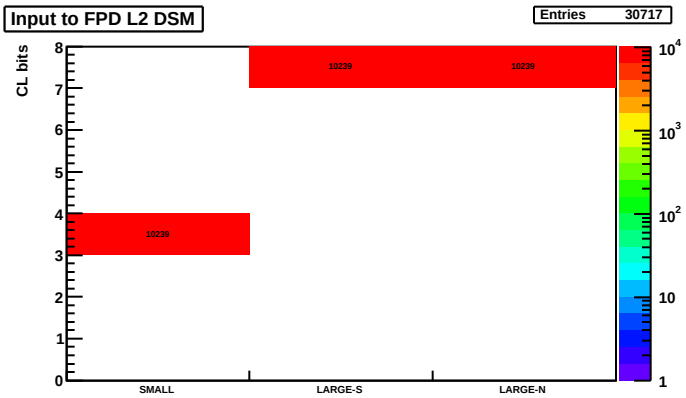

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

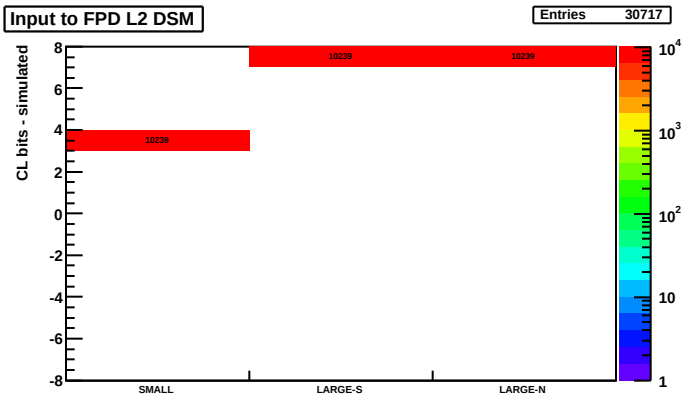

Input to FMS L1 DSM
Entries 122868
FMS L1 HT bits
DSM board

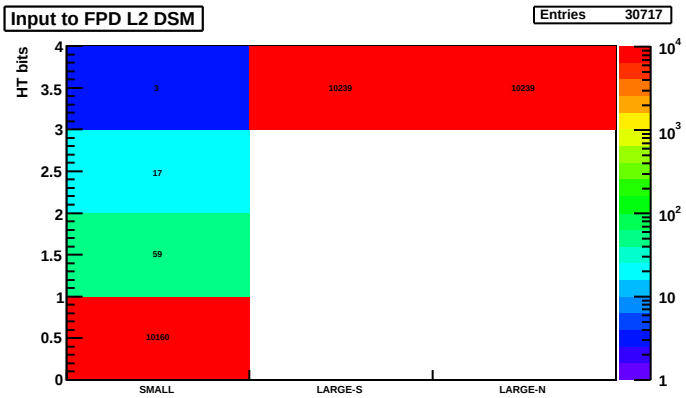

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

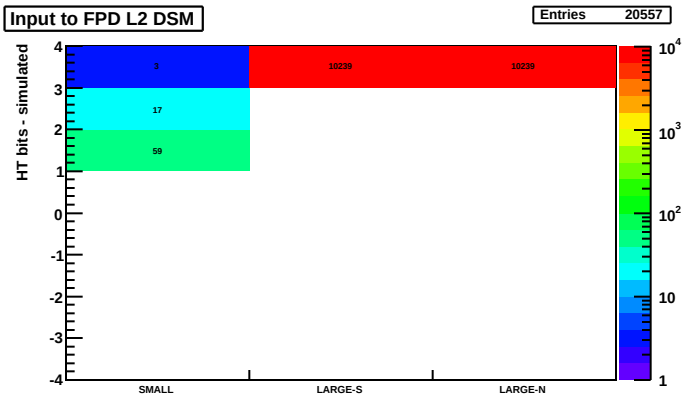

Input to FPD L2 DSM
Entries 122868
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

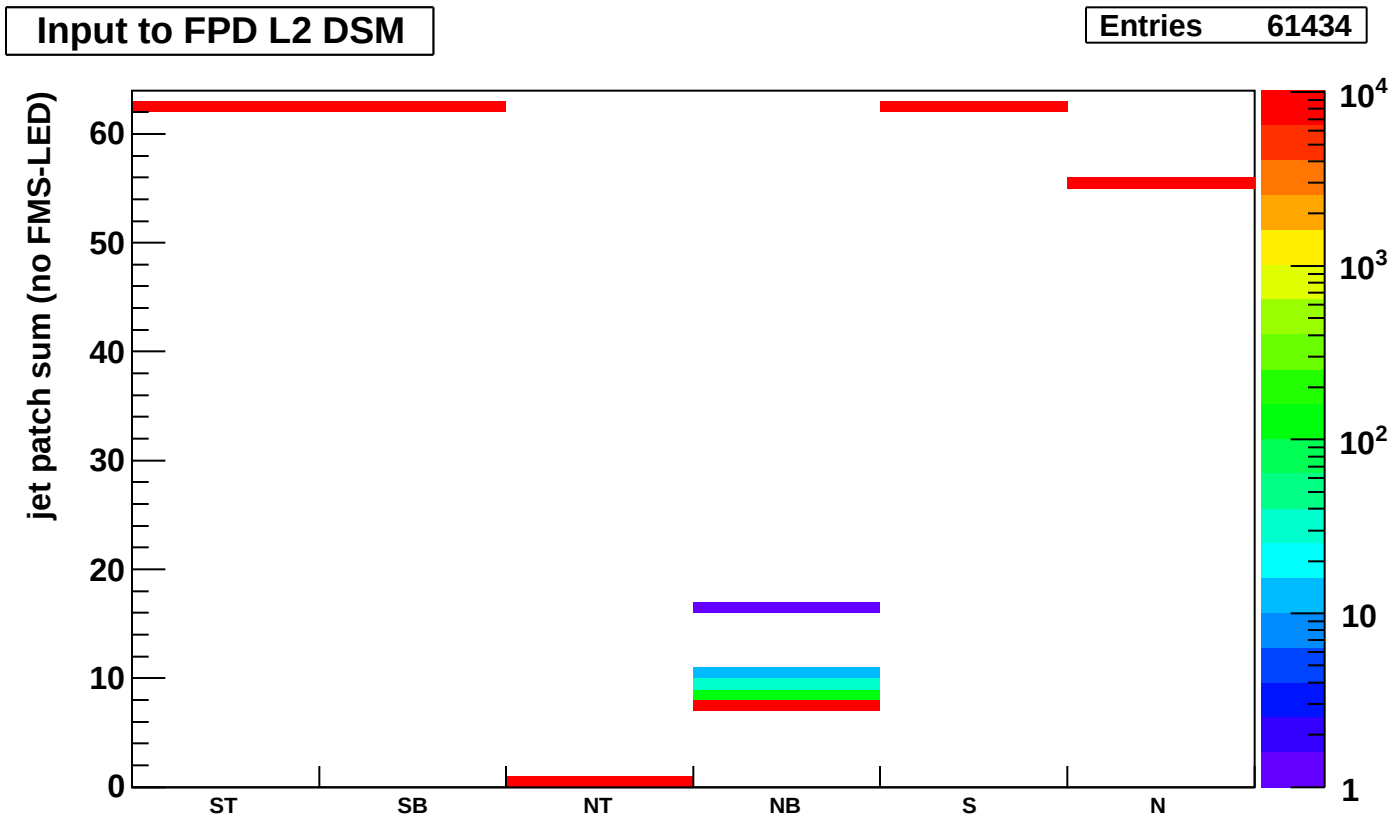

Input to FPD L2 DSM
Entries 82173
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

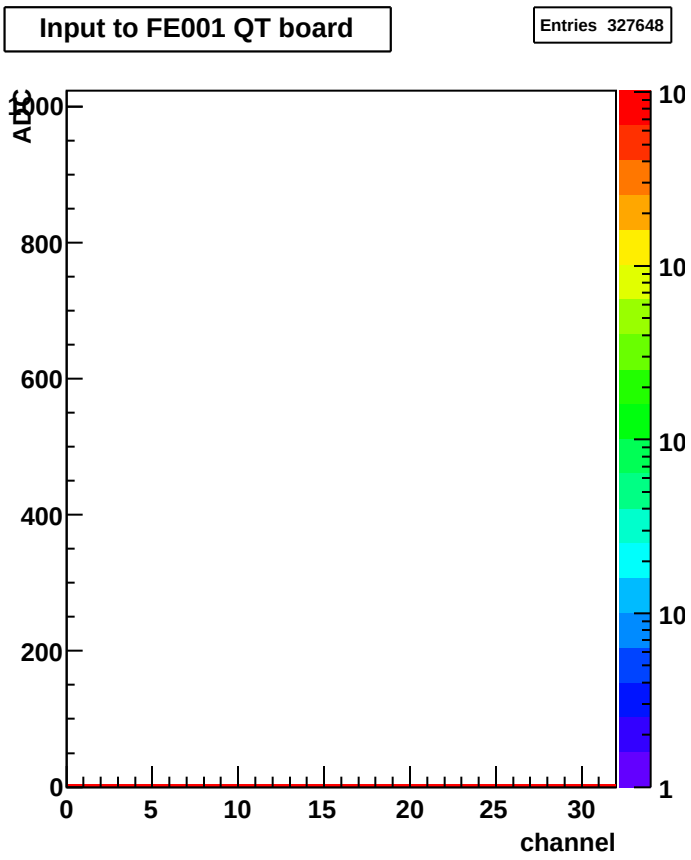

Input to FPD L2 DSM
Entries 30717
CL bits
10239
10239
10239
SMALL
LARGE-S
LARGE-N

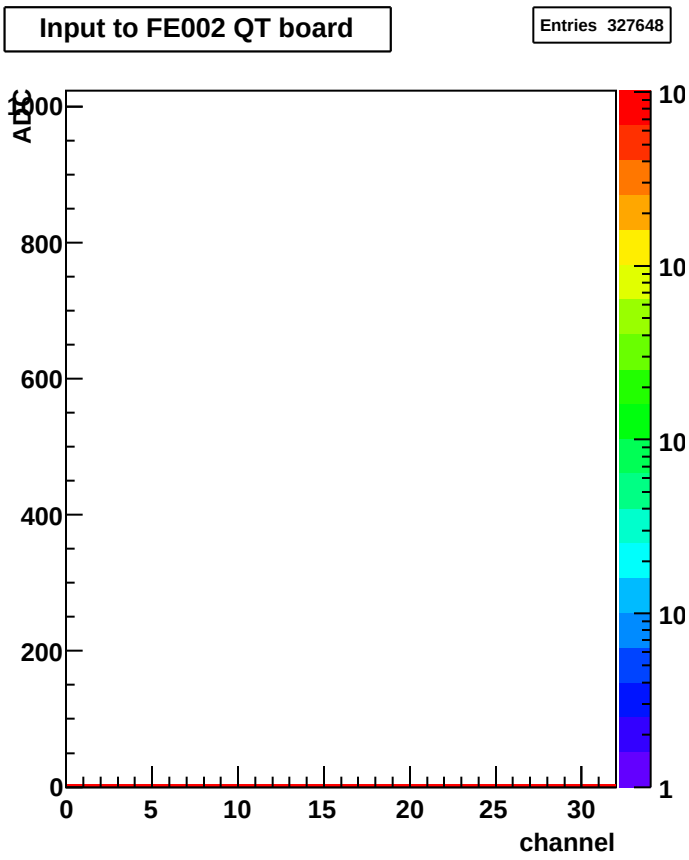

Input to FPD L2 DSM
Entries 30717
CL bits - simulated
10239
10239
10239
SMALL
LARGE-S
LARGE-N

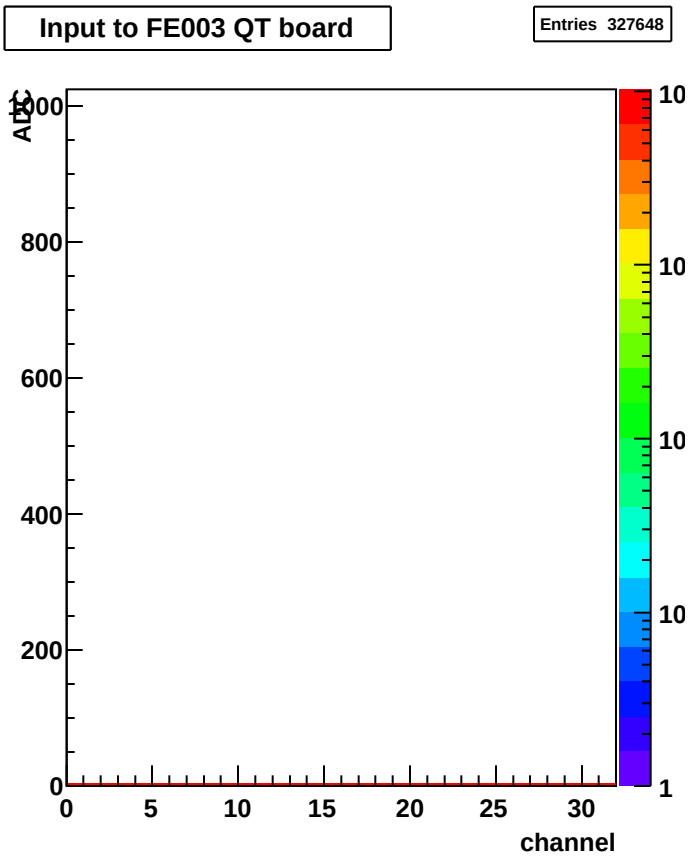

Input to FPD L2 DSM
Entries 30717
HT bits
3
17
59
10160
10239
10239
SMALL
LARGE-S
LARGE-N

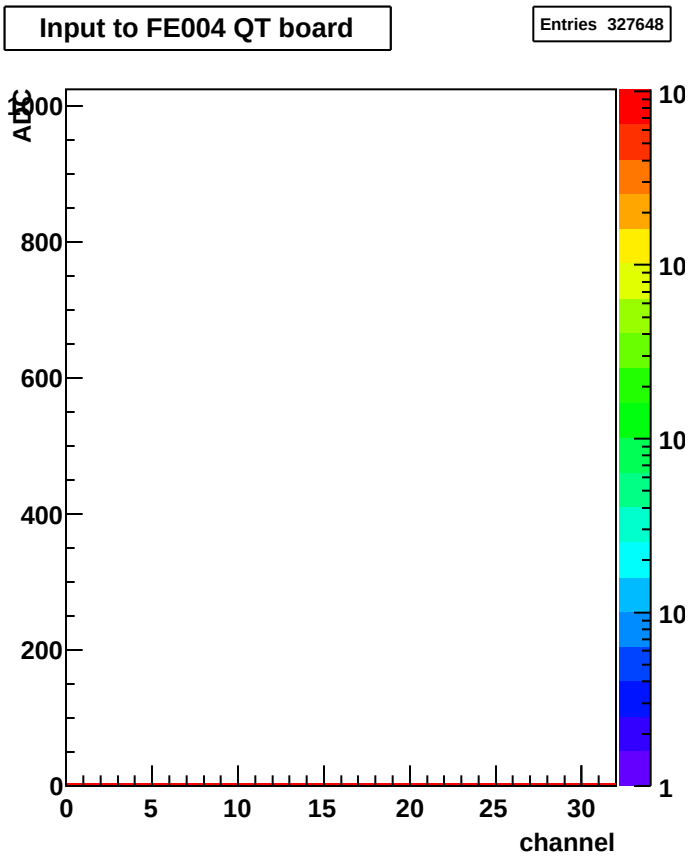

Input to FPD L2 DSM
Entries 20557
HT bits - simulated
3
17
59
10239
10239
SMALL
LARGE-S
LARGE-N

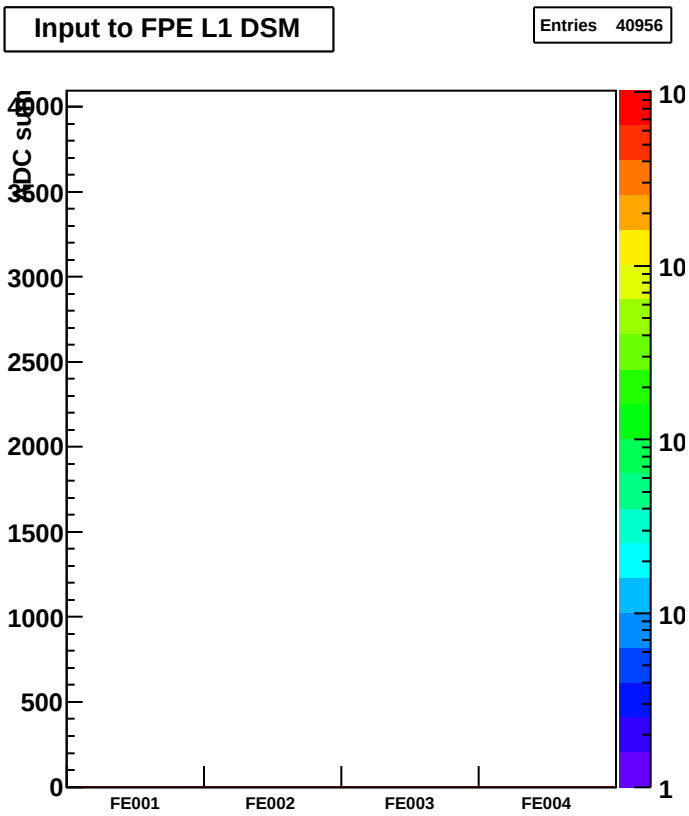

Input to FPD L2 DSM
Entries 61434
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

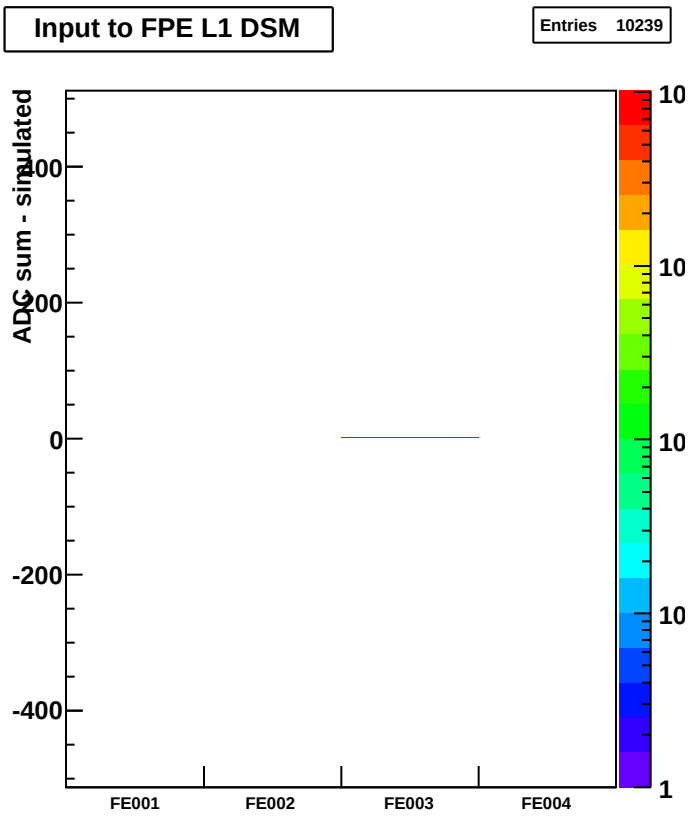

Input to FE001 QT board
Entries 327648
ADC
channel

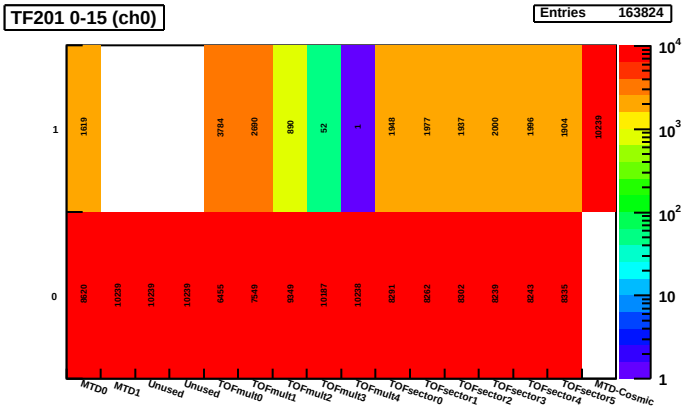

Input to FE002 QT board
Entries 327648
ADC
channel

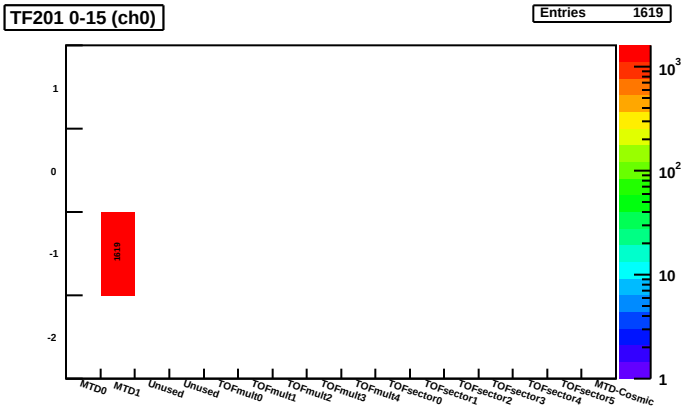

Input to FE003 QT board
Entries 327648
ADC
channel

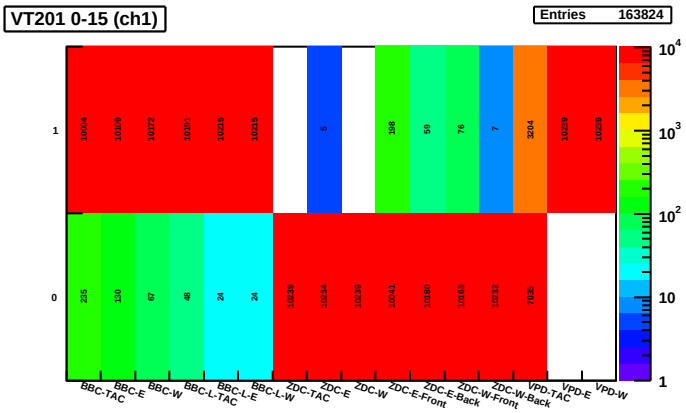

Input to FE004 QT board
Entries 327648
ADC
channel

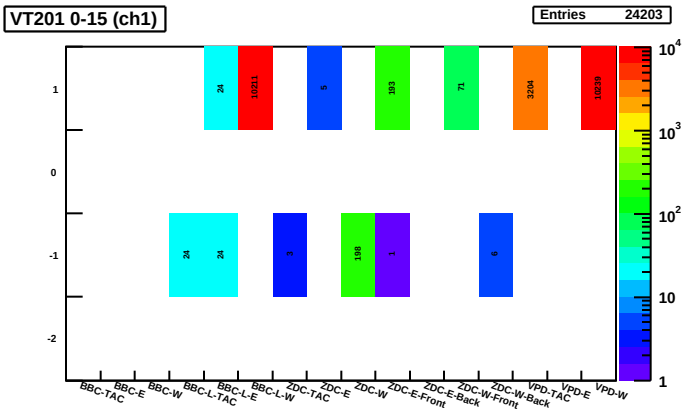

Input to FPE L1 DSM
Entries 40956
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

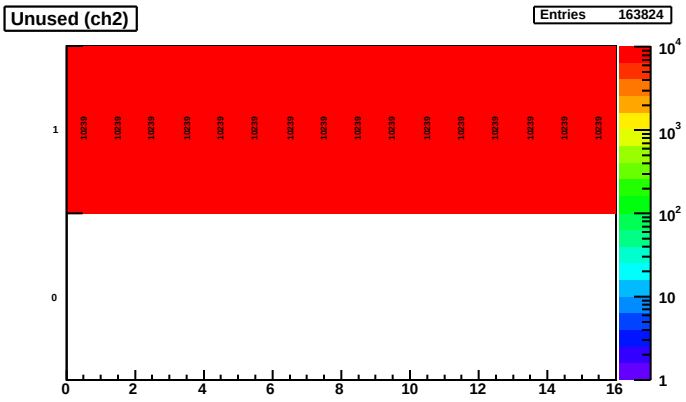

Input to FPE L1 DSM
Entries 10239
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

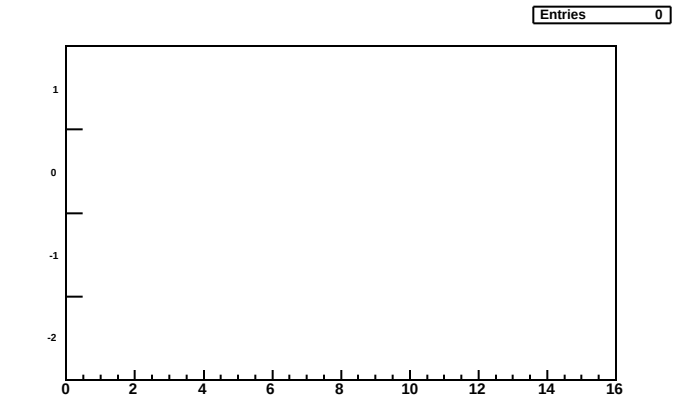

TF201 0-15 (ch0)
Entries 163824
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

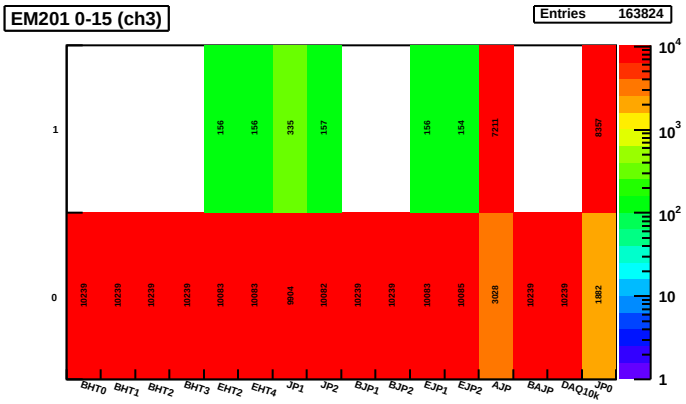

TF201 0-15 (ch0)
Entries 1619
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

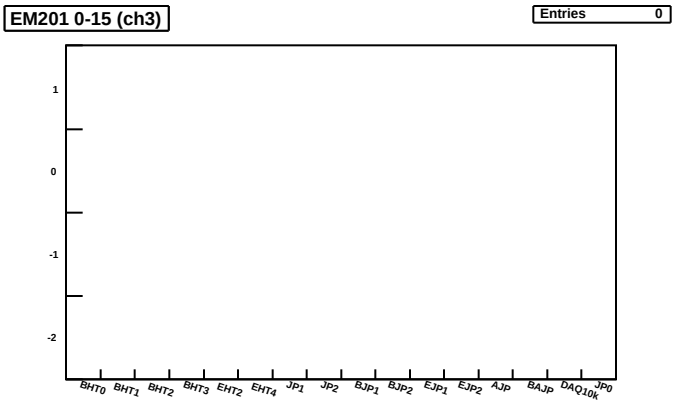

VT201 0-15 (ch1)
Entries 163824
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 24203
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

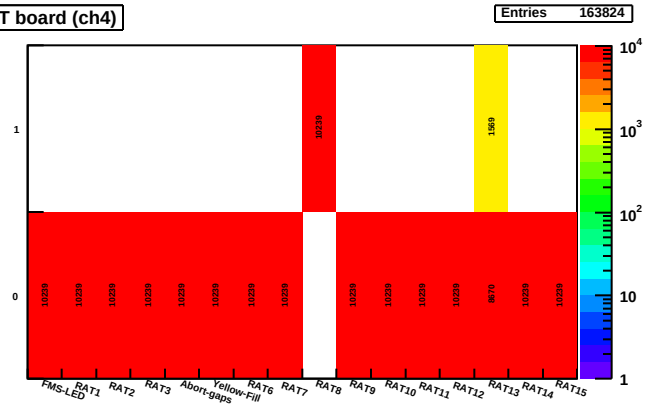

Unused (ch2)
Entries 163824

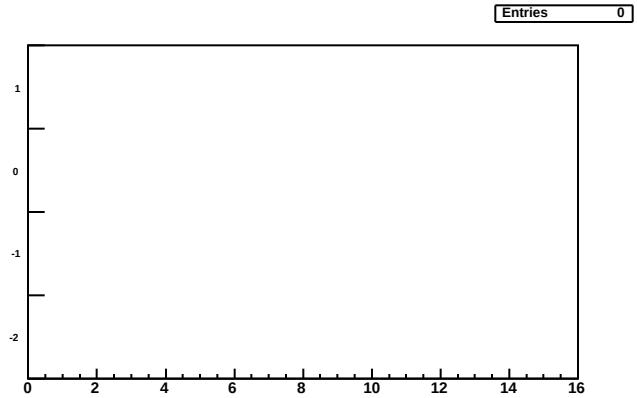

Entries 0


EM201 0-15 (ch3)
Entries 163824
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

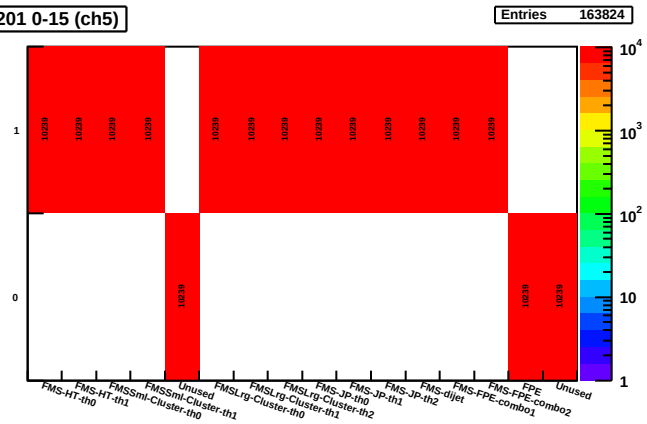

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

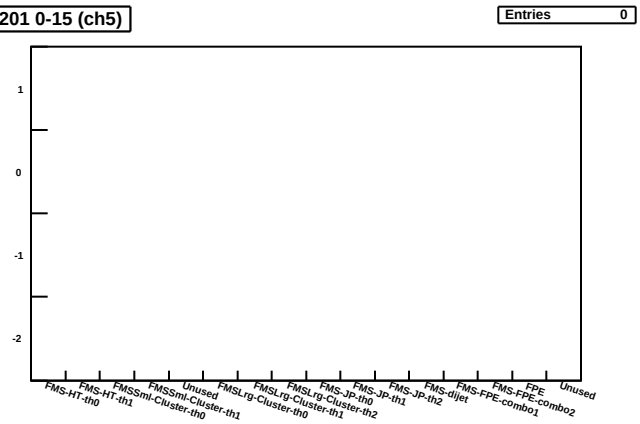




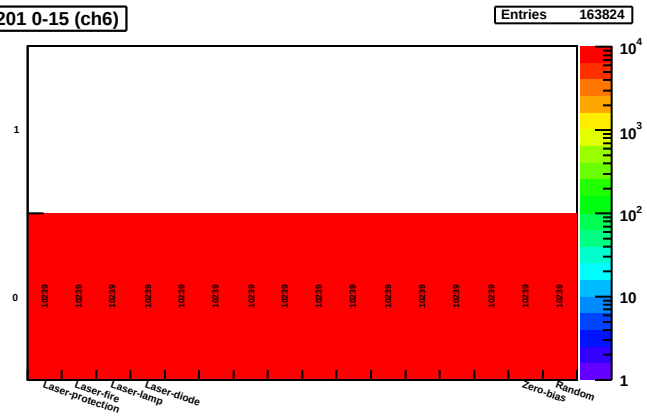
FP201 0-15 (ch5)

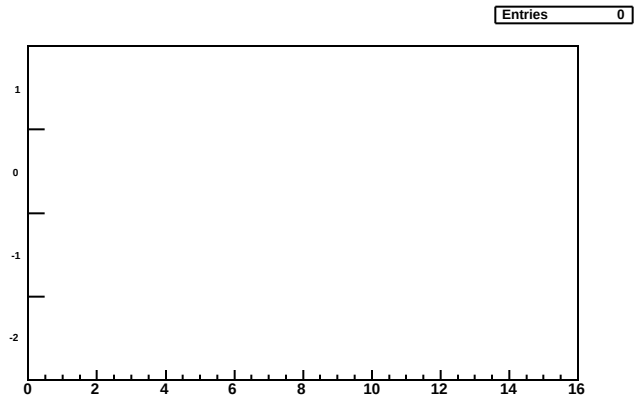
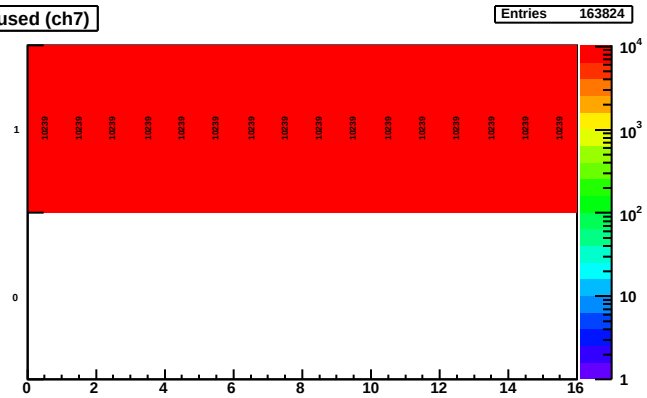
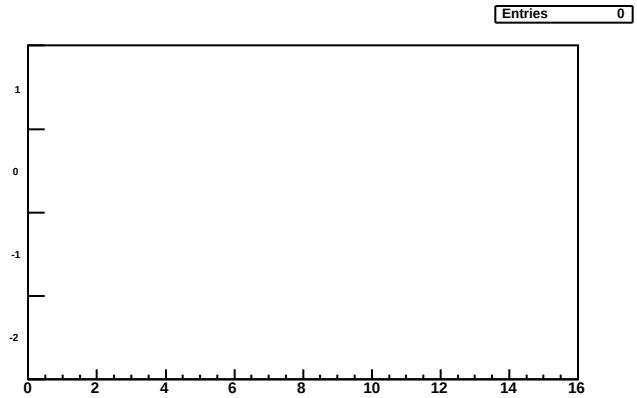


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)