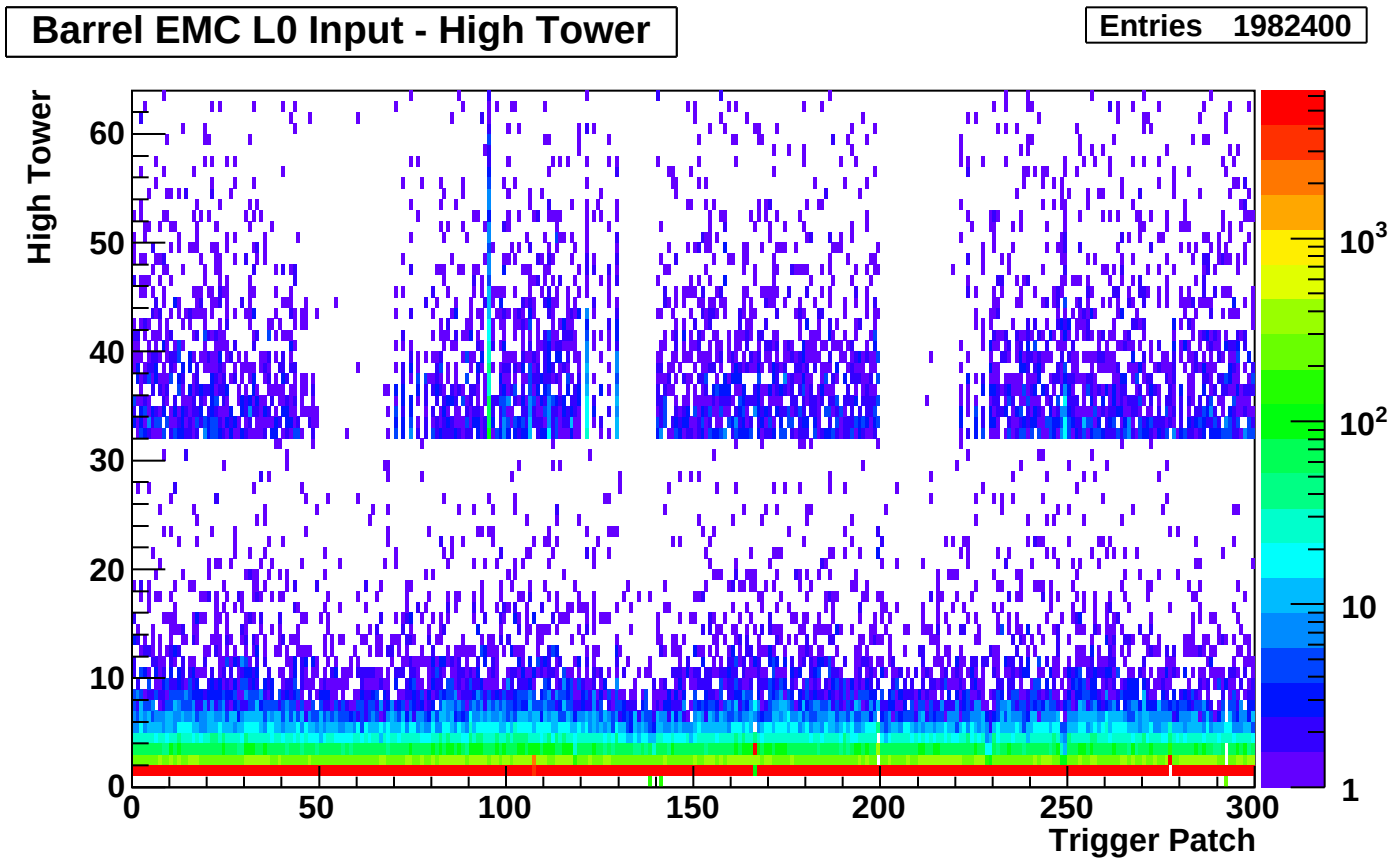
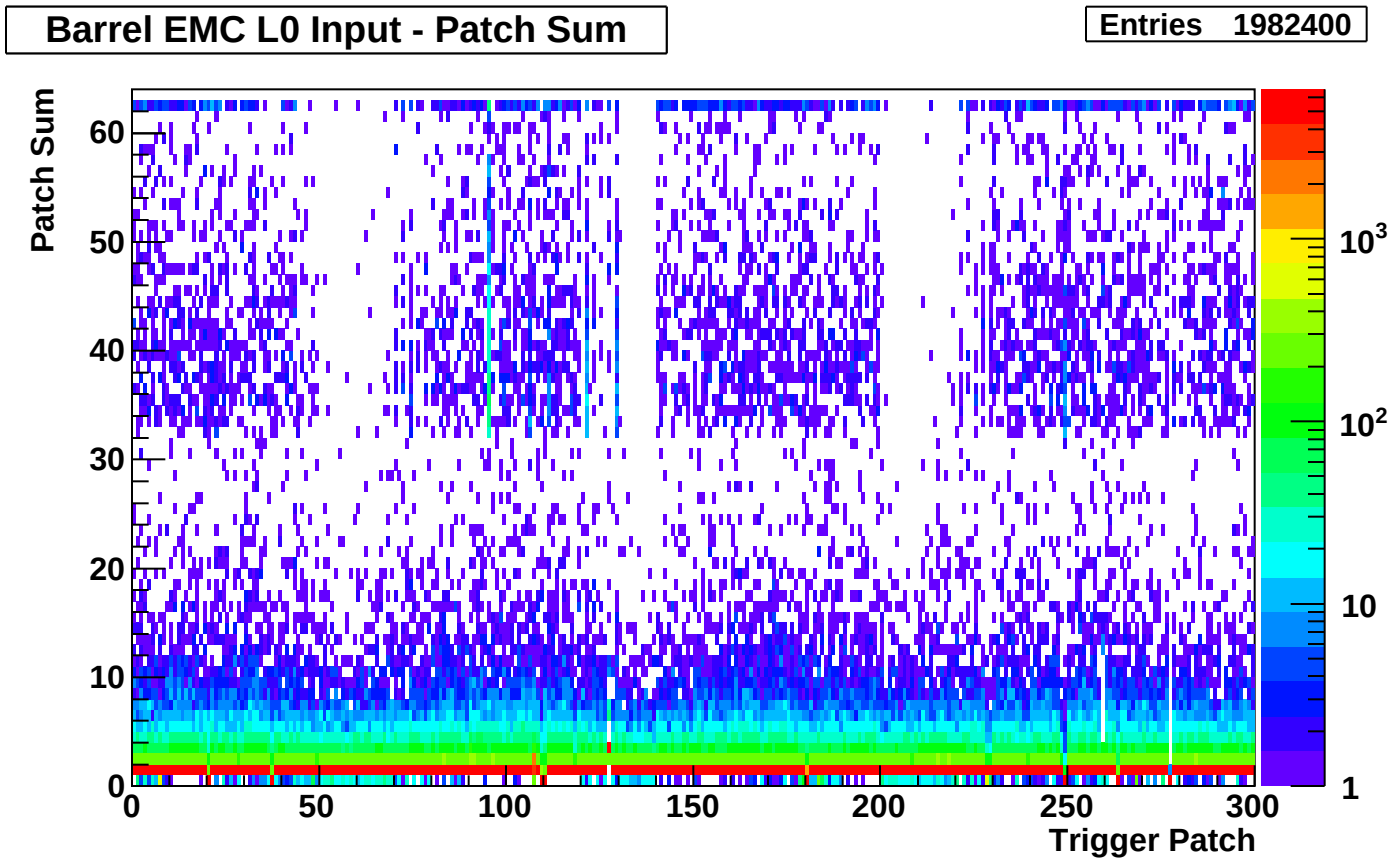
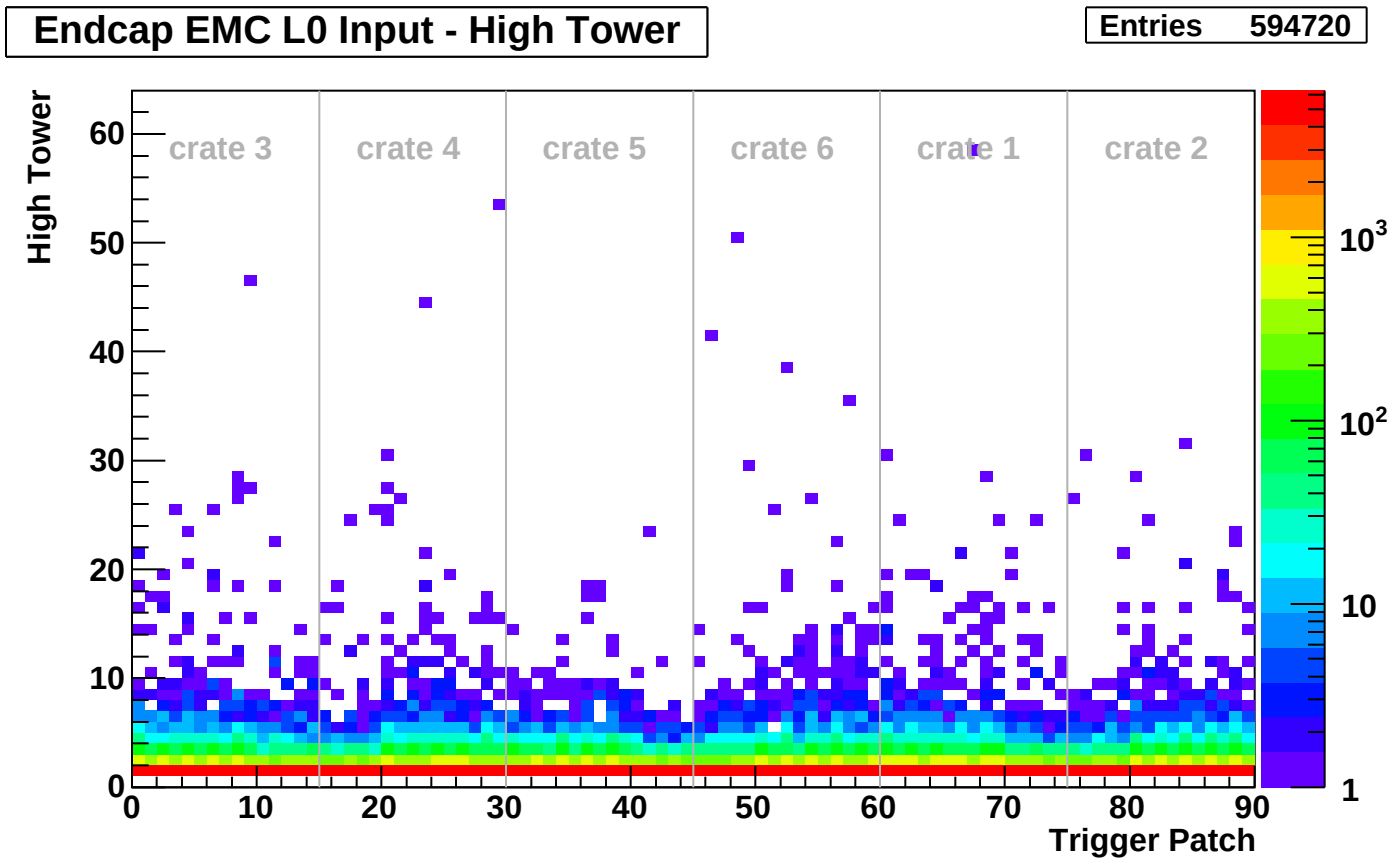
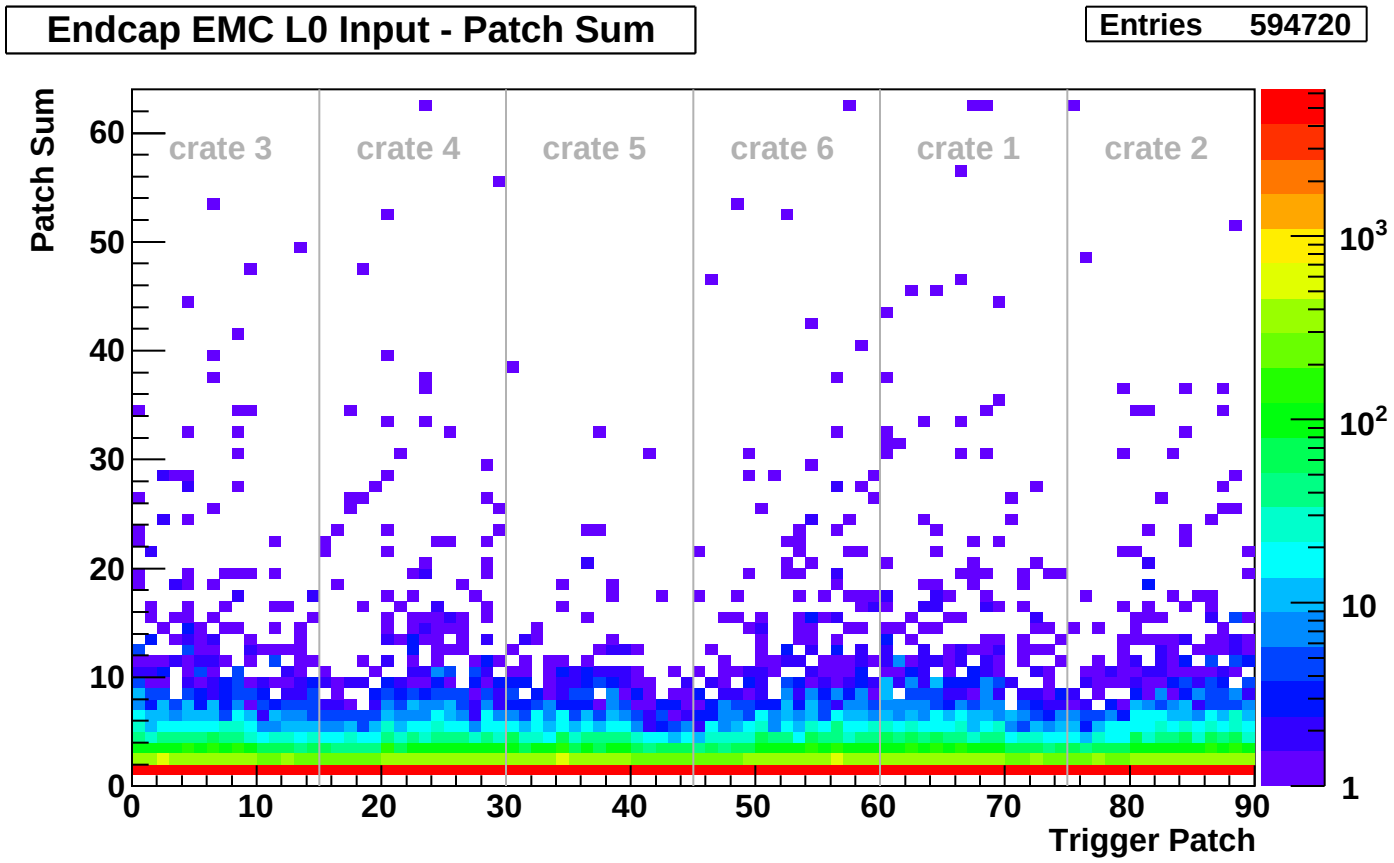
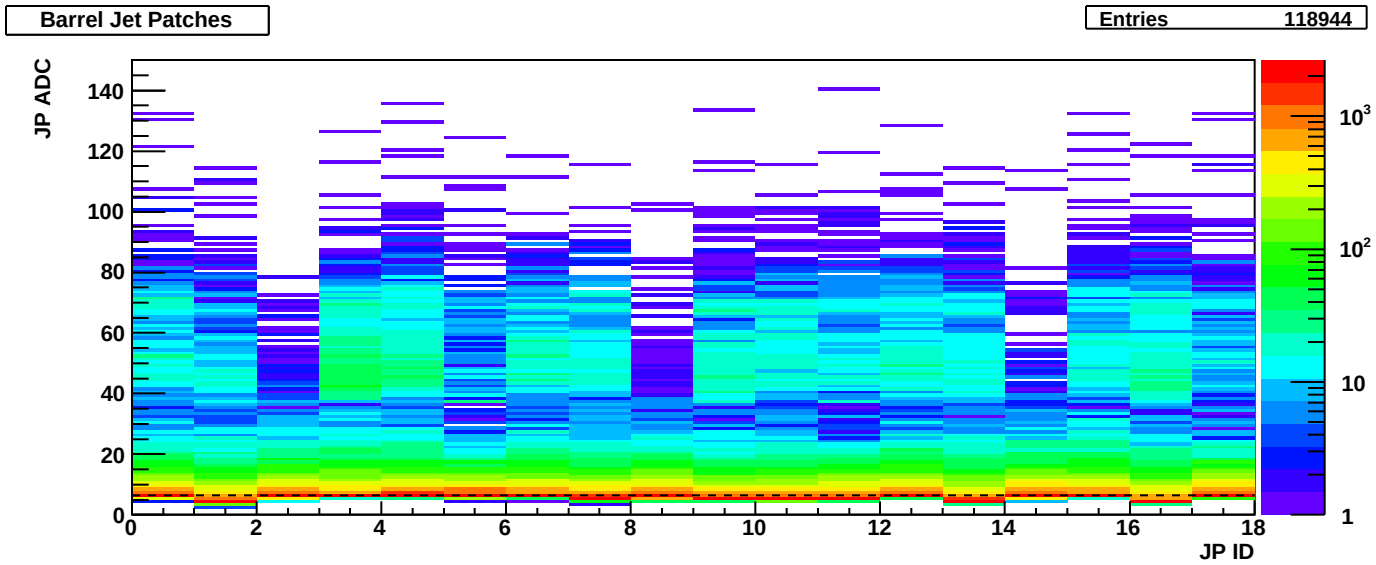
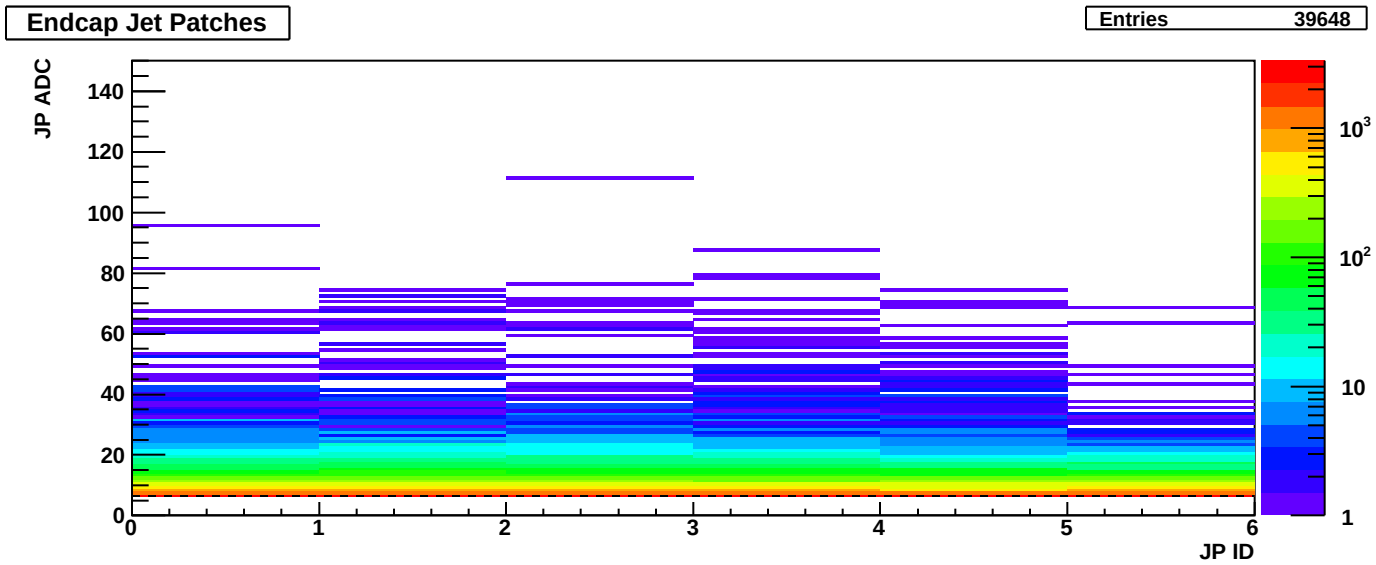

Barrel EMC L0 Input - High Tower
Entries 1982400
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

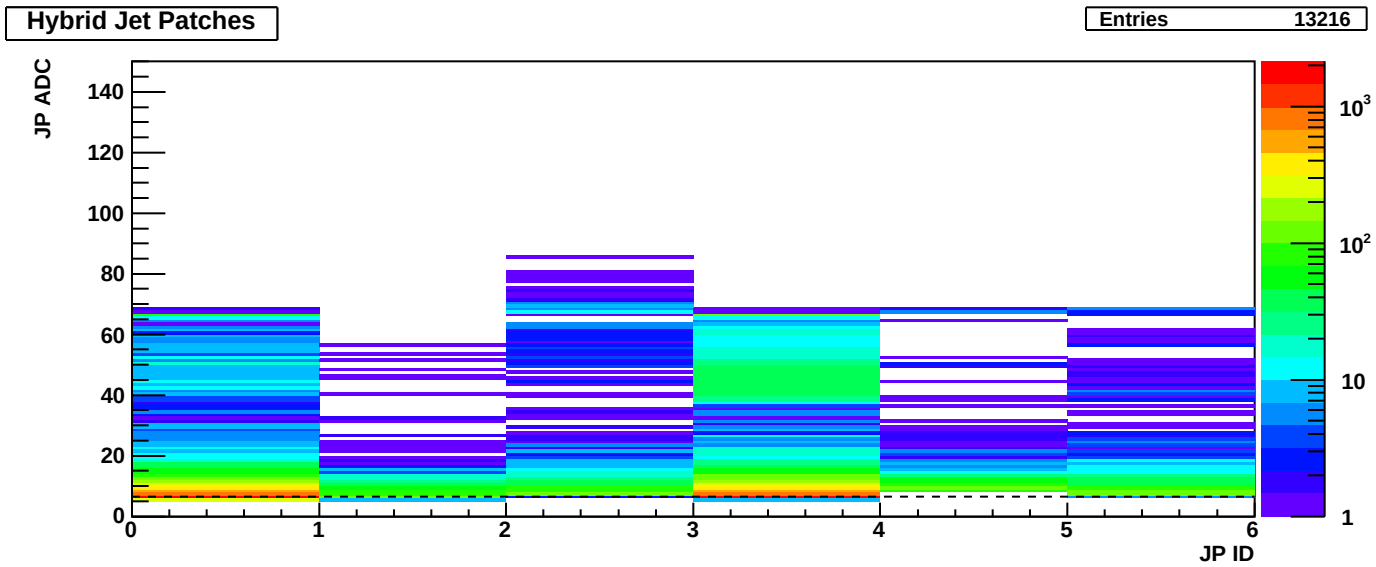

Barrel EMC L0 Input - Patch Sum
Entries 1982400
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

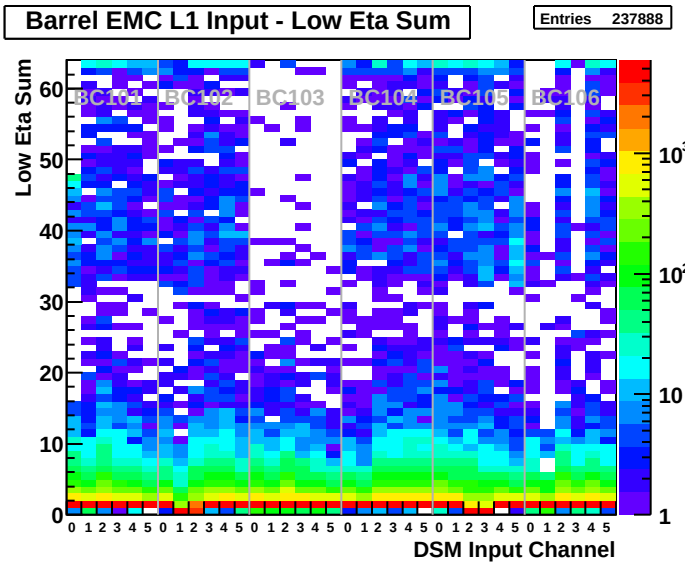

Endcap EMC L0 Input - High Tower
Entries 594720
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

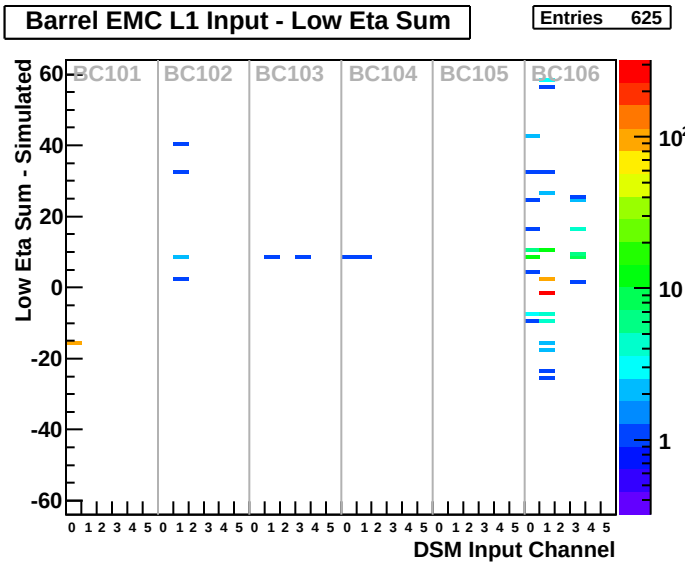

Endcap EMC L0 Input - Patch Sum
Entries 594720
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

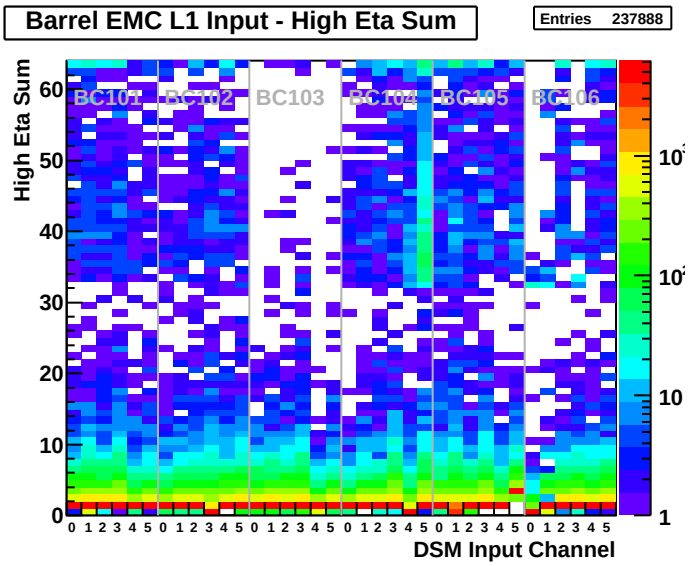

Barrel Jet Patches
Entries 118944
JP ADC
JP ID

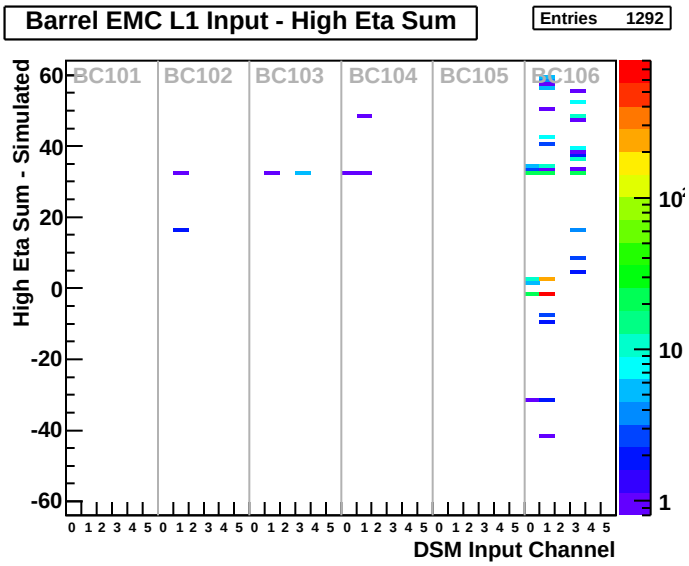

Endcap Jet Patches
Entries 39648
JP ADC
JP ID

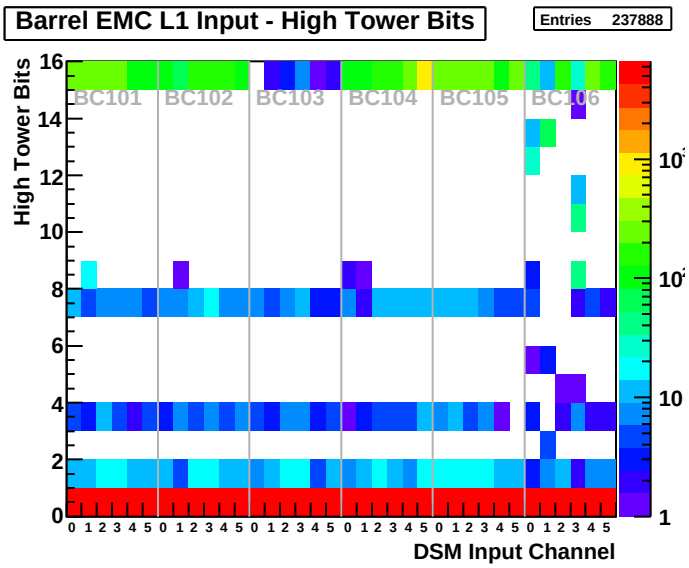

Hybrid Jet Patches
Entries 13216
JP ADC
JP ID

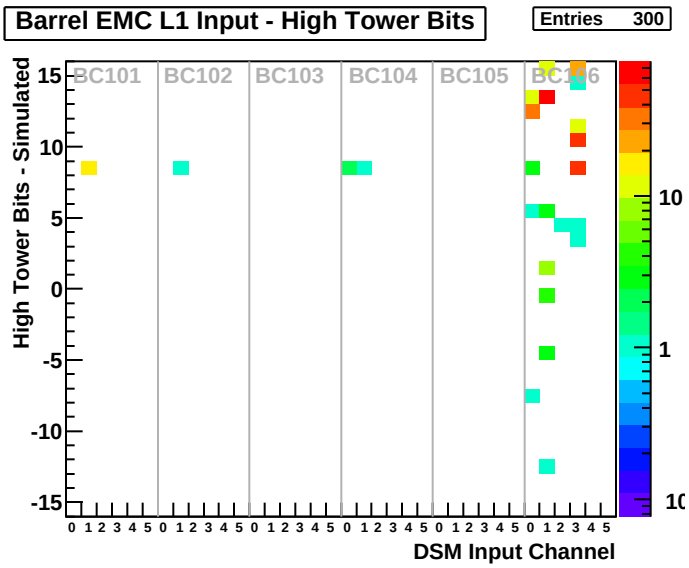

Barrel EMC L1 Input - Low Eta Sum
Entries 237888
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

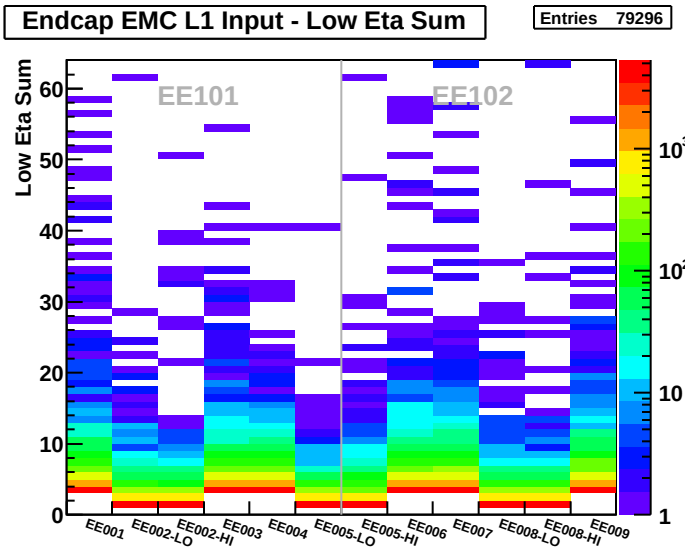

Barrel EMC L1 Input - Low Eta Sum
Entries 625
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

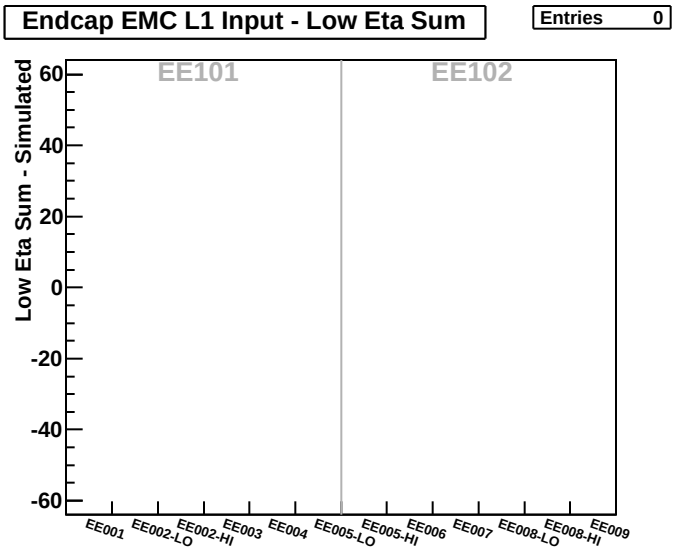

Barrel EMC L1 Input - High Eta Sum
Entries 237888
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

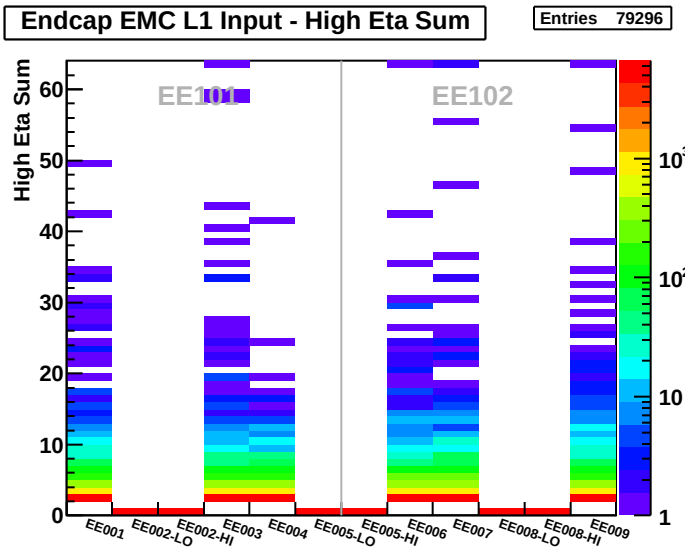

Barrel EMC L1 Input - High Eta Sum
Entries 1292
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

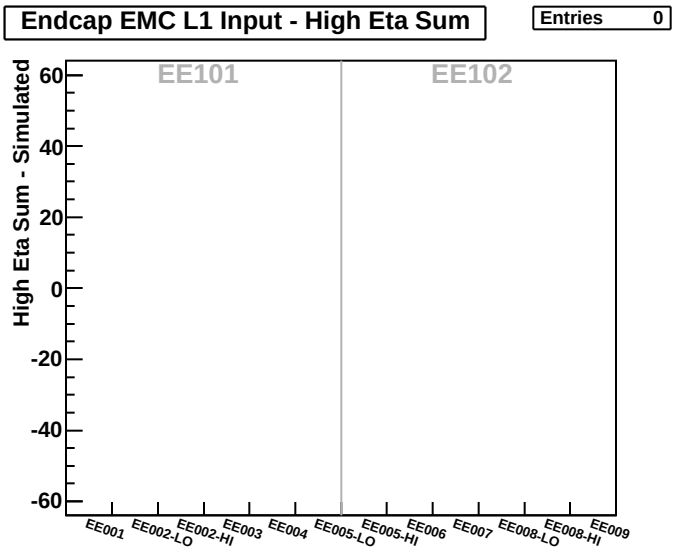

Barrel EMC L1 Input - High Tower Bits
Entries 237888
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

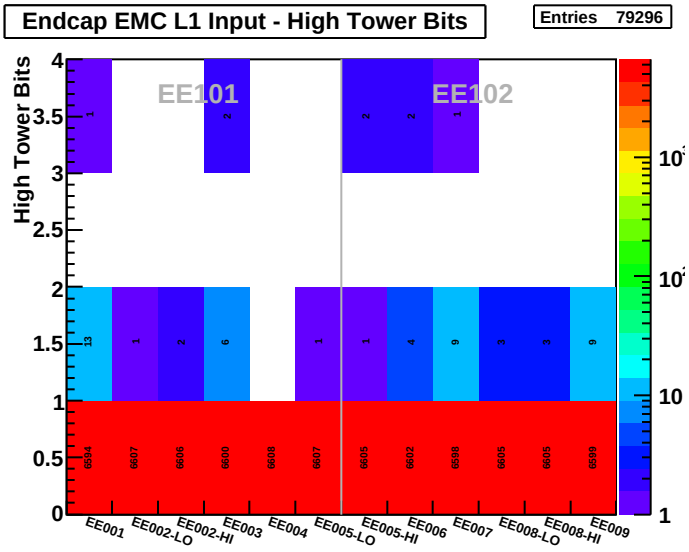

Barrel EMC L1 Input - High Tower Bits
Entries 300
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

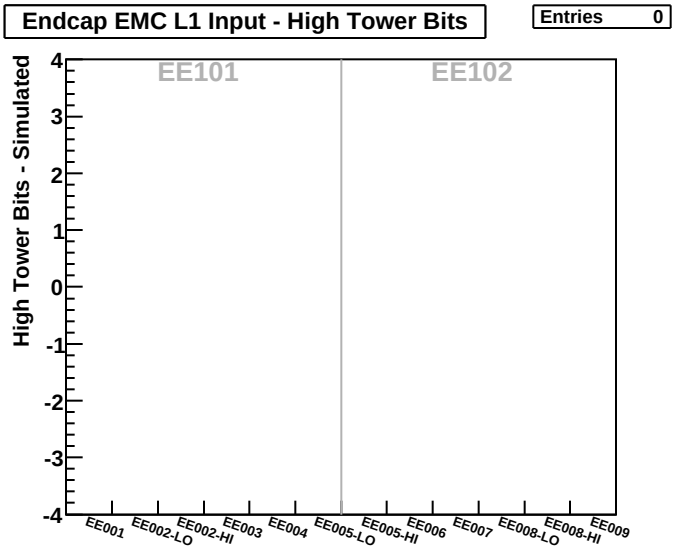

Endcap EMC L1 Input - Low Eta Sum
Entries 79296
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

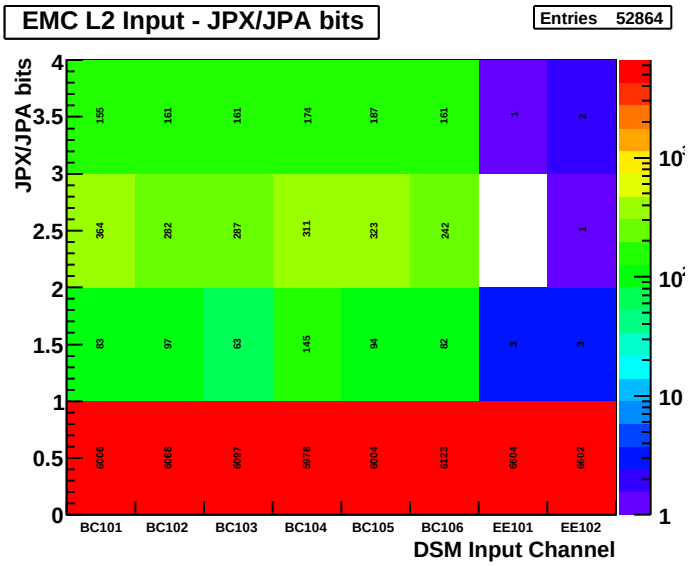

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

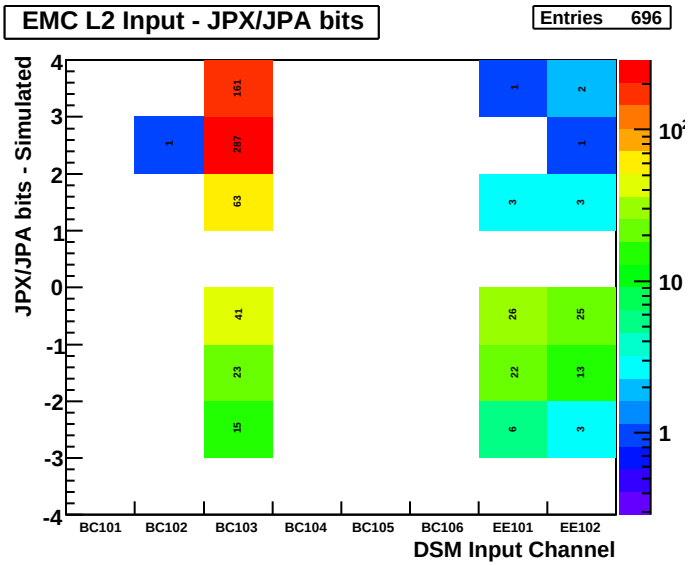

Endcap EMC L1 Input - High Eta Sum
Entries 79296
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

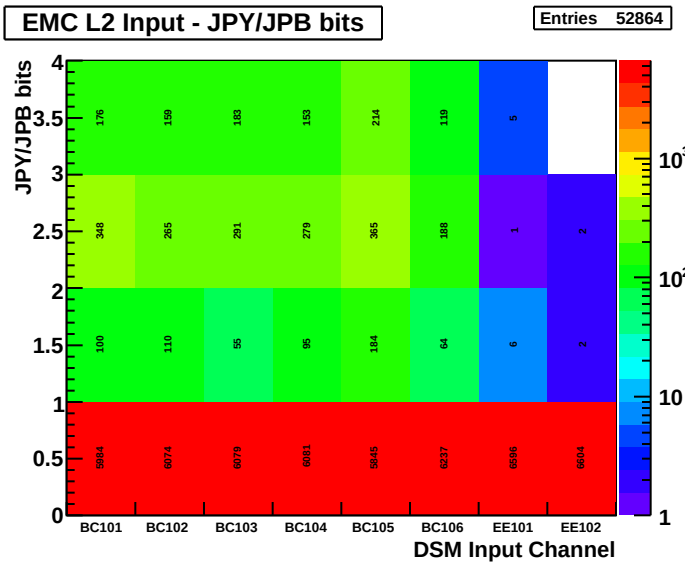

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

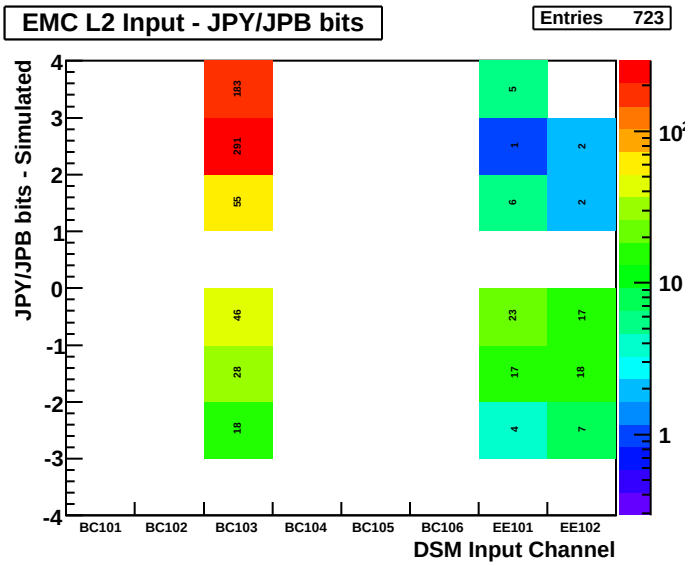

Endcap EMC L1 Input - High Tower Bits
Entries 79296
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

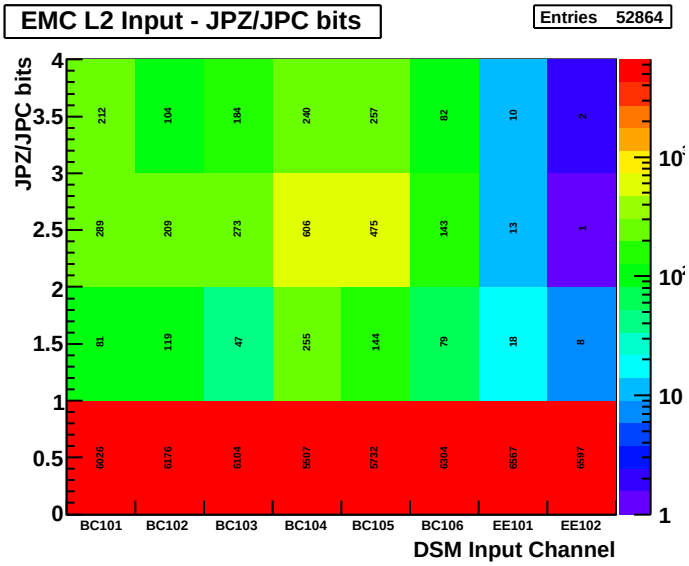

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

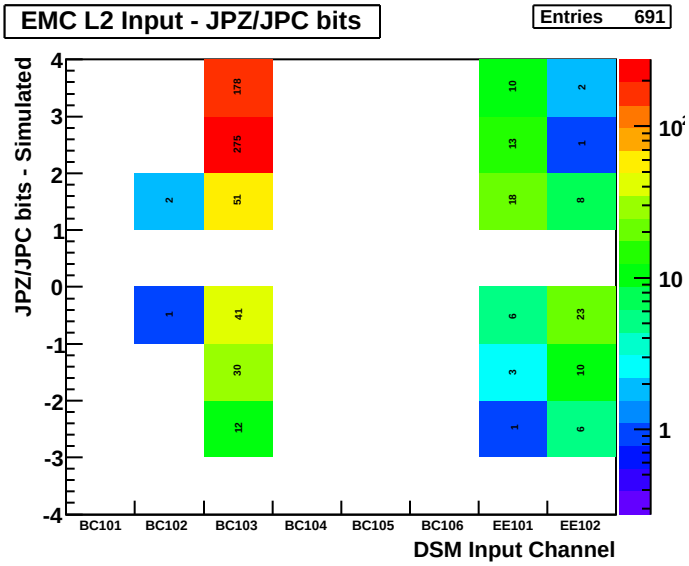

EMC L2 Input - JPX/JPA bits
Entries 52864
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
155 161 161 174 187 161 1 2
364 282 287 311 323 242 1
83 97 63 145 94 82 3 3
6006 6068 6037 5978 6004 6123 6604 6602

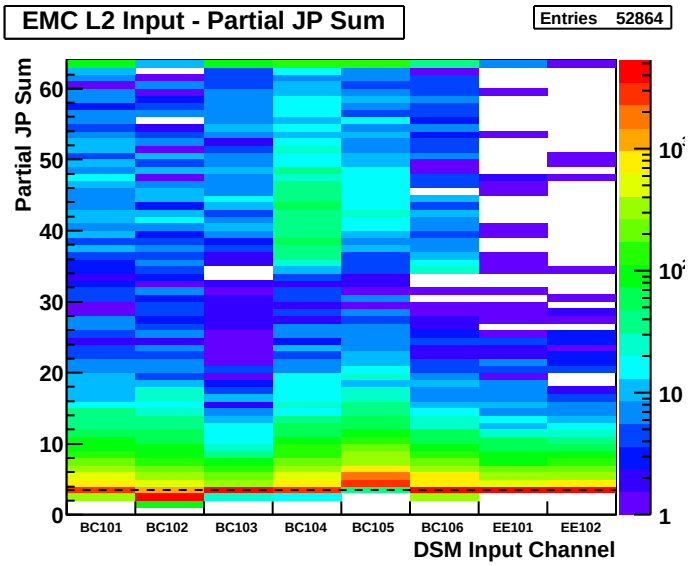

EMC L2 Input - JPX/JPA bits
Entries 696
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
161 1 2
1 287 1
63 3 3
41 26 25
23 22 13
15 6 3

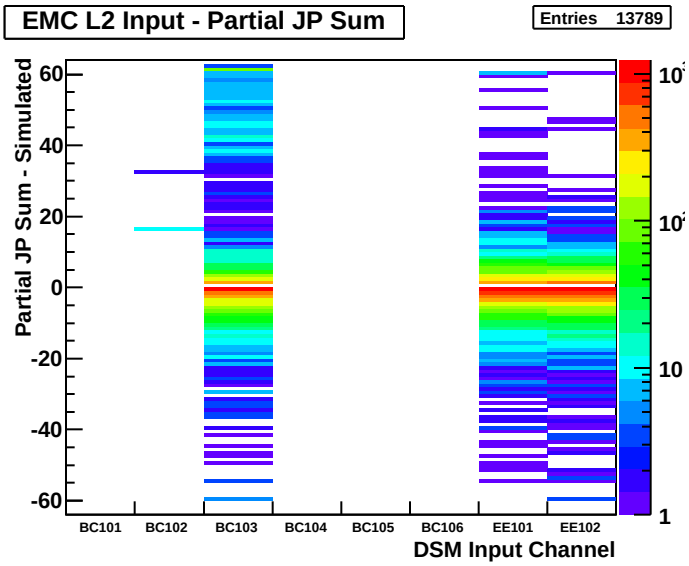

EMC L2 Input - JPY/JPB bits
Entries 52864
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
176 159 183 153 214 119 5
348 265 291 279 365 188 1 2
100 110 55 95 184 64 6 2
5984 6074 6079 6031 5945 6237 6596 6604

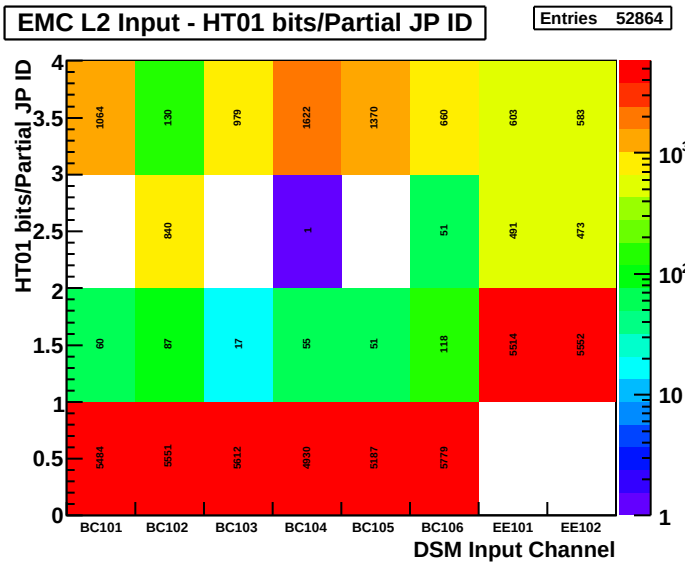

EMC L2 Input - JPY/JPB bits
Entries 723
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
183 5
291 1 2
55 6 2
46 23 17
28 17 18
18 4 7

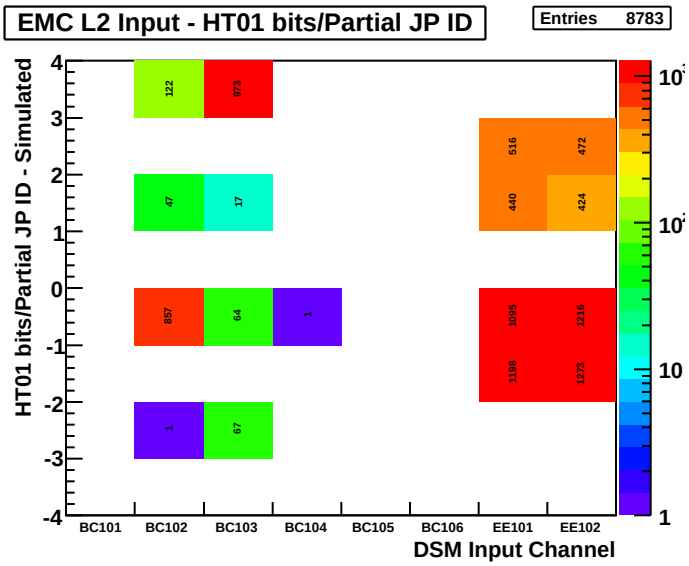

EMC L2 Input - JPZ/JPC bits
Entries 52864
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
212 104 184 240 257 82 10 2
289 209 273 606 475 143 13 1
81 119 47 255 144 79 18 8
6026 6176 6104 5507 5732 6304 6567 6597

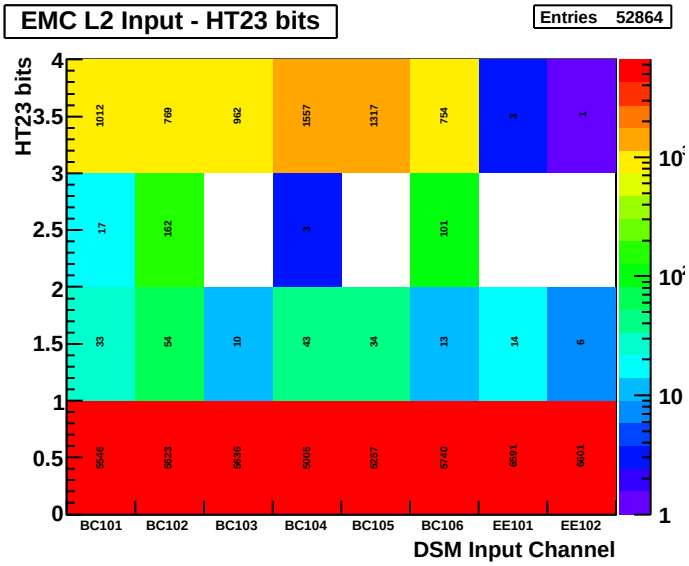

EMC L2 Input - JPZ/JPC bits
Entries 691
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
178 10 2
275 13 1
2 51 18 8
41 6 23
1 30 3 10
12 1 6

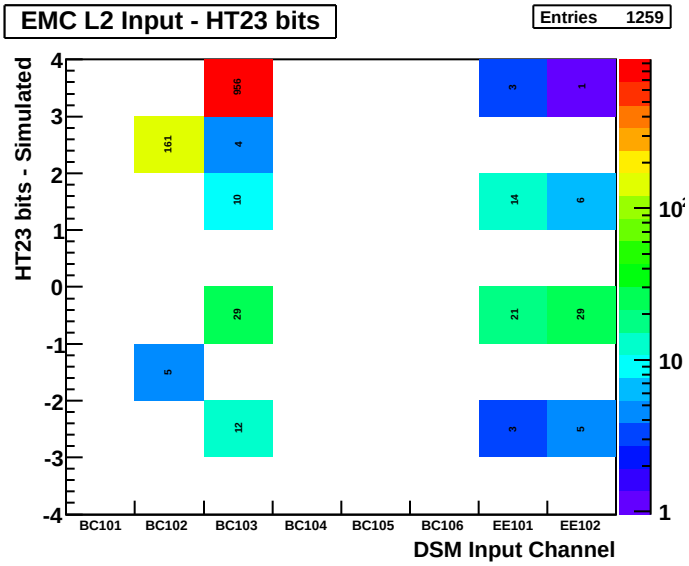

EMC L2 Input - Partial JP Sum
Entries 52864
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

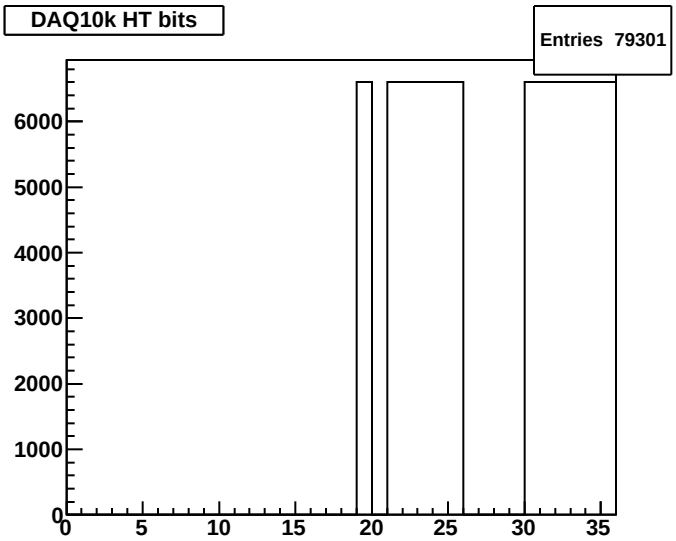

EMC L2 Input - Partial JP Sum
Entries 13789
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

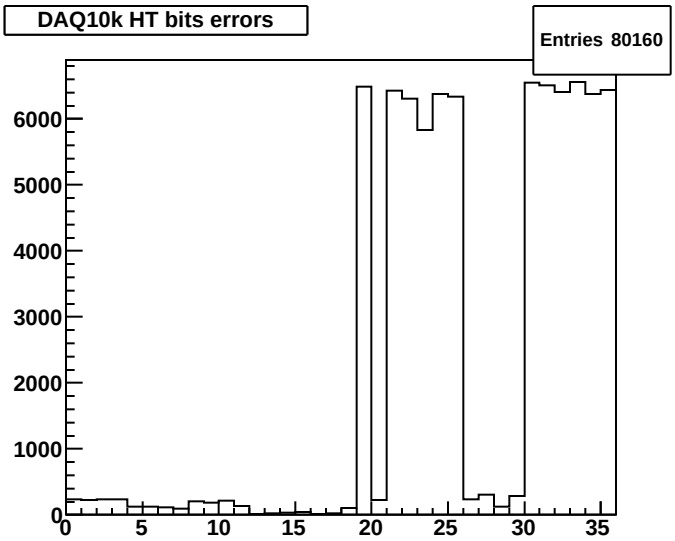

EMC L2 Input - HT01 bits/Partial JP ID
Entries 52864
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

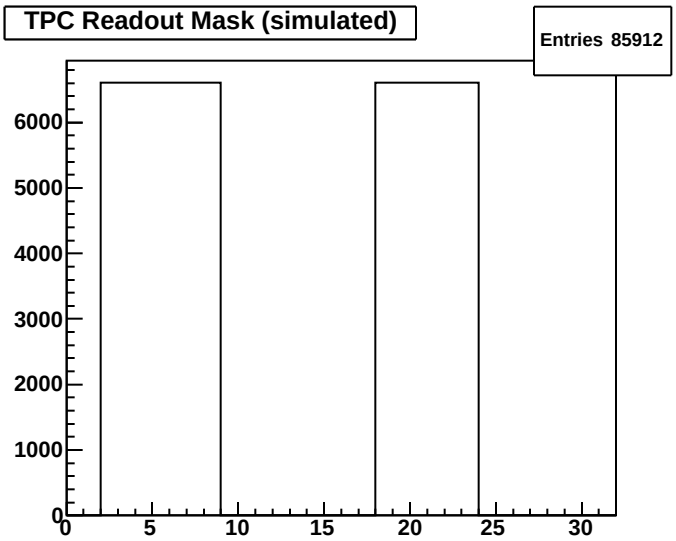

EMC L2 Input - HT01 bits/Partial JP ID
Entries 8783
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

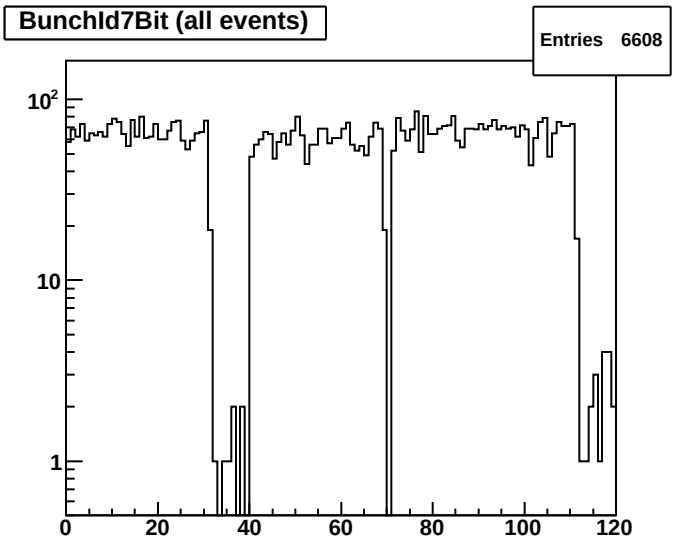

EMC L2 Input - HT23 bits
Entries 52864
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

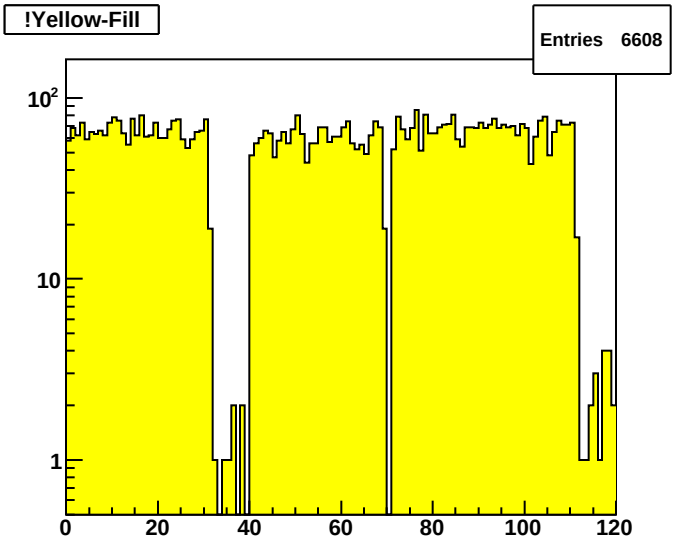

EMC L2 Input - HT23 bits
Entries 1259
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

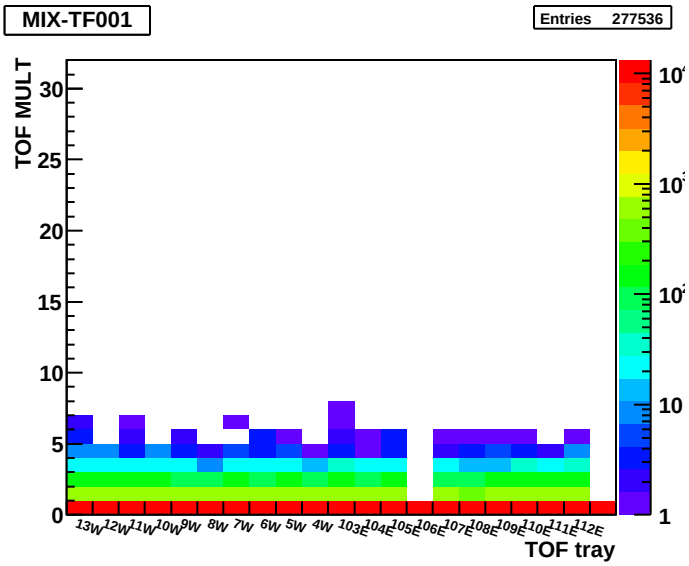

DAQ10k HT bits
Entries 79301
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30 35

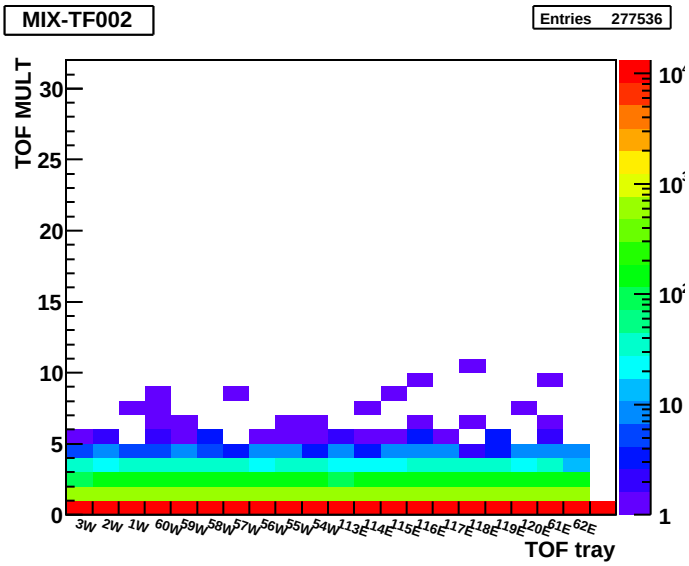

DAQ10k HT bits errors
Entries 80160
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30 35

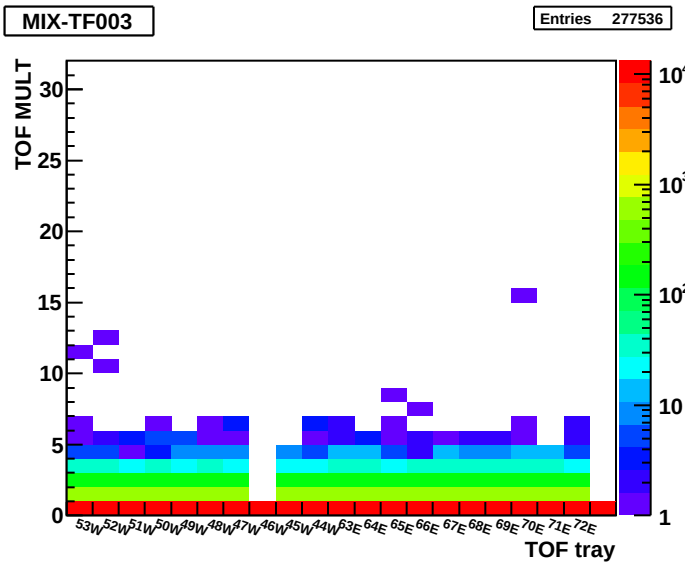

TPC Readout Mask (simulated)
Entries 85912
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30

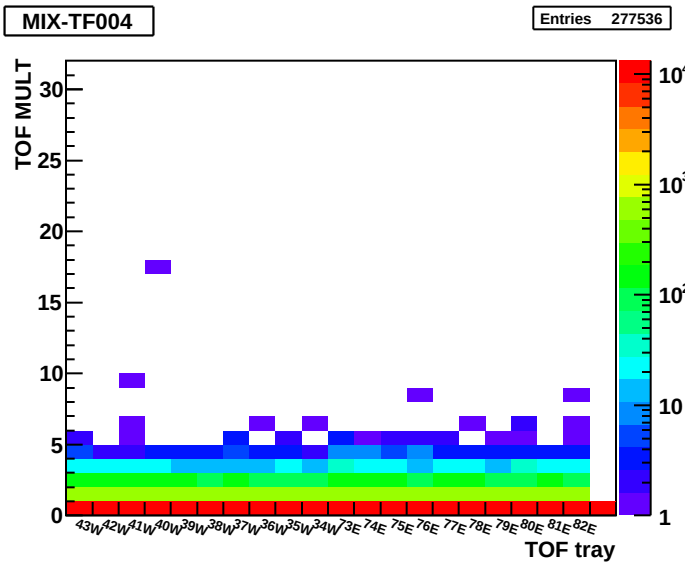

BunchId7Bit (all events)
Entries 6608
10^2
10
1
0 20 40 60 80 100 120

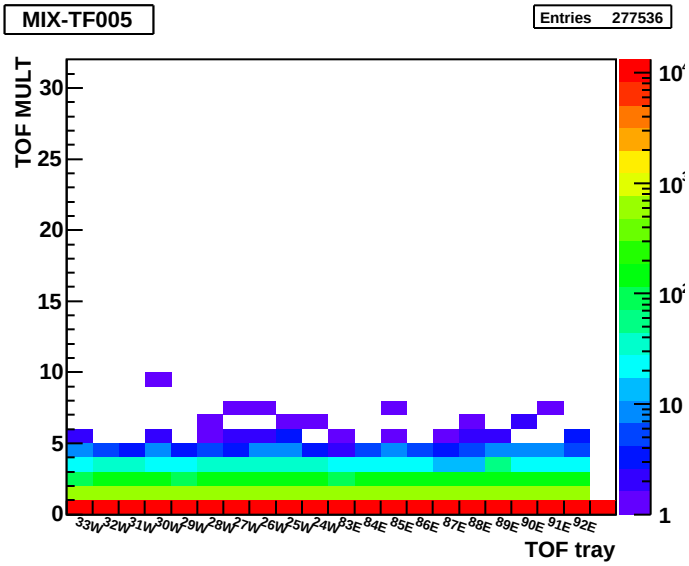

!Yellow-Fill
Entries 6608
10^2
10
1
0 20 40 60 80 100 120

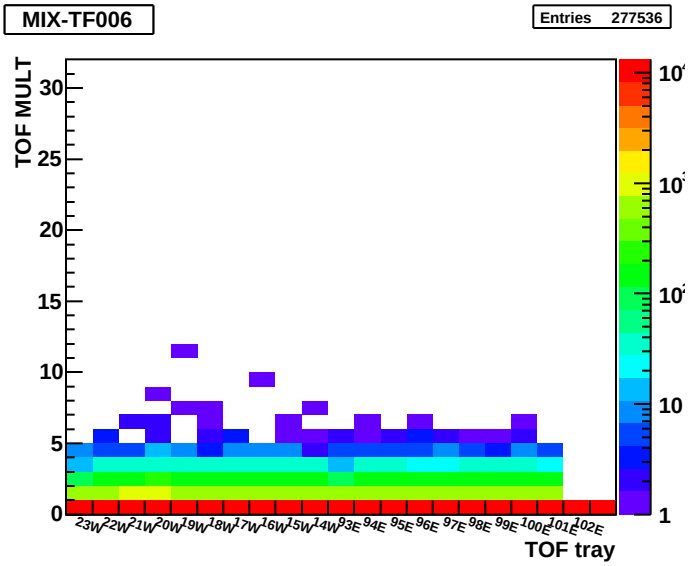

MIX-TF001
Entries 277536
TOF MULT
TOF tray

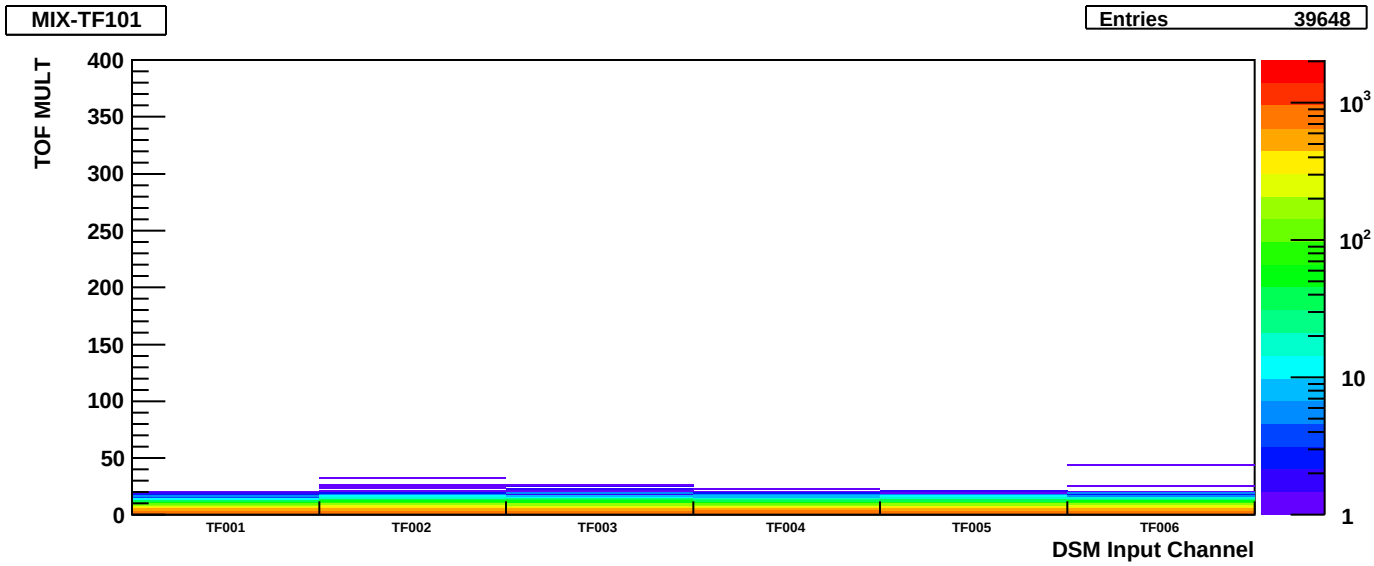

MIX-TF002
Entries 277536
TOF MULT
TOF tray

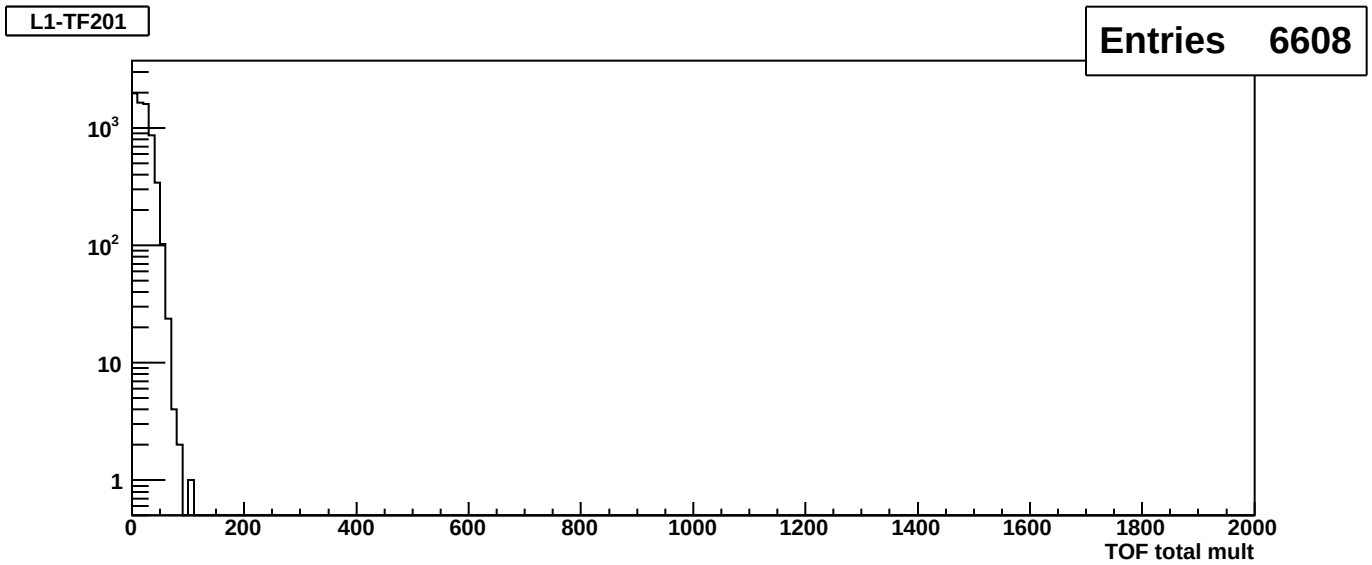

MIX-TF003
Entries 277536
TOF MULT
TOF tray

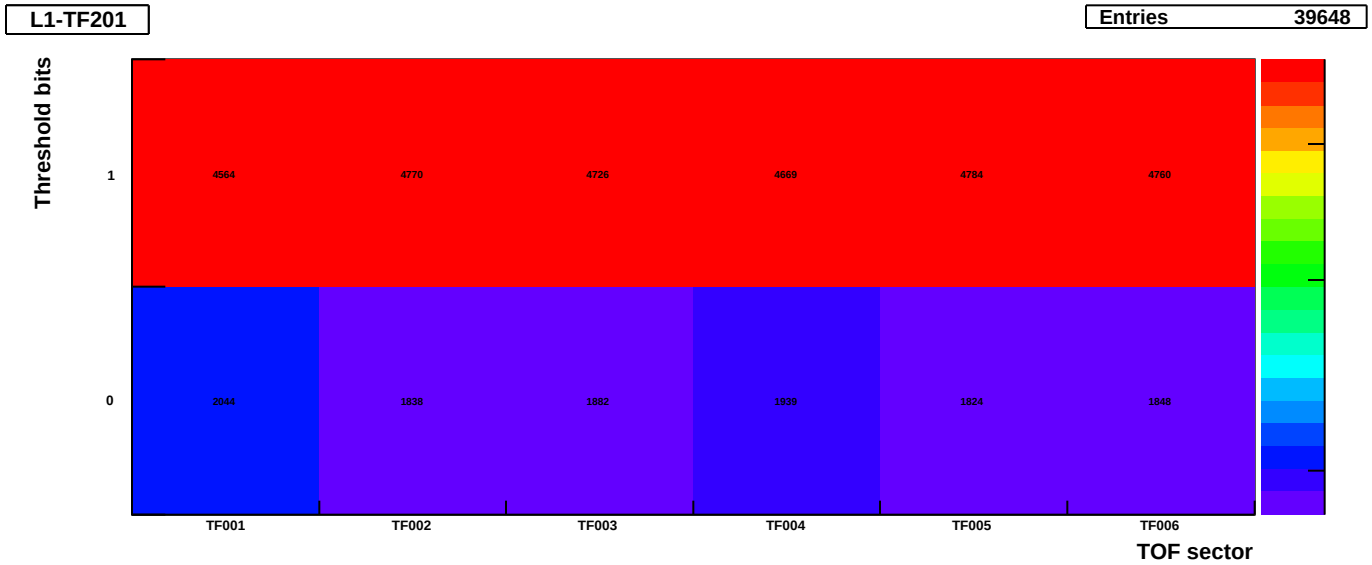

MIX-TF004
Entries 277536
TOF MULT
TOF tray

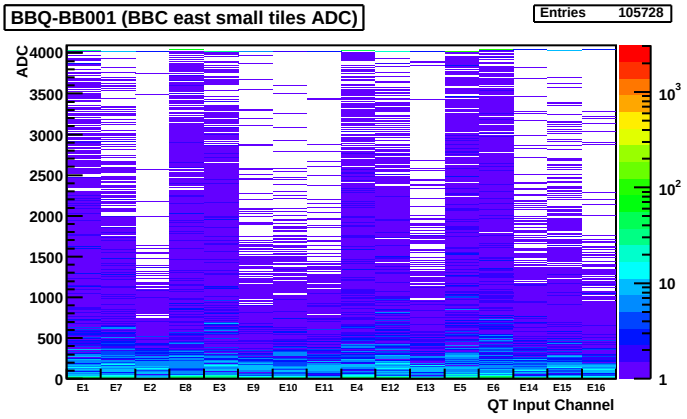

MIX-TF005
Entries 277536
TOF MULT
TOF tray

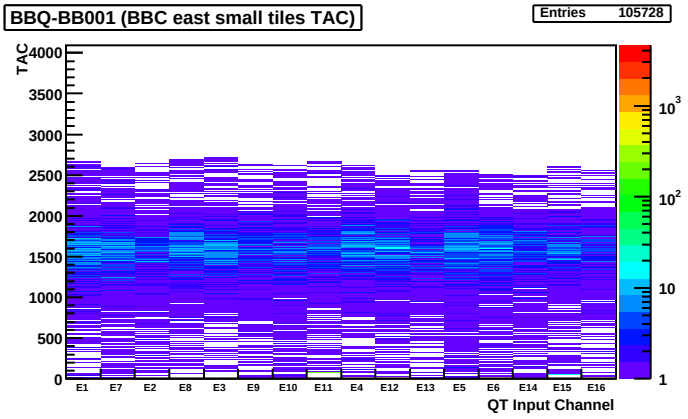

MIX-TF006
Entries 277536
TOF MULT
TOF tray

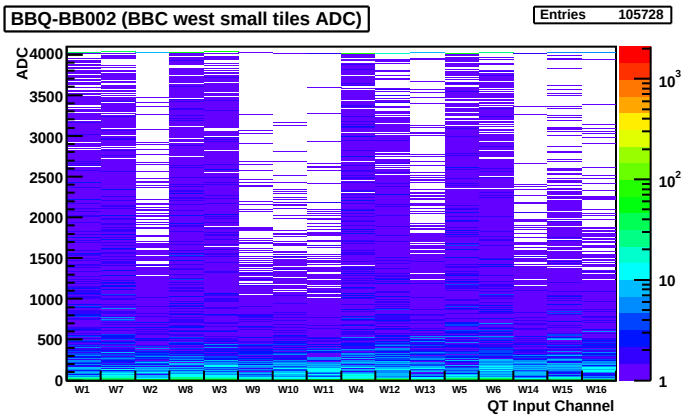

MIX-TF101
Entries 39648
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

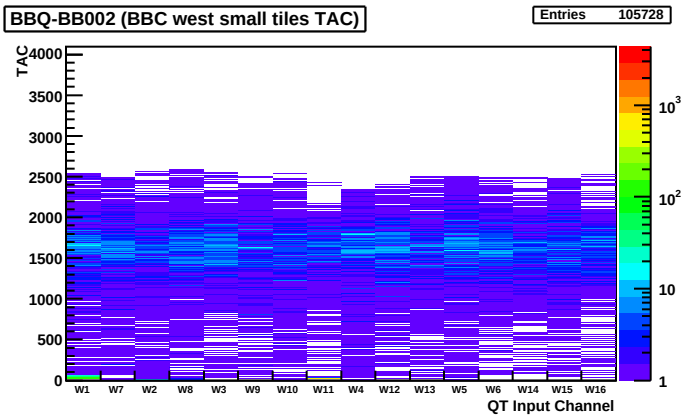

L1-TF201
Entries 6608
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

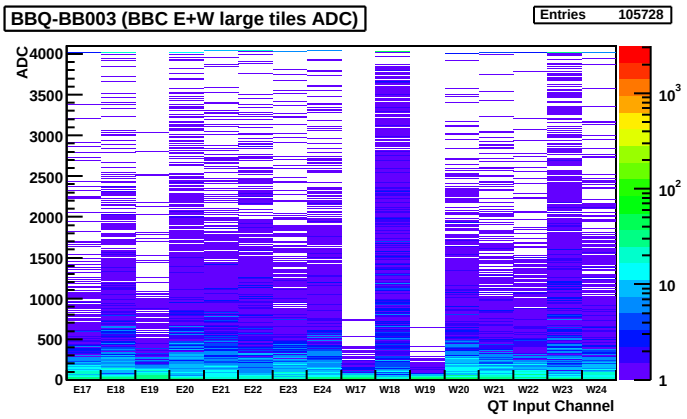

L1-TF201
Entries 39648
Threshold bits
1
0
4564
4770
4726
4669
4784
4760
2044
1838
1882
1939
1824
1848
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

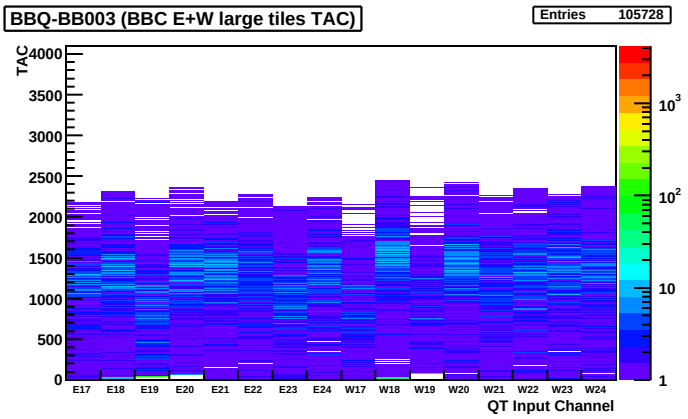

BBQ-BB001 (BBC east small tiles ADC)
Entries 105728
ADC
QT Input Channel

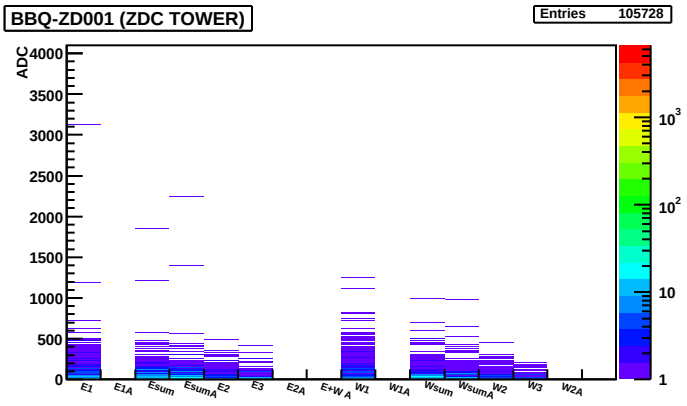

BBQ-BB001 (BBC east small tiles TAC)
Entries 105728
TAC
QT Input Channel

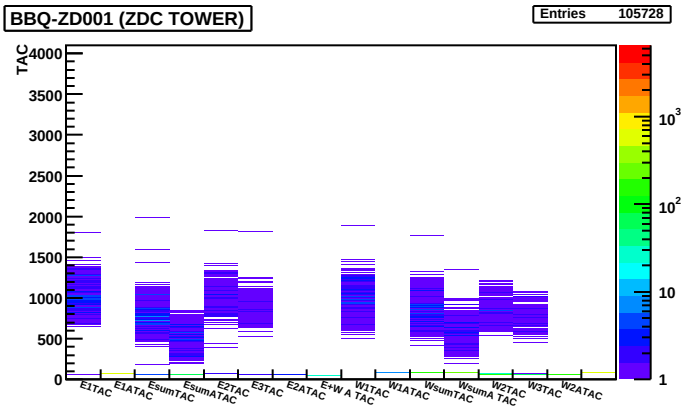

BBQ-BB002 (BBC west small tiles ADC)
Entries 105728
ADC
QT Input Channel

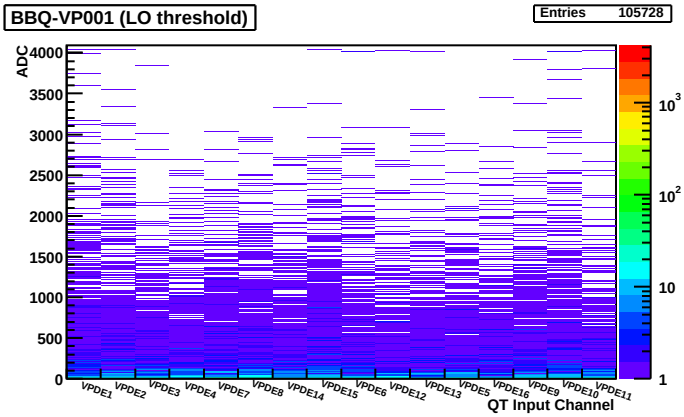

BBQ-BB002 (BBC west small tiles TAC)
Entries 105728
TAC
QT Input Channel

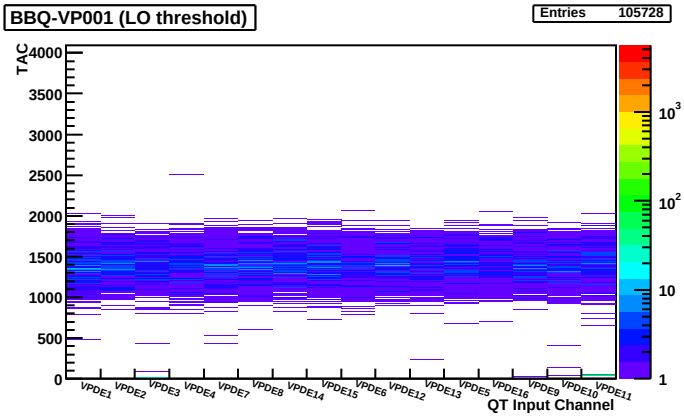

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 105728
ADC
QT Input Channel

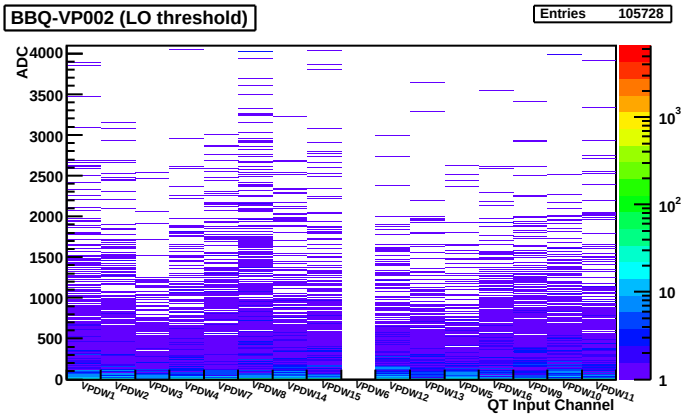

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 105728
TAC
QT Input Channel

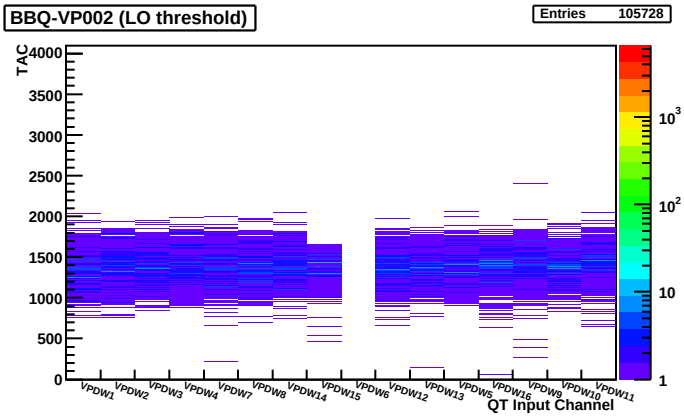

BBQ-ZD001 (ZDC TOWER)
Entries 105728
ADC

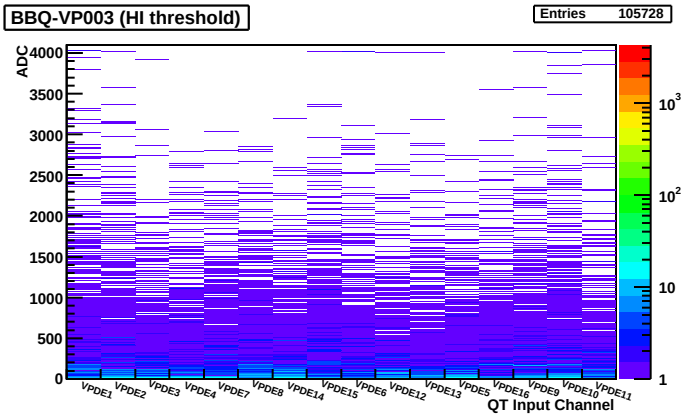

BBQ-ZD001 (ZDC TOWER)
Entries 105728
TAC

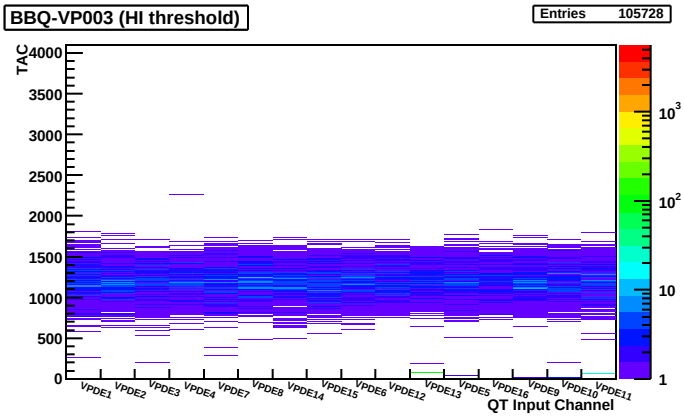

BBQ-VP001 (LO threshold)
Entries 105728
ADC
QT Input Channel

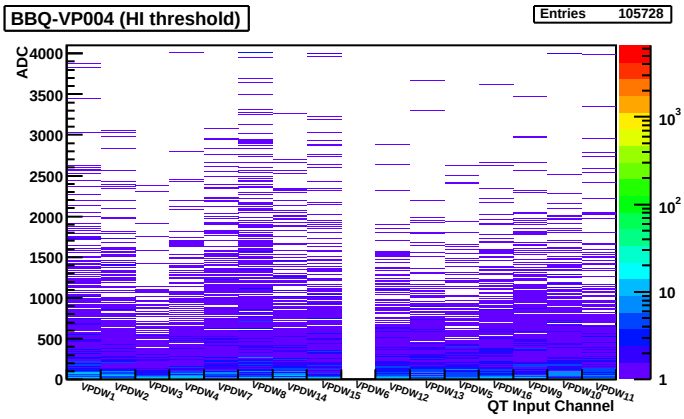

BBQ-VP001 (LO threshold)
Entries 105728
TAC
QT Input Channel

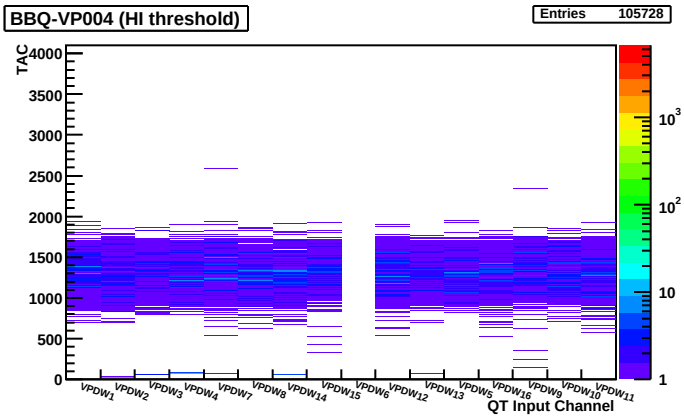

BBQ-VP002 (LO threshold)
Entries 105728
ADC
QT Input Channel

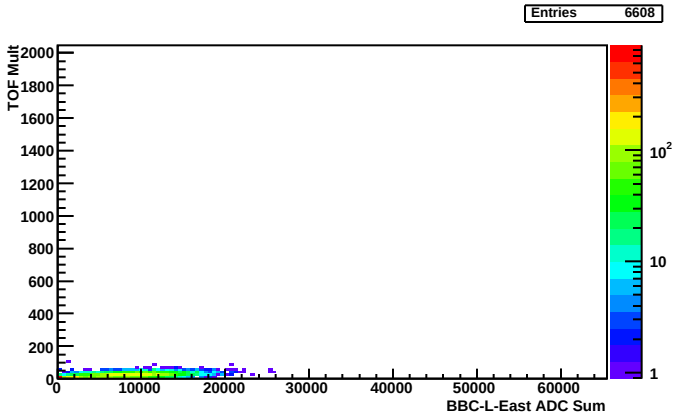

BBQ-VP002 (LO threshold)
Entries 105728
TAC
QT Input Channel

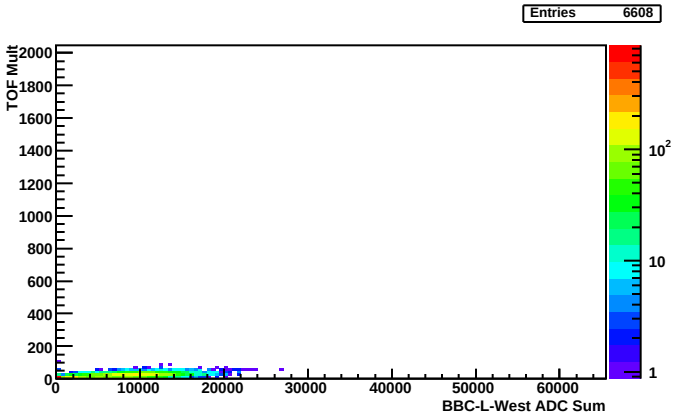

BBQ-VP003 (HI threshold)
Entries 105728
ADC
QT Input Channel

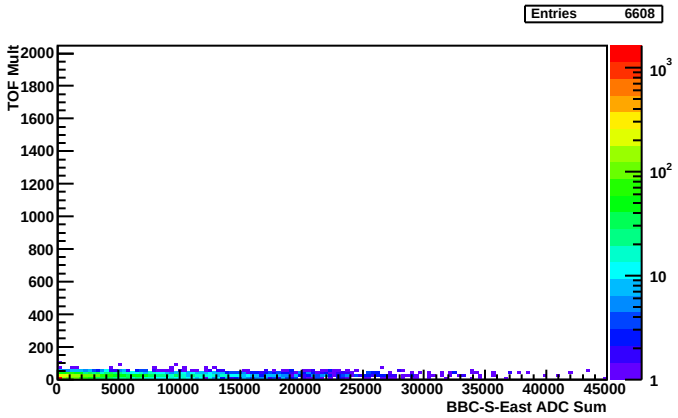

BBQ-VP003 (HI threshold)
Entries 105728
TAC
QT Input Channel

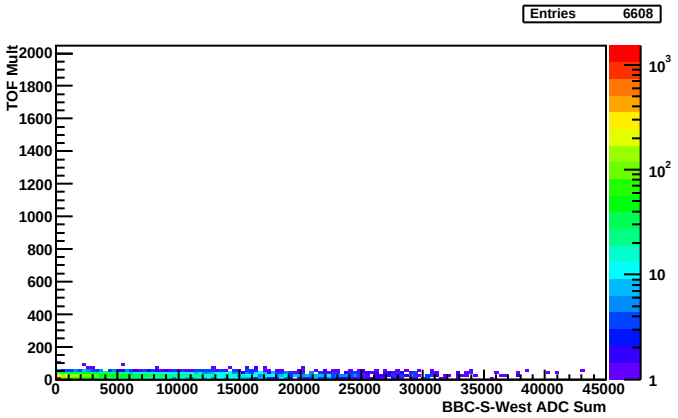

BBQ-VP004 (HI threshold)
Entries 105728
ADC
QT Input Channel

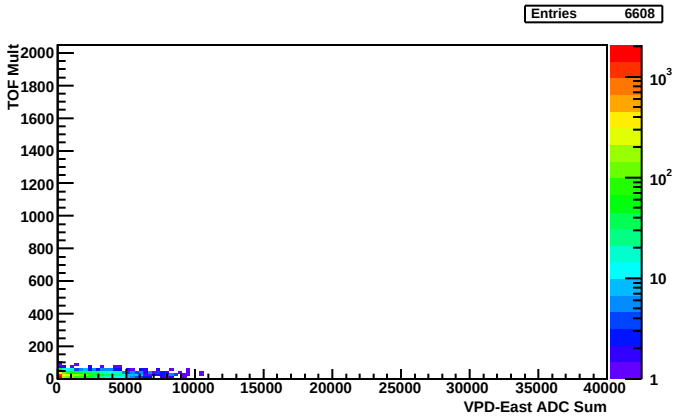

BBQ-VP004 (HI threshold)
Entries 105728
TAC
QT Input Channel

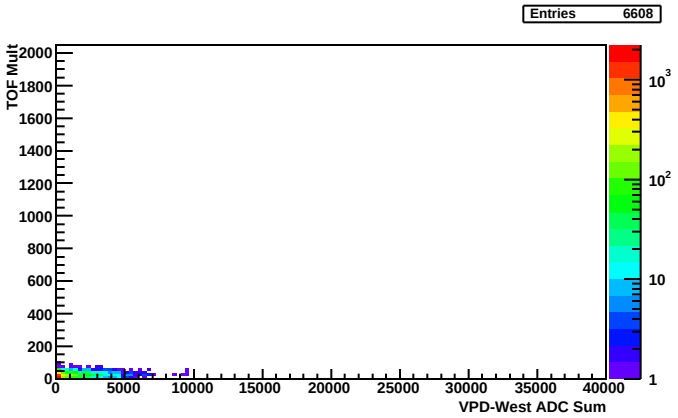

Entries 6608
TOF Mult
BBC-L-East ADC Sum

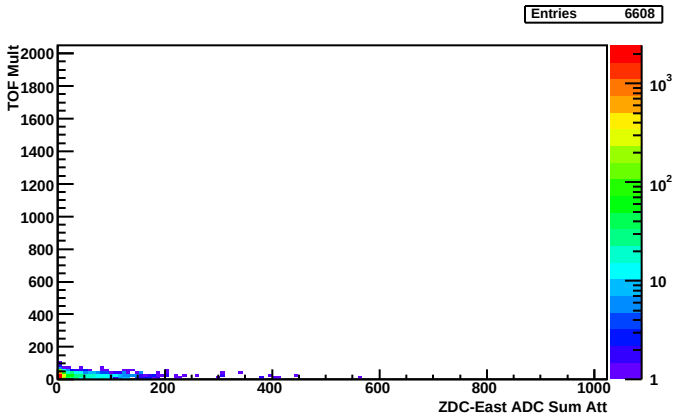

Entries 6608
TOF Mult
BBC-L-West ADC Sum

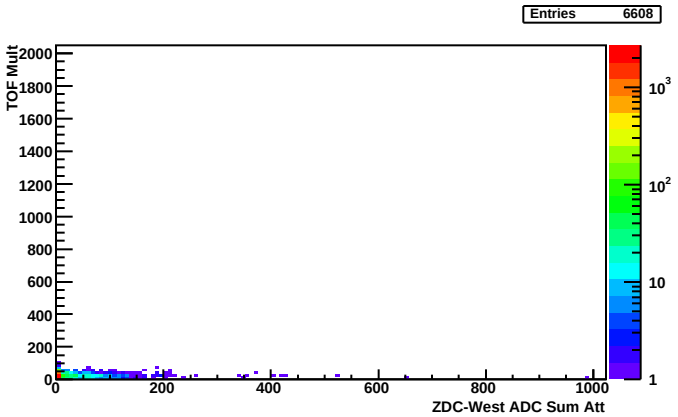

Entries 6608
TOF Mult
BBC-S-East ADC Sum

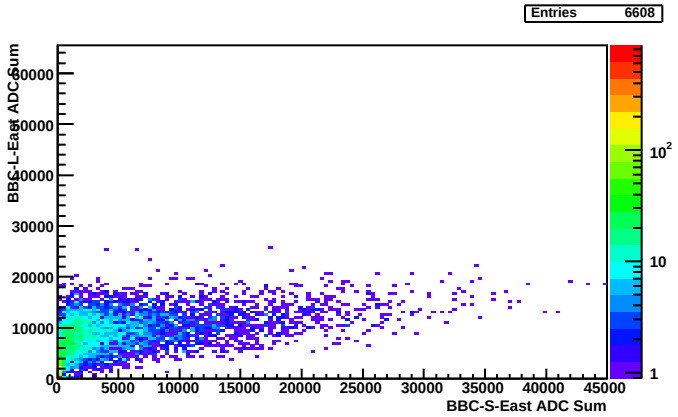

Entries 6608
TOF Mult
BBC-S-West ADC Sum

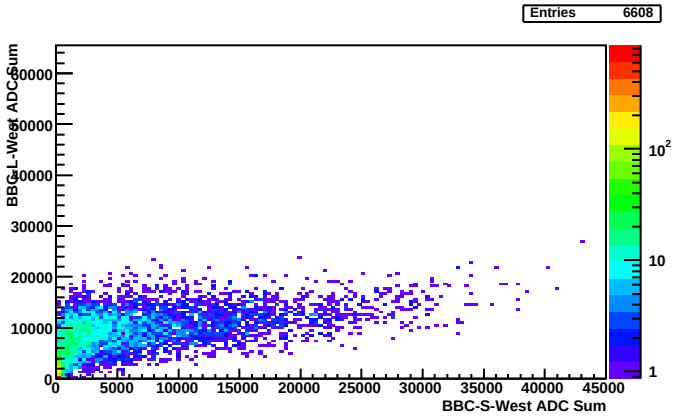

Entries 6608
TOF Mult
VPD-East ADC Sum

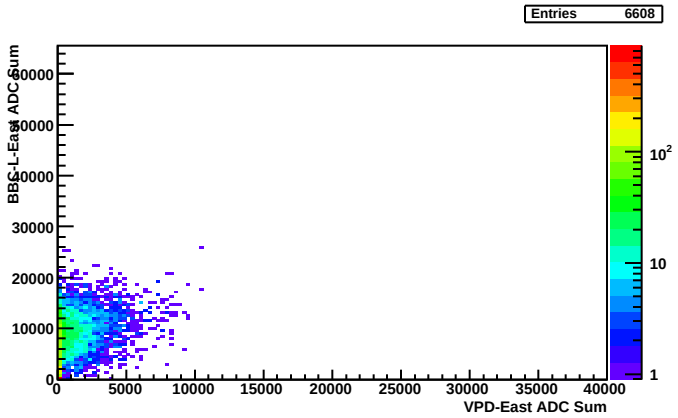

Entries 6608
TOF Mult
VPD-West ADC Sum

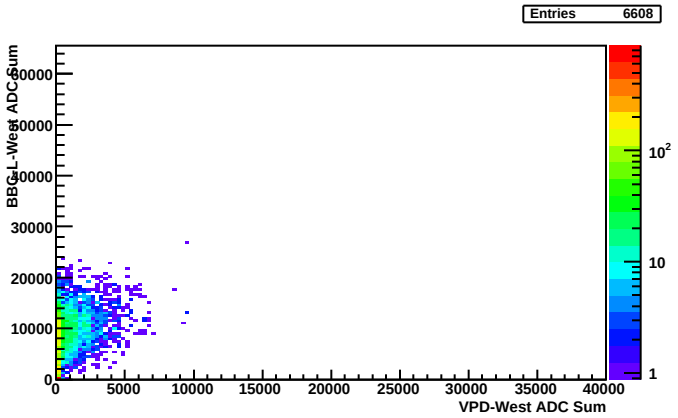

Entries 6608
TOF Mult
ZDC-East ADC Sum Att

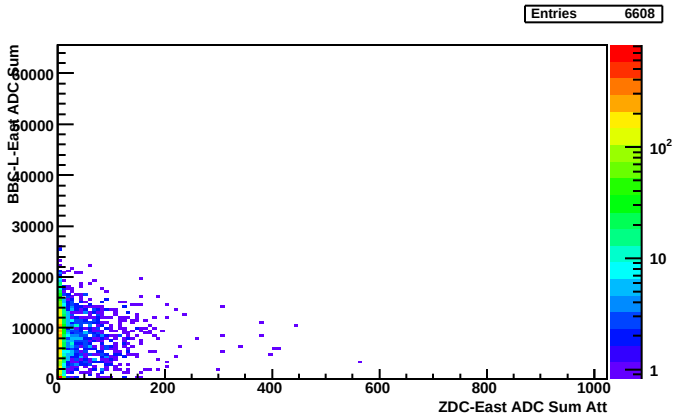

Entries 6608
TOF Mult
ZDC-West ADC Sum Att

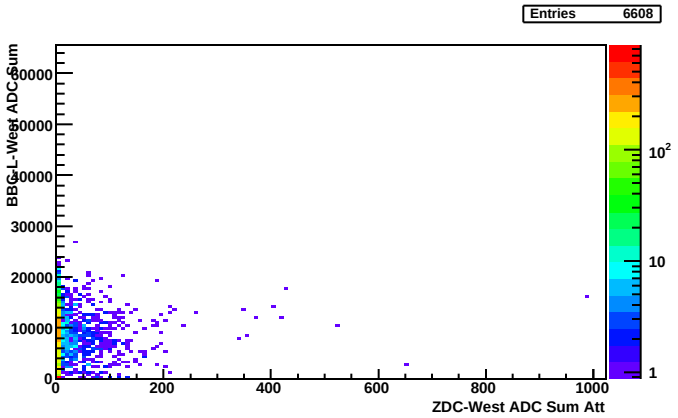

Entries 6608
BBC-L-East ADC Sum
BBC-S-East ADC Sum

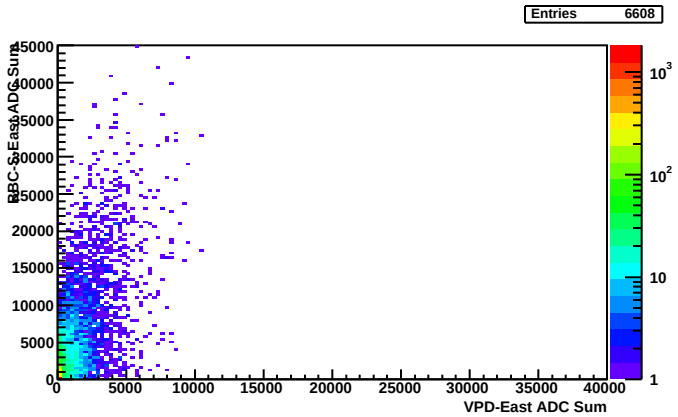

Entries 6608
BBC-L-West ADC Sum
BBC-S-West ADC Sum

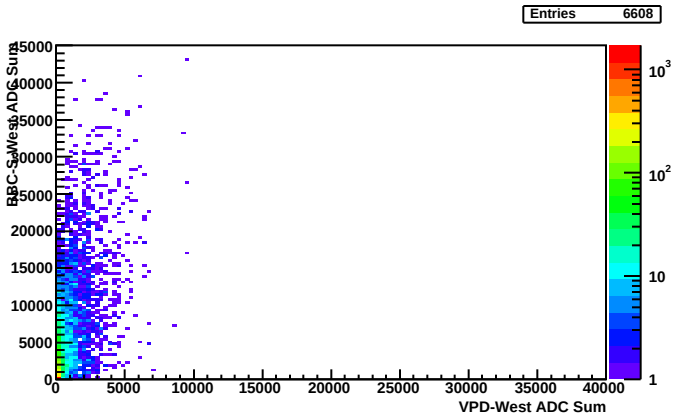

Entries 6608
BBC-L-East ADC Sum
VPD-East ADC Sum

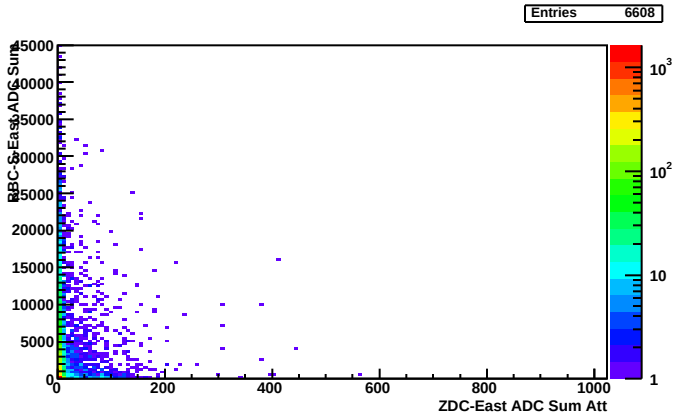

Entries 6608
BBC-L-West ADC Sum
VPD-West ADC Sum

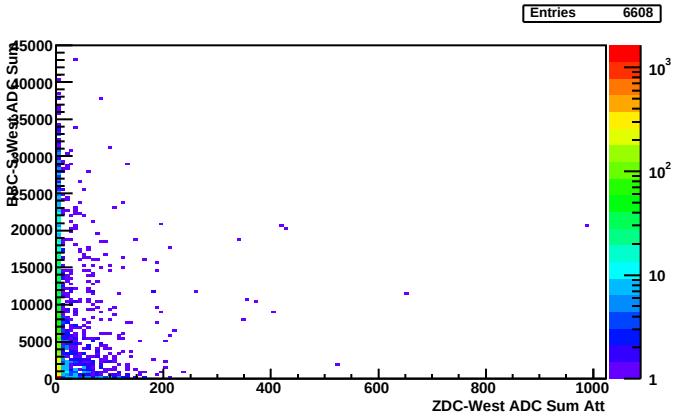

Entries 6608
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

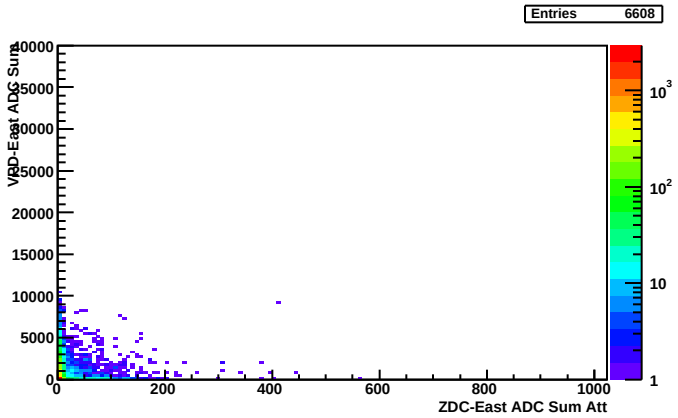

Entries 6608
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

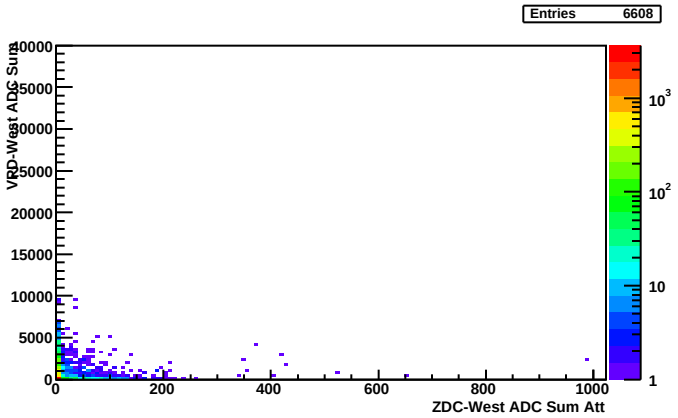

Entries 6608
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 6608
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 6608
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 6608
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 6608
VPD-East ADC Sum
ZDC-East ADC Sum Att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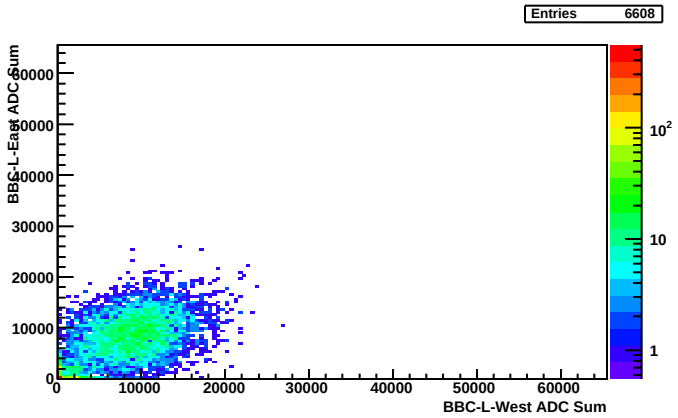
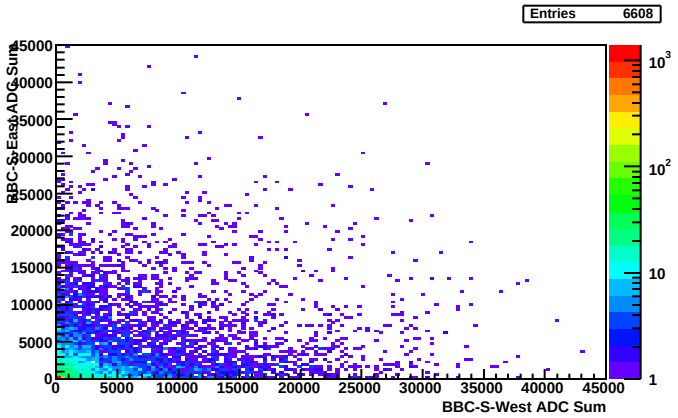
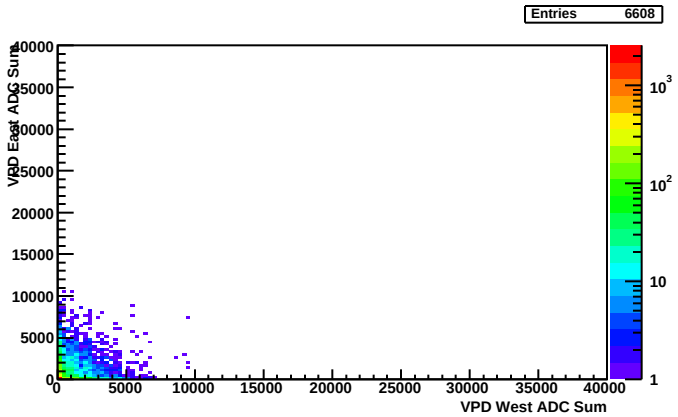
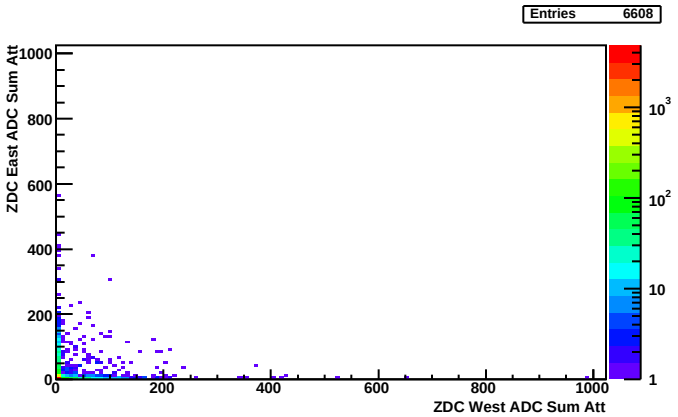
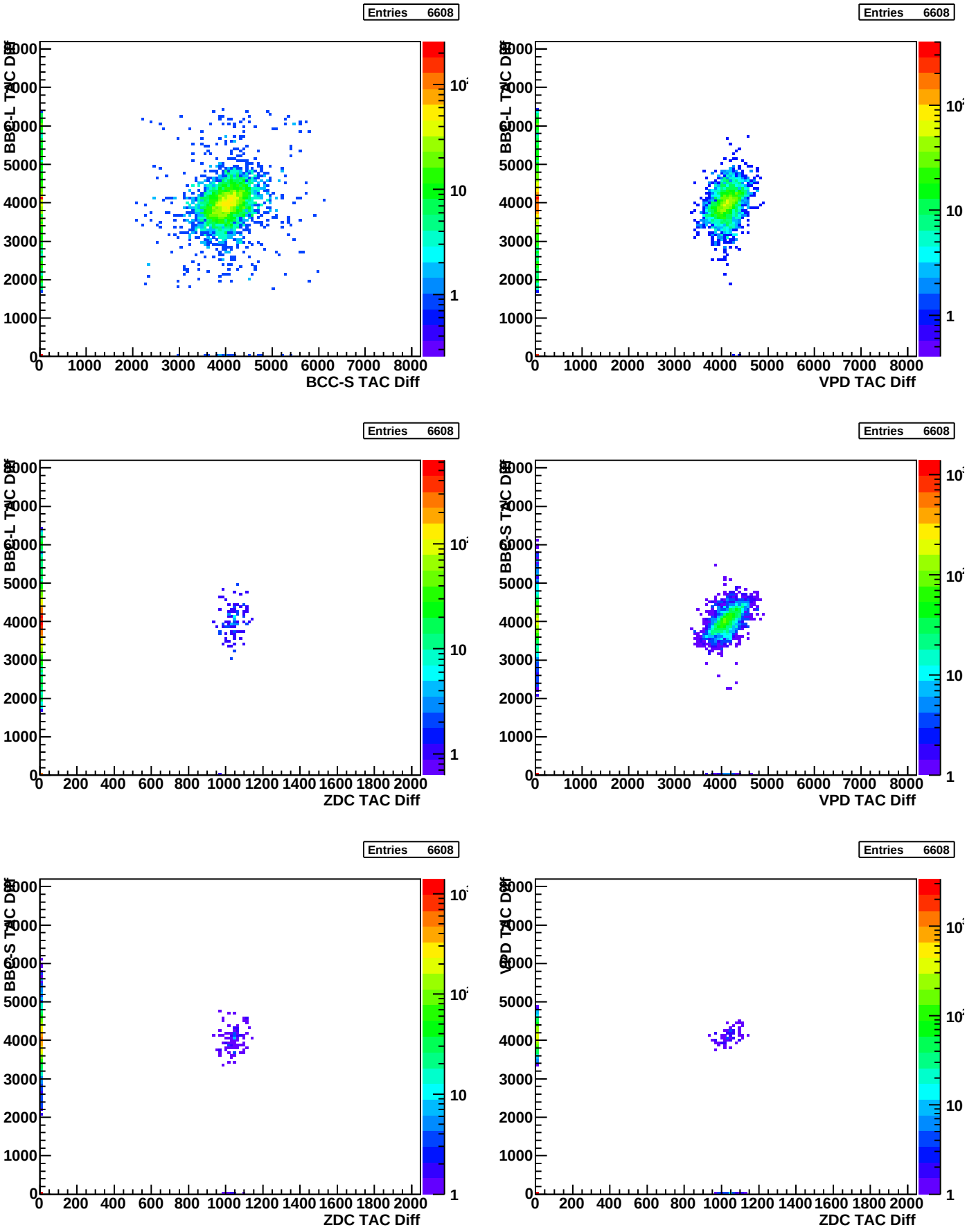
VPD-West ADC Sum
ZDC-West ADC Sum Att

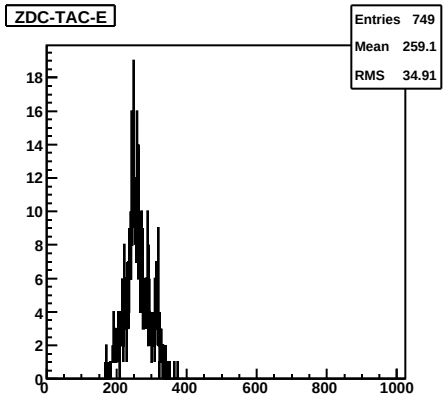

Entries 6608
BBC-L-East ADC Sum
BBC-L-West ADC Sum

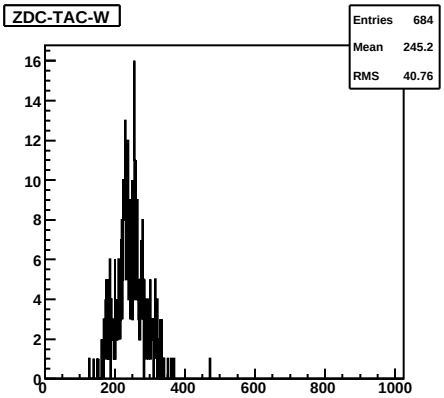

Entries 6608
BBC-S-East ADC Sum
BBC-S-West ADC Sum

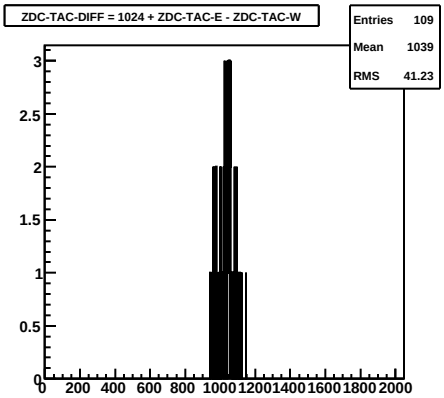

Entries 6608
VPD East ADC Sum
VPD West ADC Sum

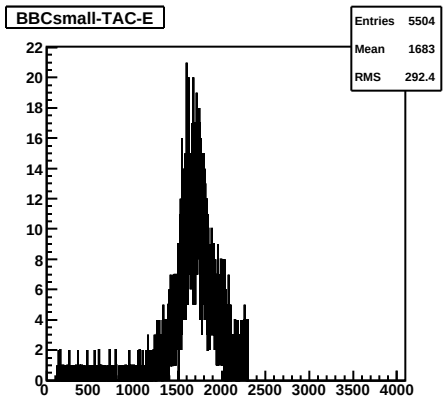

Entries 6608
ZDC East ADC Sum Att
ZDC West ADC Sum Att

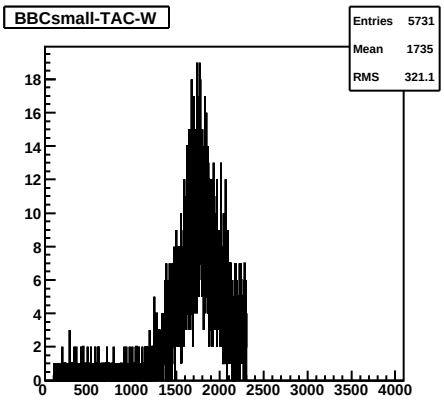

Entries 6608
BBC-L TAC Diff
BCC-S TAC Diff
Entries 6608
BBC-L TAC Diff
VPD TAC Diff
Entries 6608
BBC-L TAC Diff
ZDC TAC Diff
Entries 6608
BBC-S TAC Diff
VPD TAC Diff
Entries 6608
BBC-S TAC Diff
ZDC TAC Diff
Entries 6608
VPD TAC Diff
ZDC TAC Diff

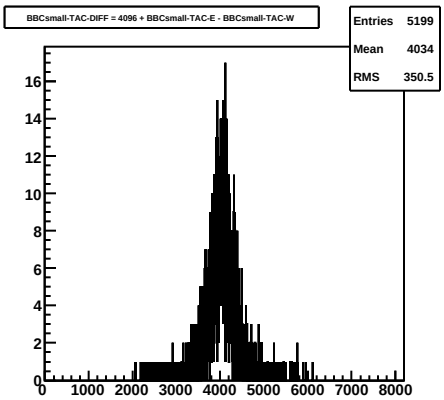

ZDC-TAC-E
Entries 749
Mean 259.1
RMS 34.91

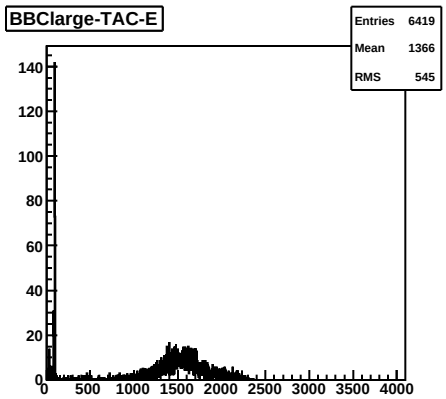

ZDC-TAC-W
Entries 684
Mean 245.2
RMS 40.76

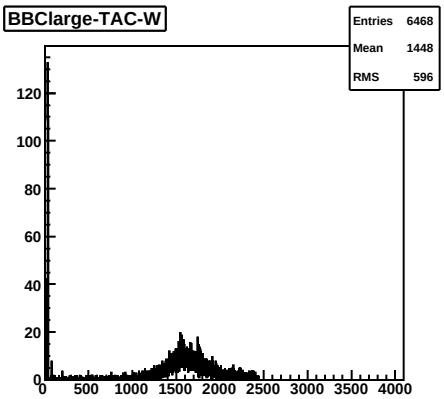

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 109
Mean 1039
RMS 41.23

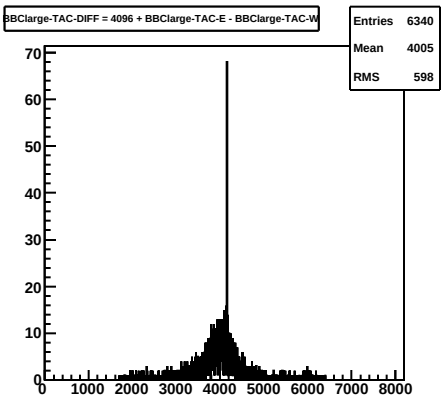

BBCsmall-TAC-E
Entries 5504
Mean 1683
RMS 292.4

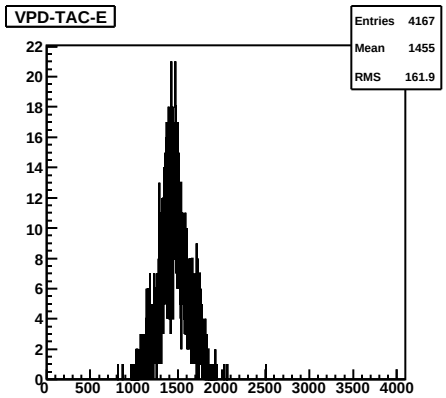

BBCsmall-TAC-W
Entries 5731
Mean 1735
RMS 321.1

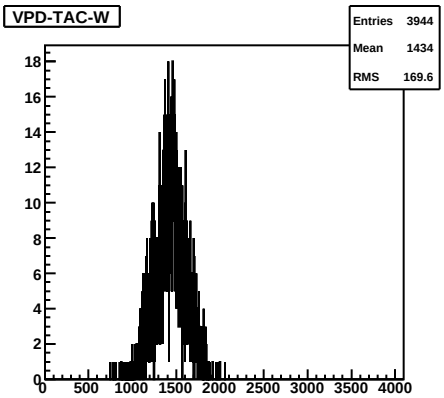

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 5199
Mean 4034
RMS 350.5

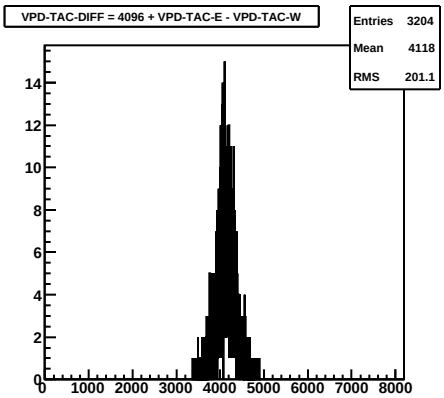

BBClarge-TAC-E
Entries 6419
Mean 1366
RMS 545

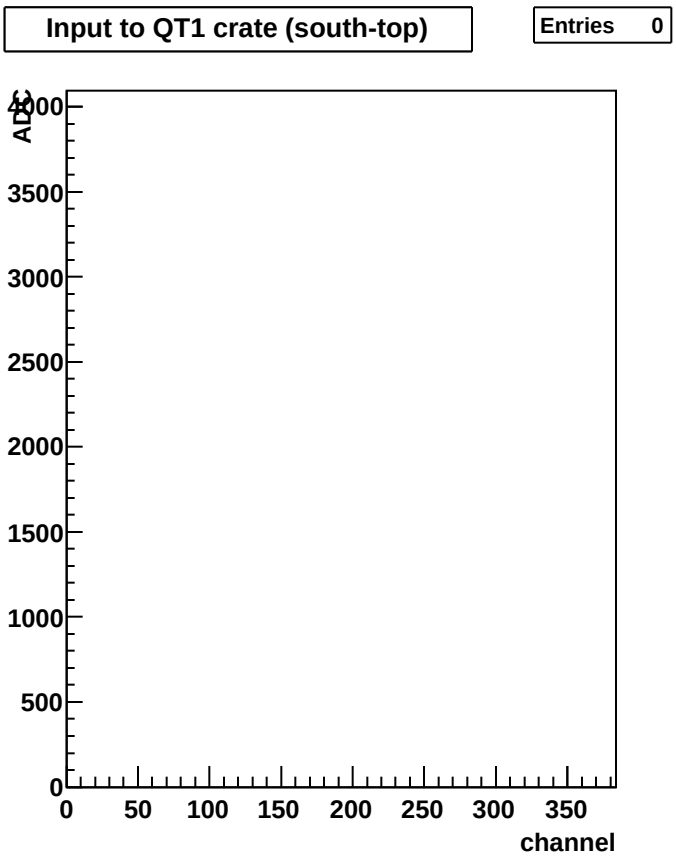

BBClarge-TAC-W
Entries 6468
Mean 1448
RMS 596

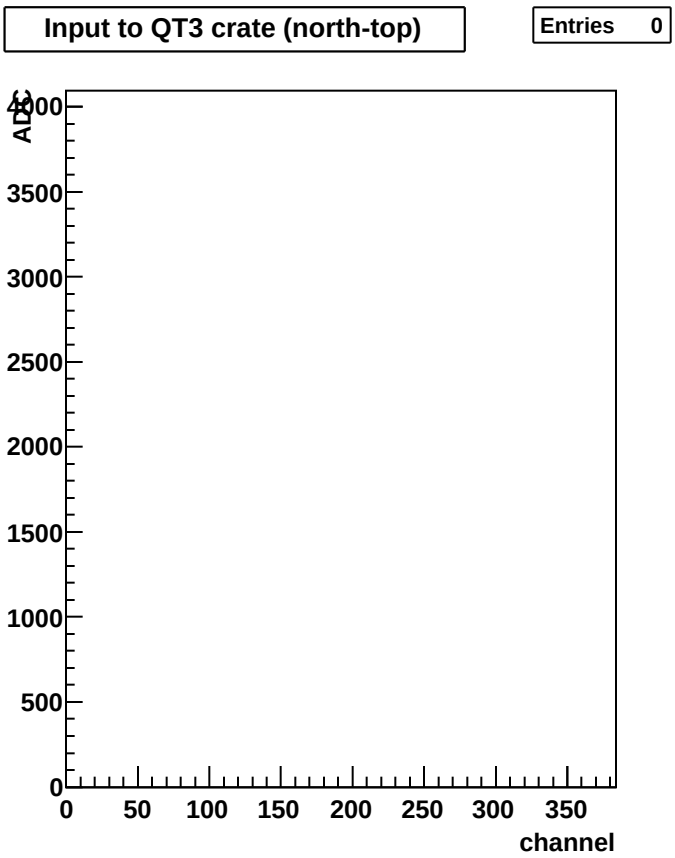

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 6340
Mean 4005
RMS 598

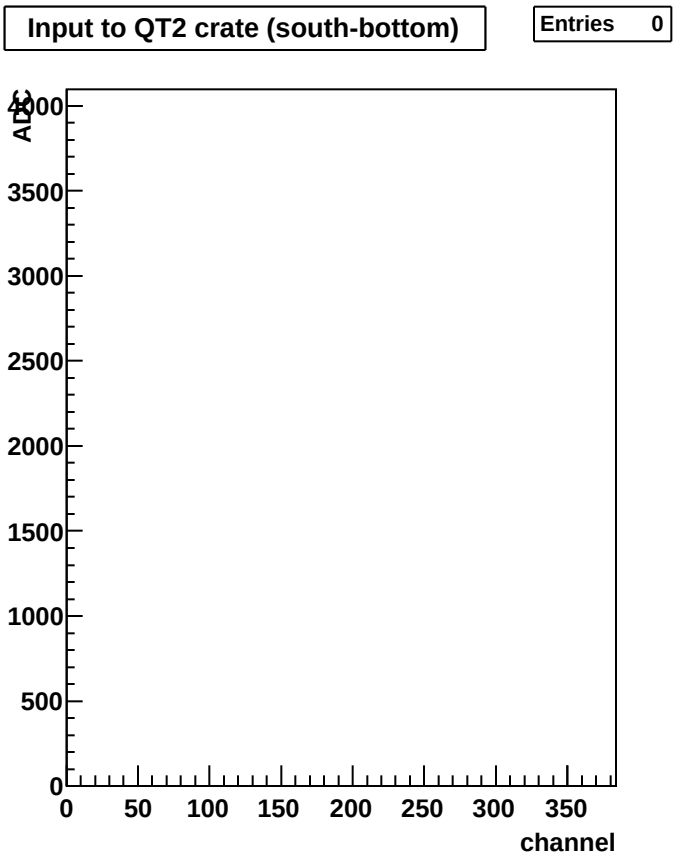

VPD-TAC-E
Entries 4167
Mean 1455
RMS 161.9

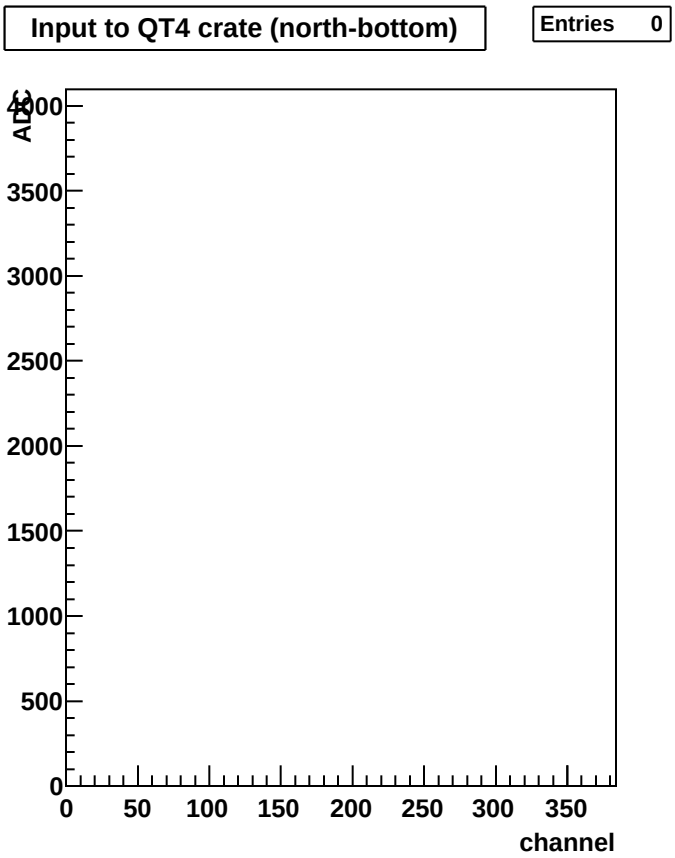

VPD-TAC-W
Entries 3944
Mean 1434
RMS 169.6

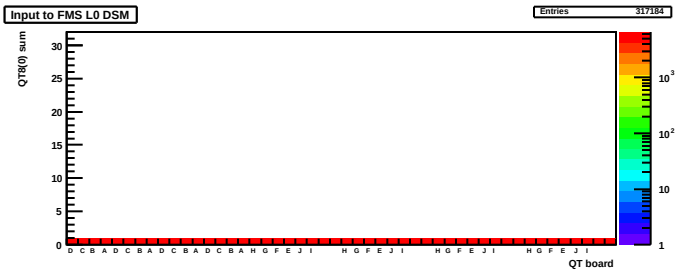

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 3204
Mean 4118
RMS 201.1

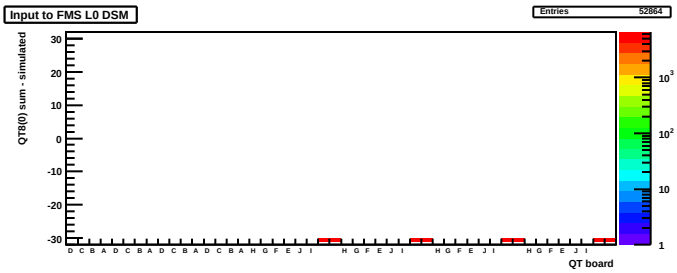

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

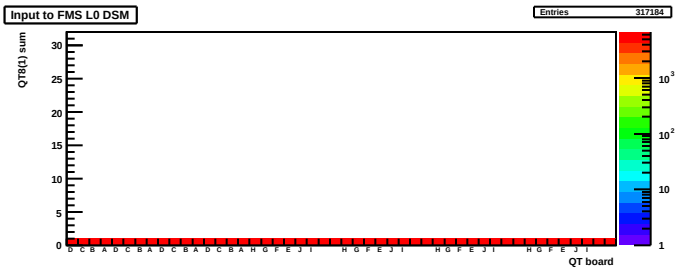

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

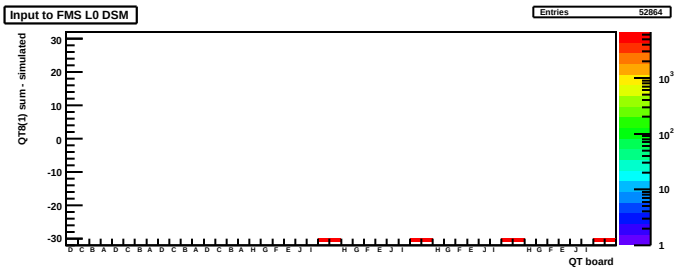

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

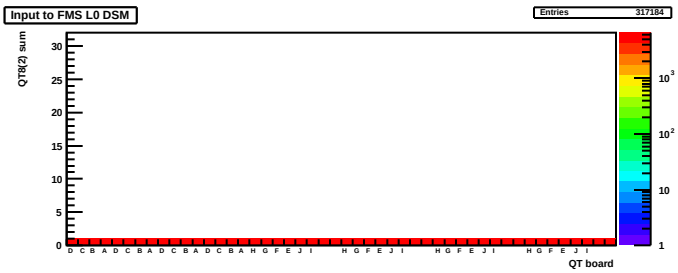

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

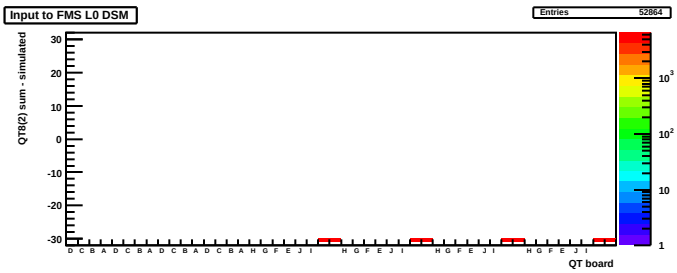

Input to FMS L0 DSM
Entries 317184
QT8(0) sum
QT board

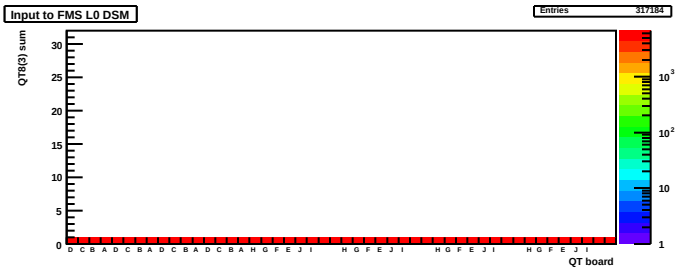

Input to FMS L0 DSM
Entries 52864
QT8(0) sum - simulated
QT board

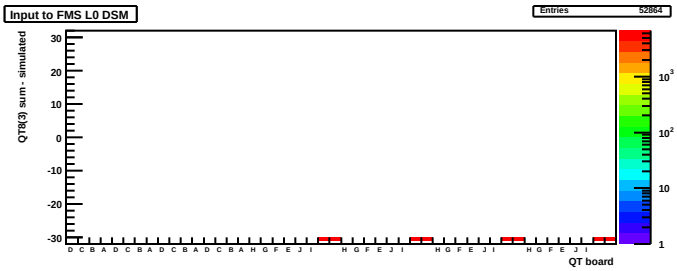

Input to FMS L0 DSM
Entries 317184
QT8(1) sum
QT board

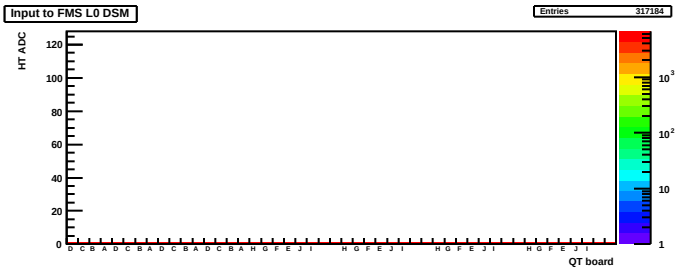

Input to FMS L0 DSM
Entries 52864
QT8(1) sum - simulated
QT board

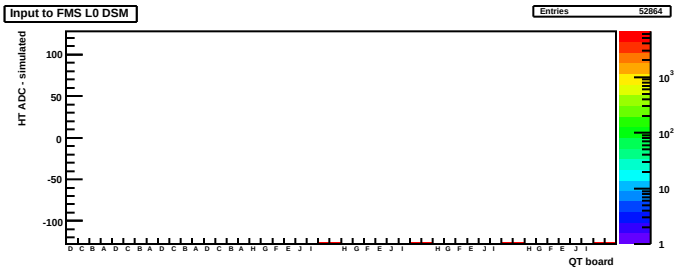

Input to FMS L0 DSM
Entries 317184
QT8(2) sum
QT board

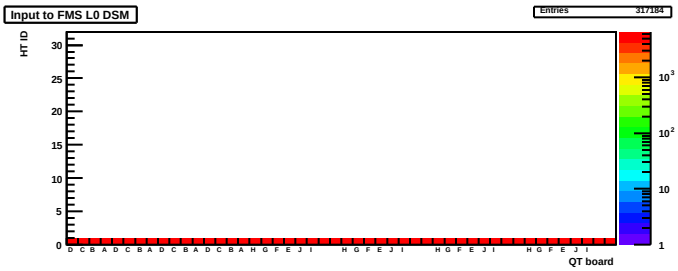

Input to FMS L0 DSM
Entries 52864
QT8(2) sum - simulated
QT board

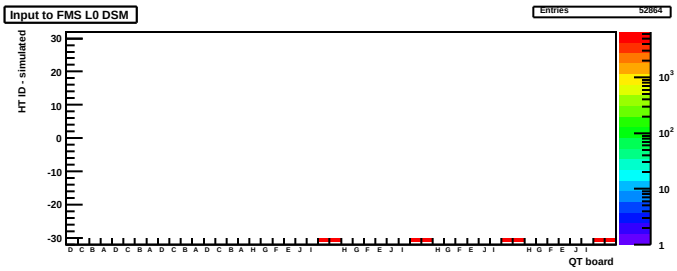

Input to FMS L0 DSM
Entries 317184
QT8(3) sum
QT board

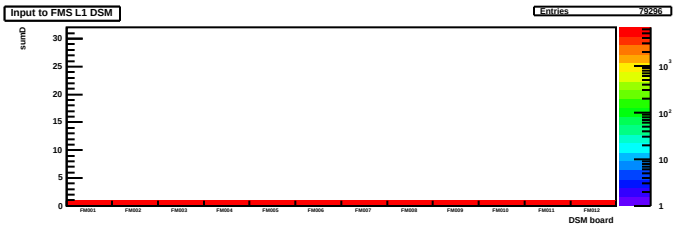

Input to FMS L0 DSM
Entries 52864
QT8(3) sum - simulated
QT board

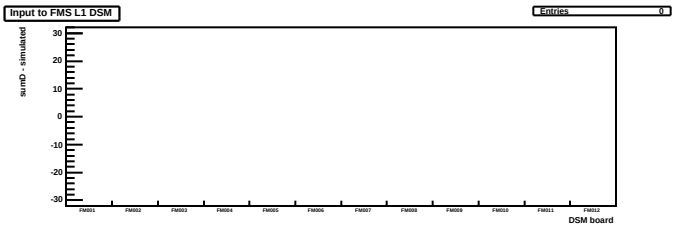

Input to FMS L0 DSM
Entries 317184
HT ADC
QT board

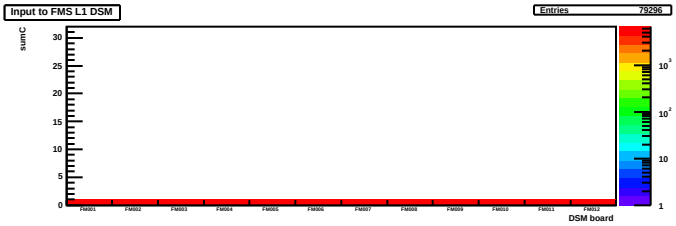

Input to FMS L0 DSM
Entries 52864
HT ADC - simulated
QT board

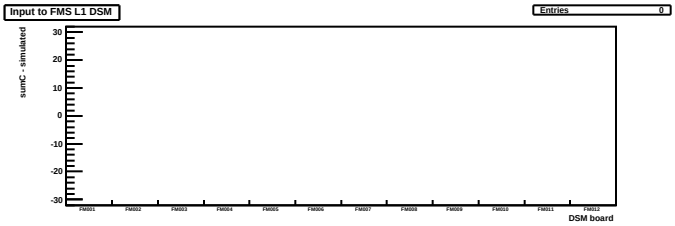

Input to FMS L0 DSM
Entries 317184
HT ID
QT board

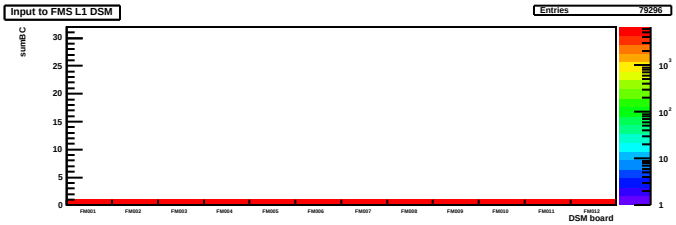

Input to FMS L0 DSM
Entries 52864
HT ID - simulated
QT board

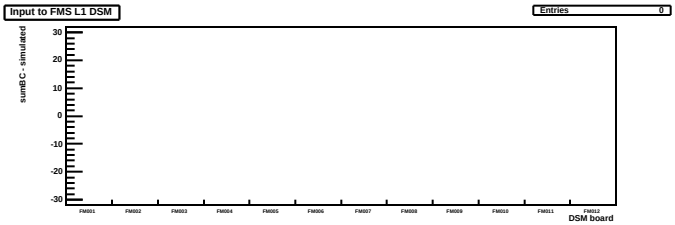

Input to FMS L1 DSM
Entries 79296
sumD
DSM board

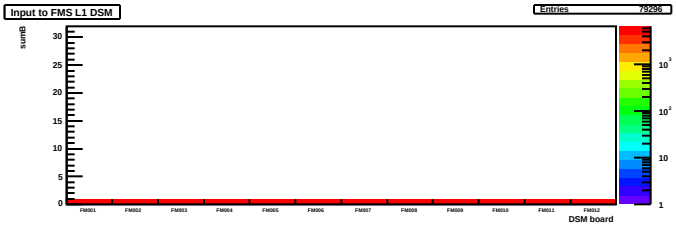

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

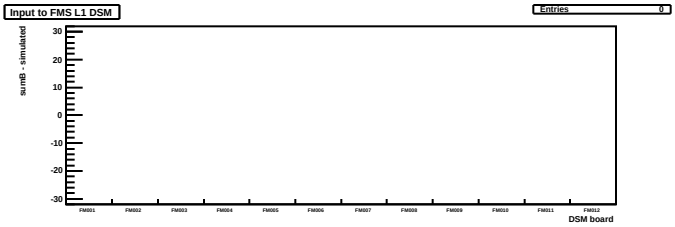

Input to FMS L1 DSM
Entries 79296
sumC
DSM board

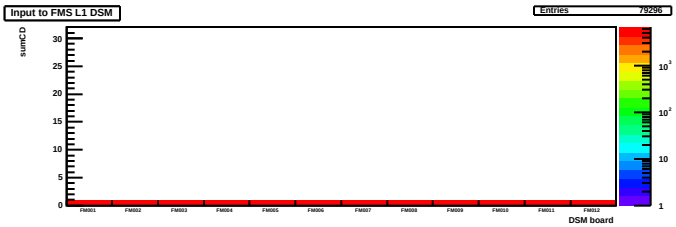

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

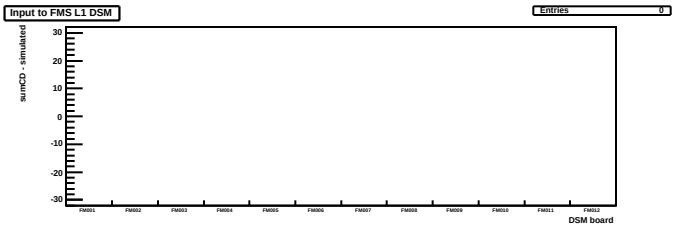

Input to FMS L1 DSM
Entries 79296
sumBC
DSM board

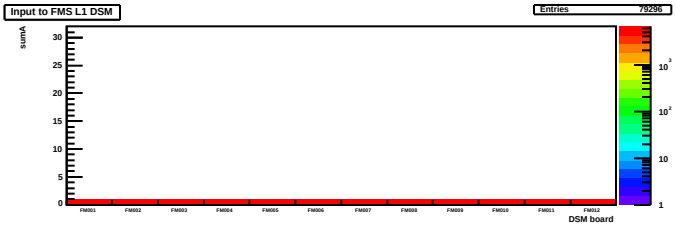

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

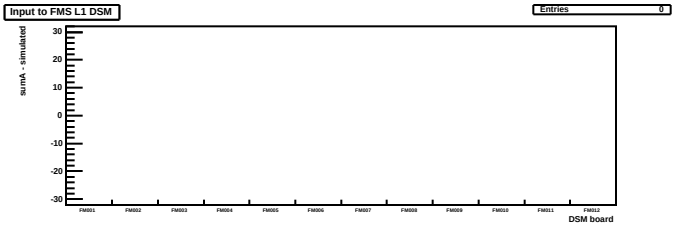

Input to FMS L1 DSM
Entries 79296
sumB
DSM board

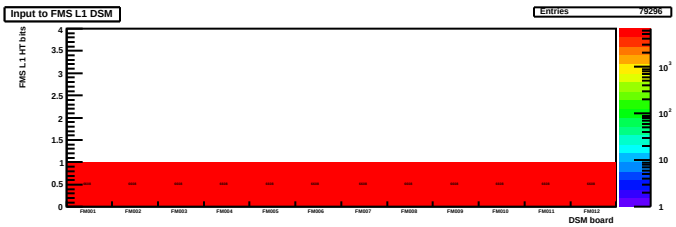

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

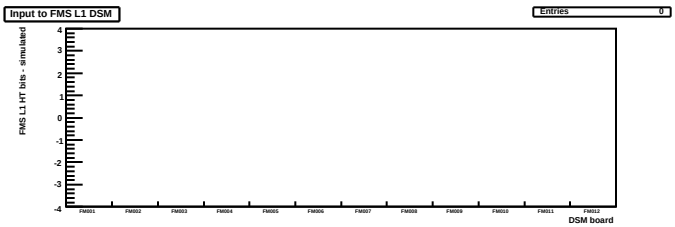

Input to FMS L1 DSM
Entries 79296
sumCD
DSM board

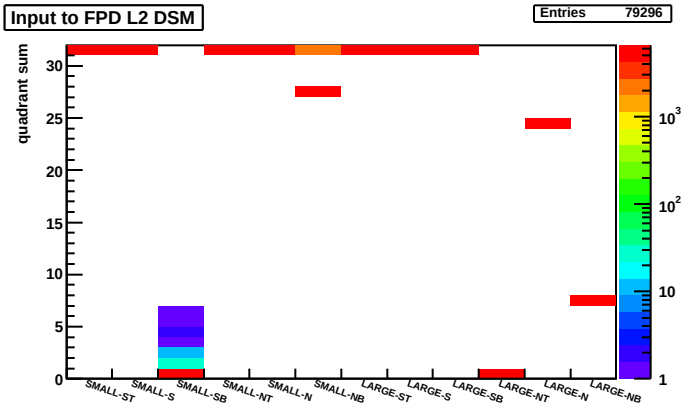

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

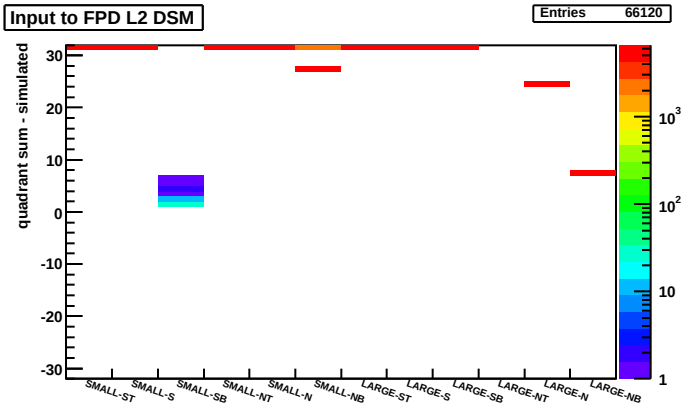

Input to FMS L1 DSM
Entries 79296
sumA
DSM board

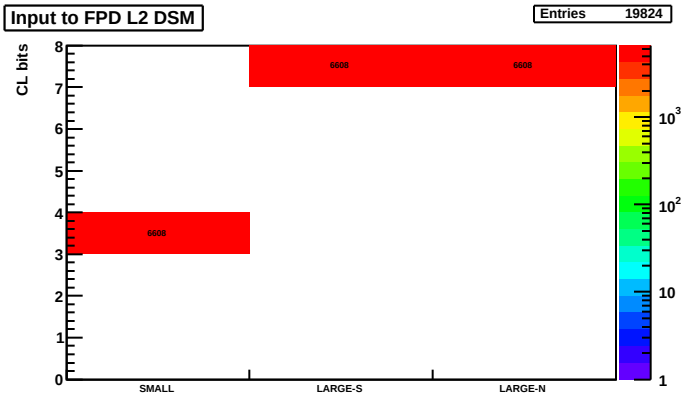

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

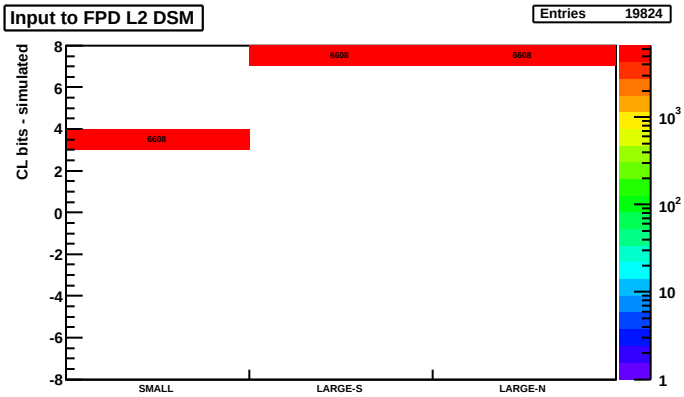

Input to FMS L1 DSM
Entries 79296
FMS L1 HT bits
DSM board

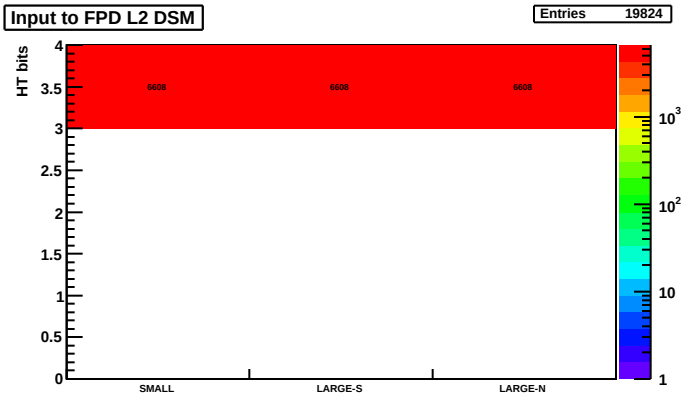

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

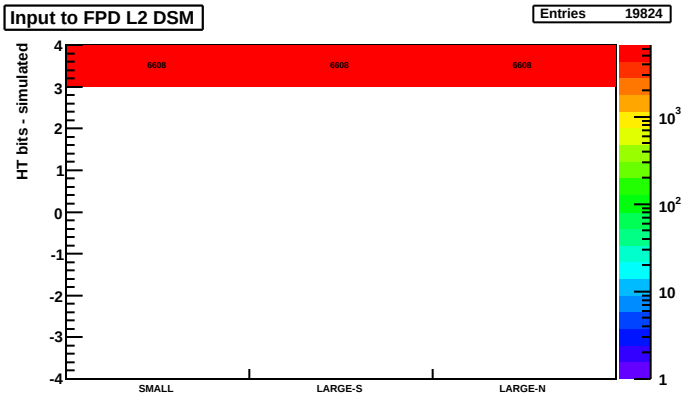

Input to FPD L2 DSM
Entries 79296
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

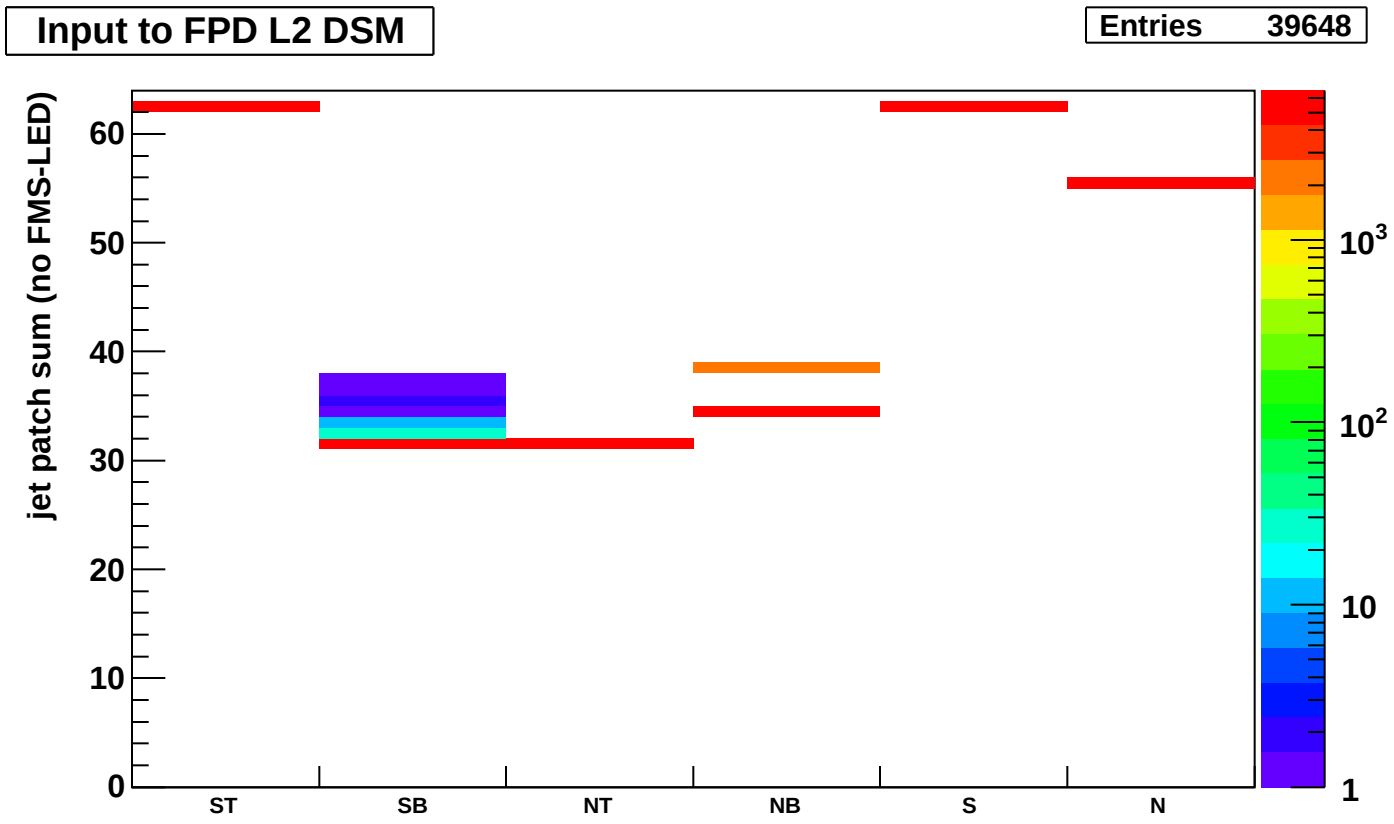

Input to FPD L2 DSM
Entries 66120
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

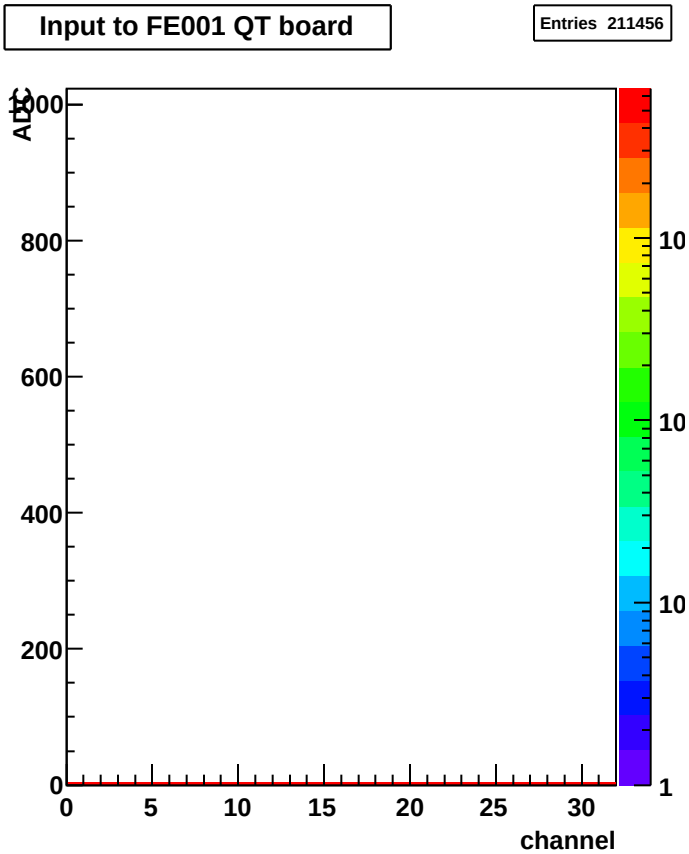

Input to FPD L2 DSM
Entries 19824
CL bits
6608
6608
6608
SMALL
LARGE-S
LARGE-N

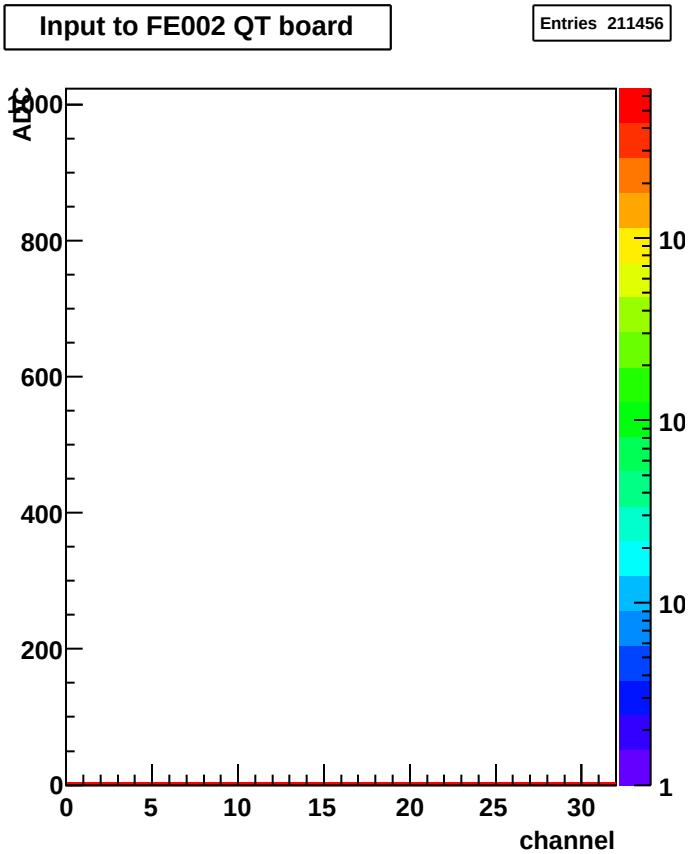

Input to FPD L2 DSM
Entries 19824
CL bits - simulated
6608
6608
6608
SMALL
LARGE-S
LARGE-N

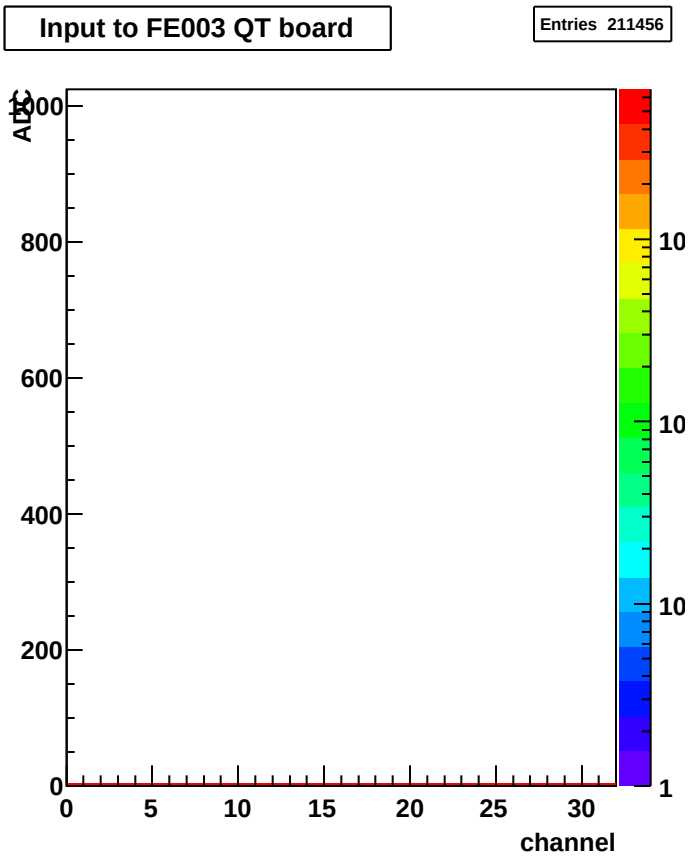

Input to FPD L2 DSM
Entries 19824
HT bits
6608
6608
6608
SMALL
LARGE-S
LARGE-N

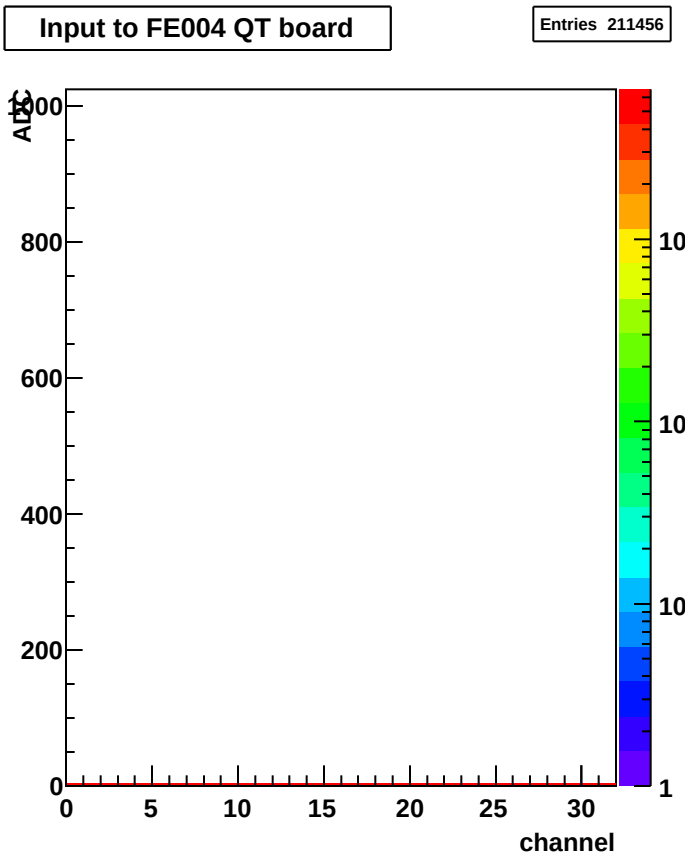

Input to FPD L2 DSM
Entries 19824
HT bits - simulated
6608
6608
6608
SMALL
LARGE-S
LARGE-N

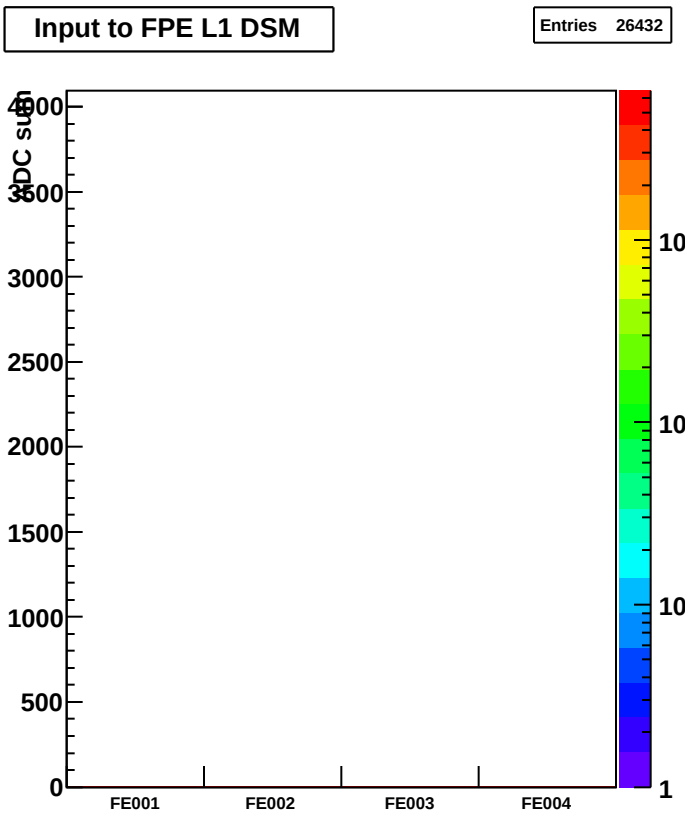

Input to FPD L2 DSM
Entries 39648
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

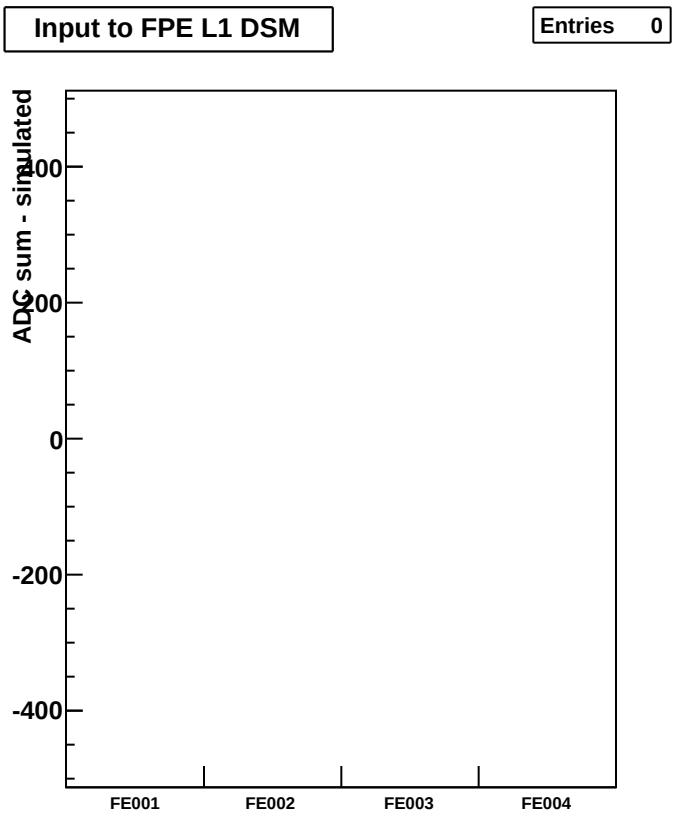

Input to FE001 QT board
Entries 211456
ADC
channel

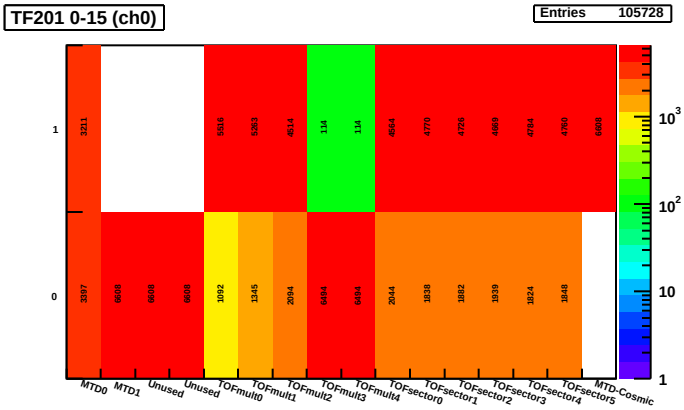

Input to FE002 QT board
Entries 211456
ADC
channel

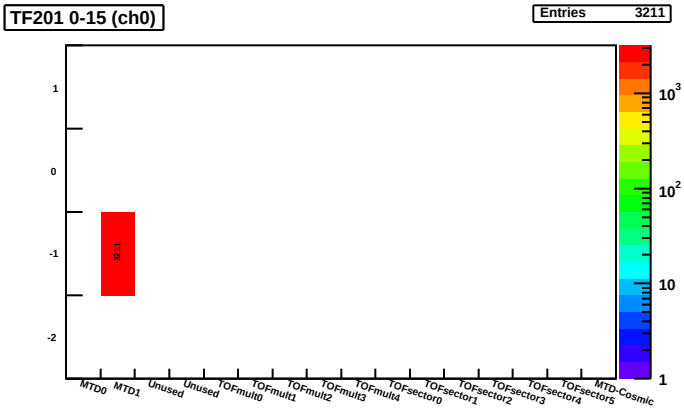

Input to FE003 QT board
Entries 211456
ADC
channel

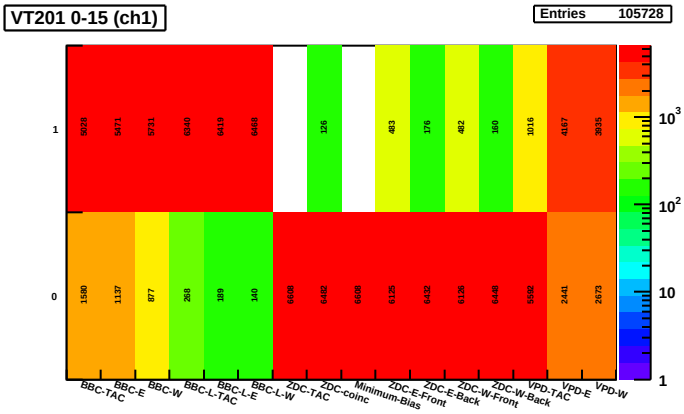

Input to FE004 QT board
Entries 211456
ADC
channel

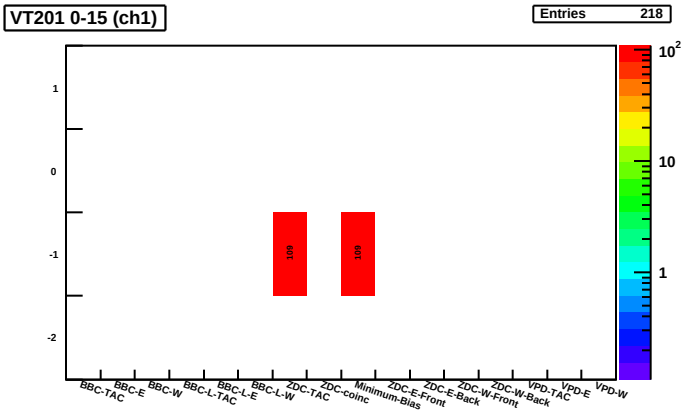

Input to FPE L1 DSM
Entries 26432
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1


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


TF201 0-15 (ch0)
Entries 105728
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 3211
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 105728
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
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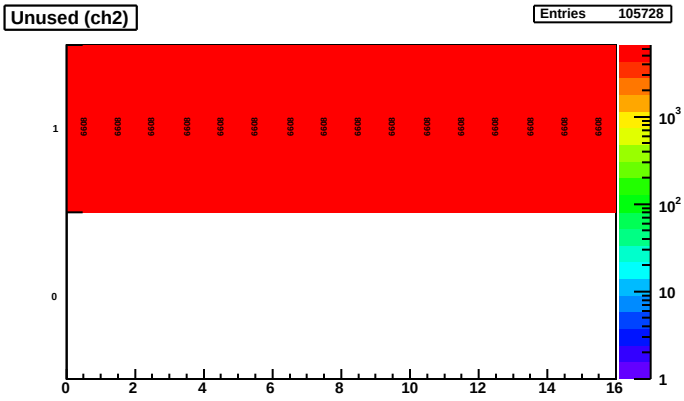
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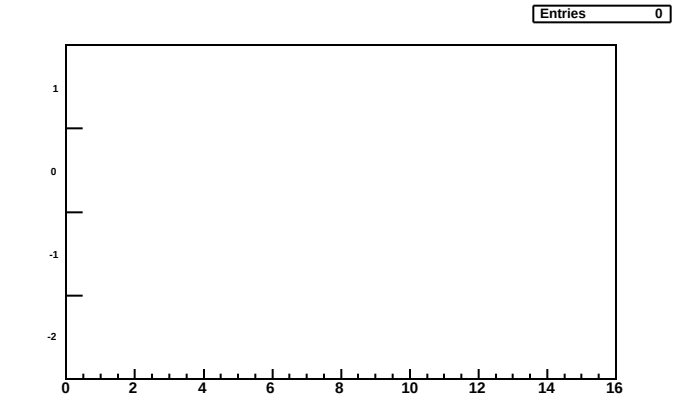
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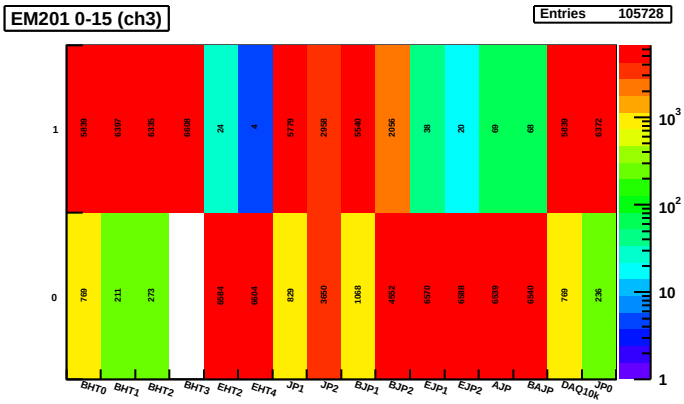
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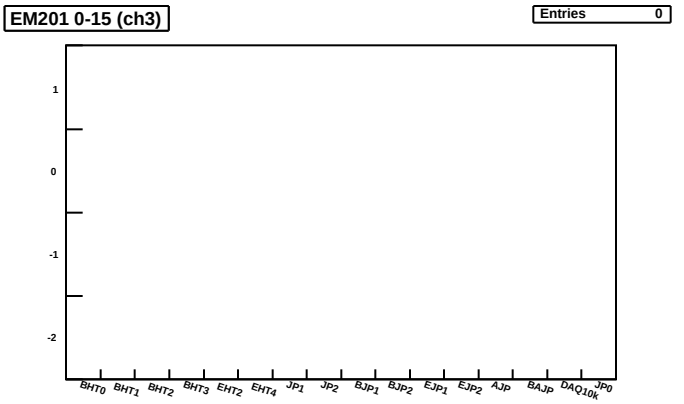
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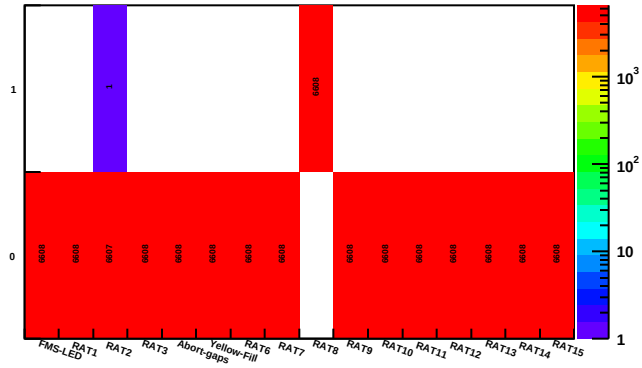
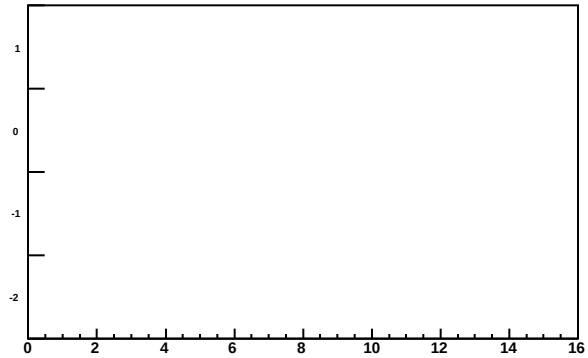
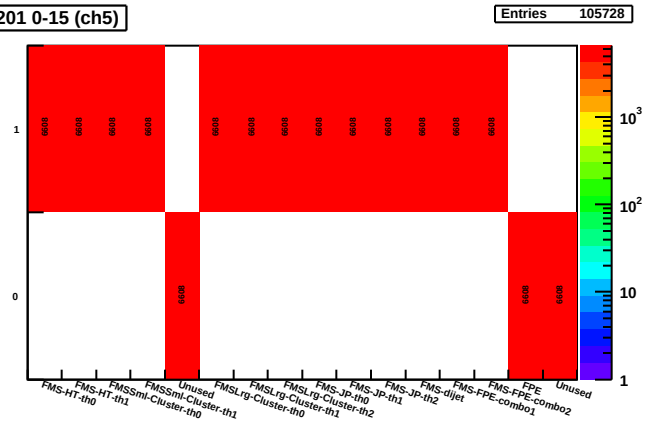
RAT board (ch4)

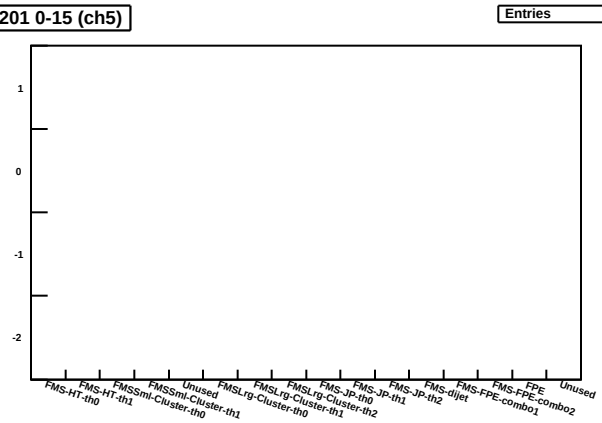




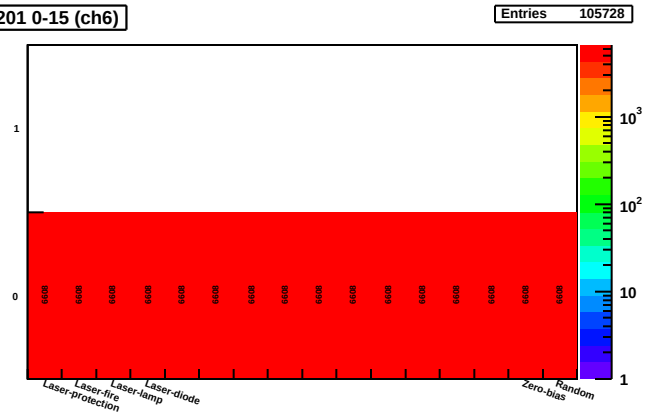
FP201 0-15 (ch5)

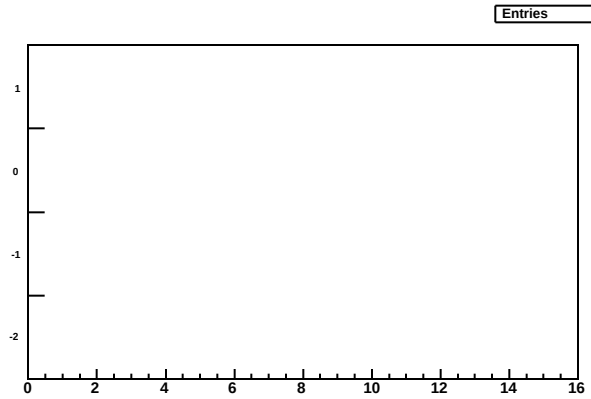
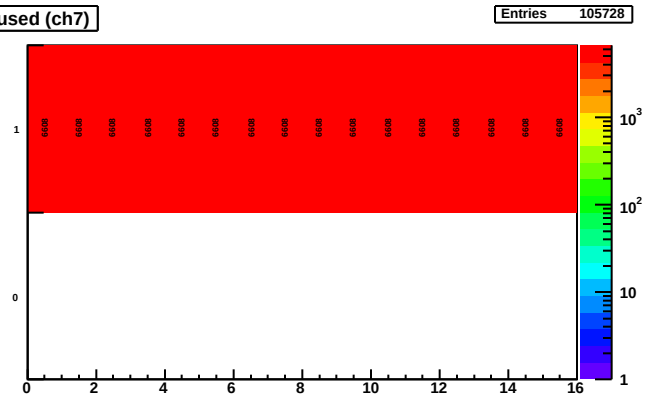
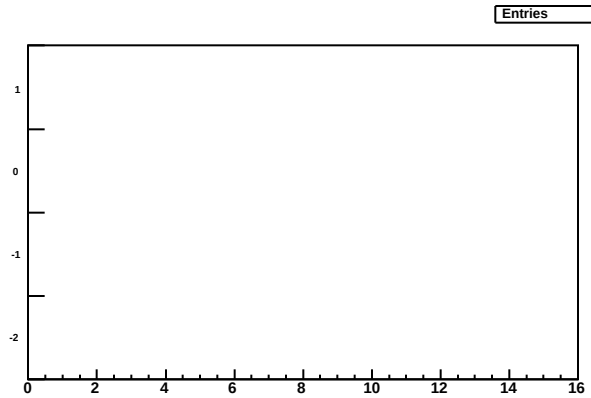


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)