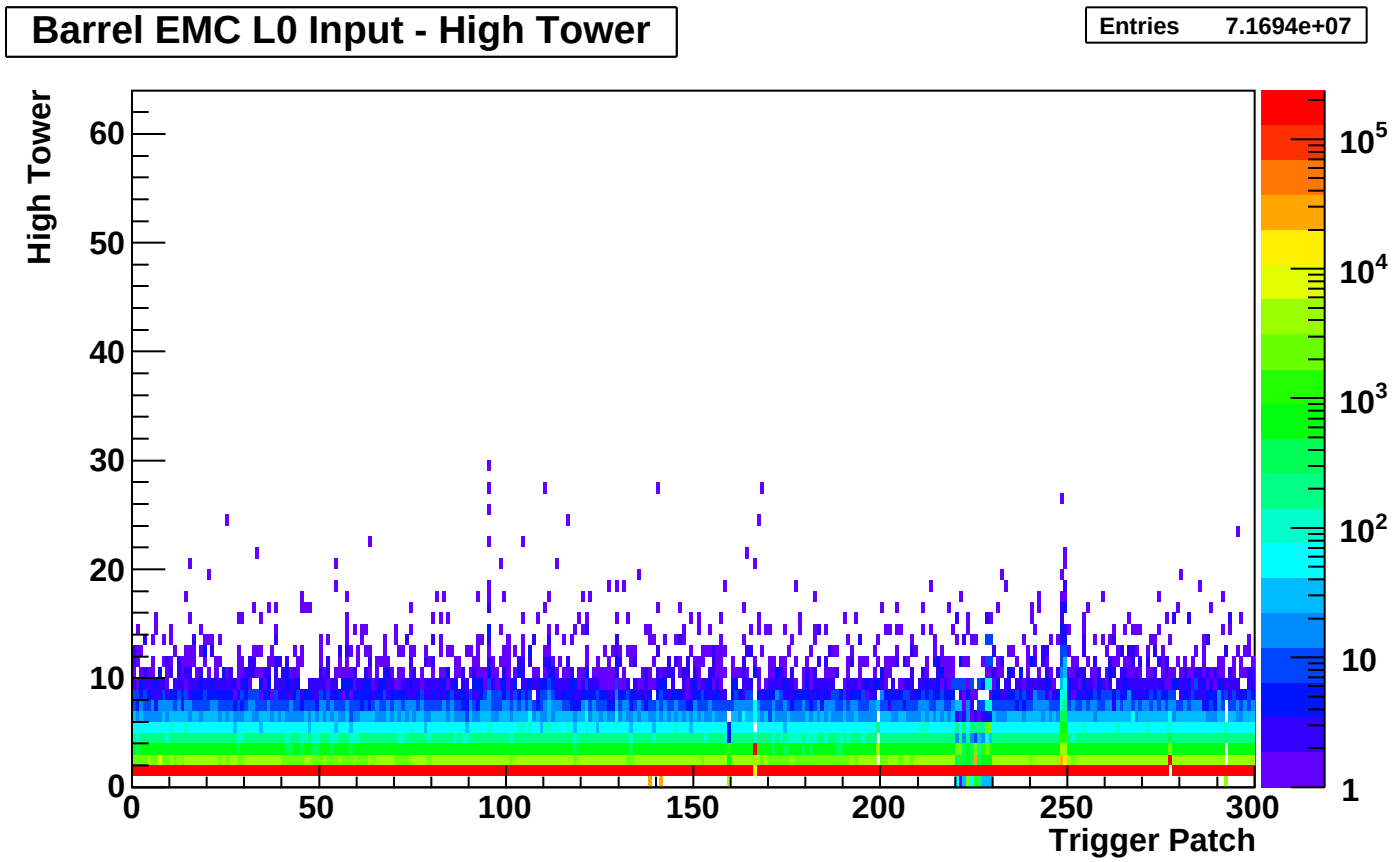
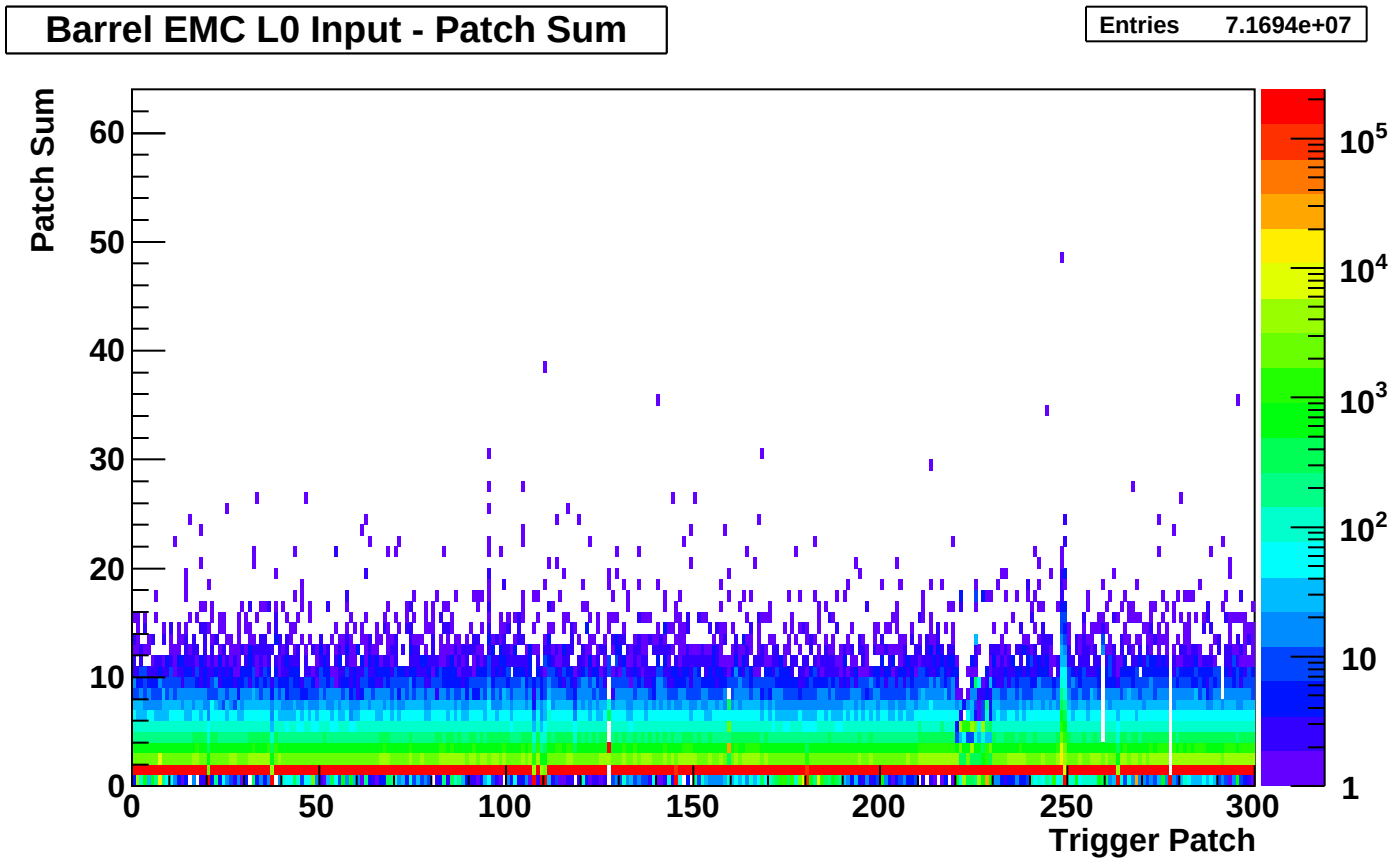
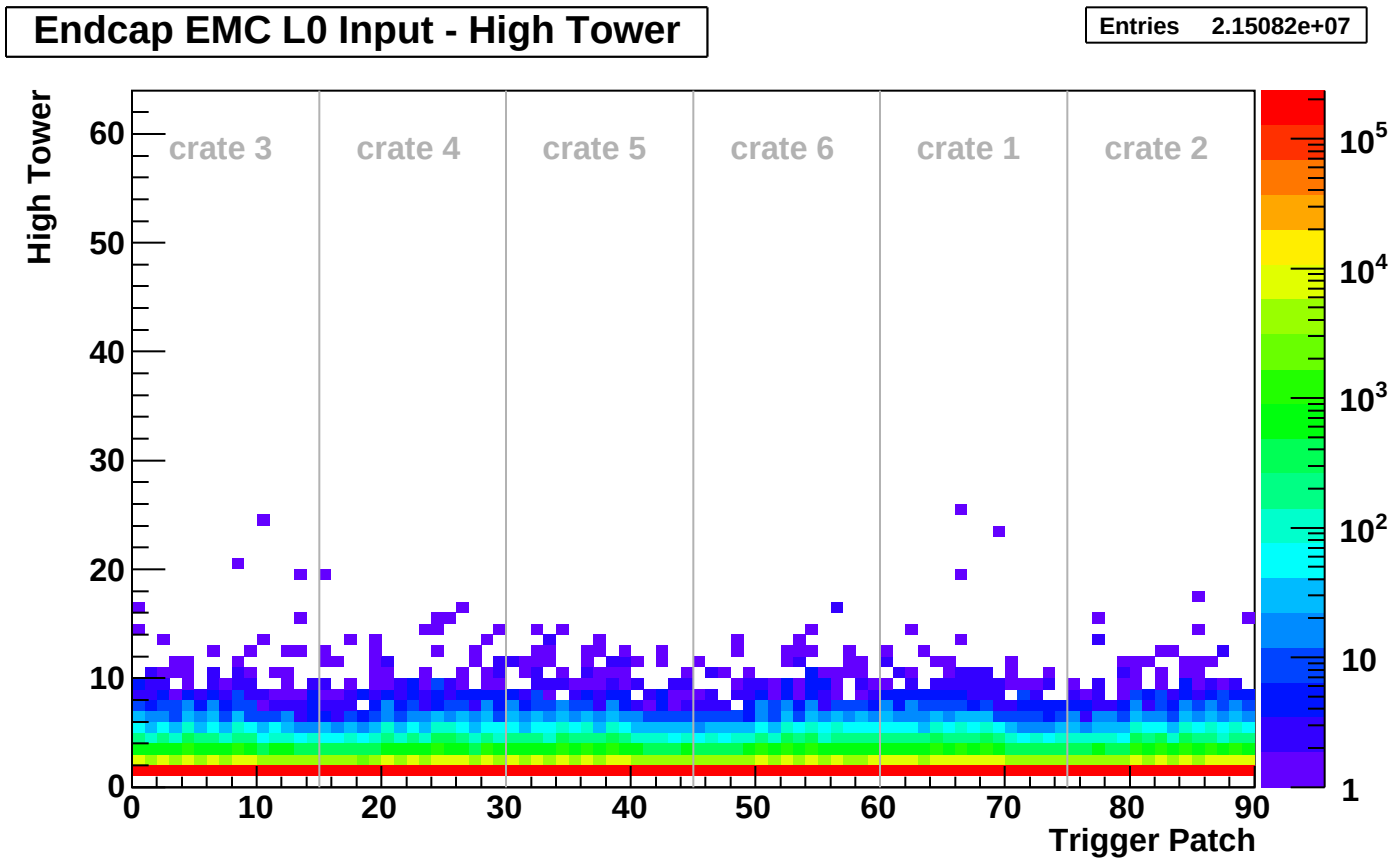
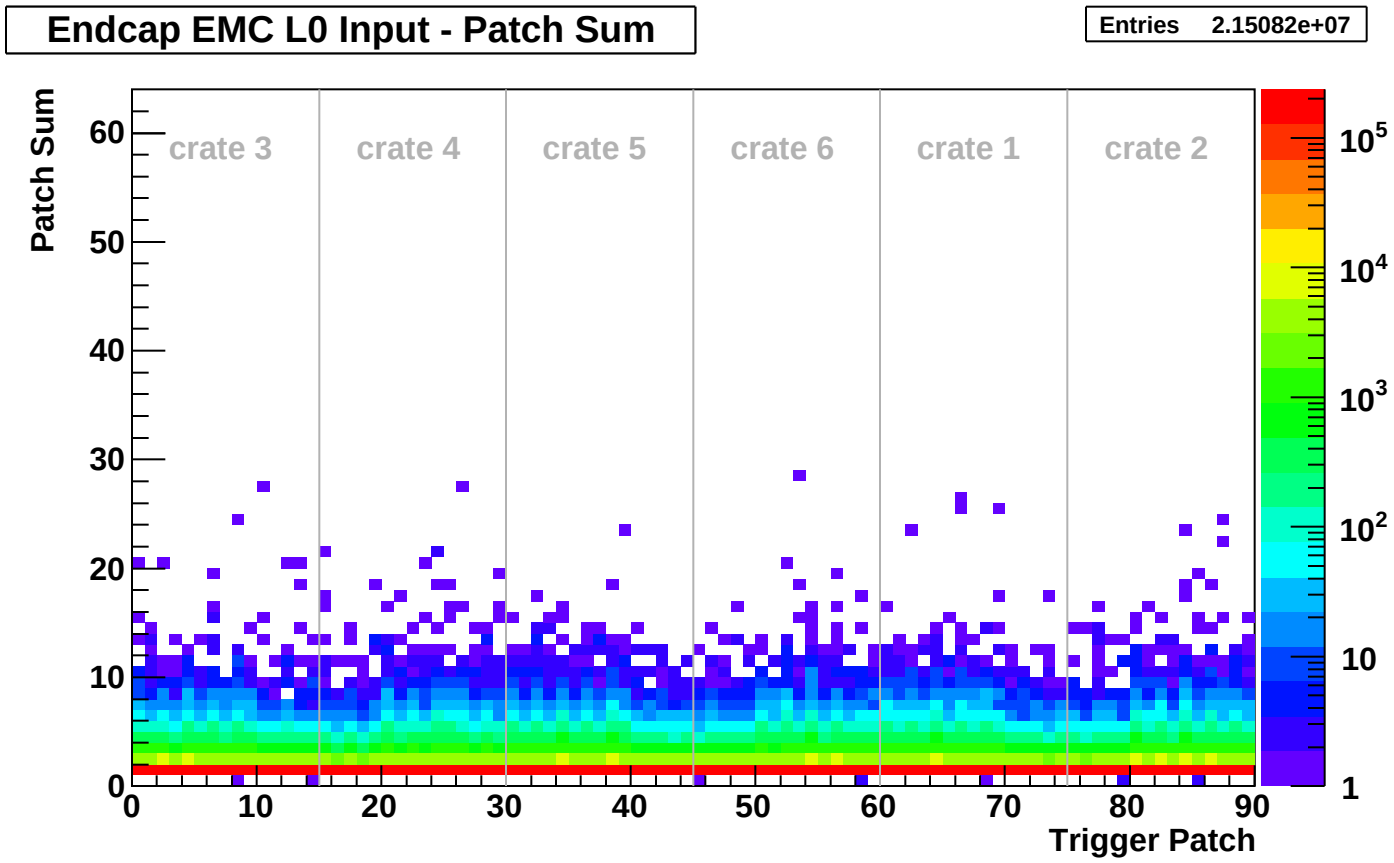
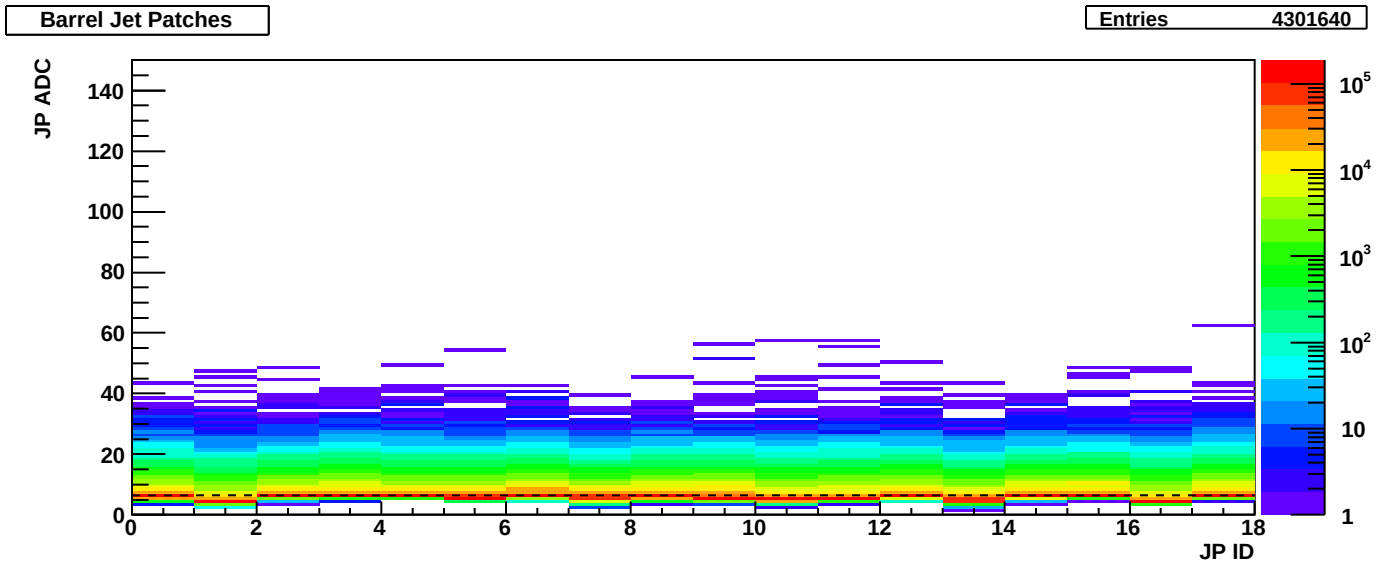
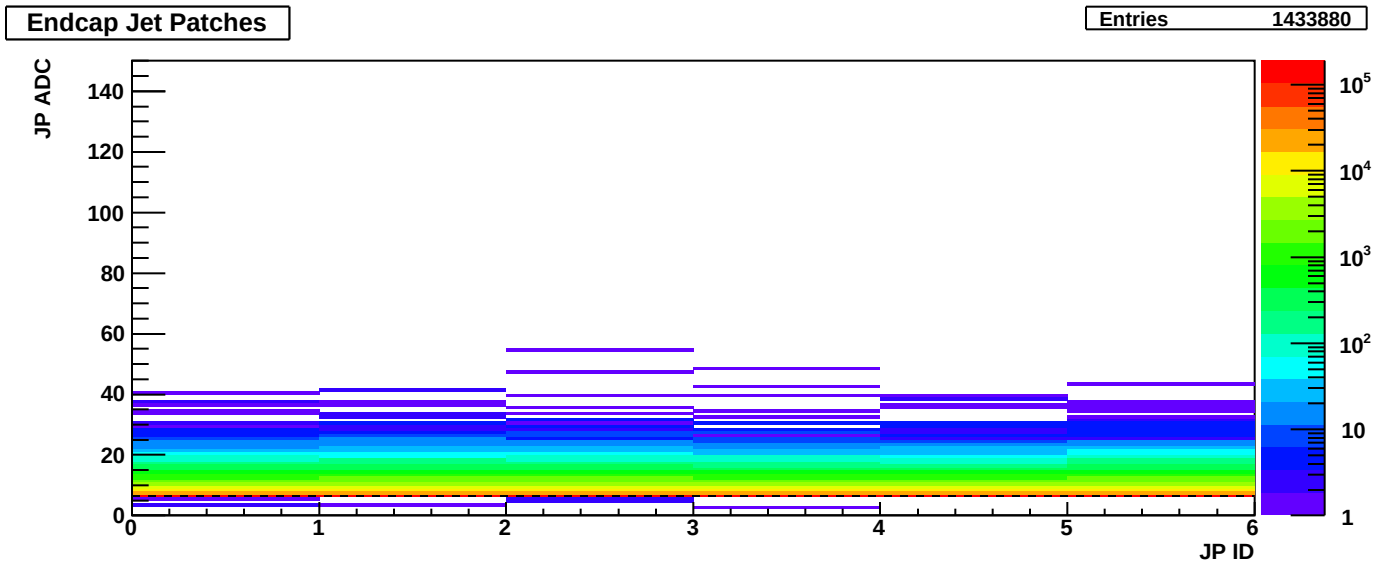

Barrel EMC L0 Input - High Tower
Entries 7.1694e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

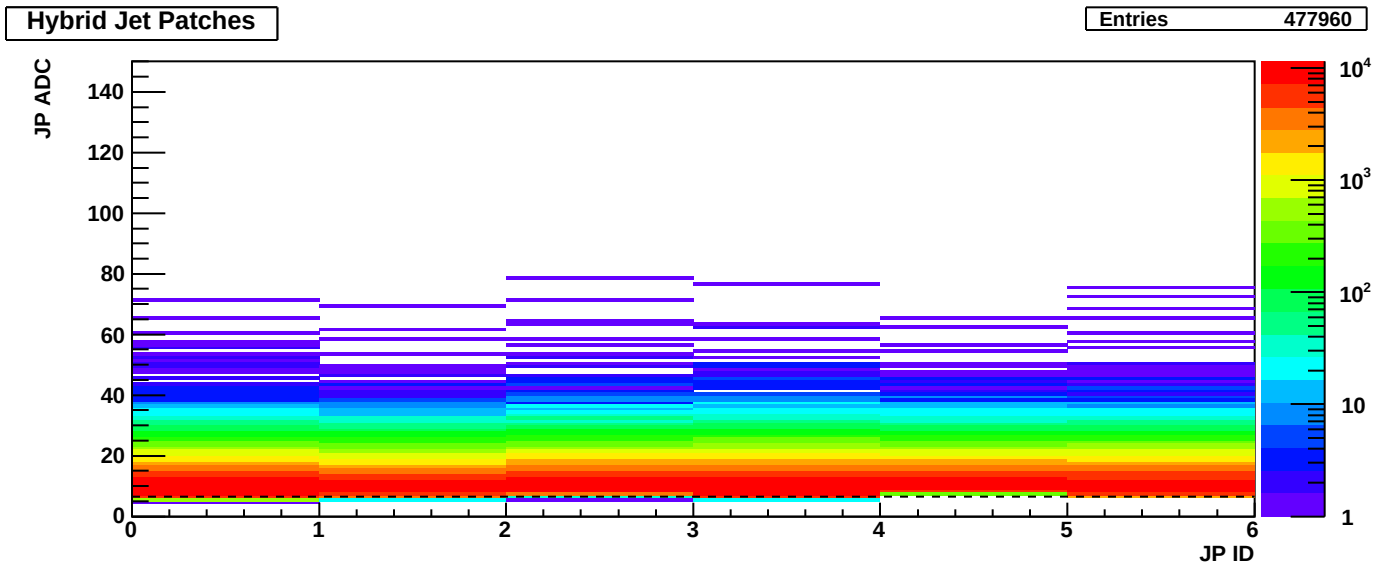

Barrel EMC L0 Input - Patch Sum
Entries 7.1694e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

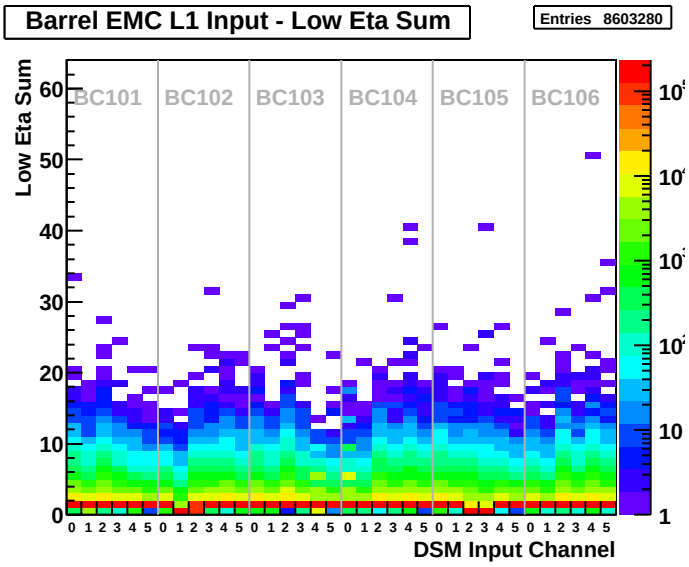

Endcap EMC L0 Input - High Tower
Entries 2.15082e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

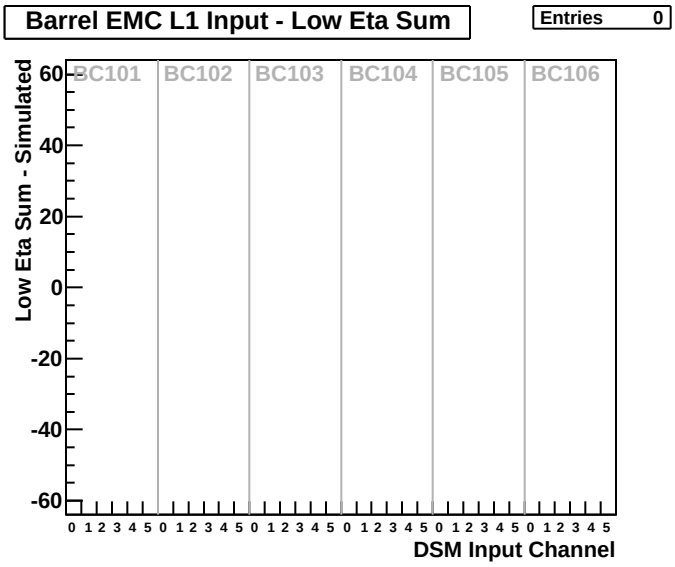

Endcap EMC L0 Input - Patch Sum
Entries 2.15082e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

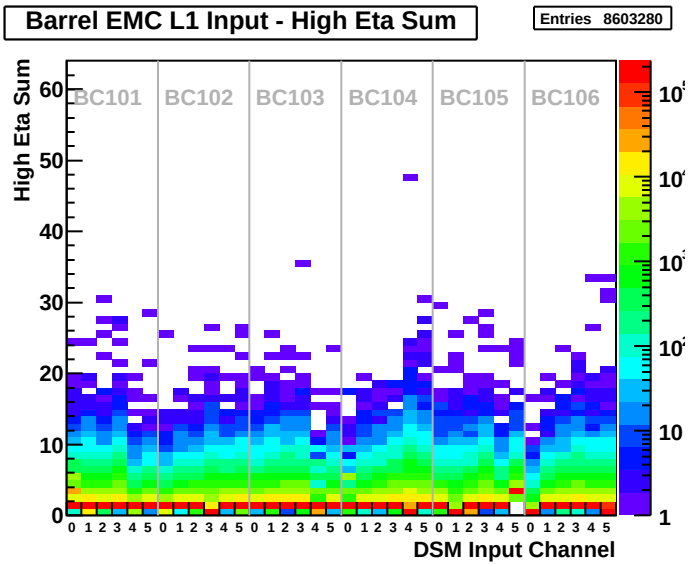

Barrel Jet Patches
Entries 4301640
JP ADC
JP ID

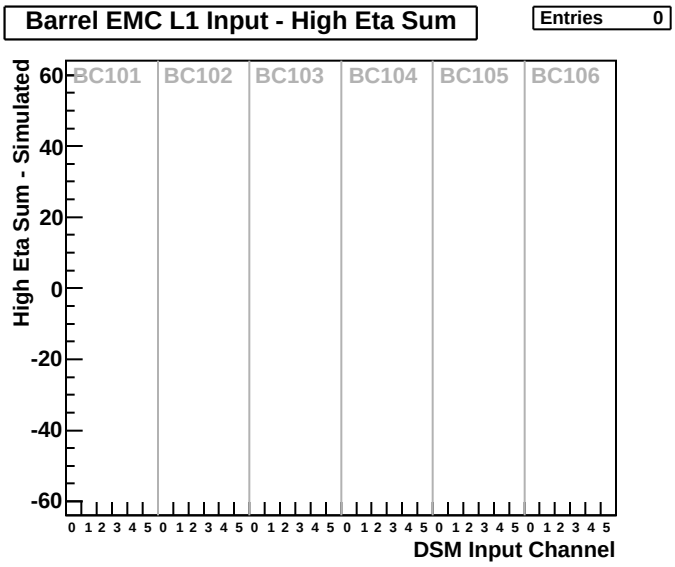

Endcap Jet Patches
Entries 1433880
JP ADC
JP ID

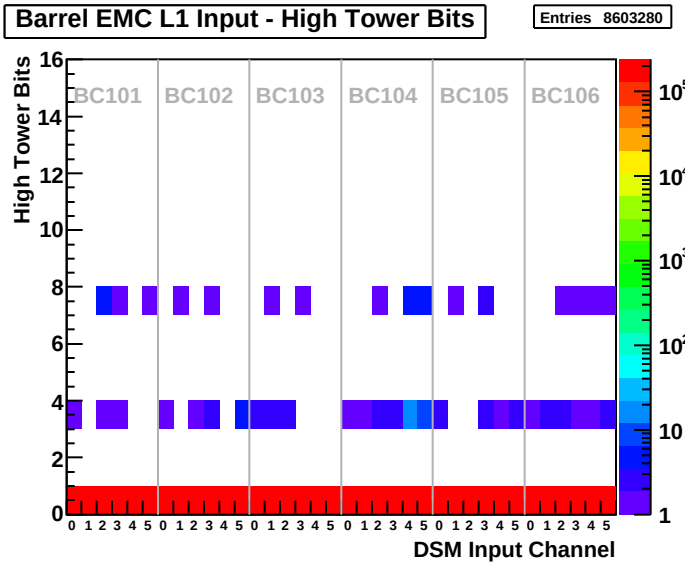

Hybrid Jet Patches
Entries 477960
JP ADC
JP ID

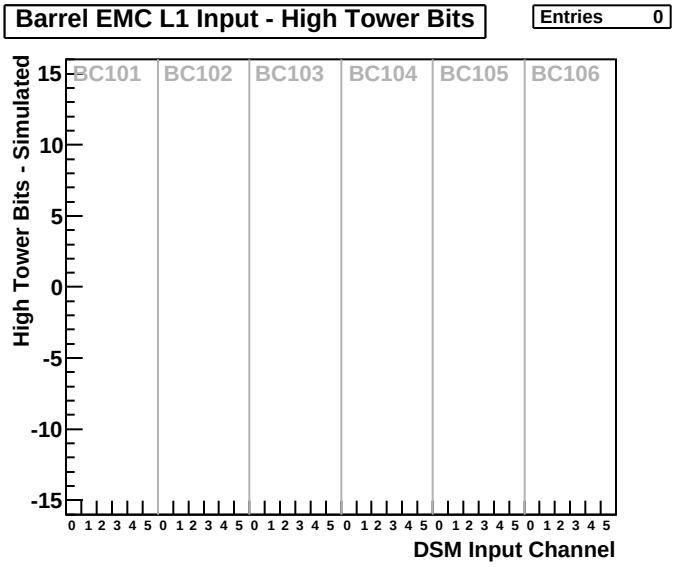

Barrel EMC L1 Input - Low Eta Sum
Entries 8603280
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

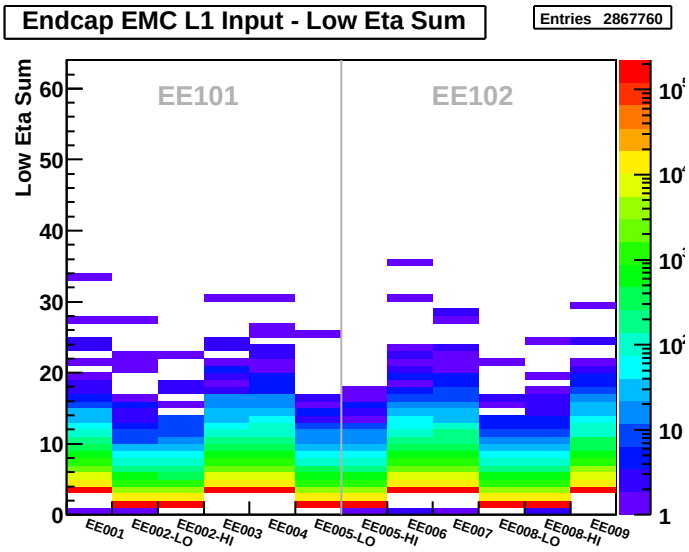

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

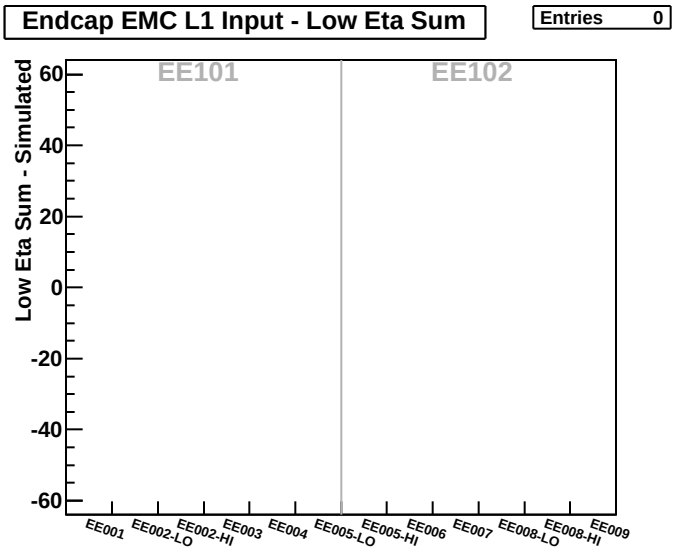

Barrel EMC L1 Input - High Eta Sum
Entries 8603280
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

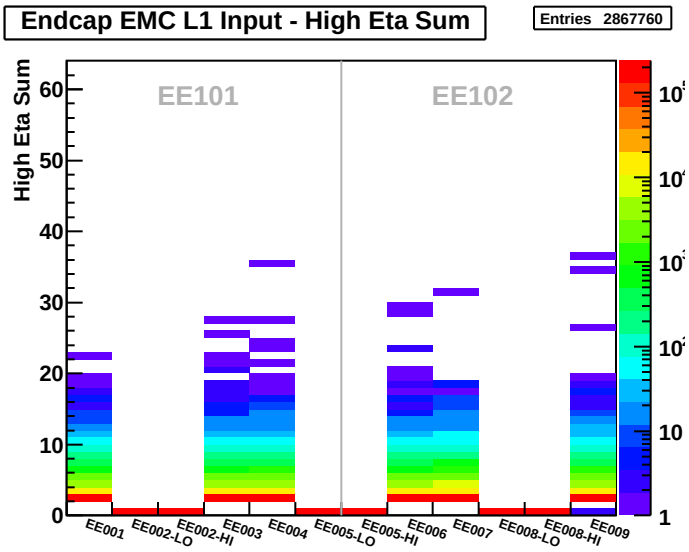

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

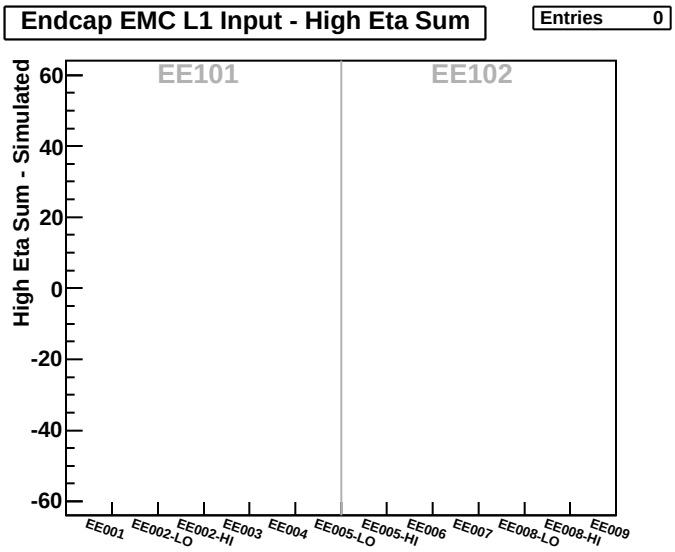

Barrel EMC L1 Input - High Tower Bits
Entries 8603280
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

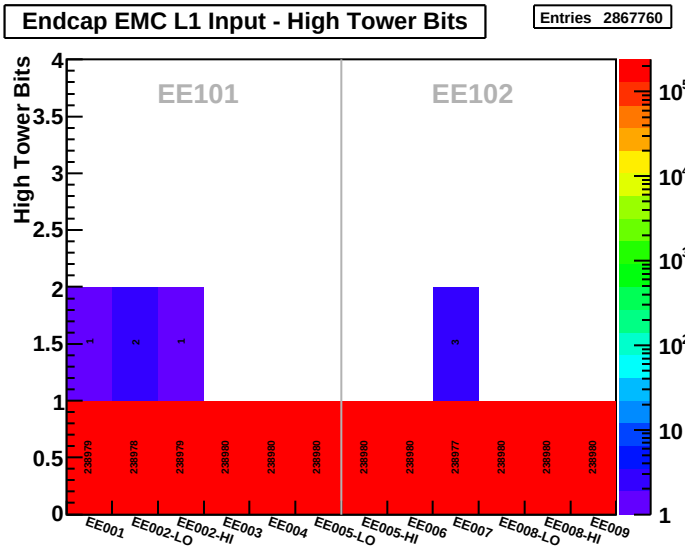

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

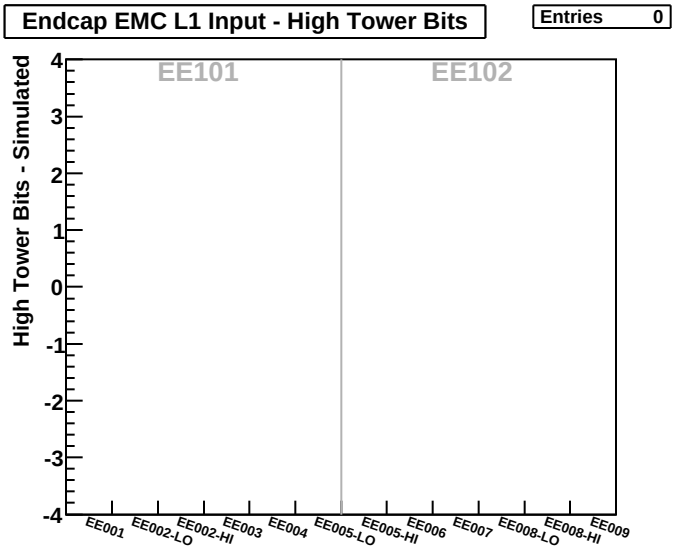

Endcap EMC L1 Input - Low Eta Sum
Entries 2867760
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

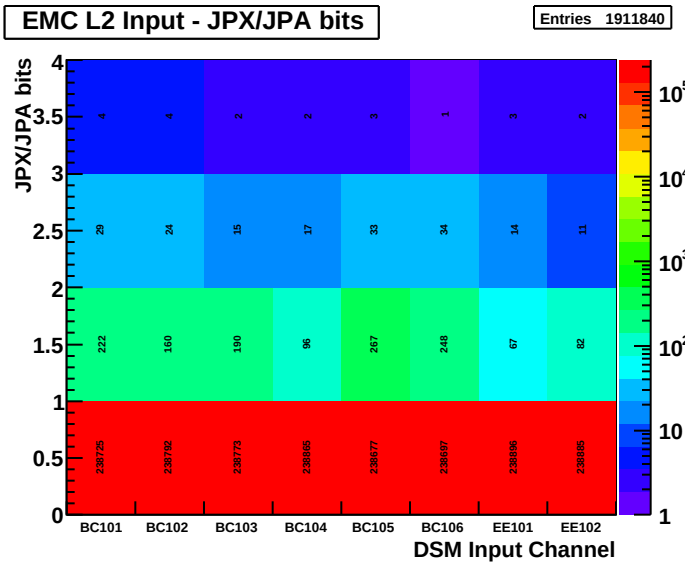

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

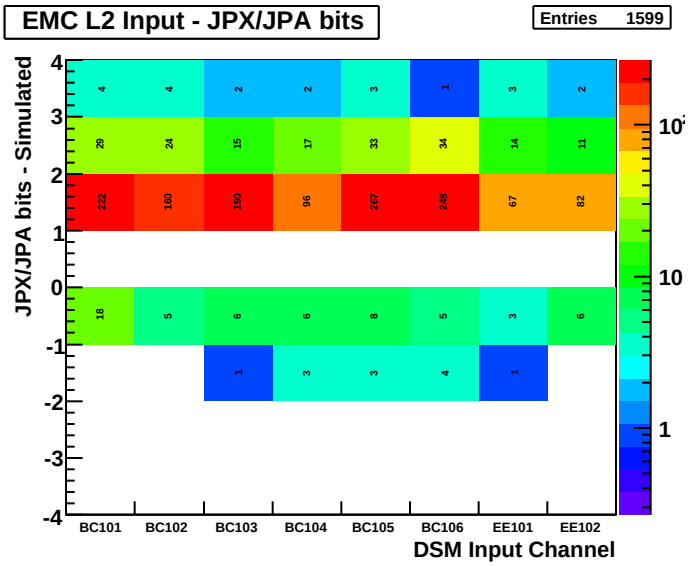

Endcap EMC L1 Input - High Eta Sum
Entries 2867760
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

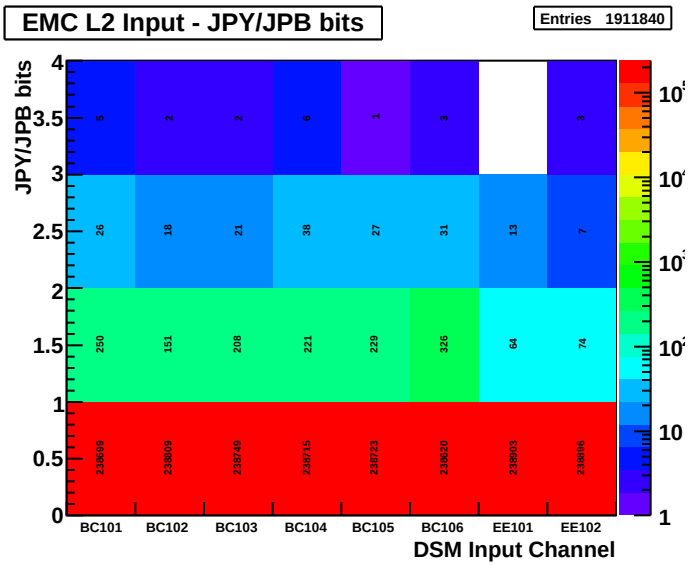

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

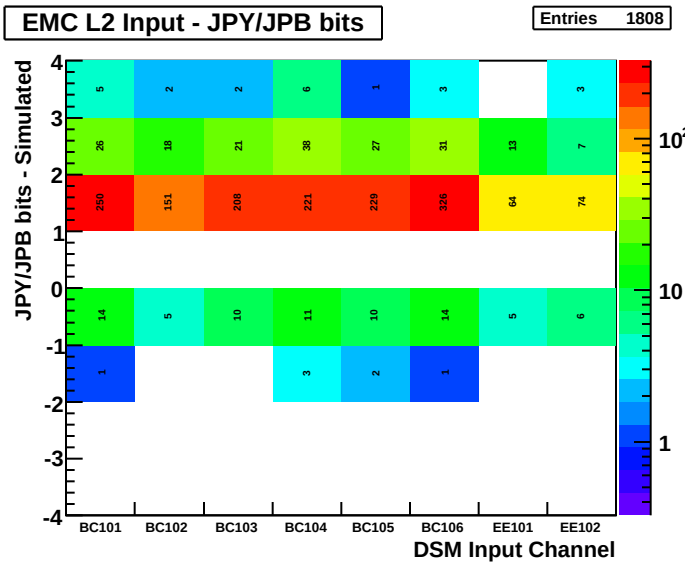

Endcap EMC L1 Input - High Tower Bits
Entries 2867760
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

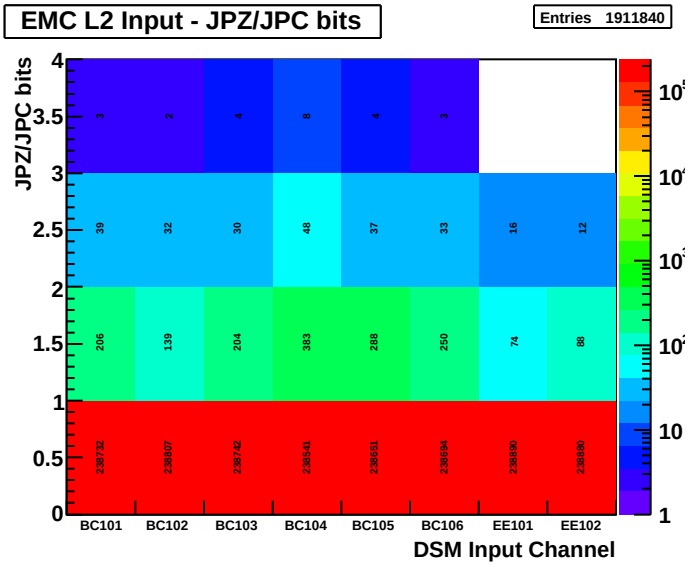

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

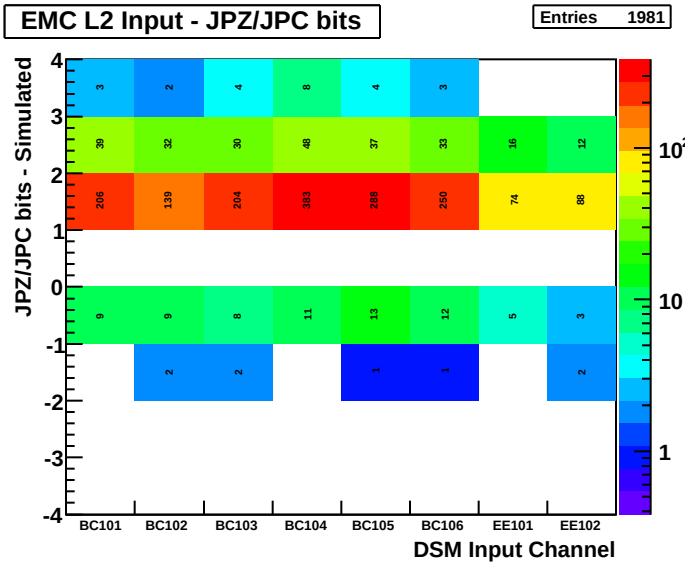

EMC L2 Input - JPX/JPA bits
Entries 1911840
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

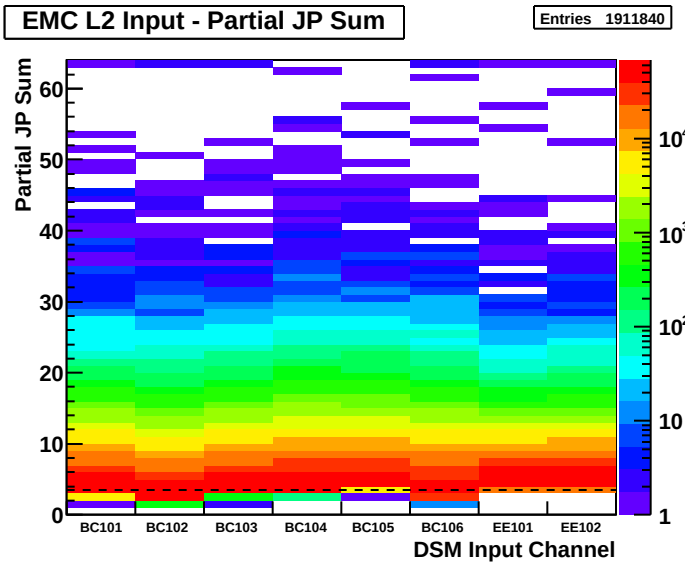

EMC L2 Input - JPX/JPA bits
Entries 1599
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

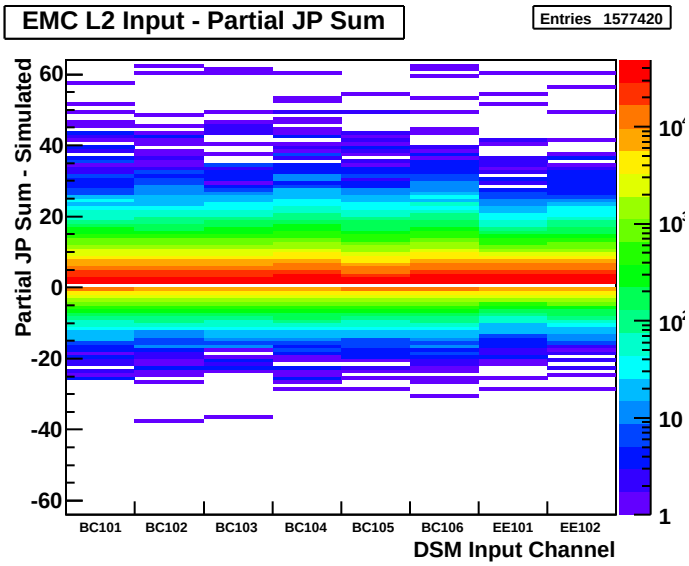

EMC L2 Input - JPY/JPB bits
Entries 1911840
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

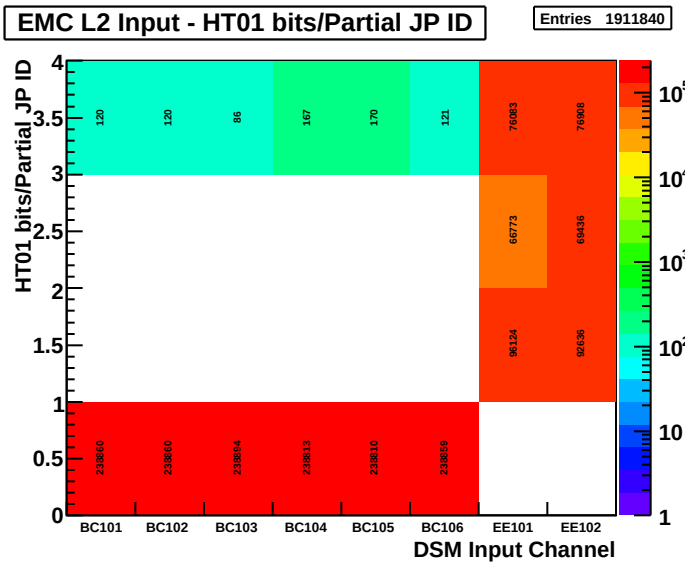

EMC L2 Input - JPY/JPB bits
Entries 1808
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

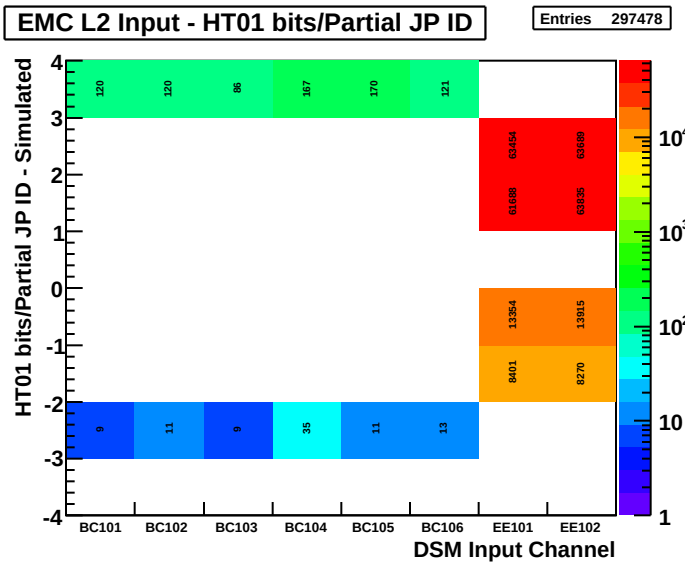

EMC L2 Input - JPZ/JPC bits
Entries 1911840
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

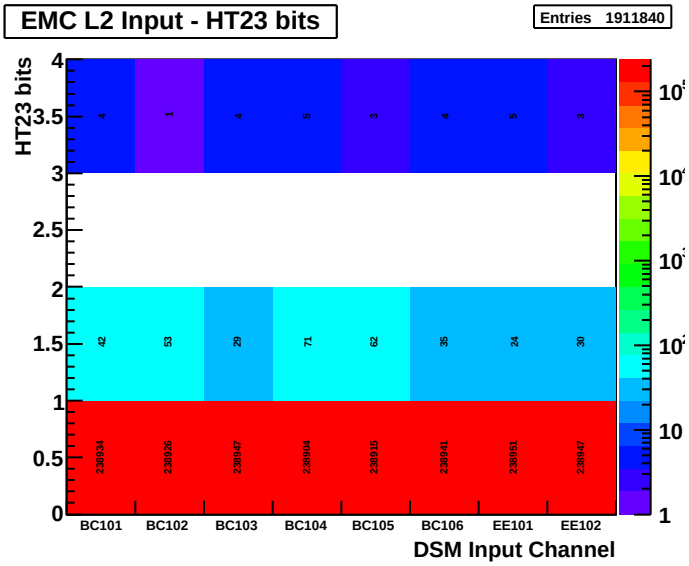

EMC L2 Input - JPZ/JPC bits
Entries 1981
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

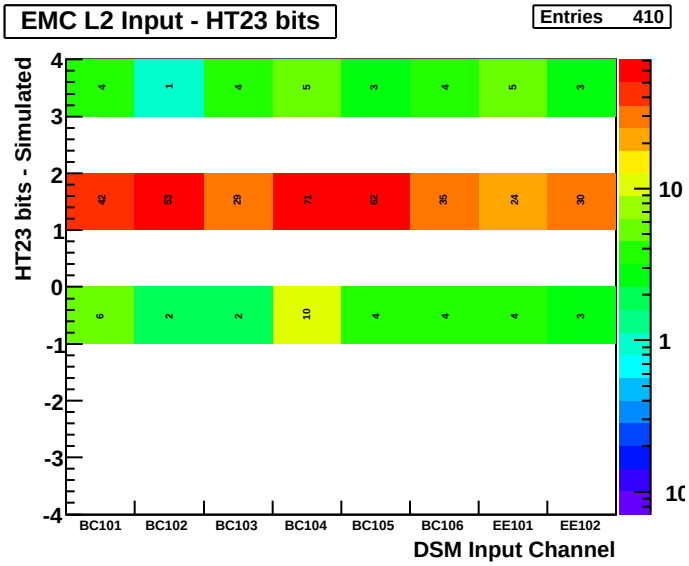

EMC L2 Input - Partial JP Sum
Entries 1911840
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

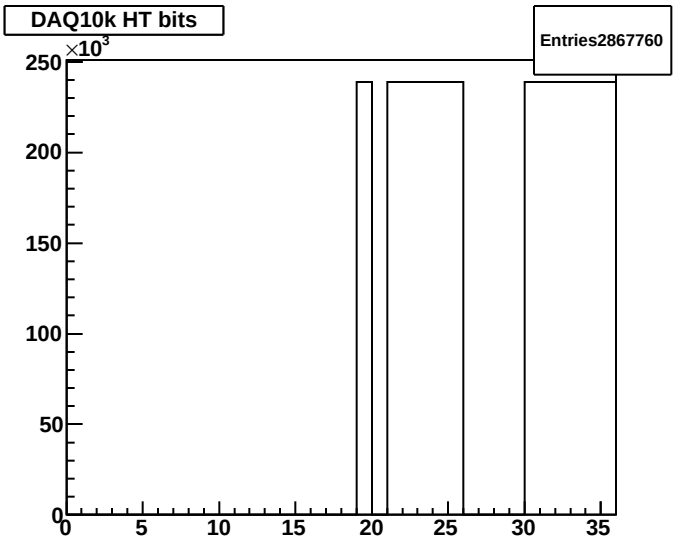

EMC L2 Input - Partial JP Sum
Entries 1577420
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

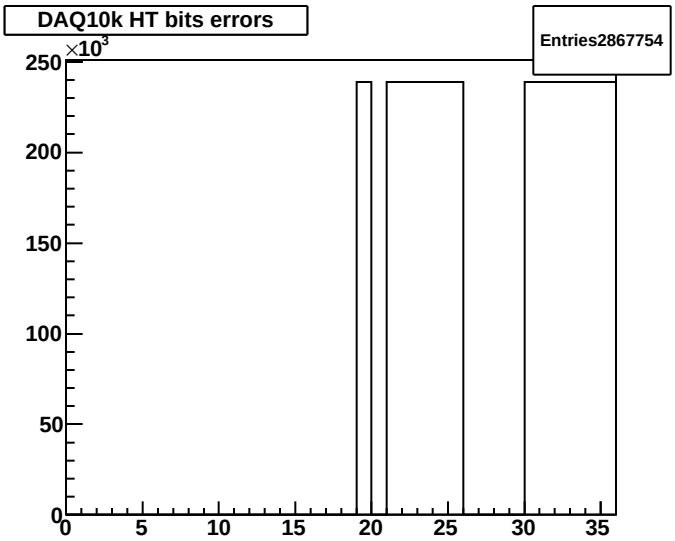

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1911840
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

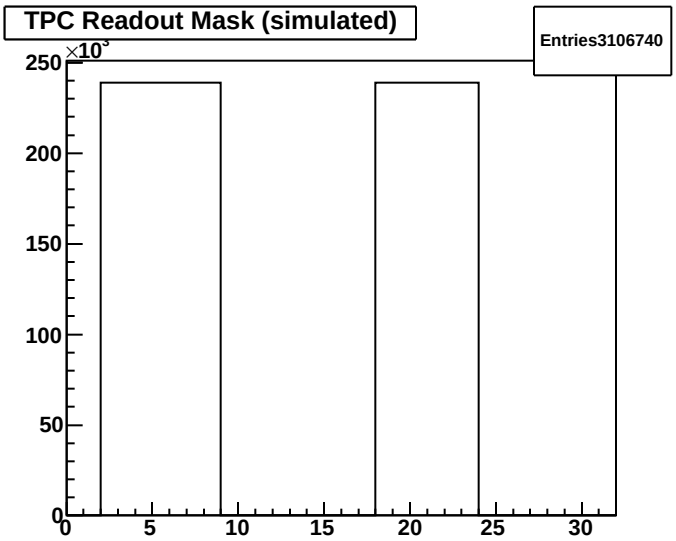

EMC L2 Input - HT01 bits/Partial JP ID
Entries 297478
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

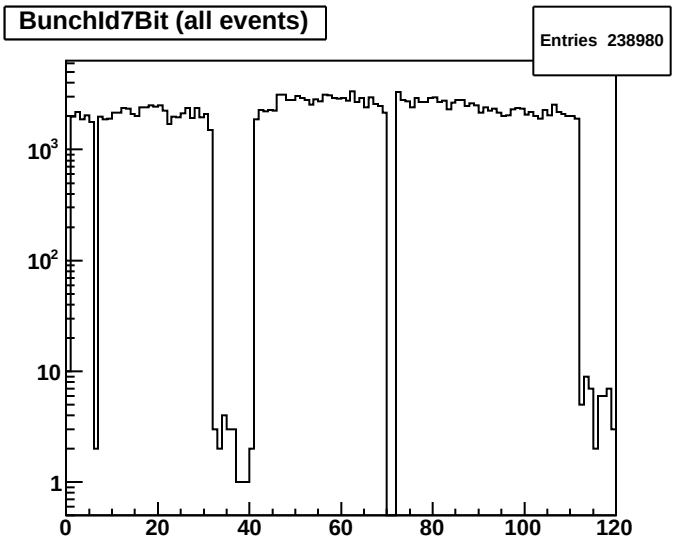

EMC L2 Input - HT23 bits
Entries 1911840
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

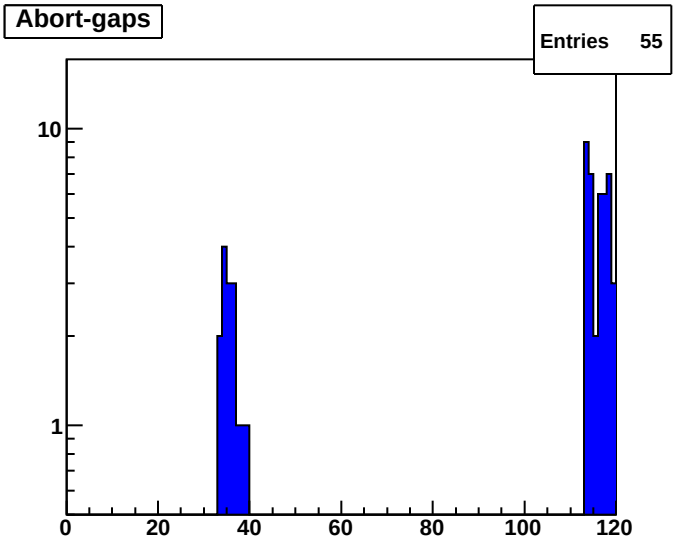

EMC L2 Input - HT23 bits
Entries 410
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

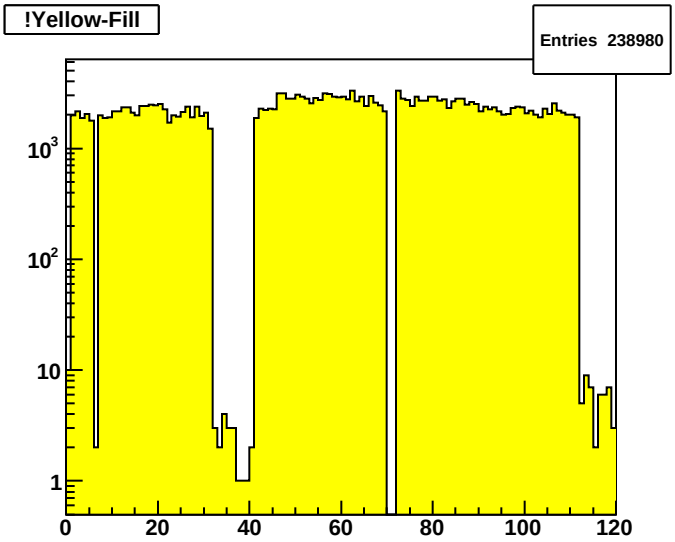

DAQ10k HT bits
Entries2867760
×10^3
250
200
150
100
50
0
0 5 10 15 20 25 30 35

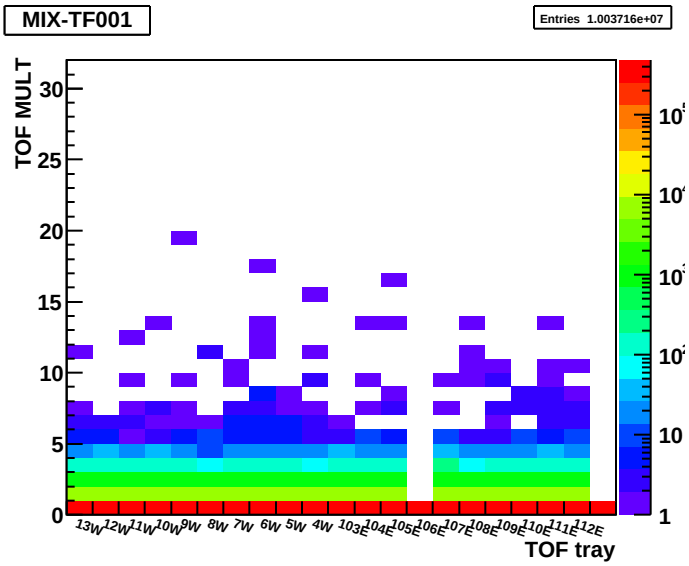

DAQ10k HT bits errors
Entries2867754
×10^3
250
200
150
100
50
0
0 5 10 15 20 25 30 35

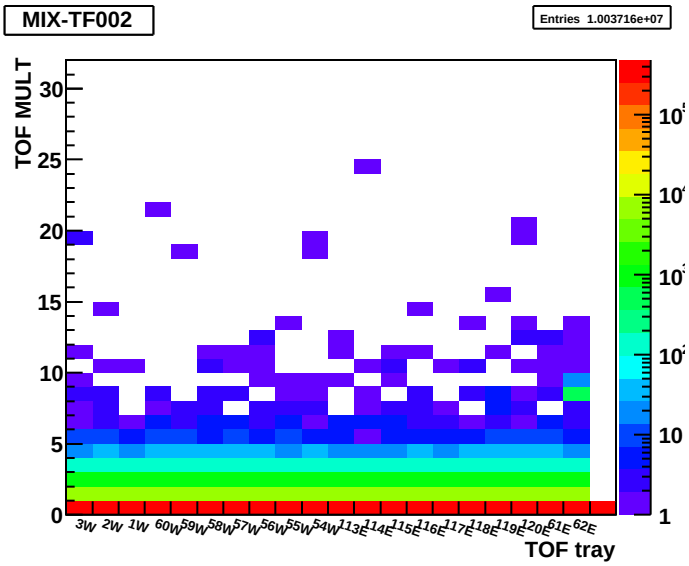

TPC Readout Mask (simulated)
Entries3106740
×10^3
250
200
150
100
50
0
0 5 10 15 20 25 30

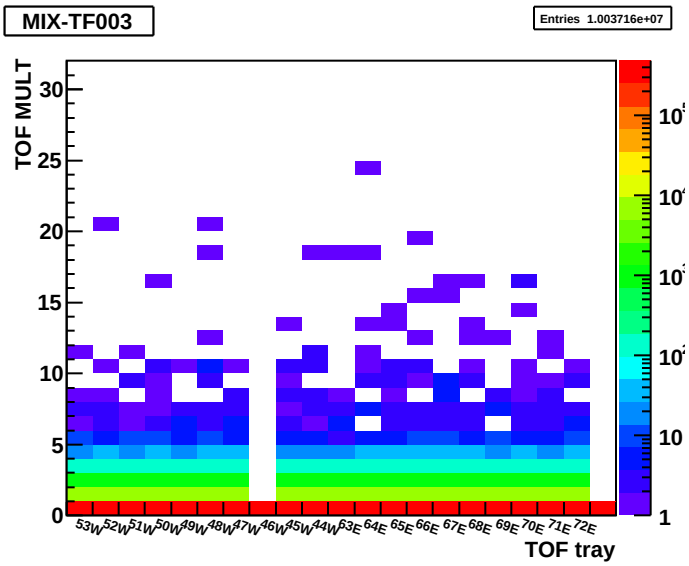

BunchId7Bit (all events)
Entries 238980
10^3
10^2
10
1
0 20 40 60 80 100 120

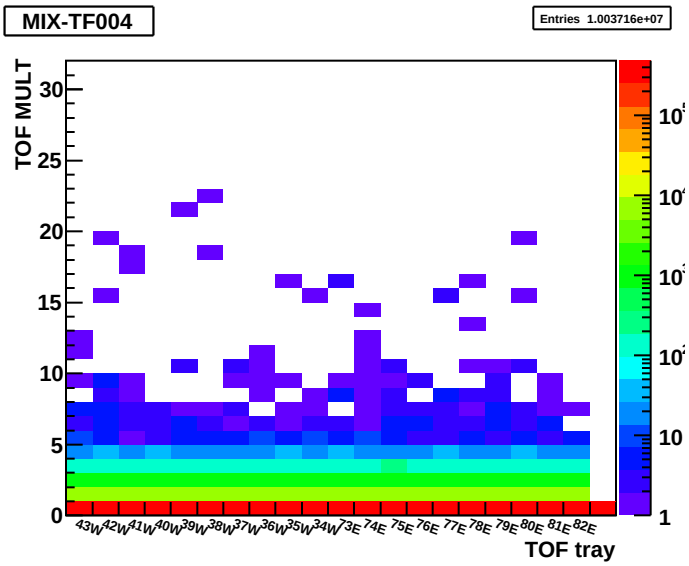

Abort-gaps
Entries 55
10
1
0 20 40 60 80 100 120

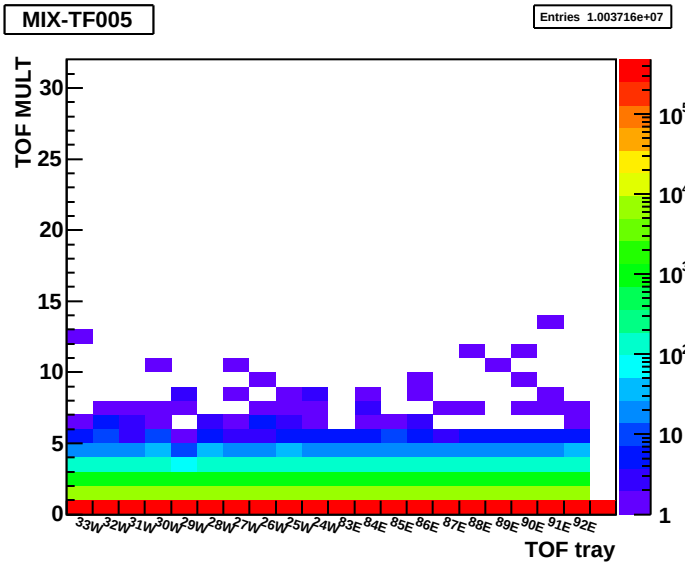

!Yellow-Fill
Entries 238980
10^3
10^2
10
1
0 20 40 60 80 100 120

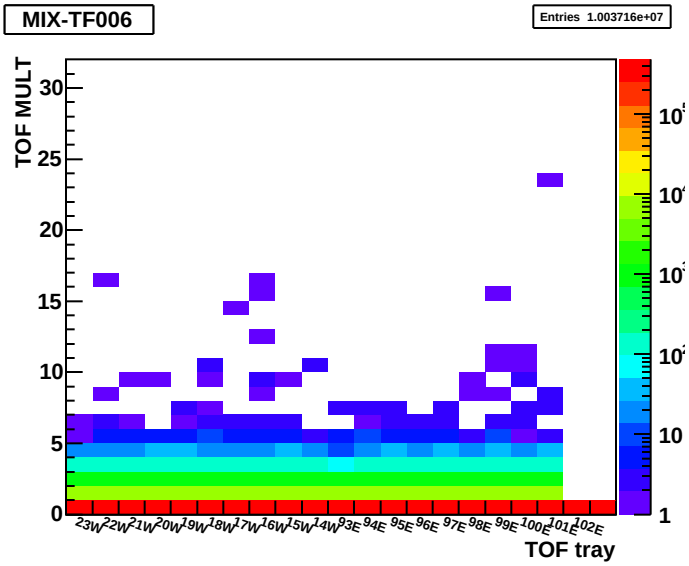

MIX-TF001
Entries 1.003716e+07
TOF MULT
TOF tray

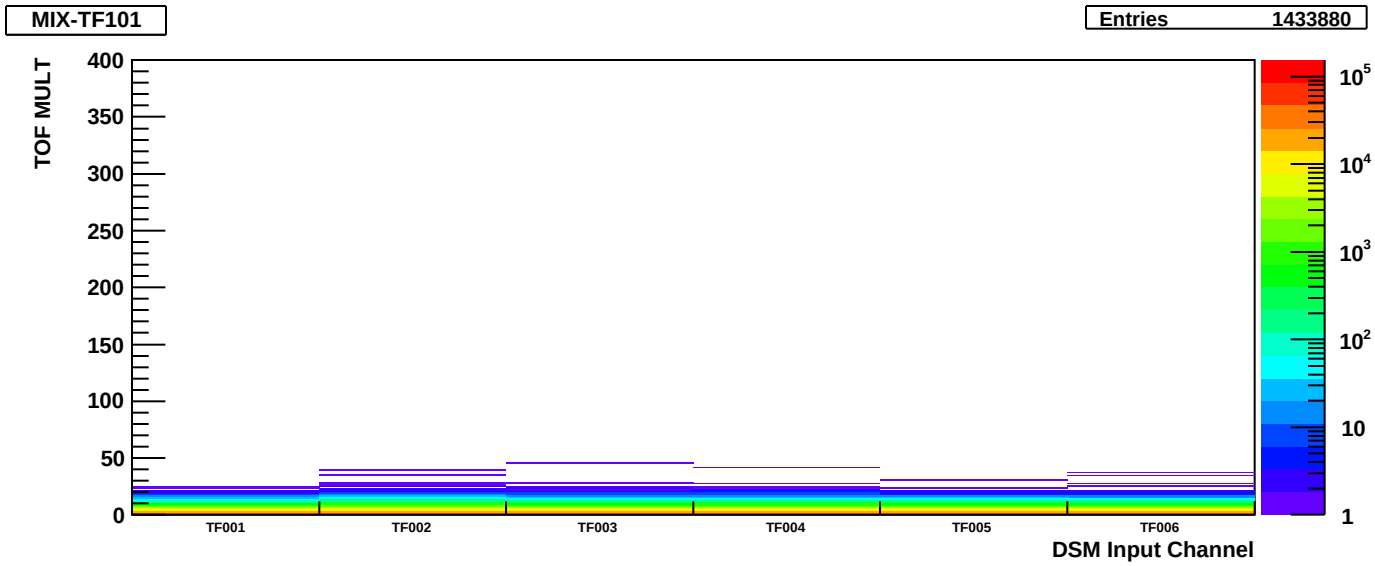

MIX-TF002
Entries 1.003716e+07
TOF MULT
TOF tray

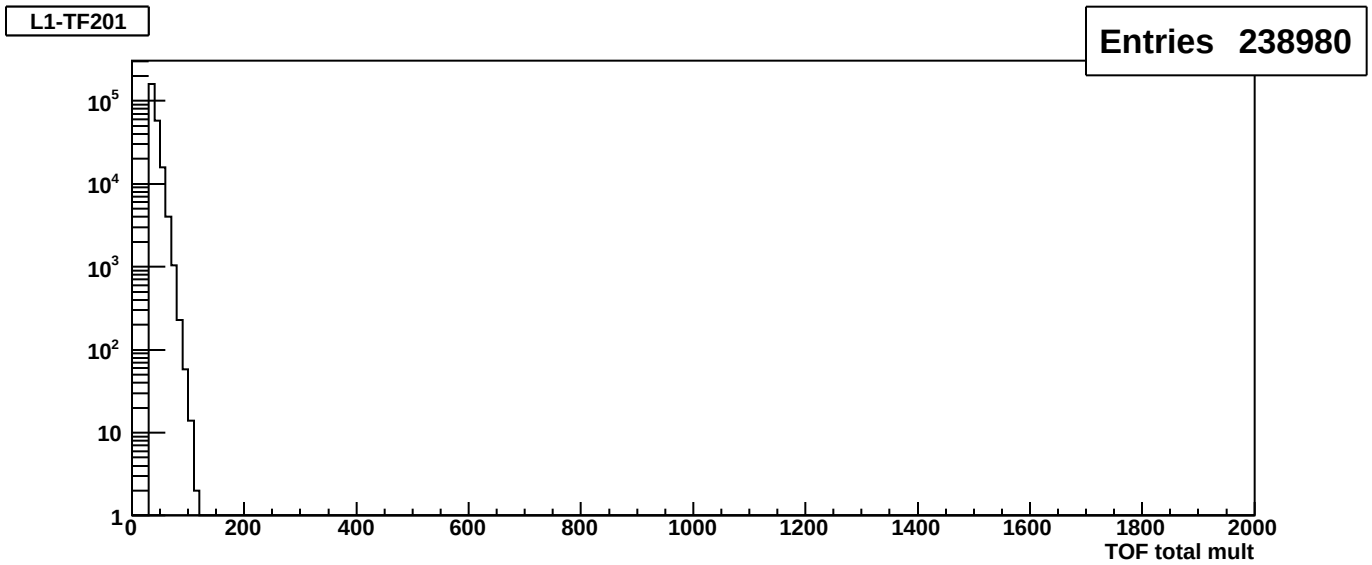

MIX-TF003
Entries 1.003716e+07
TOF MULT
TOF tray

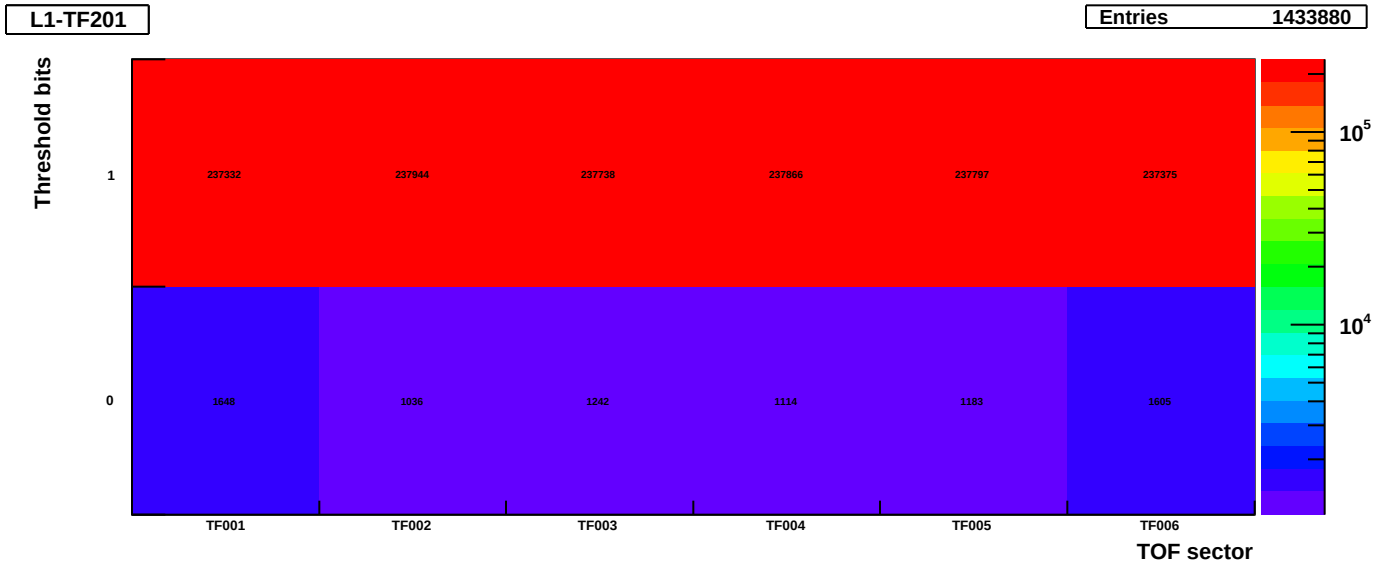

MIX-TF004
Entries 1.003716e+07
TOF MULT
TOF tray

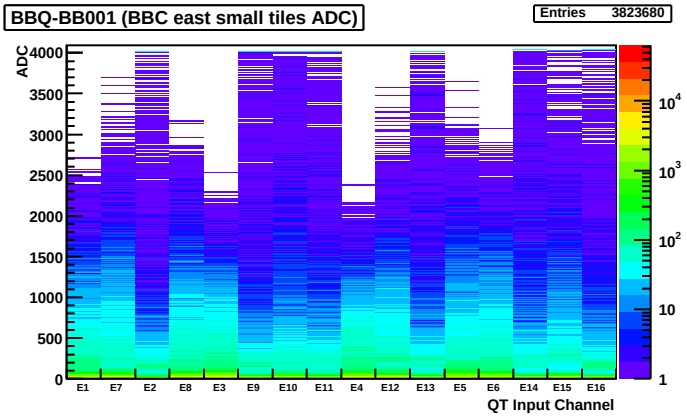

MIX-TF005
Entries 1.003716e+07
TOF MULT
TOF tray

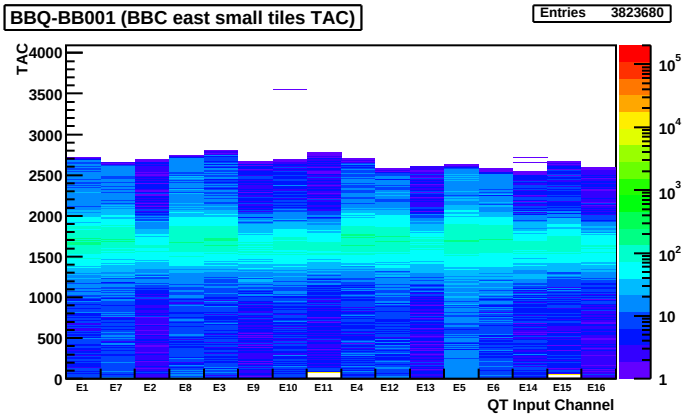

MIX-TF006
Entries 1.003716e+07
TOF MULT
TOF tray

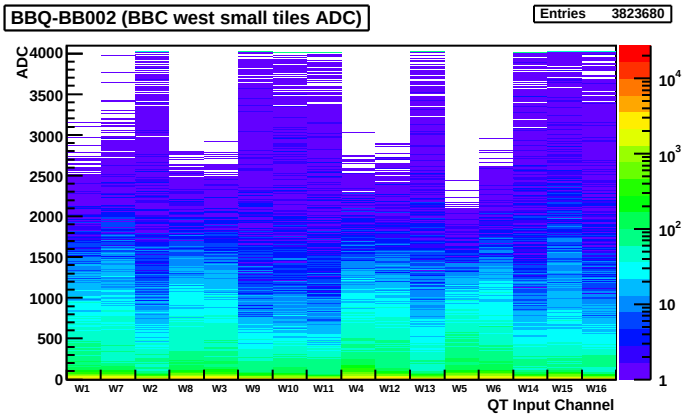

MIX-TF101
Entries 1433880
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

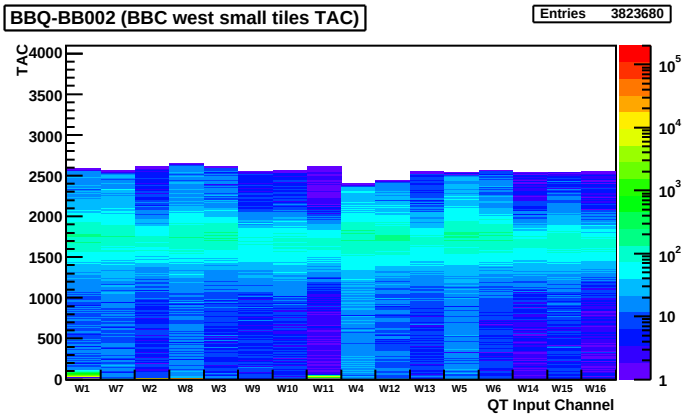

L1-TF201
Entries 238980
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

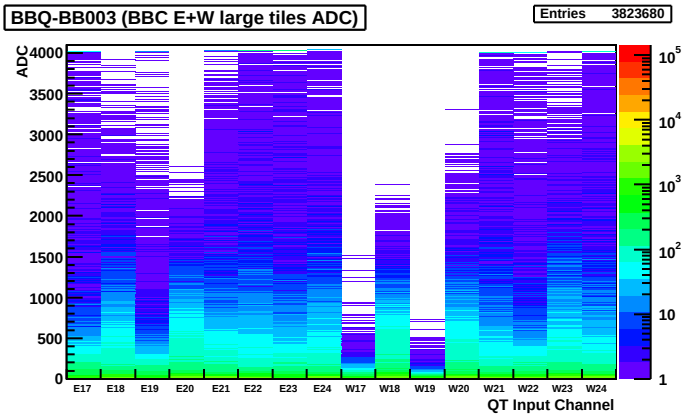

L1-TF201
Entries 1433880
Threshold bits
1
0
237332
237944
237738
237866
237797
237375
1648
1036
1242
1114
1183
1605
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4

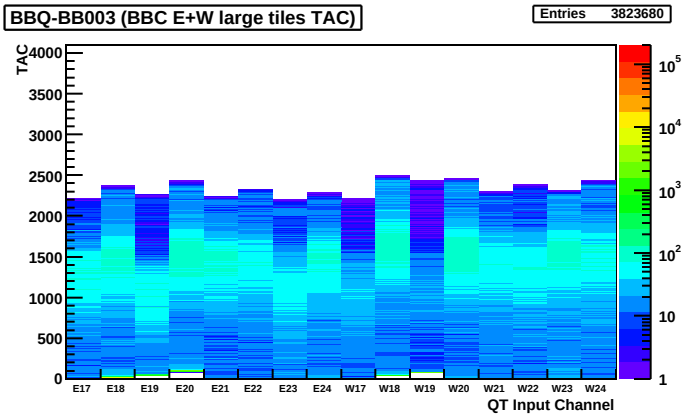

BBQ-BB001 (BBC east small tiles ADC)
Entries 3823680
ADC
QT Input Channel

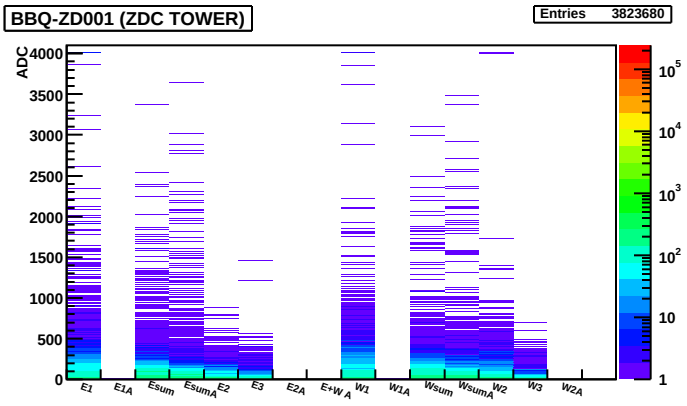

BBQ-BB001 (BBC east small tiles TAC)
Entries 3823680
TAC
QT Input Channel

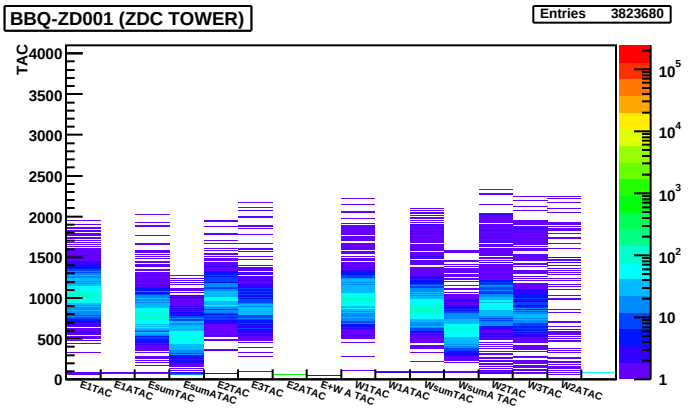

BBQ-BB002 (BBC west small tiles ADC)
Entries 3823680
ADC
QT Input Channel

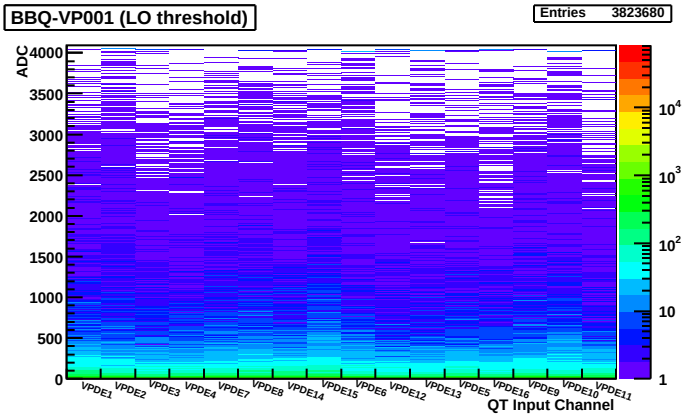

BBQ-BB002 (BBC west small tiles TAC)
Entries 3823680
TAC
QT Input Channel

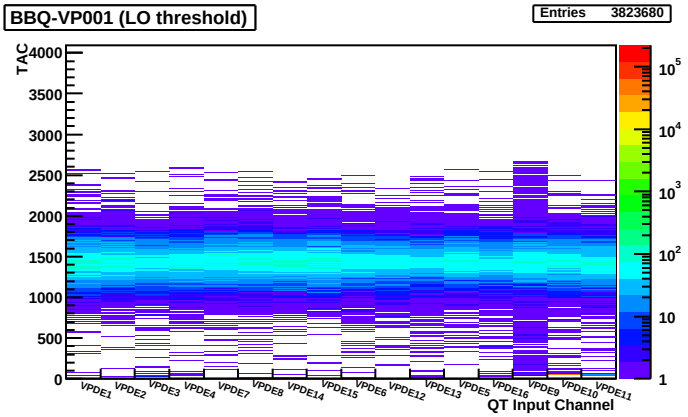

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3823680
ADC
QT Input Channel

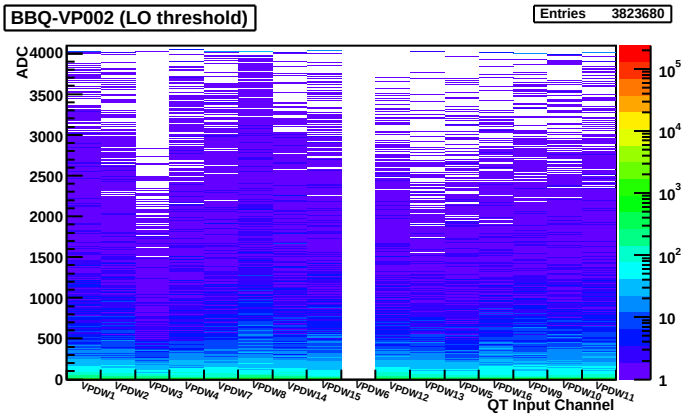

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3823680
TAC
QT Input Channel

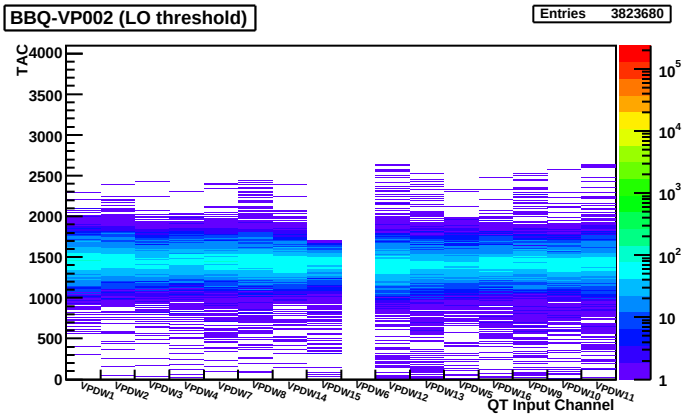

BBQ-ZD001 (ZDC TOWER)
Entries 3823680
ADC

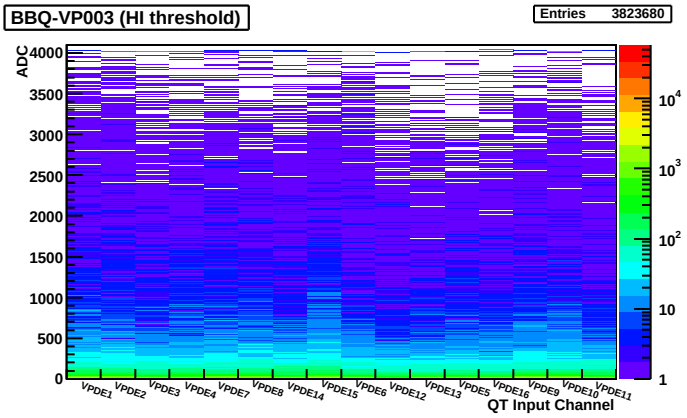

BBQ-ZD001 (ZDC TOWER)
Entries 3823680
TAC

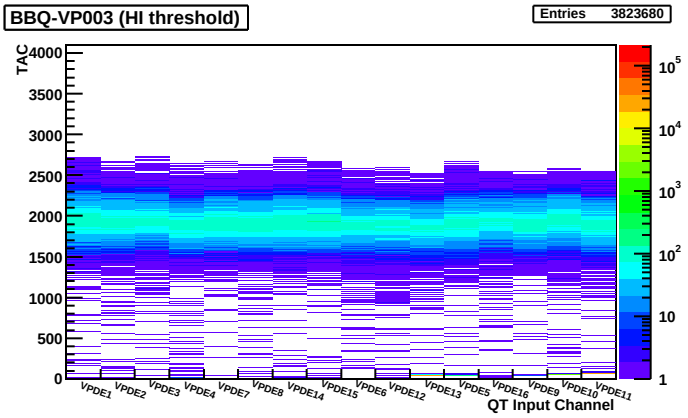

BBQ-VP001 (LO threshold)
Entries 3823680
ADC
QT Input Channel

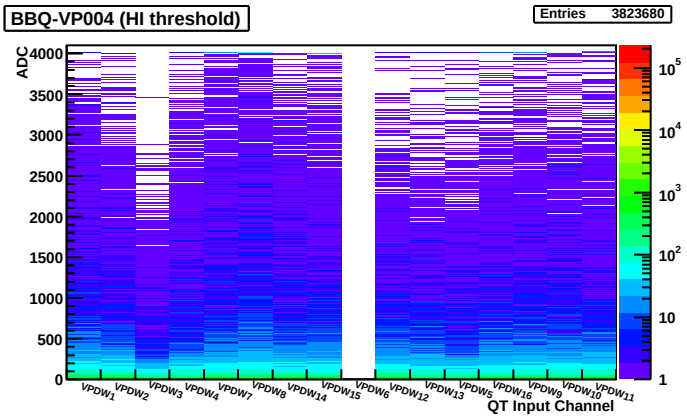

BBQ-VP001 (LO threshold)
Entries 3823680
TAC
QT Input Channel

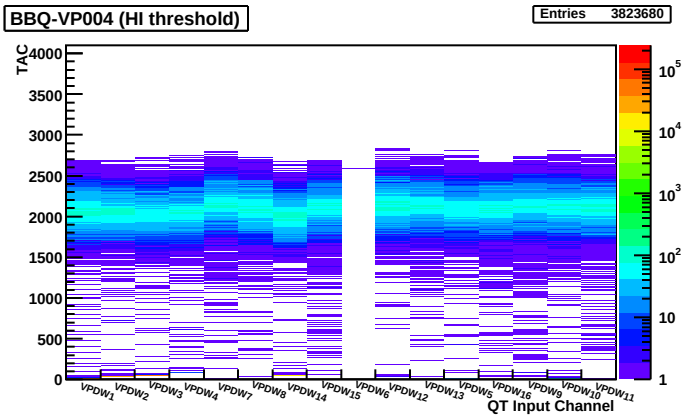

BBQ-VP002 (LO threshold)
Entries 3823680
ADC
QT Input Channel

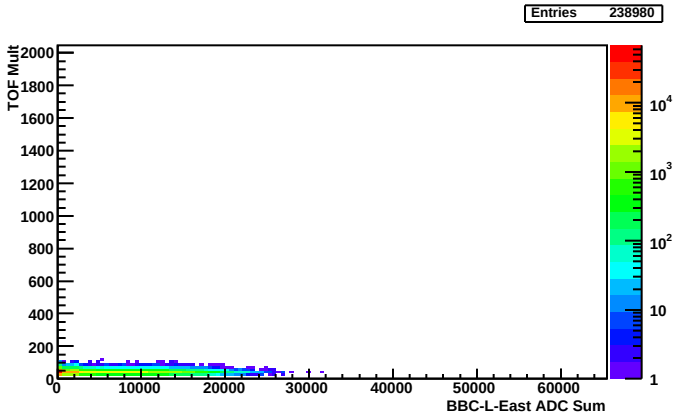

BBQ-VP002 (LO threshold)
Entries 3823680
TAC
QT Input Channel

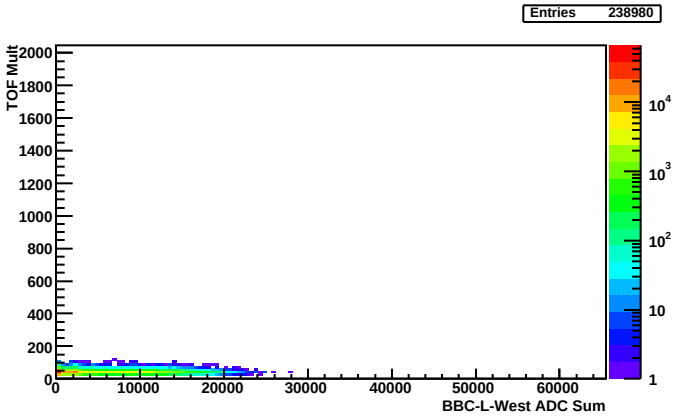

BBQ-VP003 (HI threshold)
Entries 3823680
ADC
QT Input Channel

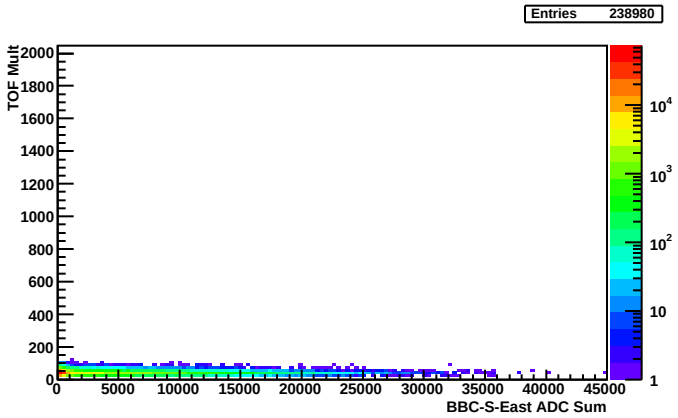

BBQ-VP003 (HI threshold)
Entries 3823680
TAC
QT Input Channel

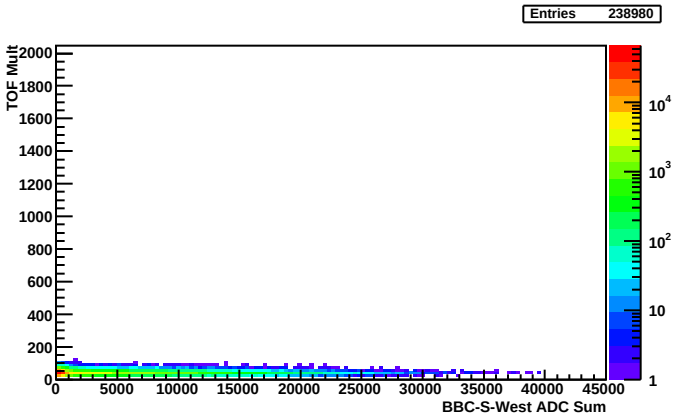

BBQ-VP004 (HI threshold)
Entries 3823680
ADC
QT Input Channel

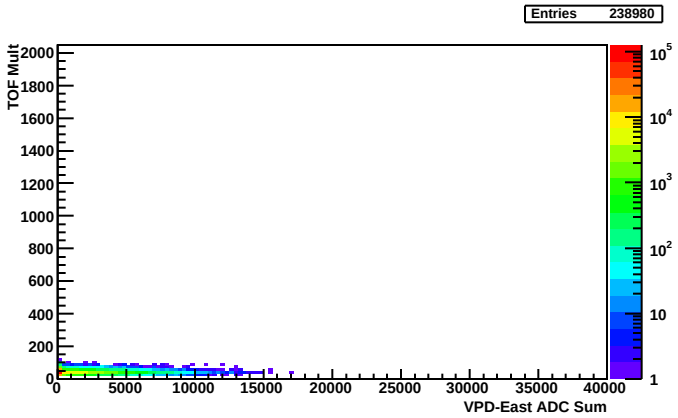

BBQ-VP004 (HI threshold)
Entries 3823680
TAC
QT Input Channel

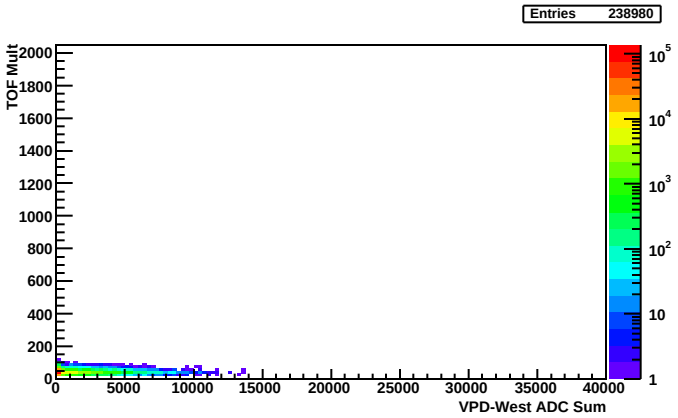

Entries 238980
TOF Mult
BBC-L-East ADC Sum

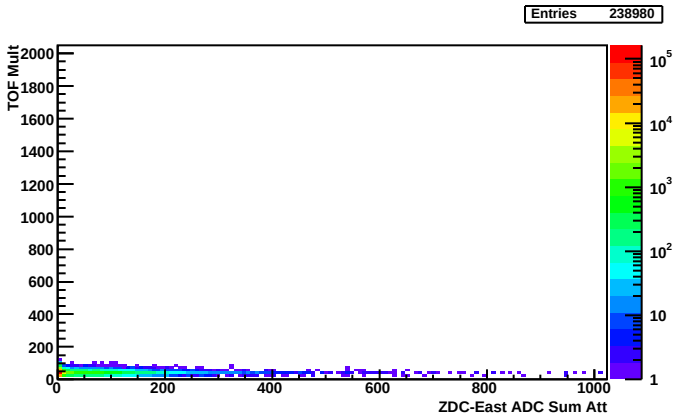

Entries 238980
TOF Mult
BBC-L-West ADC Sum

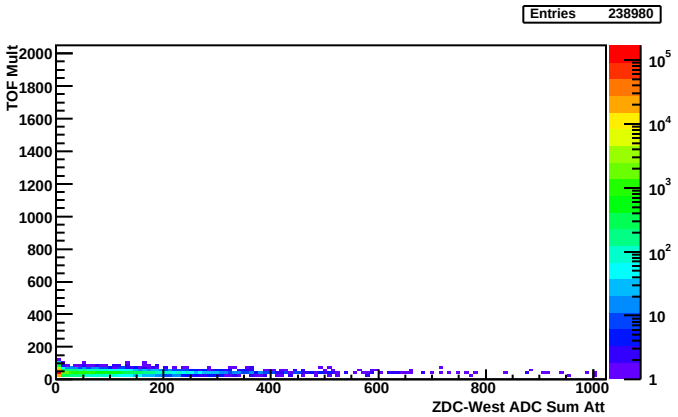

Entries 238980
TOF Mult
BBC-S-East ADC Sum

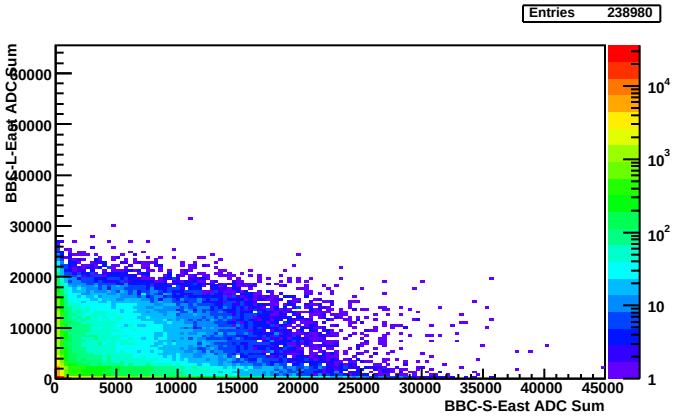

Entries 238980
TOF Mult
BBC-S-West ADC Sum

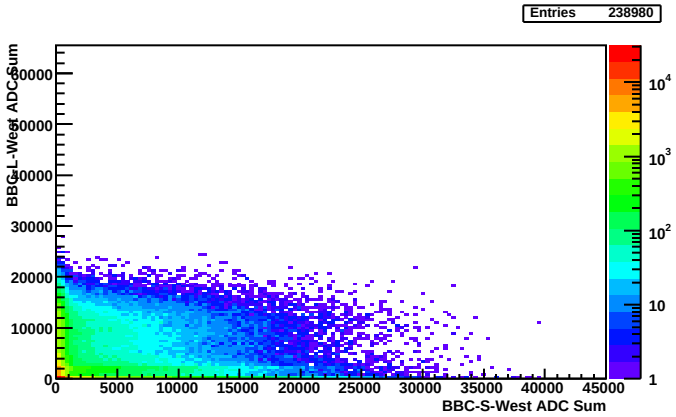

Entries 238980
TOF Mult
VPD-East ADC Sum

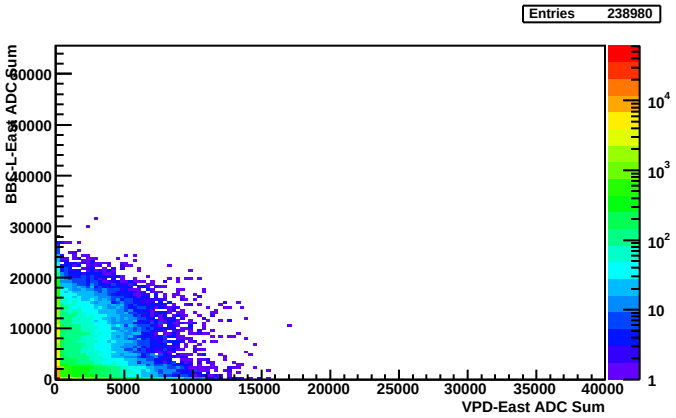

Entries 238980
TOF Mult
VPD-West ADC Sum

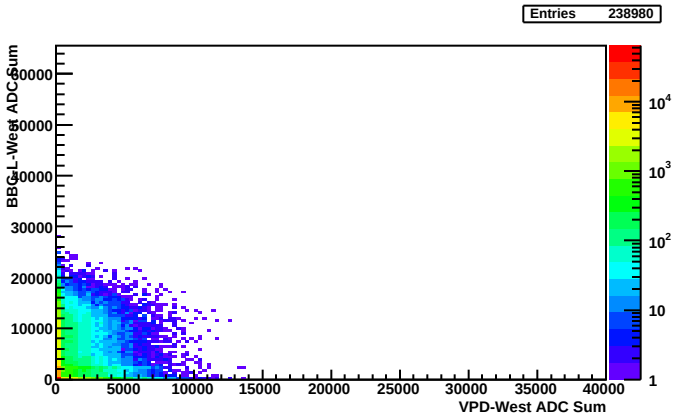

Entries 238980
TOF Mult
ZDC-East ADC Sum Att

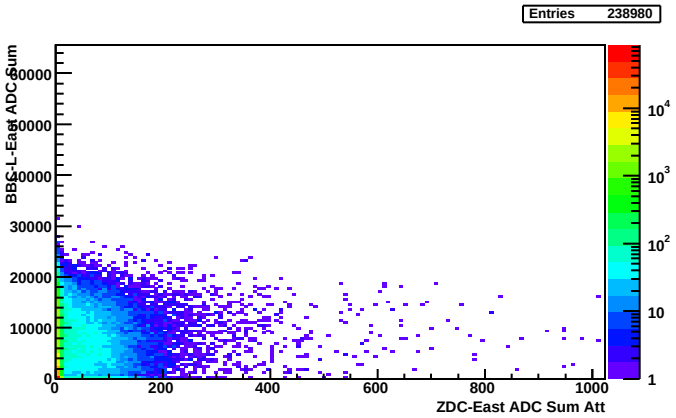

Entries 238980
TOF Mult
ZDC-West ADC Sum Att

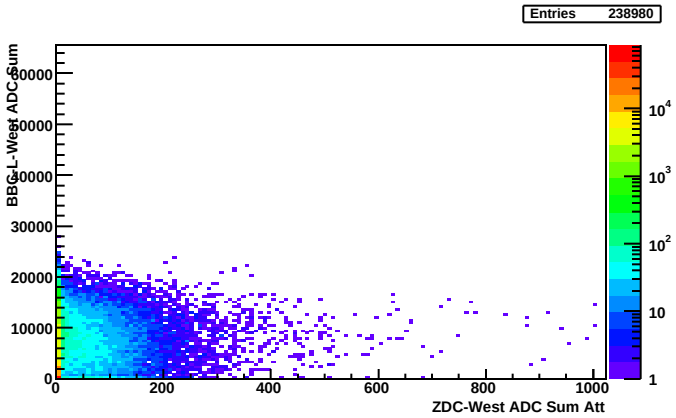

Entries 238980
BBC-L-East ADC Sum
BBC-S-East ADC Sum

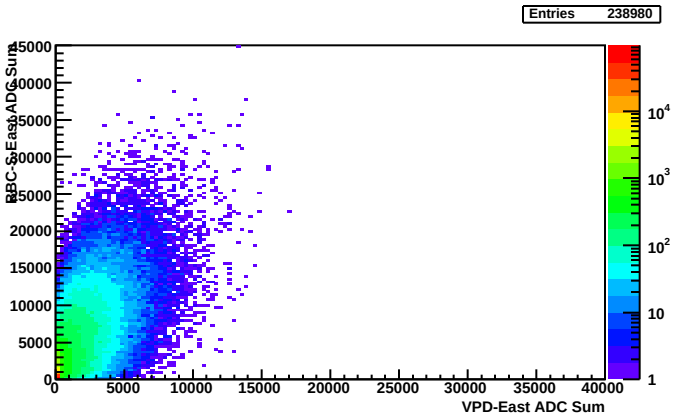

Entries 238980
BBC-L-West ADC Sum
BBC-S-West ADC Sum

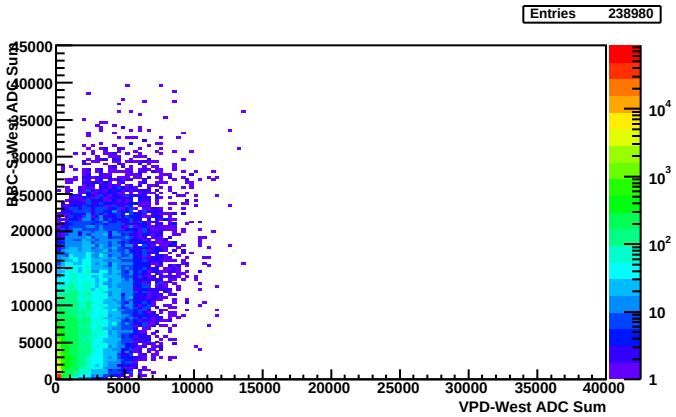

Entries 238980
BBC-L-East ADC Sum
VPD-East ADC Sum

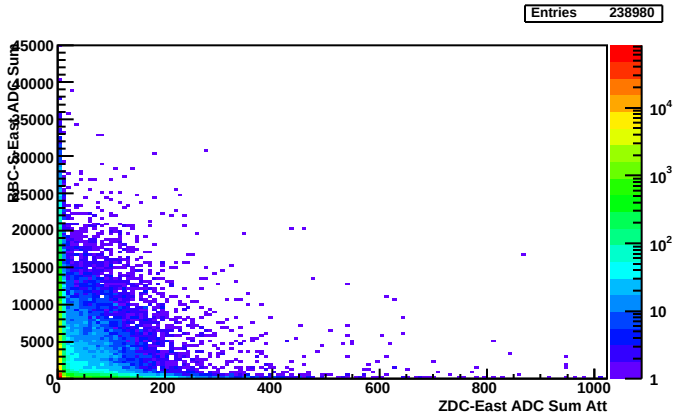

Entries 238980
BBC-L-West ADC Sum
VPD-West ADC Sum

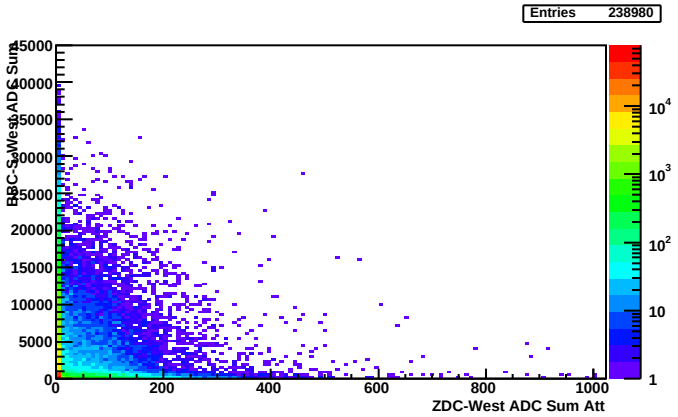

Entries 238980
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

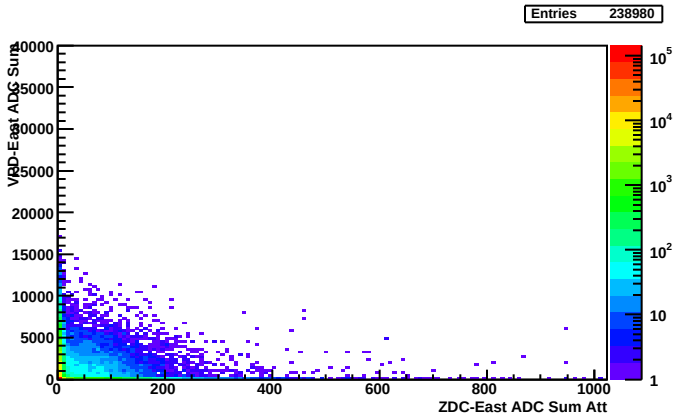

Entries 238980
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

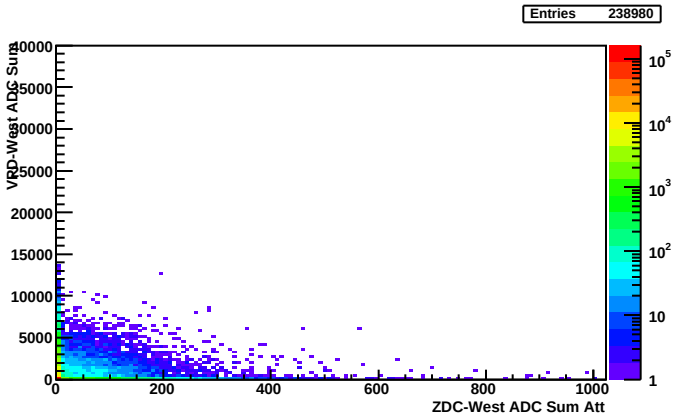

Entries 238980
BBC-S-East ADC Sum
VPD-East ADC Sum

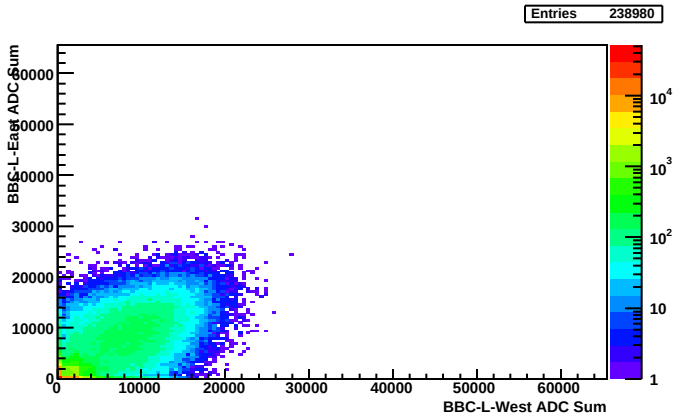

Entries 238980
BBC-S-West ADC Sum
VPD-West ADC Sum

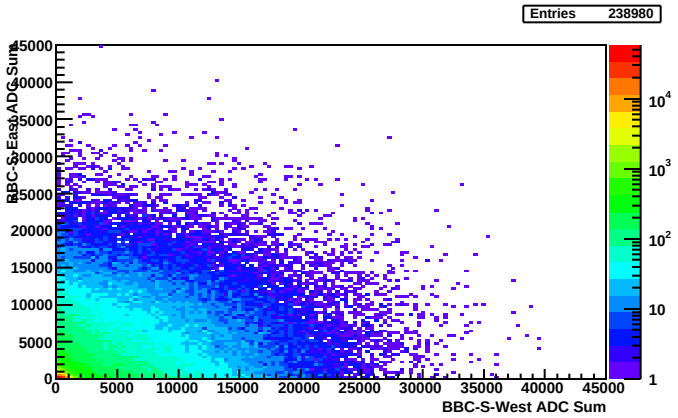

Entries 238980
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

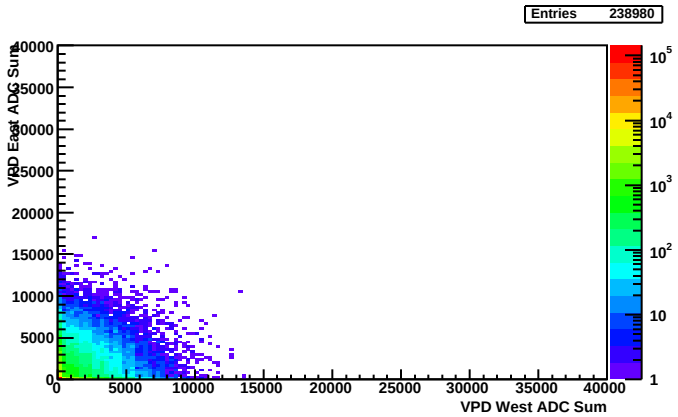

Entries 238980
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

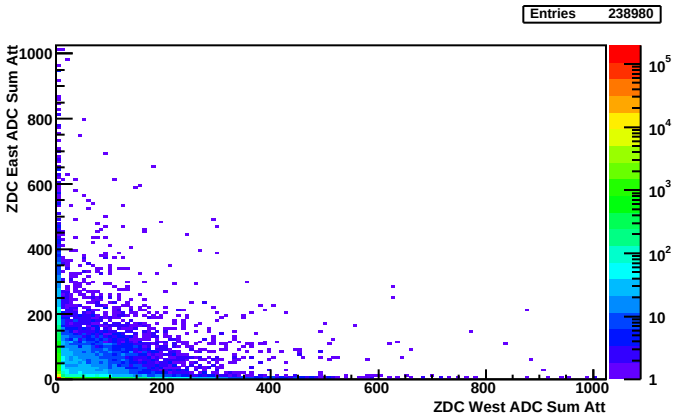

Entries 238980
VPD-East ADC Sum
ZDC-East ADC Sum Att

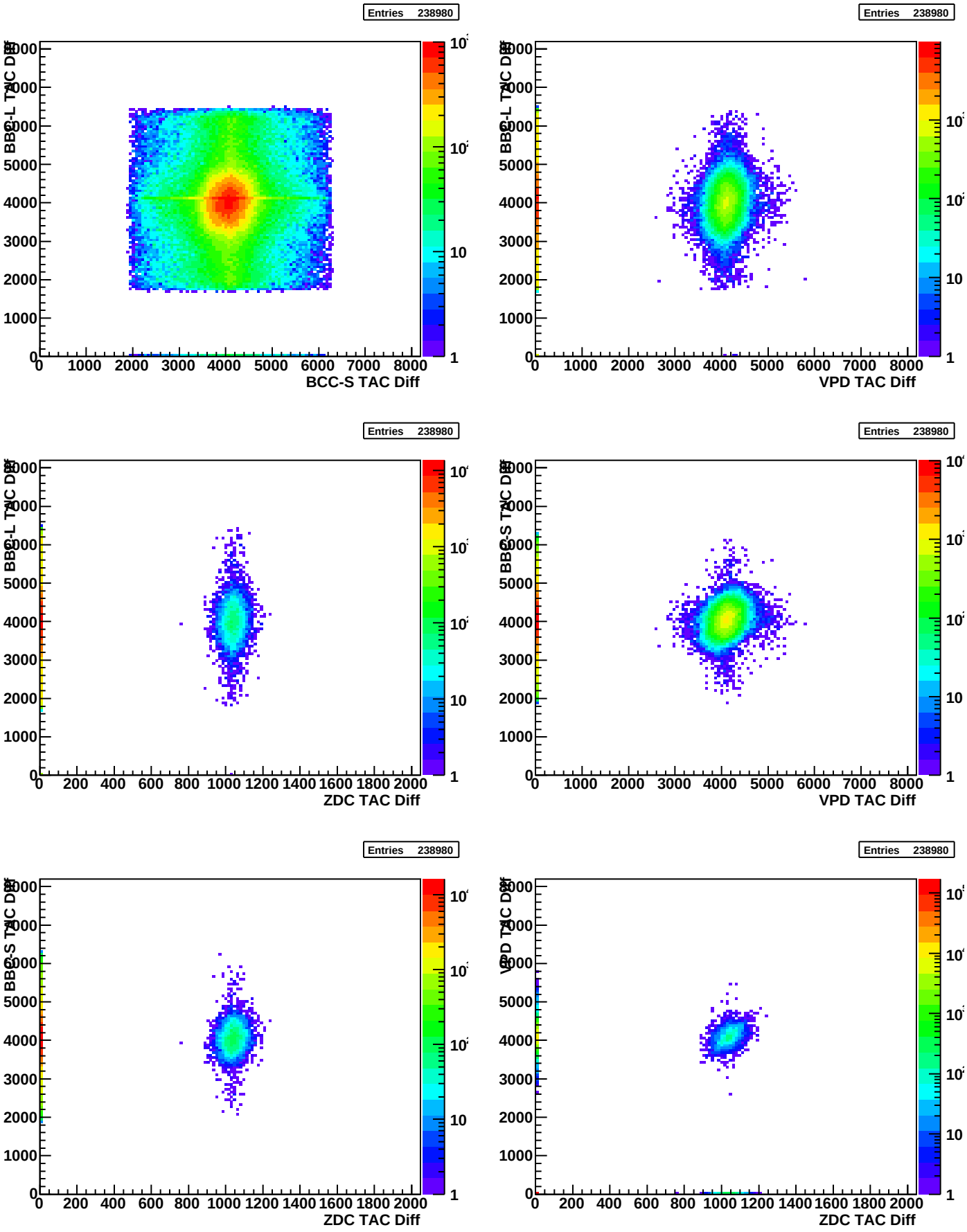

Entries 238980
VPD-West ADC Sum
ZDC-West ADC Sum Att

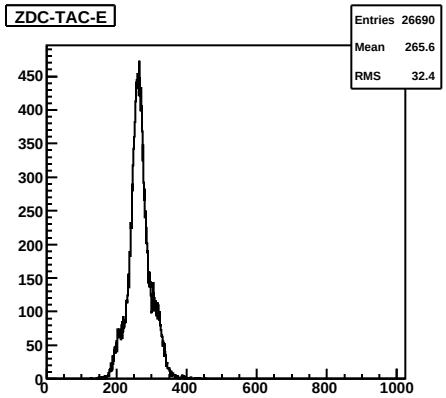

Entries 238980
BBC-L-East ADC Sum
BBC-L-West ADC Sum

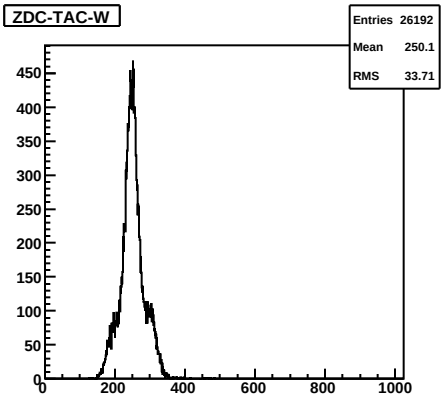

Entries 238980
BBC-S-East ADC Sum
BBC-S-West ADC Sum

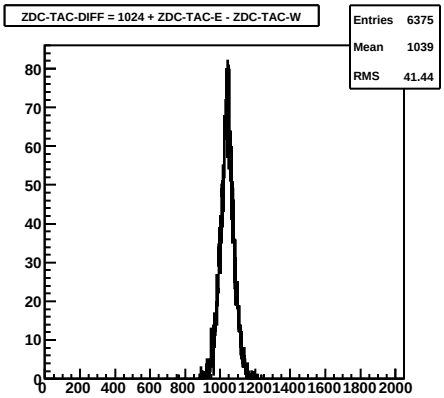

Entries 238980
VPD East ADC Sum
VPD West ADC Sum

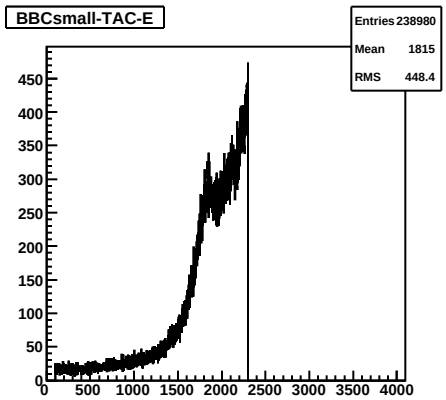

Entries 238980
ZDC East ADC Sum Att
ZDC West ADC Sum Att

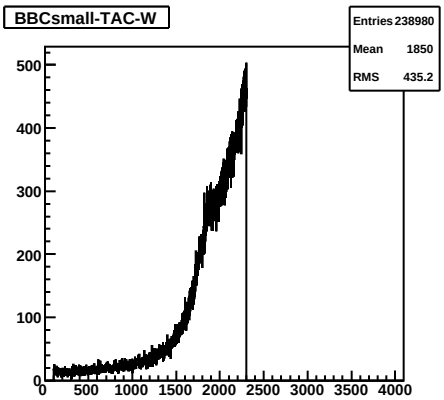

Entries 238980
BBC-L TAC Diff
BCC-S TAC Diff
Entries 238980
BBC-L TAC Diff
VPD TAC Diff
Entries 238980
BBC-L TAC Diff
ZDC TAC Diff
Entries 238980
BBC-S TAC Diff
VPD TAC Diff
Entries 238980
BBC-S TAC Diff
ZDC TAC Diff
Entries 238980
VPD TAC Diff
ZDC TAC Diff

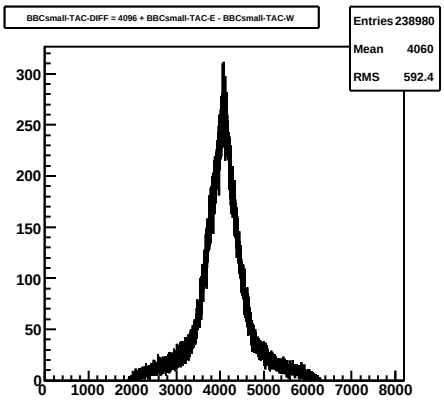

ZDC-TAC-E
Entries 26690
Mean 265.6
RMS 32.4

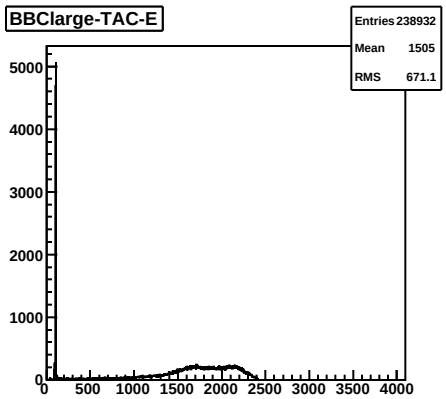

ZDC-TAC-W
Entries 26192
Mean 250.1
RMS 33.71

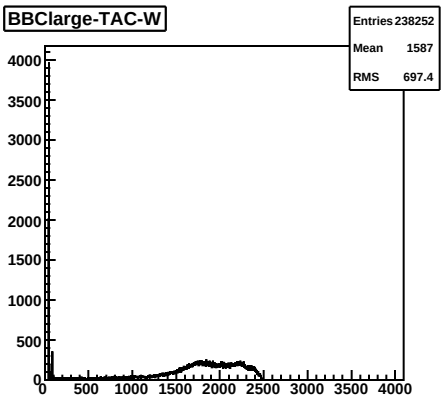

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 6375
Mean 1039
RMS 41.44

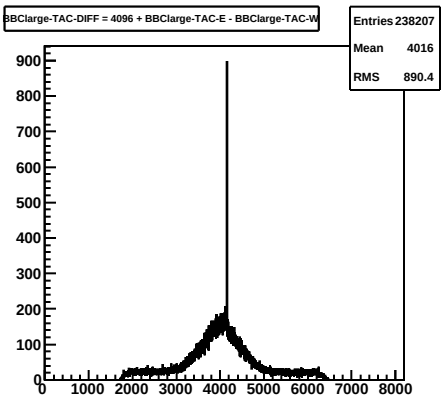

BBCsmall-TAC-E
Entries 238980
Mean 1815
RMS 448.4

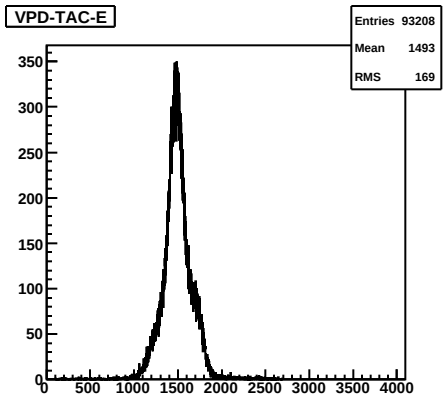

BBCsmall-TAC-W
Entries 238980
Mean 1850
RMS 435.2

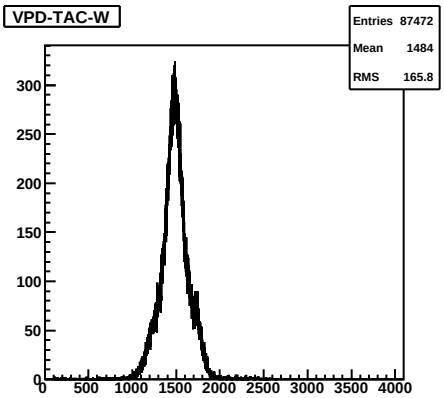

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 238980
Mean 4060
RMS 592.4

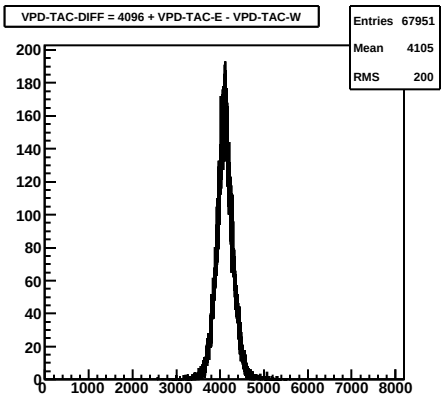

BBClarge-TAC-E
Entries 238932
Mean 1505
RMS 671.1

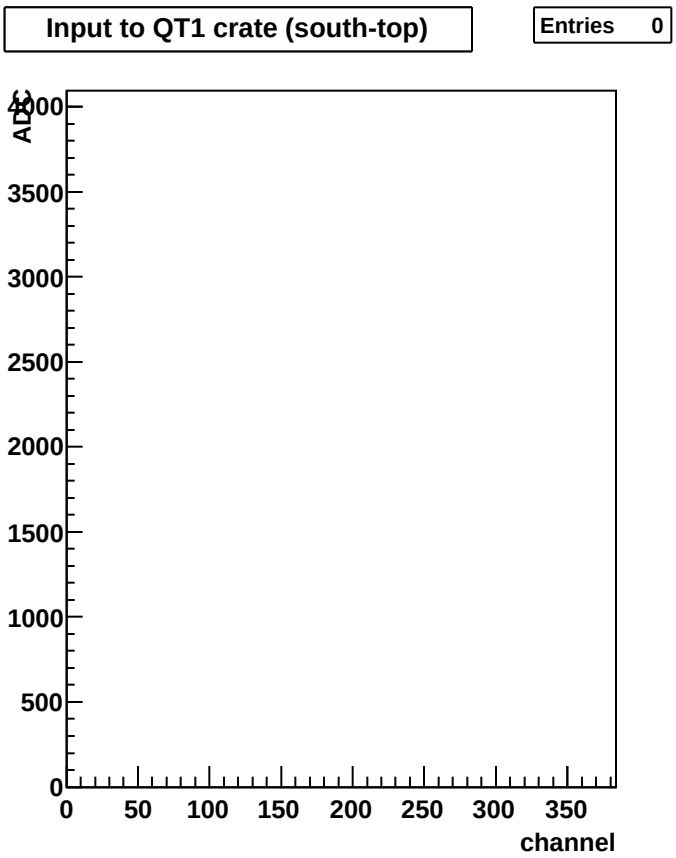

BBClarge-TAC-W
Entries 238252
Mean 1587
RMS 697.4

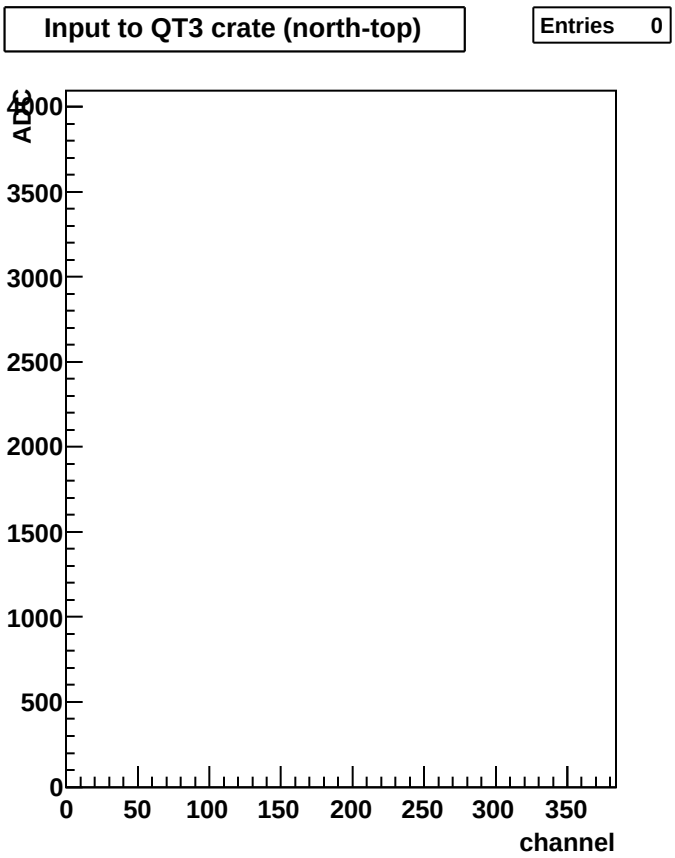

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 238207
Mean 4016
RMS 890.4

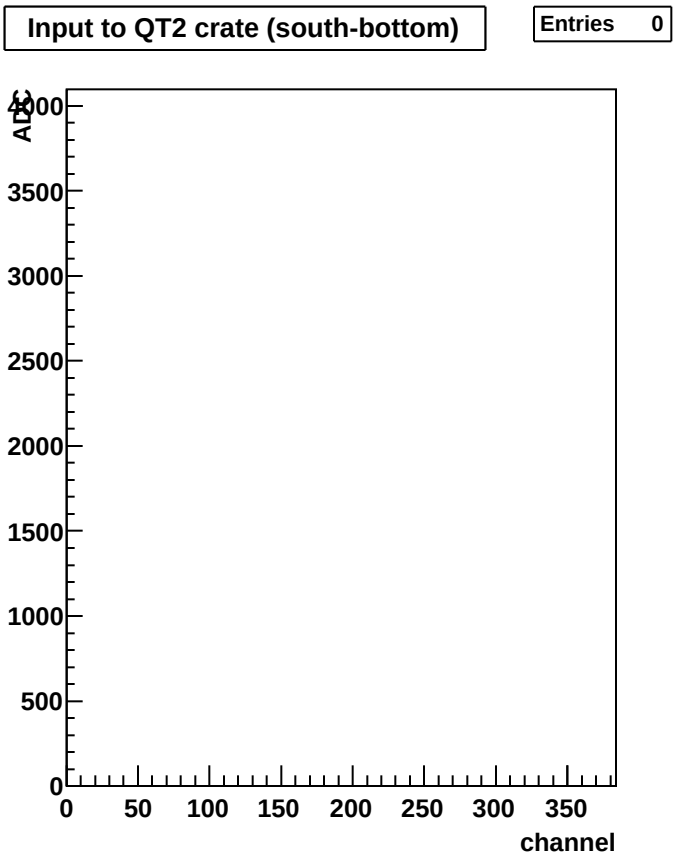

VPD-TAC-E
Entries 93208
Mean 1493
RMS 169

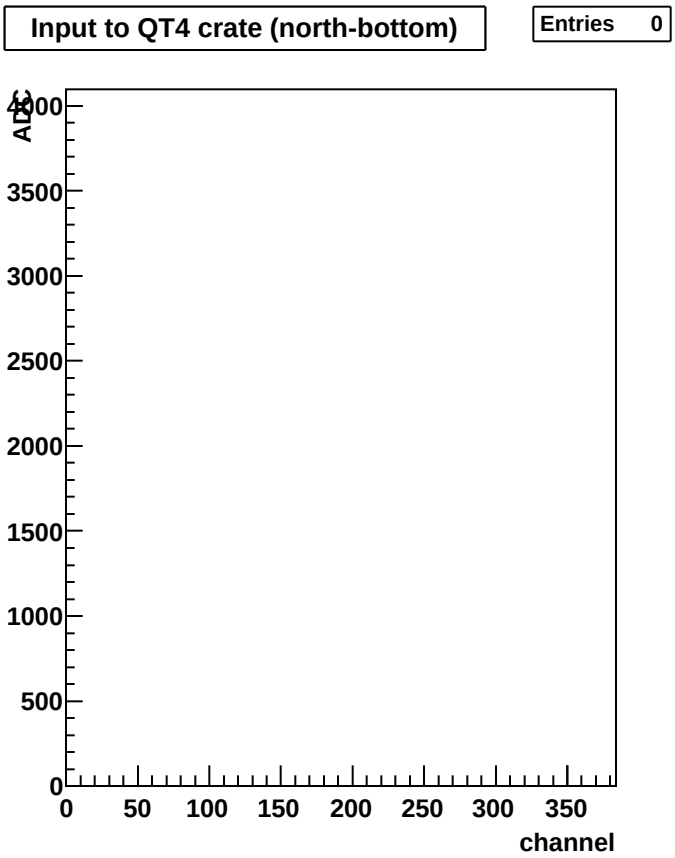

VPD-TAC-W
Entries 87472
Mean 1484
RMS 165.8

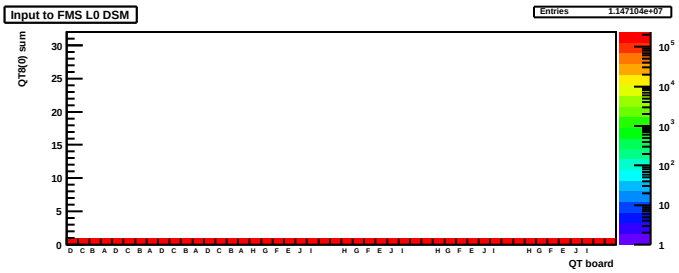

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 67951
Mean 4105
RMS 200

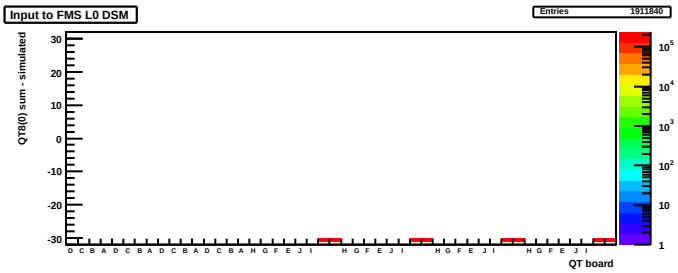

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

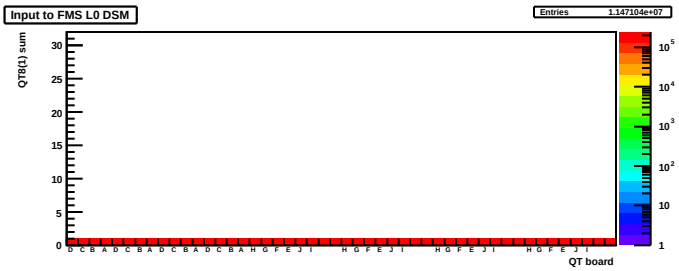

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

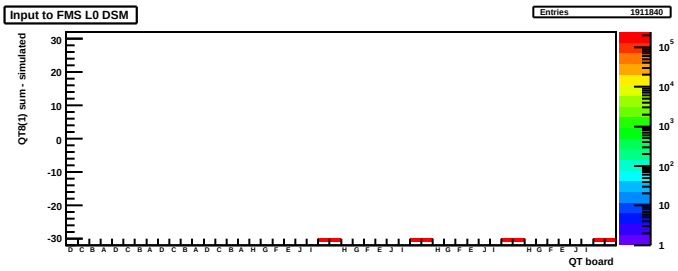

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

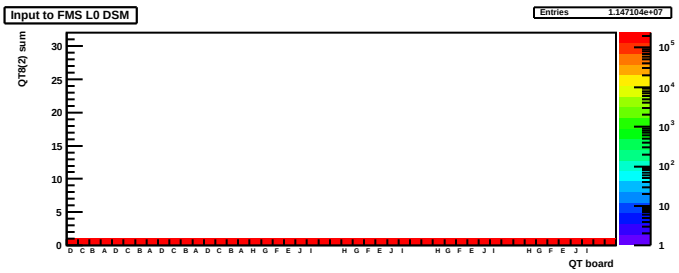

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

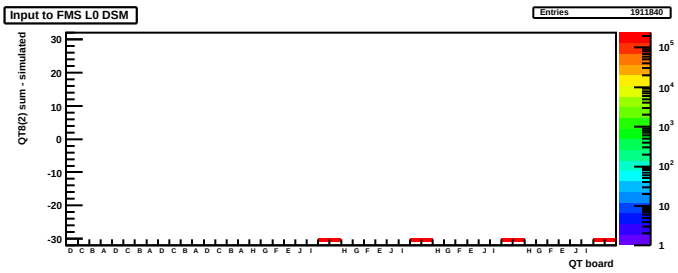

Input to FMS L0 DSM
Entries 1.147104e+07
QT8(0) sum
QT board

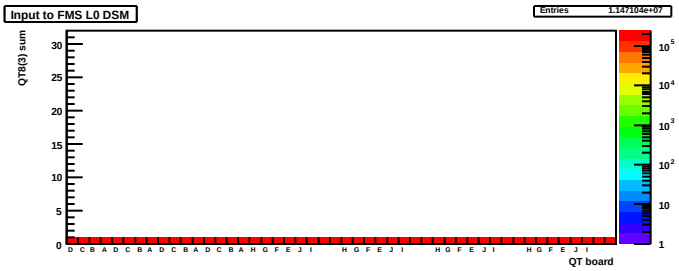

Input to FMS L0 DSM
Entries 1911840
QT8(0) sum - simulated
QT board

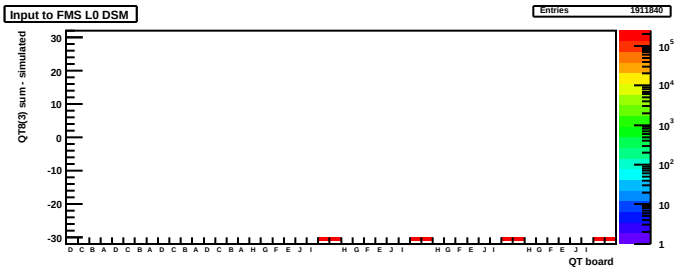

Input to FMS L0 DSM
Entries 1.147104e+07
QT8(1) sum
QT board

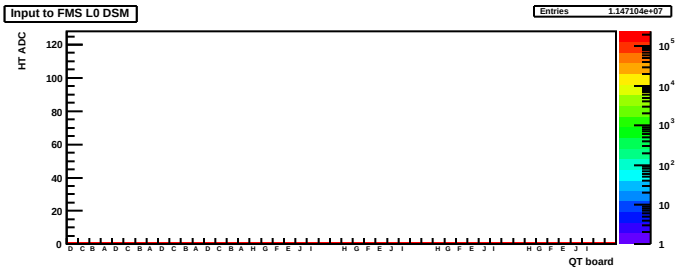

Input to FMS L0 DSM
Entries 1911840
QT8(1) sum - simulated
QT board

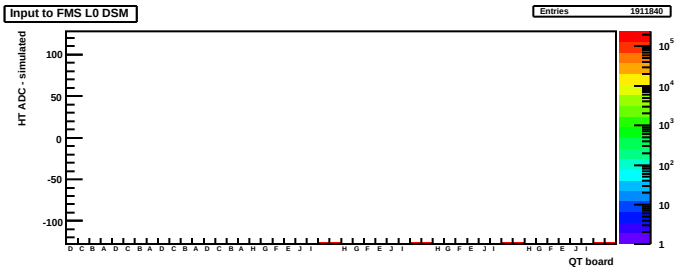

Input to FMS L0 DSM
Entries 1.147104e+07
QT8(2) sum
QT board

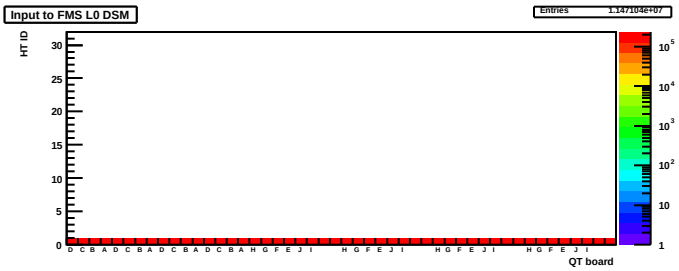

Input to FMS L0 DSM
Entries 1911840
QT8(2) sum - simulated
QT board

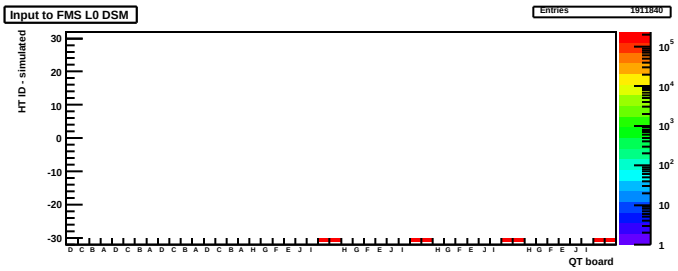

Input to FMS L0 DSM
Entries 1.147104e+07
QT8(3) sum
QT board

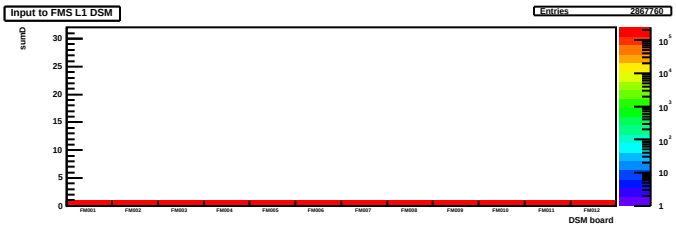

Input to FMS L0 DSM
Entries 1911840
QT8(3) sum - simulated
QT board

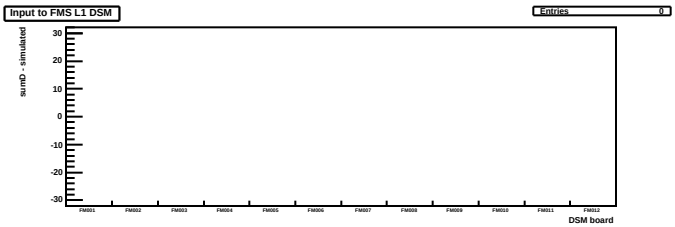

Input to FMS L0 DSM
Entries 1.147104e+07
HT ADC
QT board

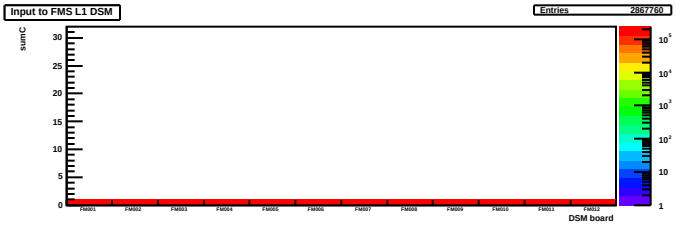

Input to FMS L0 DSM
Entries 1911840
HT ADC - simulated
QT board

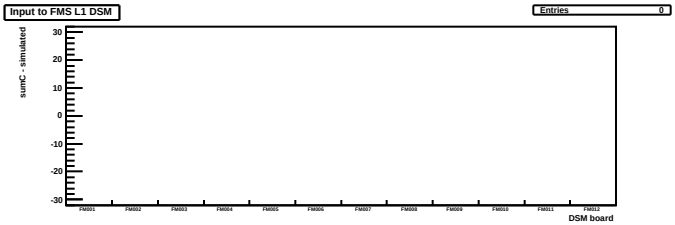

Input to FMS L0 DSM
Entries 1.147104e+07
HT ID
QT board

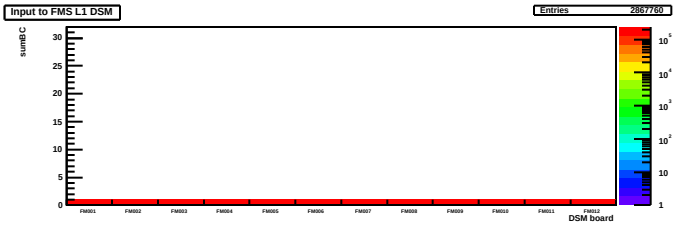

Input to FMS L0 DSM
Entries 1911840
HT ID - simulated
QT board

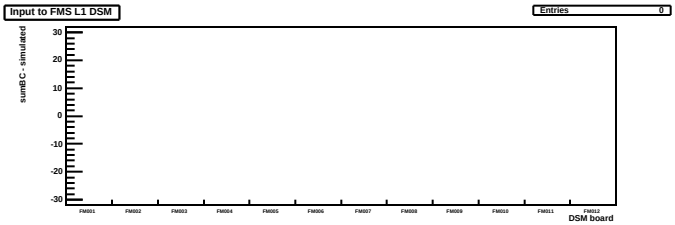

Input to FMS L1 DSM
Entries 2867760
sumD
DSM board

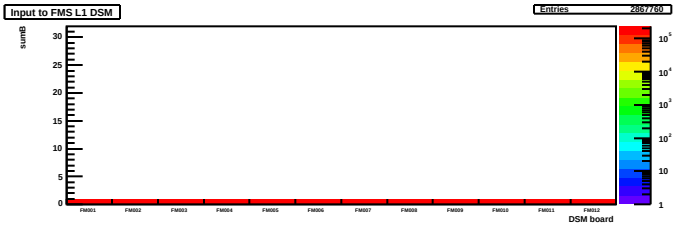

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

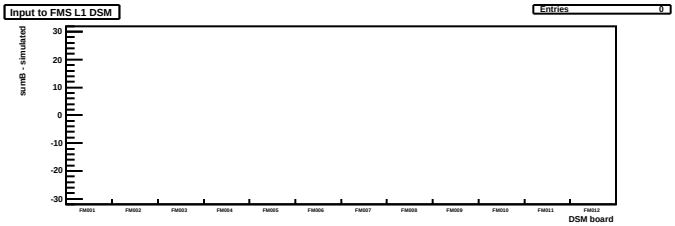

Input to FMS L1 DSM
Entries 2867760
sumC
DSM board

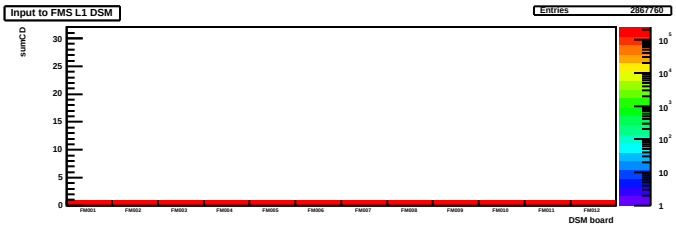

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

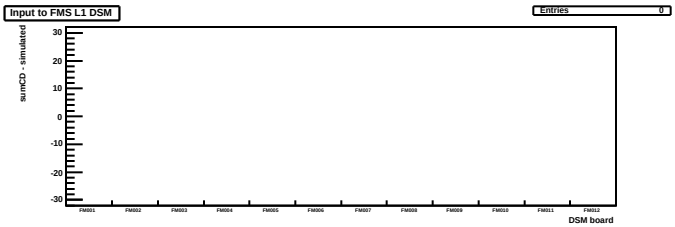

Input to FMS L1 DSM
Entries 2867760
sumBC
DSM board

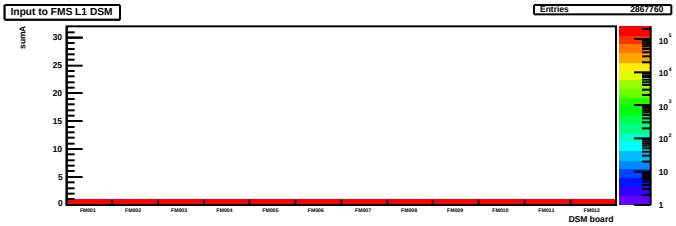

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

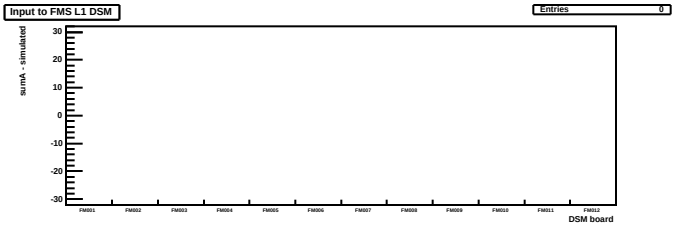

Input to FMS L1 DSM
Entries 2867760
sumB
DSM board

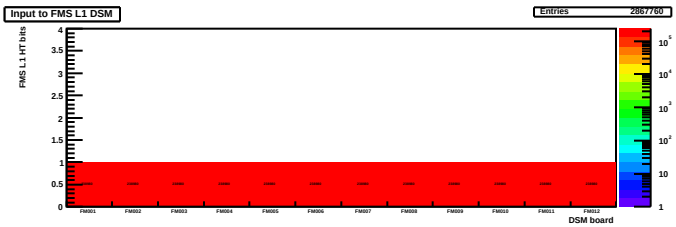

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

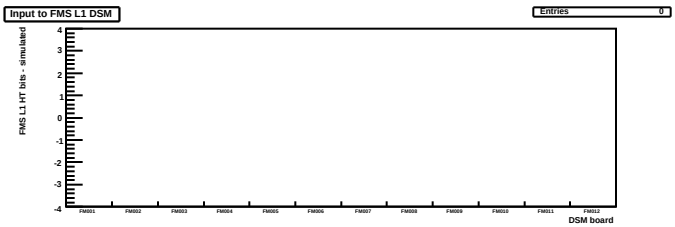

Input to FMS L1 DSM
Entries 2867760
sumCD
DSM board

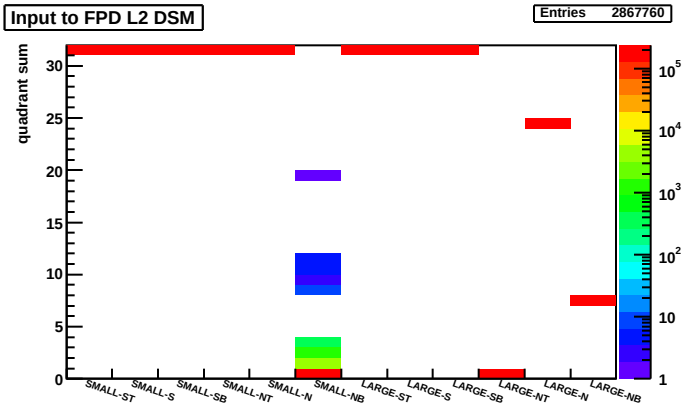

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

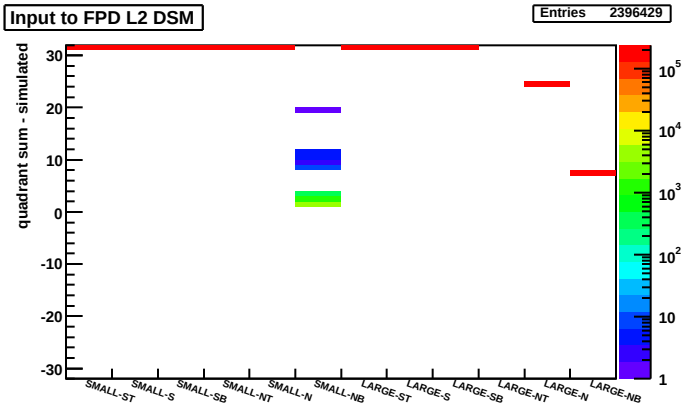

Input to FMS L1 DSM
Entries 2867760
sumA
DSM board

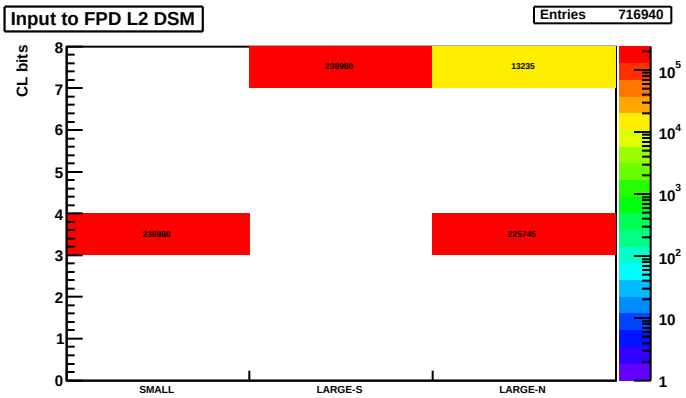

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

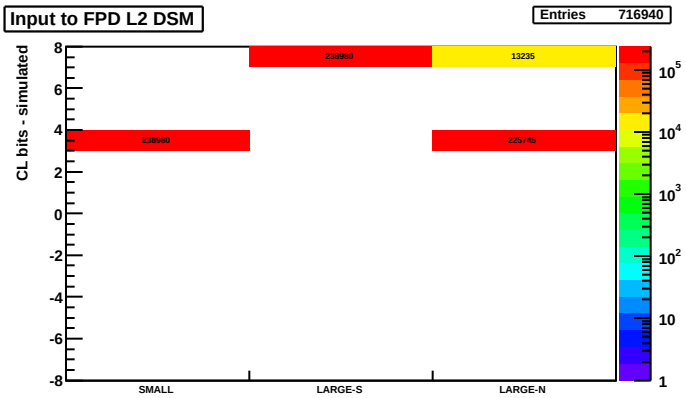

Input to FMS L1 DSM
Entries 2867760
FMS L1 HT bits
DSM board

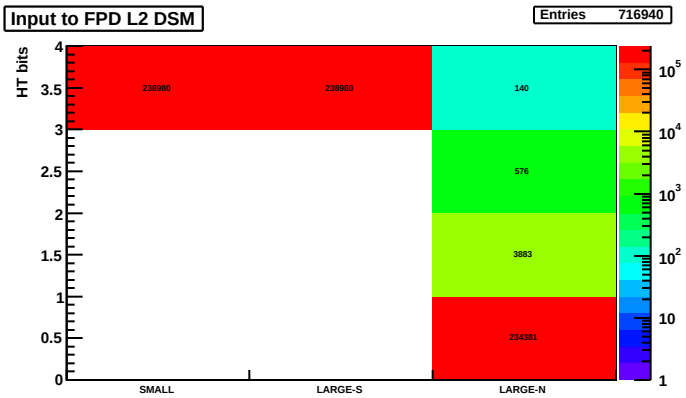

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

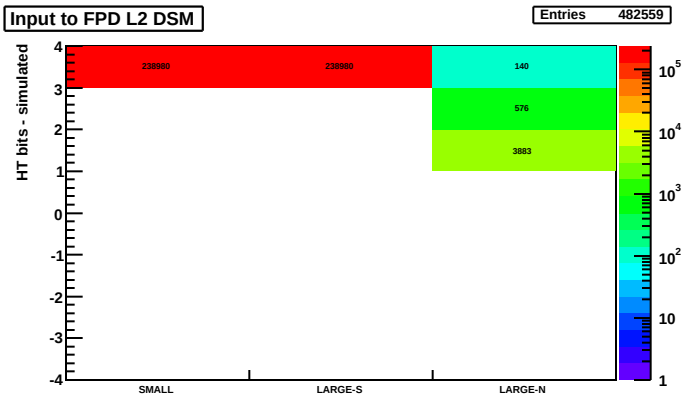

Input to FPD L2 DSM
Entries 2867760
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

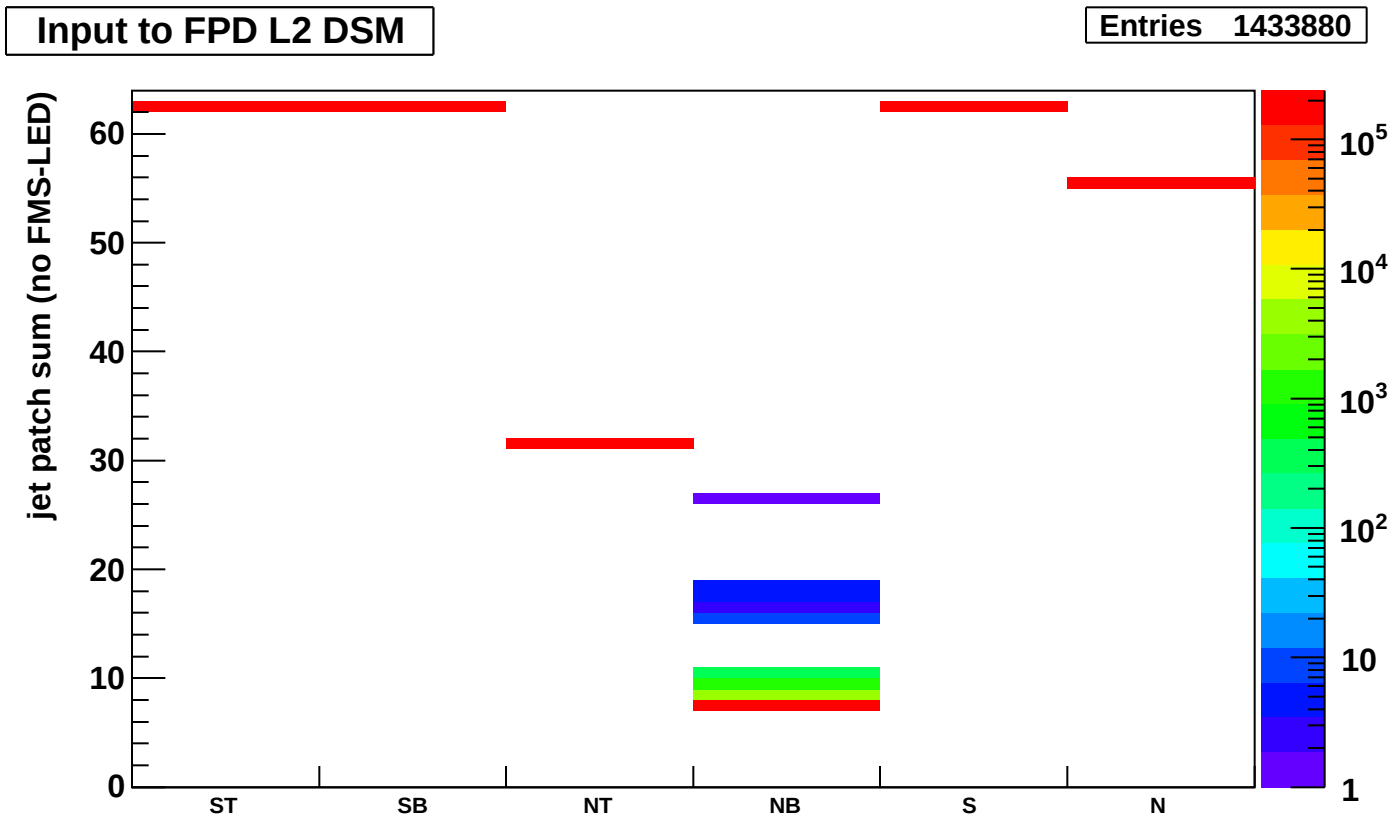

Input to FPD L2 DSM
Entries 2396429
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

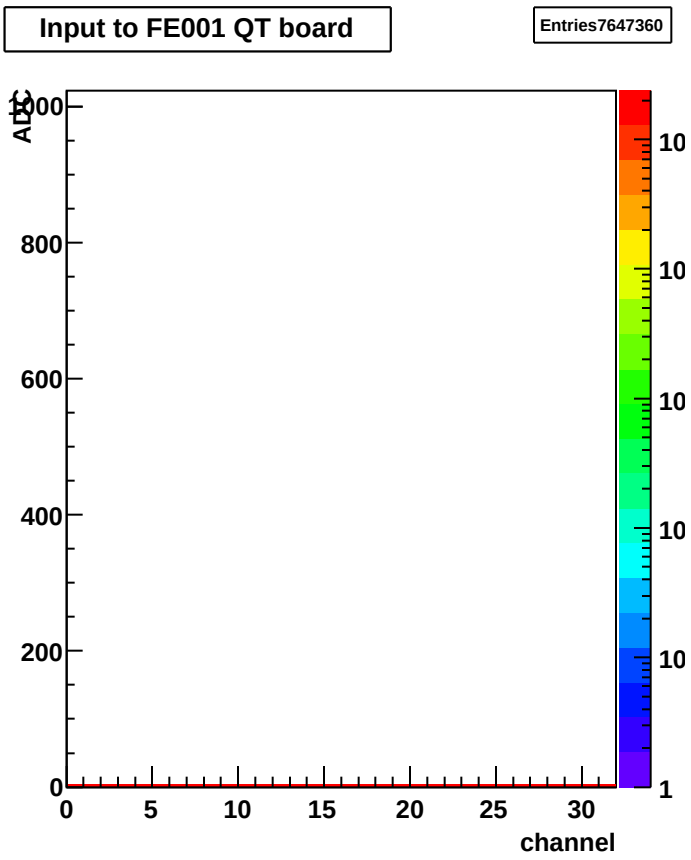

Input to FPD L2 DSM
Entries 716940
CL bits
238980
13235
238980
225745
SMALL
LARGE-S
LARGE-N

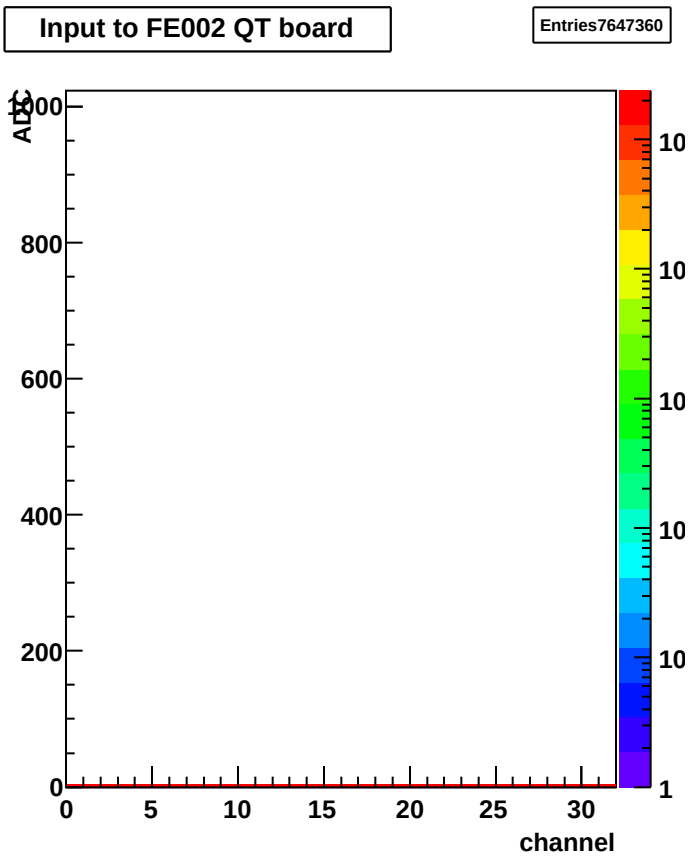

Input to FPD L2 DSM
Entries 716940
CL bits - simulated
238980
13235
238980
225745
SMALL
LARGE-S
LARGE-N

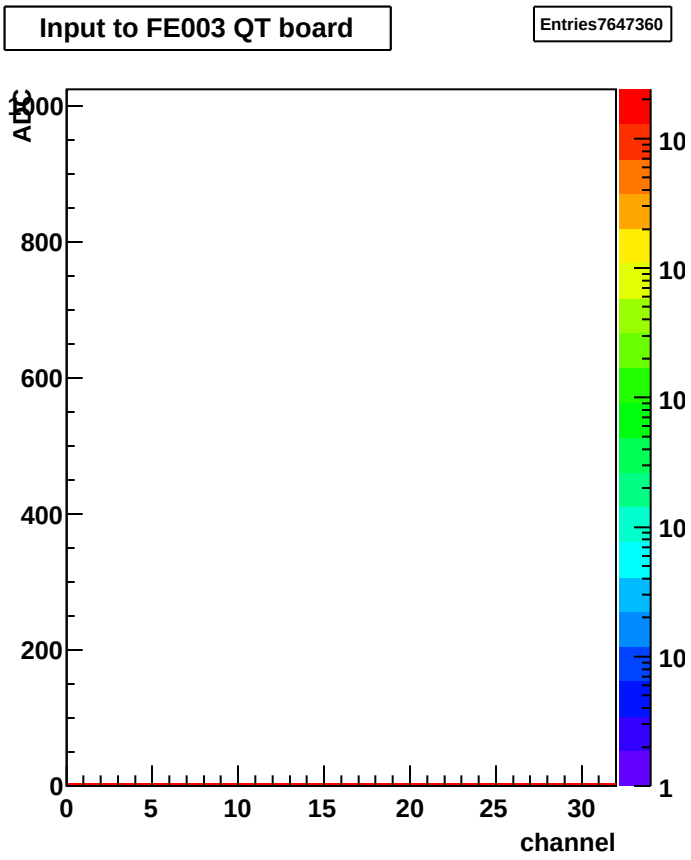

Input to FPD L2 DSM
Entries 716940
HT bits
238980
238980
140
576
3883
234381
SMALL
LARGE-S
LARGE-N

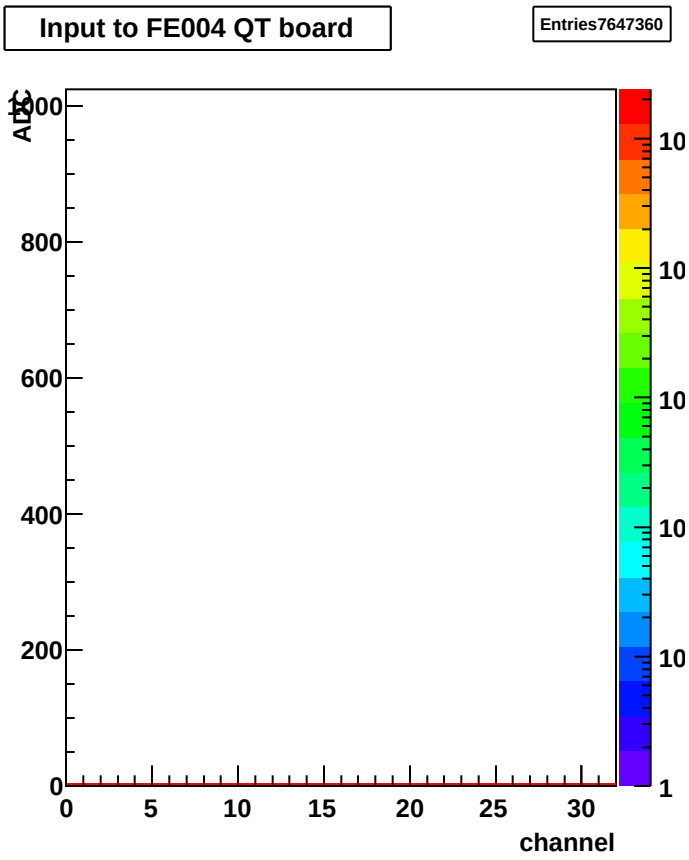

Input to FPD L2 DSM
Entries 482559
HT bits - simulated
238980
238980
140
576
3883
SMALL
LARGE-S
LARGE-N

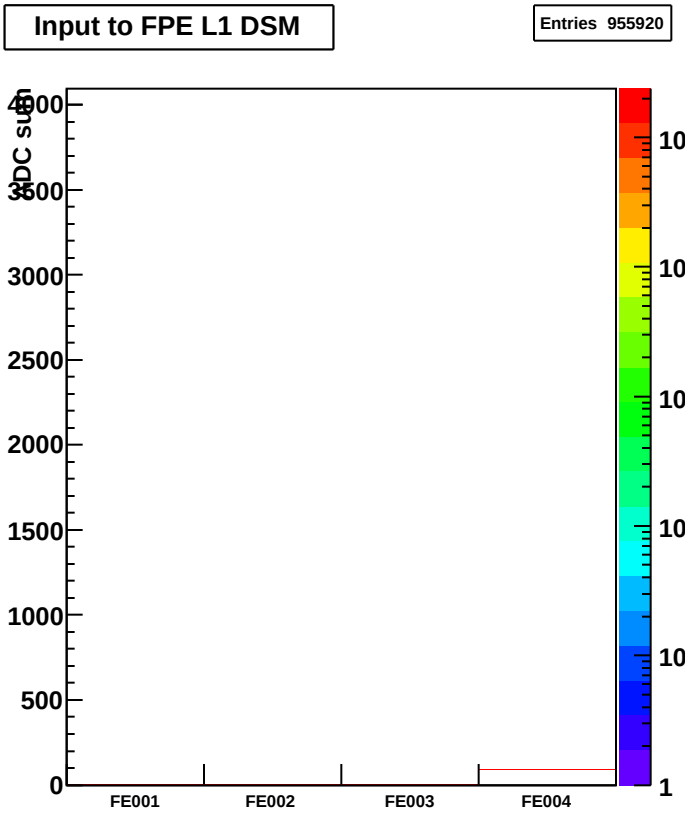

Input to FPD L2 DSM
Entries 1433880
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

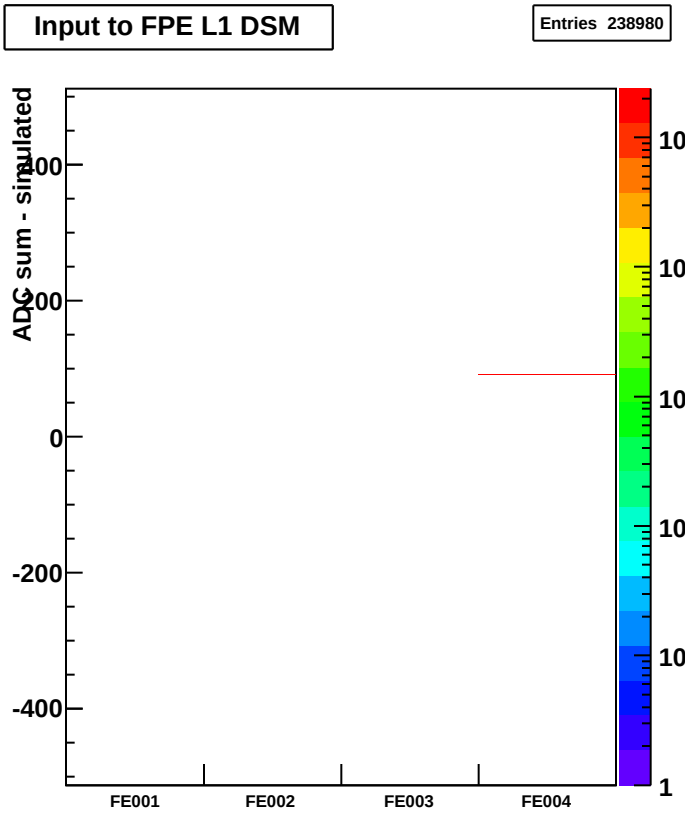

Input to FE001 QT board
Entries7647360
ADC
channel


Input to FE002 QT board
Entries7647360
ADC
channel

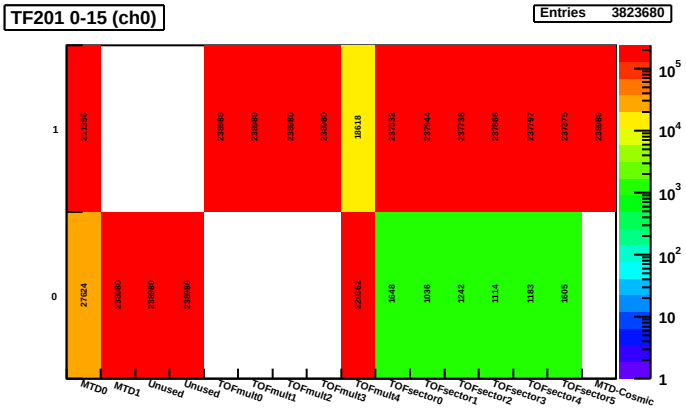

Input to FE003 QT board
Entries7647360
ADC
channel


Input to FE004 QT board
Entries7647360
ADC
channel

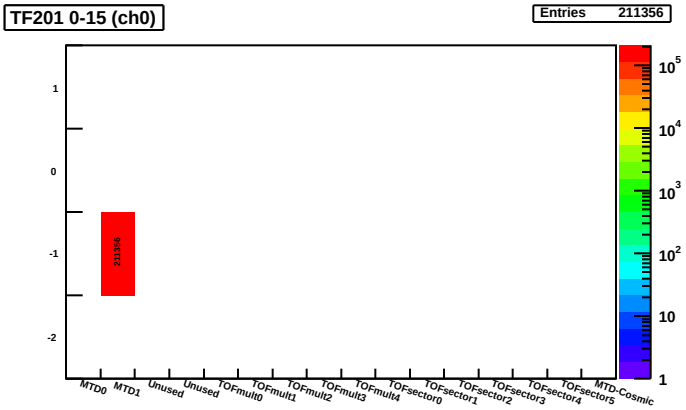

Input to FPE L1 DSM
Entries 955920
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 238980
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

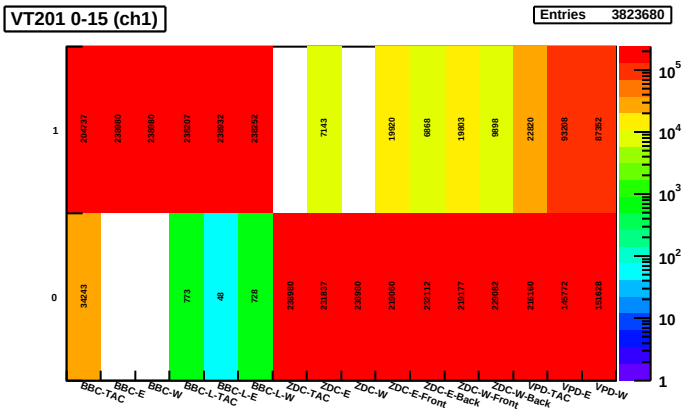
TF201 0-15 (ch0)



TF201 0-15 (ch0)



VT201 0-15 (ch1)



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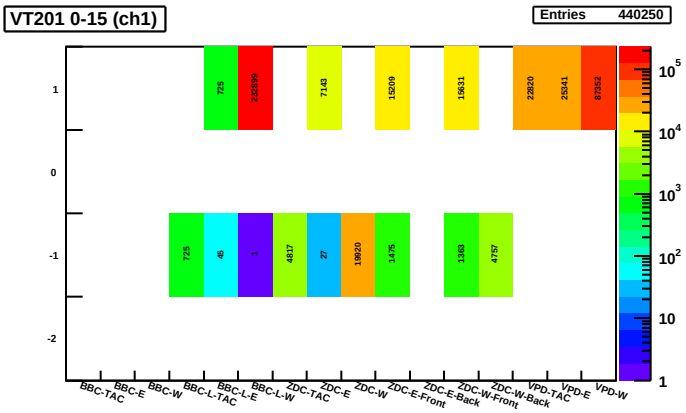

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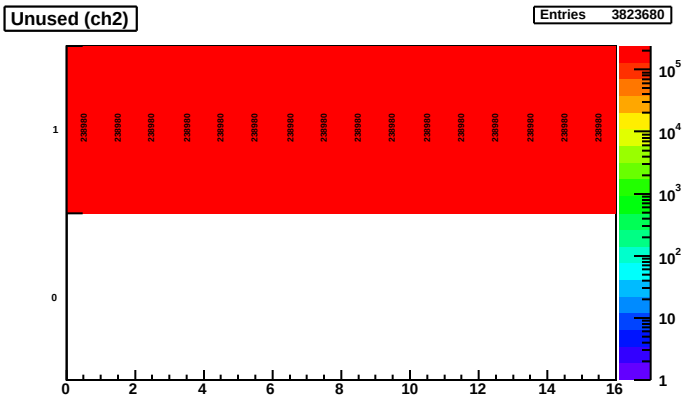

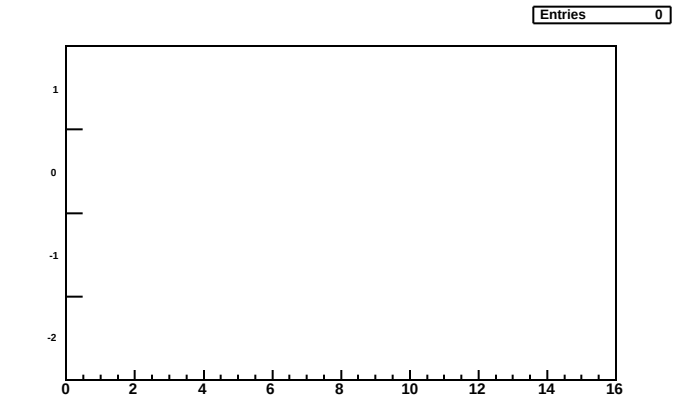

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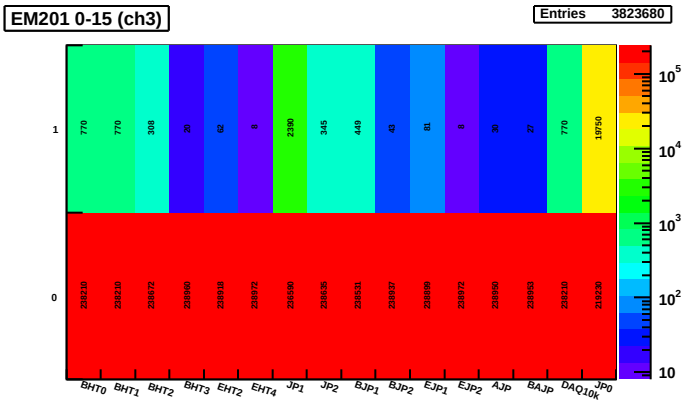

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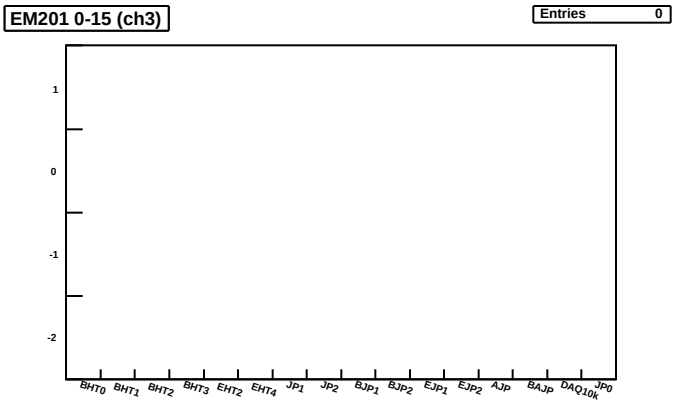
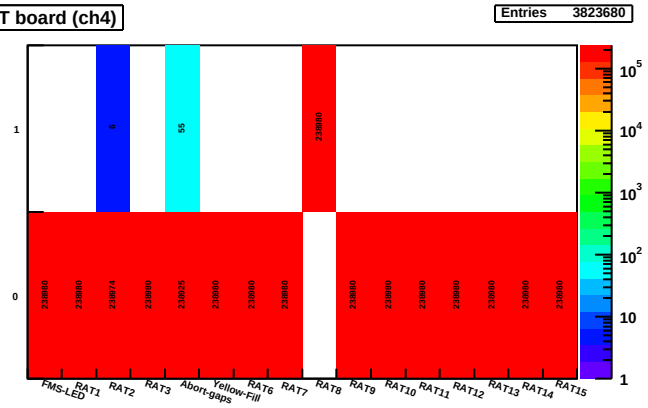
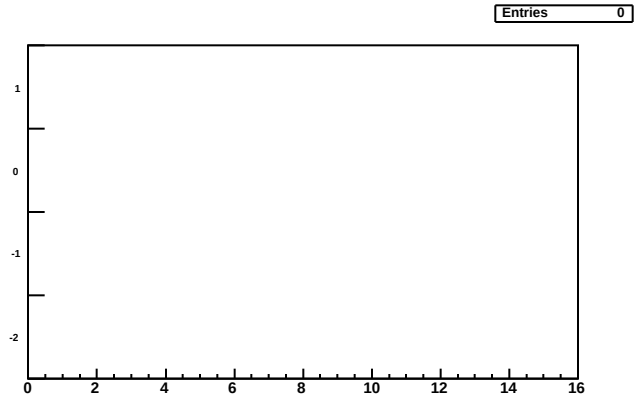
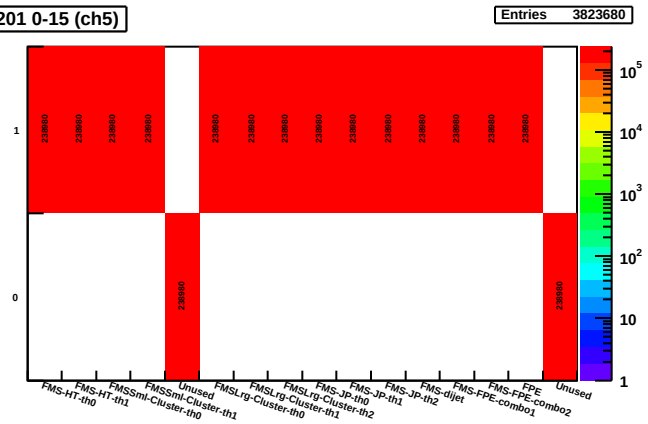


RAT board (ch4)

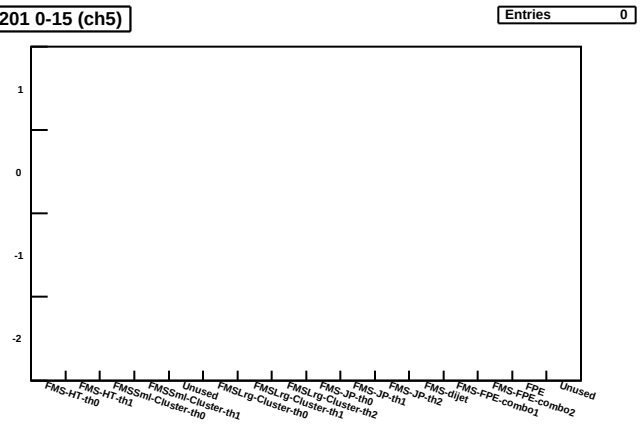




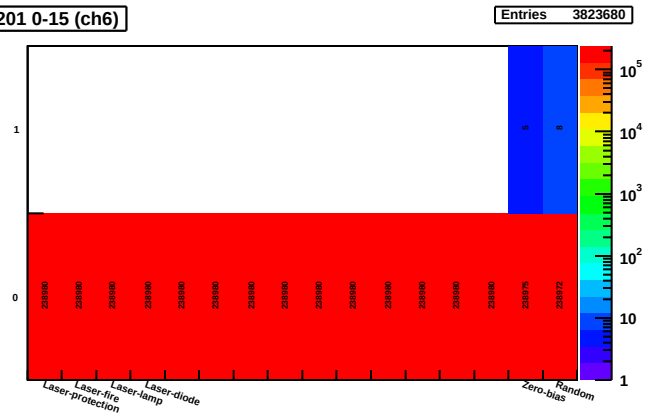
FP201 0-15 (ch5)

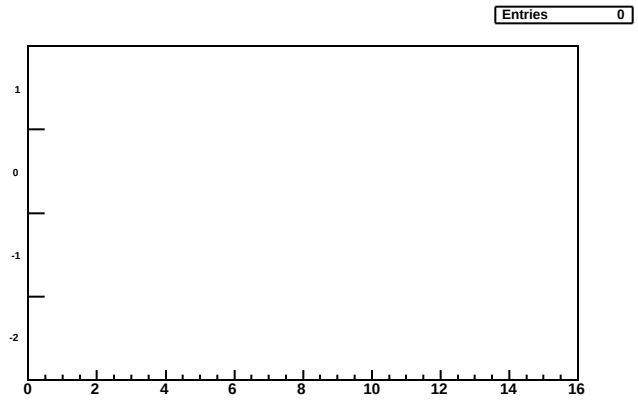
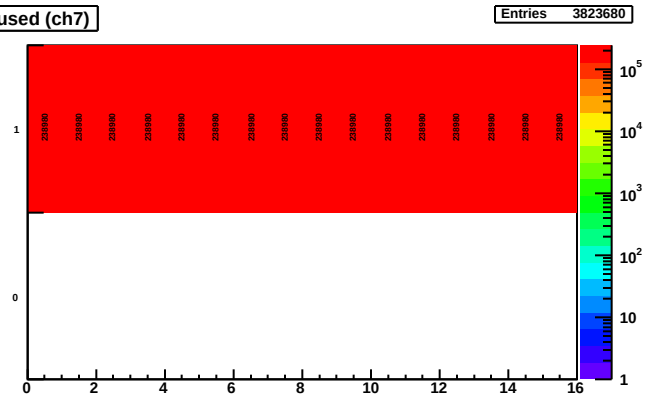
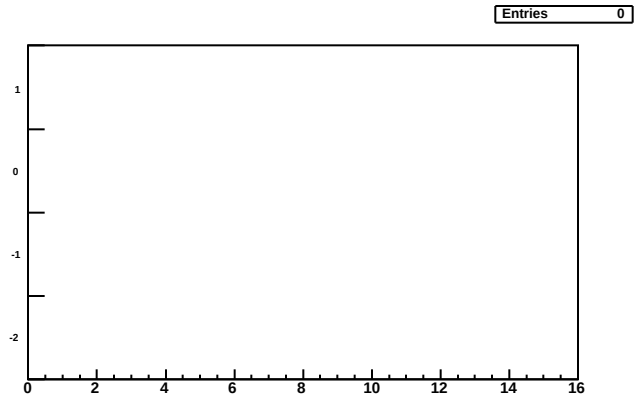


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)