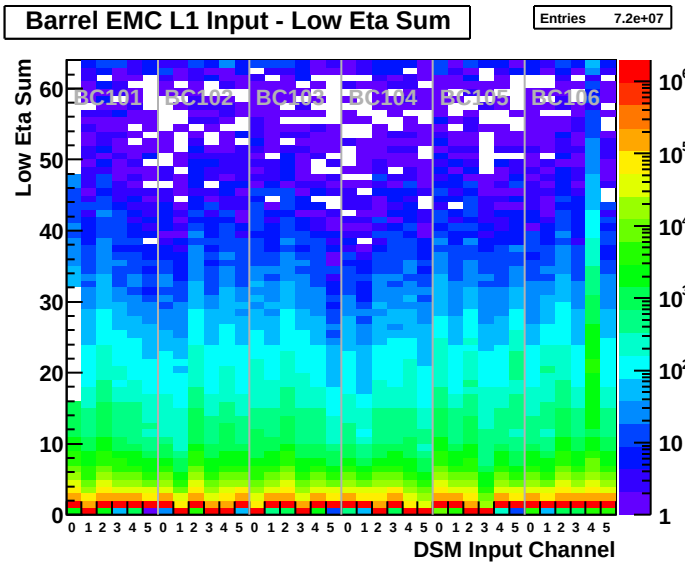
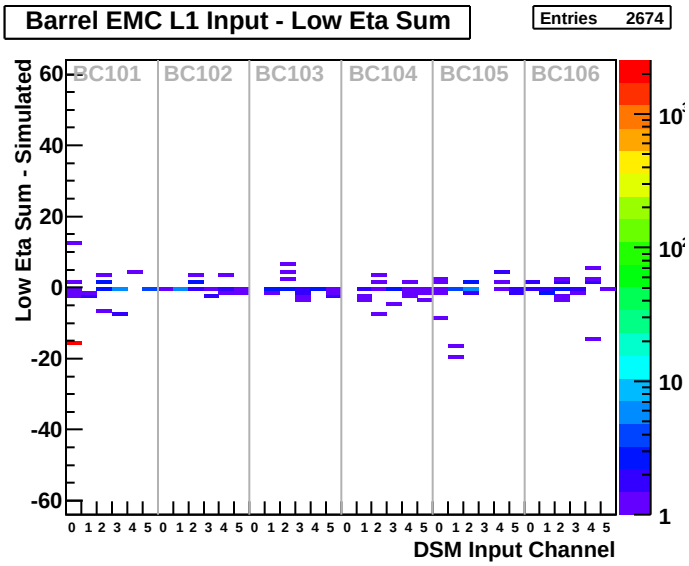
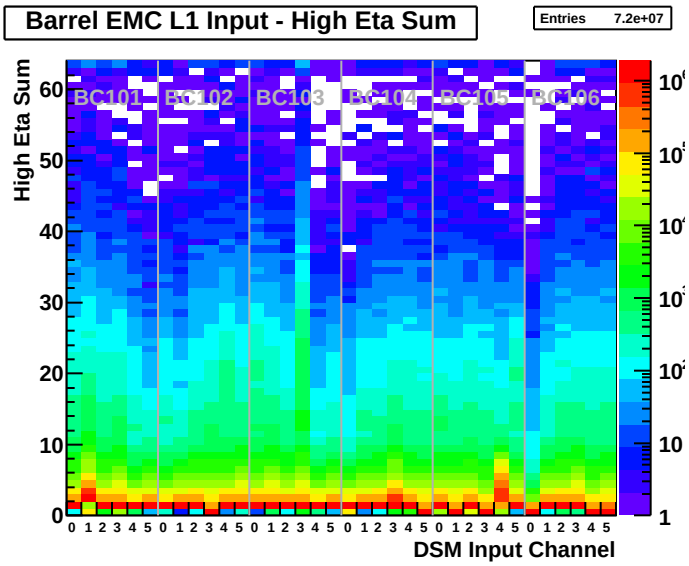
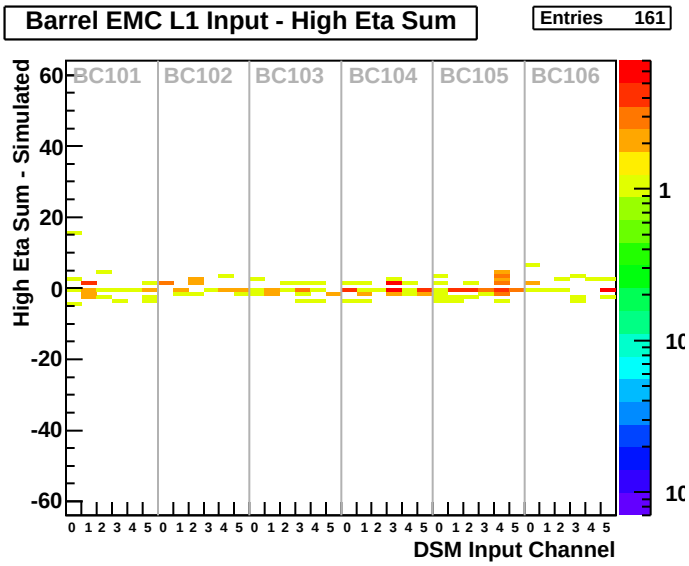
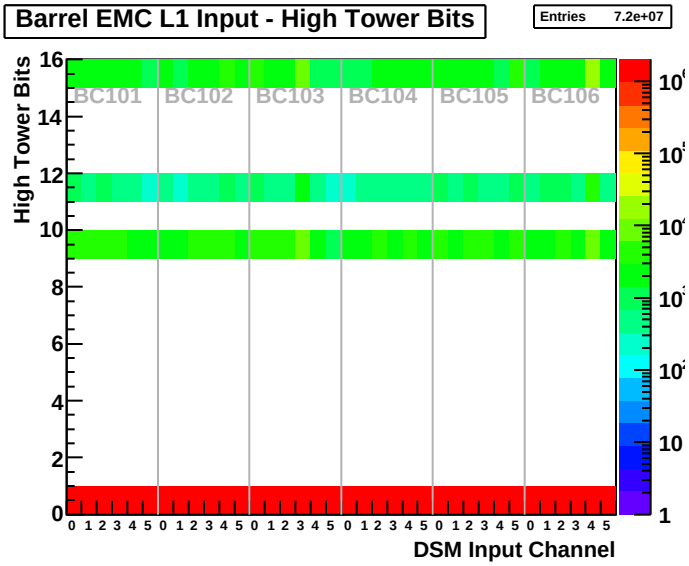
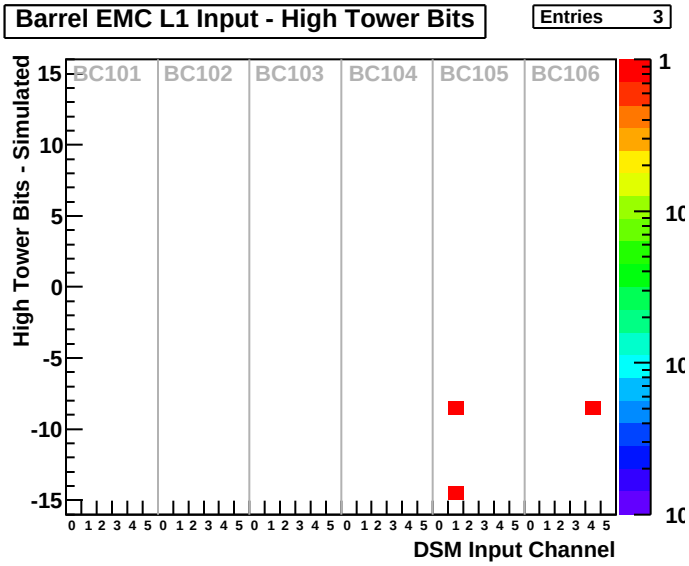

Barrel EMC L1 Input - Low Eta Sum
Entries 7.2e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

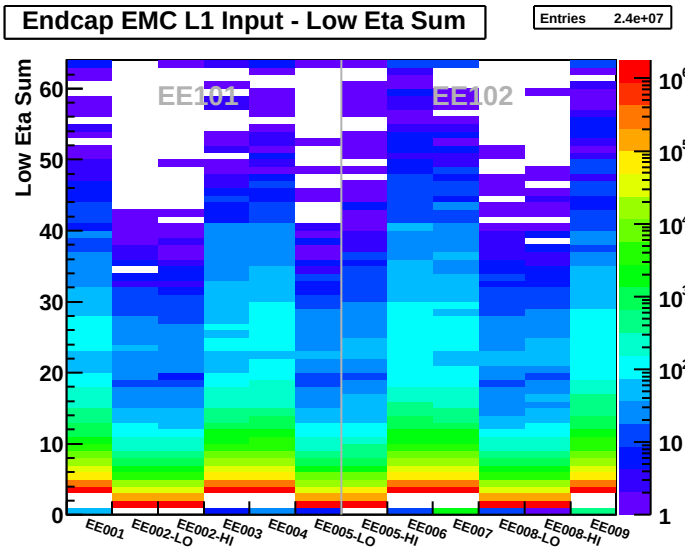

Barrel EMC L1 Input - Low Eta Sum
Entries 2674
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

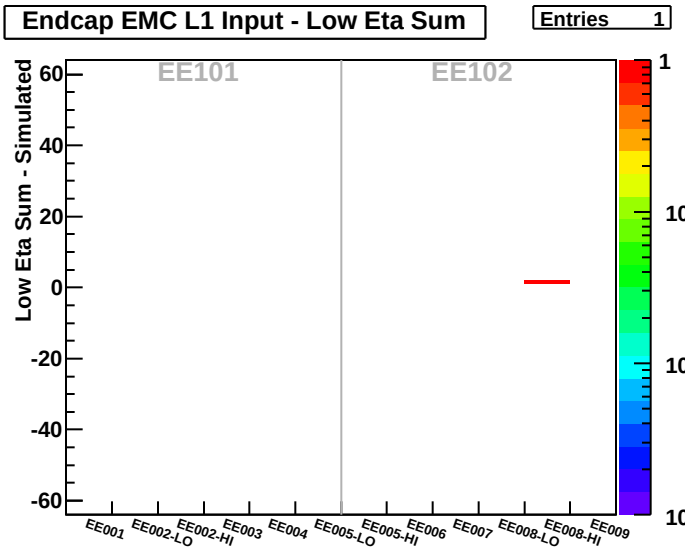

Barrel EMC L1 Input - High Eta Sum
Entries 7.2e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

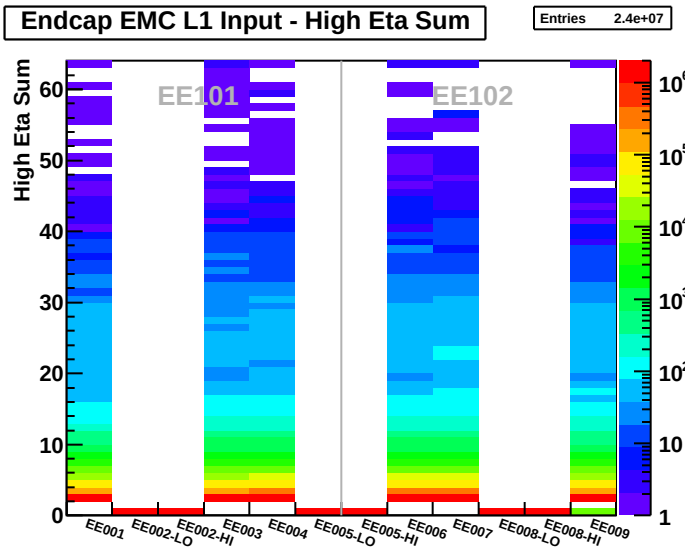

Barrel EMC L1 Input - High Eta Sum
Entries 161
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

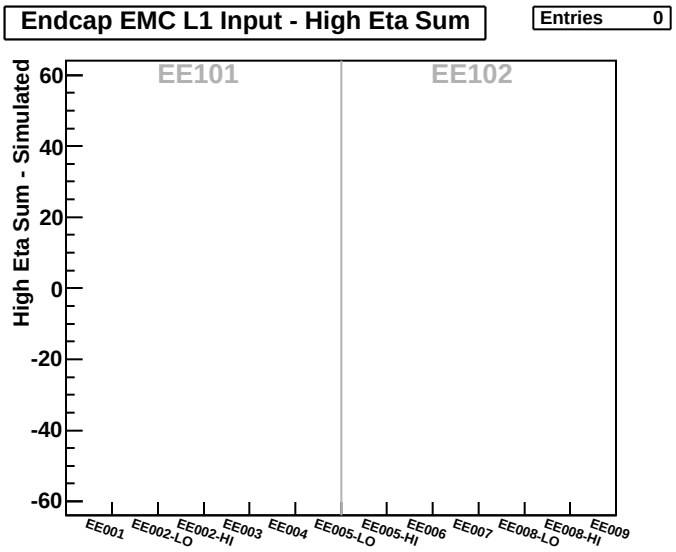

Barrel EMC L1 Input - High Tower Bits
Entries 7.2e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

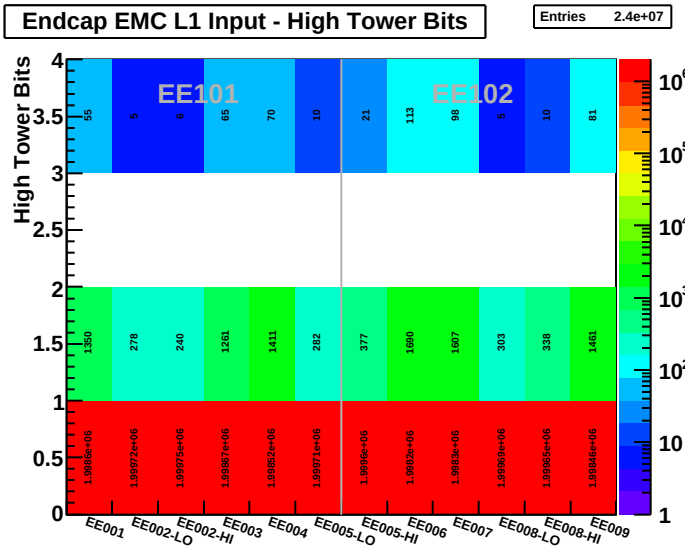

Barrel EMC L1 Input - High Tower Bits
Entries 3
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

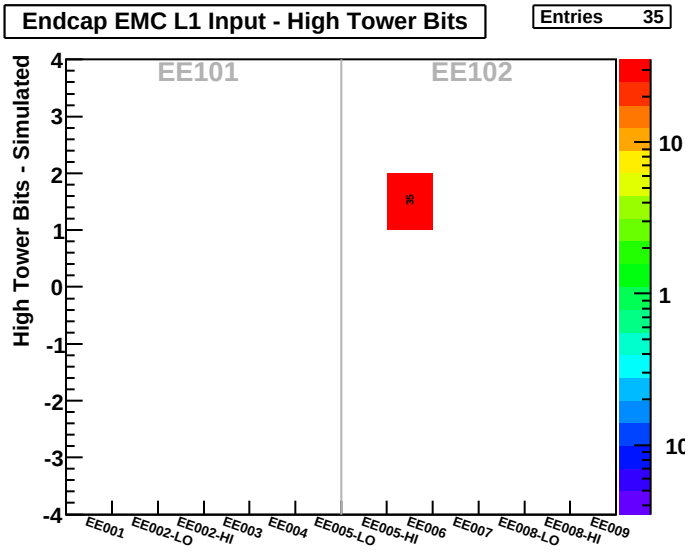

Endcap EMC L1 Input - Low Eta Sum
Entries 2.4e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

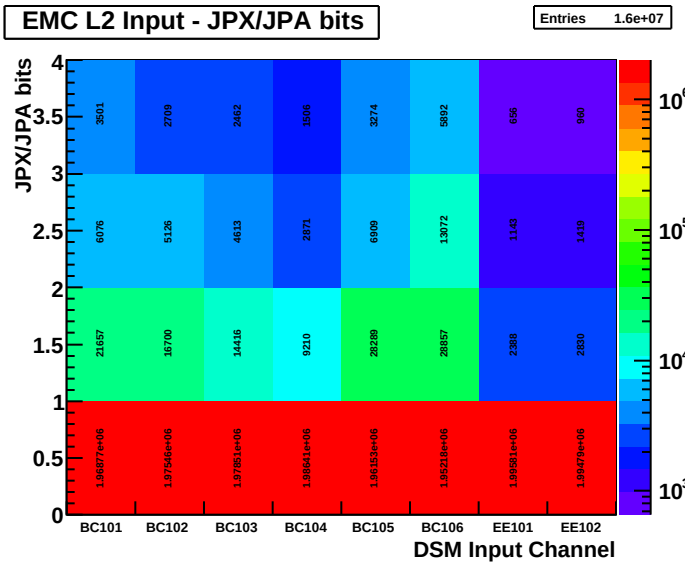

Endcap EMC L1 Input - Low Eta Sum
Entries 1
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

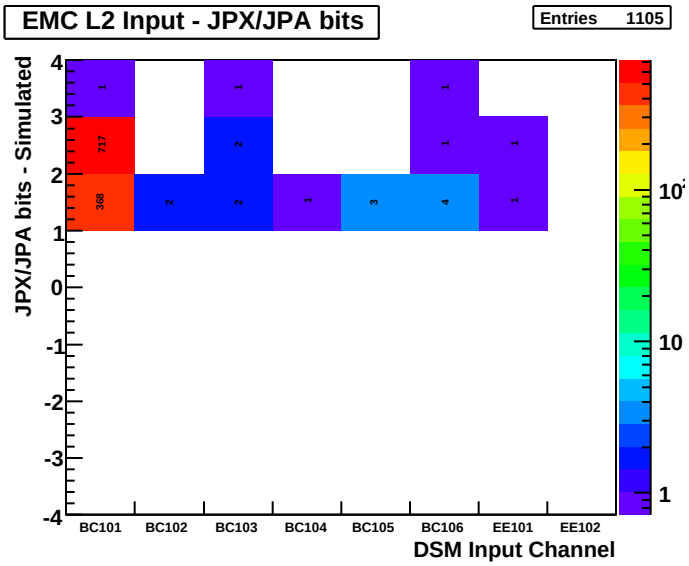

Endcap EMC L1 Input - High Eta Sum
Entries 2.4e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

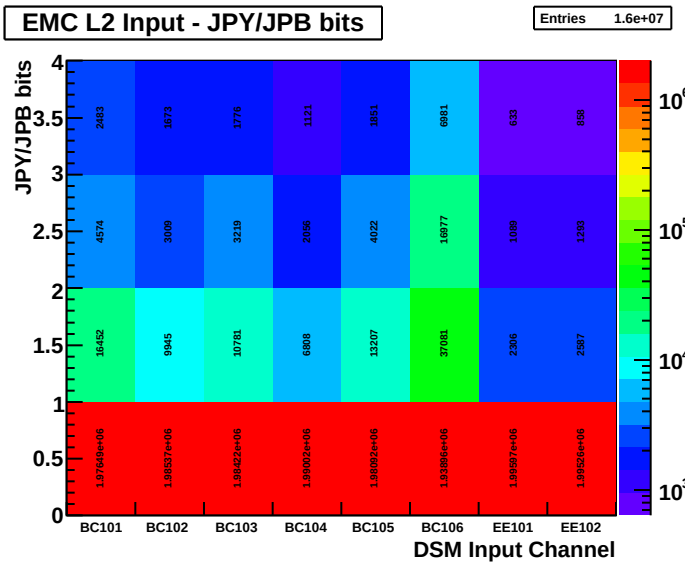

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

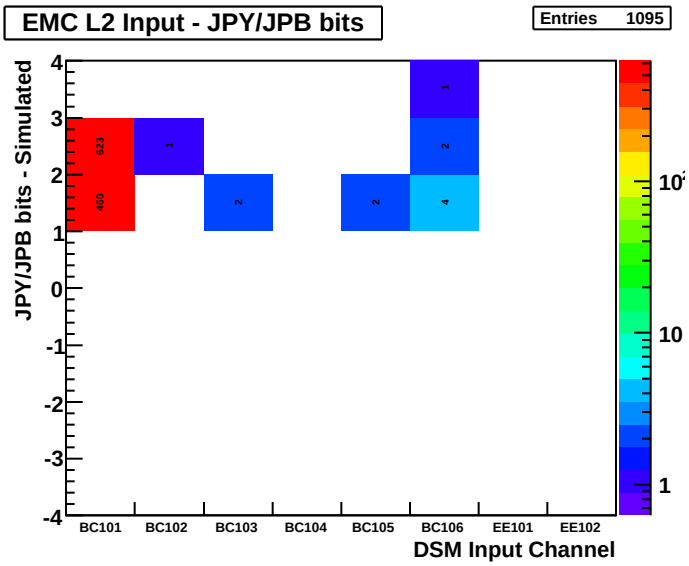

Endcap EMC L1 Input - High Tower Bits
Entries 2.4e+07
High Tower Bits
EE101
EE102
55 5 6 65 70 10 21 113 98 5 10 81
1350 278 240 1261 1411 282 377 1690 1607 303 338 1461
1.9986e+06 1.99972e+06 1.99975e+06 1.99867e+06 1.99852e+06 1.99971e+06 1.9996e+06 1.9982e+06 1.9983e+06 1.99969e+06 1.99965e+06 1.99846e+06
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

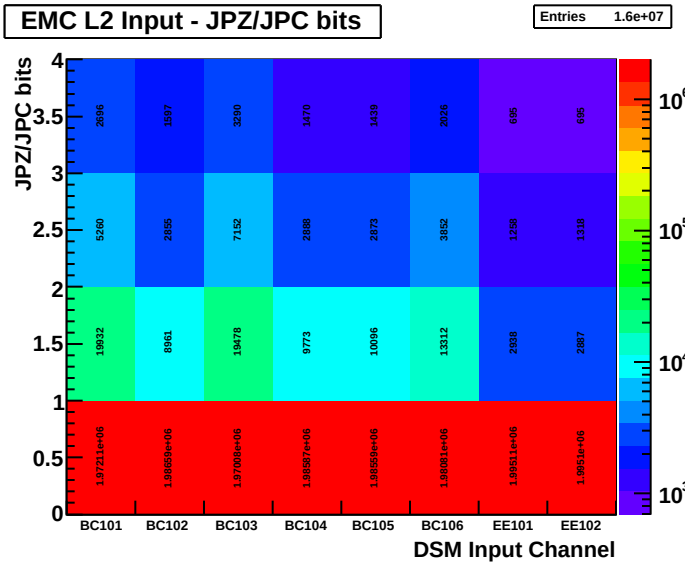

Endcap EMC L1 Input - High Tower Bits
Entries 35
High Tower Bits - Simulated
EE101
EE102
35
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

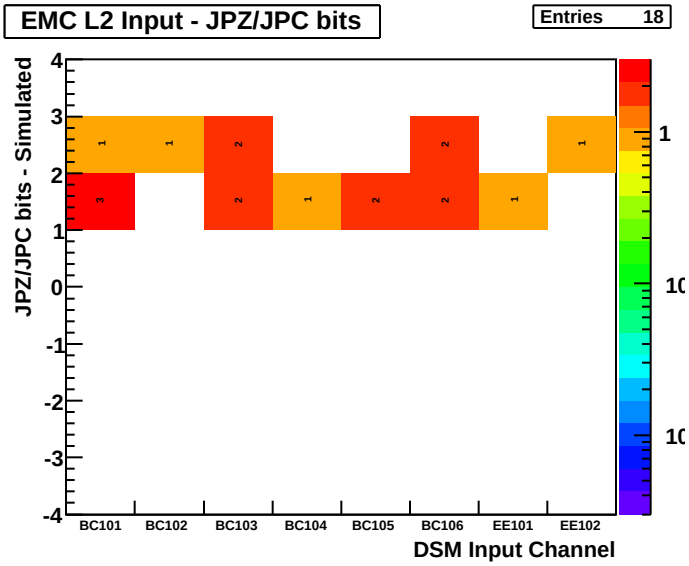

EMC L2 Input - JPX/JPA bits
Entries 1.6e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

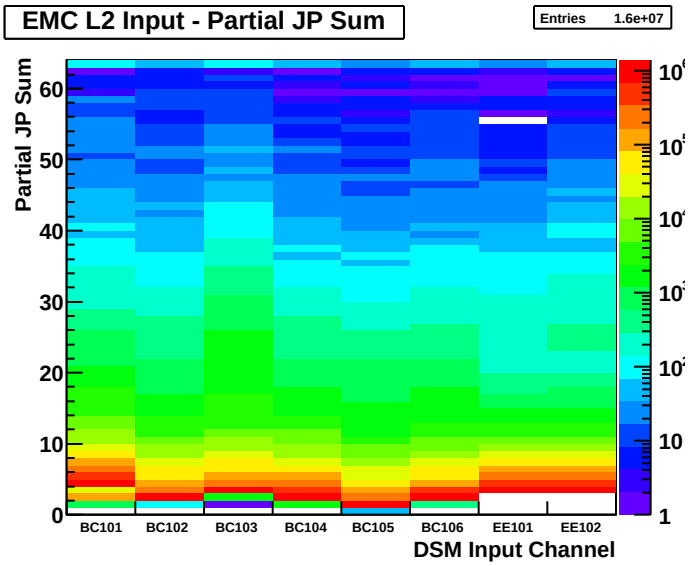

EMC L2 Input - JPX/JPA bits
Entries 1105
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

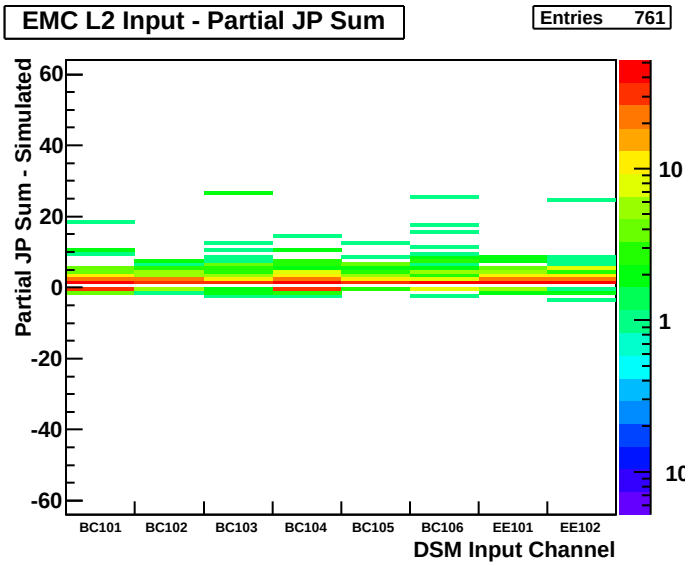

EMC L2 Input - JPY/JPB bits
Entries 1.6e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

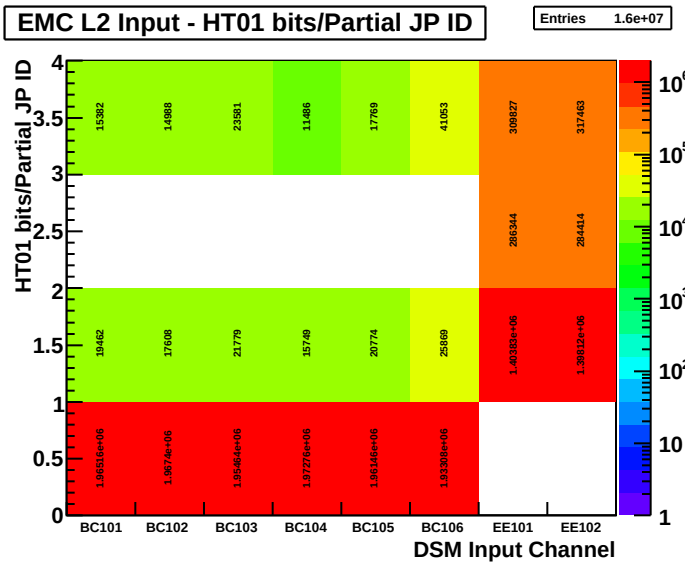

EMC L2 Input - JPY/JPB bits
Entries 1095
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

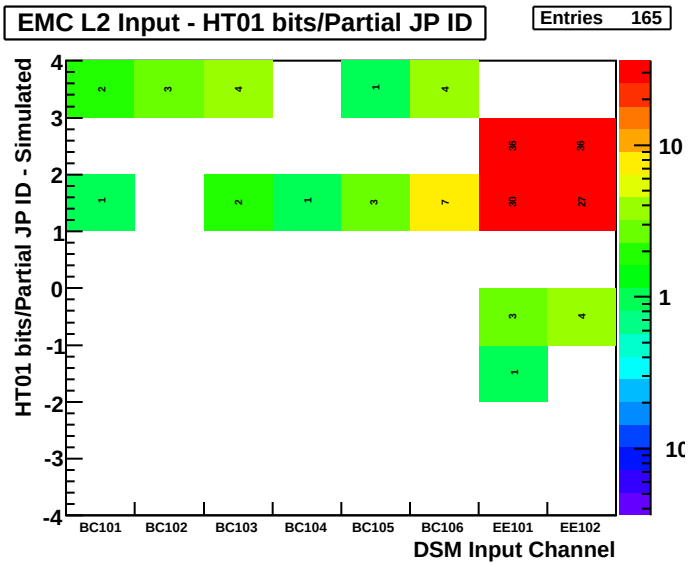

EMC L2 Input - JPZ/JPC bits
Entries 1.6e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

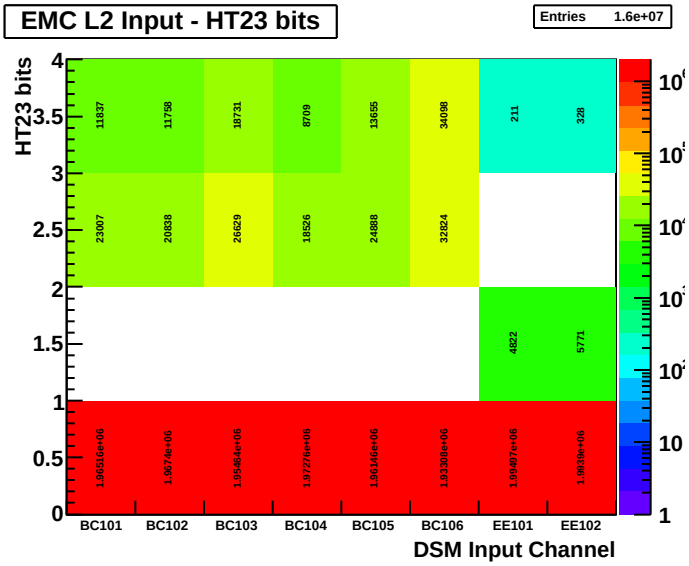

EMC L2 Input - JPZ/JPC bits
Entries 18
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

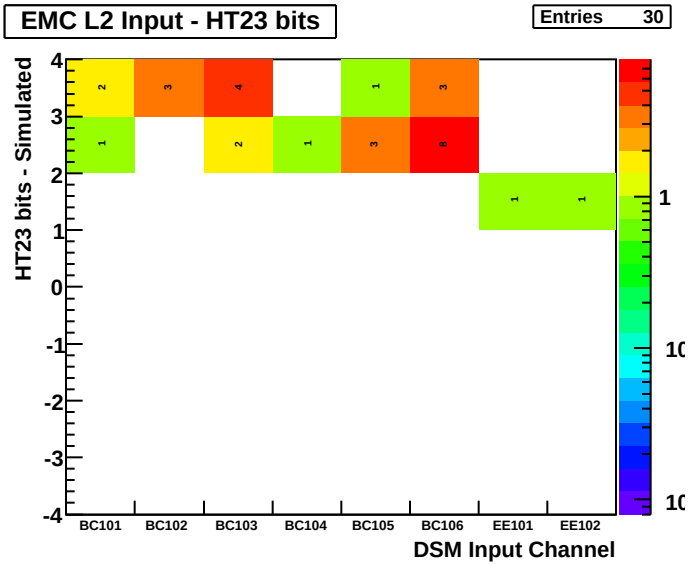

EMC L2 Input - Partial JP Sum
Entries 1.6e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

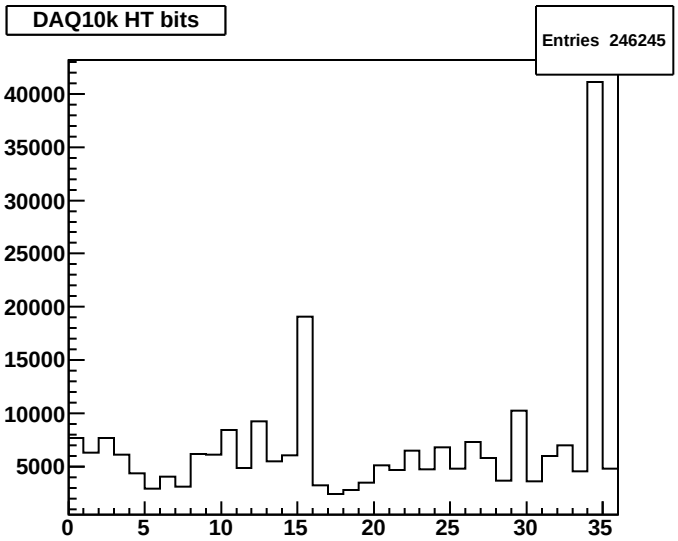

EMC L2 Input - Partial JP Sum
Entries 761
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

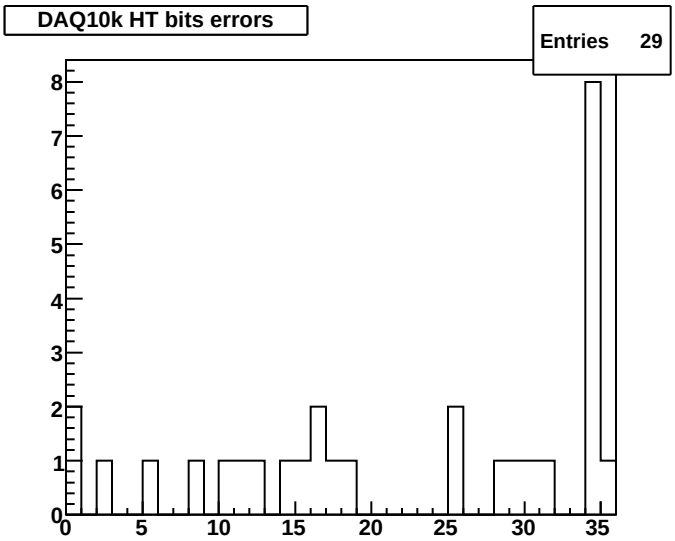

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1.6e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

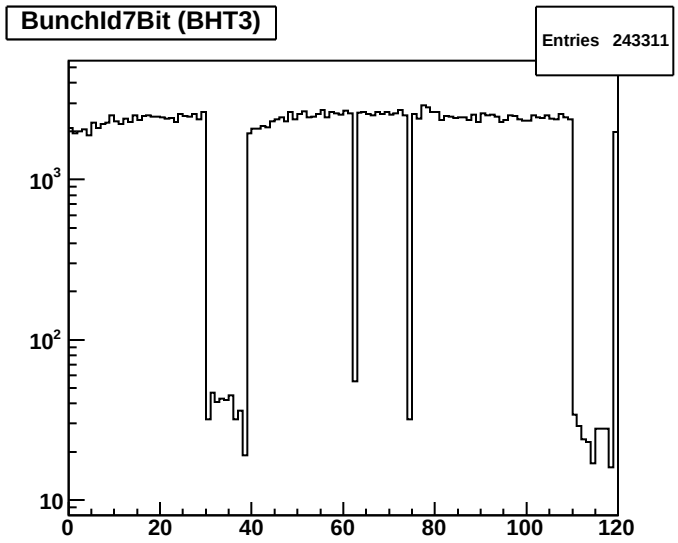

EMC L2 Input - HT01 bits/Partial JP ID
Entries 165
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

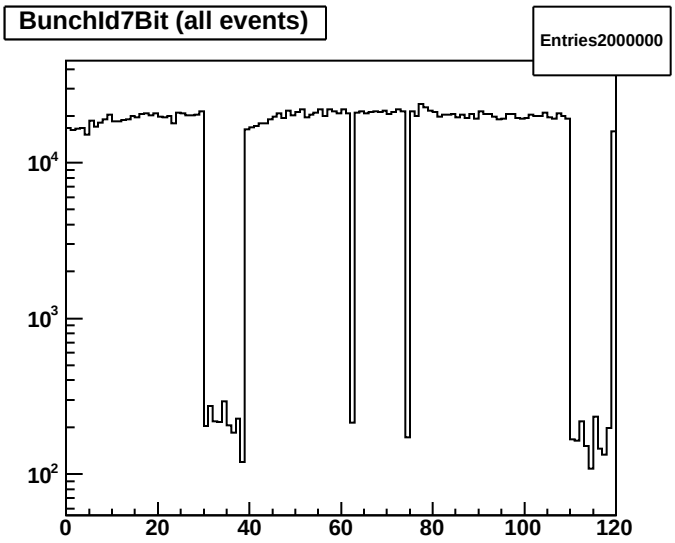

EMC L2 Input - HT23 bits
Entries 1.6e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

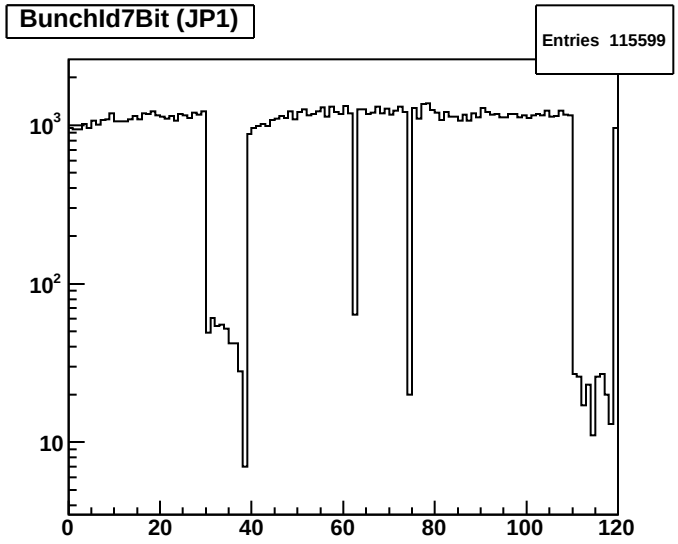

EMC L2 Input - HT23 bits
Entries 30
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

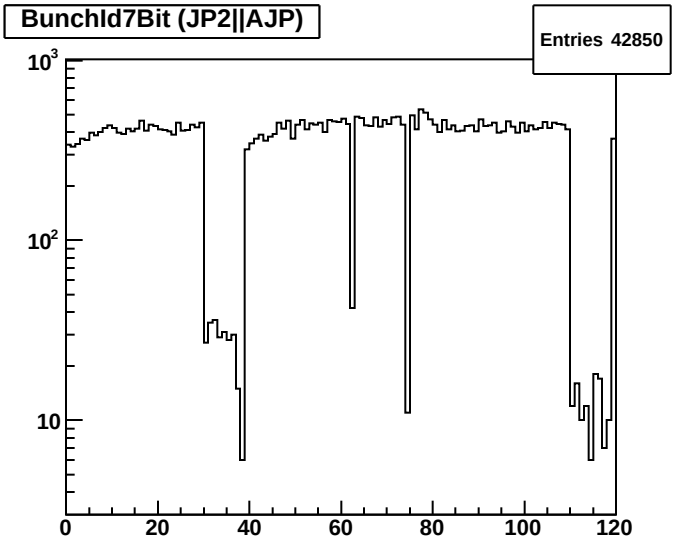

DAQ10k HT bits
Entries 246245
40000
35000
30000
25000
20000
15000
10000
5000
0
5
10
15
20
25
30
35

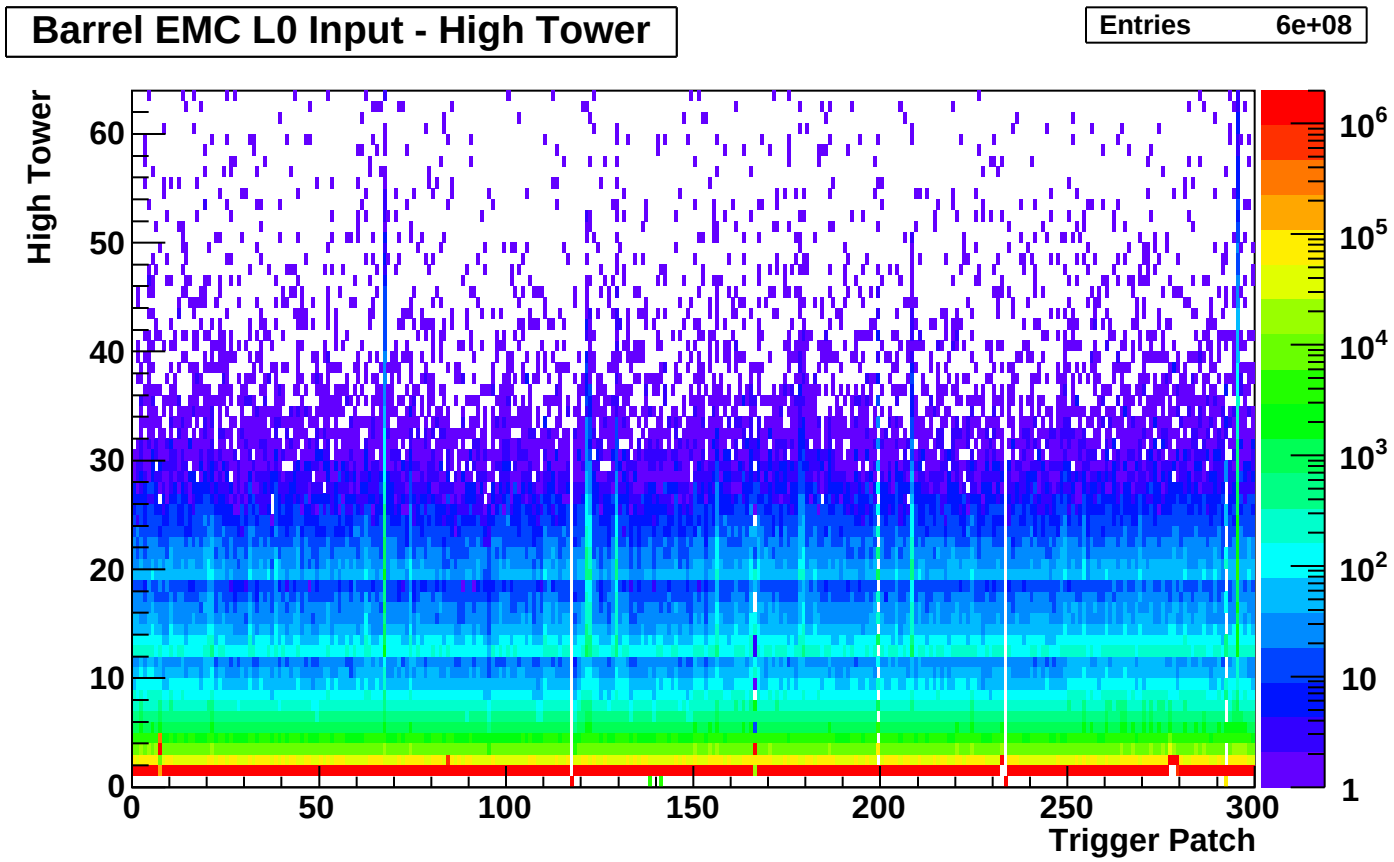

DAQ10k HT bits errors
Entries 29
8
7
6
5
4
3
2
1
0
0
5
10
15
20
25
30
35

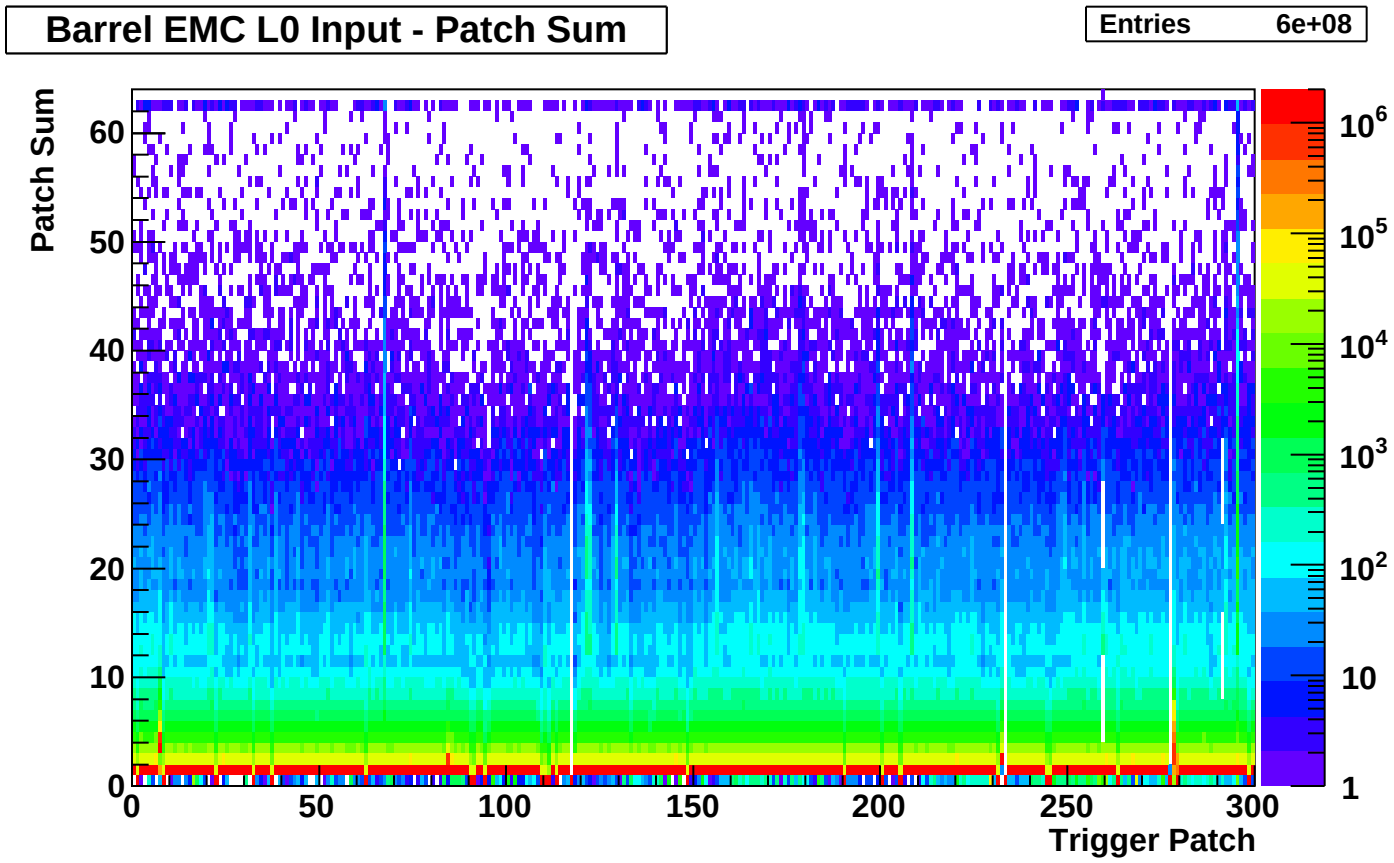

BunchId7Bit (BHT3)
Entries 243311
10^3
10^2
10
0
20
40
60
80
100
120

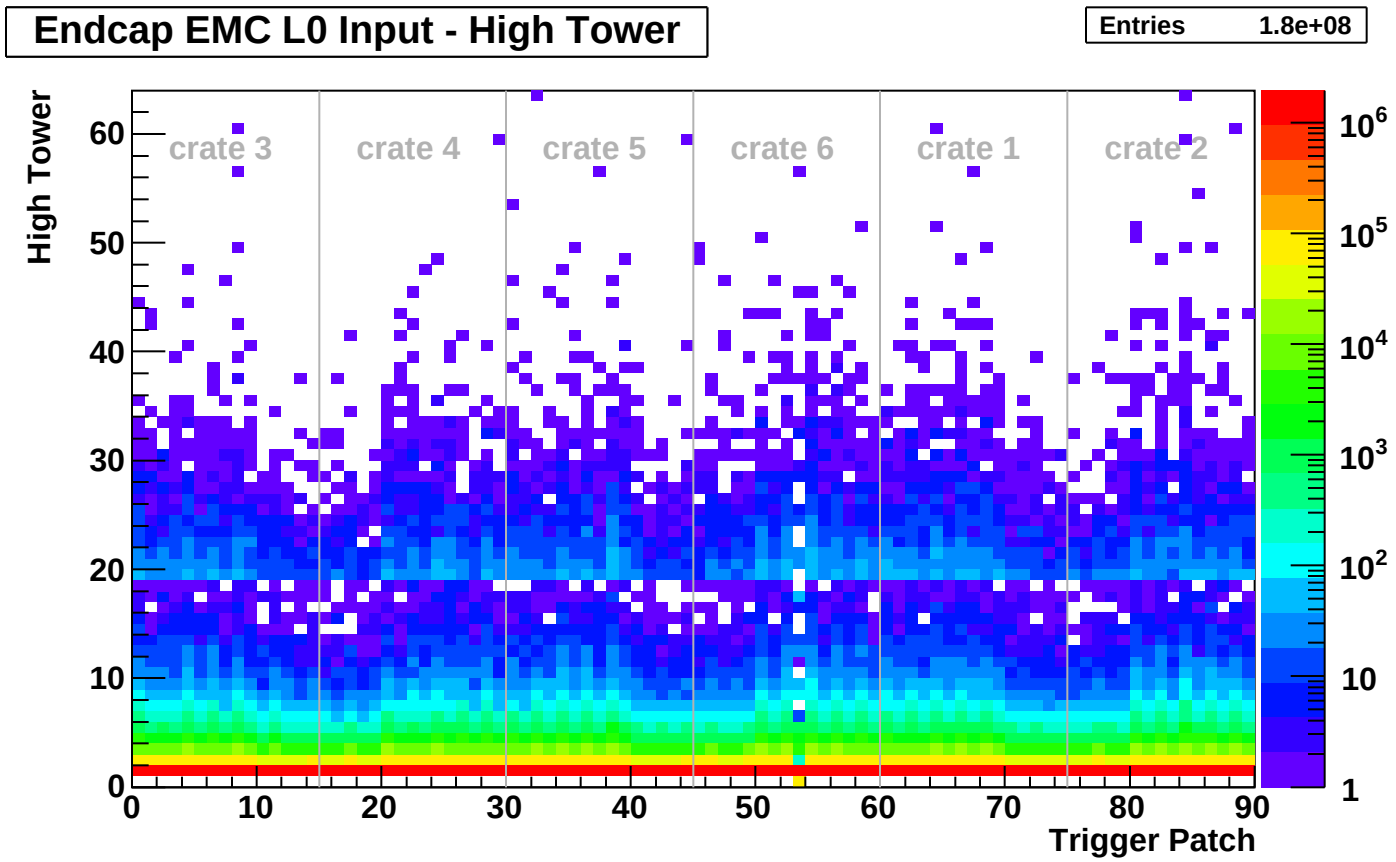

BunchId7Bit (all events)
Entries2000000
10^4
10^3
10^2
0
20
40
60
80
100
120

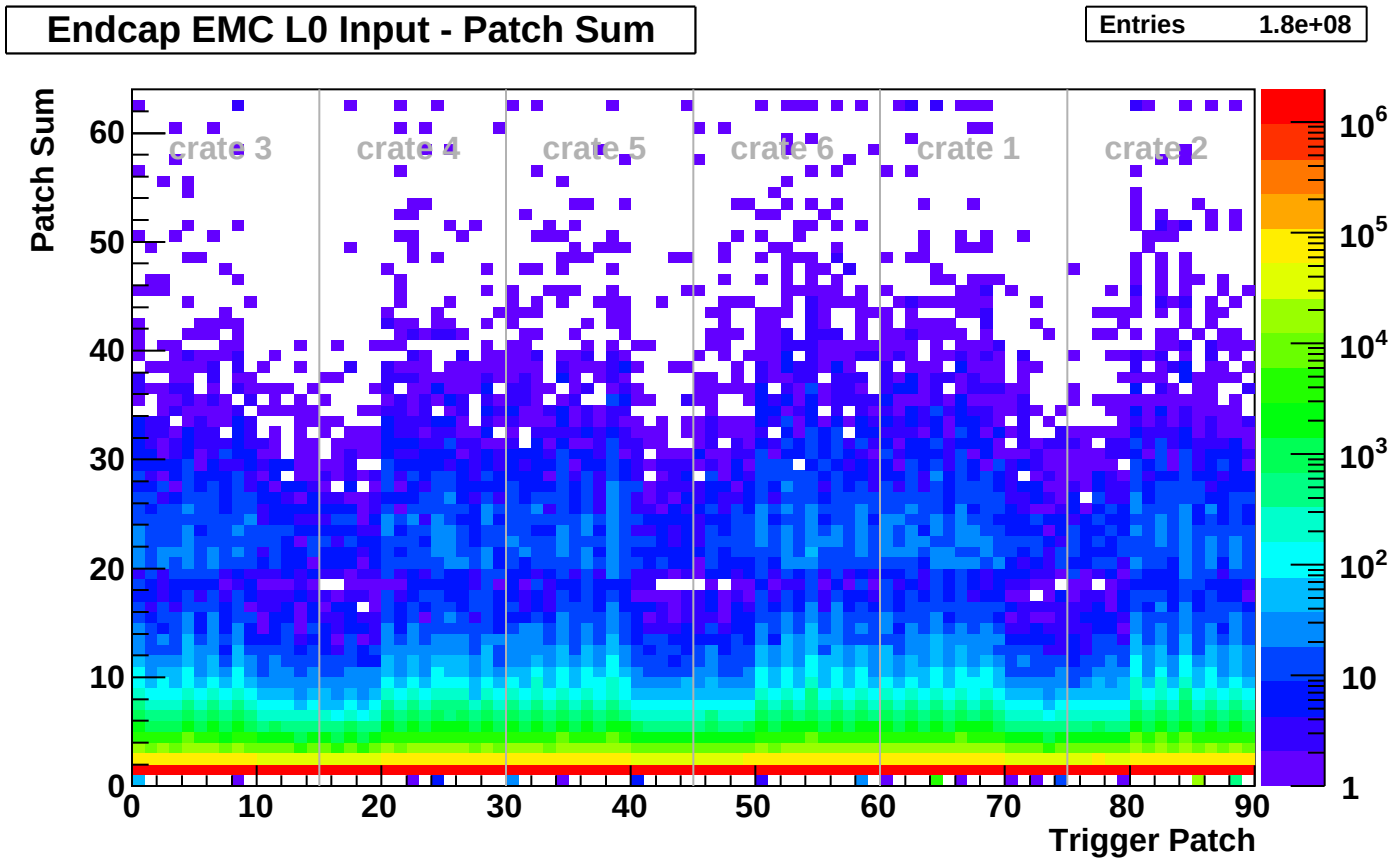

BunchId7Bit (JP1)
Entries 115599
10^3
10^2
10
0
20
40
60
80
100
120

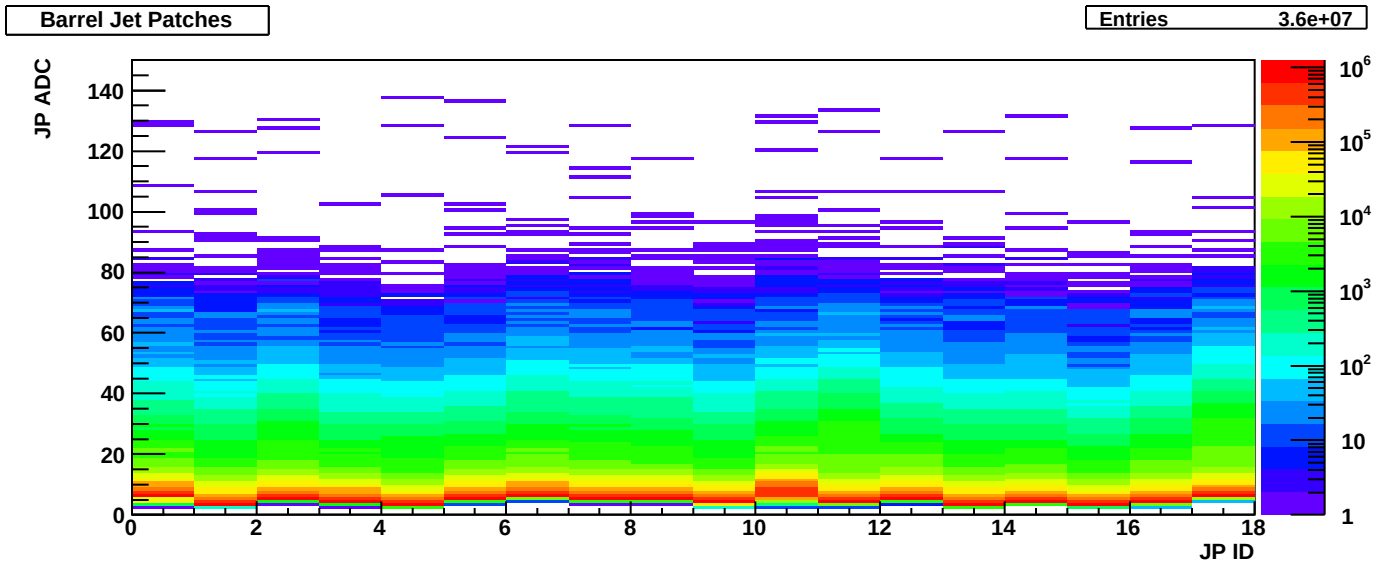

BunchId7Bit (JP2||AJP)
Entries 42850
10^3
10^2
10
0
20
40
60
80
100
120

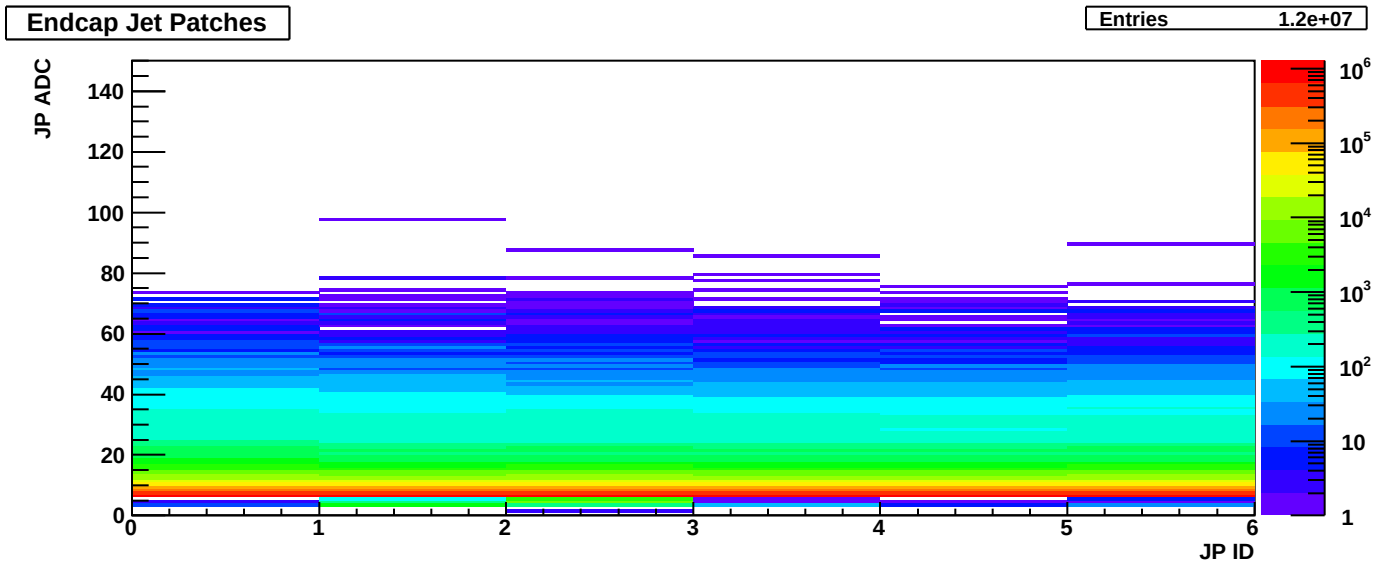

Barrel EMC L0 Input - High Tower
Entries 6e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

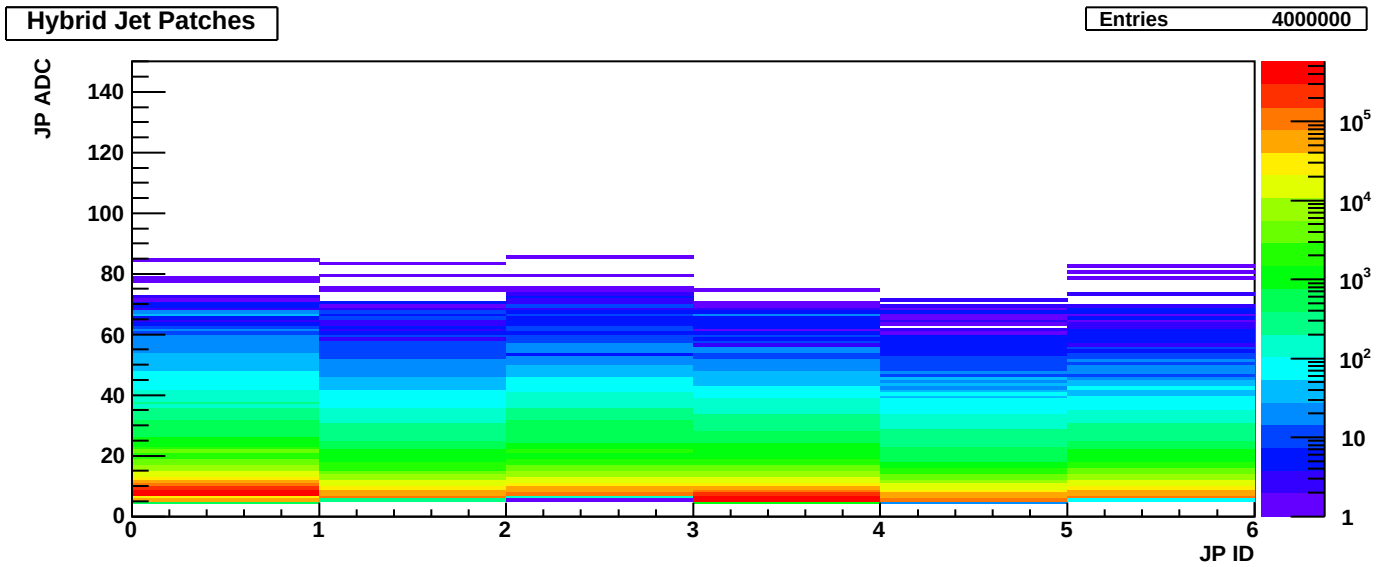

Barrel EMC L0 Input - Patch Sum
Entries 6e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

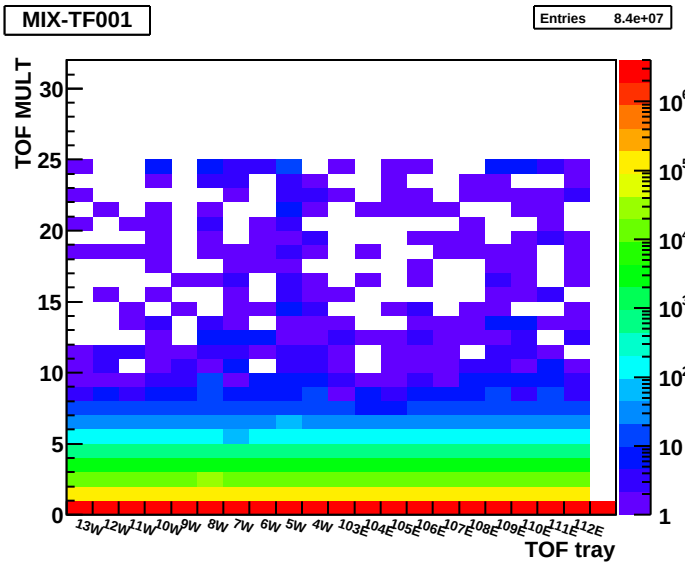

Endcap EMC L0 Input - High Tower
Entries 1.8e+08
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

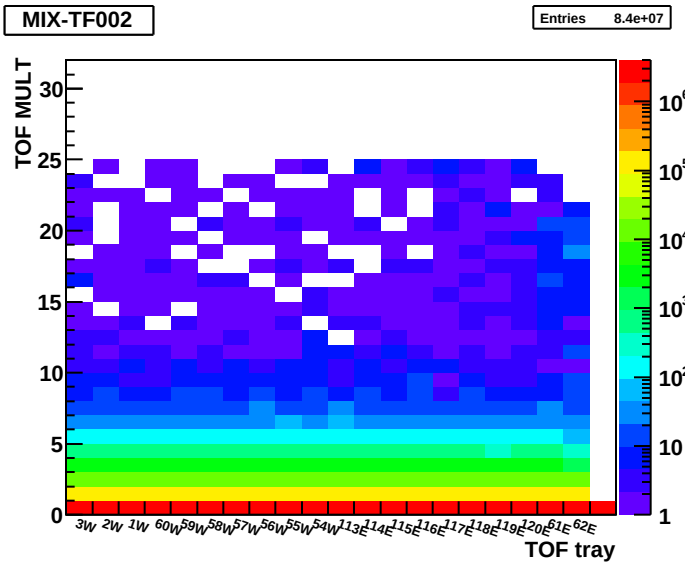

Endcap EMC L0 Input - Patch Sum
Entries 1.8e+08
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

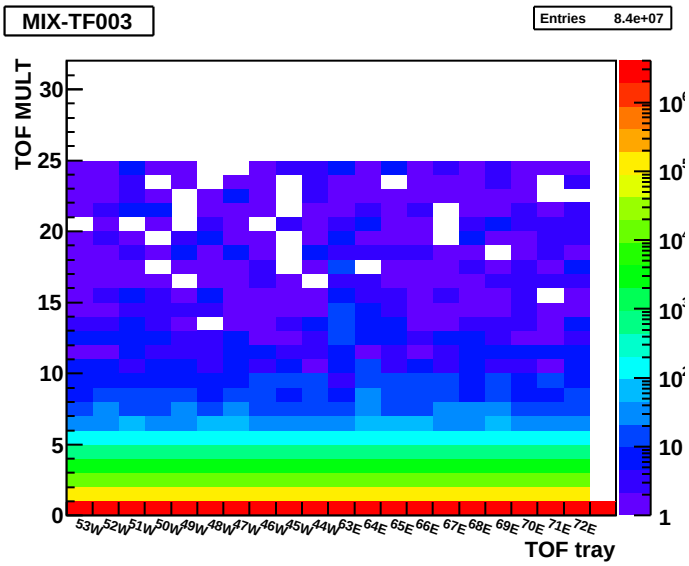

Barrel Jet Patches
Entries 3.6e+07
JP ADC
JP ID

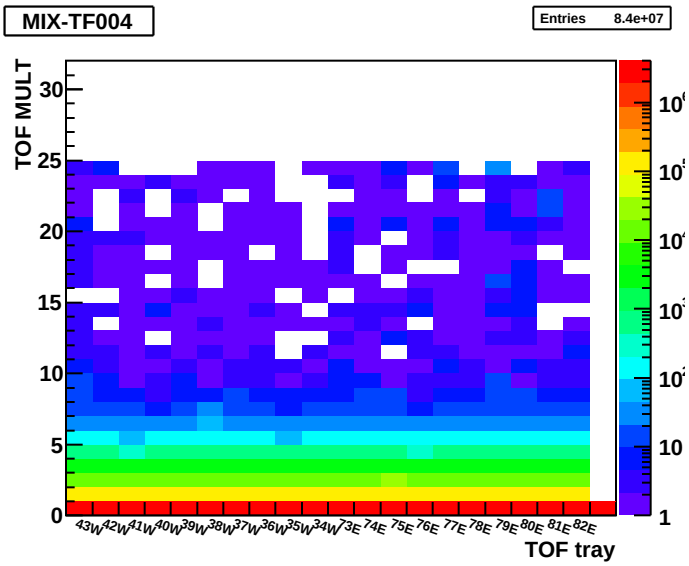

Endcap Jet Patches
Entries 1.2e+07
JP ADC
JP ID

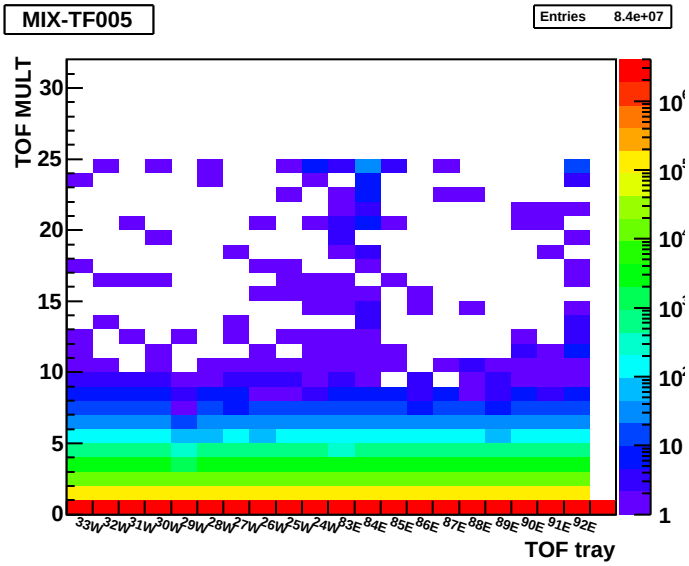

Hybrid Jet Patches
Entries 4000000
JP ADC
JP ID

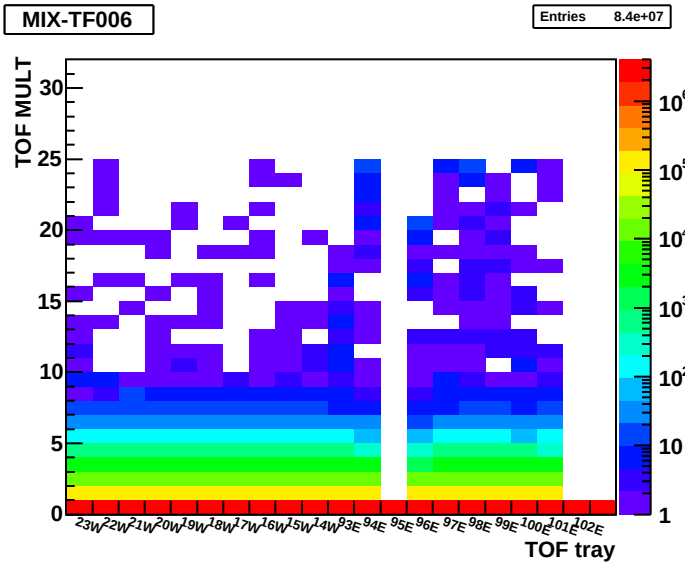

MIX-TF001
Entries 8.4e+07
TOF MULT
TOF tray

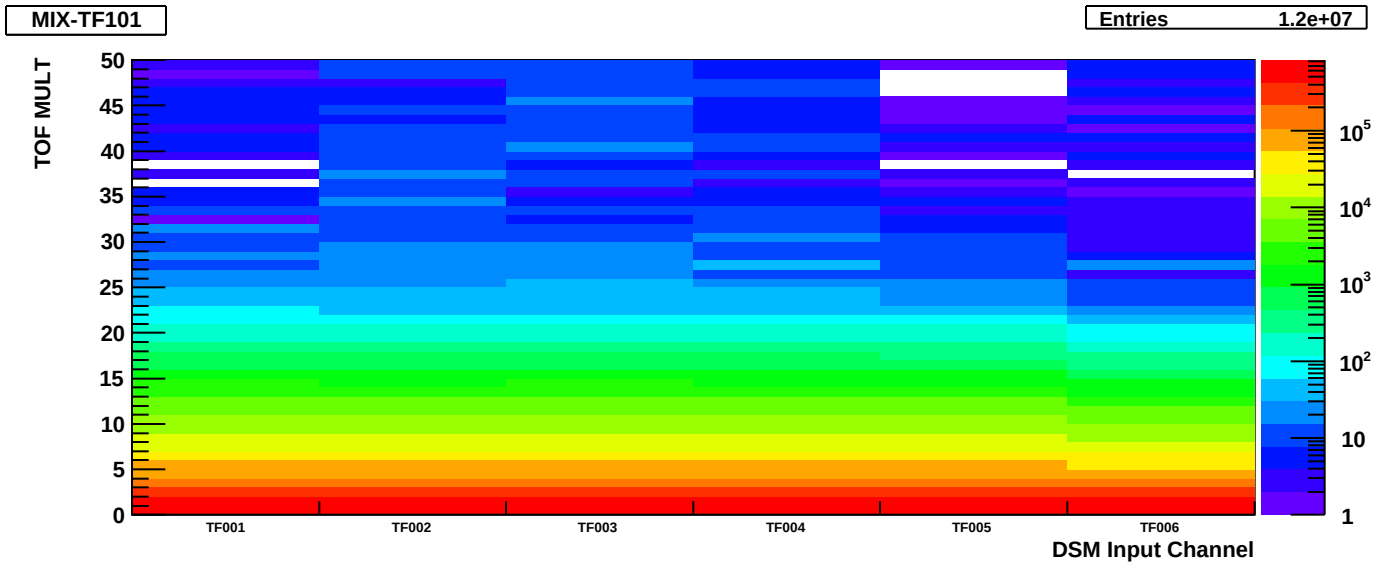

MIX-TF002
Entries 8.4e+07
TOF MULT
TOF tray

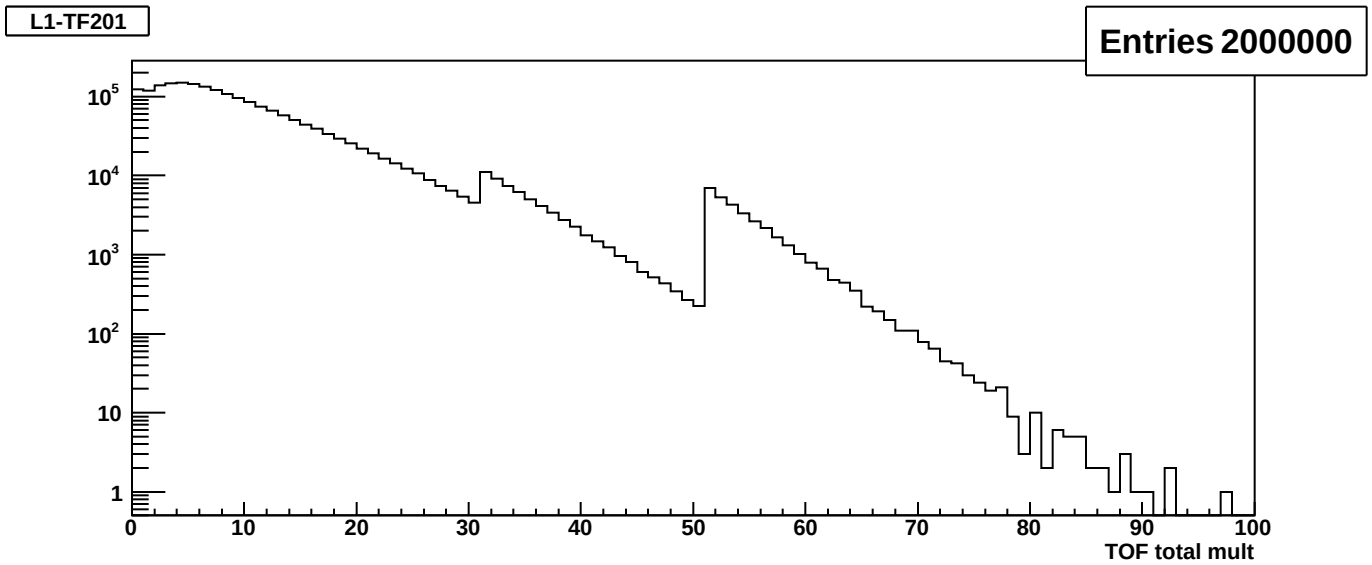

MIX-TF003
Entries 8.4e+07
TOF MULT
TOF tray

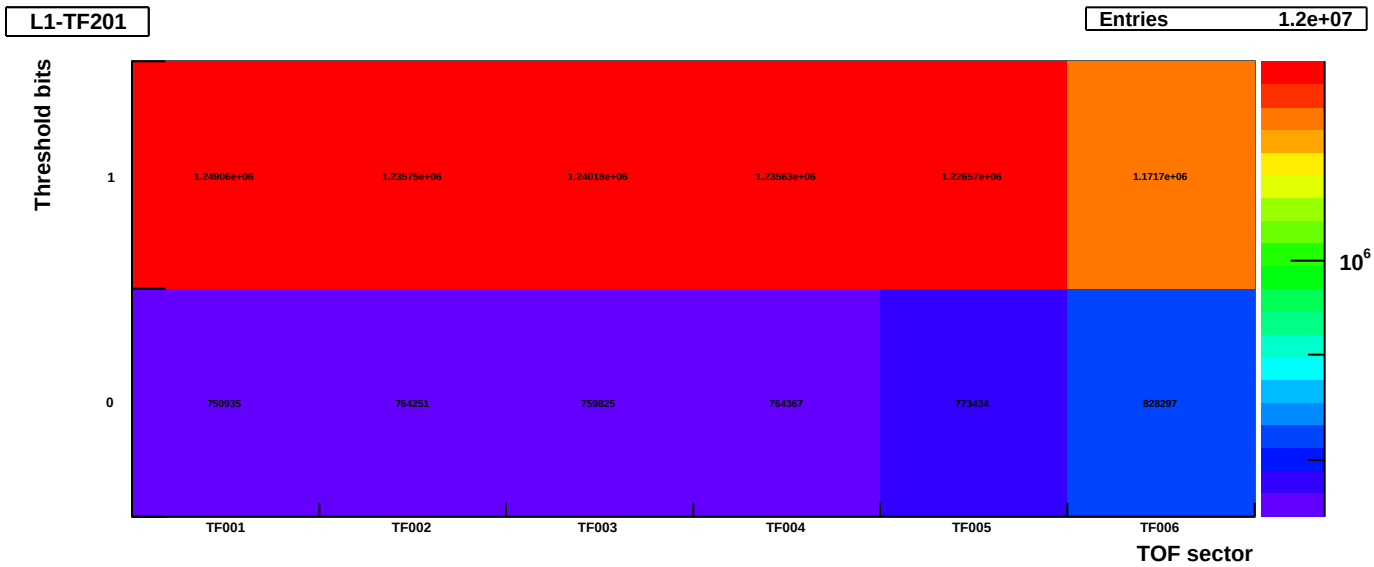

MIX-TF004
Entries 8.4e+07
TOF MULT
TOF tray

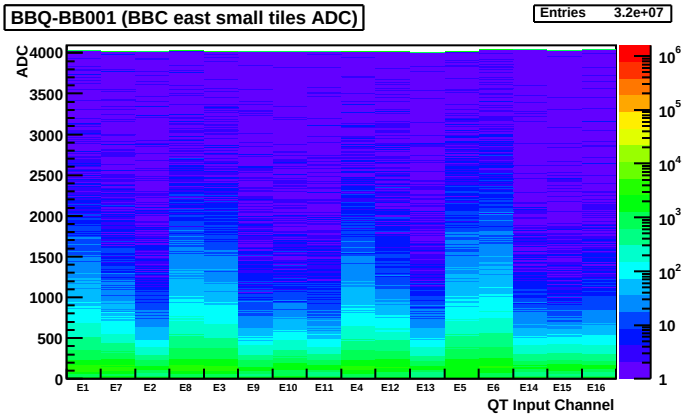

MIX-TF005
Entries 8.4e+07
TOF MULT
TOF tray

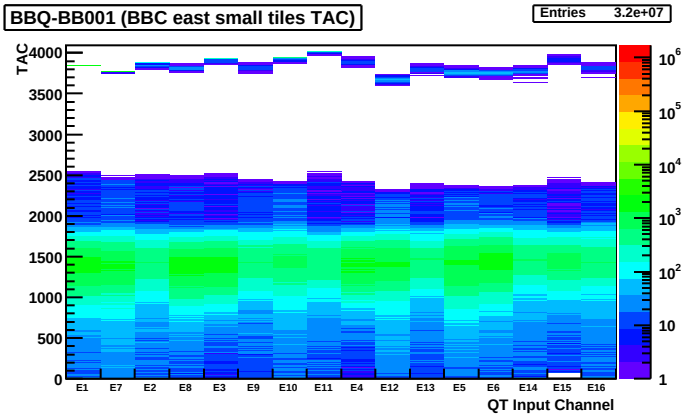

MIX-TF006
Entries 8.4e+07
TOF MULT
TOF tray

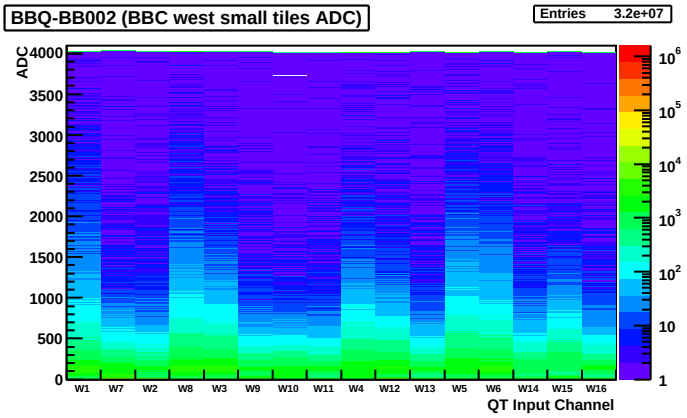

MIX-TF101
Entries 1.2e+07
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

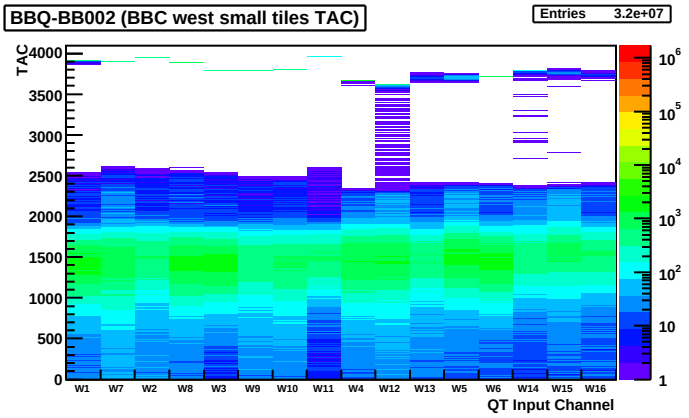

L1-TF201
Entries 2000000
10^5
10^4
10^3
10^2
10
1
0
10
20
30
40
50
60
70
80
90
100
TOF total mult

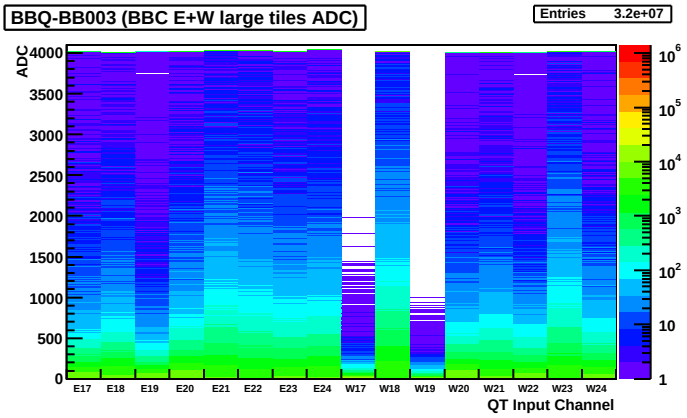

L1-TF201
Entries 1.2e+07
Threshold bits
1
0
1.24906e+06
1.23575e+06
1.24018e+06
1.23563e+06
1.22657e+06
1.1717e+06
750935
764251
759825
764367
773434
828297
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^6

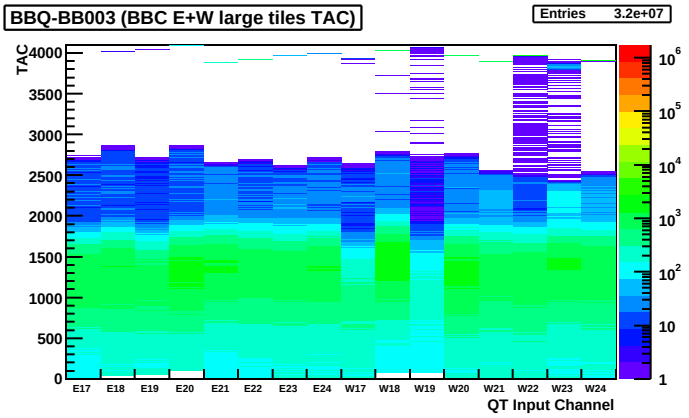

BBQ-BB001 (BBC east small tiles ADC)
Entries 3.2e+07
ADC
QT Input Channel

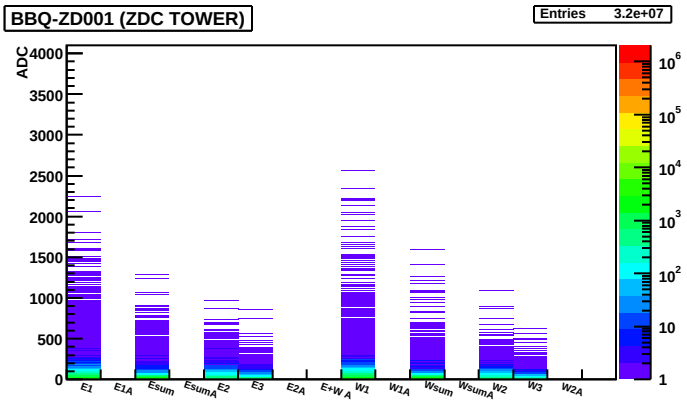

BBQ-BB001 (BBC east small tiles TAC)
Entries 3.2e+07
TAC
QT Input Channel

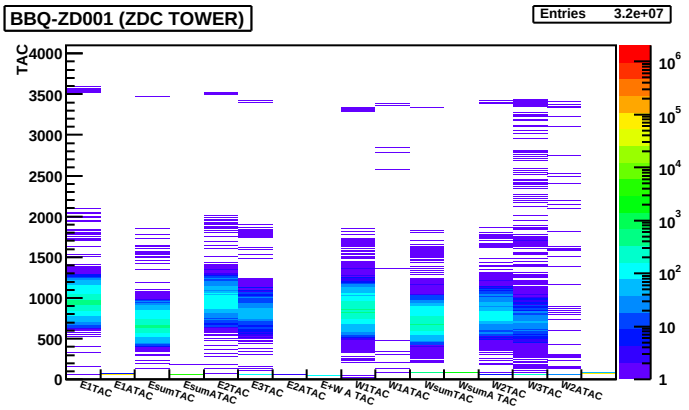

BBQ-BB002 (BBC west small tiles ADC)
Entries 3.2e+07
ADC
QT Input Channel

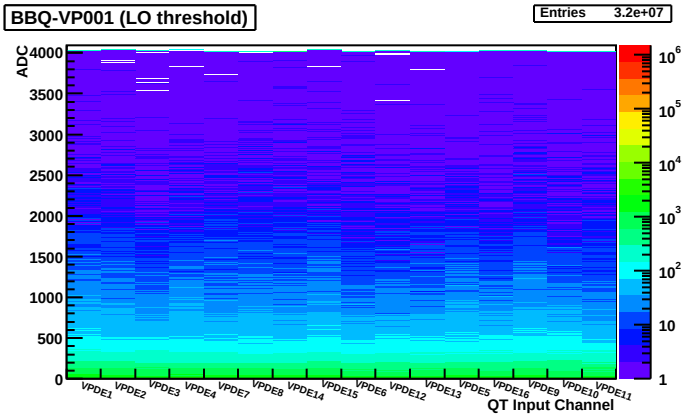

BBQ-BB002 (BBC west small tiles TAC)
Entries 3.2e+07
TAC
QT Input Channel

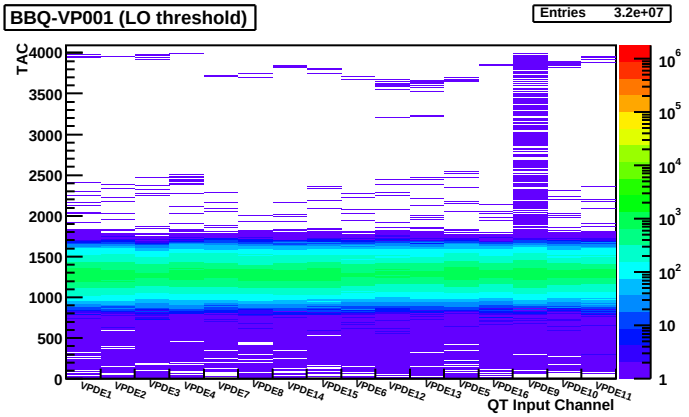

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3.2e+07
ADC
QT Input Channel

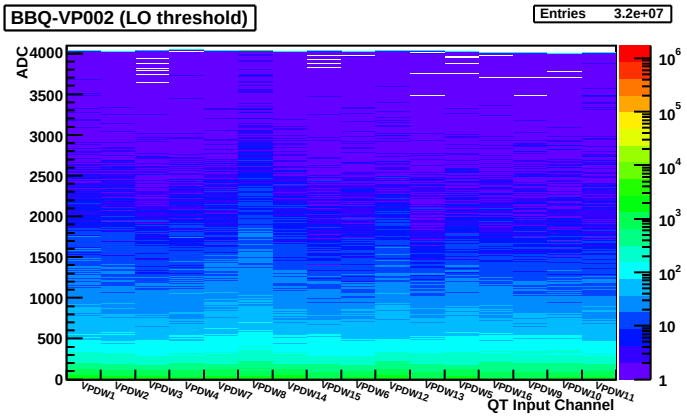

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3.2e+07
TAC
QT Input Channel

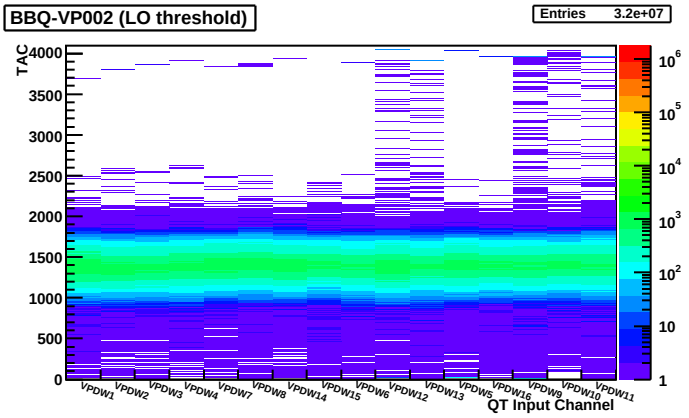

BBQ-ZD001 (ZDC TOWER)
Entries 3.2e+07
ADC

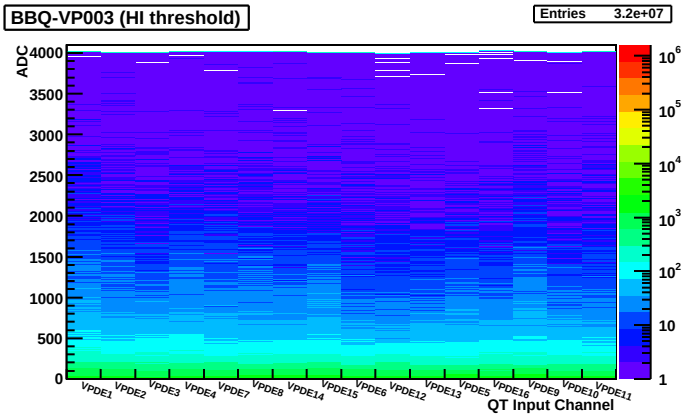

BBQ-ZD001 (ZDC TOWER)
Entries 3.2e+07
TAC

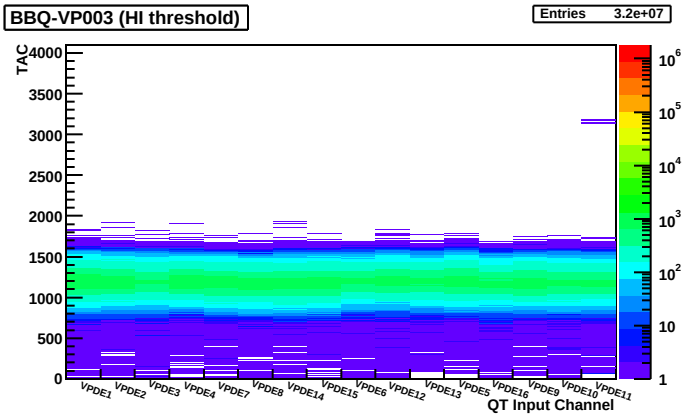

BBQ-VP001 (LO threshold)
Entries 3.2e+07
ADC
QT Input Channel

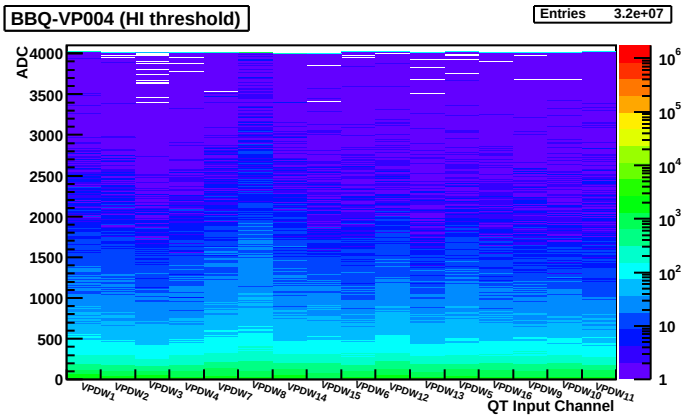

BBQ-VP001 (LO threshold)
Entries 3.2e+07
TAC
QT Input Channel

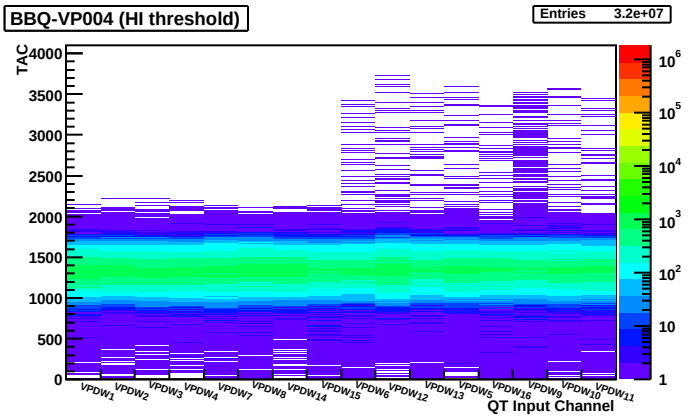

BBQ-VP002 (LO threshold)
Entries 3.2e+07
ADC
QT Input Channel

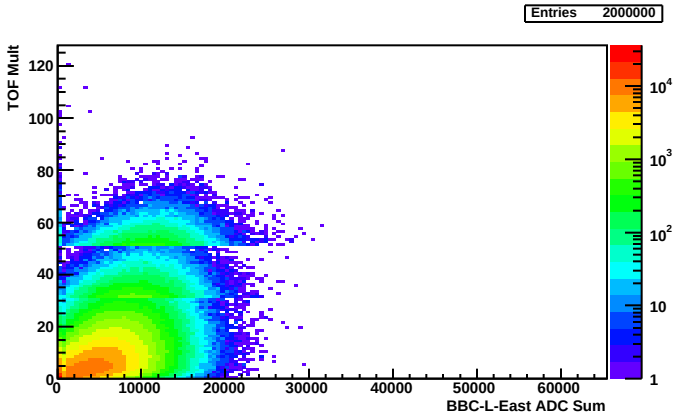

BBQ-VP002 (LO threshold)
Entries 3.2e+07
TAC
QT Input Channel

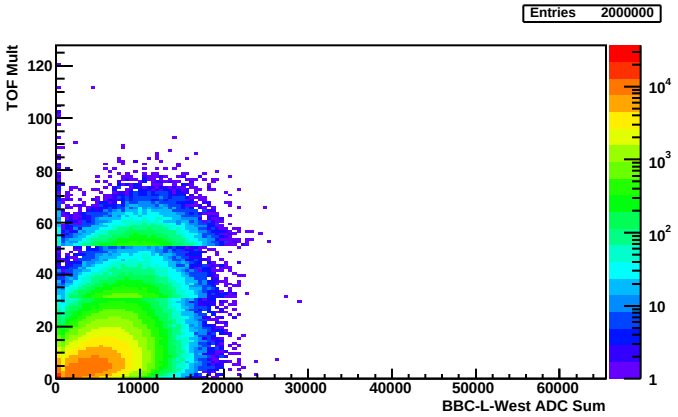

BBQ-VP003 (HI threshold)
Entries 3.2e+07
ADC
QT Input Channel

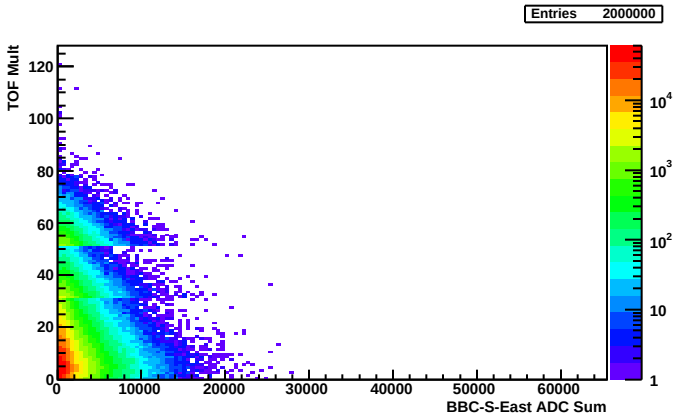

BBQ-VP003 (HI threshold)
Entries 3.2e+07
TAC
QT Input Channel

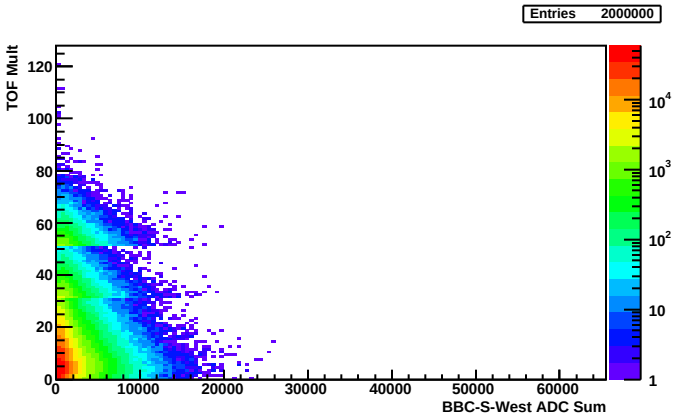

BBQ-VP004 (HI threshold)
Entries 3.2e+07
ADC
QT Input Channel

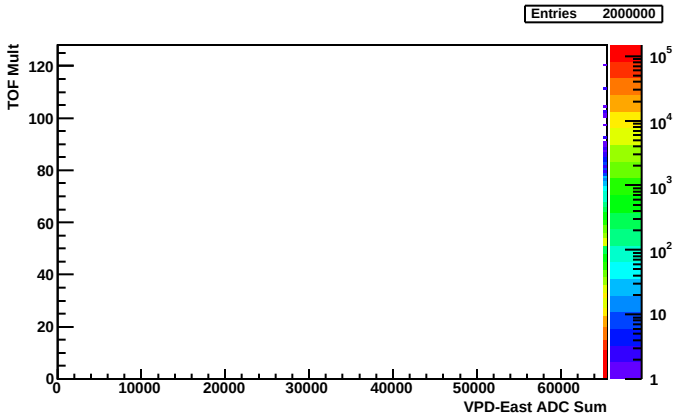

BBQ-VP004 (HI threshold)
Entries 3.2e+07
TAC
QT Input Channel

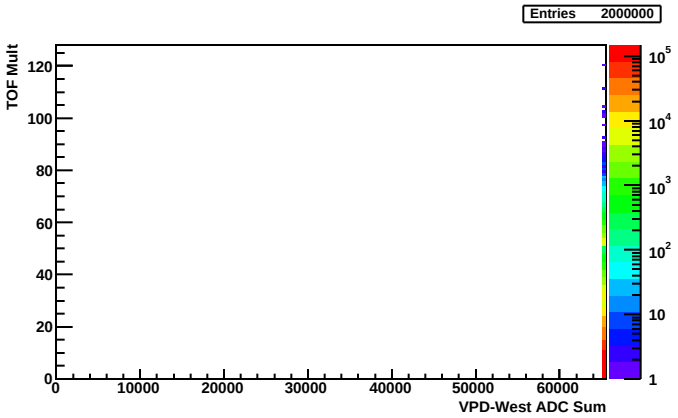

Entries 2000000
TOF Mult
BBC-L-East ADC Sum

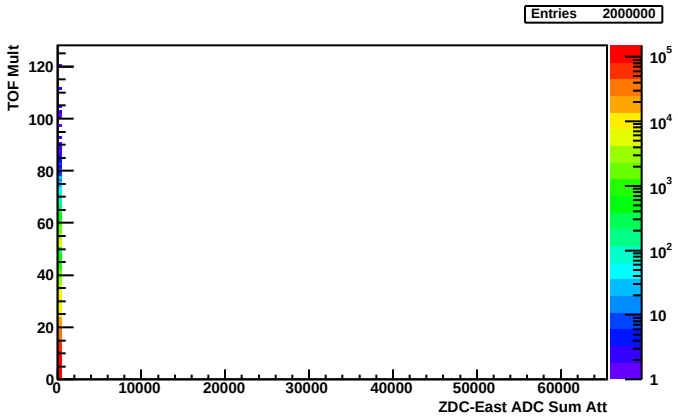

Entries 2000000
TOF Mult
BBC-L-West ADC Sum

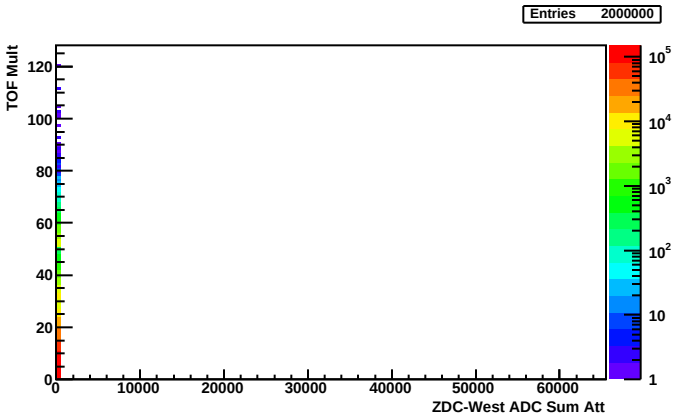

Entries 2000000
TOF Mult
BBC-S-East ADC Sum

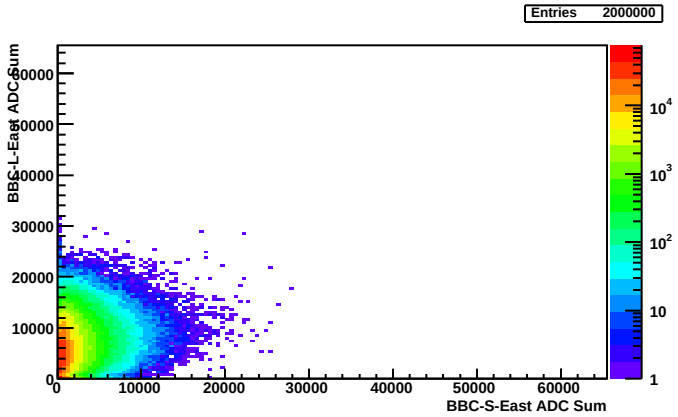

Entries 2000000
TOF Mult
BBC-S-West ADC Sum

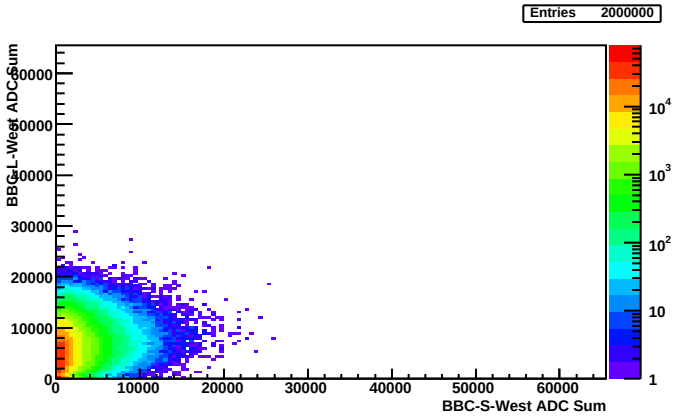

Entries 2000000
TOF Mult
VPD-East ADC Sum

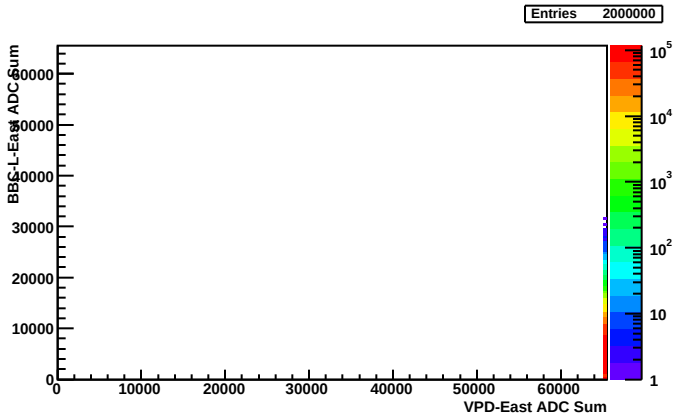

Entries 2000000
TOF Mult
VPD-West ADC Sum

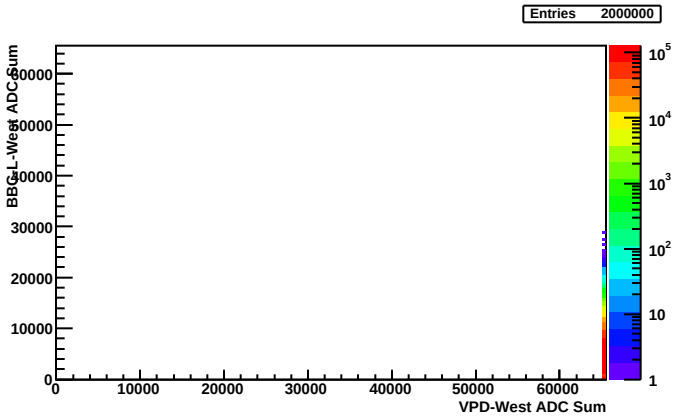

Entries 2000000
TOF Mult
ZDC-East ADC Sum Att

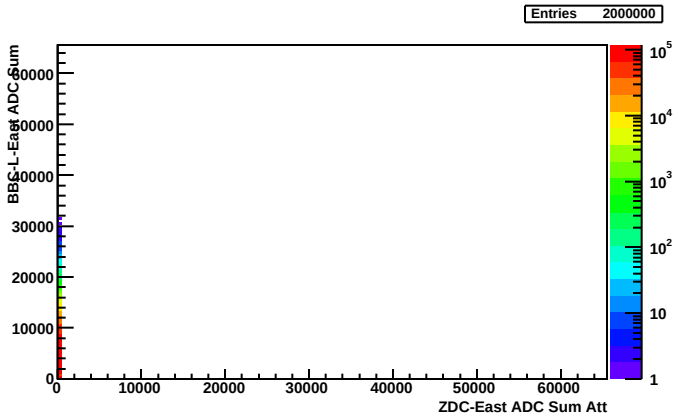

Entries 2000000
TOF Mult
ZDC-West ADC Sum Att

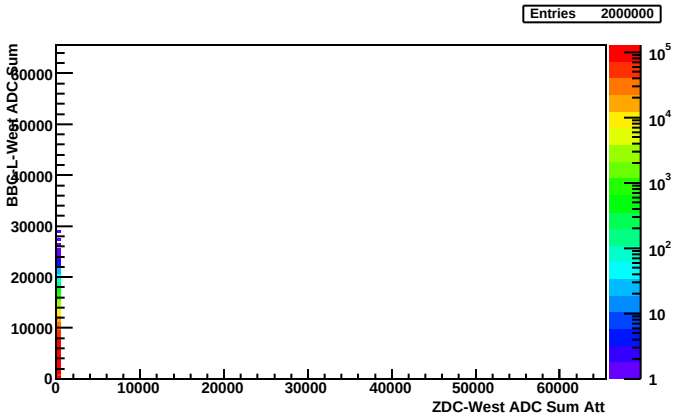

Entries 2000000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

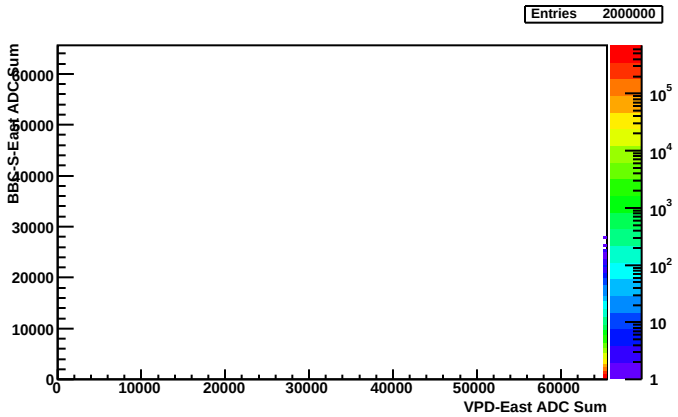

Entries 2000000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

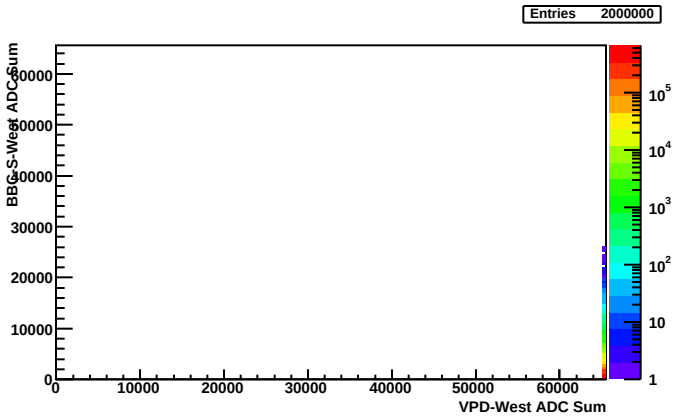

Entries 2000000
BBC-L-East ADC Sum
VPD-East ADC Sum

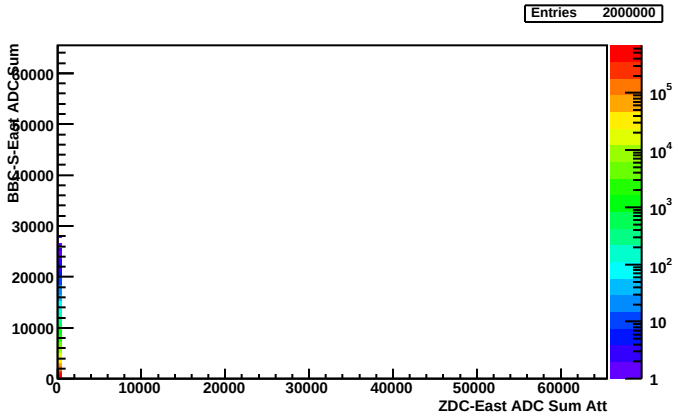

Entries 2000000
BBC-L-West ADC Sum
VPD-West ADC Sum

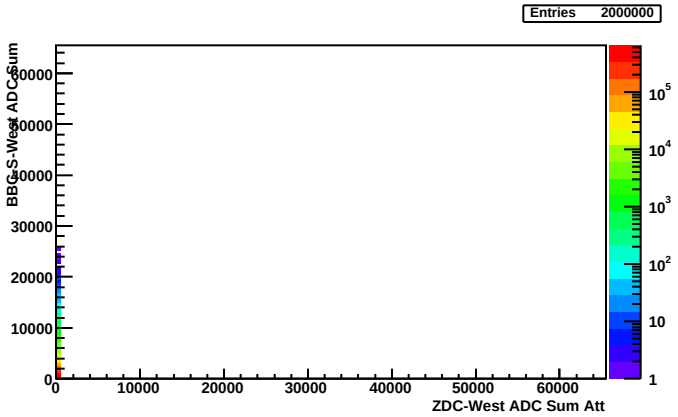

Entries 2000000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

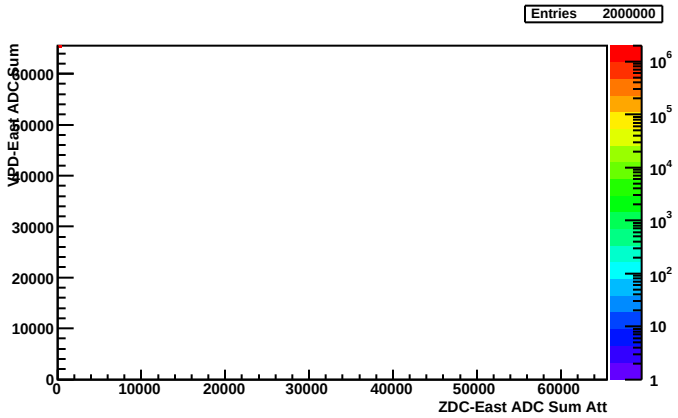

Entries 2000000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

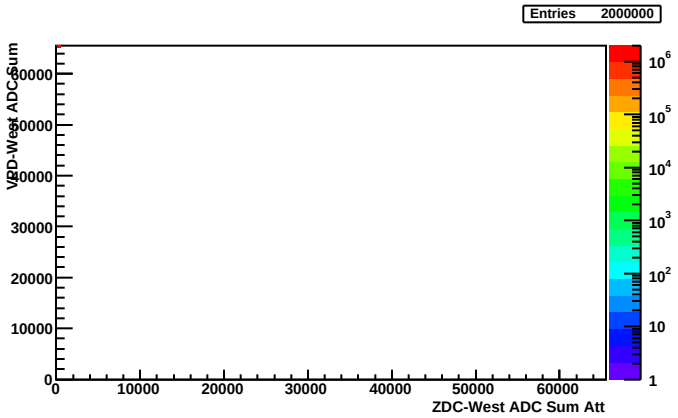

Entries 2000000
BBC-S-East ADC Sum
VPD-East ADC Sum

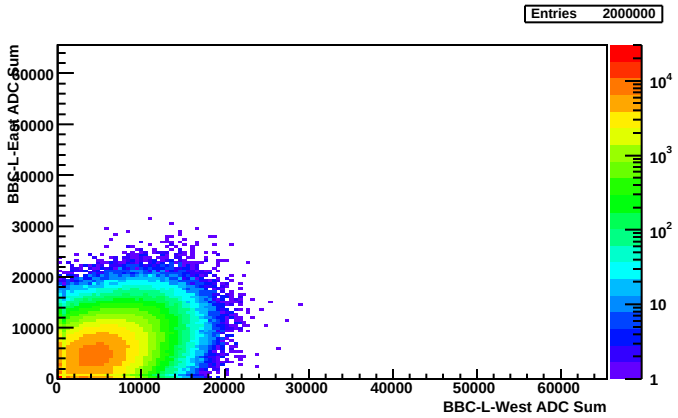

Entries 2000000
BBC-S-West ADC Sum
VPD-West ADC Sum

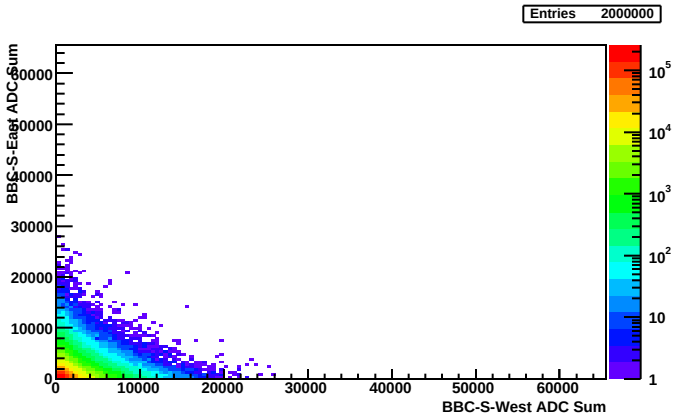

Entries 2000000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

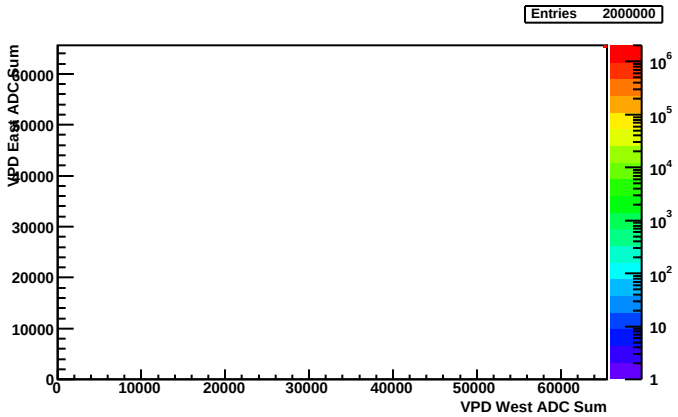

Entries 2000000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

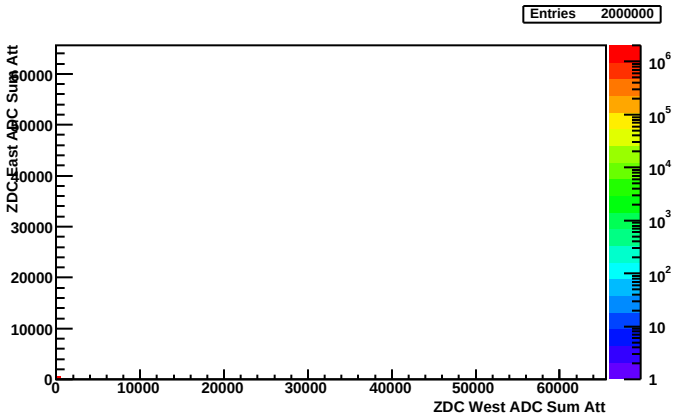

Entries 2000000
VPD-East ADC Sum
ZDC-East ADC Sum Att

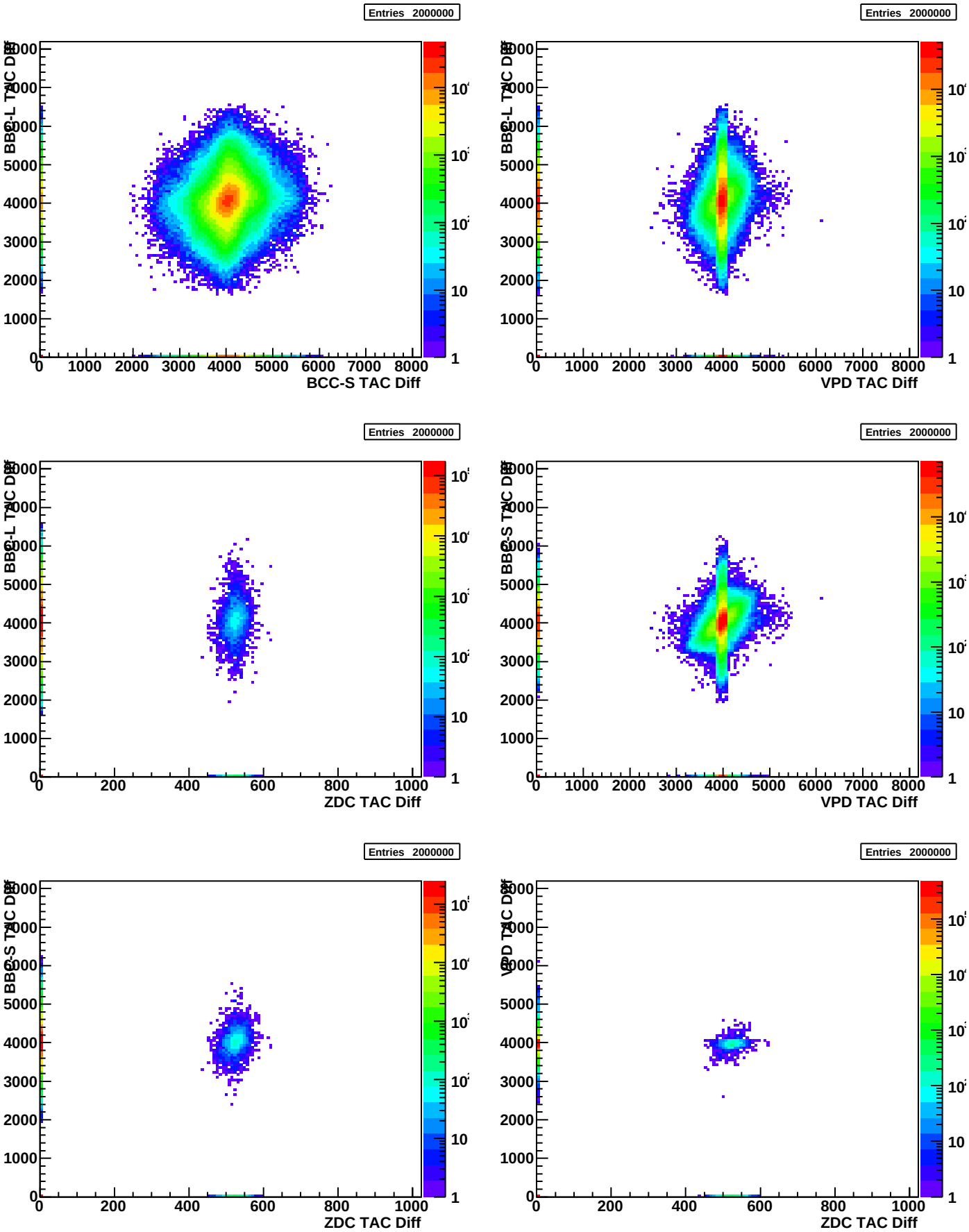

Entries 2000000
VPD-West ADC Sum
ZDC-West ADC Sum Att

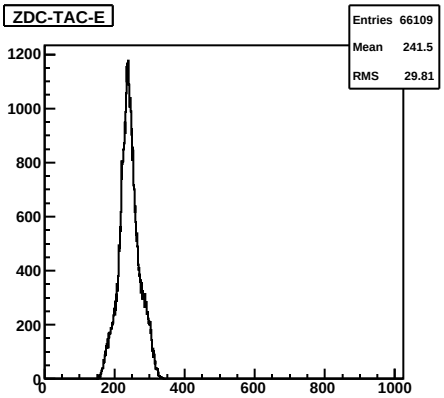

Entries 2000000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

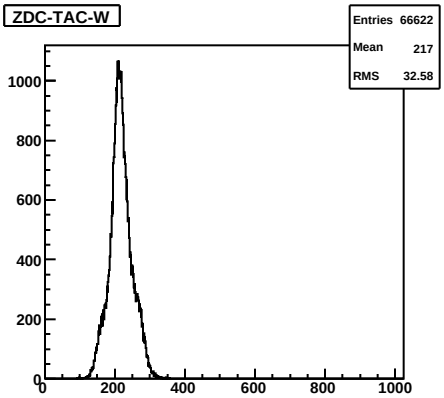

Entries 2000000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

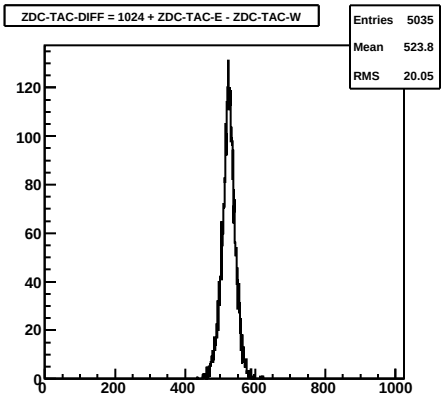

Entries 2000000
VPD East ADC Sum
VPD West ADC Sum

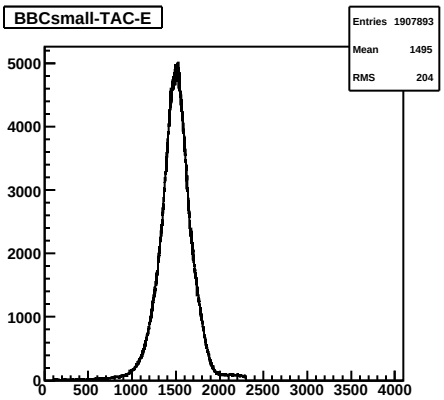

Entries 2000000
ZDC-East ADC Sum Att
ZDC West ADC Sum Att

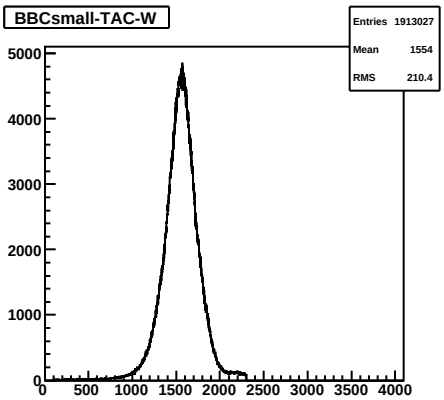

Entries 2000000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 2000000
BBC-L TAC Diff
VPD TAC Diff
Entries 2000000
BBC-L TAC Diff
ZDC TAC Diff
Entries 2000000
BBC-S TAC Diff
VPD TAC Diff
Entries 2000000
BBC-S TAC Diff
ZDC TAC Diff
Entries 2000000
VPD TAC Diff
ZDC TAC Diff

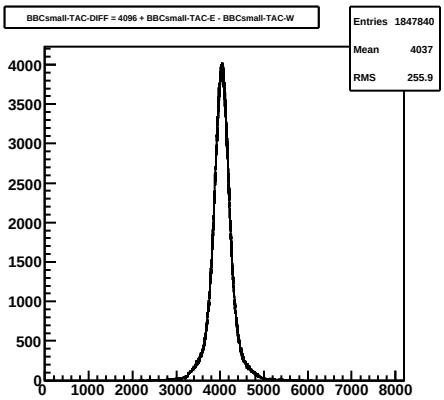

ZDC-TAC-E
Entries 66109
Mean 241.5
RMS 29.81

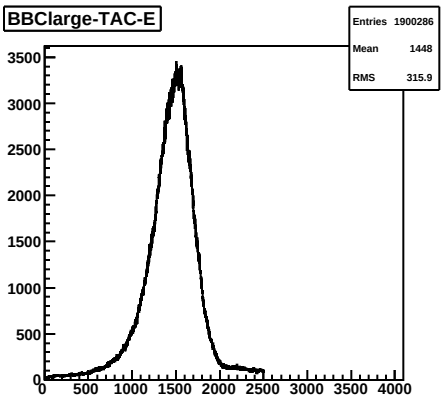

ZDC-TAC-W
Entries 66622
Mean 217
RMS 32.58

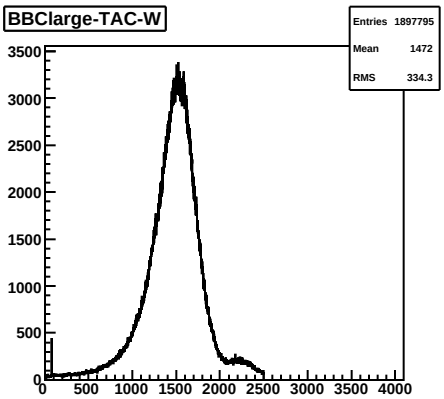

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 5035
Mean 523.8
RMS 20.05

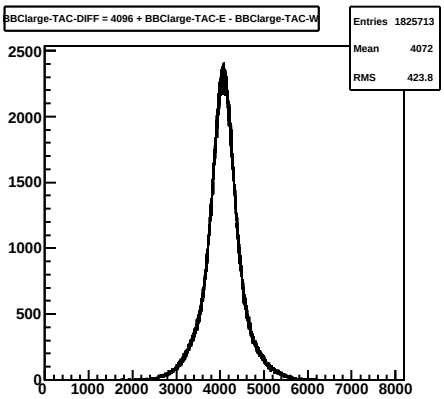

BBCsmall-TAC-E
Entries 1907893
Mean 1495
RMS 204

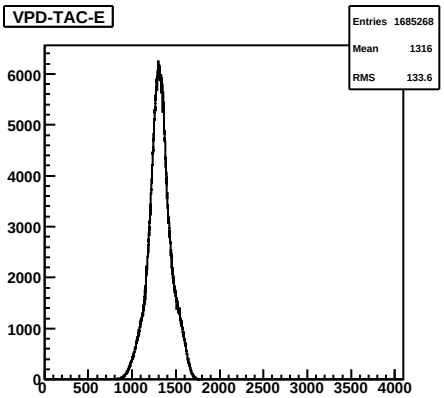

BBCsmall-TAC-W
Entries 1913027
Mean 1554
RMS 210.4

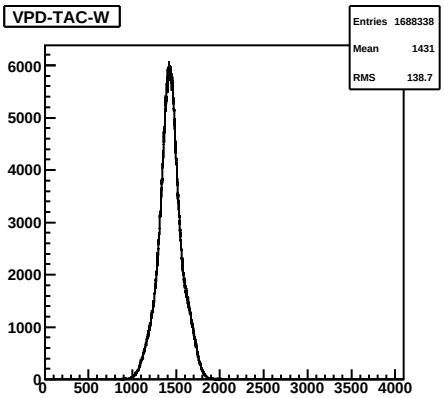

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1847840
Mean 4037
RMS 255.9

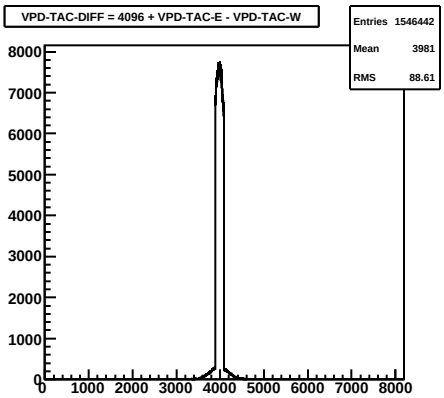

BBClarge-TAC-E
Entries 1900286
Mean 1448
RMS 315.9

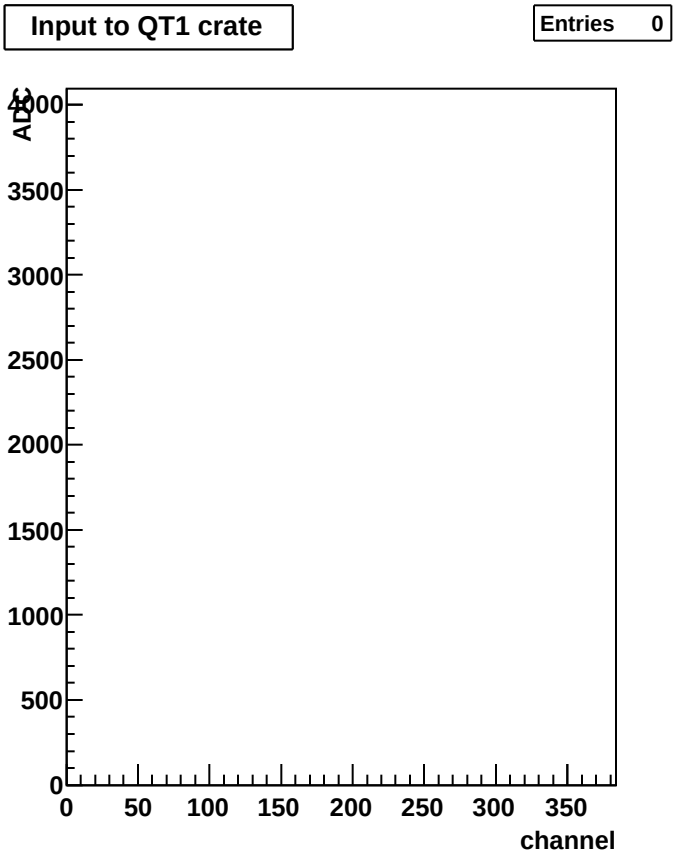

BBClarge-TAC-W
Entries 1897795
Mean 1472
RMS 334.3

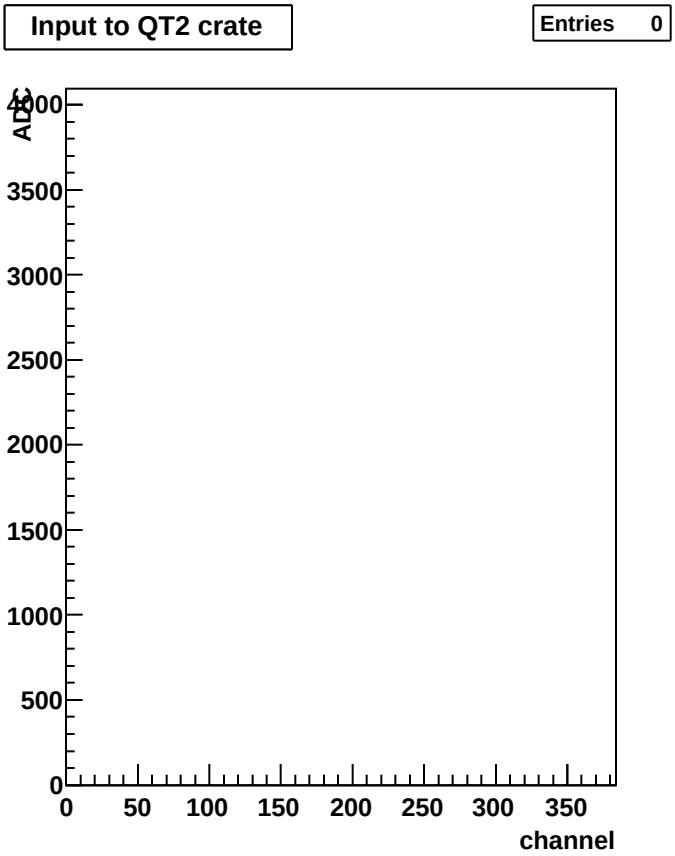

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1825713
Mean 4072
RMS 423.8

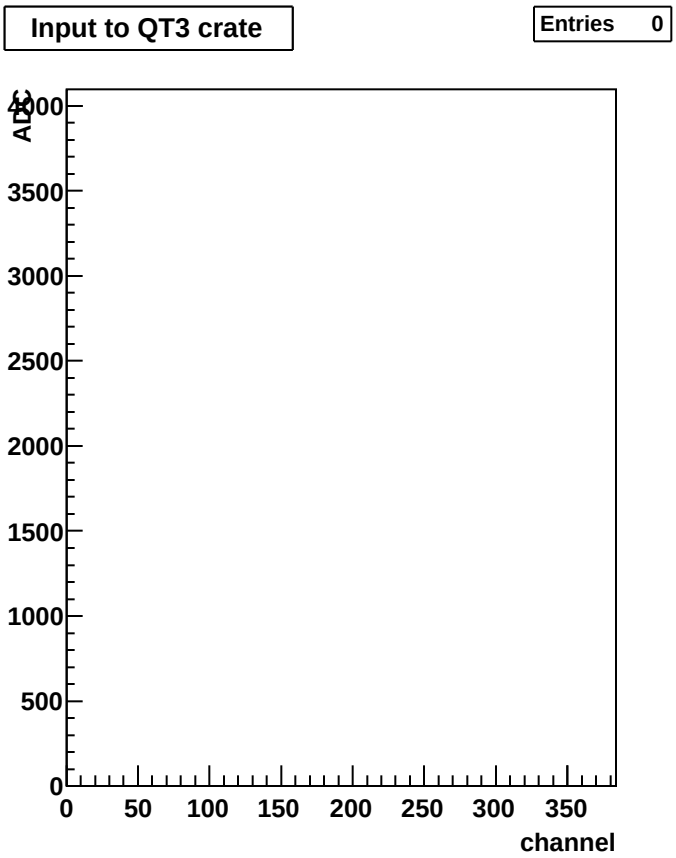

VPD-TAC-E
Entries 1685268
Mean 1316
RMS 133.6

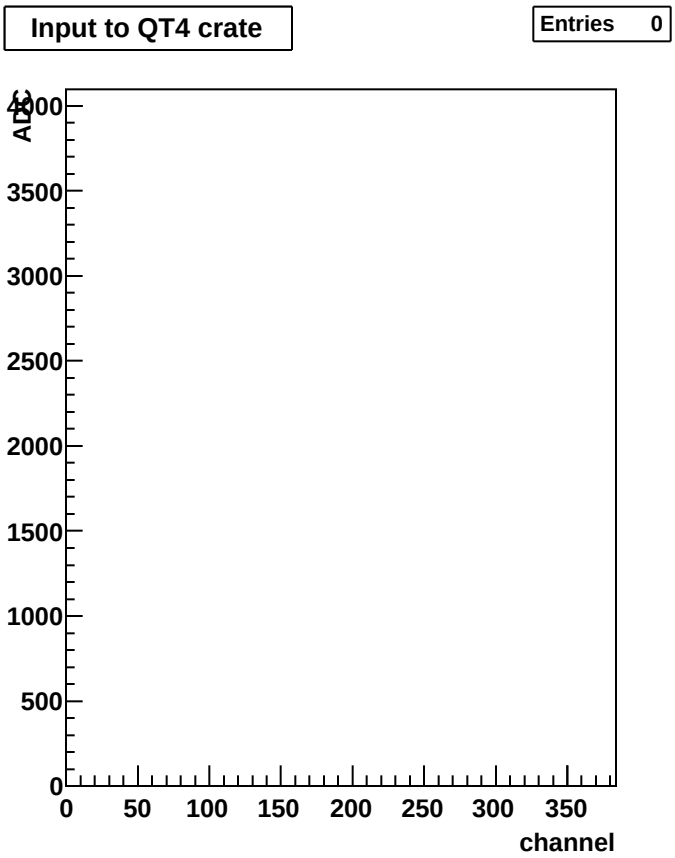

VPD-TAC-W
Entries 1688338
Mean 1431
RMS 138.7

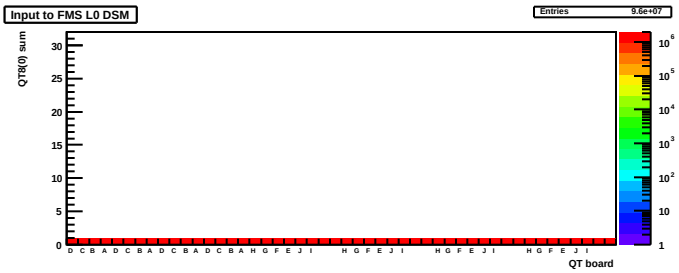

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1546442
Mean 3981
RMS 88.61

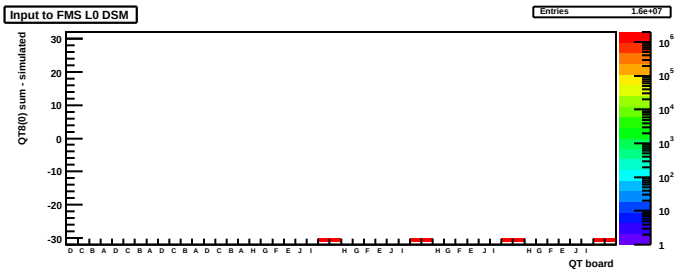

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

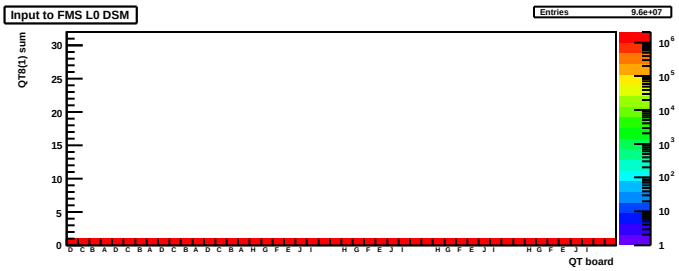

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

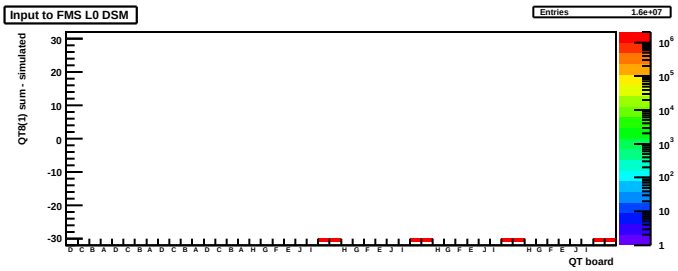

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

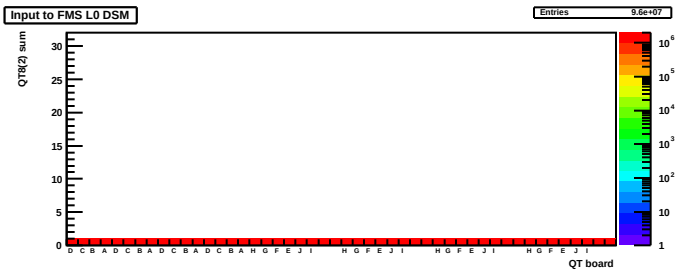

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

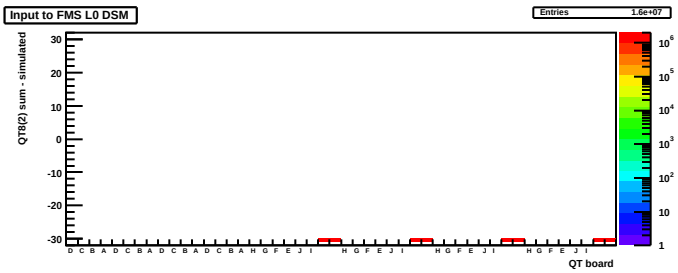

Input to FMS L0 DSM
Entries 9.6e+07
QT8(0) sum
QT board

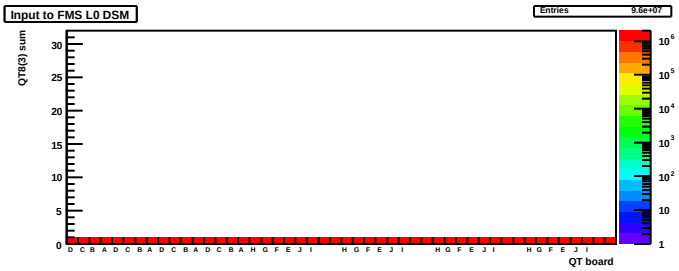

Input to FMS L0 DSM
Entries 1.6e+07
QT8(0) sum - simulated
QT board

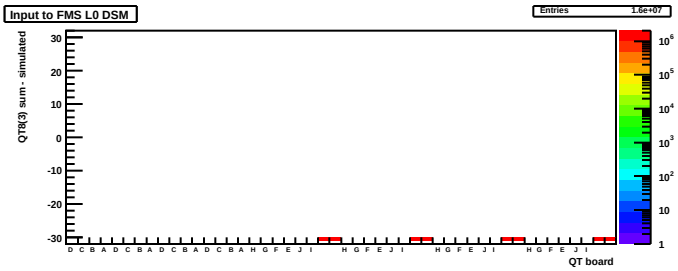

Input to FMS L0 DSM
Entries 9.6e+07
QT8(1) sum
QT board

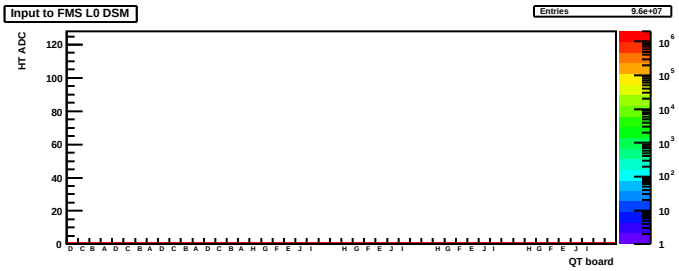

Input to FMS L0 DSM
Entries 1.6e+07
QT8(1) sum - simulated
QT board

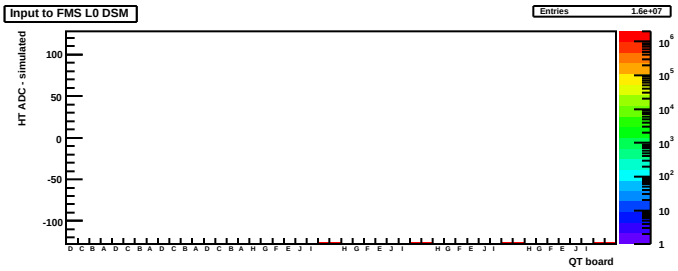

Input to FMS L0 DSM
Entries 9.6e+07
QT8(2) sum
QT board

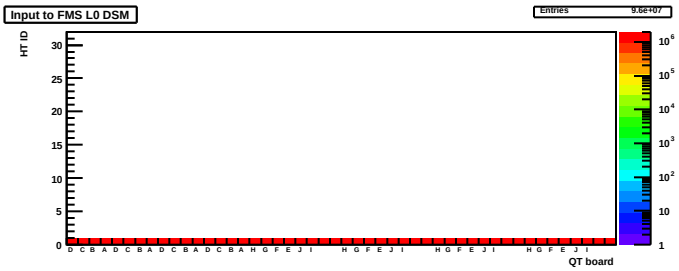

Input to FMS L0 DSM
Entries 1.6e+07
QT8(2) sum - simulated
QT board

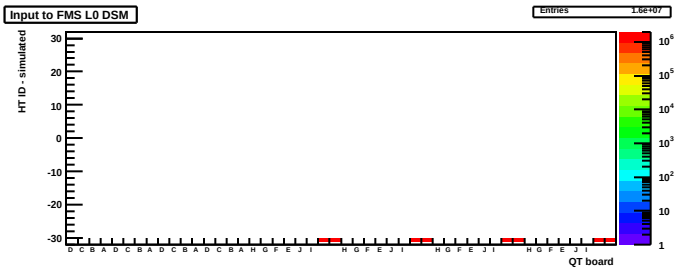

Input to FMS L0 DSM
Entries 9.6e+07
QT8(3) sum
QT board

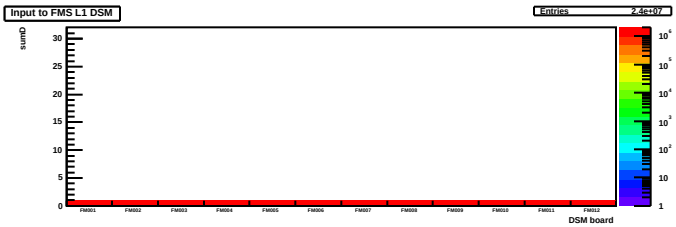

Input to FMS L0 DSM
Entries 1.6e+07
QT8(3) sum - simulated
QT board

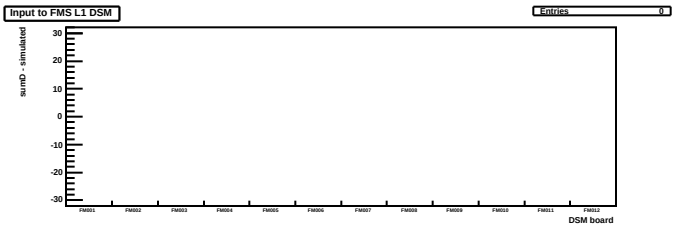

Input to FMS L0 DSM
Entries 9.6e+07
HT ADC
QT board

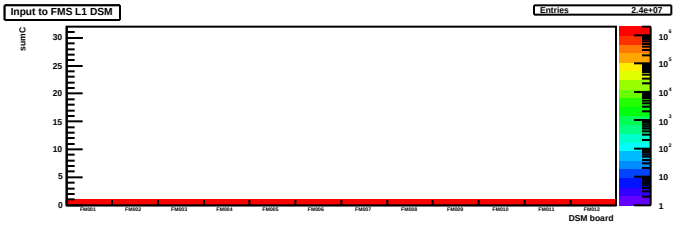

Input to FMS L0 DSM
Entries 1.6e+07
HT ADC - simulated
QT board

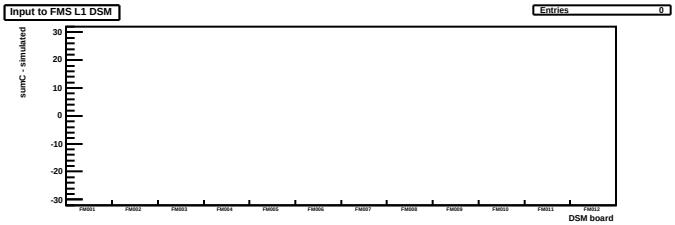

Input to FMS L0 DSM
Entries 9.6e+07
HT ID
QT board

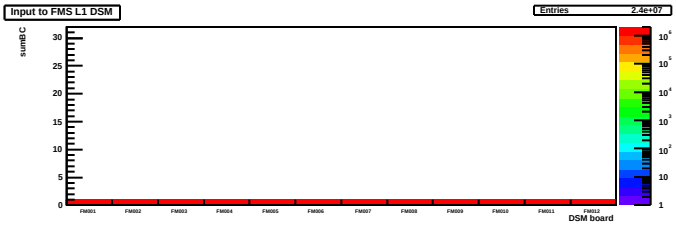

Input to FMS L0 DSM
Entries 1.6e+07
HT ID - simulated
QT board

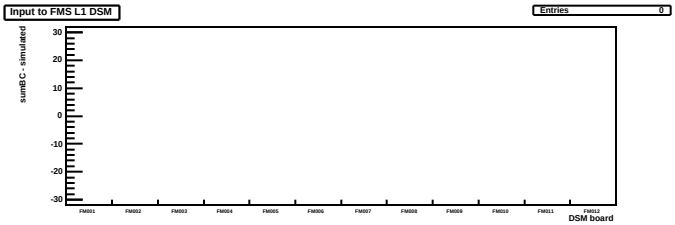

Input to FMS L1 DSM
Entries 2.4e+07
sumD
DSM board

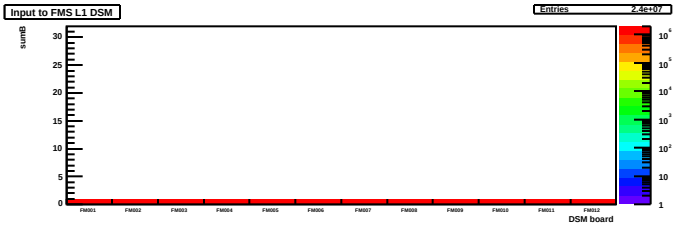

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

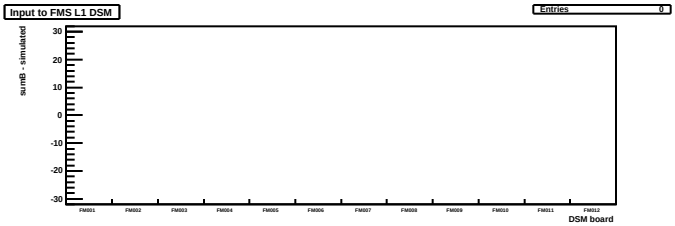

Input to FMS L1 DSM
Entries 2.4e+07
sumC
DSM board

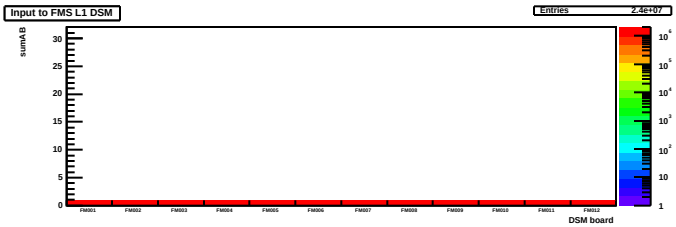

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

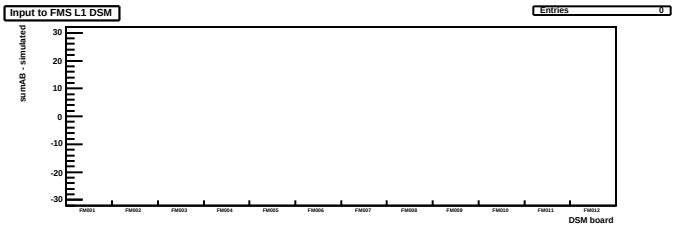

Input to FMS L1 DSM
Entries 2.4e+07
sumBC
DSM board

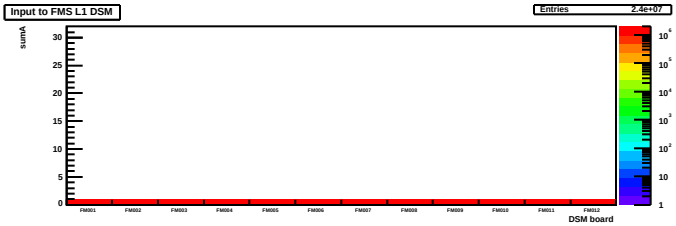

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

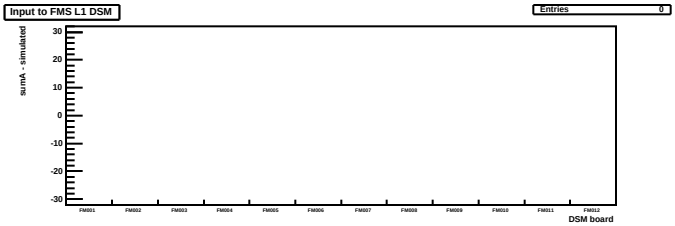

Input to FMS L1 DSM
Entries 2.4e+07
sumB
DSM board

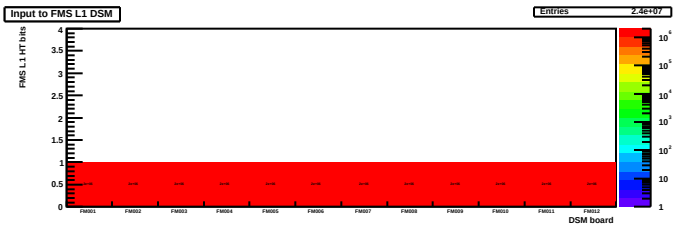

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

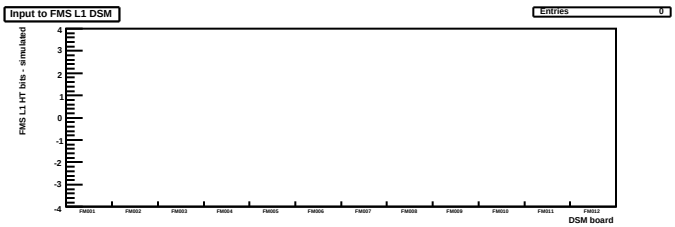

Input to FMS L1 DSM
Entries 2.4e+07
sumAB
DSM board

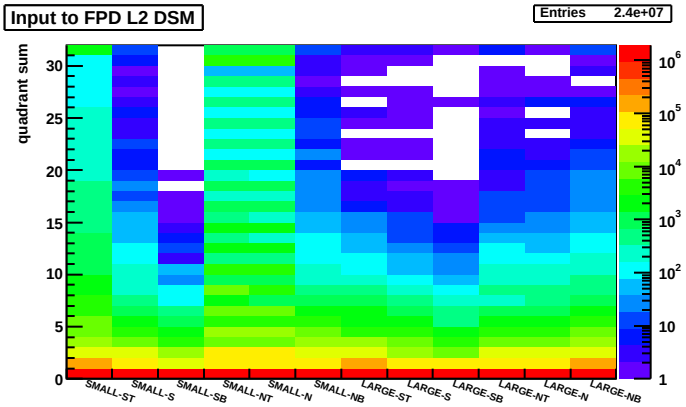

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

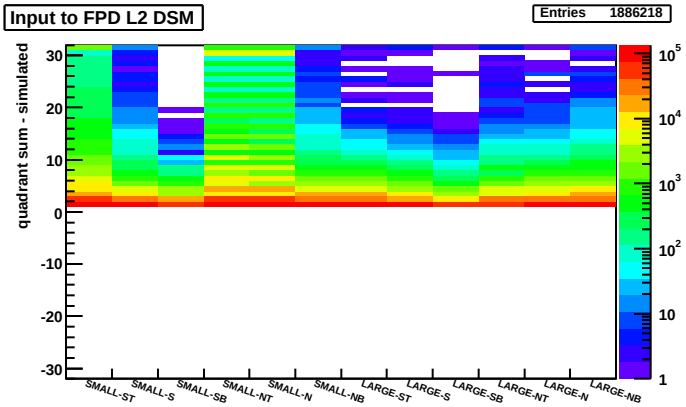

Input to FMS L1 DSM
Entries 2.4e+07
sumA
DSM board

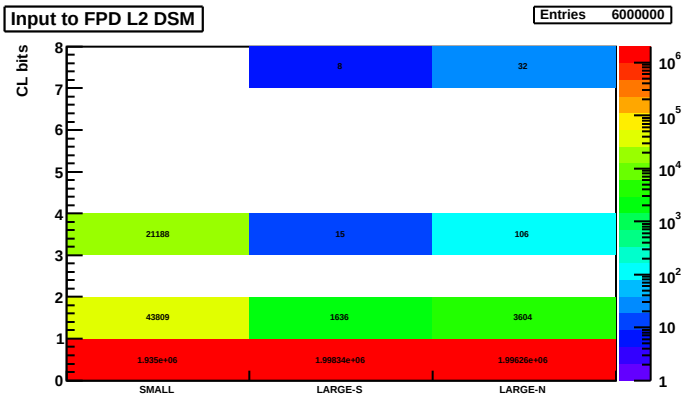

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

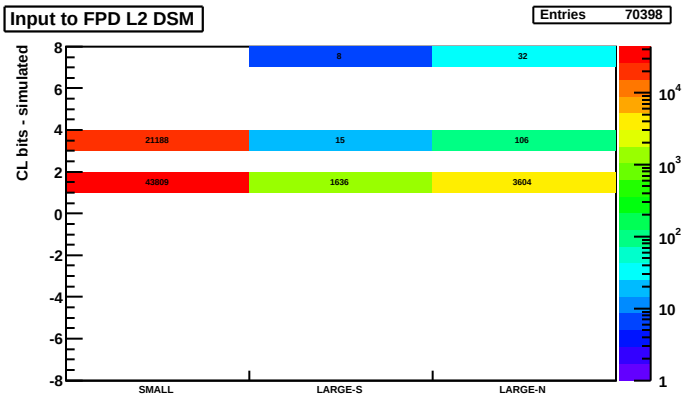

Input to FMS L1 DSM
Entries 2.4e+07
FMS L1 HT bits
DSM board

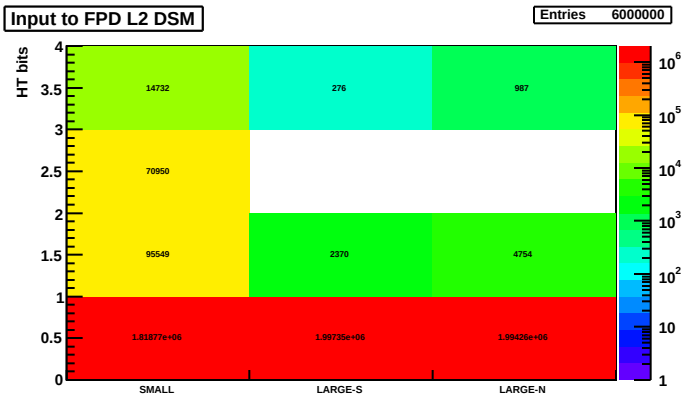

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

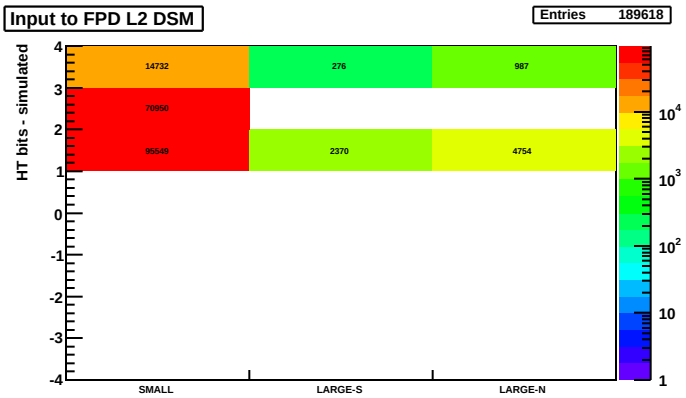

Input to FPD L2 DSM
Entries 2.4e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

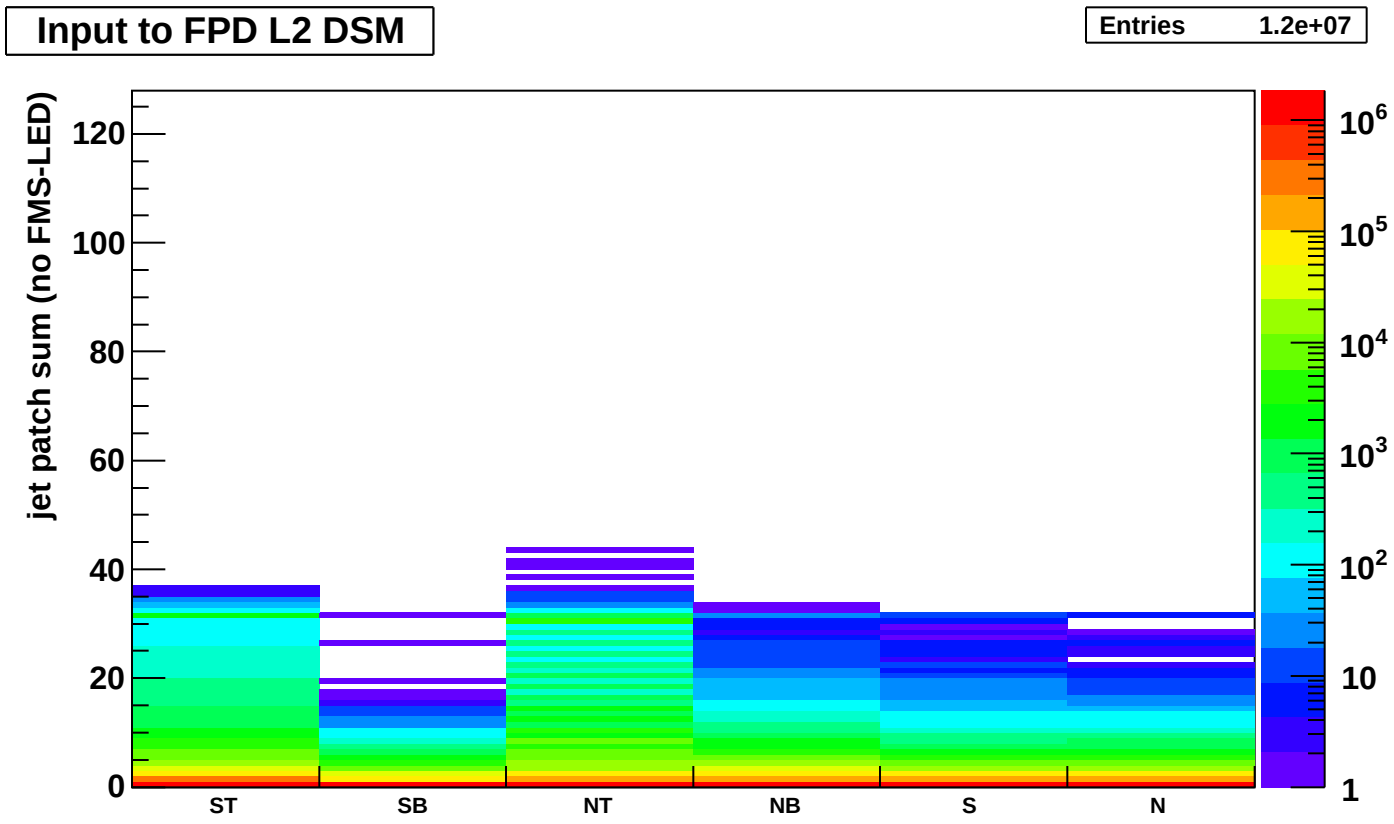

Input to FPD L2 DSM
Entries 1886218
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

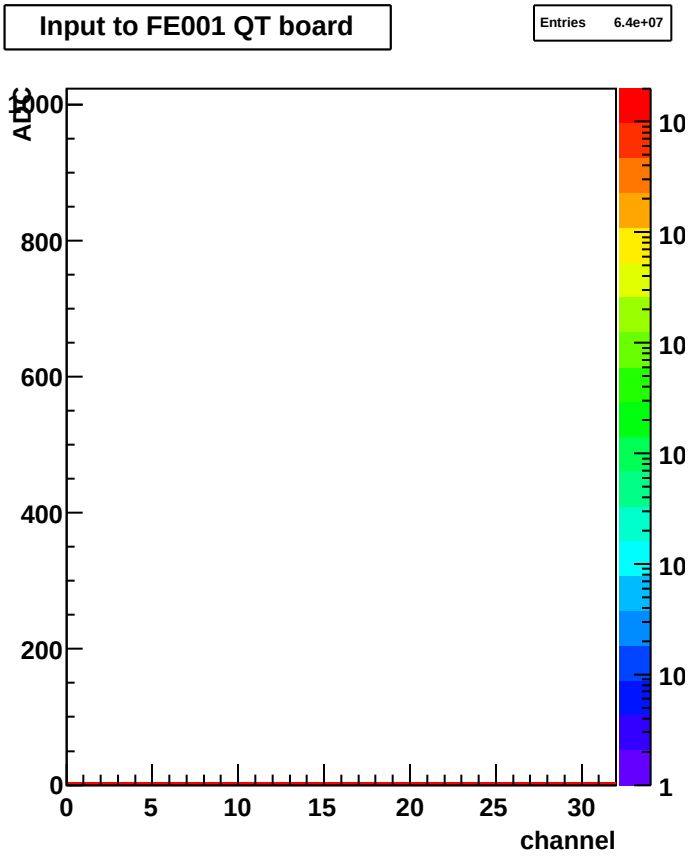

Input to FPD L2 DSM
Entries 6000000
CL bits
8
32
21188
15
106
43809
1636
3604
1.935e+06
1.99834e+06
1.99626e+06
SMALL
LARGE-S
LARGE-N

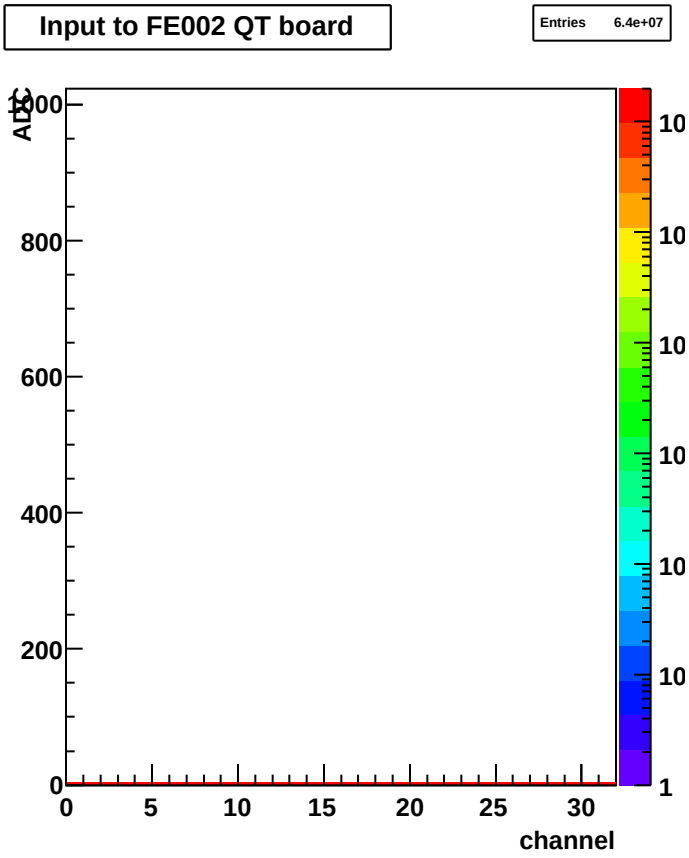

Input to FPD L2 DSM
Entries 70398
CL bits - simulated
8
32
21188
15
106
43809
1636
3604
SMALL
LARGE-S
LARGE-N

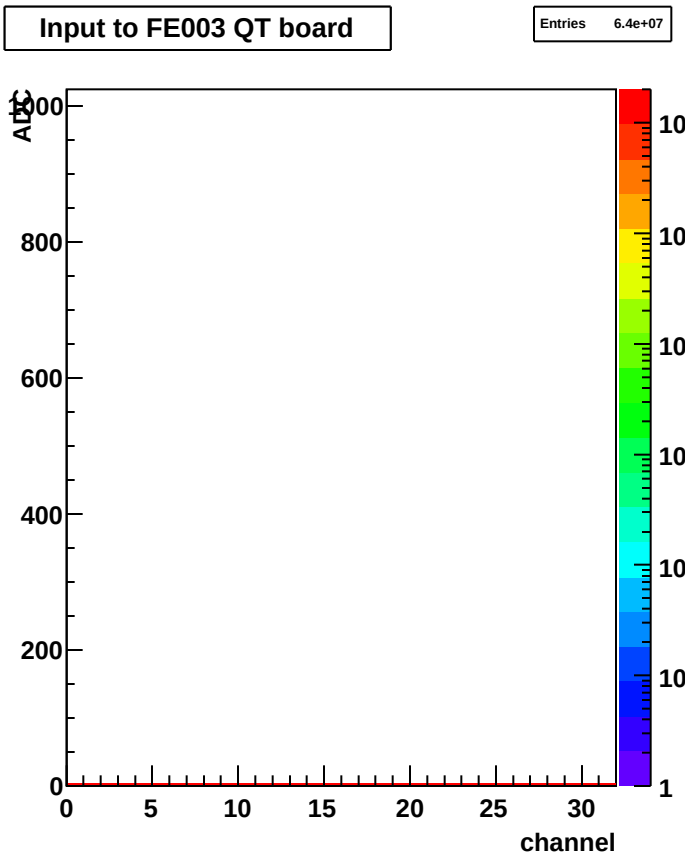

Input to FPD L2 DSM
Entries 6000000
HT bits
14732
276
987
70950
95549
2370
4754
1.81877e+06
1.99735e+06
1.99426e+06
SMALL
LARGE-S
LARGE-N

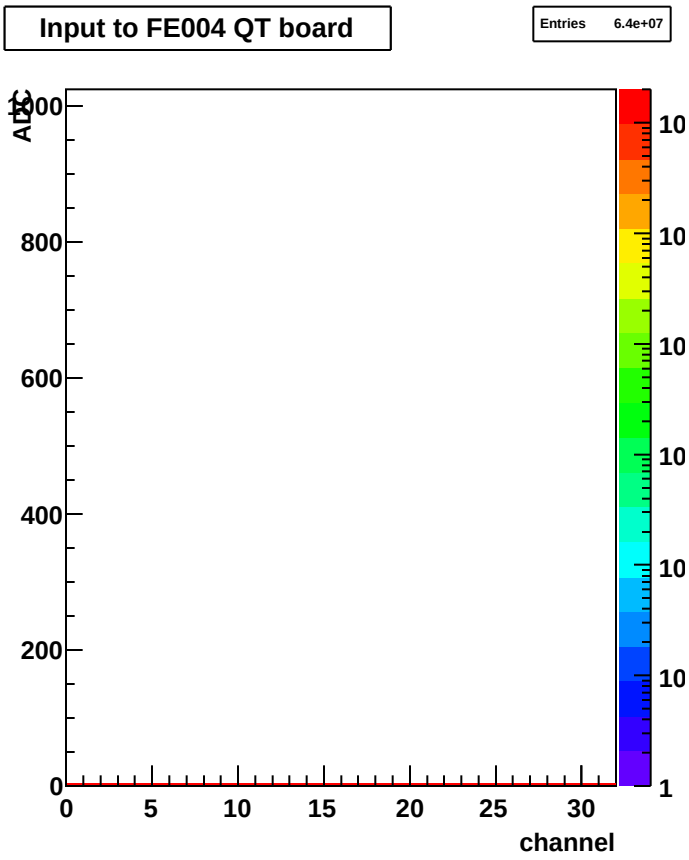

Input to FPD L2 DSM
Entries 189618
HT bits - simulated
14732
276
987
70950
95549
2370
4754
SMALL
LARGE-S
LARGE-N

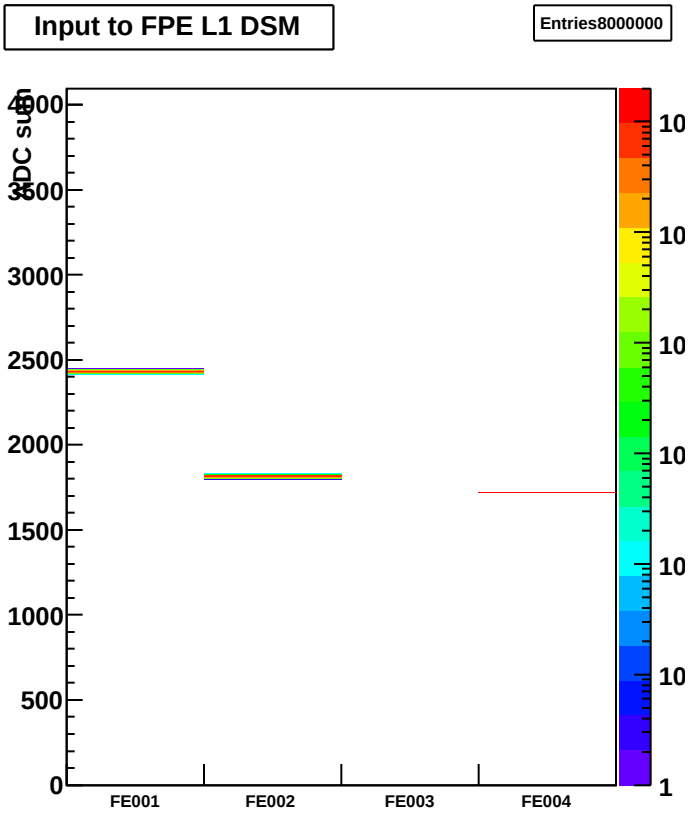

Input to FPD L2 DSM
Entries 1.2e+07
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6


Input to FE001 QT board
Entries 6.4e+07
ADC
channel

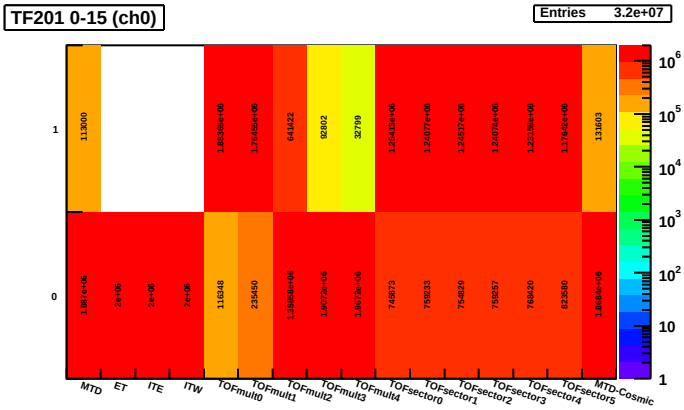

Input to FE002 QT board
Entries 6.4e+07
ADC
channel


Input to FE003 QT board
Entries 6.4e+07
ADC
channel

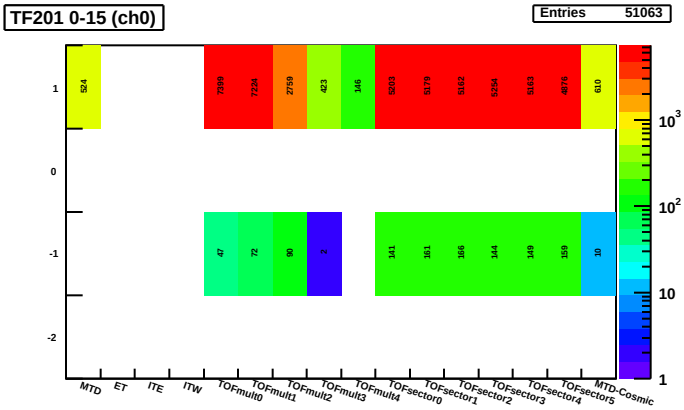

Input to FE004 QT board
Entries 6.4e+07
ADC
channel


Input to FPE L1 DSM
Entries8000000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

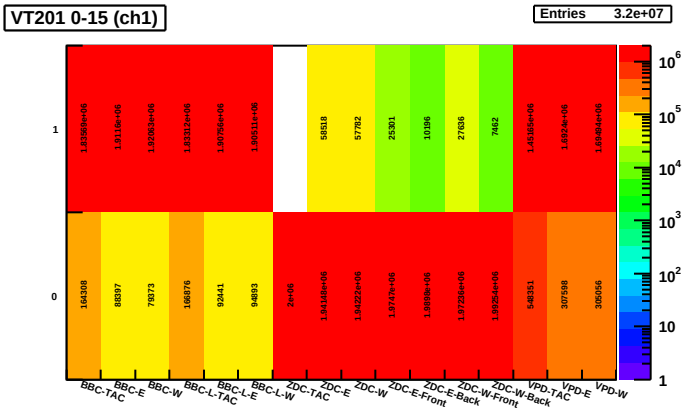
TF201 0-15 (ch0)



TF201 0-15 (ch0)



VT201 0-15 (ch1)



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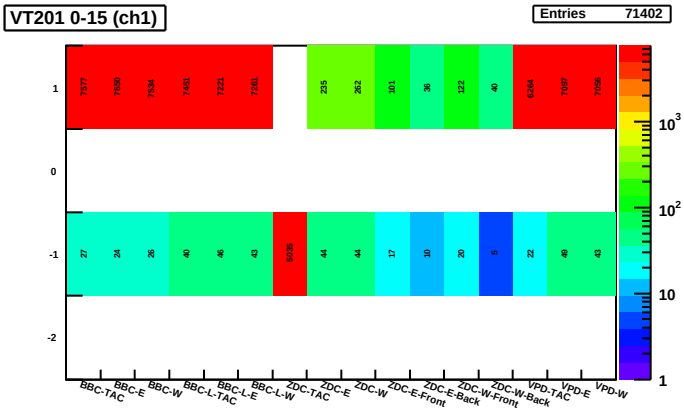

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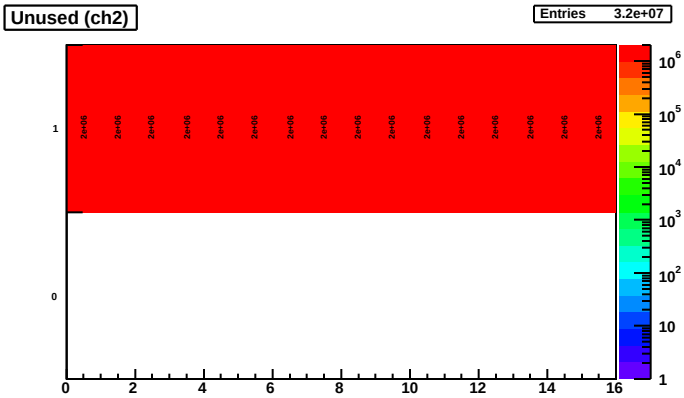

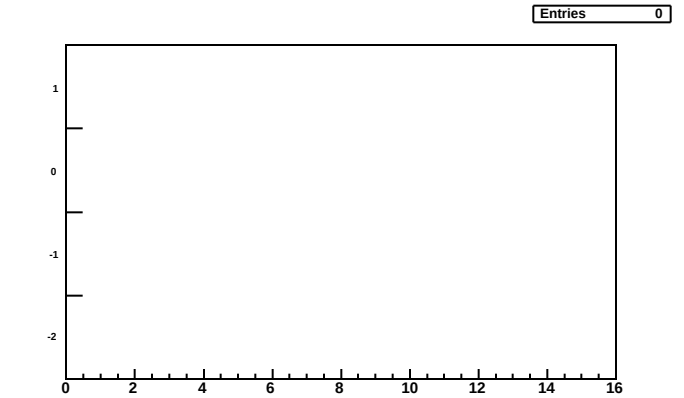

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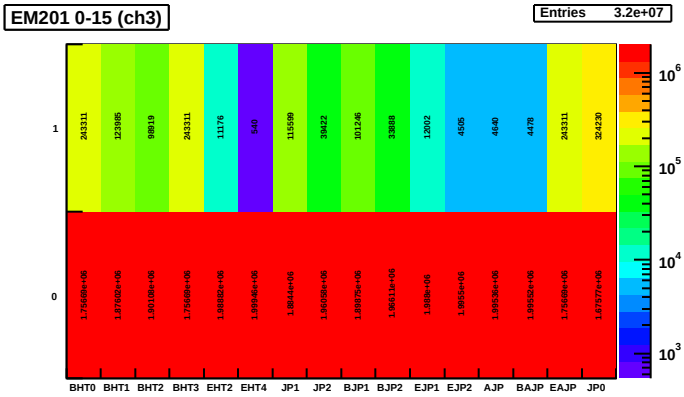

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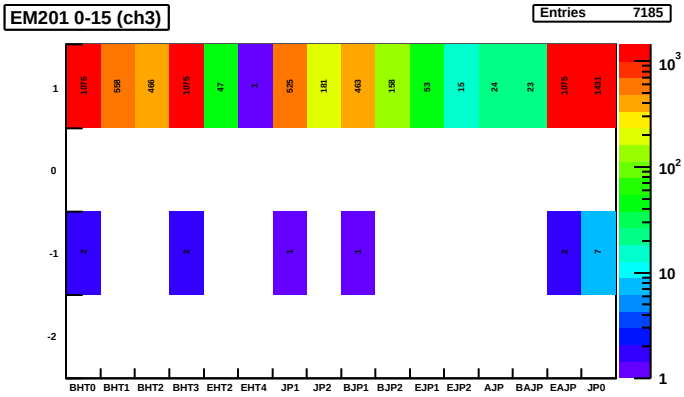
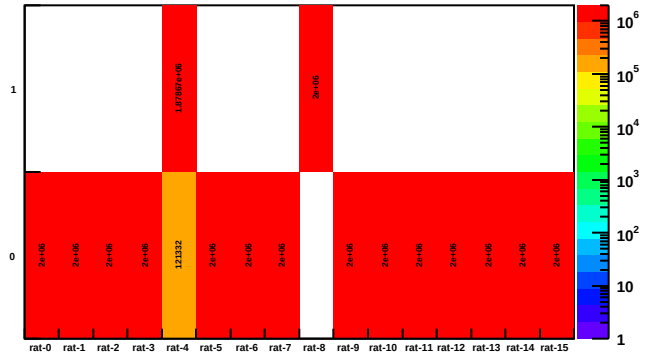
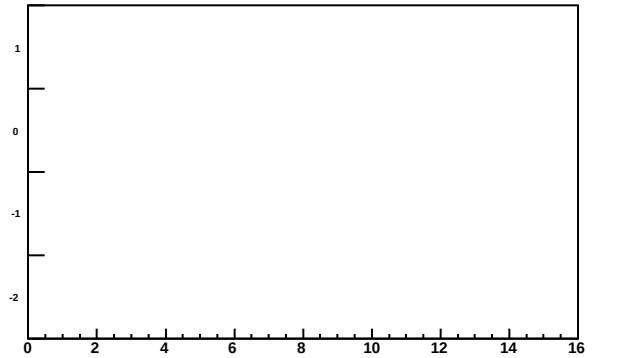


RAT board (ch4)





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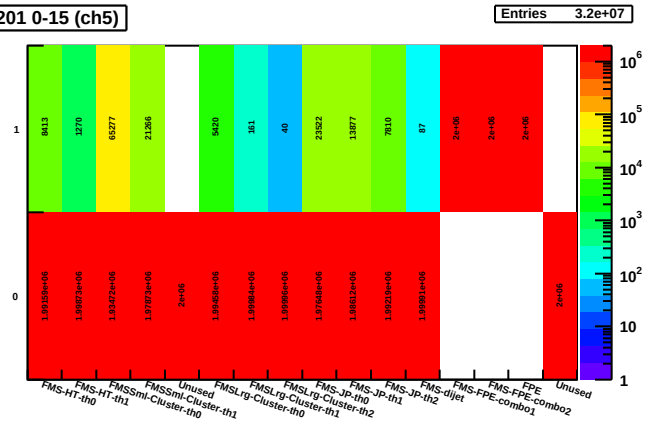

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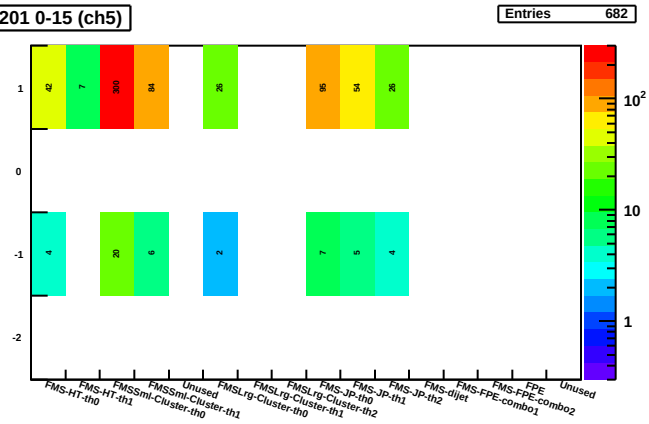

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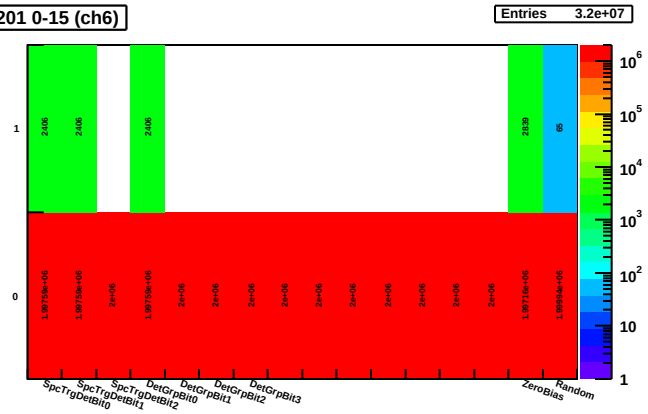

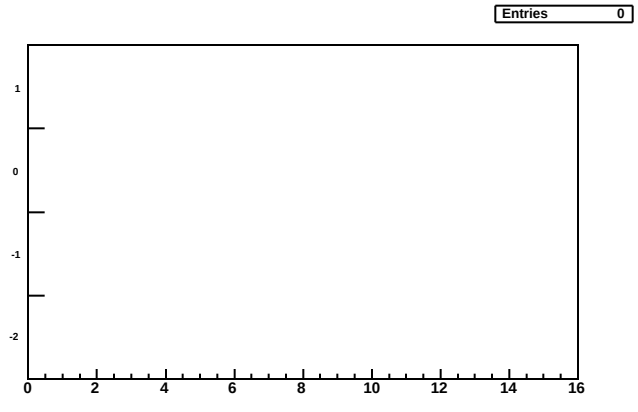
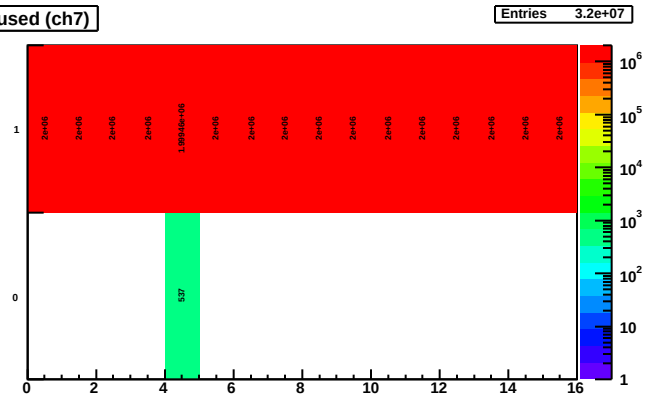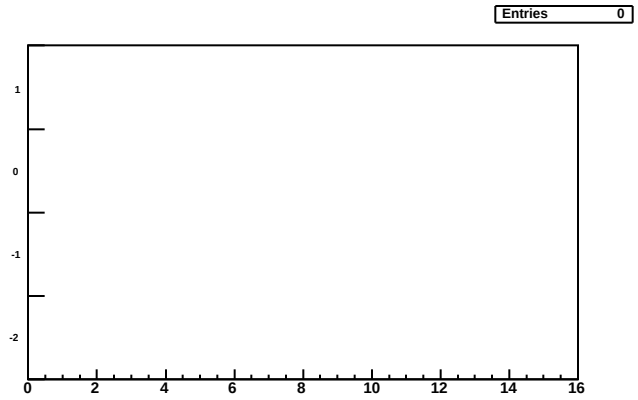
Unused (ch7)