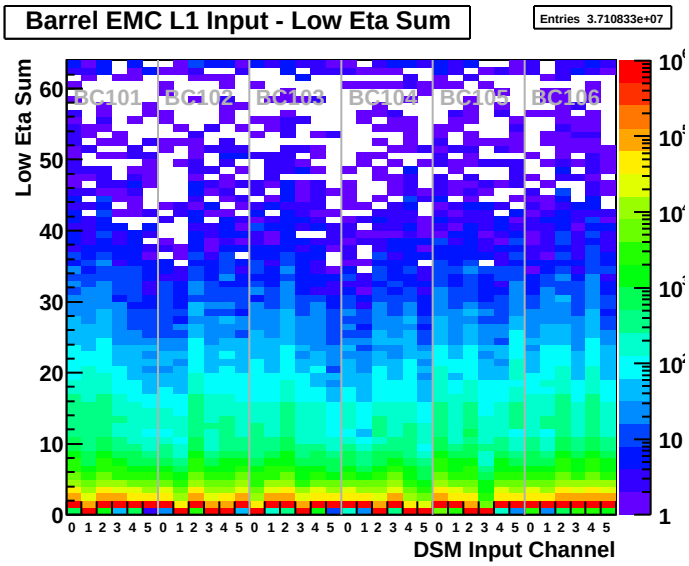
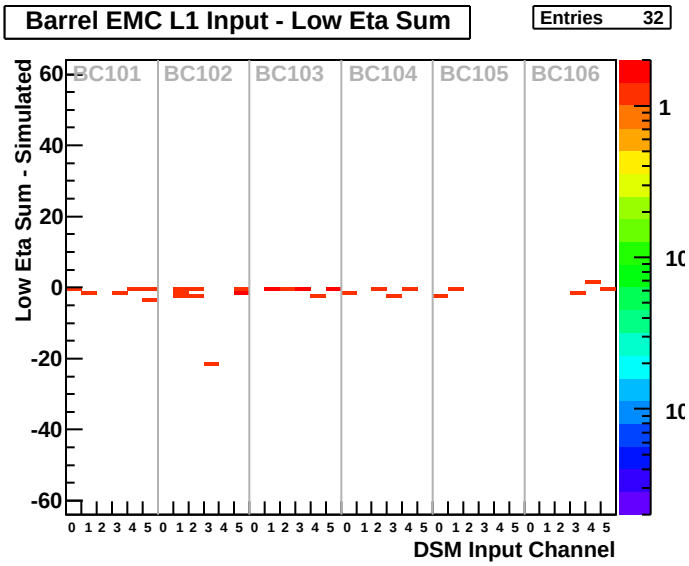
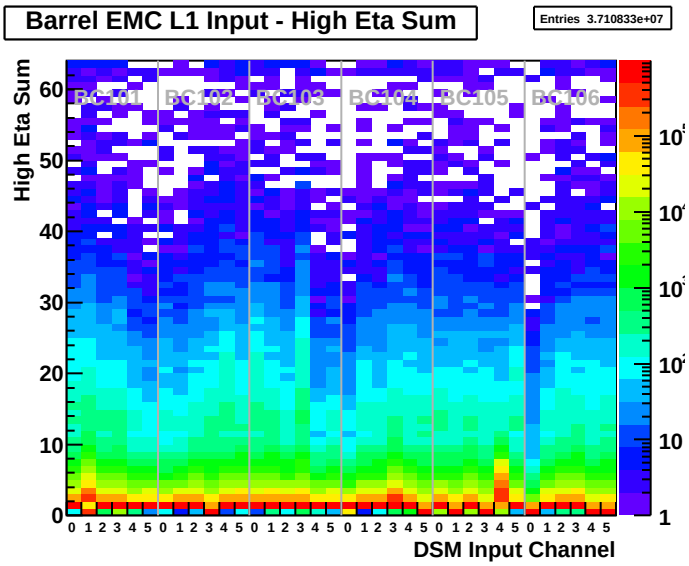
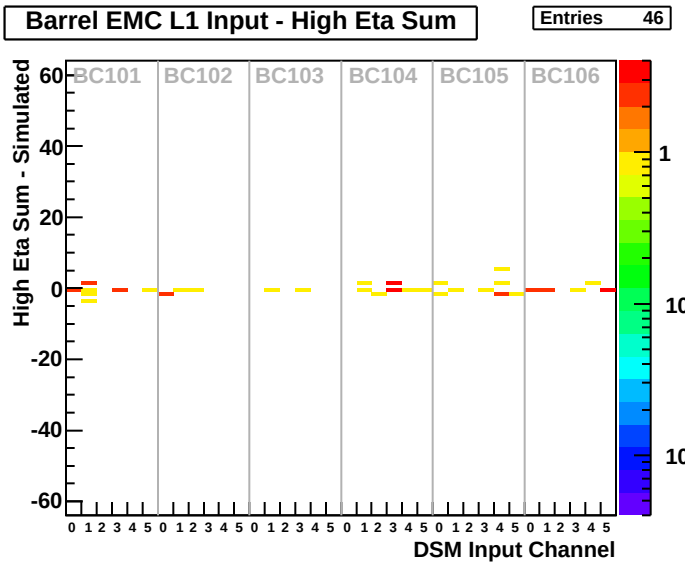
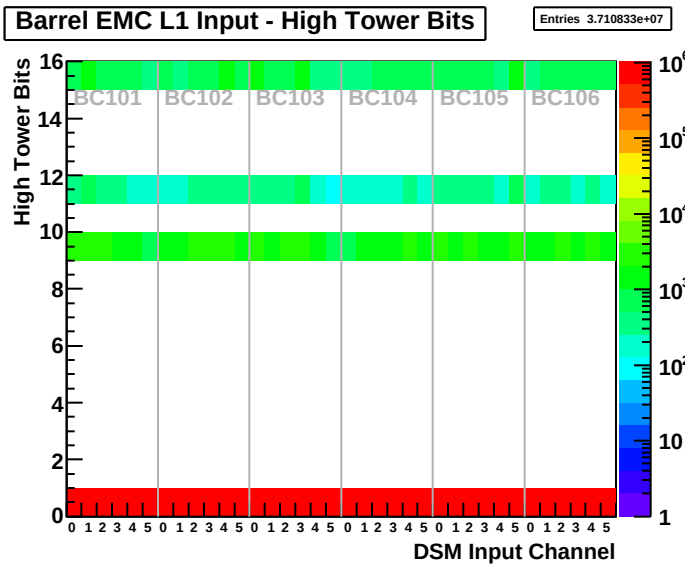
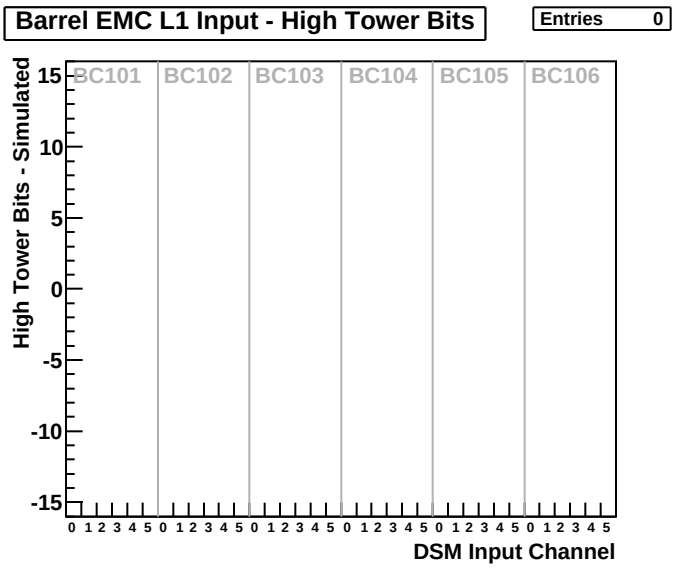

Barrel EMC L1 Input - Low Eta Sum
Entries 3.710833e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

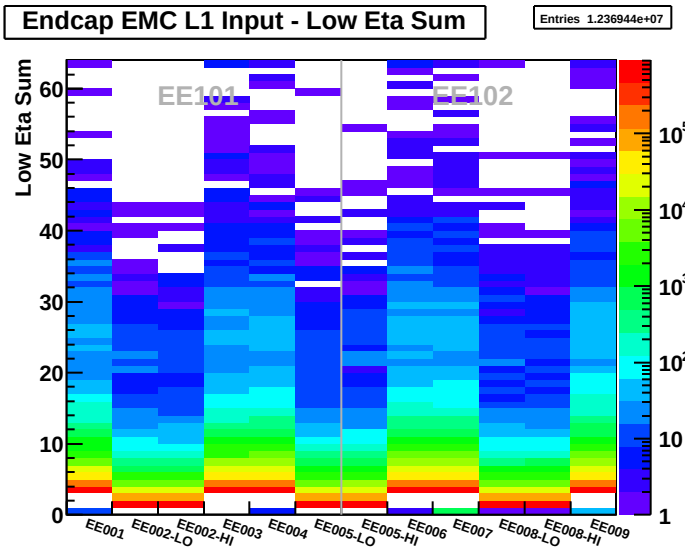

Barrel EMC L1 Input - Low Eta Sum
Entries 32
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

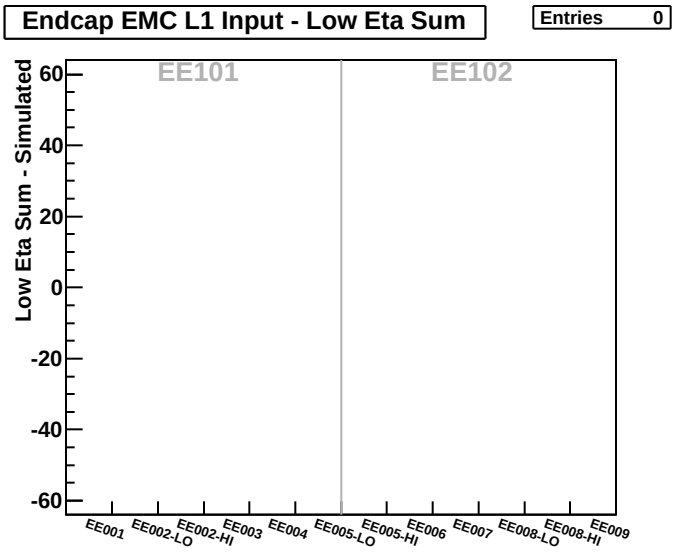

Barrel EMC L1 Input - High Eta Sum
Entries 3.710833e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

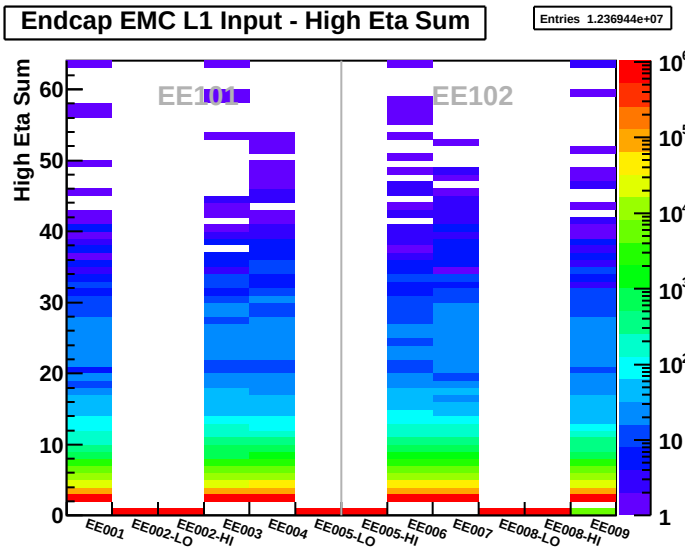

Barrel EMC L1 Input - High Eta Sum
Entries 46
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

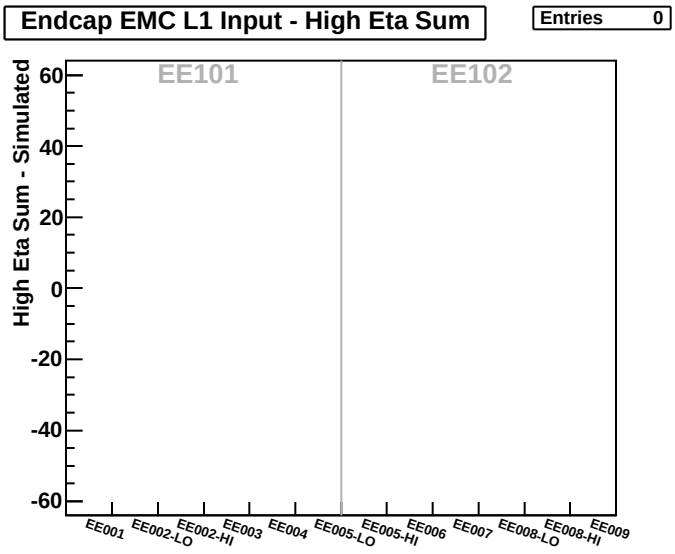

Barrel EMC L1 Input - High Tower Bits
Entries 3.710833e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

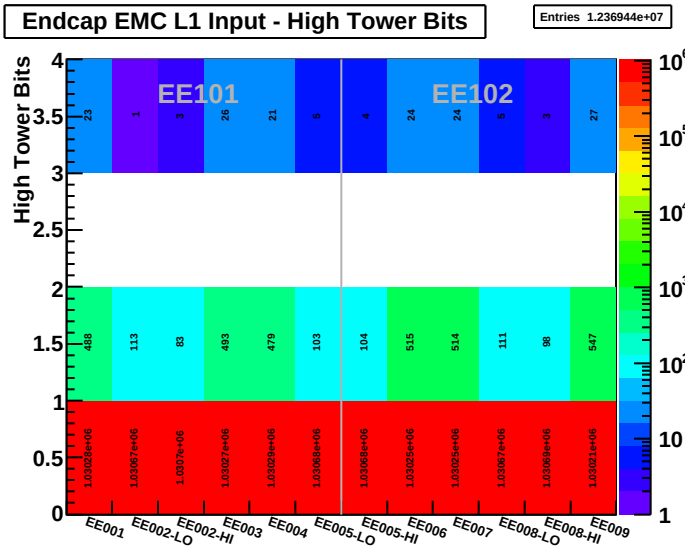

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

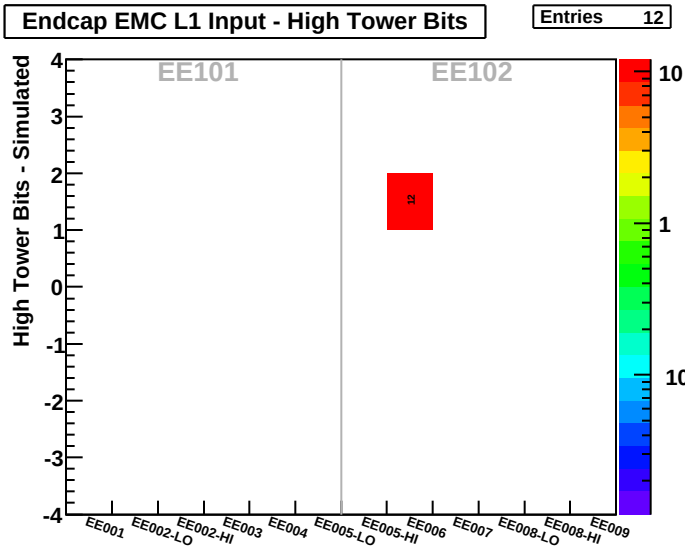

Endcap EMC L1 Input - Low Eta Sum
Entries 1.236944e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

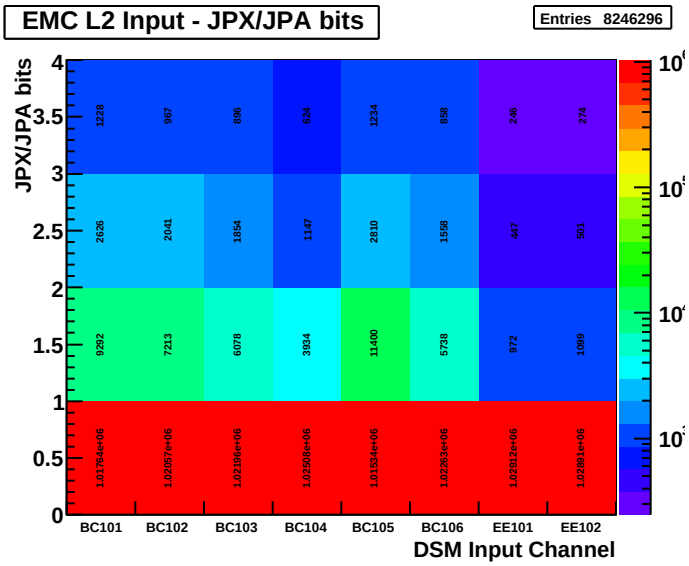

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

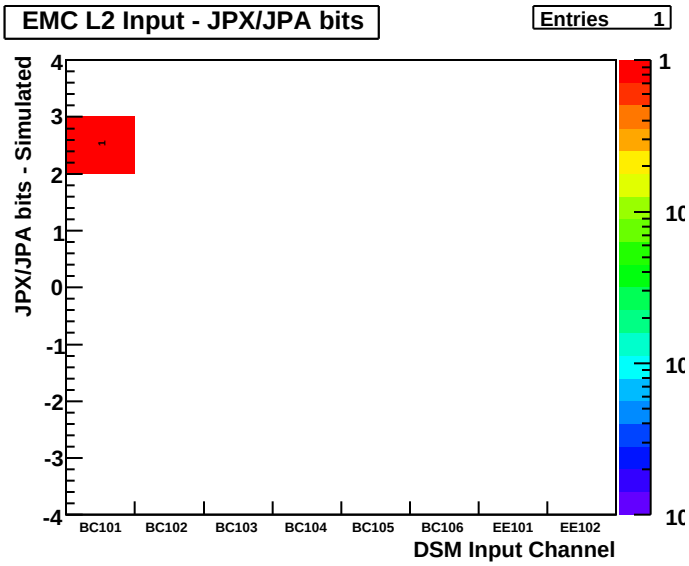

Endcap EMC L1 Input - High Eta Sum
Entries 1.236944e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

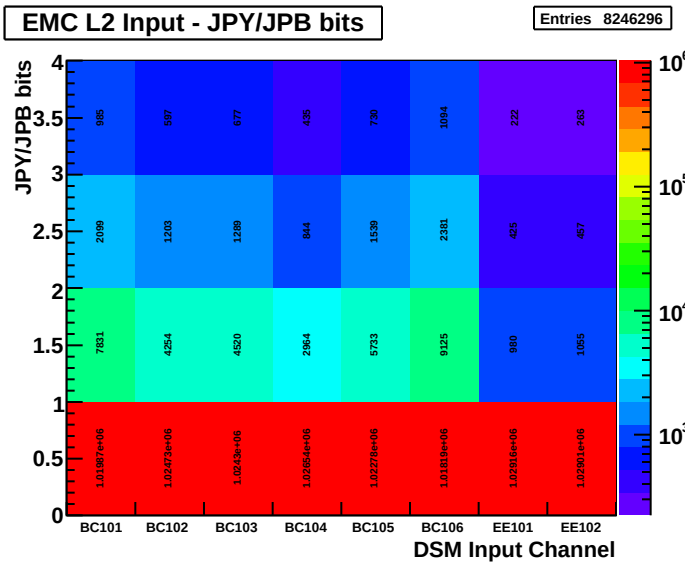

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

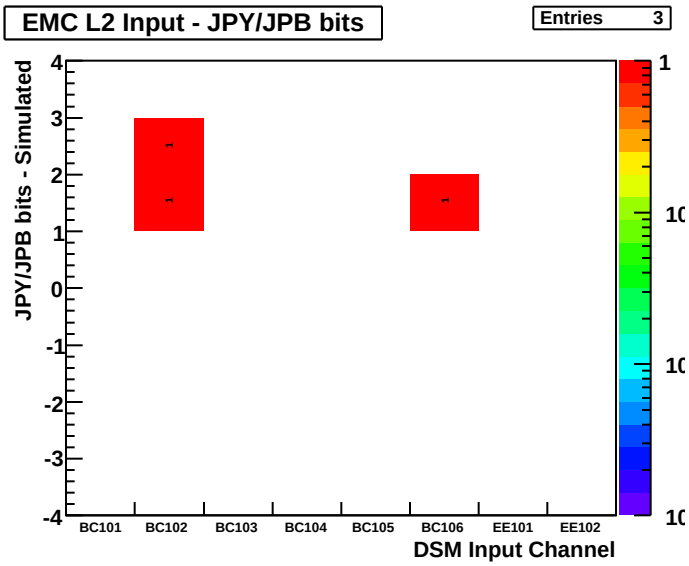

Endcap EMC L1 Input - High Tower Bits
Entries 1.236944e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

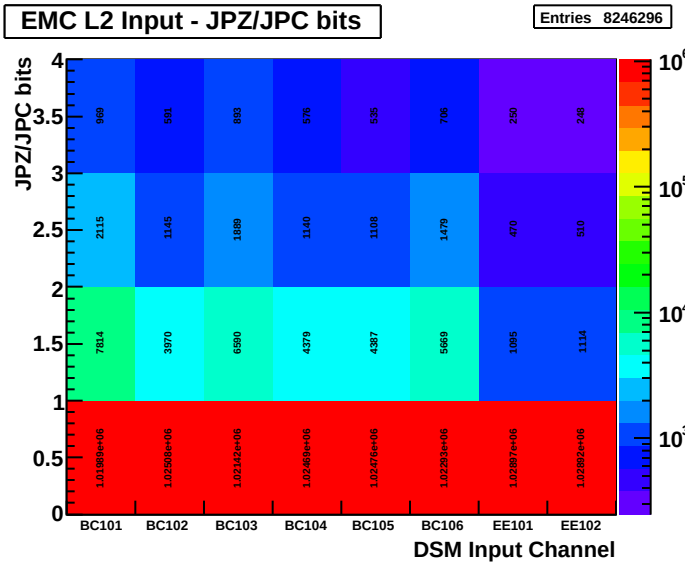

Endcap EMC L1 Input - High Tower Bits
Entries 12
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

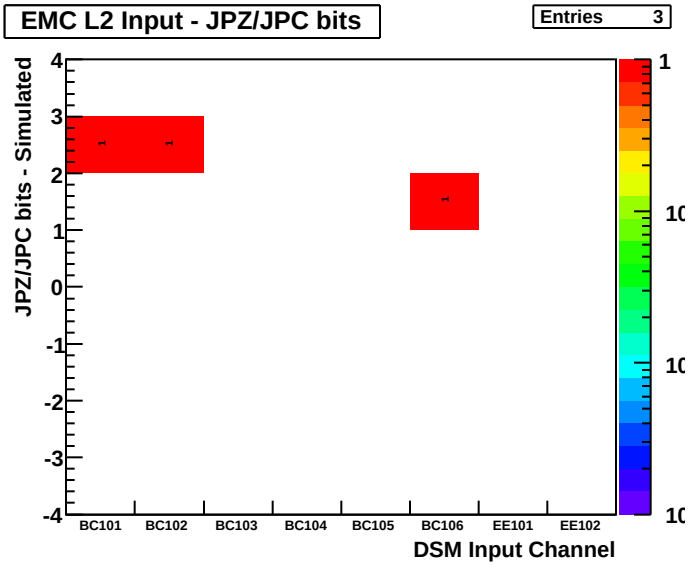

EMC L2 Input - JPX/JPA bits
Entries 8246296
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

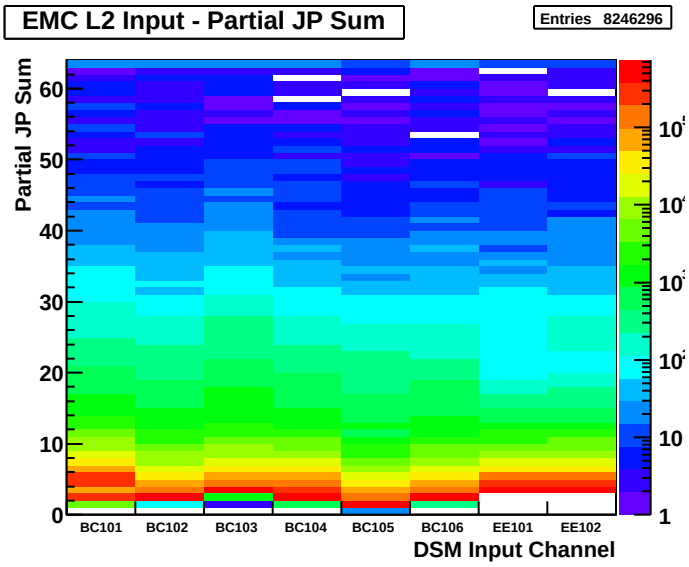

EMC L2 Input - JPX/JPA bits
Entries 1
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

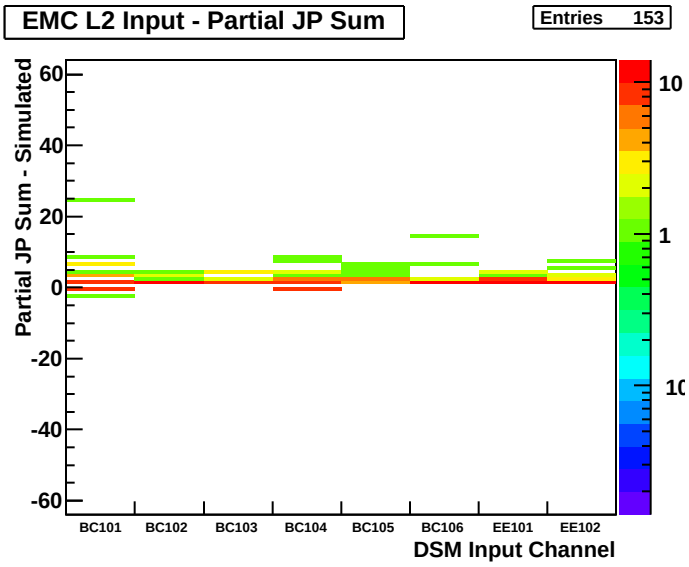

EMC L2 Input - JPY/JPB bits
Entries 8246296
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

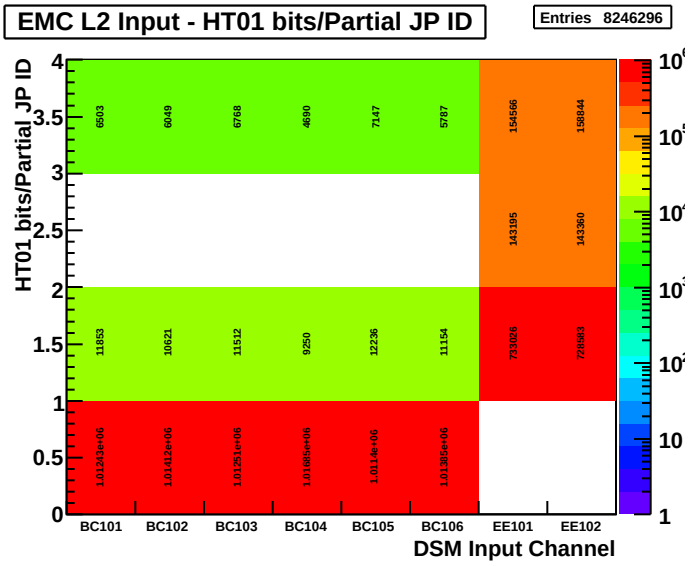

EMC L2 Input - JPY/JPB bits
Entries 3
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

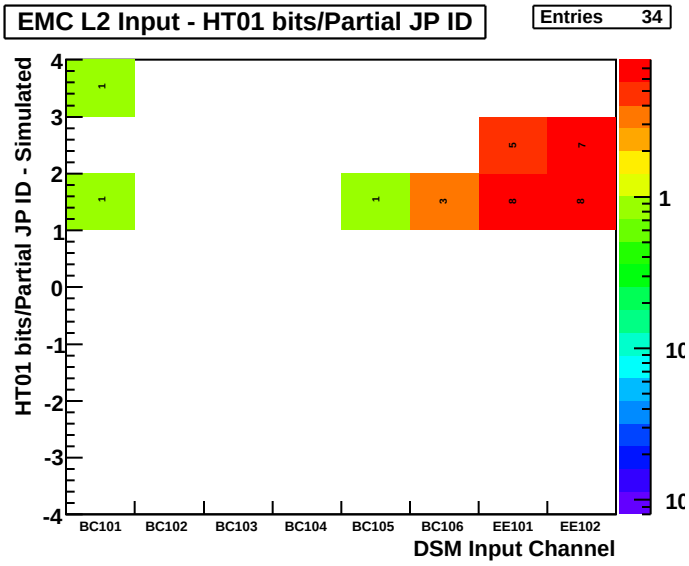

EMC L2 Input - JPZ/JPC bits
Entries 8246296
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

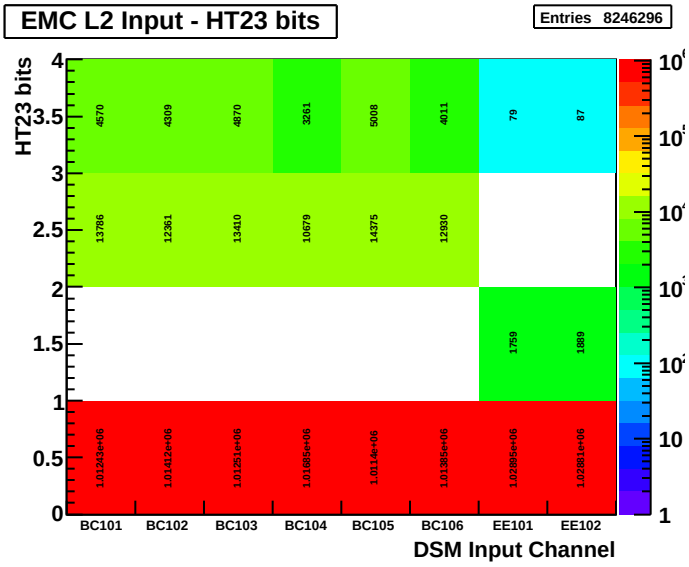

EMC L2 Input - JPZ/JPC bits
Entries 3
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

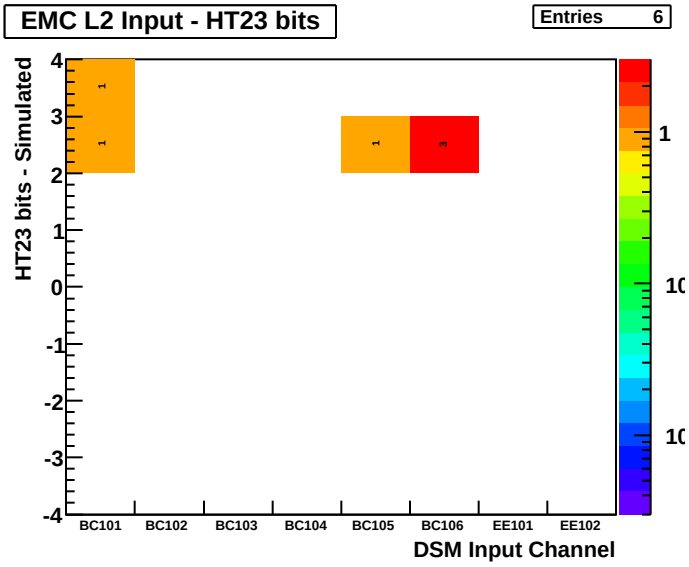

EMC L2 Input - Partial JP Sum
Entries 8246296
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

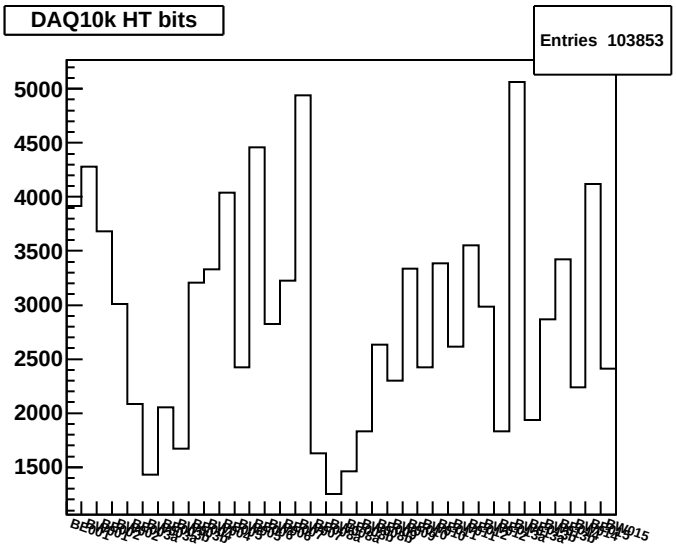

EMC L2 Input - Partial JP Sum
Entries 153
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

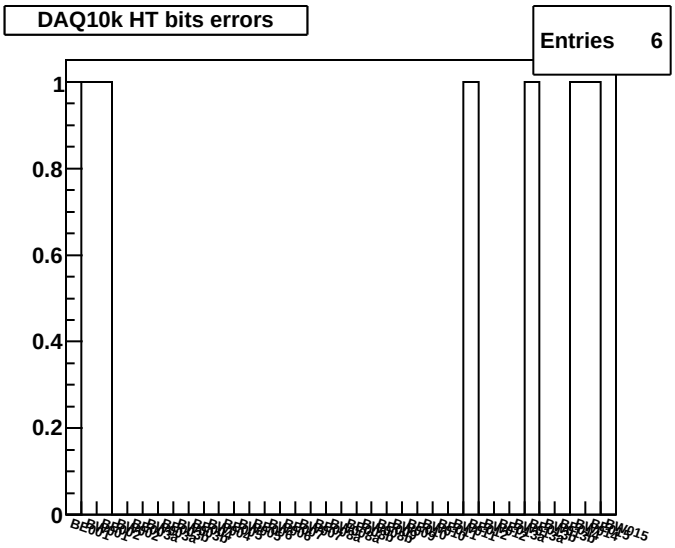

EMC L2 Input - HT01 bits/Partial JP ID
Entries 8246296
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

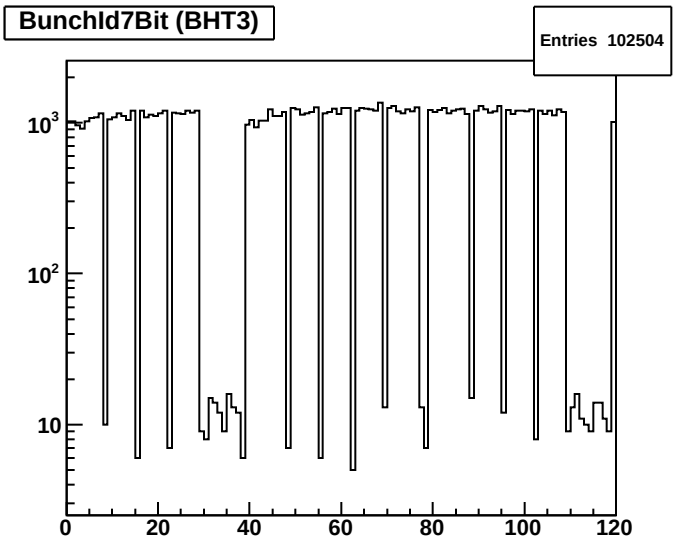

EMC L2 Input - HT01 bits/Partial JP ID
Entries 34
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

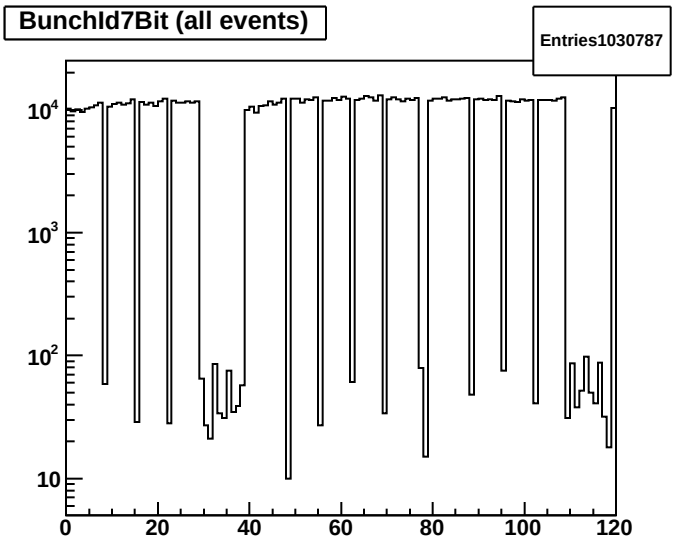

EMC L2 Input - HT23 bits
Entries 8246296
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

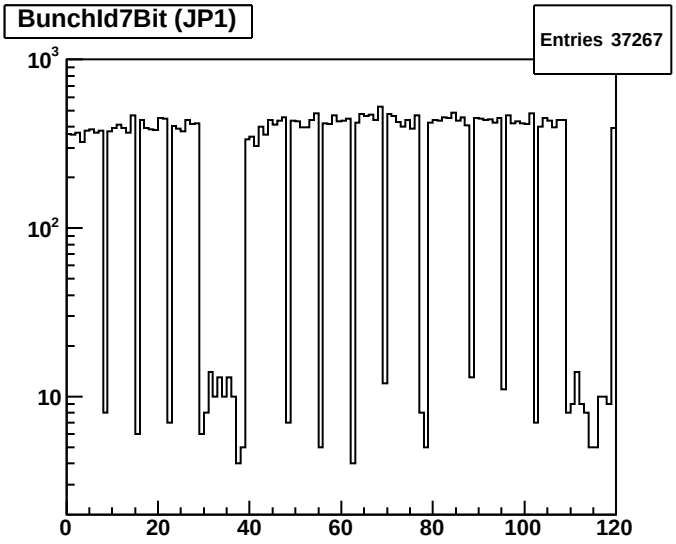

EMC L2 Input - HT23 bits
Entries 6
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

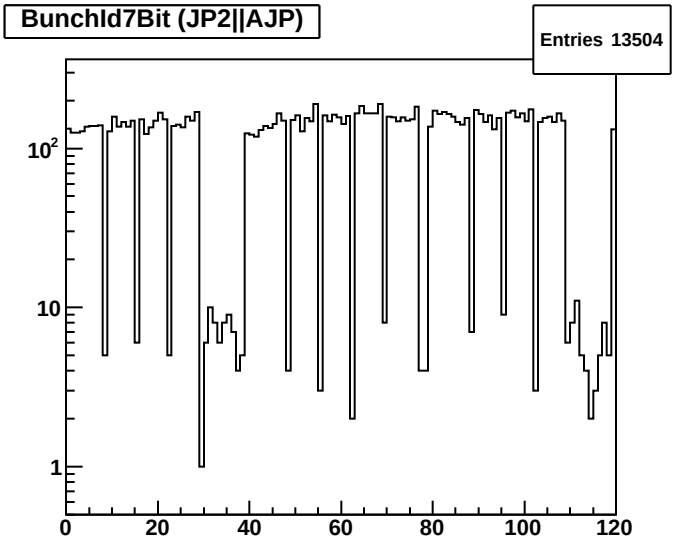

DAQ10k HT bits
Entries 103853
5000
4500
4000
3500
3000
2500
2000
1500

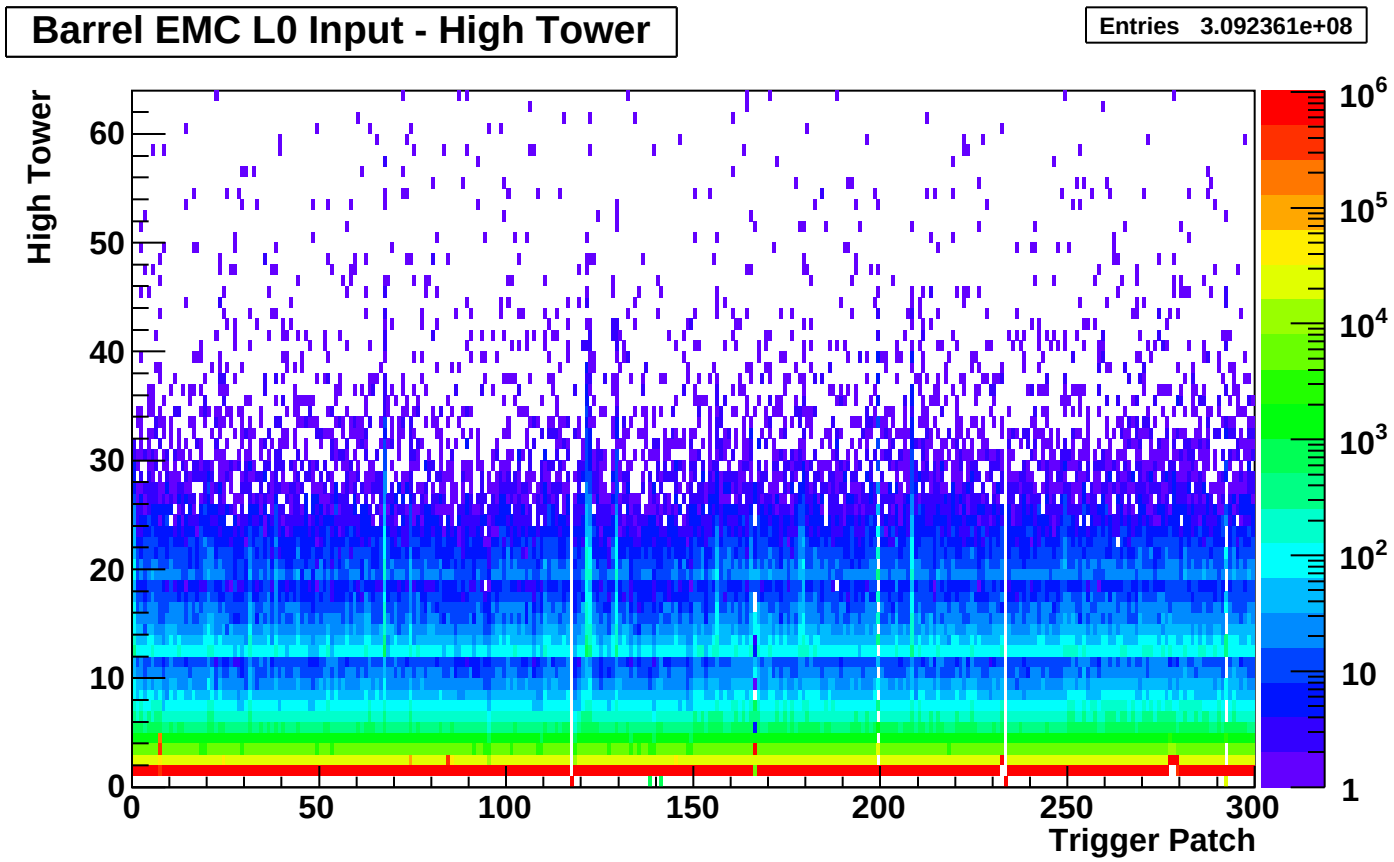

DAQ10k HT bits errors
Entries 6
1
0.8
0.6
0.4
0.2
0

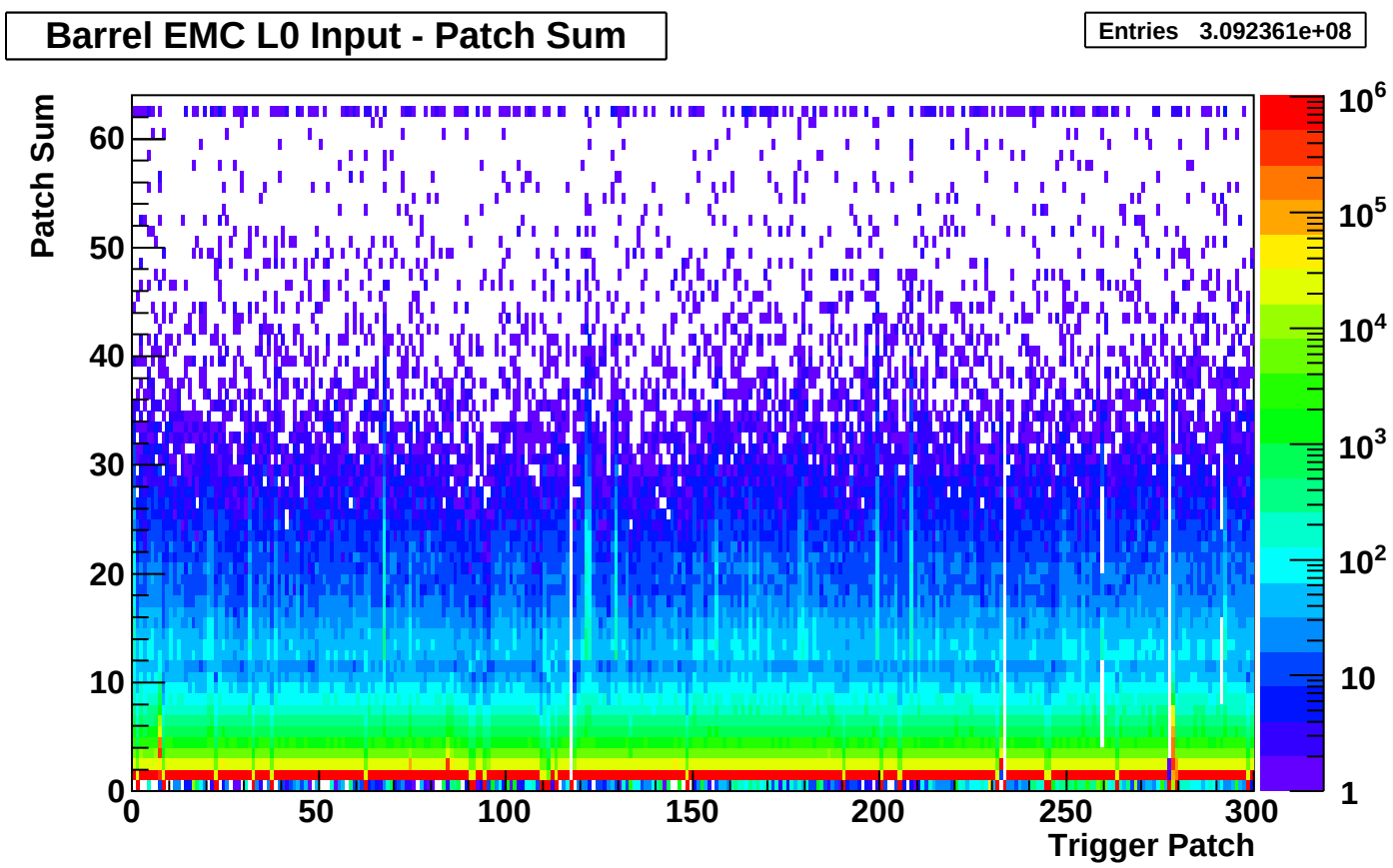

BunchId7Bit (BHT3)
Entries 102504
10^3
10^2
10
0
20
40
60
80
100
120

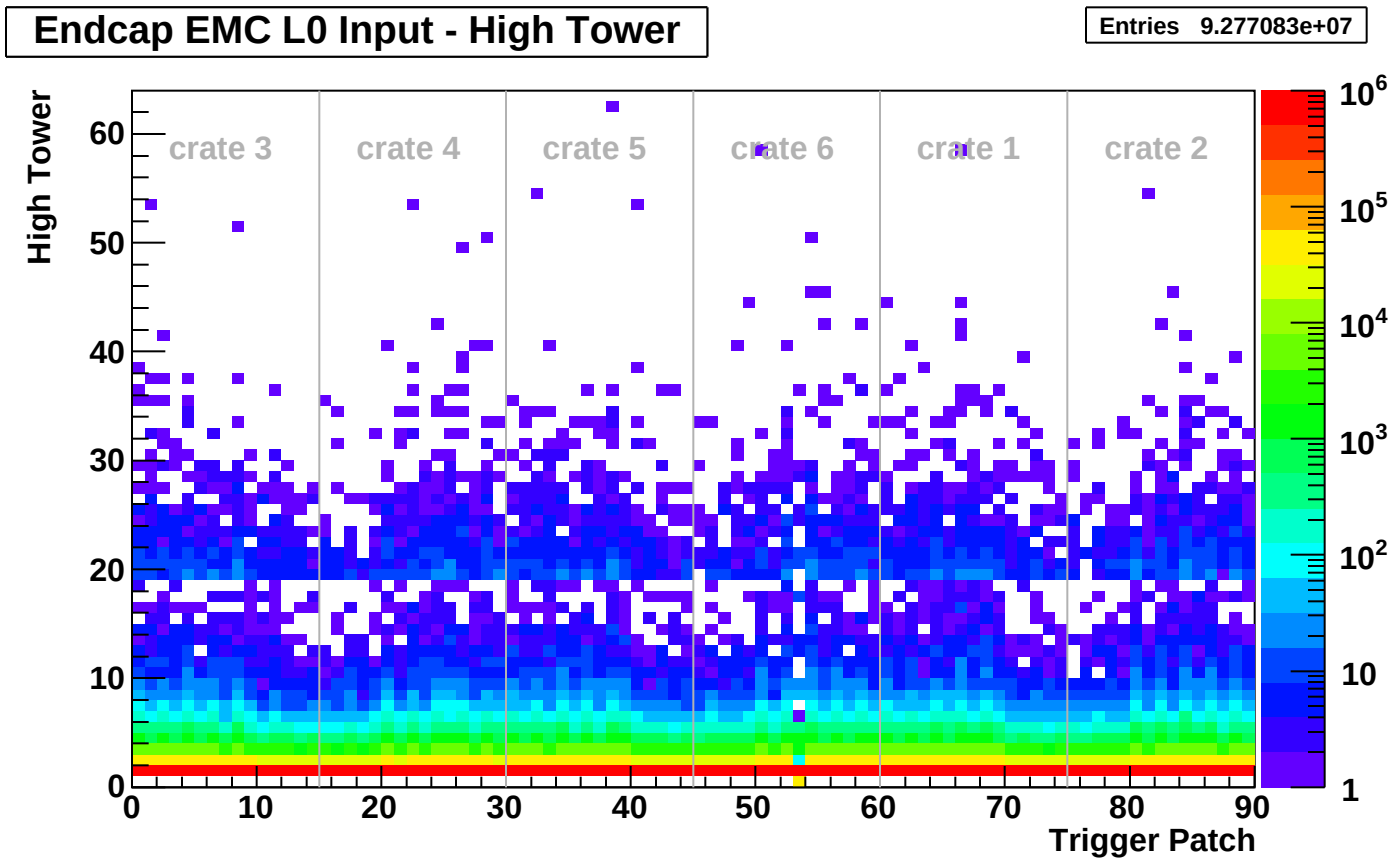

BunchId7Bit (all events)
Entries1030787
10^4
10^3
10^2
10
0
20
40
60
80
100
120

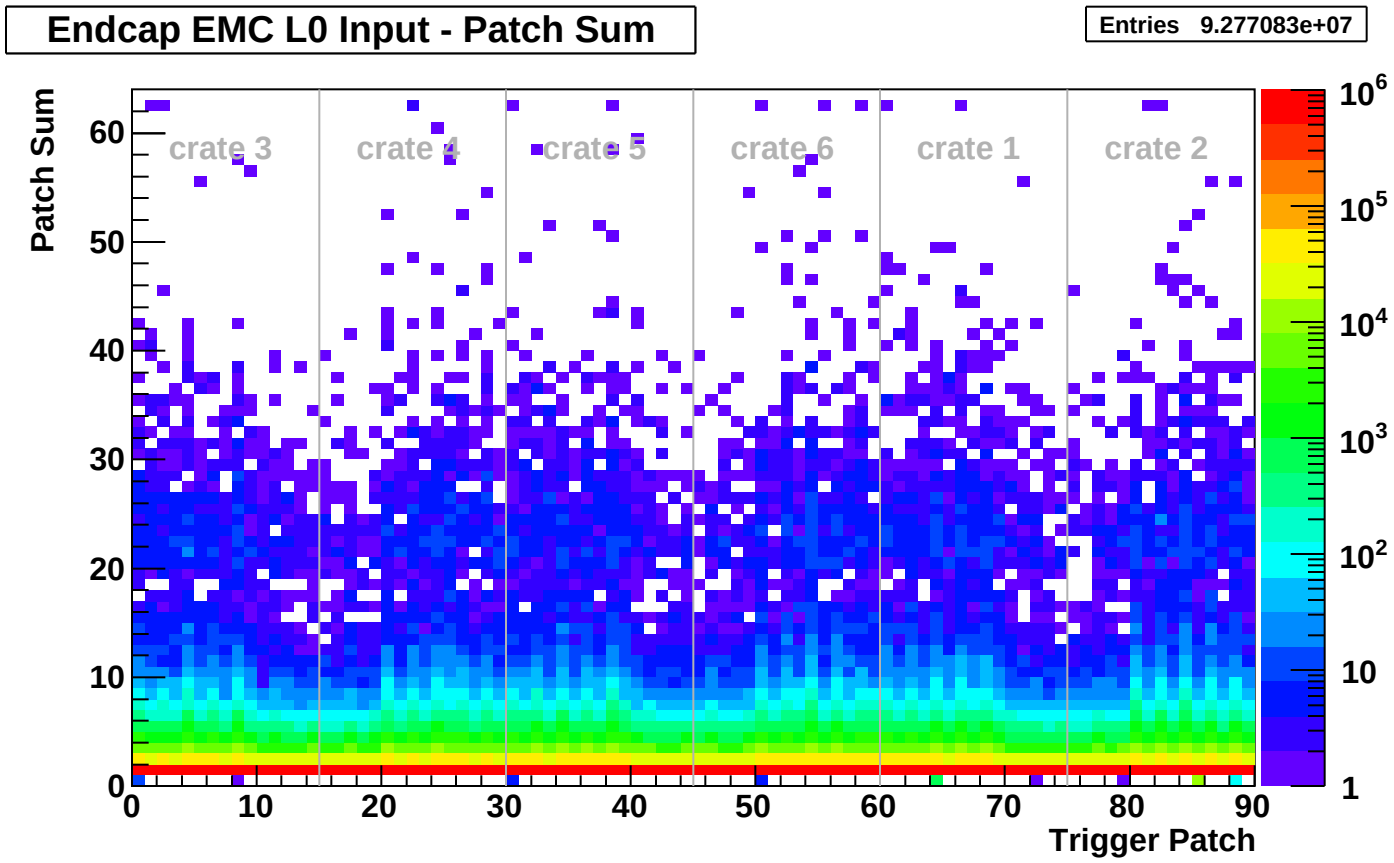

BunchId7Bit (JP1)
Entries 37267
10^3
10^2
10
0
20
40
60
80
100
120

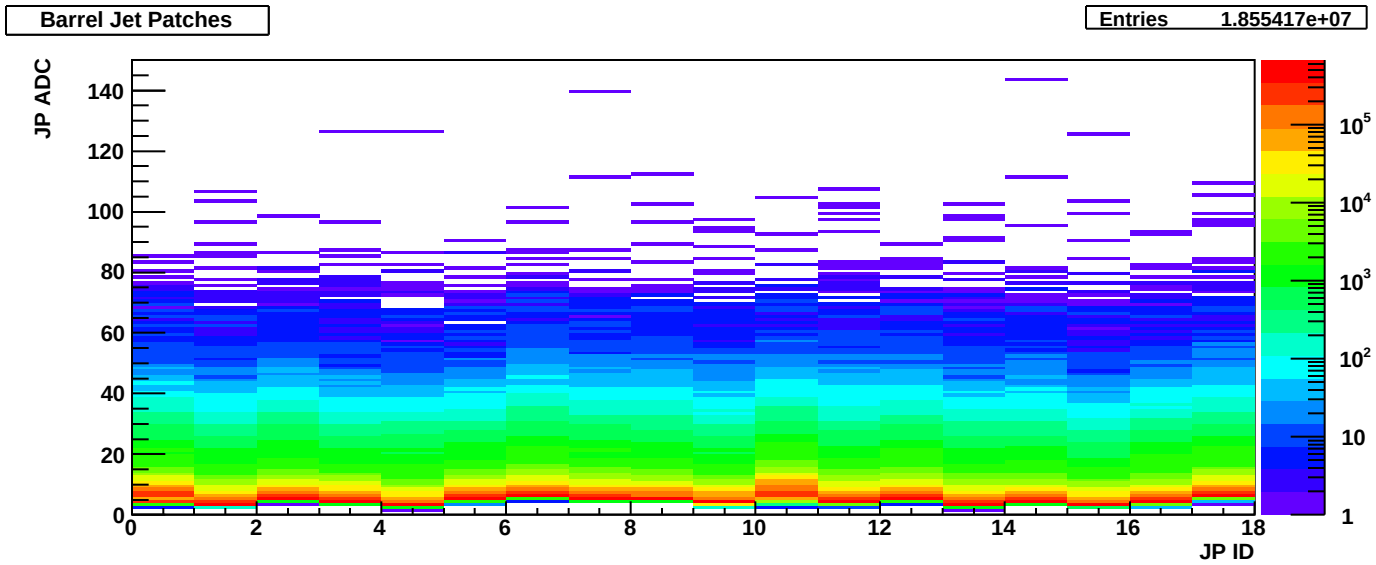

BunchId7Bit (JP2||AJP)
Entries 13504
10^2
10
1
0
20
40
60
80
100
120

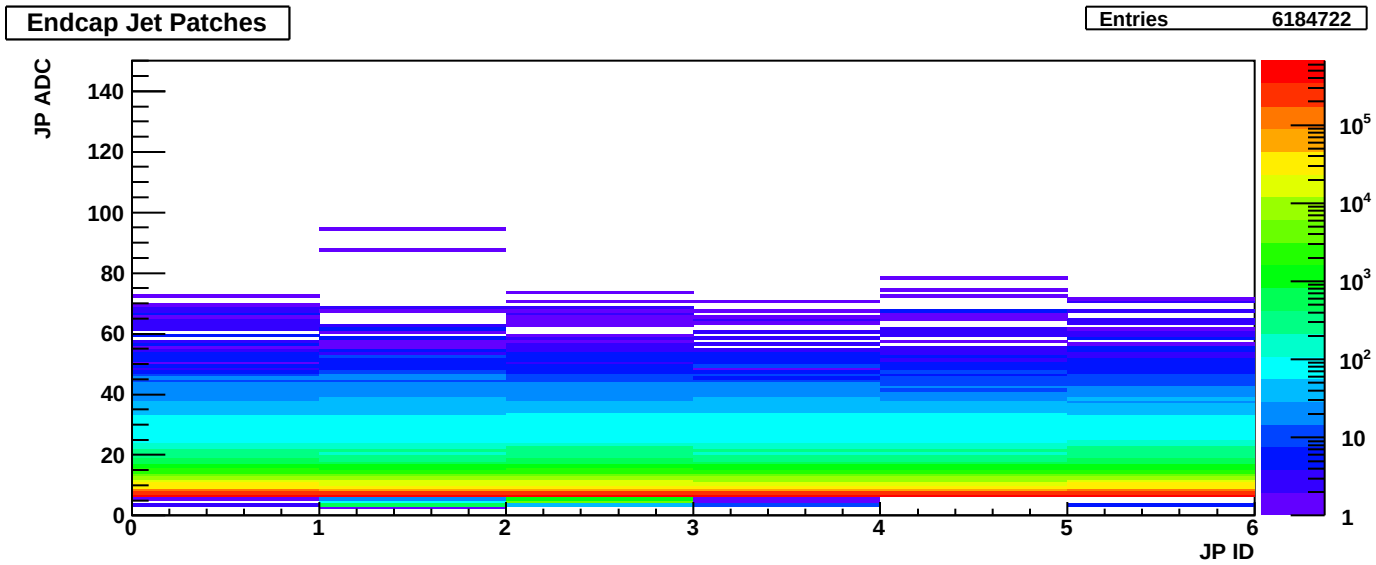

Barrel EMC L0 Input - High Tower
Entries 3.092361e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

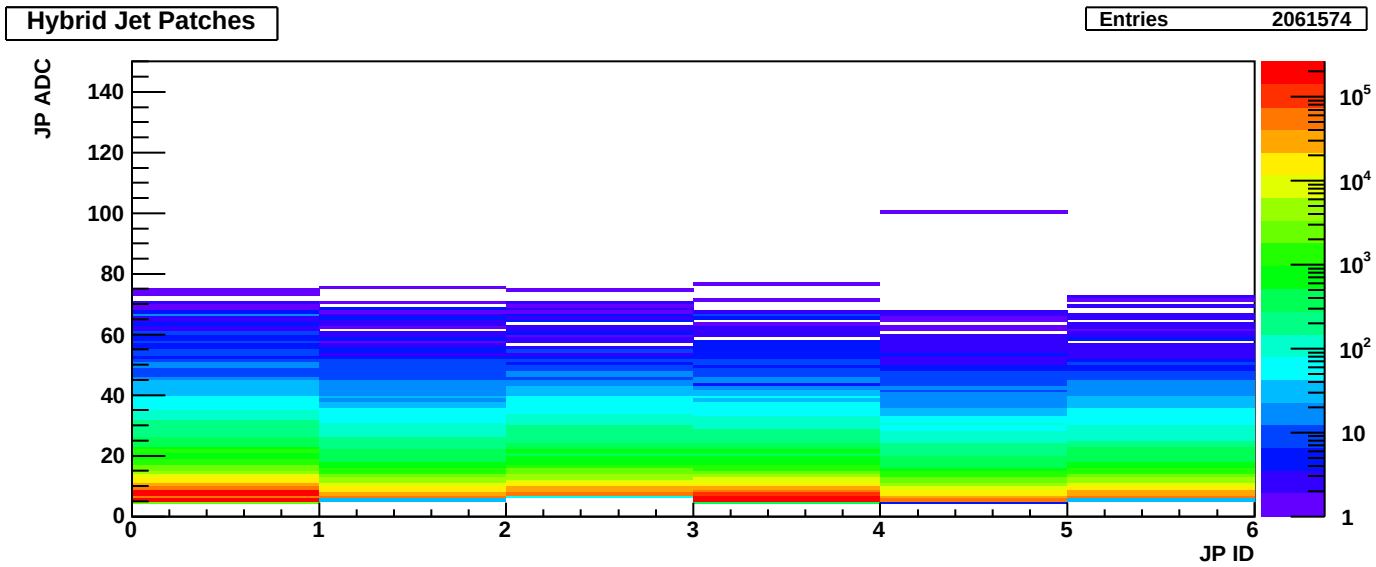

Barrel EMC L0 Input - Patch Sum
Entries 3.092361e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

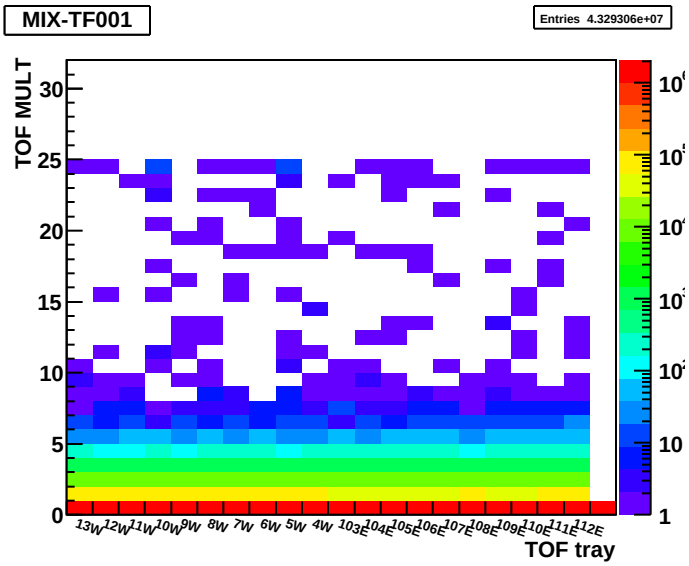

Endcap EMC L0 Input - High Tower
Entries 9.277083e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

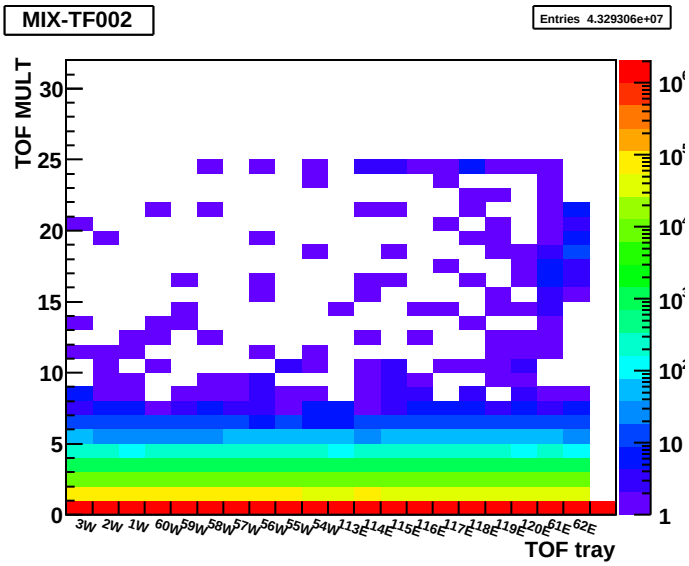

Endcap EMC L0 Input - Patch Sum
Entries 9.277083e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

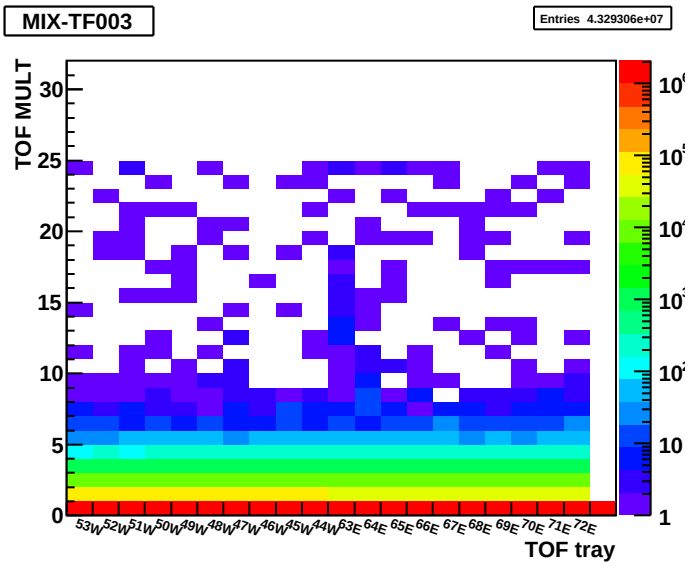

Barrel Jet Patches
Entries 1.855417e+07
JP ADC
JP ID

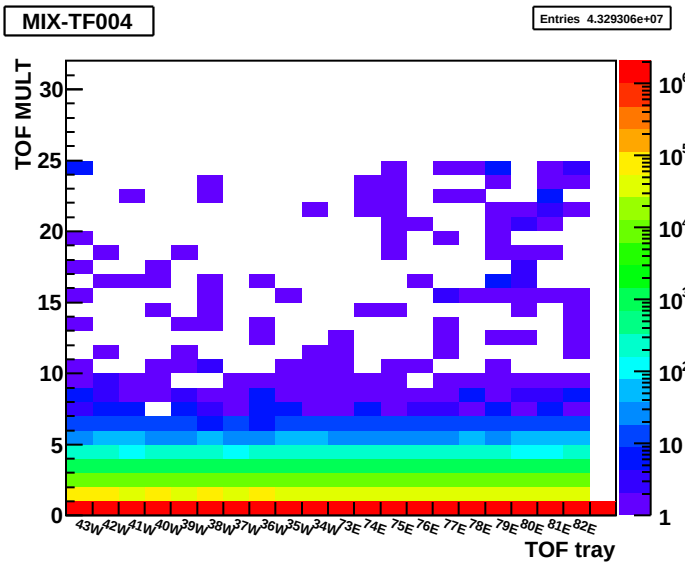

Endcap Jet Patches
Entries 6184722
JP ADC
JP ID

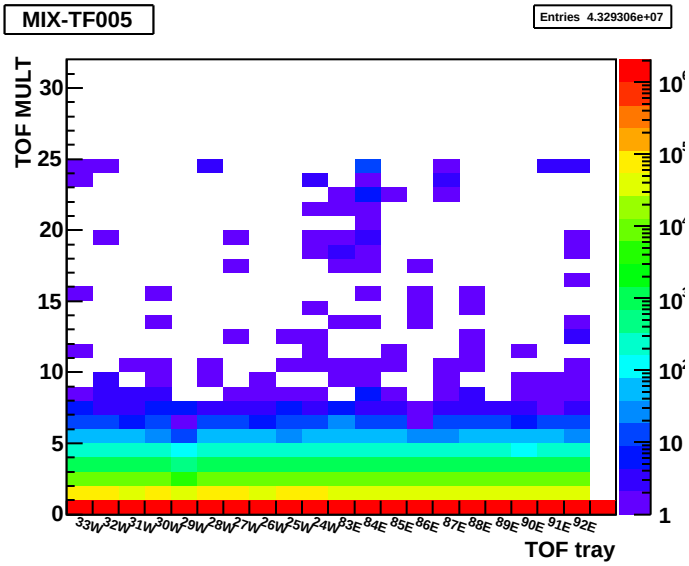

Hybrid Jet Patches
Entries 2061574
JP ADC
JP ID

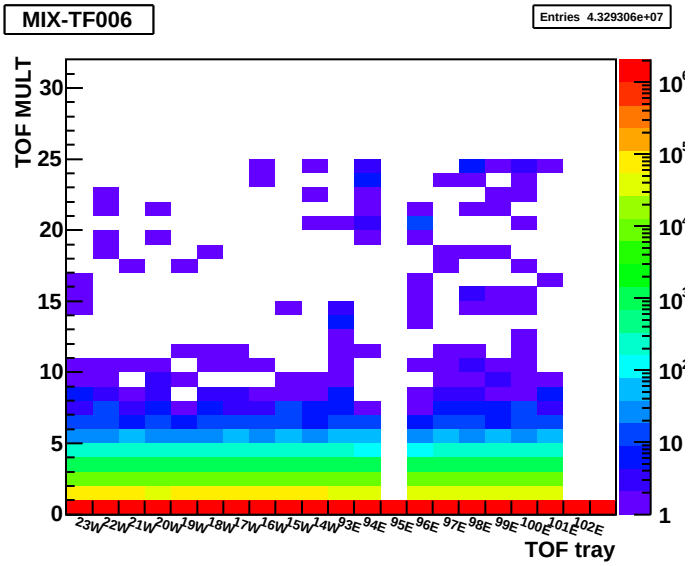

MIX-TF001
Entries 4.329306e+07
TOF MULT
TOF tray

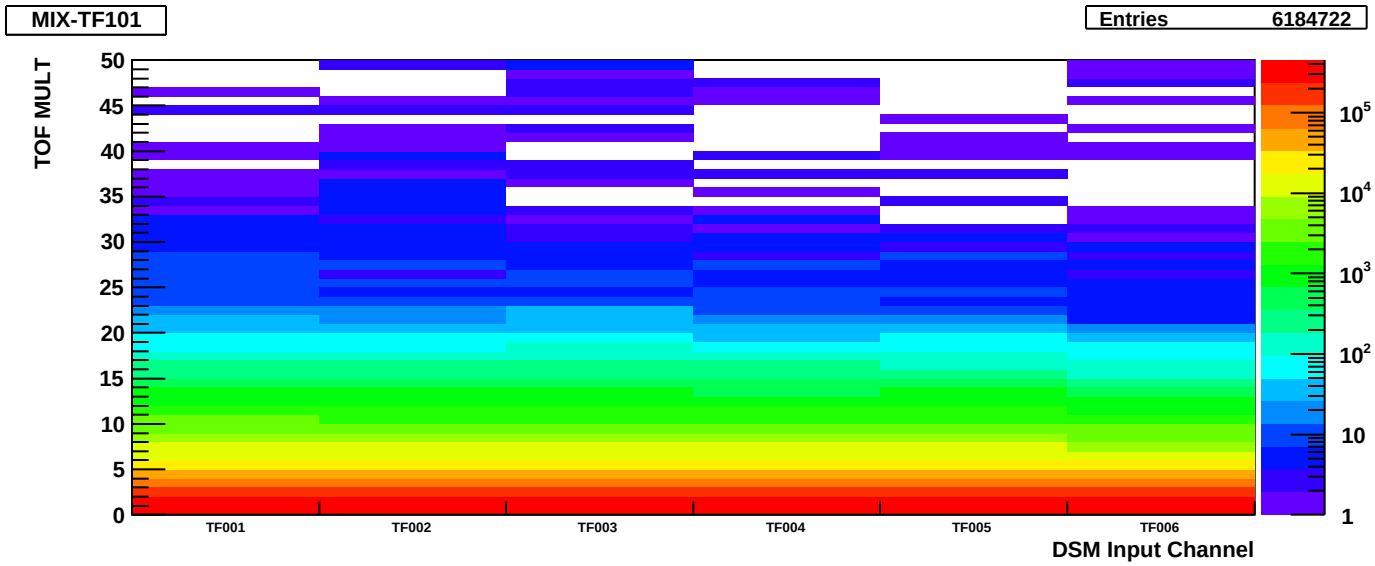

MIX-TF002
Entries 4.329306e+07
TOF MULT
TOF tray

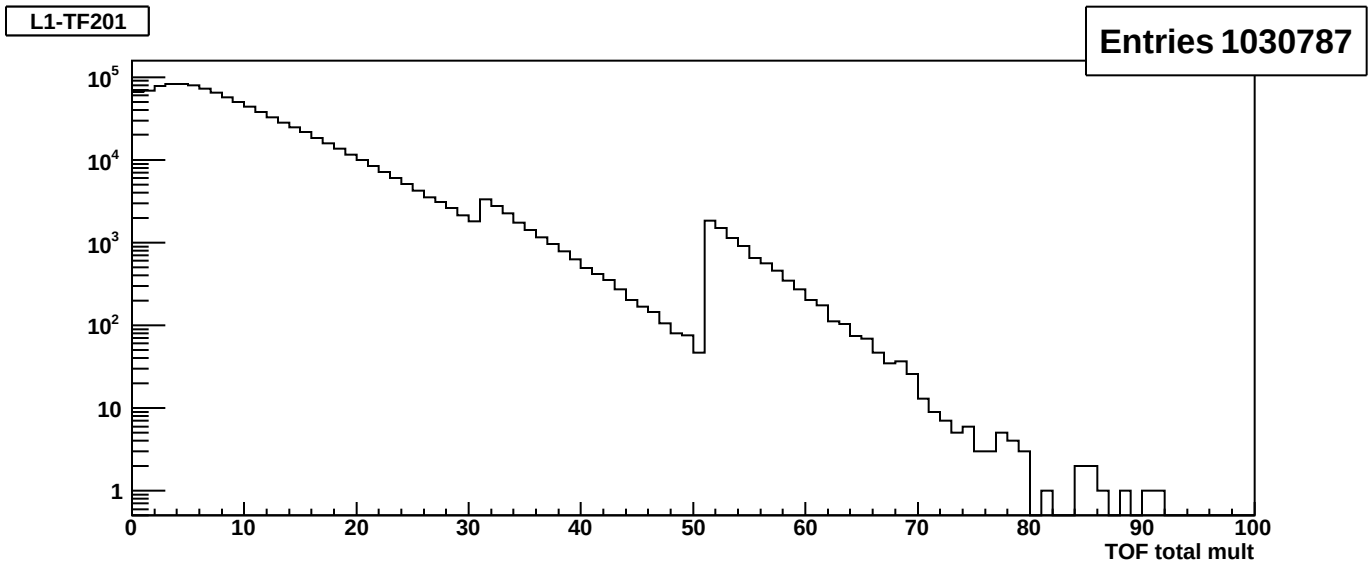

MIX-TF003
Entries 4.329306e+07
TOF MULT
TOF tray

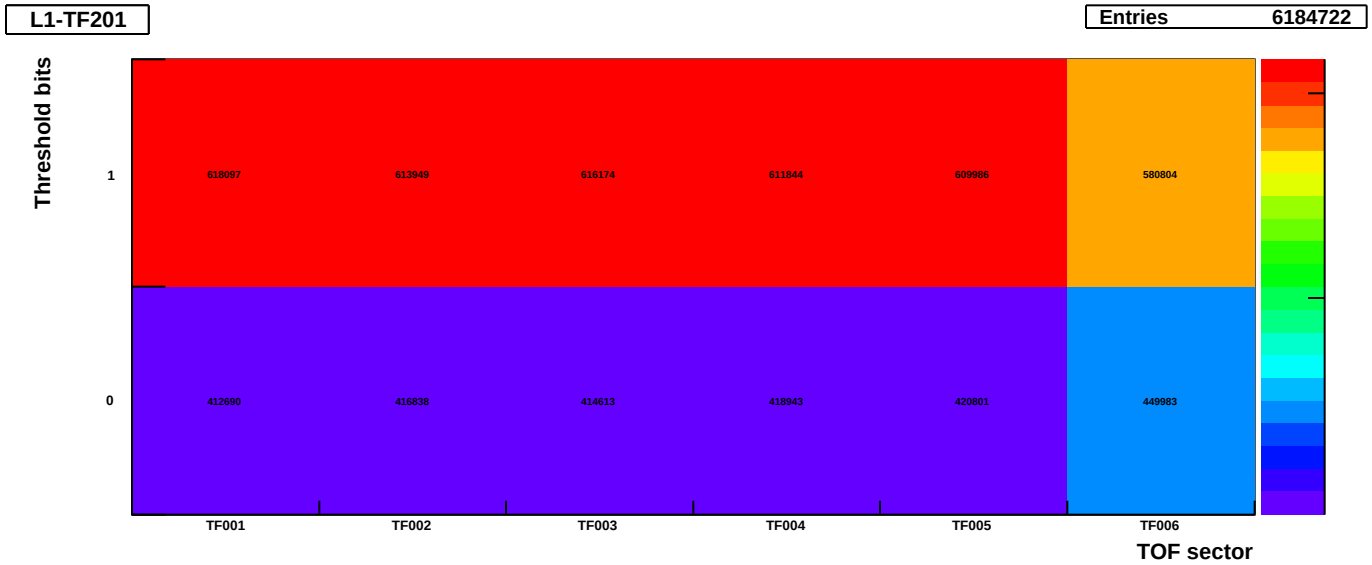

MIX-TF004
Entries 4.329306e+07
TOF MULT
TOF tray

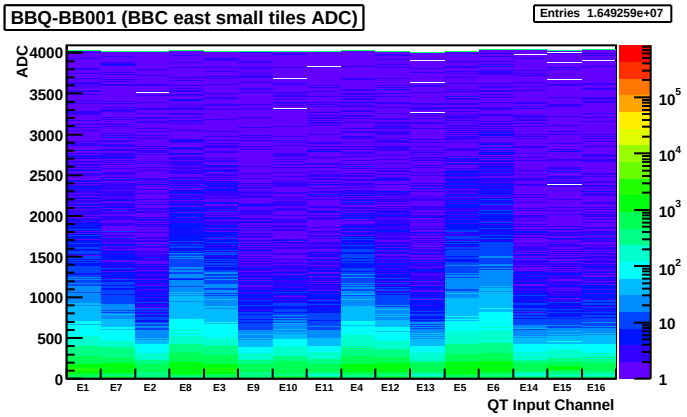

MIX-TF005
Entries 4.329306e+07
TOF MULT
TOF tray

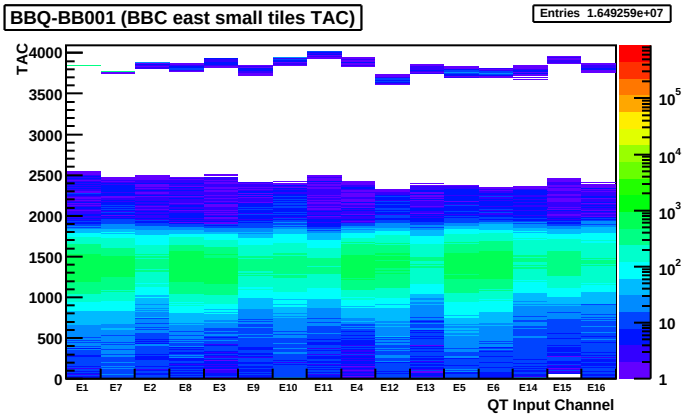

MIX-TF006
Entries 4.329306e+07
TOF MULT
TOF tray

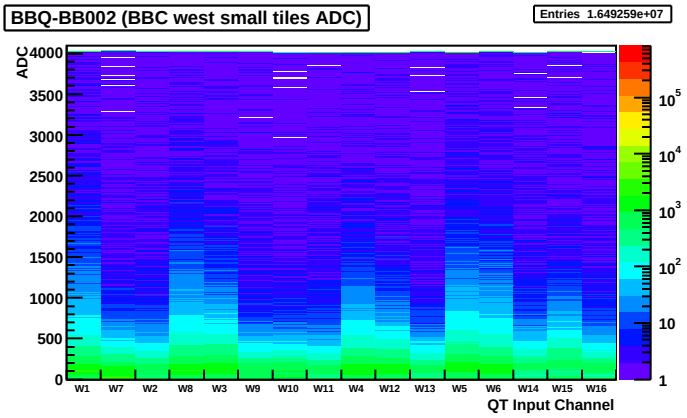

MIX-TF101
Entries 6184722
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

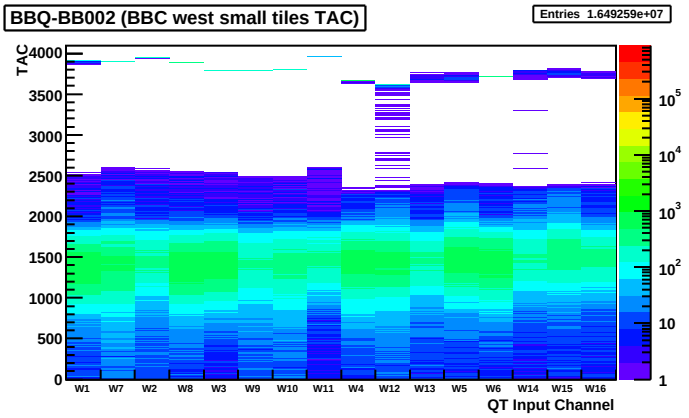

L1-TF201
Entries 1030787
TOF total mult

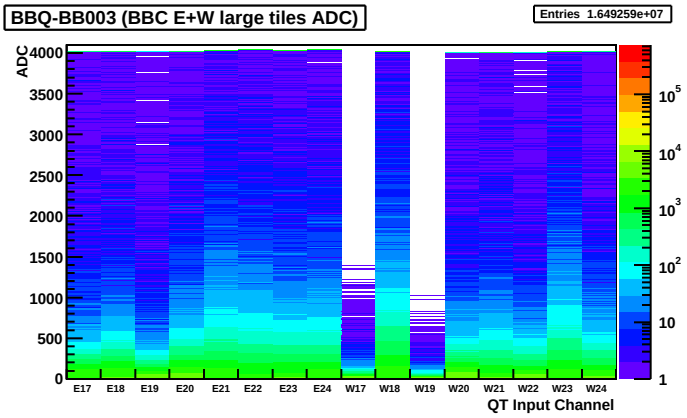

L1-TF201
Entries 6184722
Threshold bits
618097
613949
616174
611844
609986
580804
412690
416838
414613
418943
420801
449983
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

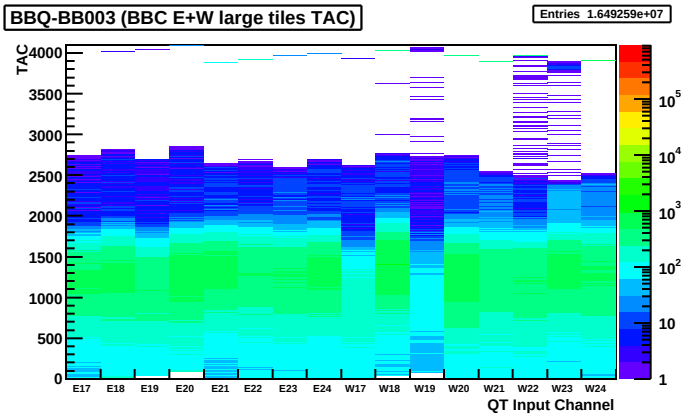

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.649259e+07
ADC
QT Input Channel

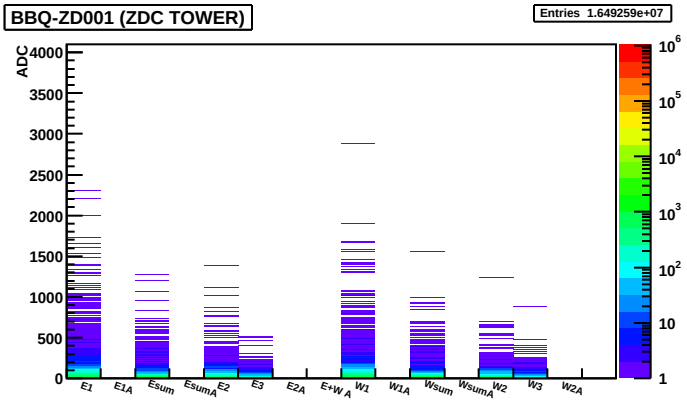

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.649259e+07
TAC
QT Input Channel

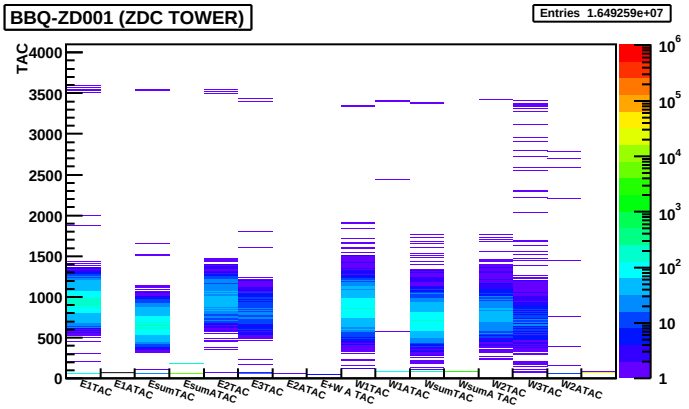

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.649259e+07
ADC
QT Input Channel

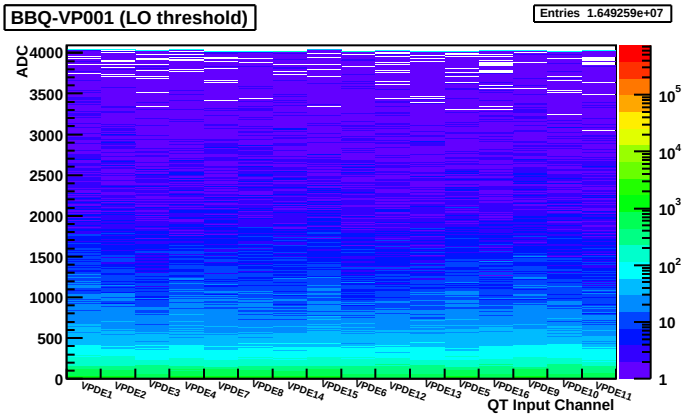

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.649259e+07
TAC
QT Input Channel

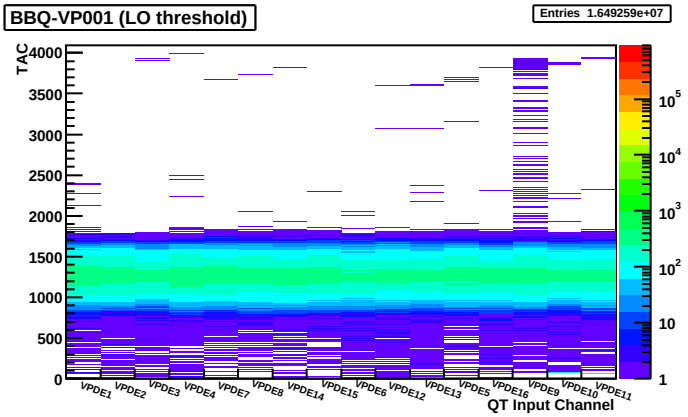

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.649259e+07
ADC
QT Input Channel

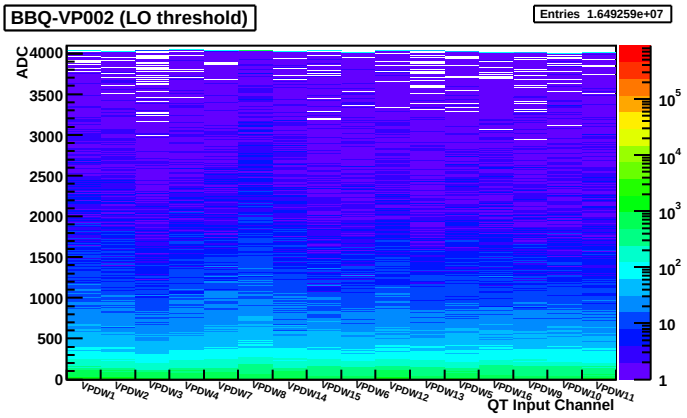

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.649259e+07
TAC
QT Input Channel

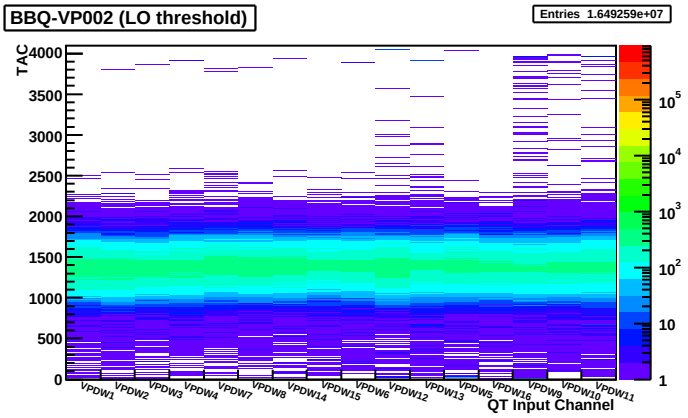

BBQ-ZD001 (ZDC TOWER)
Entries 1.649259e+07
ADC

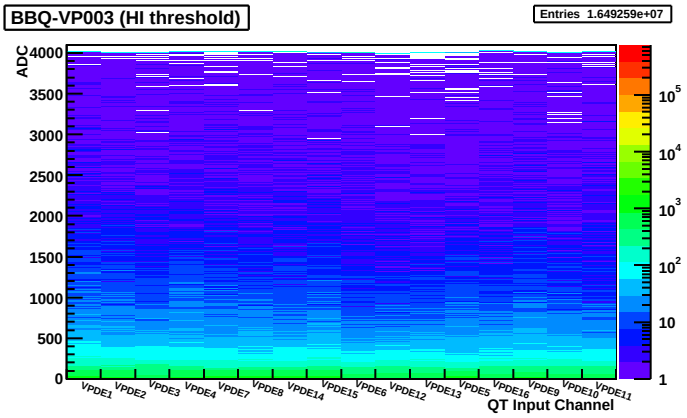

BBQ-ZD001 (ZDC TOWER)
Entries 1.649259e+07
TAC

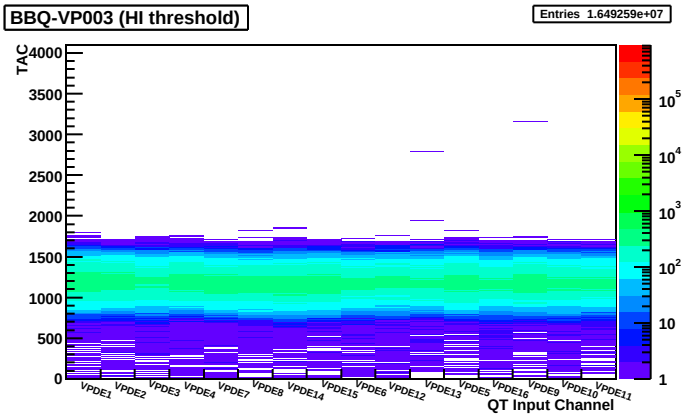

BBQ-VP001 (LO threshold)
Entries 1.649259e+07
ADC
QT Input Channel

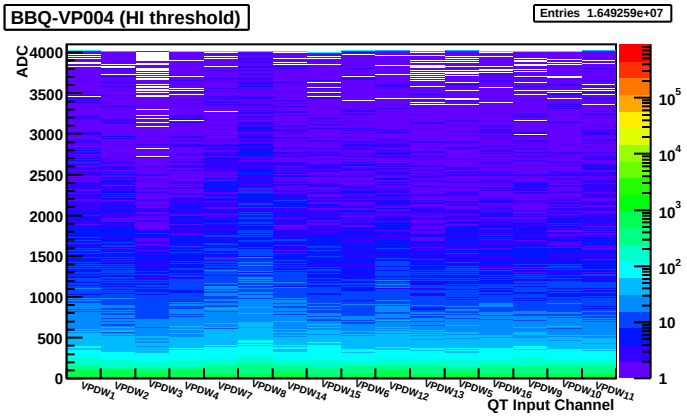

BBQ-VP001 (LO threshold)
Entries 1.649259e+07
TAC
QT Input Channel

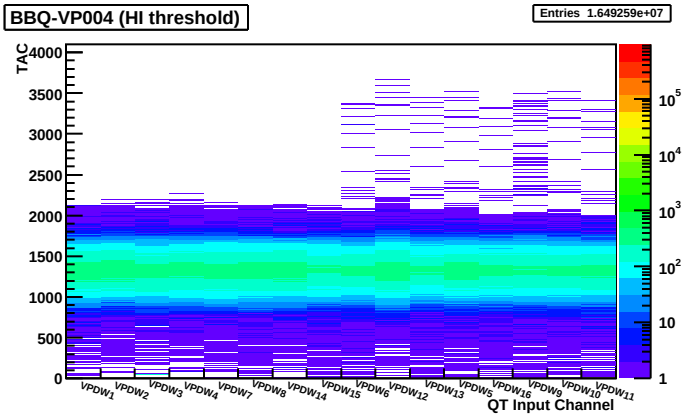

BBQ-VP002 (LO threshold)
Entries 1.649259e+07
ADC
QT Input Channel

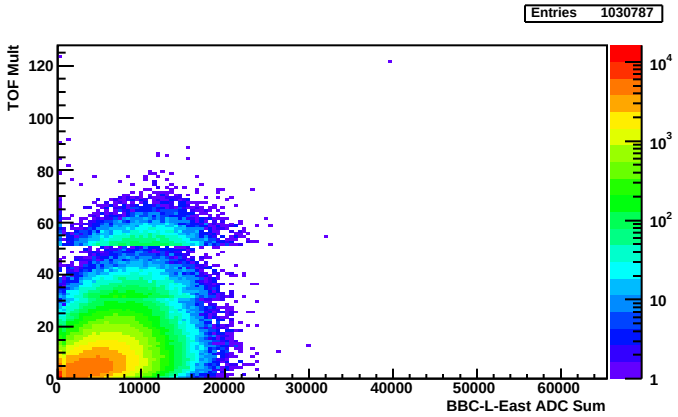

BBQ-VP002 (LO threshold)
Entries 1.649259e+07
TAC
QT Input Channel

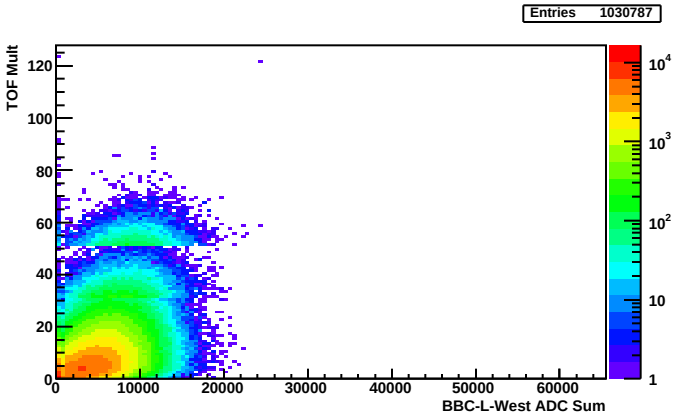

BBQ-VP003 (HI threshold)
Entries 1.649259e+07
ADC
QT Input Channel

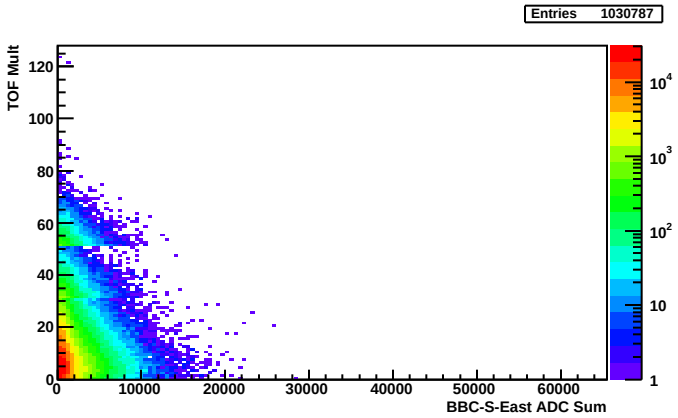

BBQ-VP003 (HI threshold)
Entries 1.649259e+07
TAC
QT Input Channel

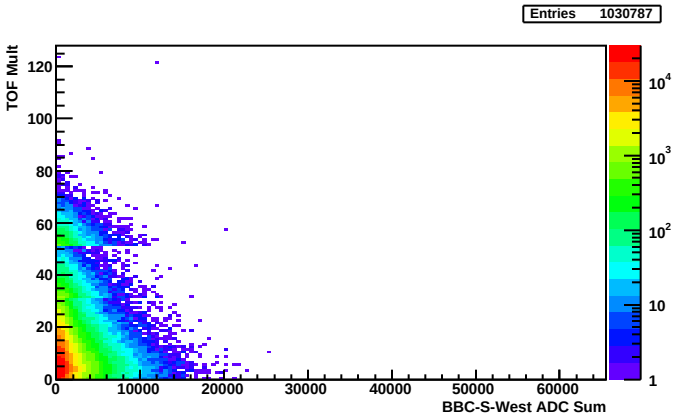

BBQ-VP004 (HI threshold)
Entries 1.649259e+07
ADC
QT Input Channel

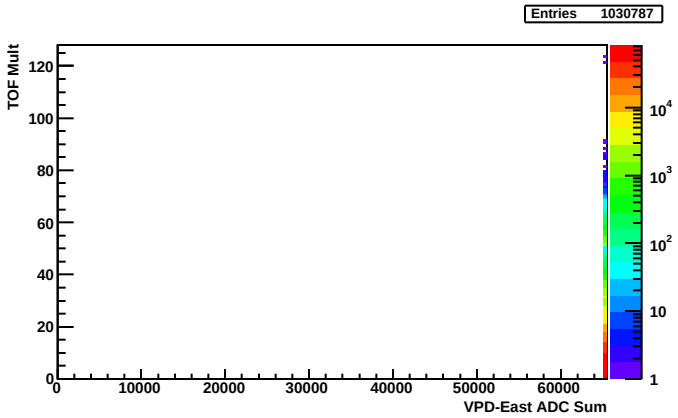

BBQ-VP004 (HI threshold)
Entries 1.649259e+07
TAC
QT Input Channel

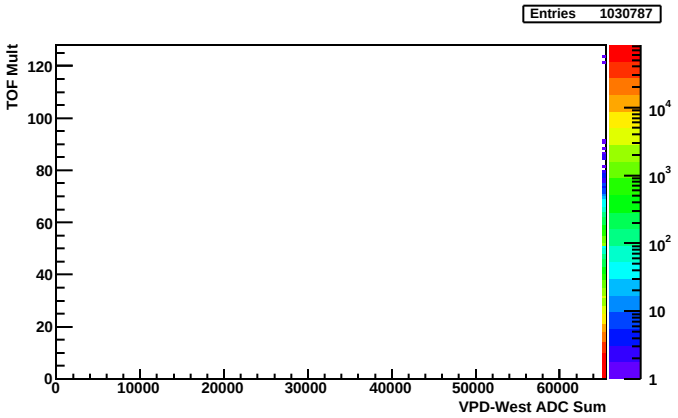

Entries 1030787
TOF Mult
BBC-L-East ADC Sum

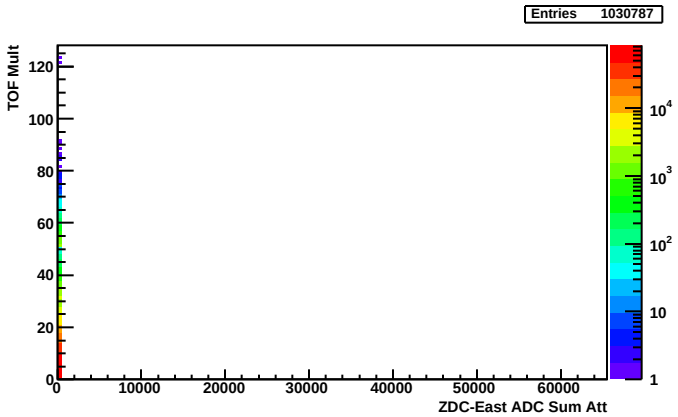

Entries 1030787
TOF Mult
BBC-L-West ADC Sum

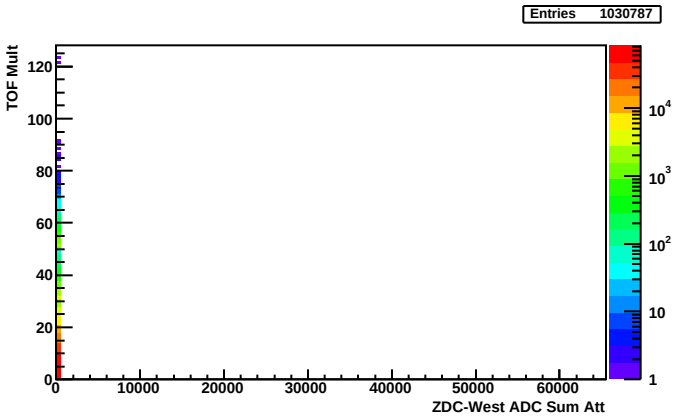

Entries 1030787
TOF Mult
BBC-S-East ADC Sum

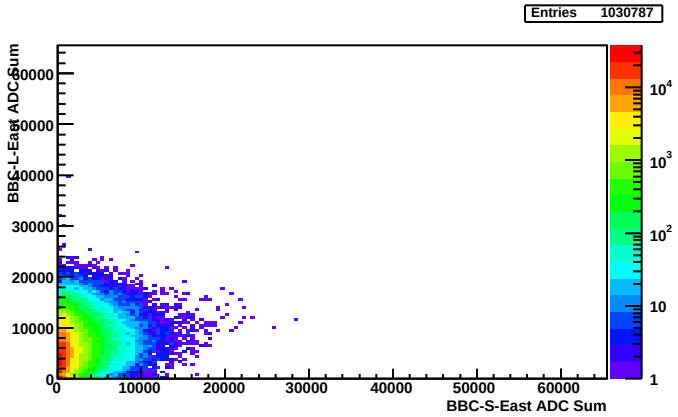

Entries 1030787
TOF Mult
BBC-S-West ADC Sum

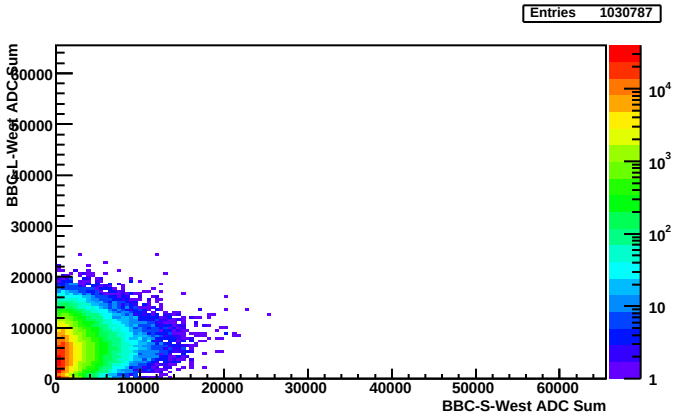

Entries 1030787
TOF Mult
VPD-East ADC Sum

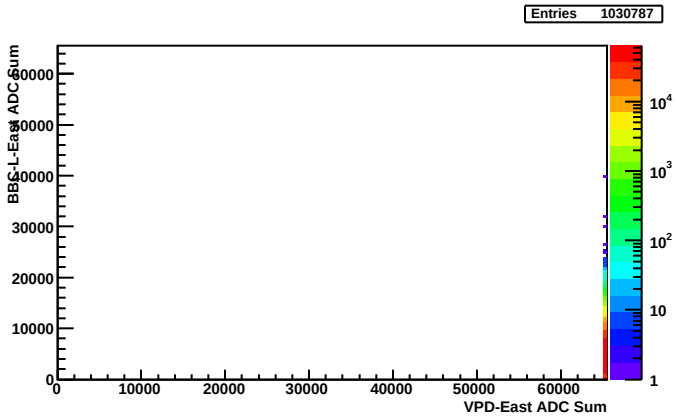

Entries 1030787
TOF Mult
VPD-West ADC Sum

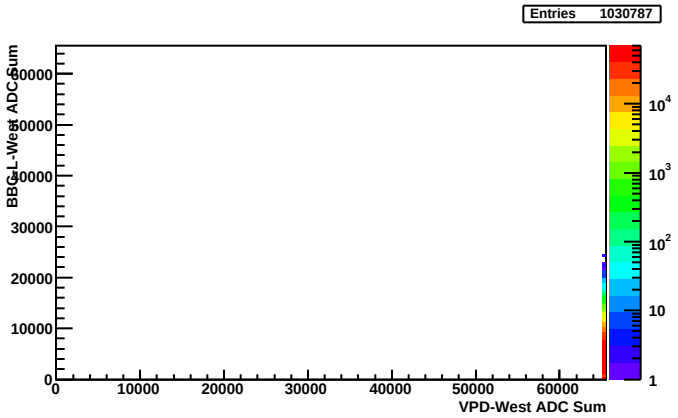

Entries 1030787
TOF Mult
ZDC-East ADC Sum Att

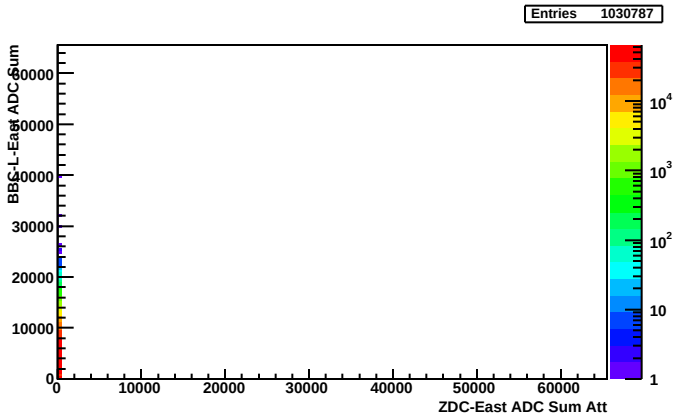

Entries 1030787
TOF Mult
ZDC-West ADC Sum Att

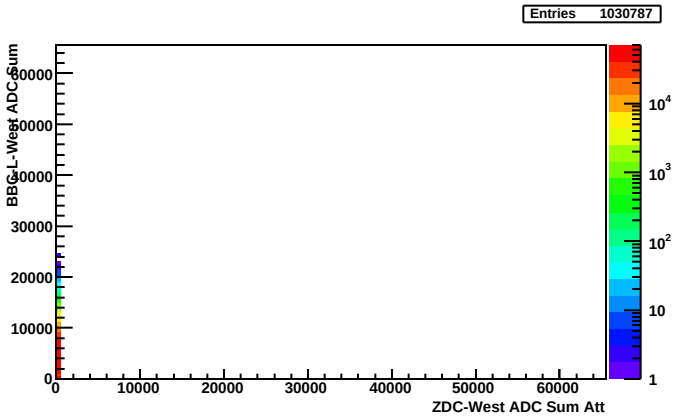

Entries 1030787
BBC-L-East ADC Sum
BBC-S-East ADC Sum

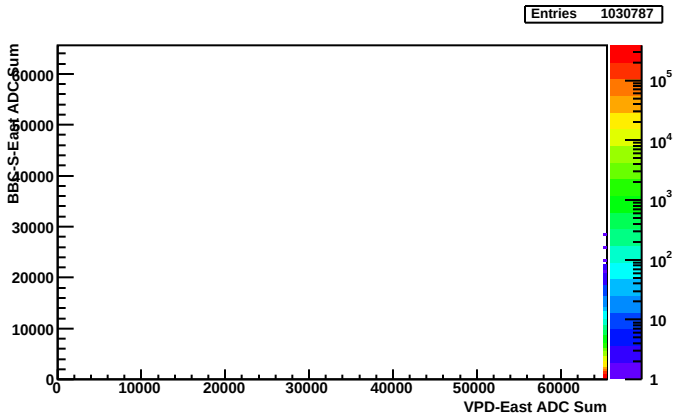

Entries 1030787
BBC-L-West ADC Sum
BBC-S-West ADC Sum

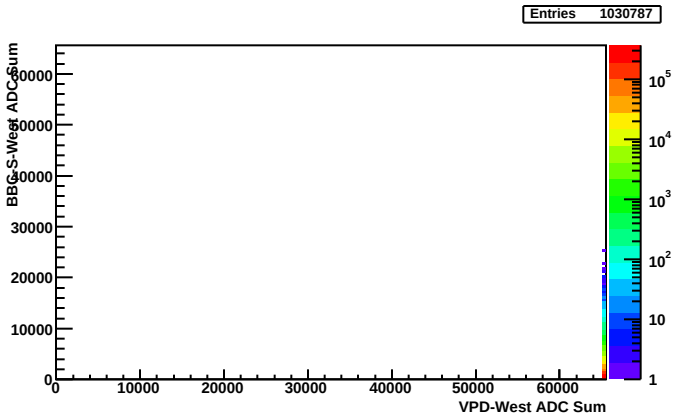

Entries 1030787
BBC-L-East ADC Sum
VPD-East ADC Sum

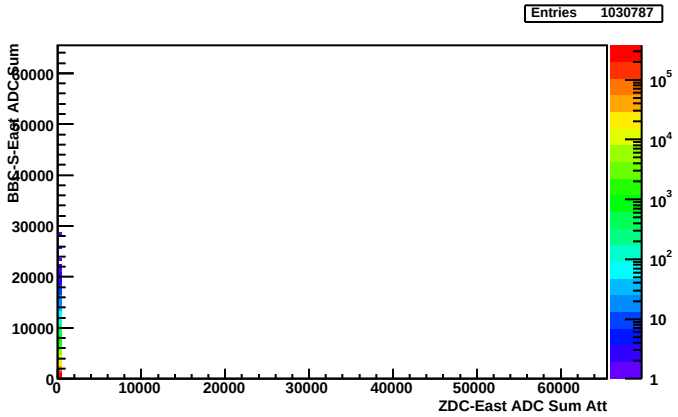

Entries 1030787
BBC-L-West ADC Sum
VPD-West ADC Sum

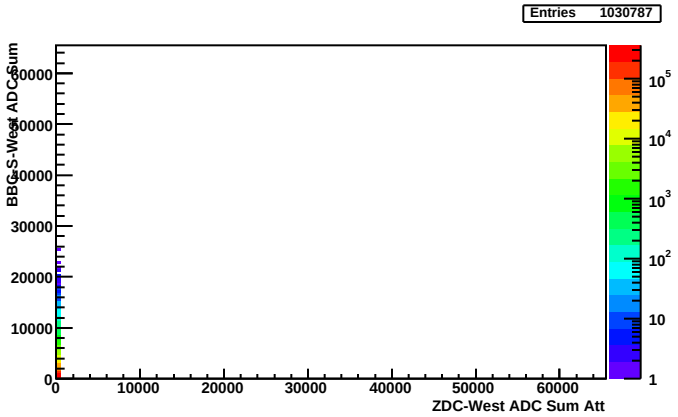

Entries 1030787
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

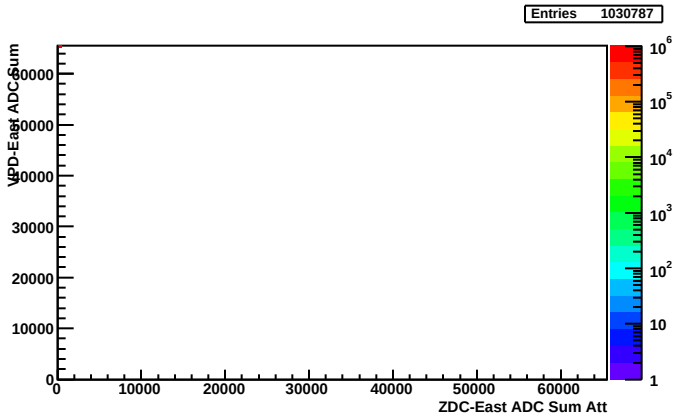

Entries 1030787
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

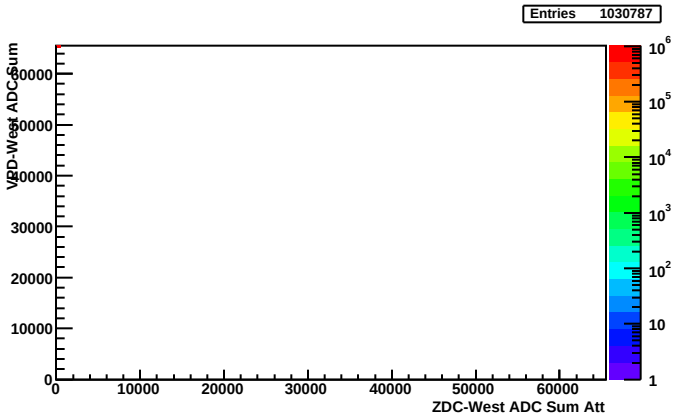

Entries 1030787
BBC-S-East ADC Sum
VPD-East ADC Sum

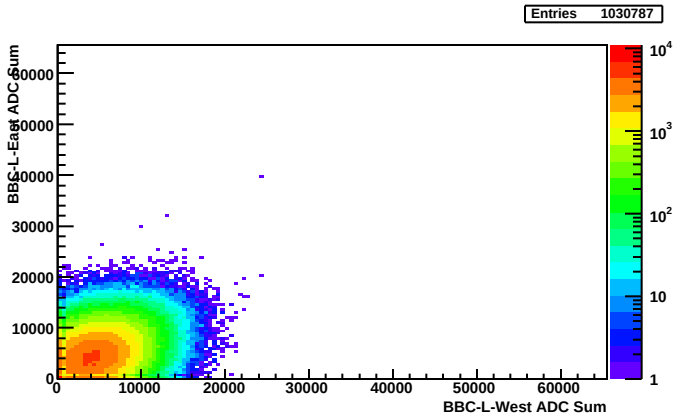

Entries 1030787
BBC-S-West ADC Sum
VPD-West ADC Sum

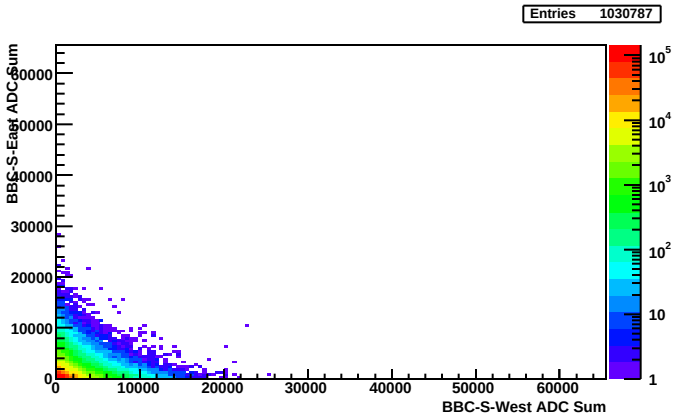

Entries 1030787
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

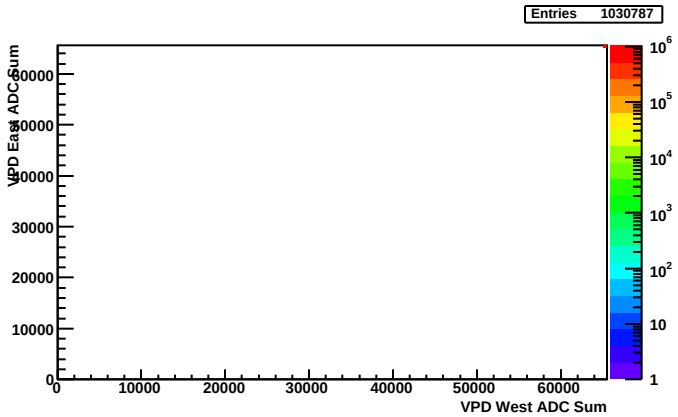

Entries 1030787
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

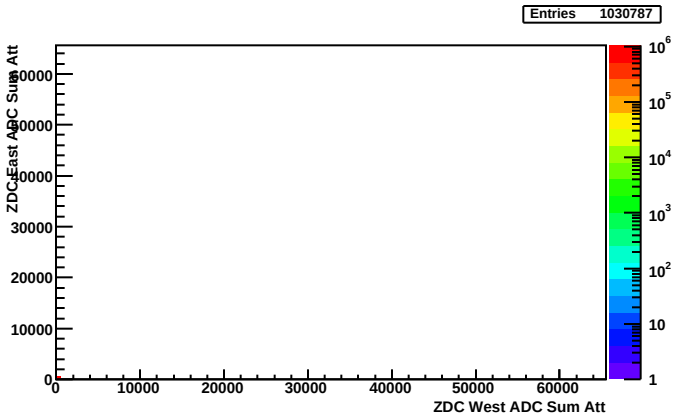

Entries 1030787
VPD-East ADC Sum
ZDC-East ADC Sum Att

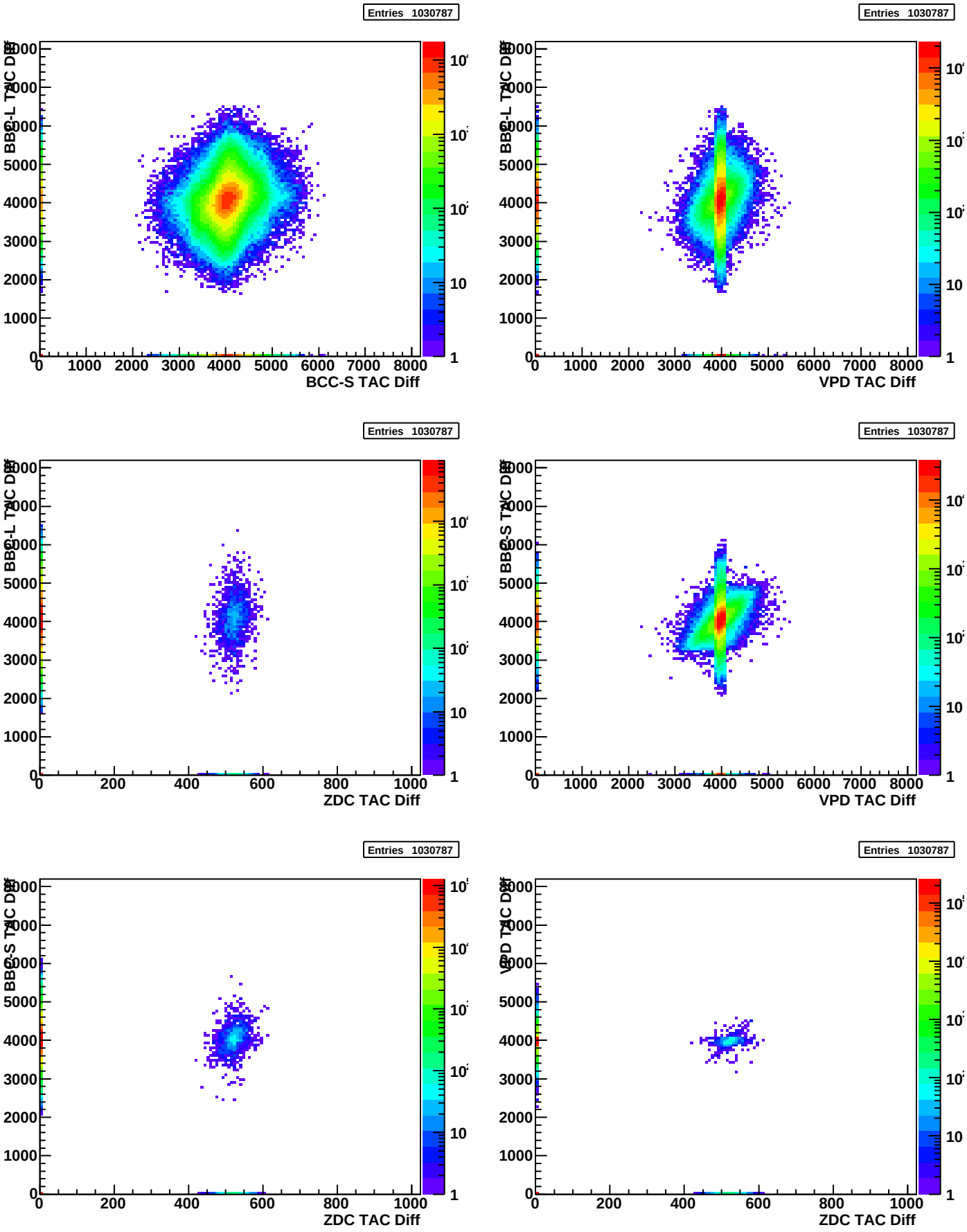

Entries 1030787
VPD-West ADC Sum
ZDC-West ADC Sum Att

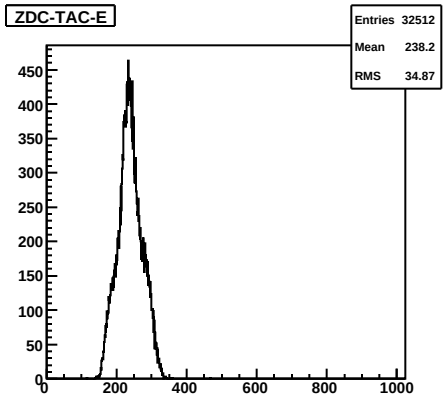

Entries 1030787
BBC-L-East ADC Sum
BBC-L-West ADC Sum

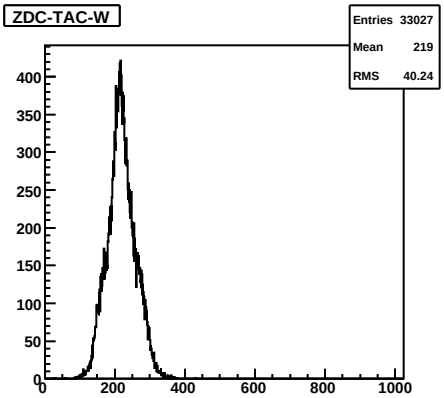

Entries 1030787
BBC-S-East ADC Sum
BBC-S-West ADC Sum

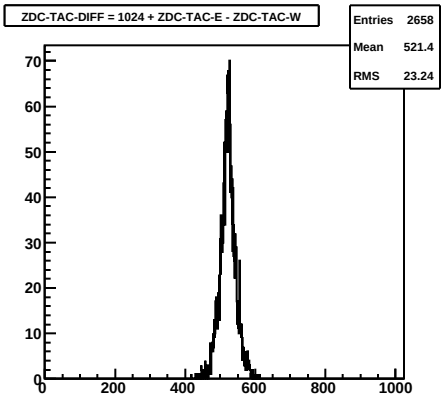

Entries 1030787
VPD East ADC Sum
VPD West ADC Sum

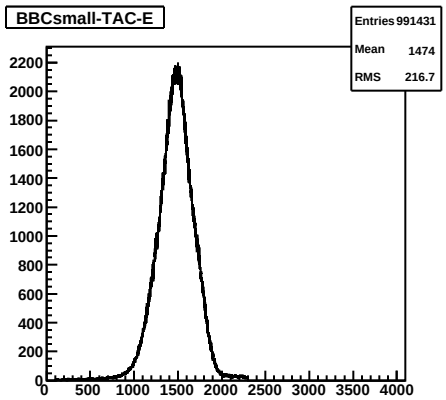

Entries 1030787
ZDC East ADC Sum Att
ZDC West ADC Sum Att

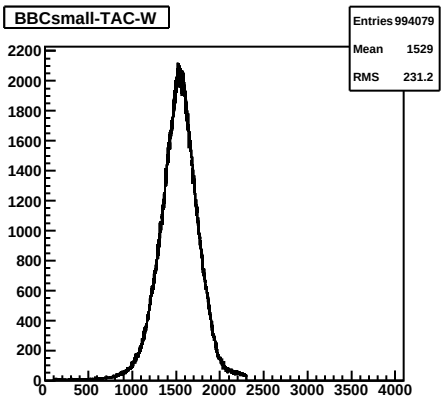

Entries 1030787
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1030787
BBC-L TAC Diff
VPD TAC Diff
Entries 1030787
BBC-L TAC Diff
ZDC TAC Diff
Entries 1030787
BBC-S TAC Diff
VPD TAC Diff
Entries 1030787
BBC-S TAC Diff
ZDC TAC Diff
Entries 1030787
VPD TAC Diff
ZDC TAC Diff

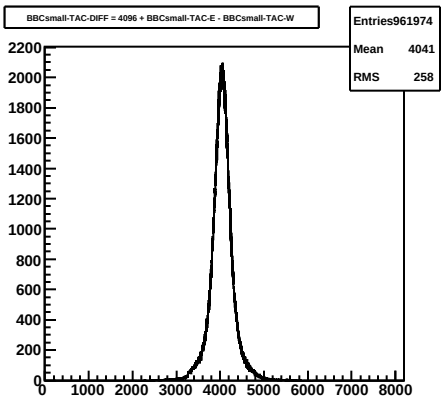

ZDC-TAC-E
Entries 32512
Mean 238.2
RMS 34.87

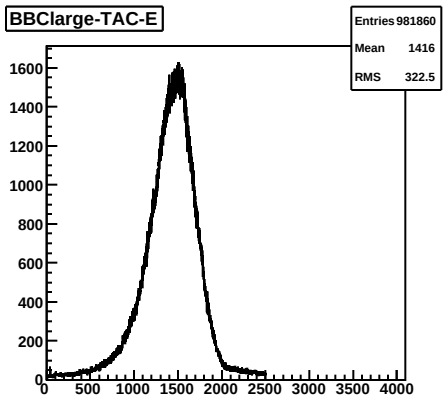

ZDC-TAC-W
Entries 33027
Mean 219
RMS 40.24

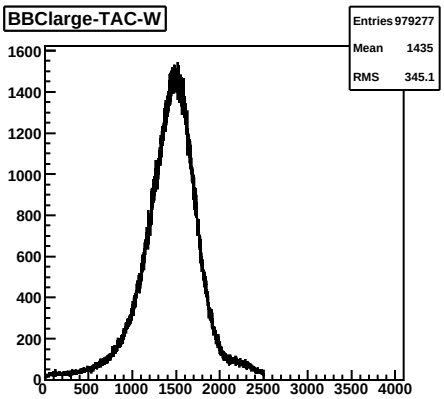

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2658
Mean 521.4
RMS 23.24

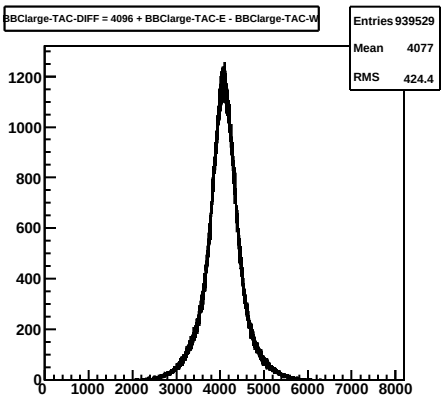

BBCsmall-TAC-E
Entries 991431
Mean 1474
RMS 216.7

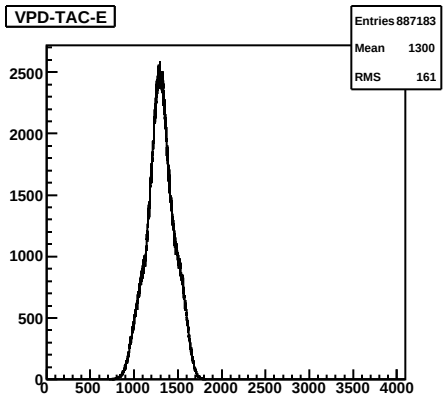

BBCsmall-TAC-W
Entries 994079
Mean 1529
RMS 231.2

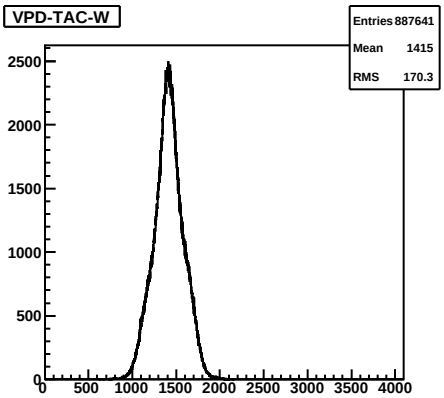

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 961974
Mean 4041
RMS 258

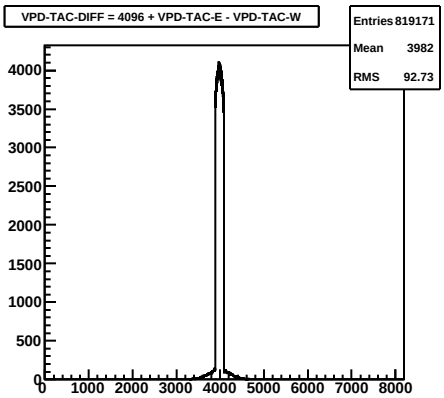

BBClarge-TAC-E
Entries 981860
Mean 1416
RMS 322.5

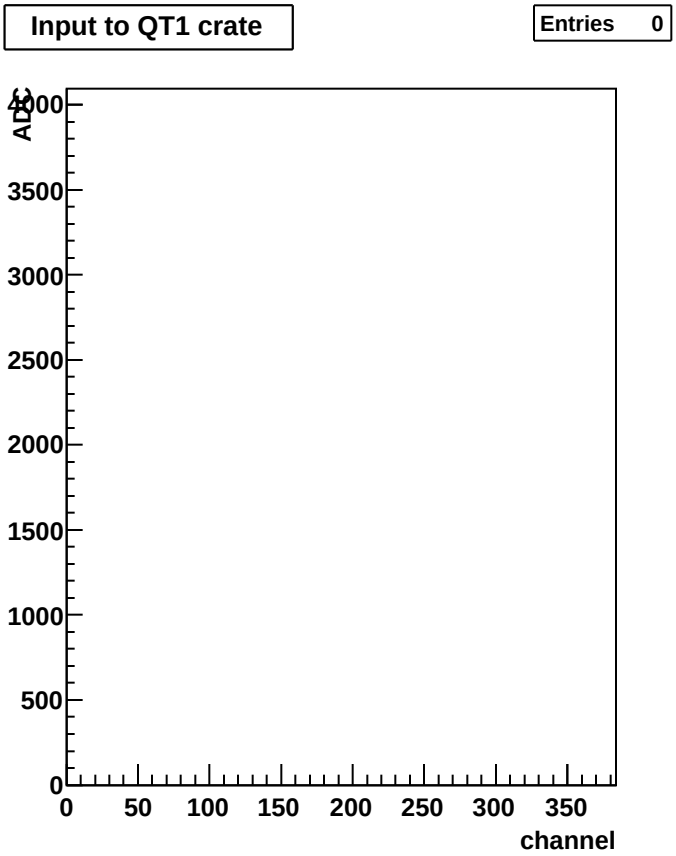

BBClarge-TAC-W
Entries 979277
Mean 1435
RMS 345.1

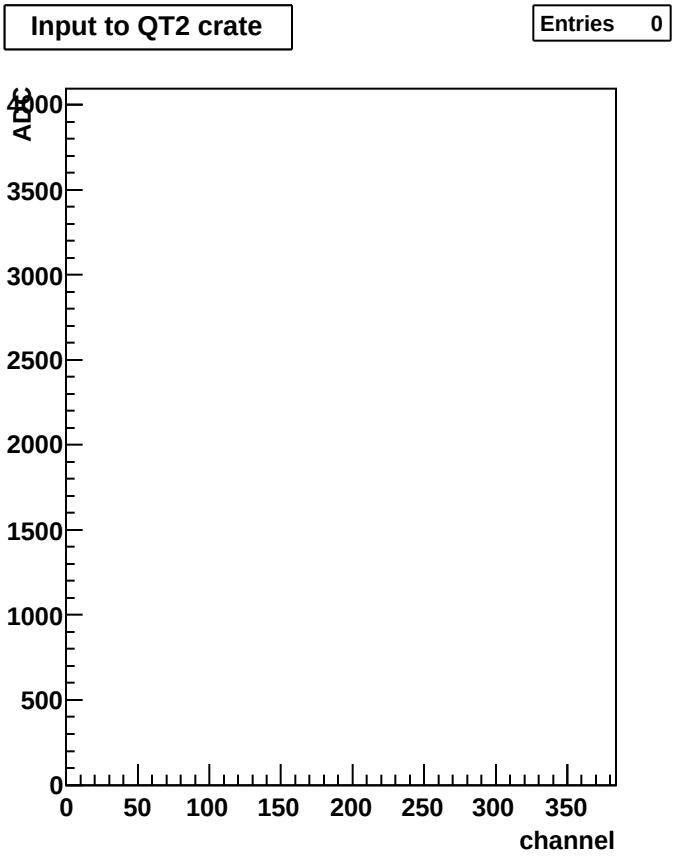

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 939529
Mean 4077
RMS 424.4

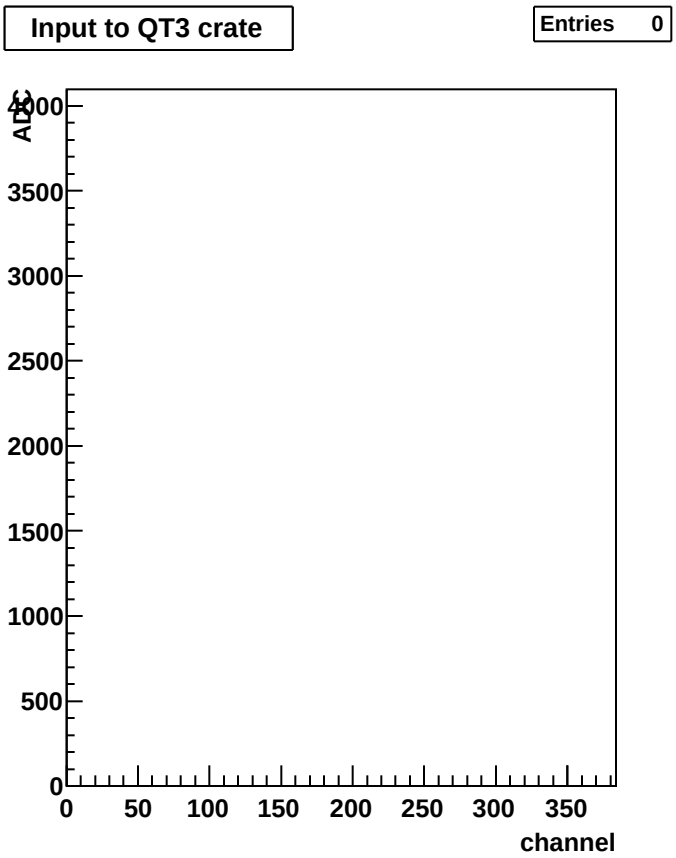

VPD-TAC-E
Entries 887183
Mean 1300
RMS 161

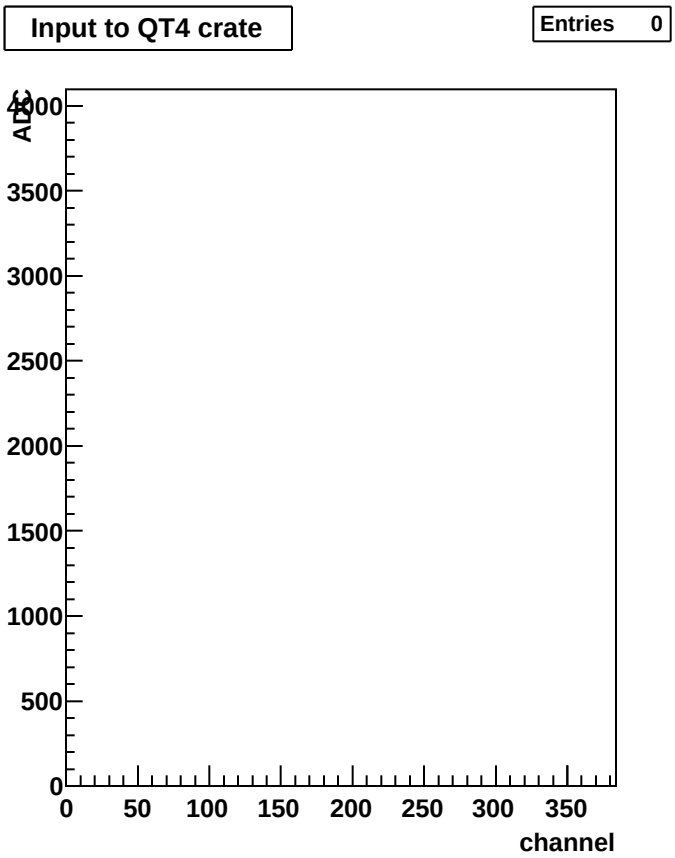

VPD-TAC-W
Entries 887641
Mean 1415
RMS 170.3

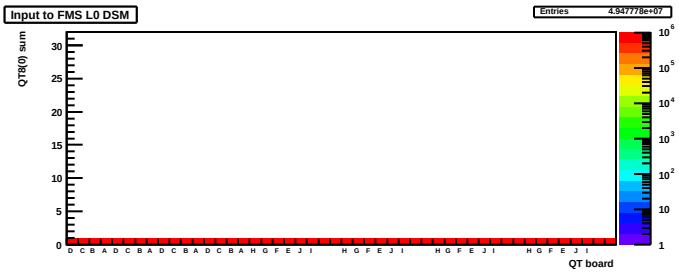

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 819171
Mean 3982
RMS 92.73

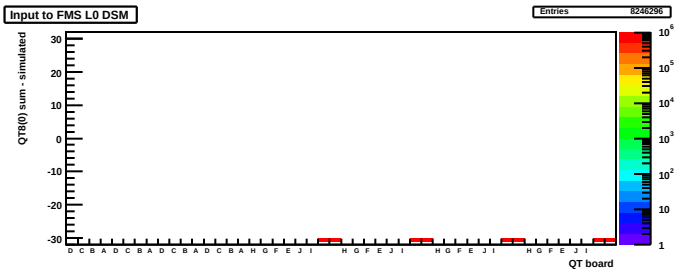

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

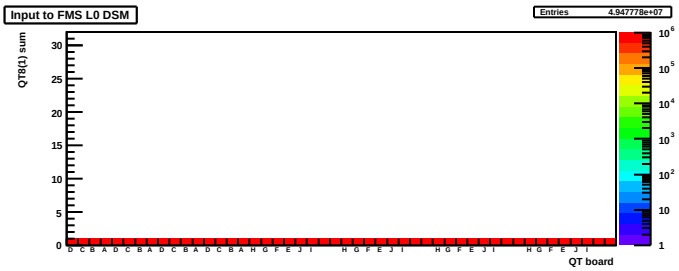

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

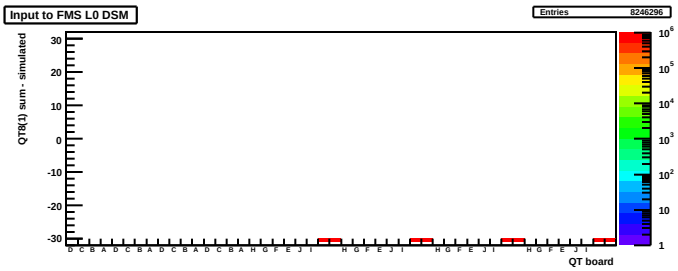

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

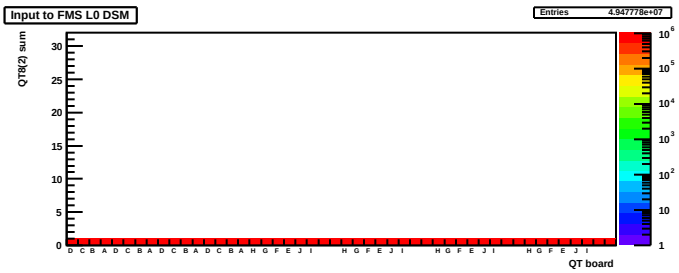

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

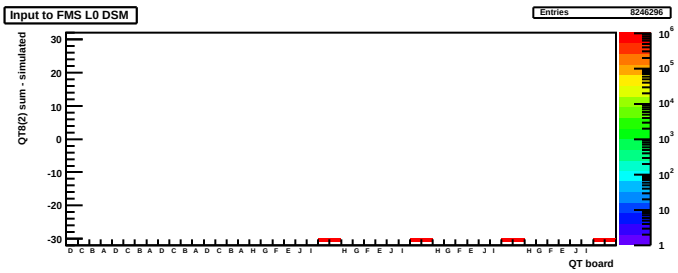

Input to FMS L0 DSM
Entries 4.947778e+07
QT8(0) sum
QT board

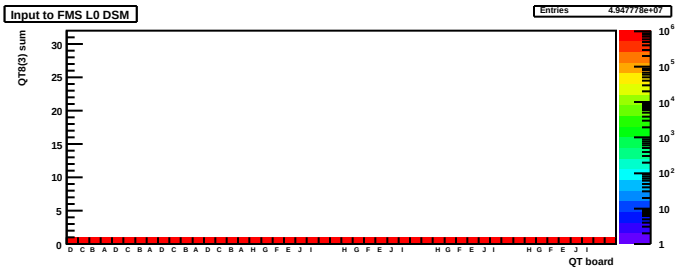

Input to FMS L0 DSM
Entries 8246296
QT8(0) sum - simulated
QT board

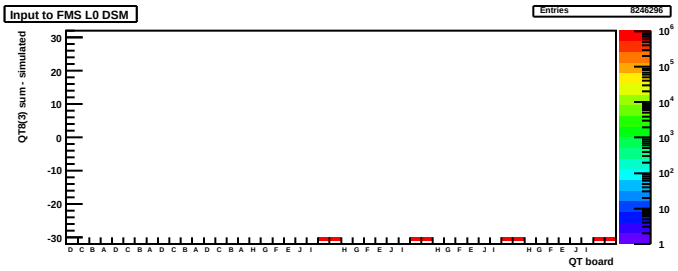

Input to FMS L0 DSM
Entries 4.947778e+07
QT8(1) sum
QT board

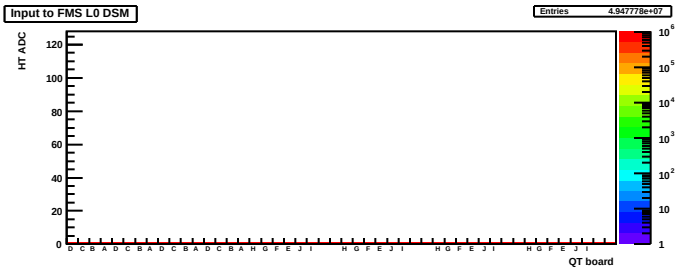

Input to FMS L0 DSM
Entries 8246296
QT8(1) sum - simulated
QT board

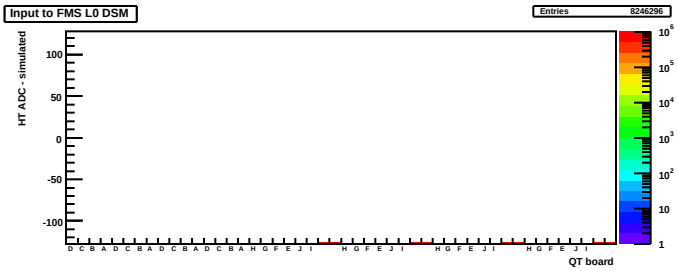

Input to FMS L0 DSM
Entries 4.947778e+07
QT8(2) sum
QT board

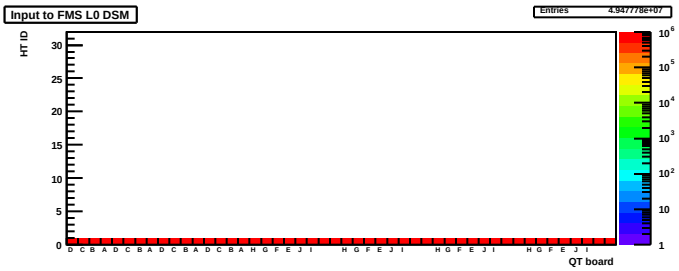

Input to FMS L0 DSM
Entries 8246296
QT8(2) sum - simulated
QT board

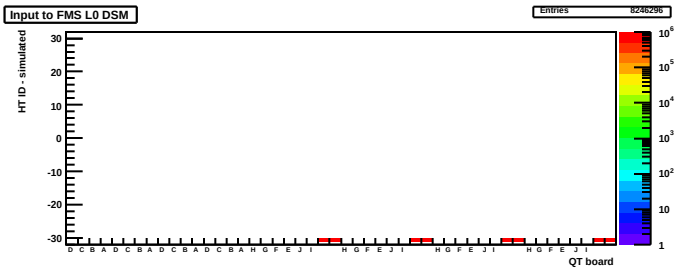

Input to FMS L0 DSM
Entries 4.947778e+07
QT8(3) sum
QT board

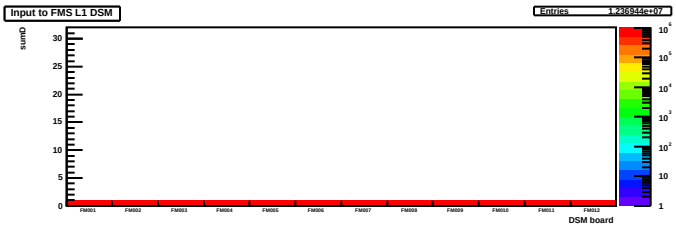

Input to FMS L0 DSM
Entries 8246296
QT8(3) sum - simulated
QT board

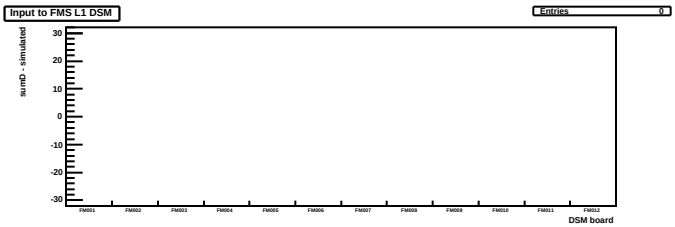

Input to FMS L0 DSM
Entries 4.947778e+07
HT ADC
QT board

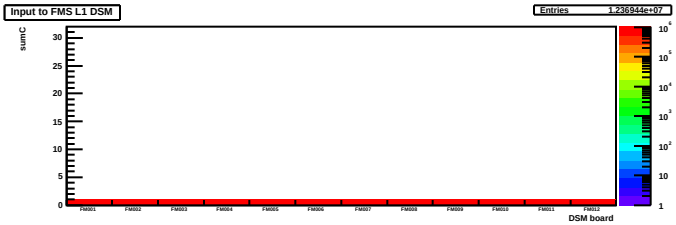

Input to FMS L0 DSM
Entries 8246296
HT ADC - simulated
QT board

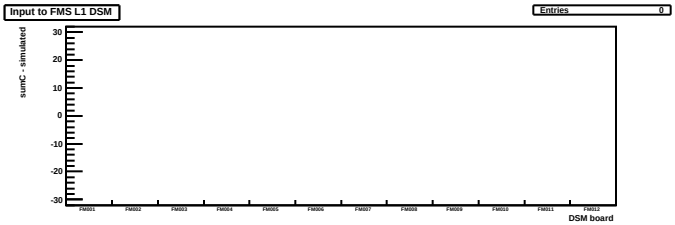

Input to FMS L0 DSM
Entries 4.947778e+07
HT ID
QT board

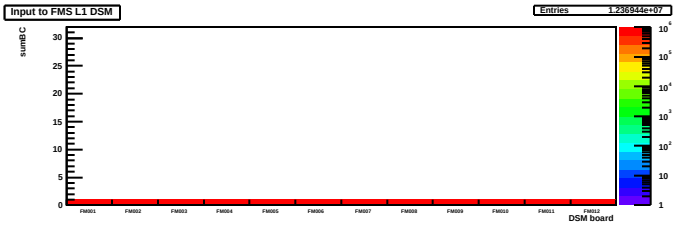

Input to FMS L0 DSM
Entries 8246296
HT ID - simulated
QT board

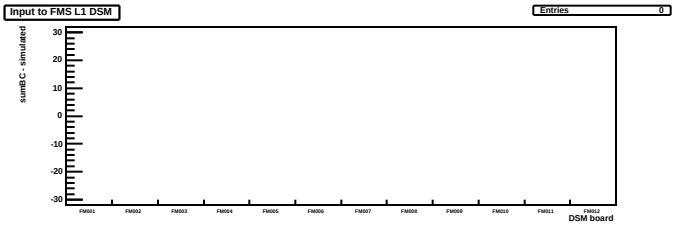

Input to FMS L1 DSM
Entries 1.236944e+07
sumD
DSM board

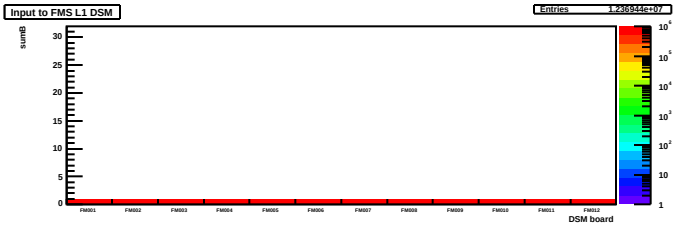

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

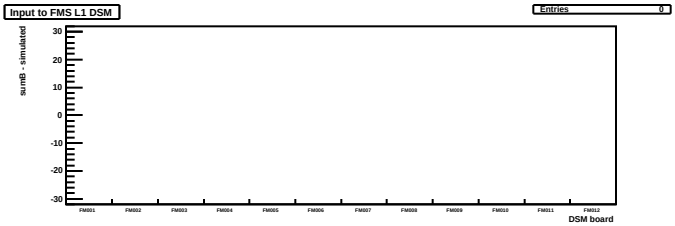

Input to FMS L1 DSM
Entries 1.236944e+07
sumC
DSM board

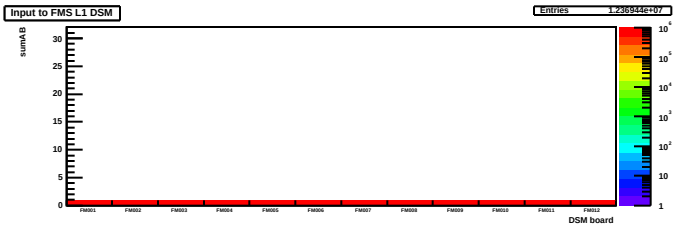

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

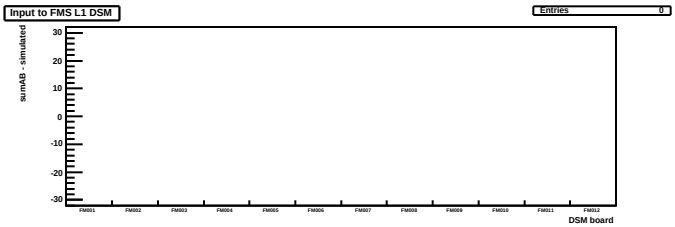

Input to FMS L1 DSM
Entries 1.236944e+07
sumBC
DSM board

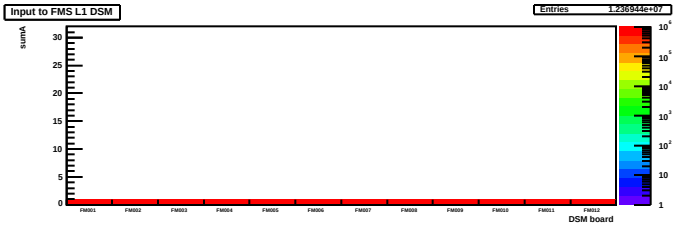

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

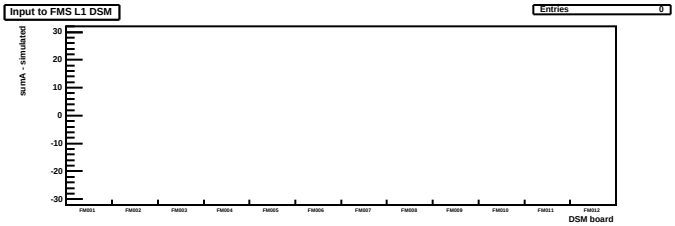

Input to FMS L1 DSM
Entries 1.236944e+07
sumB
DSM board

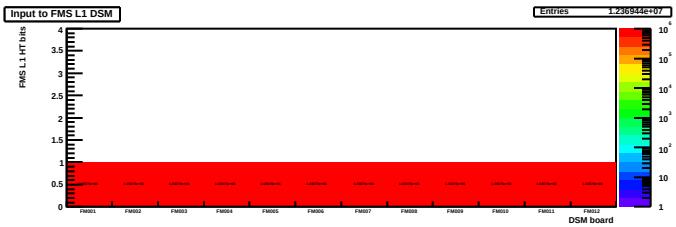

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

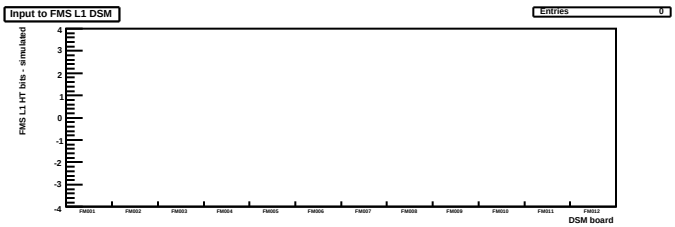

Input to FMS L1 DSM
Entries 1.236944e+07
sumAB
DSM board

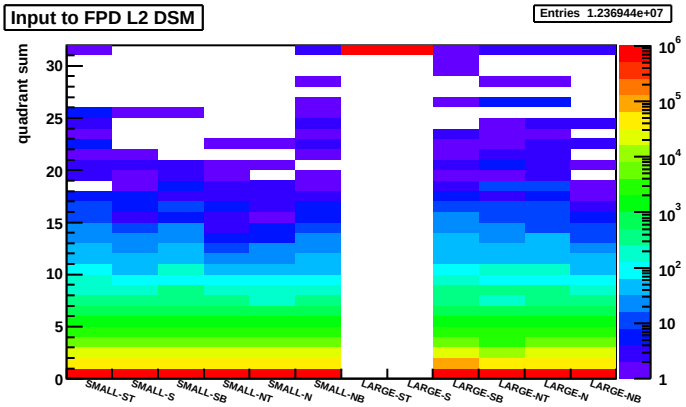

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

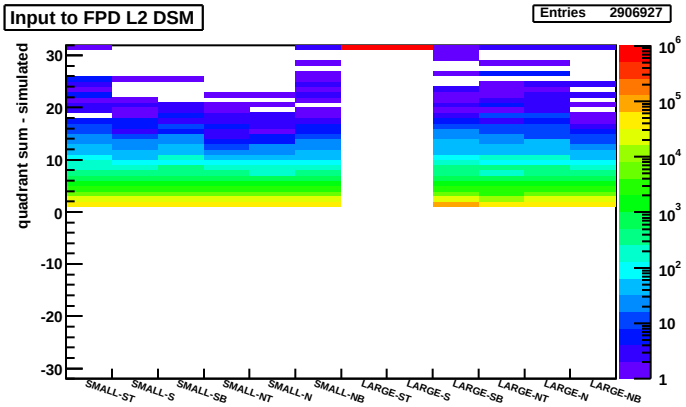

Input to FMS L1 DSM
Entries 1.236944e+07
sumA
DSM board

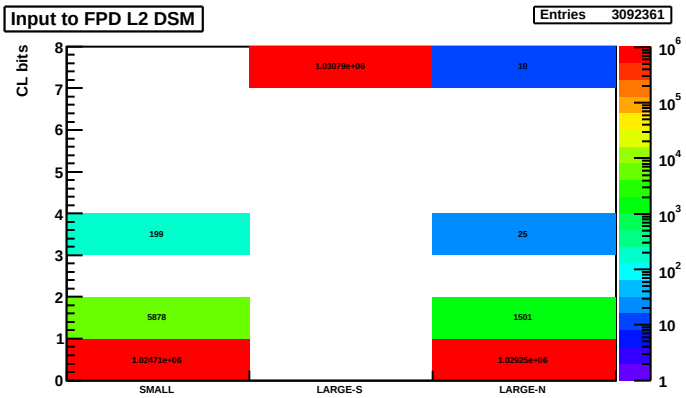

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

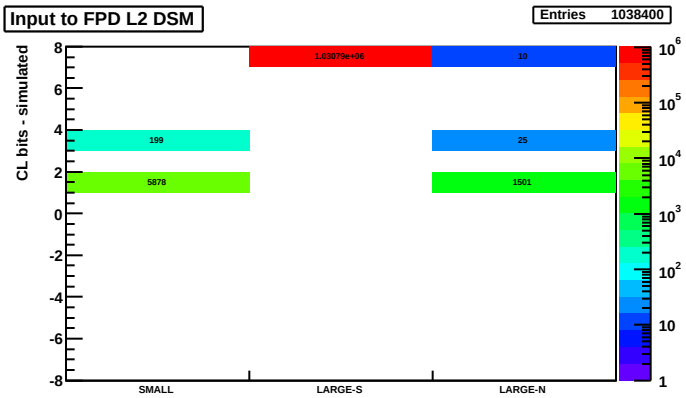

Input to FMS L1 DSM
Entries 1.236944e+07
FMS L1 HT bits
DSM board

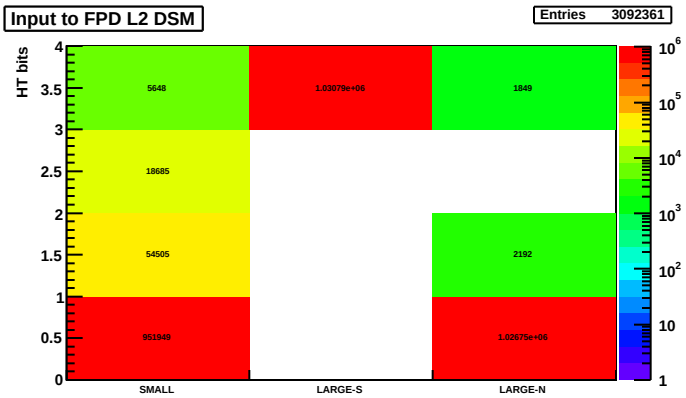

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

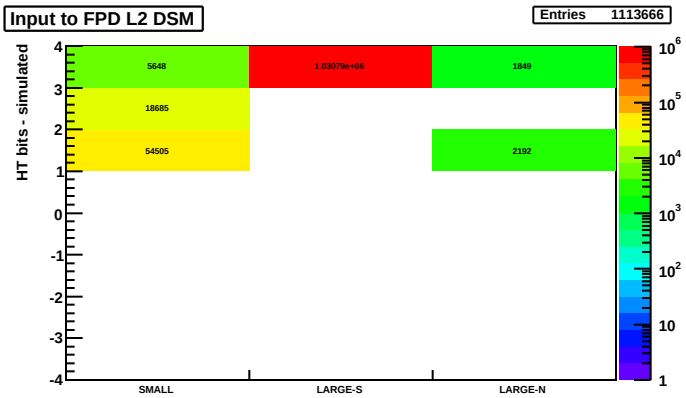

Input to FPD L2 DSM
Entries 1.236944e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

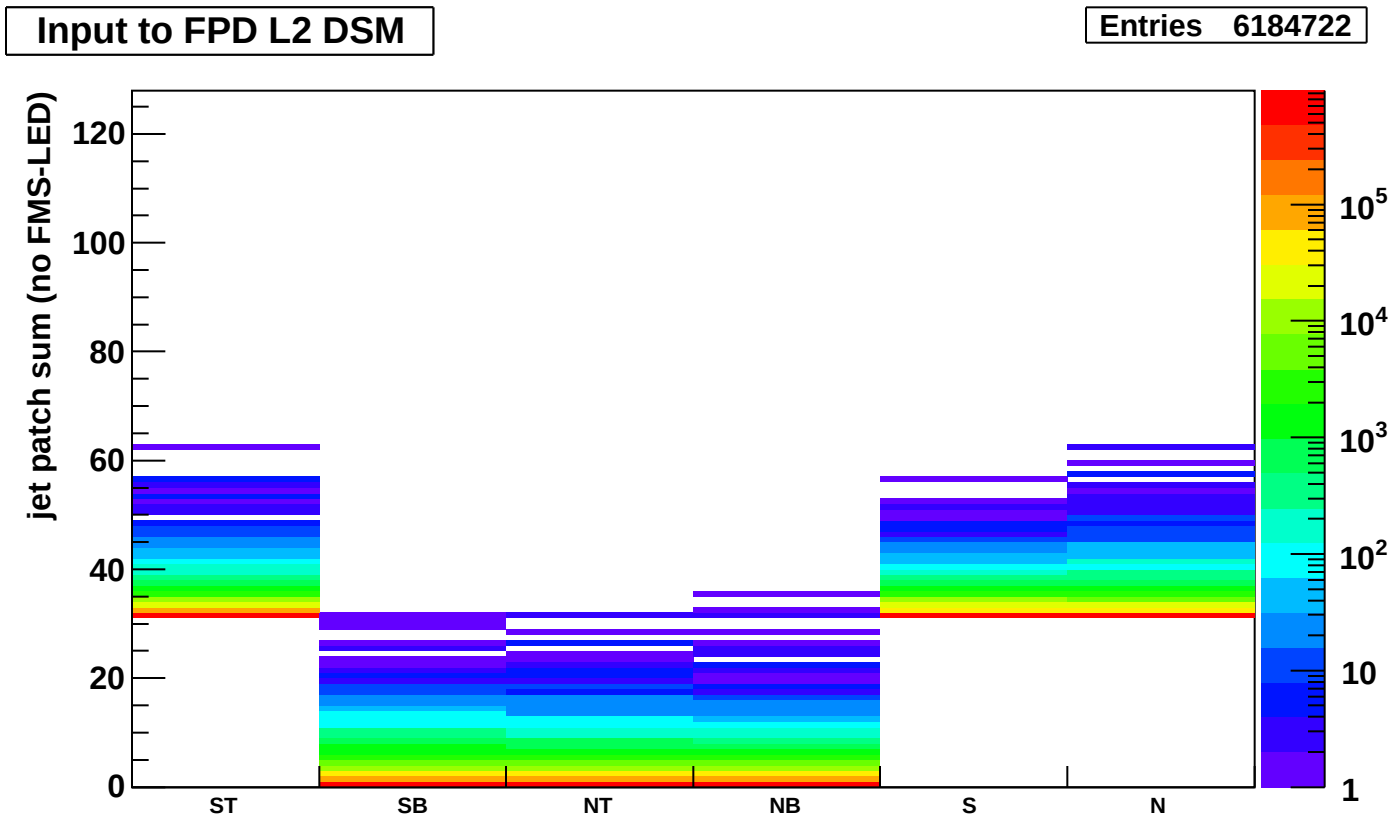

Input to FPD L2 DSM
Entries 2906927
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

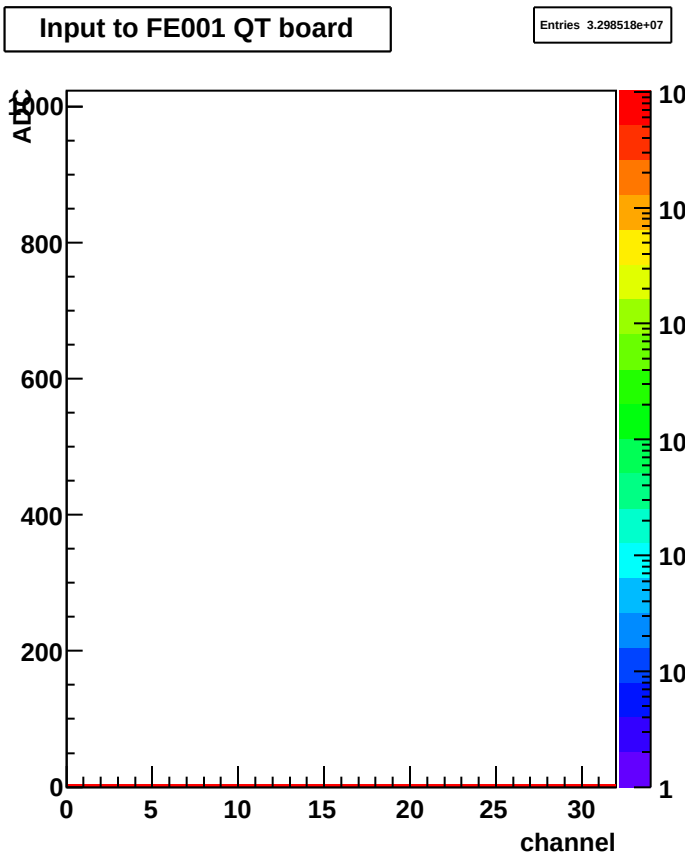

Input to FPD L2 DSM
Entries 3092361
CL bits
1.03079e+06
10
199
25
5878
1501
1.02471e+06
1.02925e+06
SMALL
LARGE-S
LARGE-N

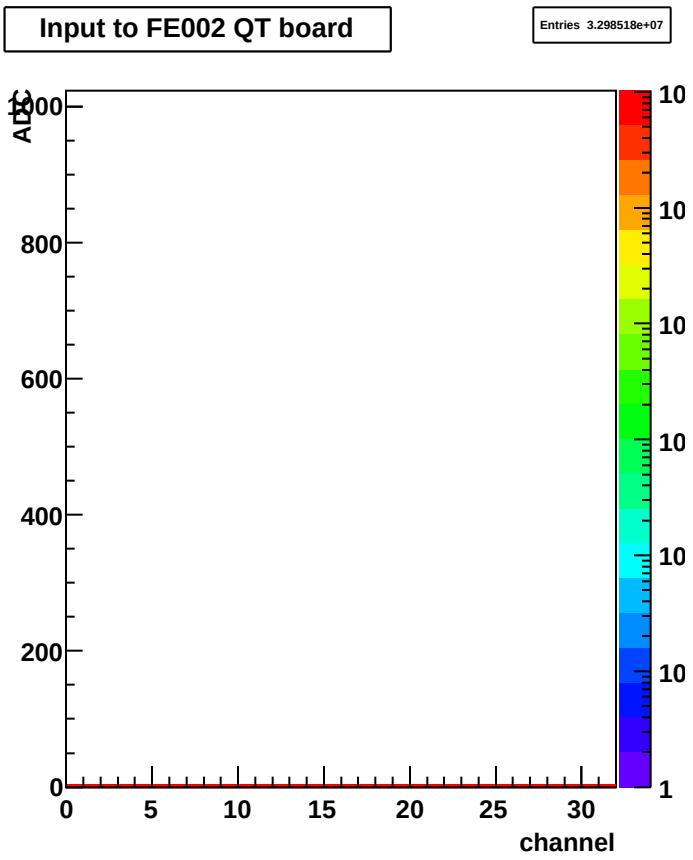

Input to FPD L2 DSM
Entries 1038400
CL bits - simulated
1.03079e+06
10
199
25
5878
1501
SMALL
LARGE-S
LARGE-N

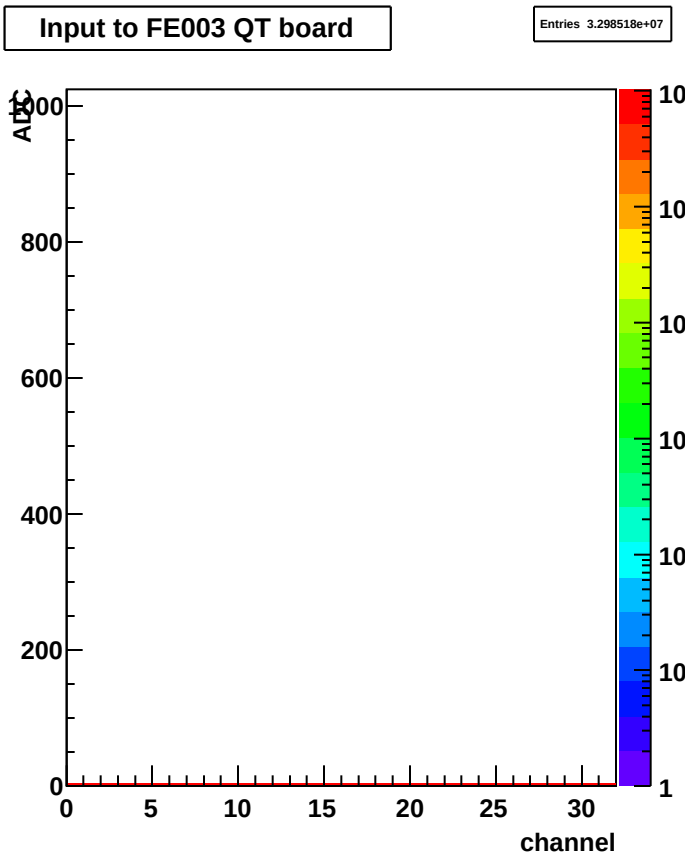

Input to FPD L2 DSM
Entries 3092361
HT bits
5648
1.03079e+06
1849
18685
54505
2192
951949
1.02675e+06
SMALL
LARGE-S
LARGE-N

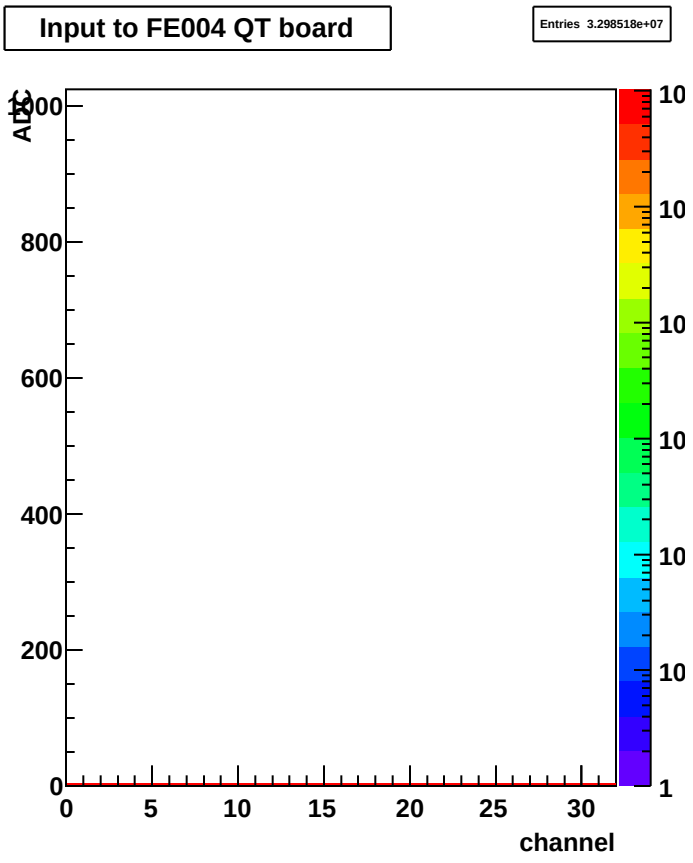

Input to FPD L2 DSM
Entries 1113666
HT bits - simulated
5648
1.03079e+06
1849
18685
54505
2192
SMALL
LARGE-S
LARGE-N

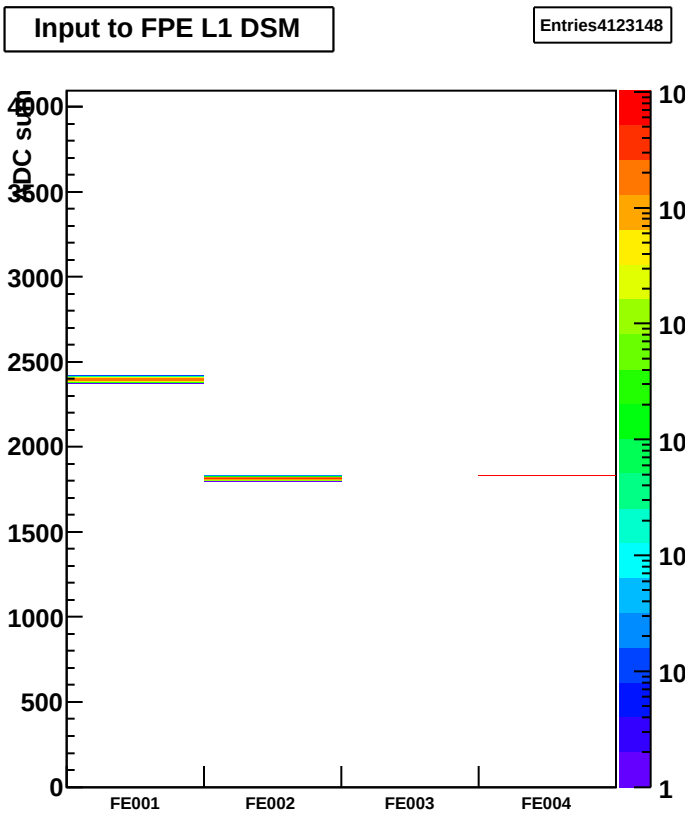

Input to FPD L2 DSM
Entries 6184722
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

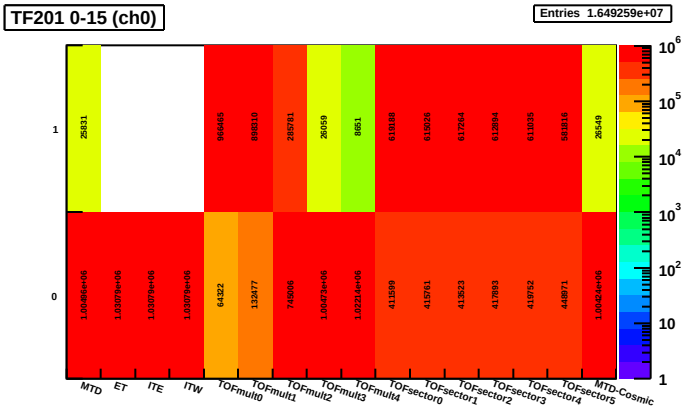

Input to FE001 QT board
Entries 3.298518e+07
ADC
channel

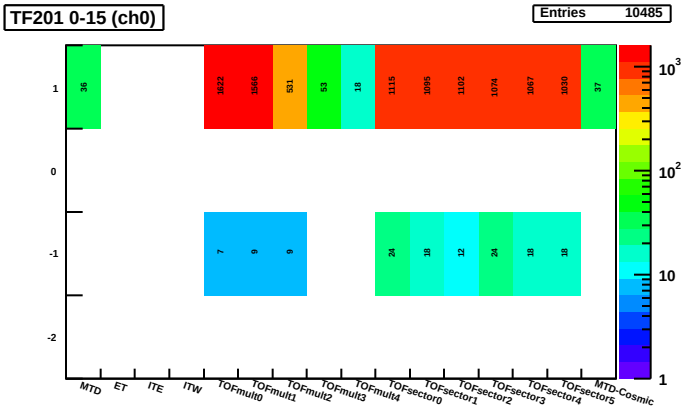

Input to FE002 QT board
Entries 3.298518e+07
ADC
channel

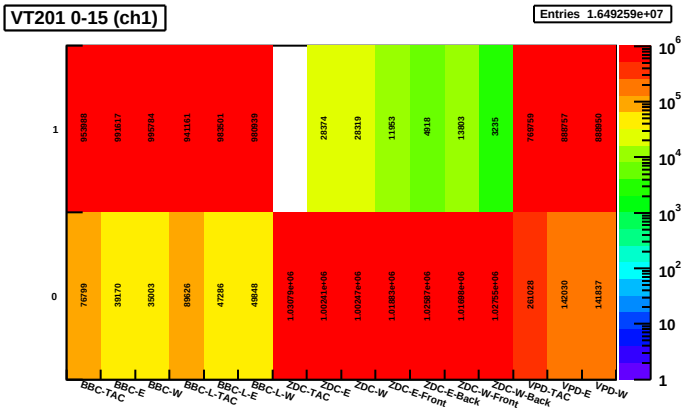

Input to FE003 QT board
Entries 3.298518e+07
ADC
channel


Input to FE004 QT board
Entries 3.298518e+07
ADC
channel


Input to FPE L1 DSM
Entries4123148
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)
Entries 1.649259e+07
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 10485
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic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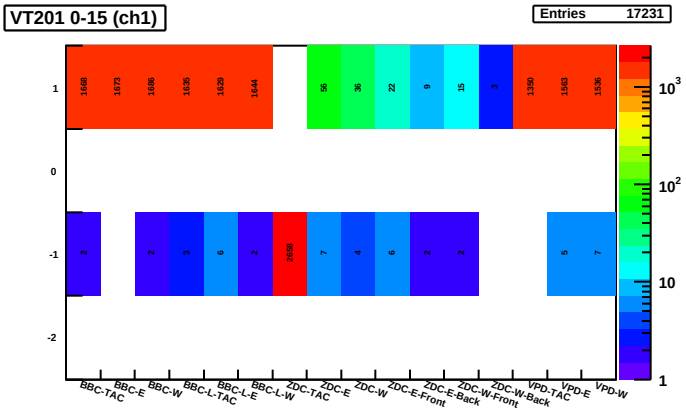
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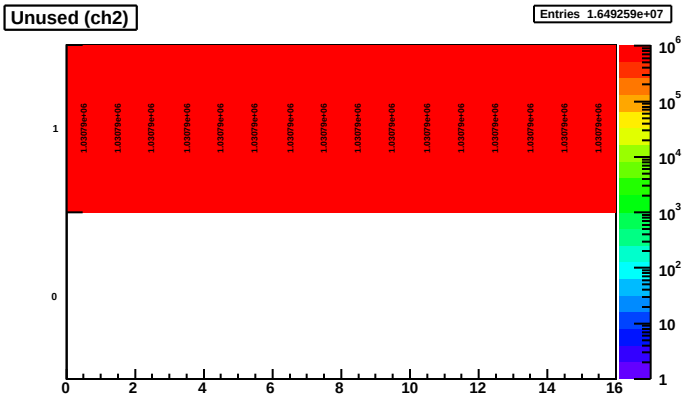
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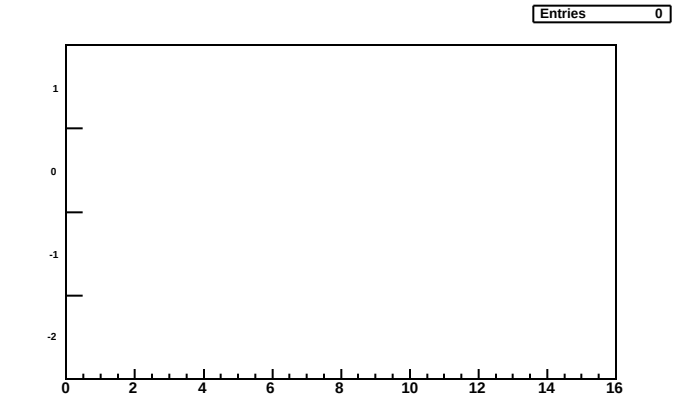
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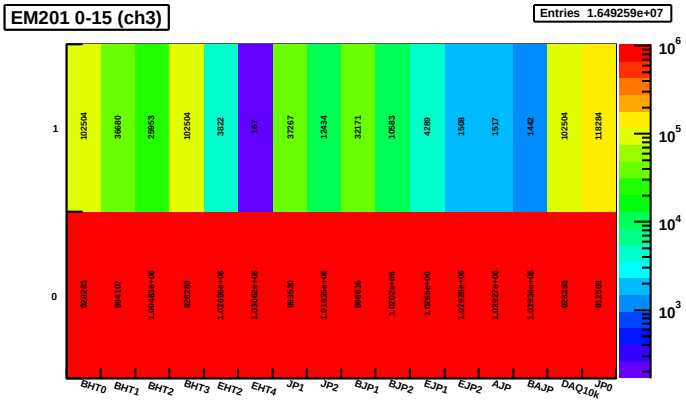
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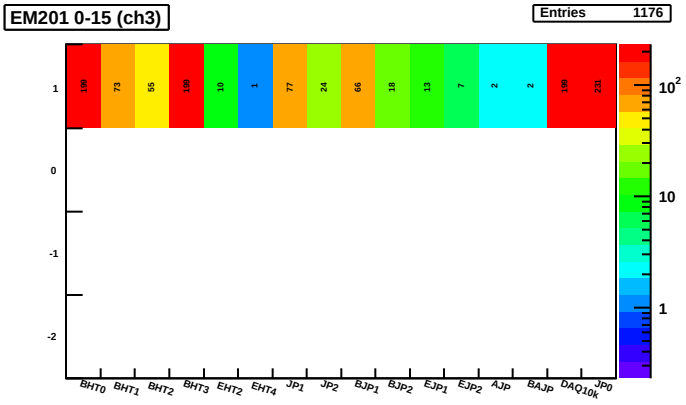
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Entries 1176
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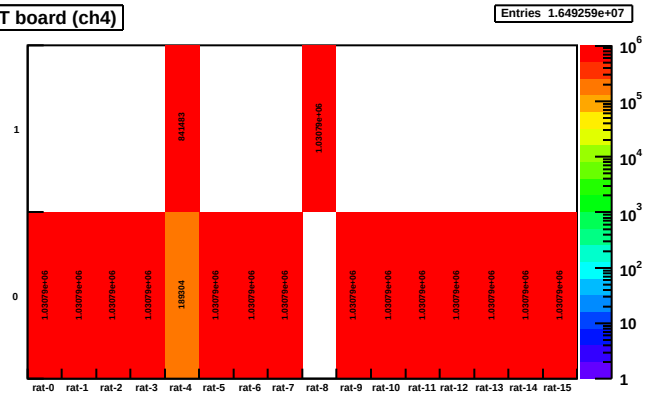
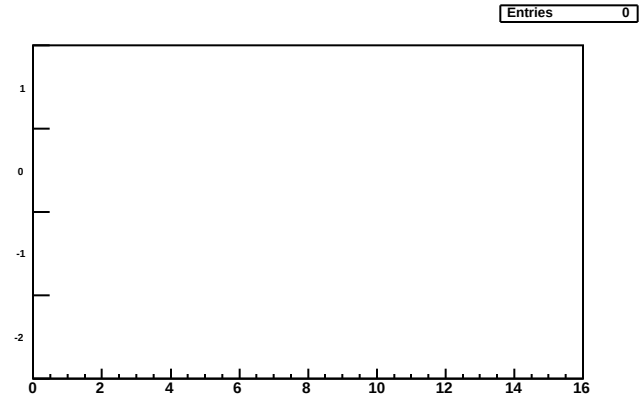
RAT board (ch4)





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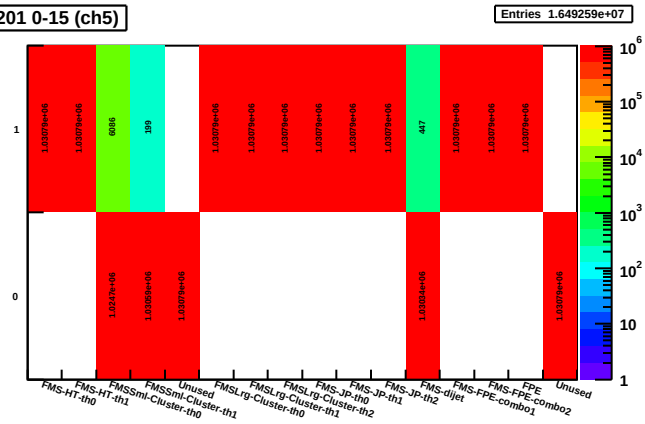

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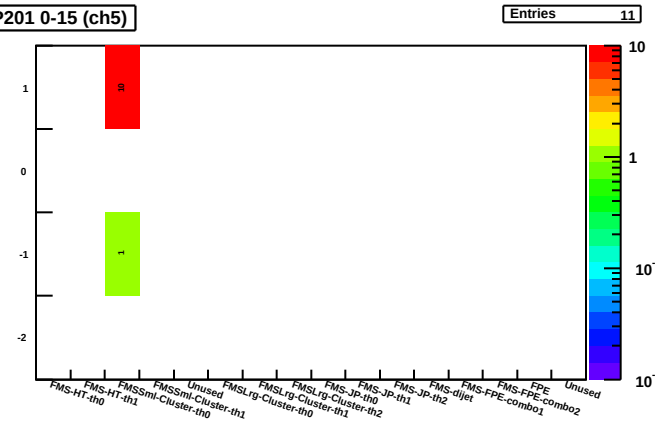

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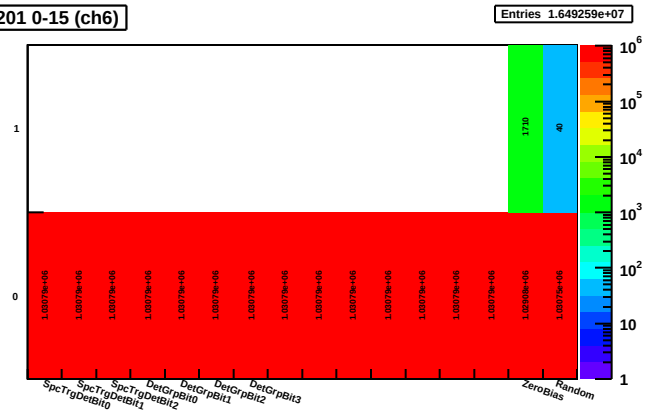

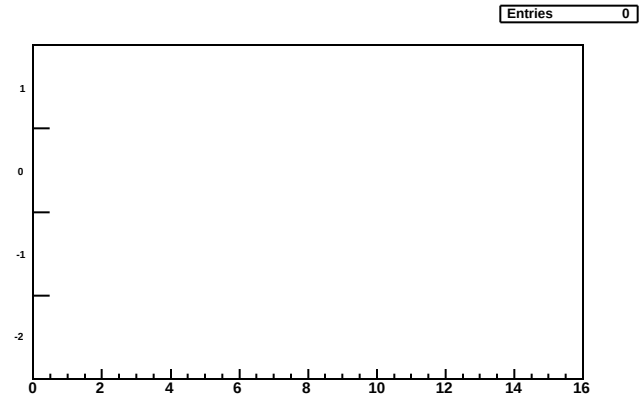
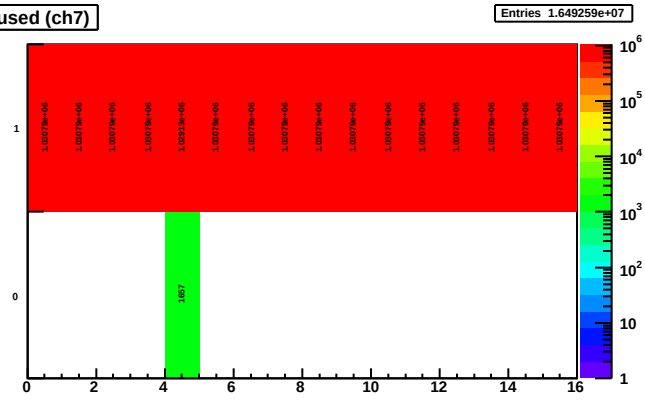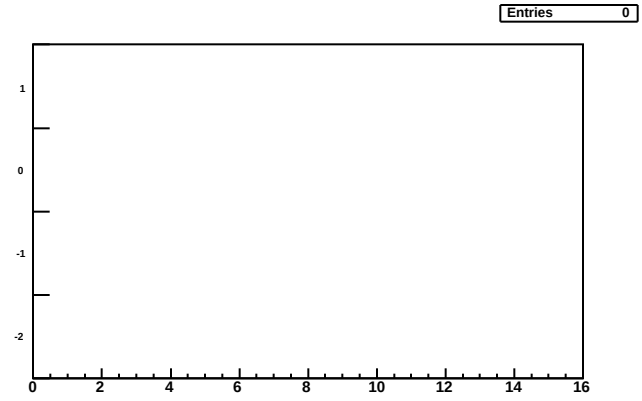
Unused (ch7)