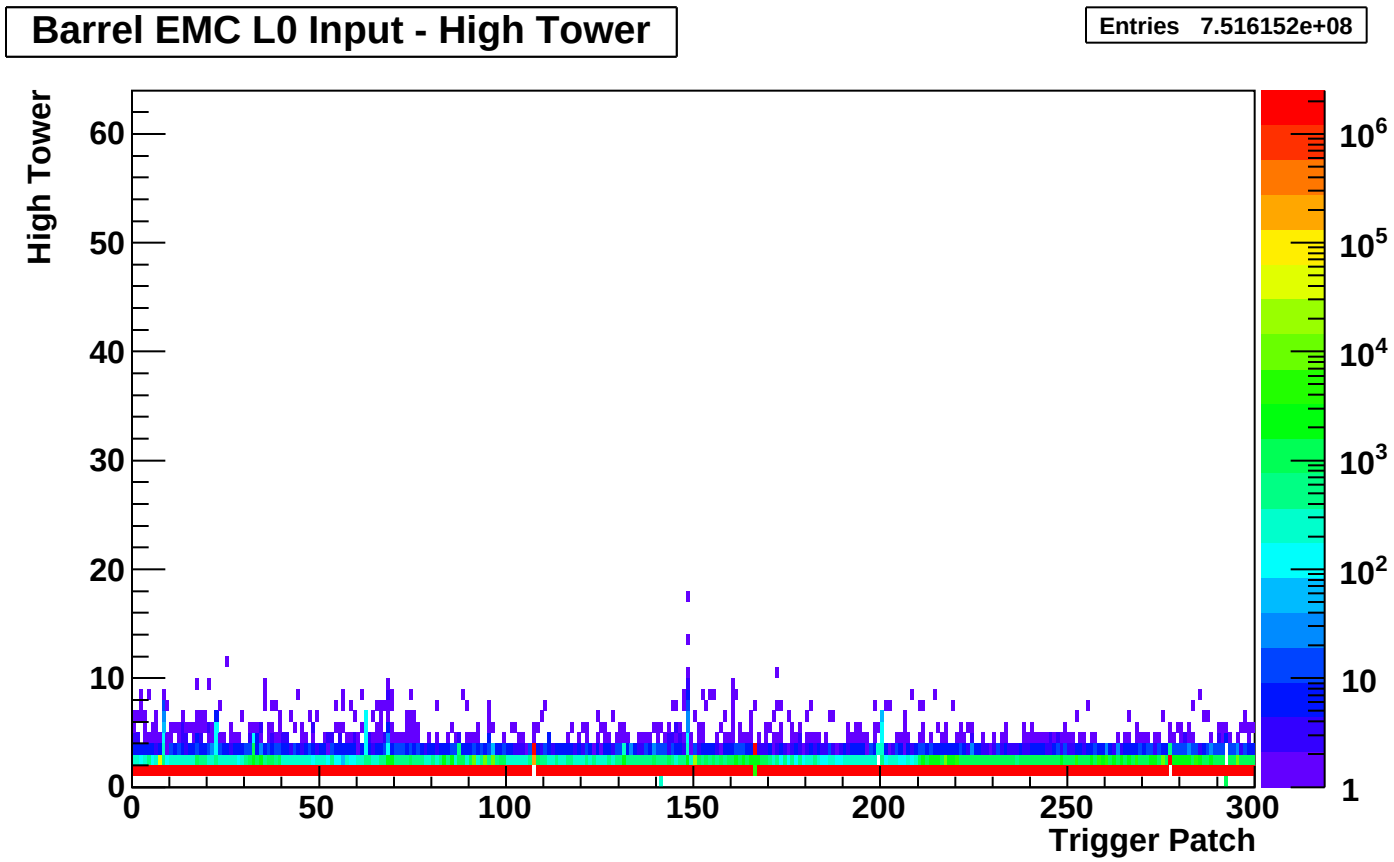
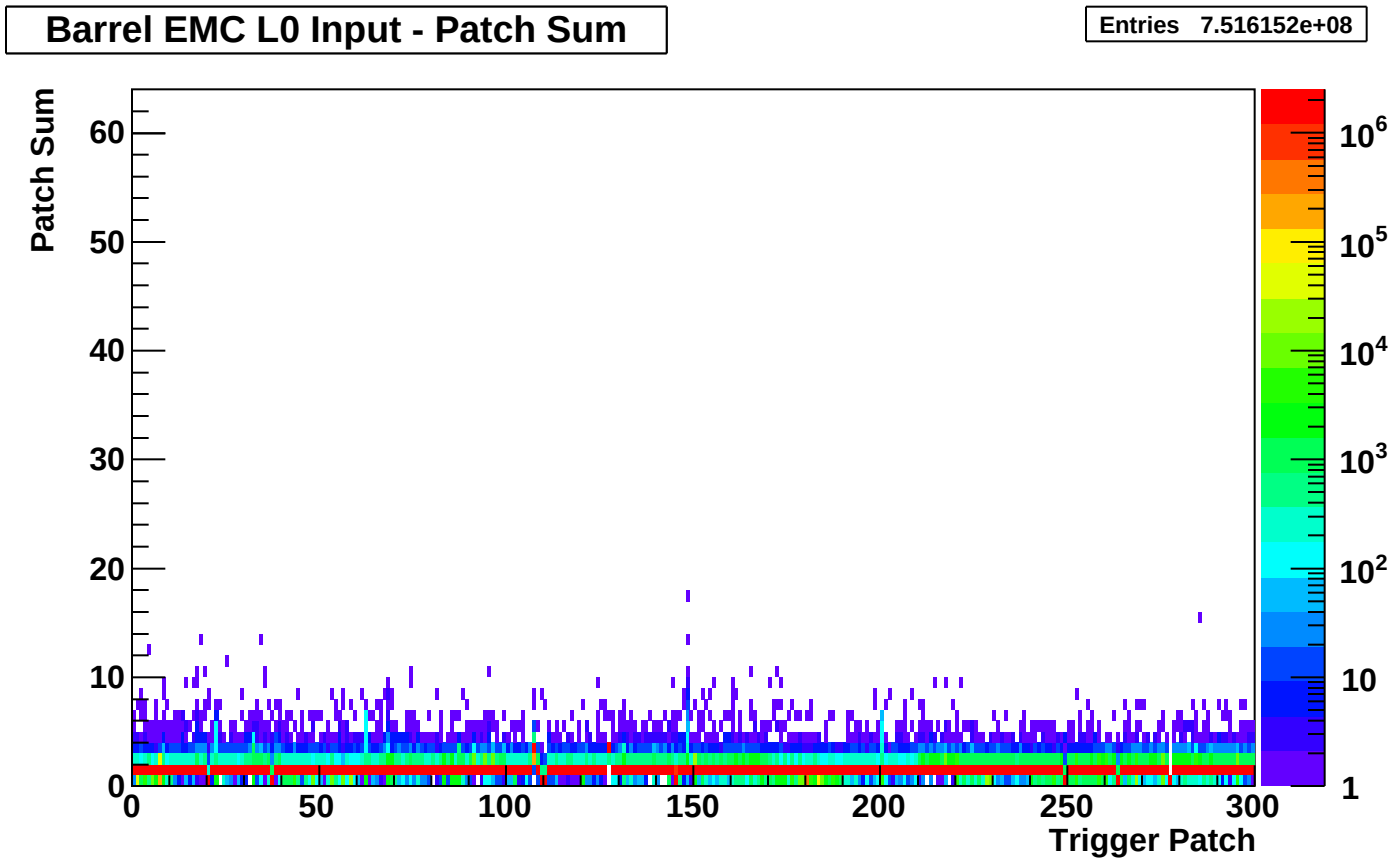
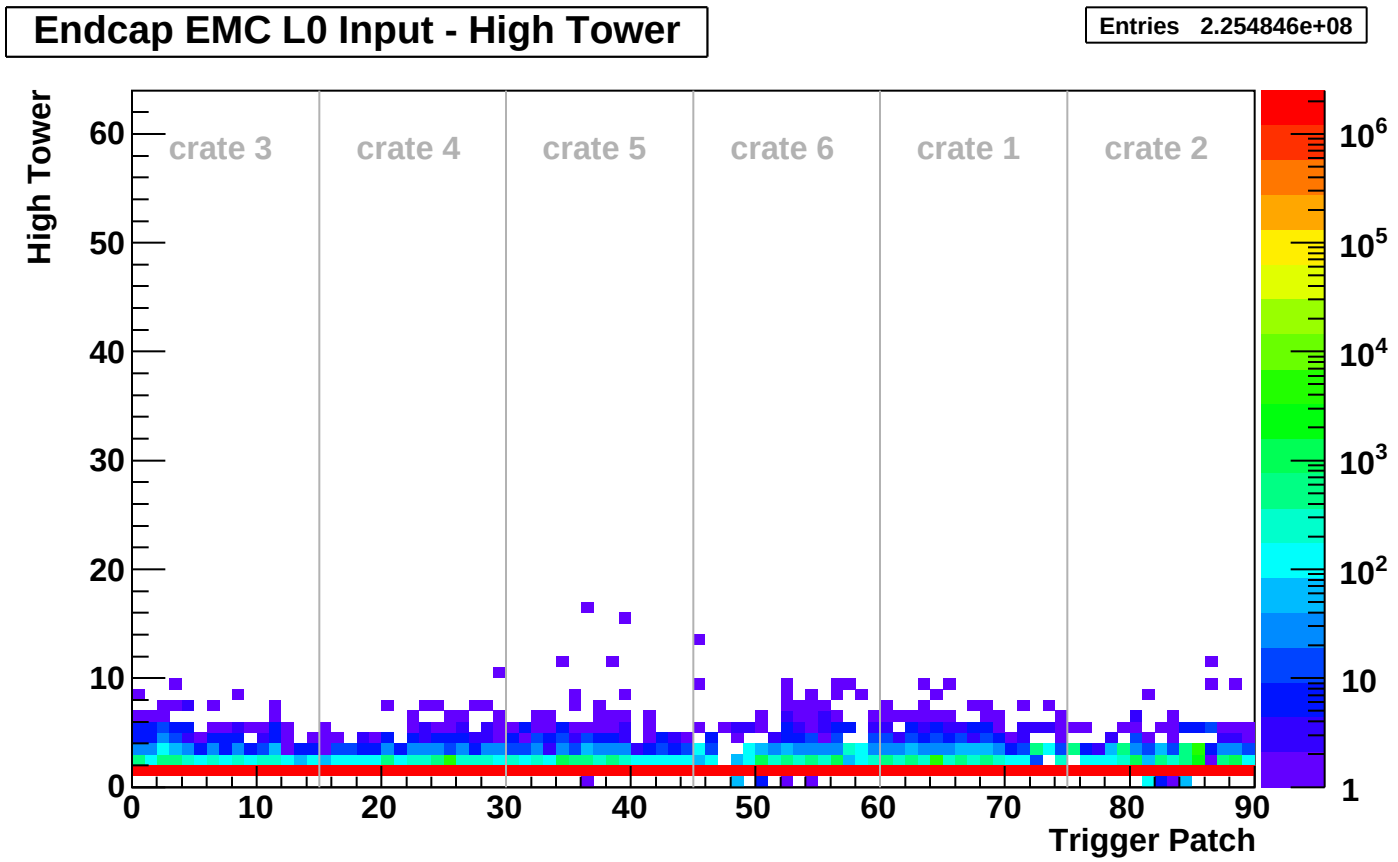
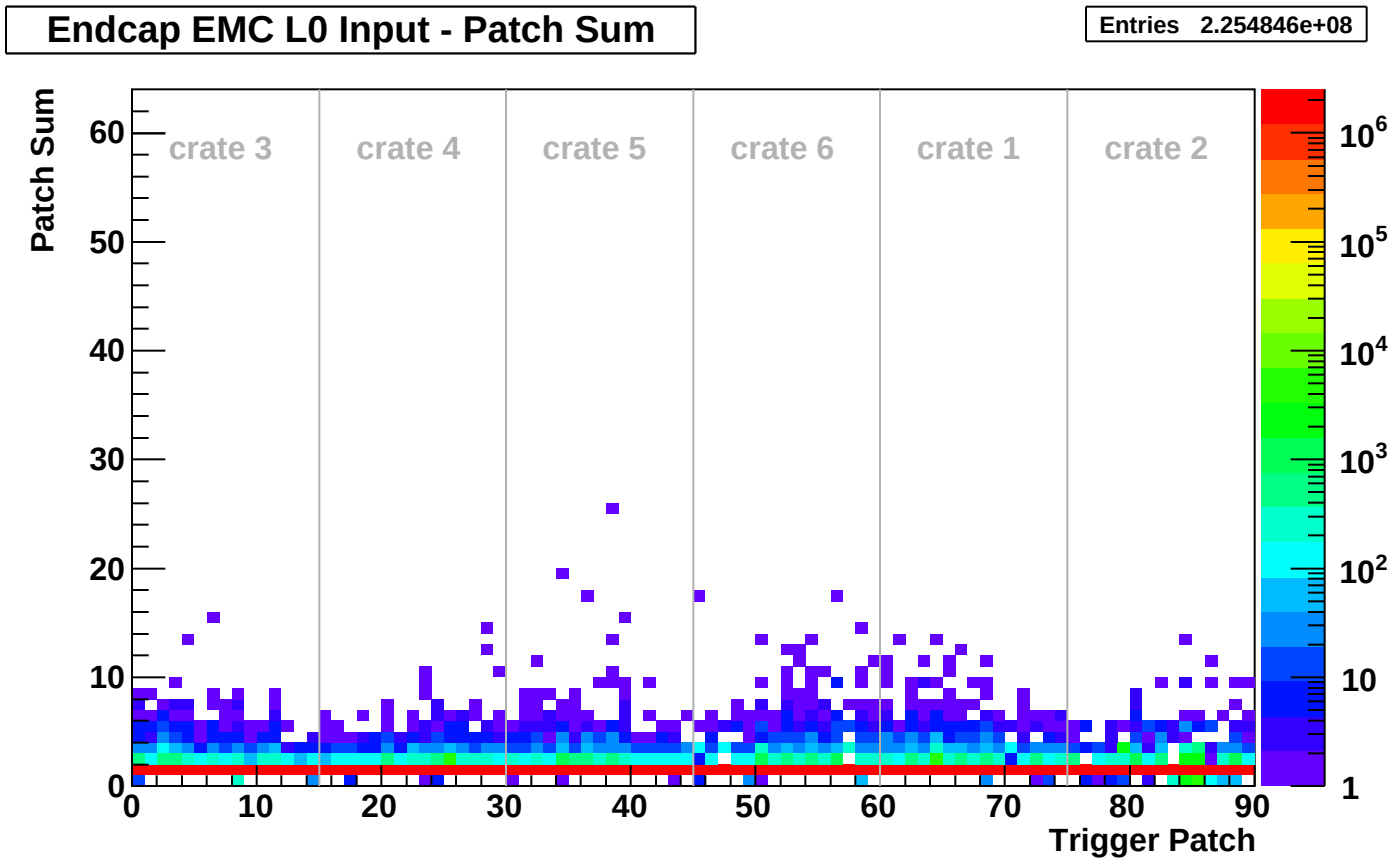
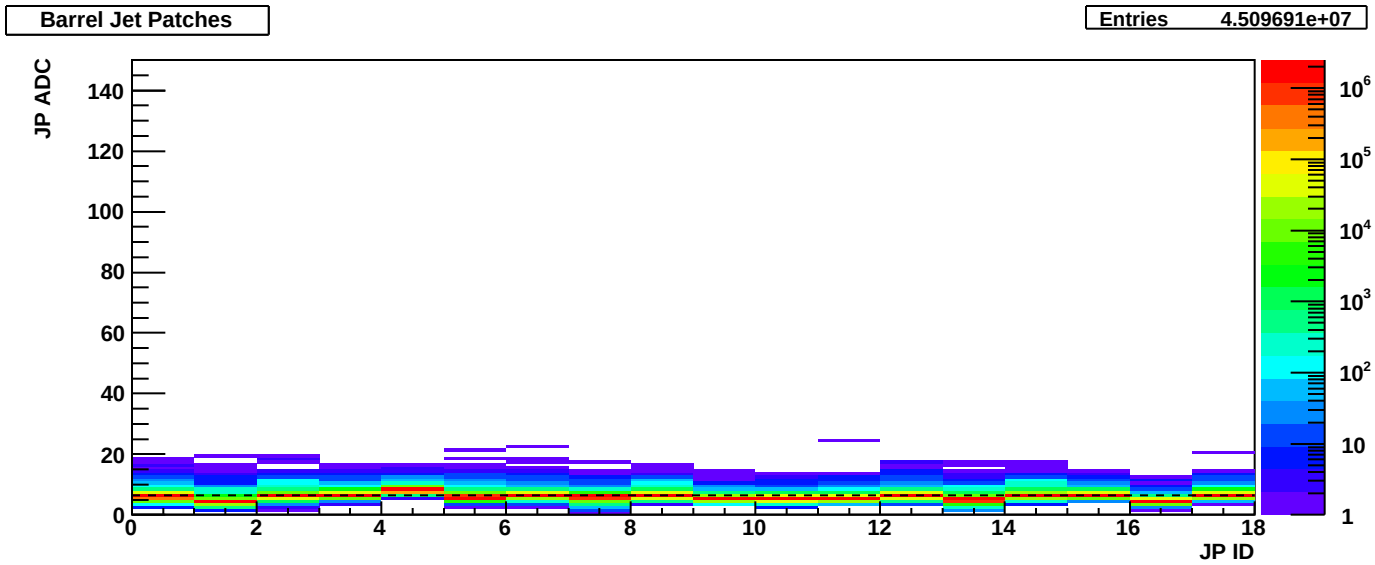
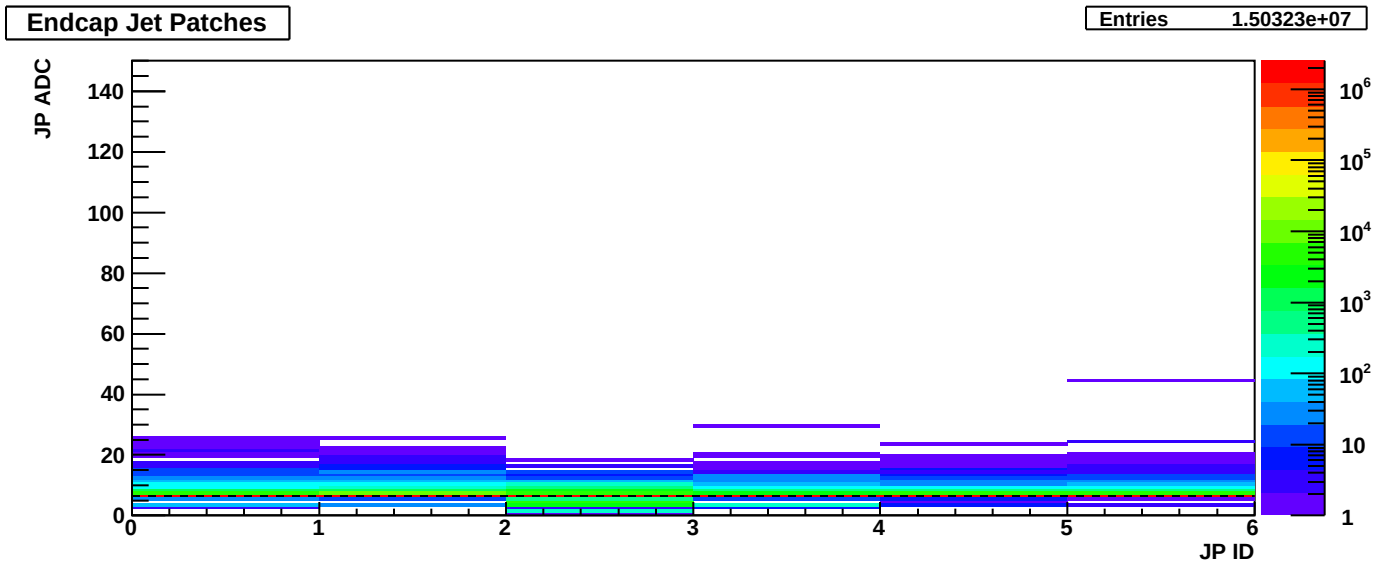

Barrel EMC L0 Input - High Tower
Entries 7.516152e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

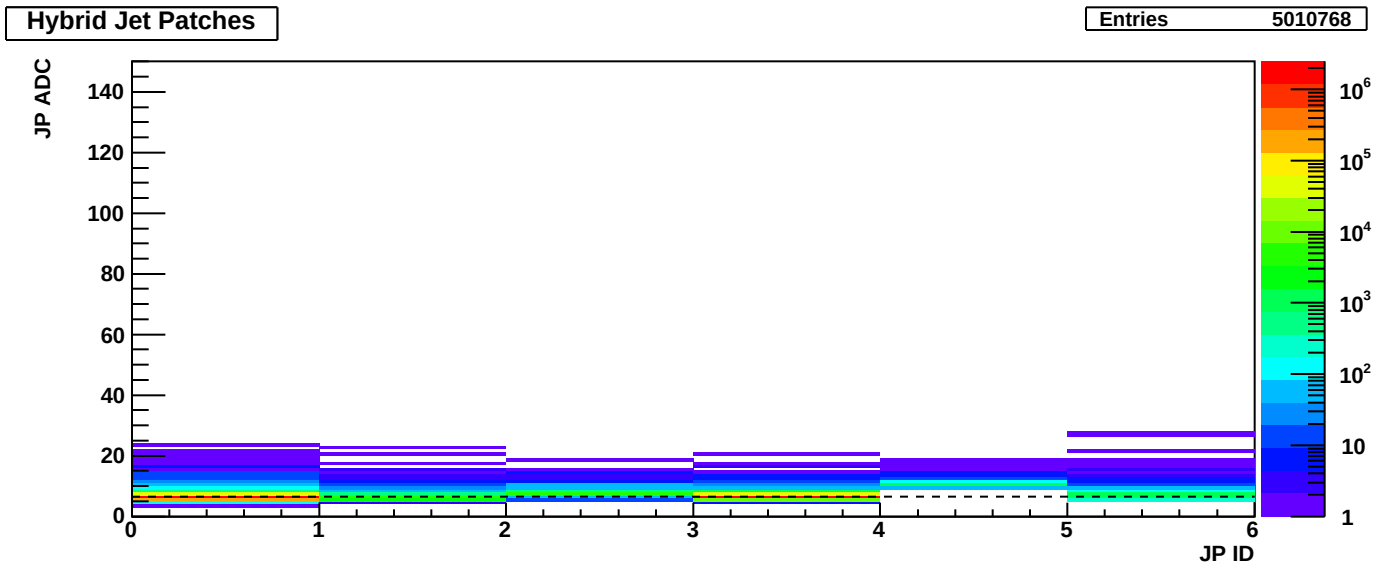

Barrel EMC L0 Input - Patch Sum
Entries 7.516152e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

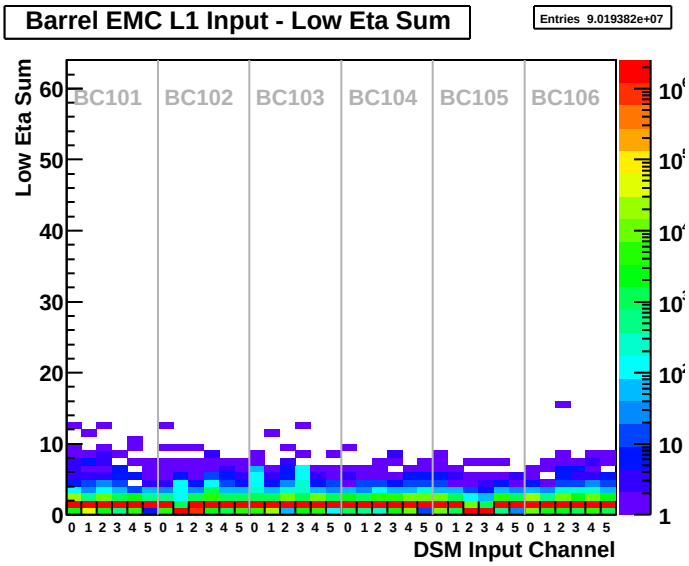

Endcap EMC L0 Input - High Tower
Entries 2.254846e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

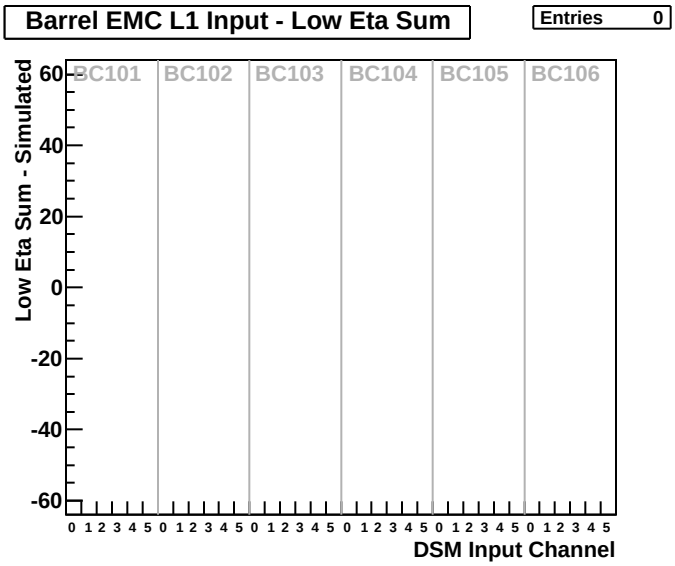

Endcap EMC L0 Input - Patch Sum
Entries 2.254846e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

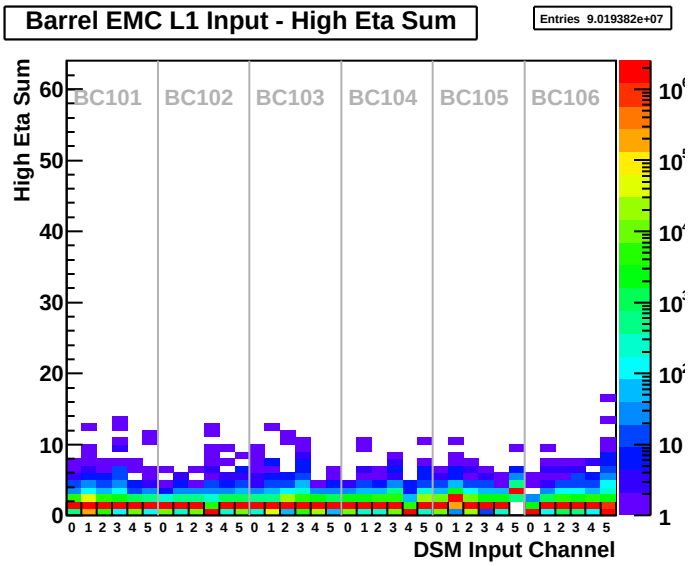

Barrel Jet Patches
Entries 4.509691e+07
JP ADC
JP ID

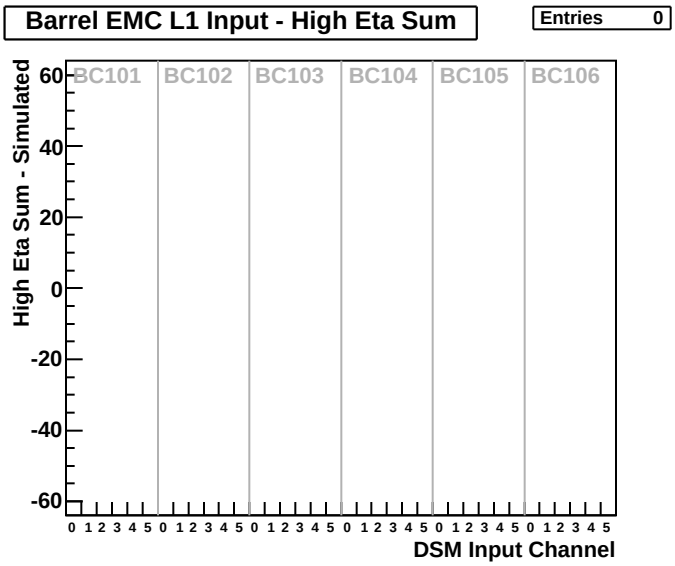

Endcap Jet Patches
Entries 1.50323e+07
JP ADC
JP ID

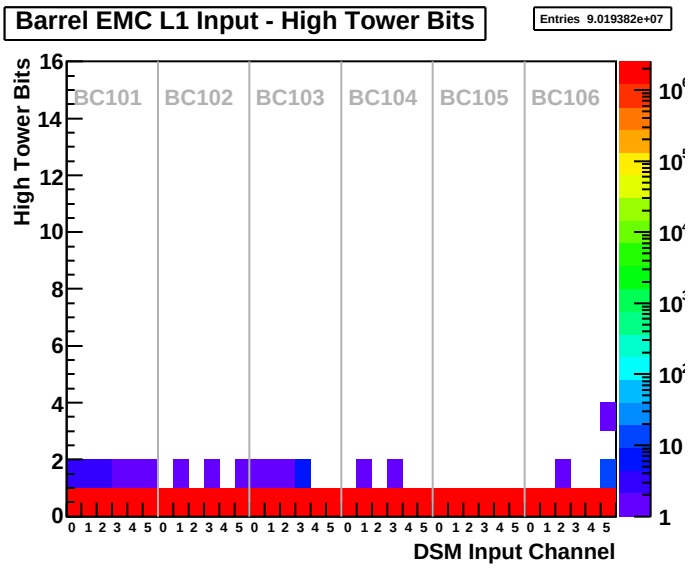

Hybrid Jet Patches
Entries 5010768
JP ADC
JP ID

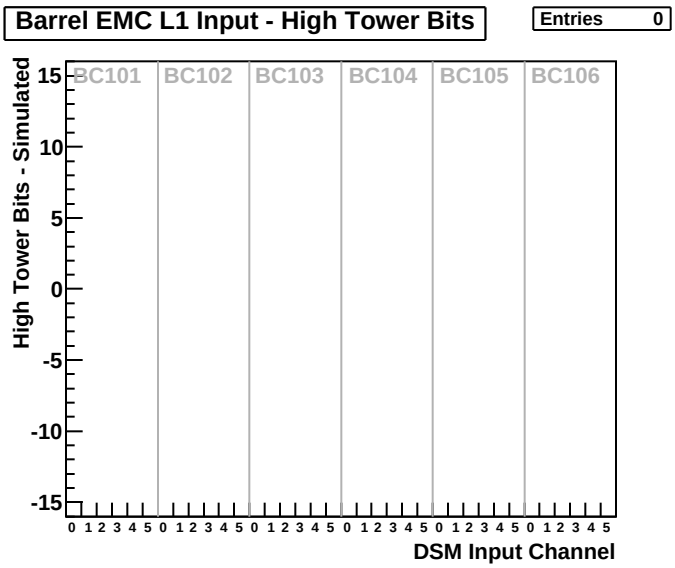

Barrel EMC L1 Input - Low Eta Sum
Entries 9.019382e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

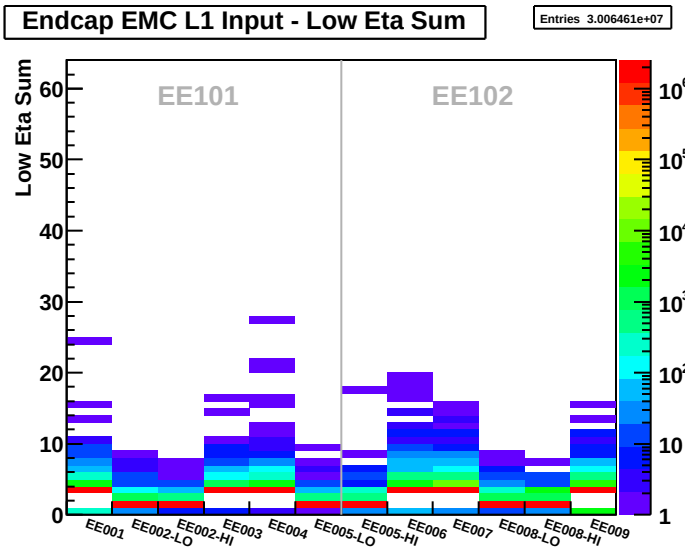

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

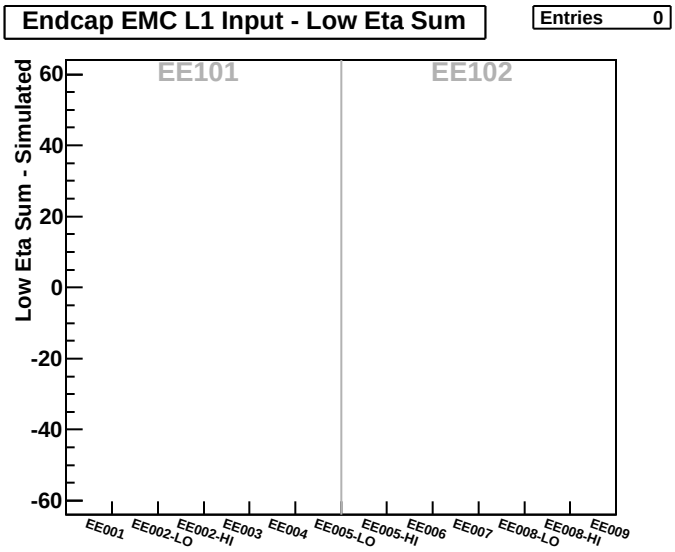

Barrel EMC L1 Input - High Eta Sum
Entries 9.019382e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

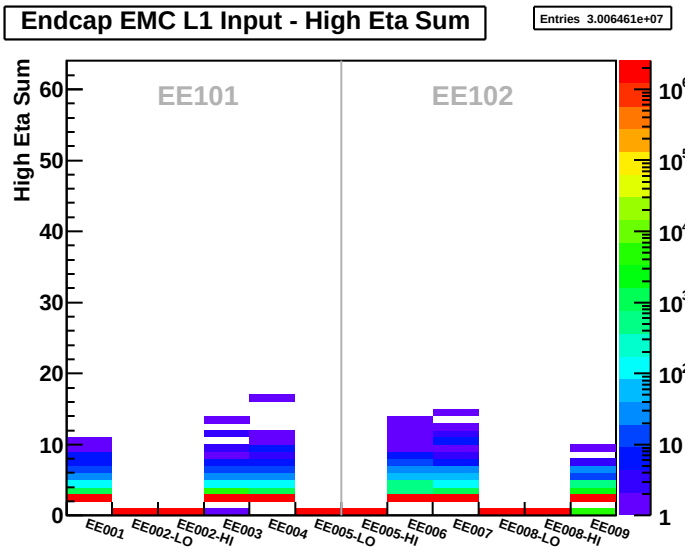

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

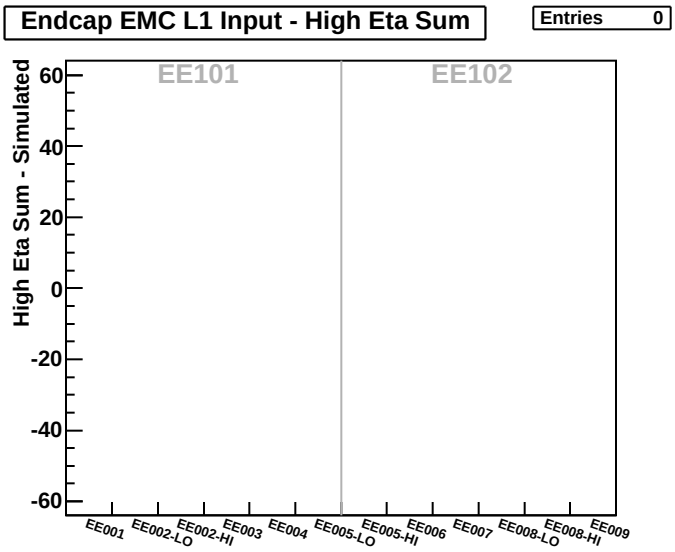

Barrel EMC L1 Input - High Tower Bits
Entries 9.019382e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

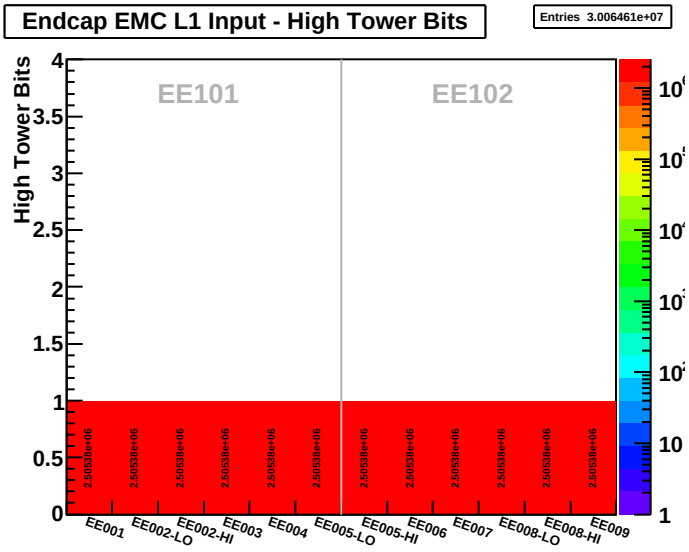

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

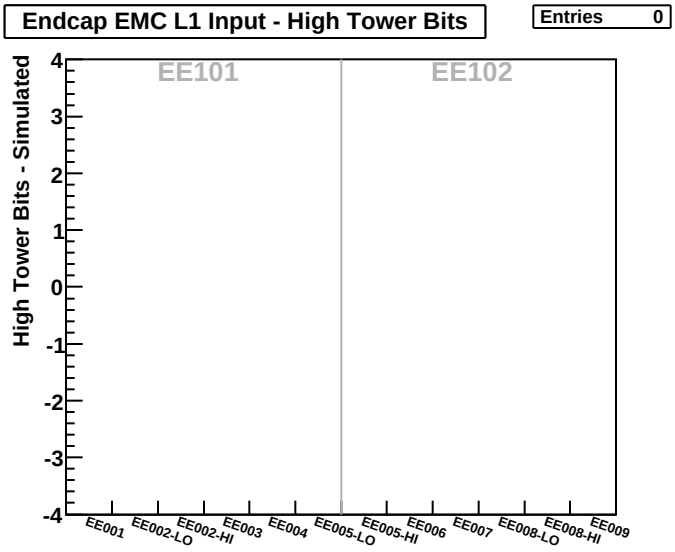

Endcap EMC L1 Input - Low Eta Sum
Entries 3.006461e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

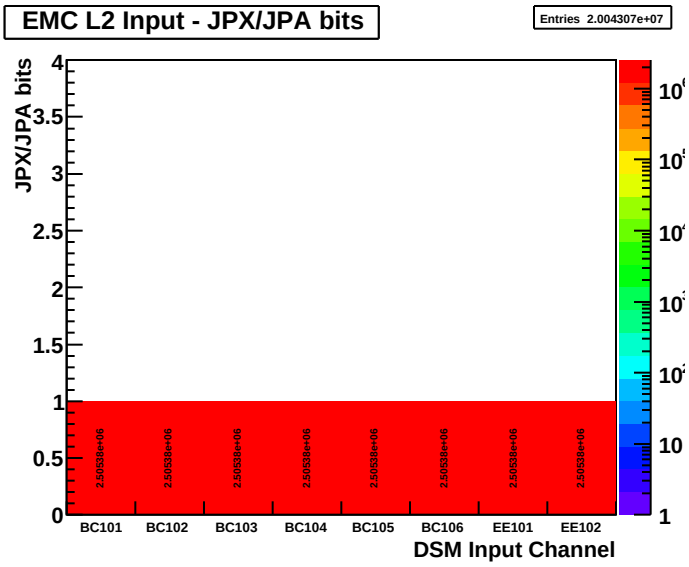

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

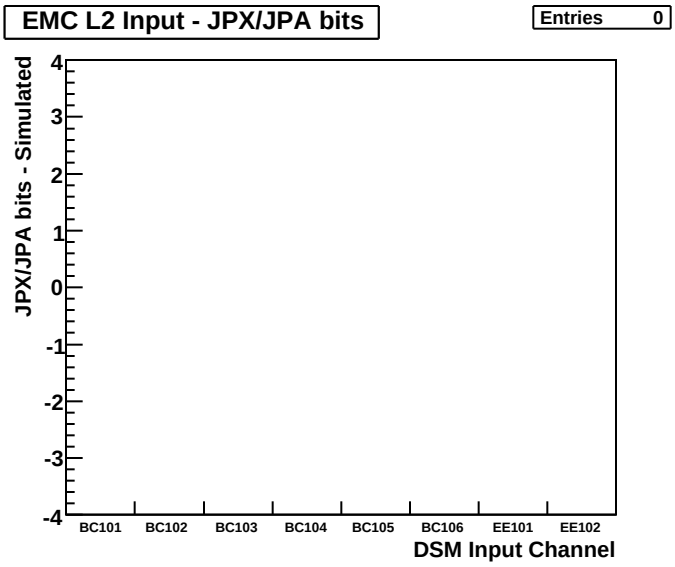

Endcap EMC L1 Input - High Eta Sum
Entries 3.006461e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

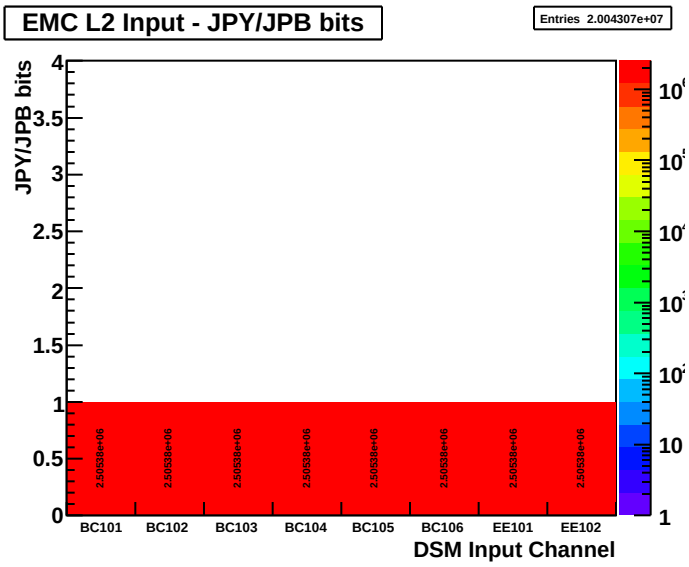

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

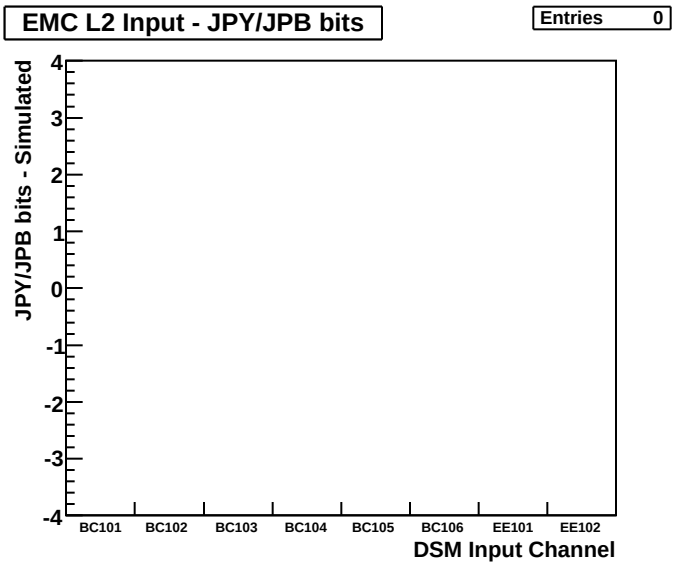

Endcap EMC L1 Input - High Tower Bits
Entries 3.006461e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

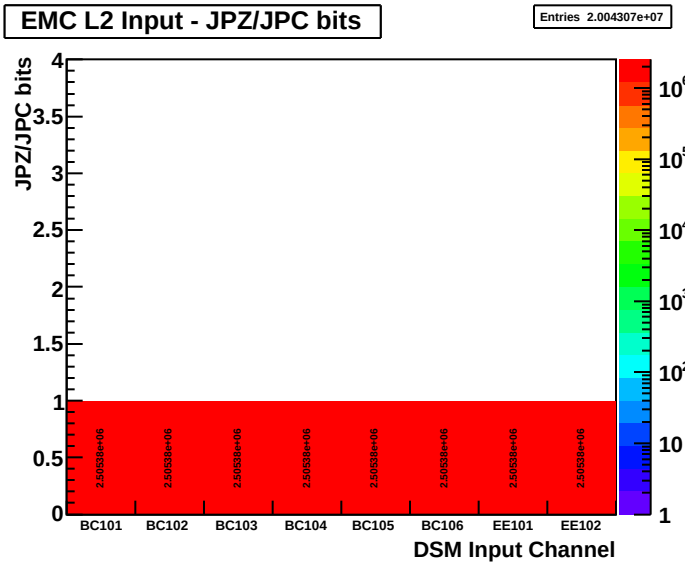

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

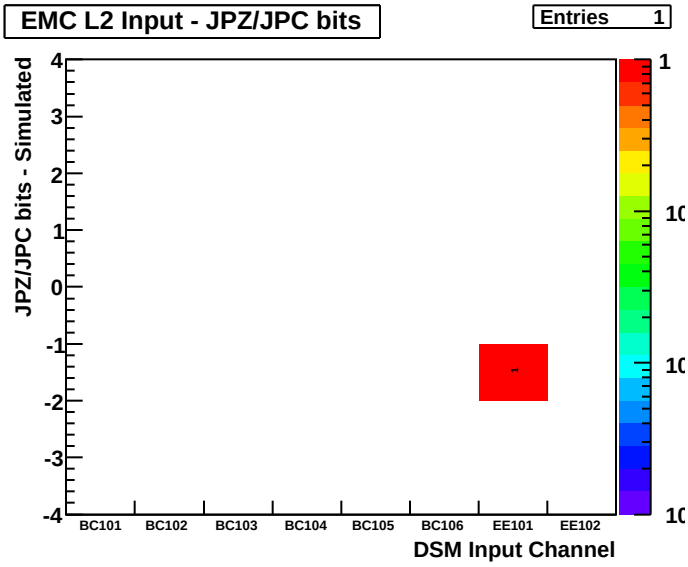

EMC L2 Input - JPX/JPA bits
Entries 2.004307e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2.50538e+06

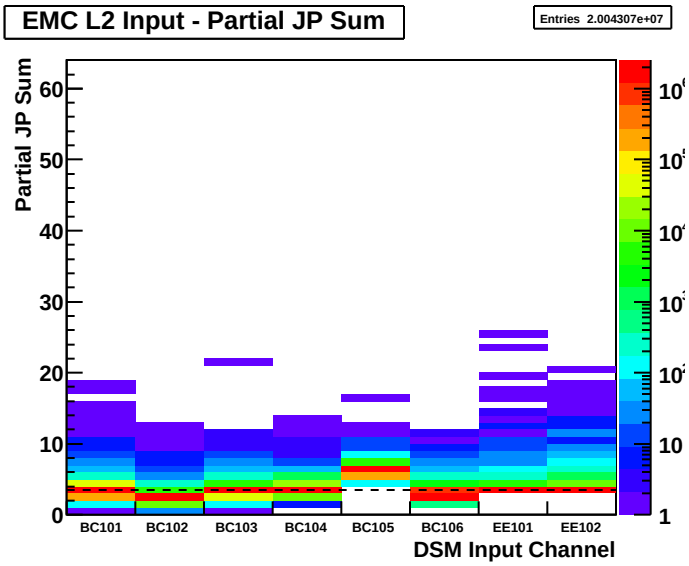

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

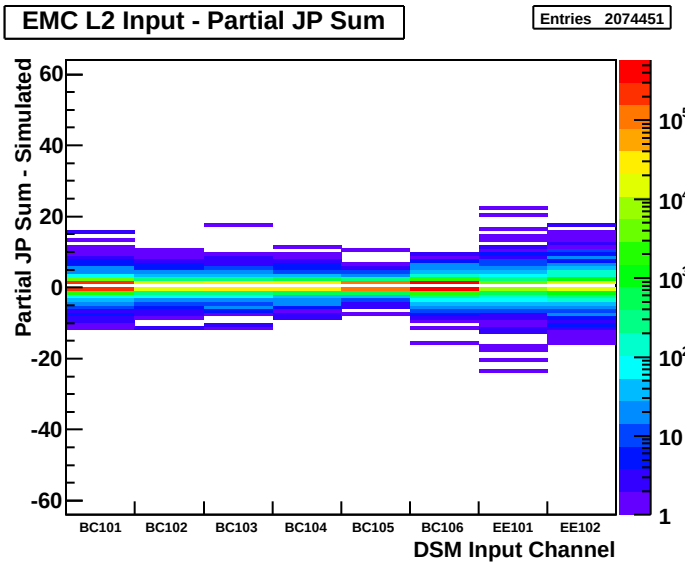

EMC L2 Input - JPY/JPB bits
Entries 2.004307e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2.50538e+06

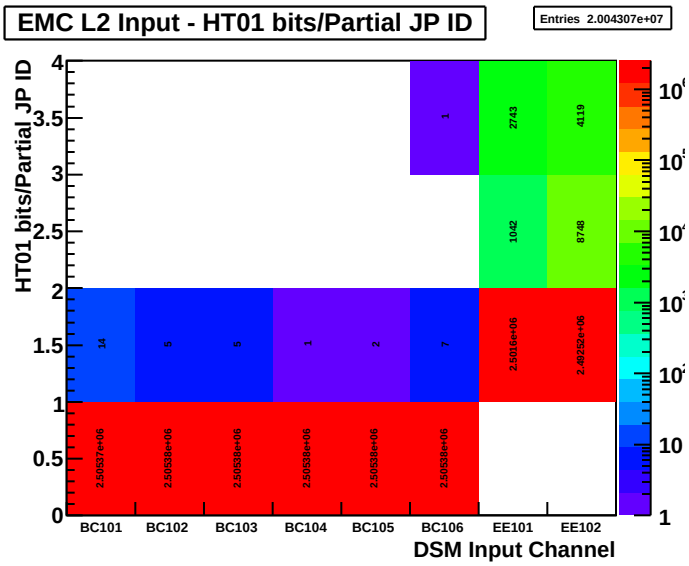

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

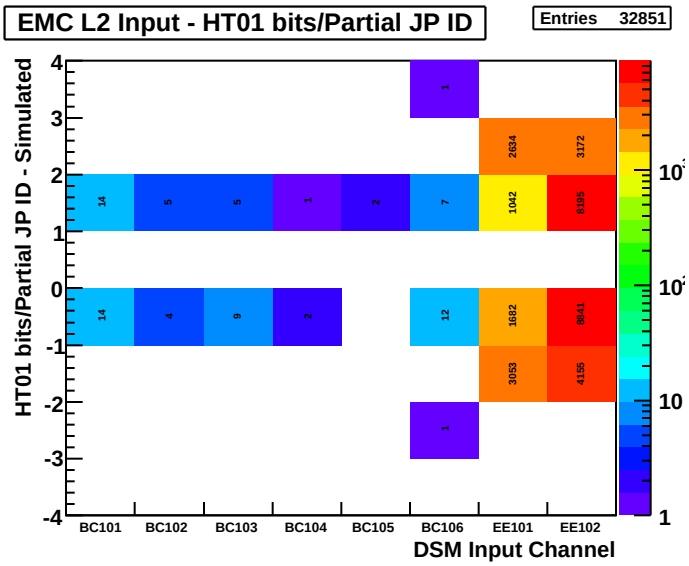

EMC L2 Input - JPZ/JPC bits
Entries 2.004307e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2.50538e+06

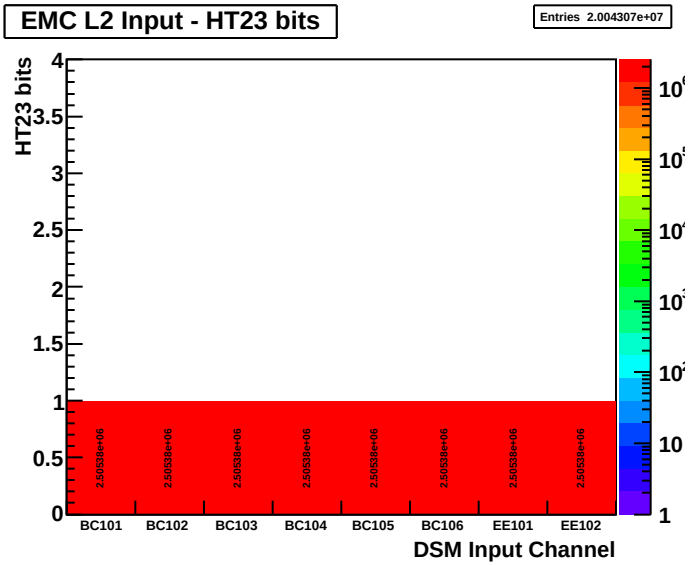

EMC L2 Input - JPZ/JPC bits
Entries 1
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

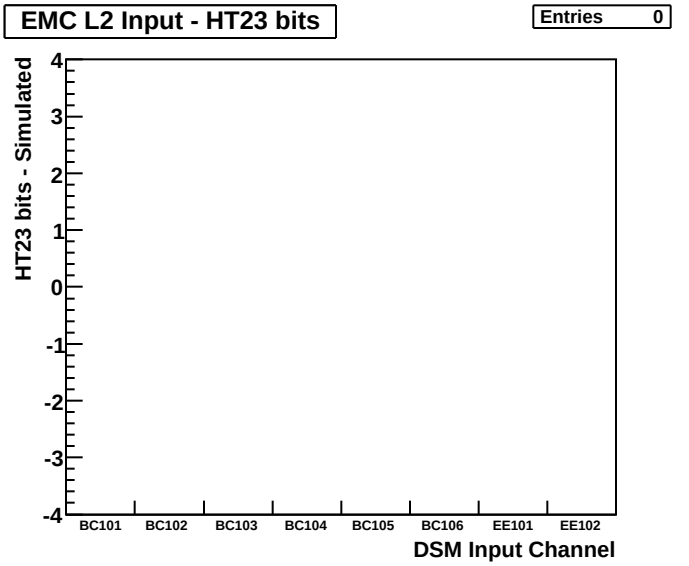

EMC L2 Input - Partial JP Sum
Entries 2.004307e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

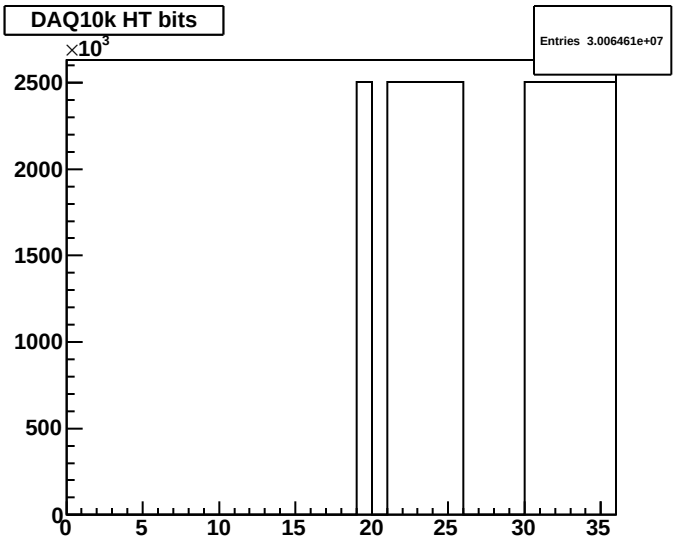

EMC L2 Input - Partial JP Sum
Entries 2074451
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

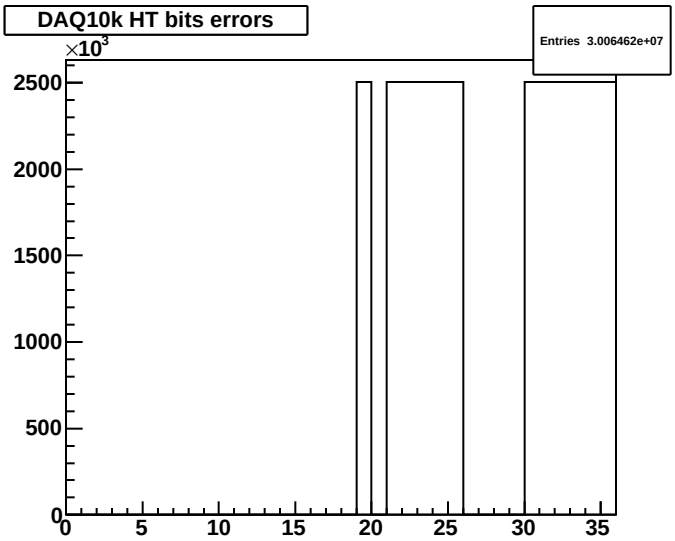

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2.004307e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

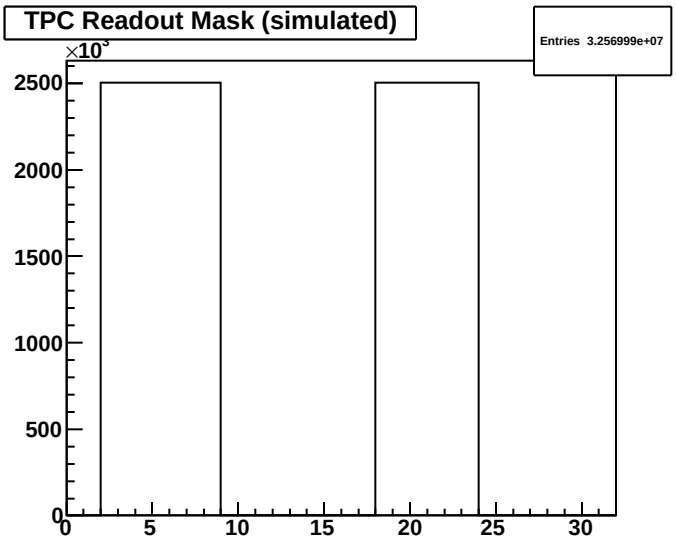

EMC L2 Input - HT01 bits/Partial JP ID
Entries 32851
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

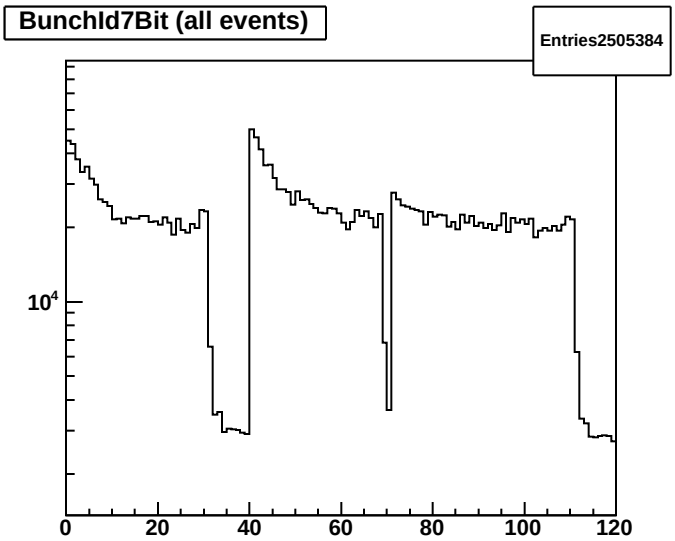

EMC L2 Input - HT23 bits
Entries 2.004307e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

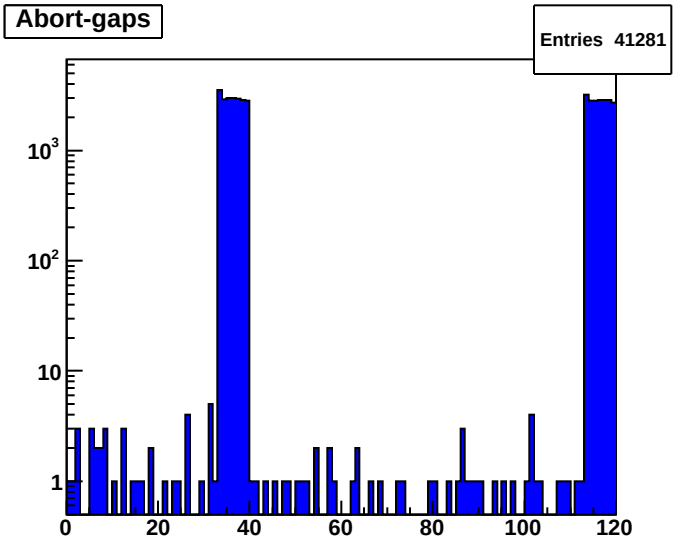

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

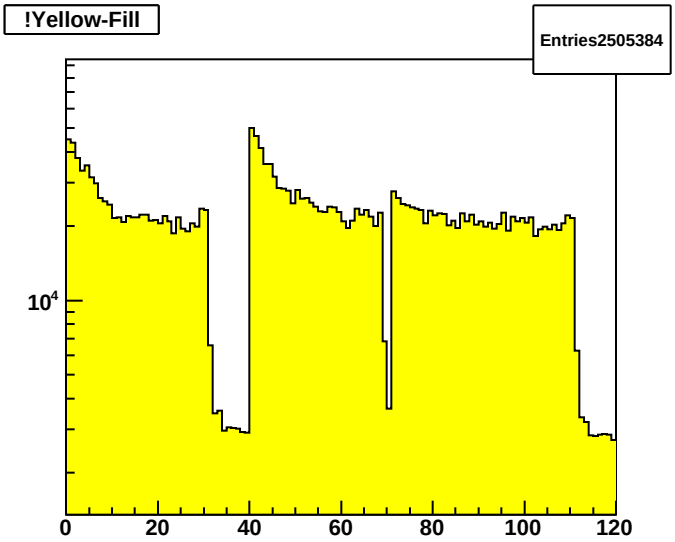

DAQ10k HT bits
Entries 3.006461e+07
×10^3
2500
2000
1500
1000
500
0
0 5 10 15 20 25 30 35

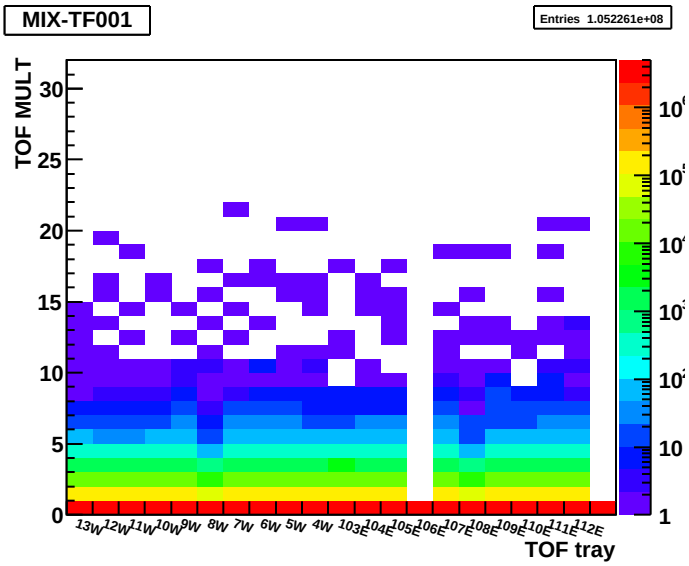

DAQ10k HT bits errors
Entries 3.006462e+07
×10^3
2500
2000
1500
1000
500
0
0 5 10 15 20 25 30 35

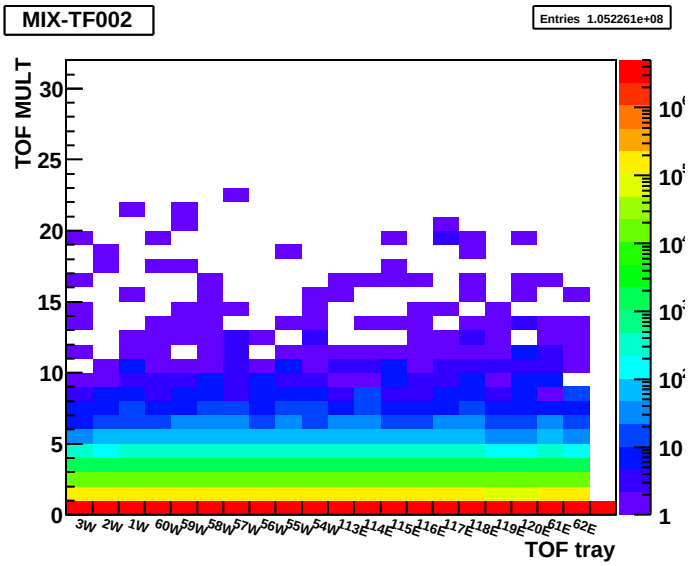

TPC Readout Mask (simulated)
Entries 3.256999e+07
×10^3
2500
2000
1500
1000
500
0
0 5 10 15 20 25 30

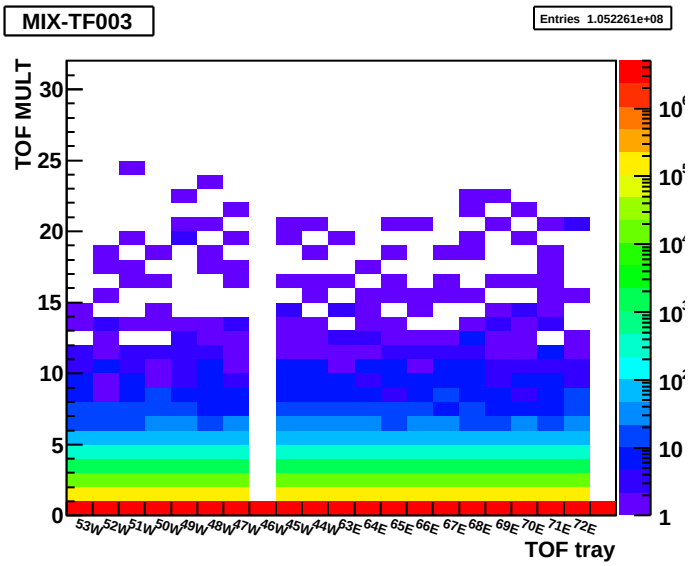

BunchId7Bit (all events)
Entries2505384
10^4
0 20 40 60 80 100 120

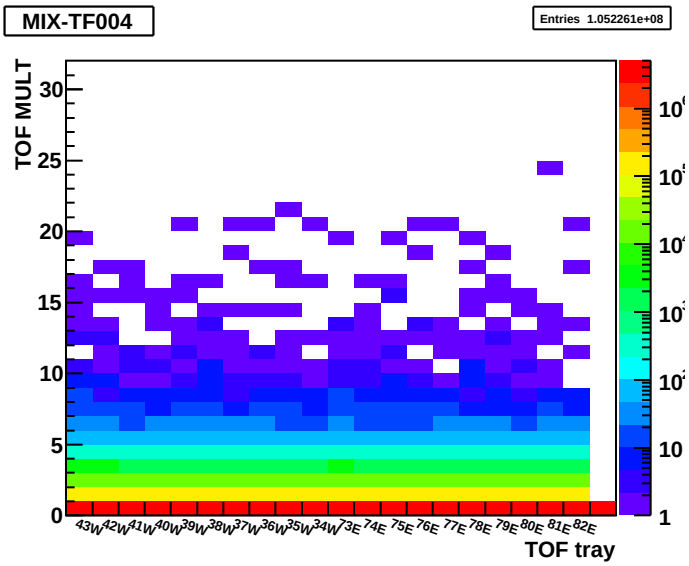

Abort-gaps
Entries 41281
10^3
10^2
10
1
0 20 40 60 80 100 120

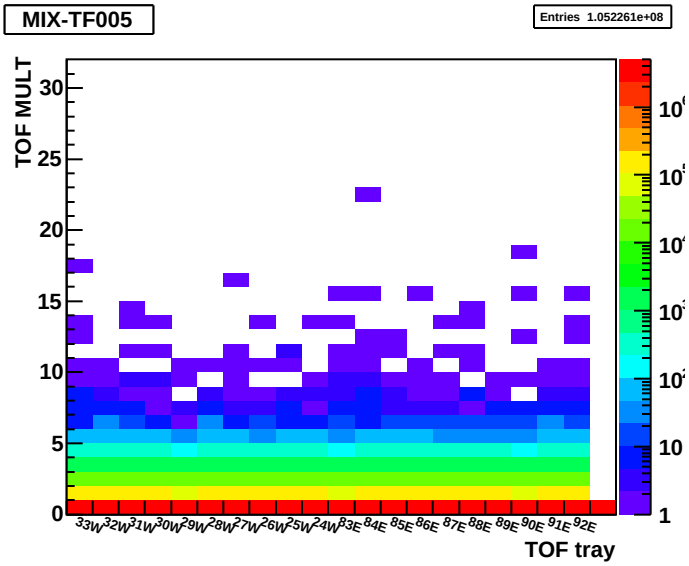

!Yellow-Fill
Entries2505384
10^4
0 20 40 60 80 100 120

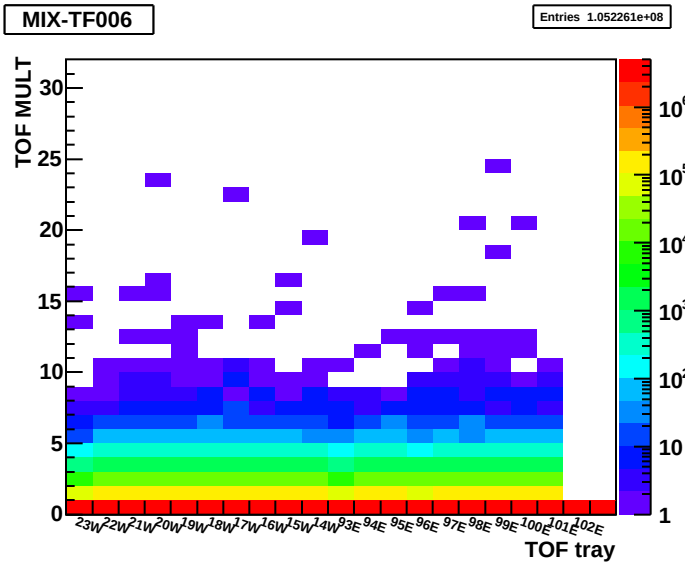

MIX-TF001
Entries 1.052261e+08
TOF MULT
TOF tray

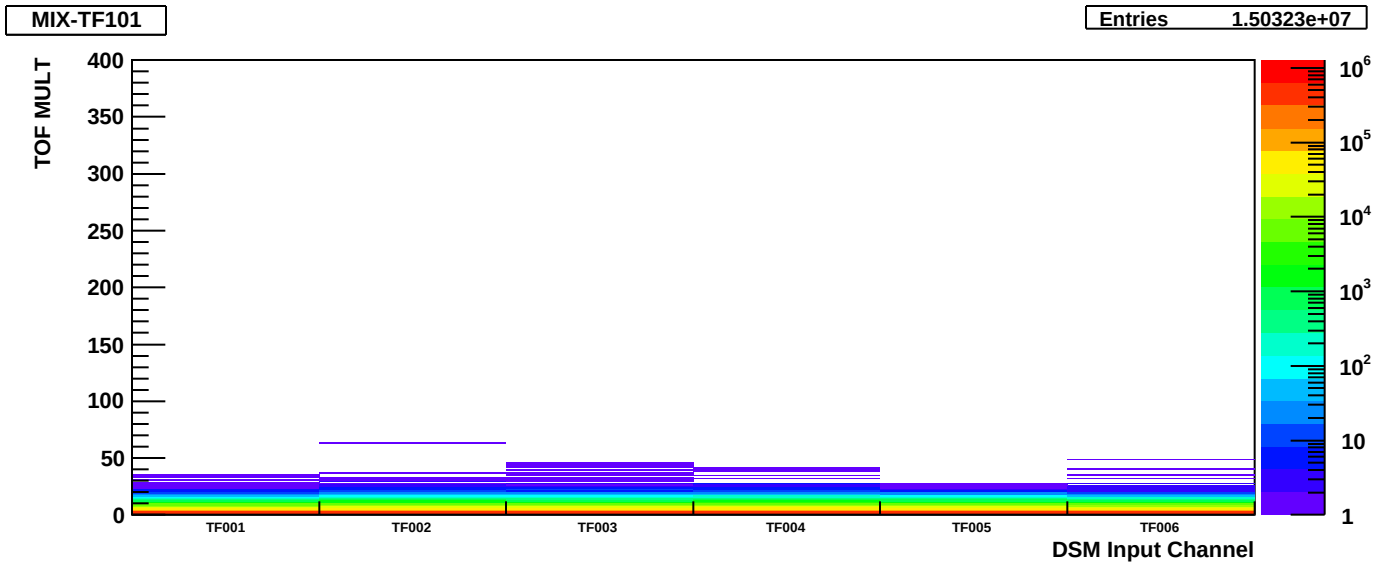

MIX-TF002
Entries 1.052261e+08
TOF MULT
TOF tray

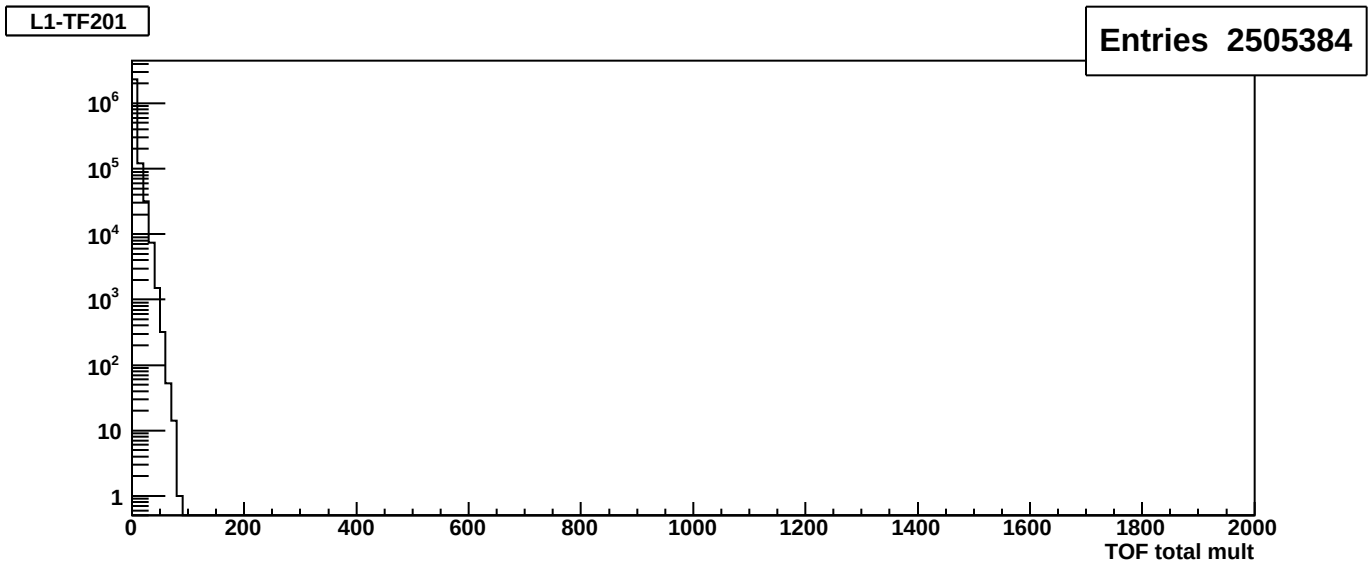

MIX-TF003
Entries 1.052261e+08
TOF MULT
TOF tray

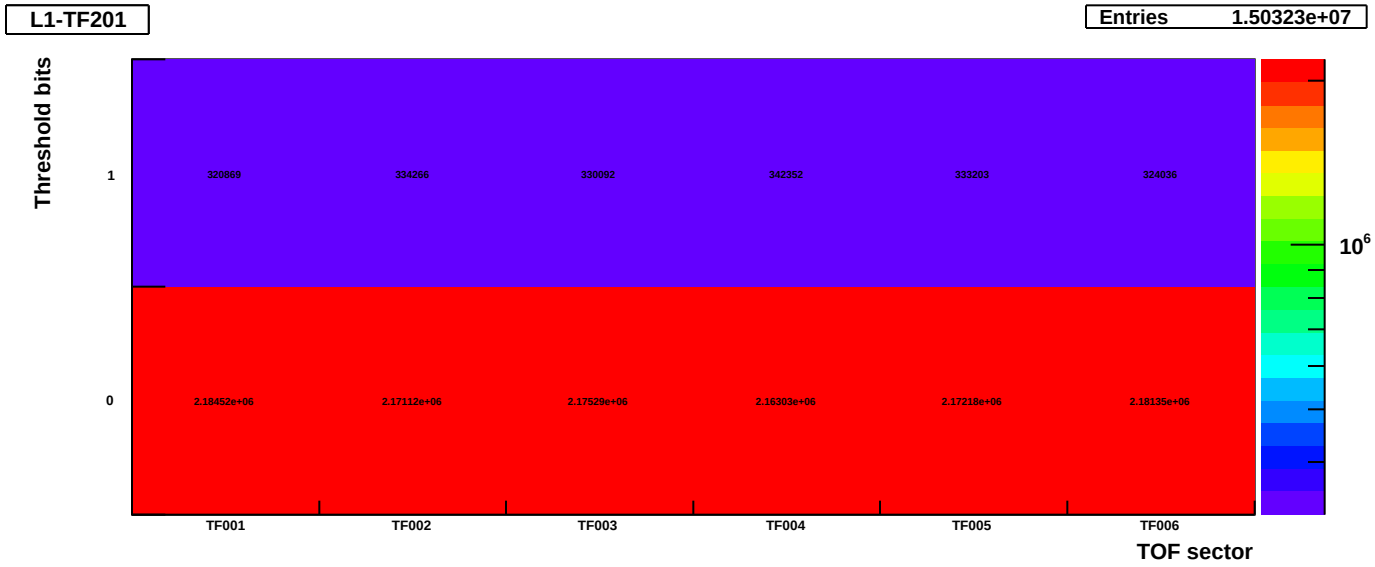

MIX-TF004
Entries 1.052261e+08
TOF MULT
TOF tray

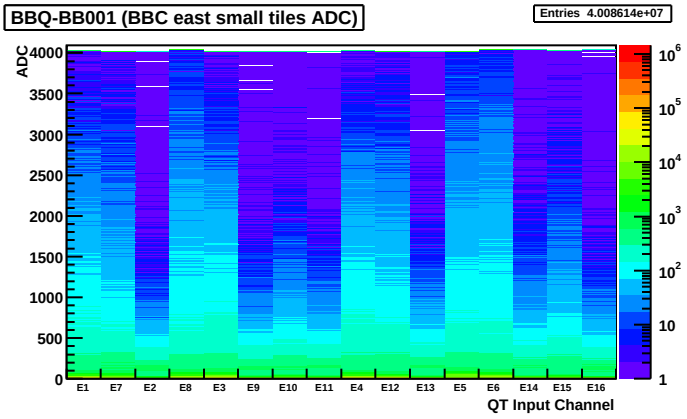

MIX-TF005
Entries 1.052261e+08
TOF MULT
TOF tray

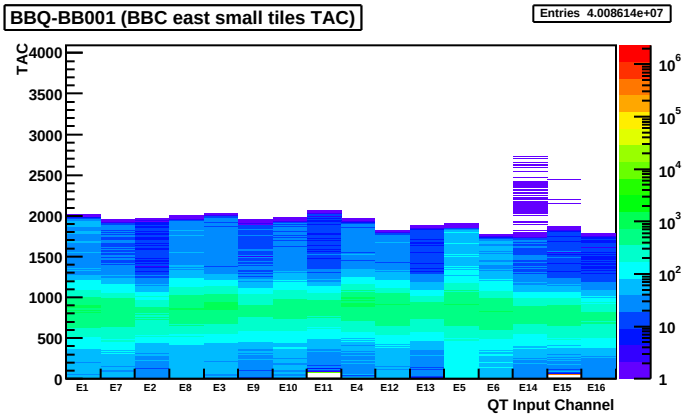

MIX-TF006
Entries 1.052261e+08
TOF MULT
TOF tray

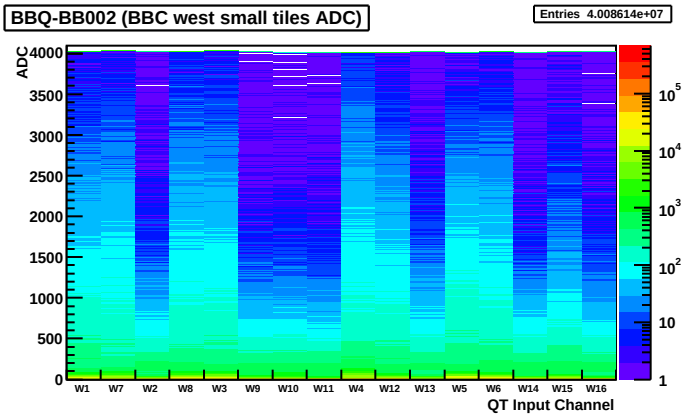

MIX-TF101
Entries 1.50323e+07
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^6
10^5
10^4
10^3
10^2
10
1

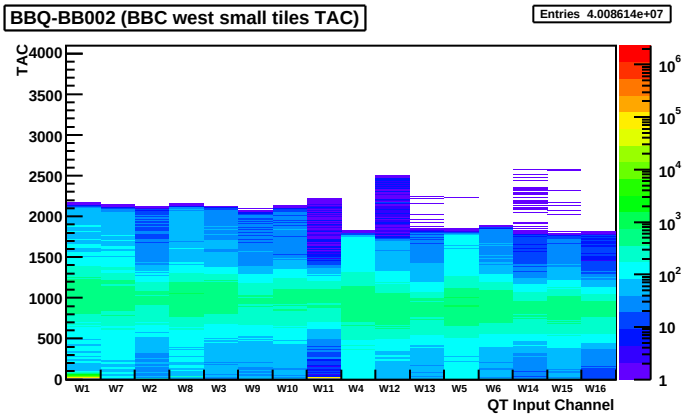

L1-TF201
Entries 2505384
10^6
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

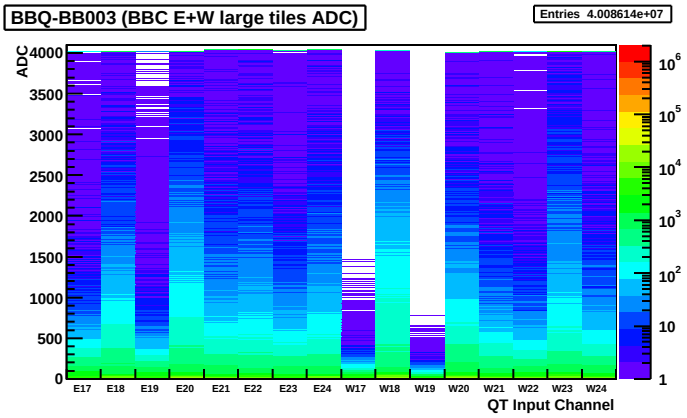

L1-TF201
Entries 1.50323e+07
Threshold bits
1
0
320869
334266
330092
342352
333203
324036
2.18452e+06
2.17112e+06
2.17529e+06
2.16303e+06
2.17218e+06
2.18135e+06
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^6

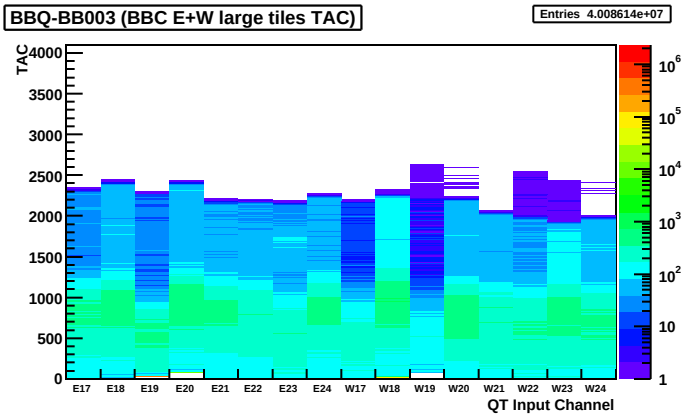

BBQ-BB001 (BBC east small tiles ADC)
Entries 4.008614e+07
ADC
QT Input Channel

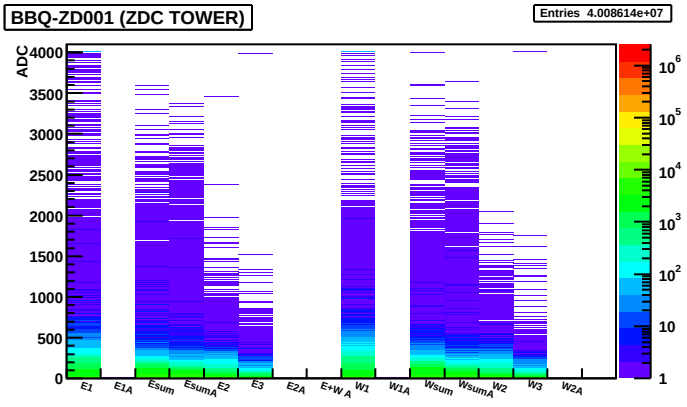

BBQ-BB001 (BBC east small tiles TAC)
Entries 4.008614e+07
TAC
QT Input Channel

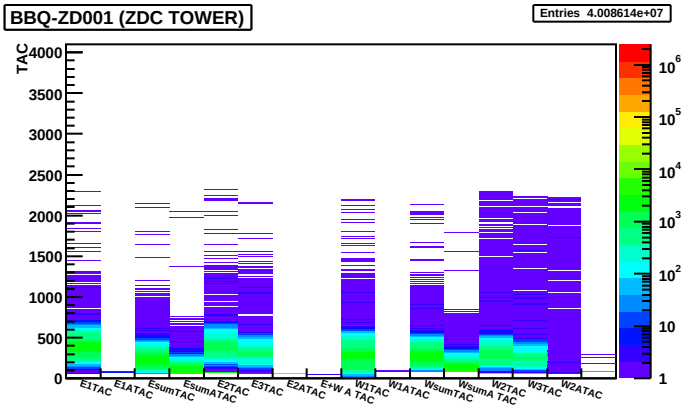

BBQ-BB002 (BBC west small tiles ADC)
Entries 4.008614e+07
ADC
QT Input Channel

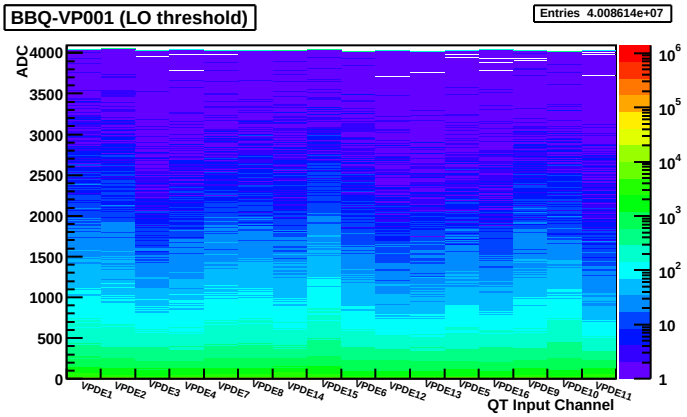

BBQ-BB002 (BBC west small tiles TAC)
Entries 4.008614e+07
TAC
QT Input Channel

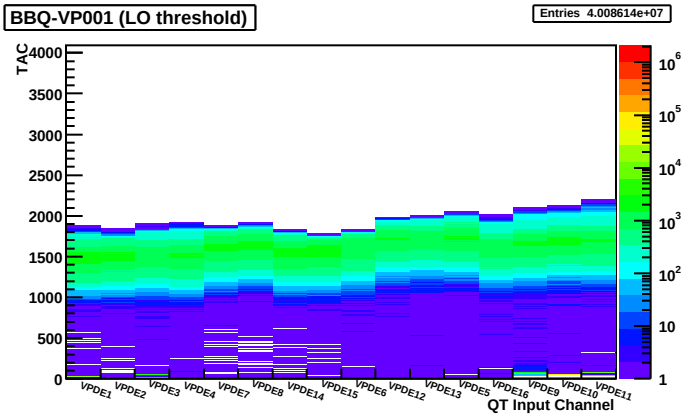

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4.008614e+07
ADC
QT Input Channel

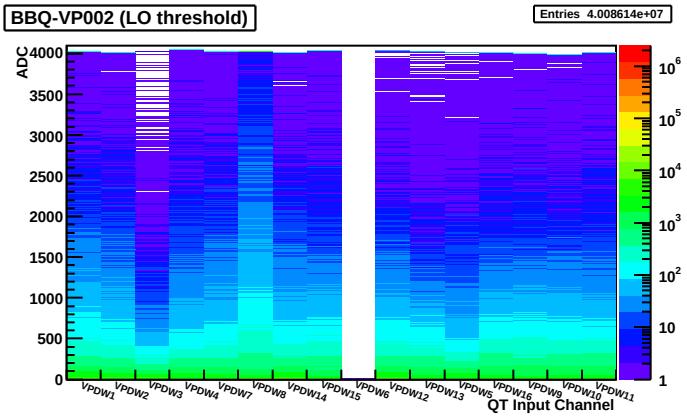

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4.008614e+07
TAC
QT Input Channel

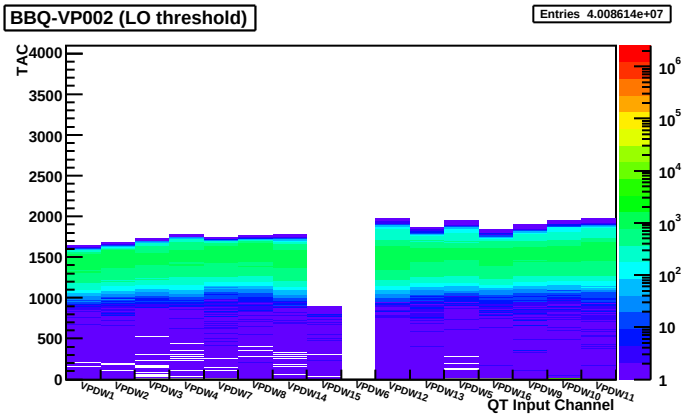

BBQ-ZD001 (ZDC TOWER)
Entries 4.008614e+07
ADC

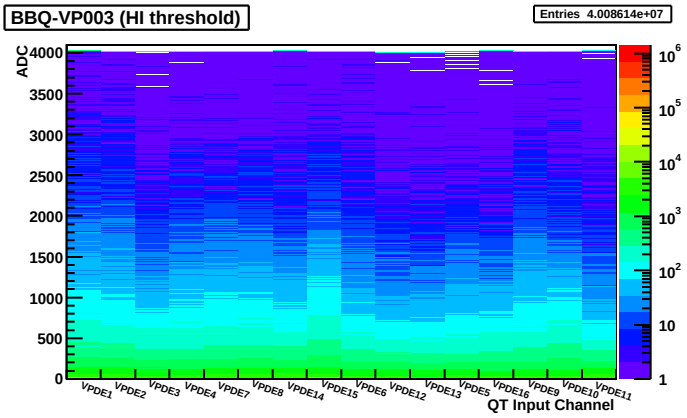

BBQ-ZD001 (ZDC TOWER)
Entries 4.008614e+07
TAC

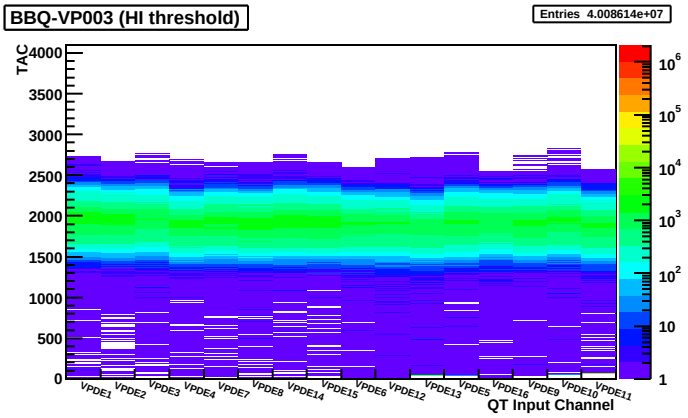

BBQ-VP001 (LO threshold)
Entries 4.008614e+07
ADC
QT Input Channel

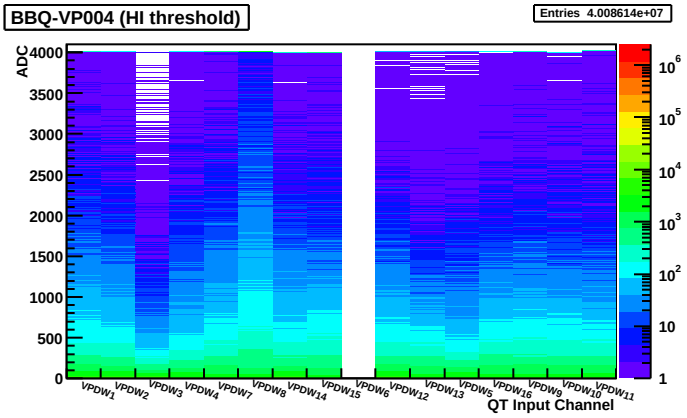

BBQ-VP001 (LO threshold)
Entries 4.008614e+07
TAC
QT Input Channel

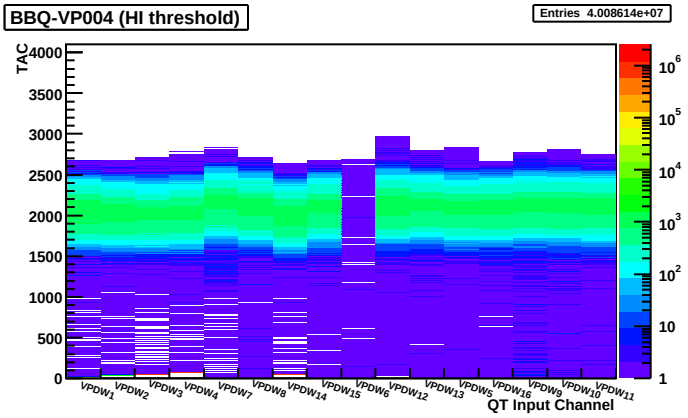

BBQ-VP002 (LO threshold)
Entries 4.008614e+07
ADC
QT Input Channel

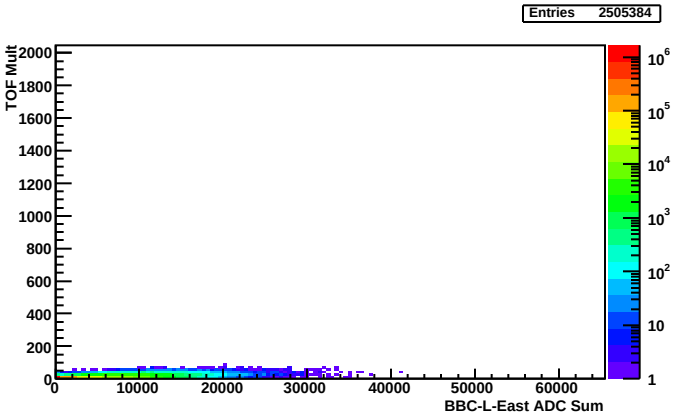

BBQ-VP002 (LO threshold)
Entries 4.008614e+07
TAC
QT Input Channel

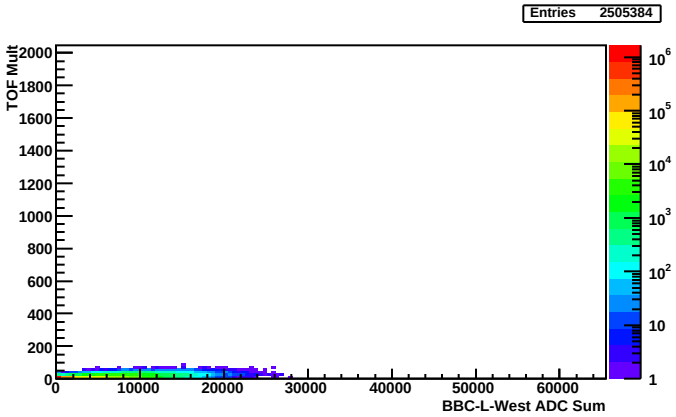

BBQ-VP003 (HI threshold)
Entries 4.008614e+07
ADC
QT Input Channel

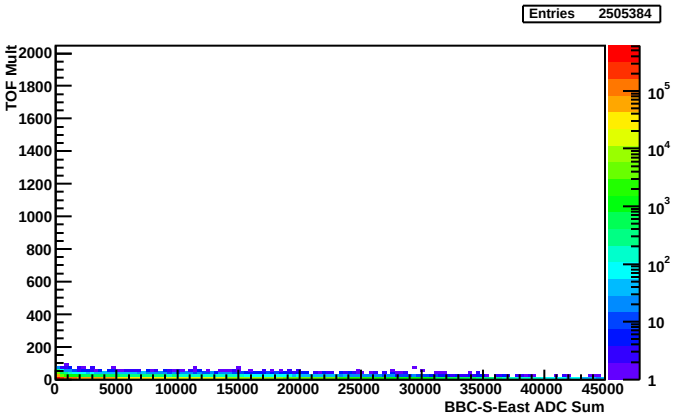

BBQ-VP003 (HI threshold)
Entries 4.008614e+07
TAC
QT Input Channel

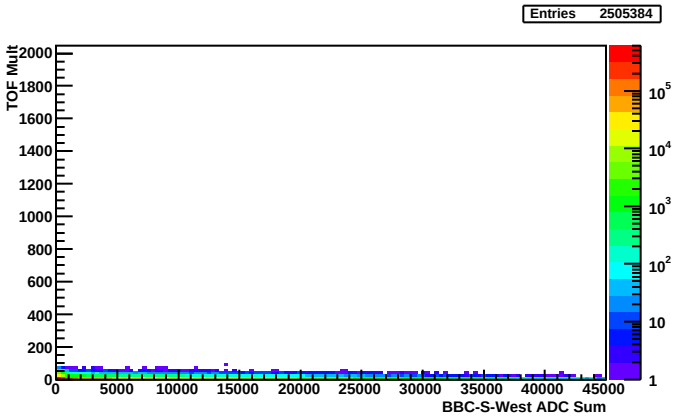

BBQ-VP004 (HI threshold)
Entries 4.008614e+07
ADC
QT Input Channel

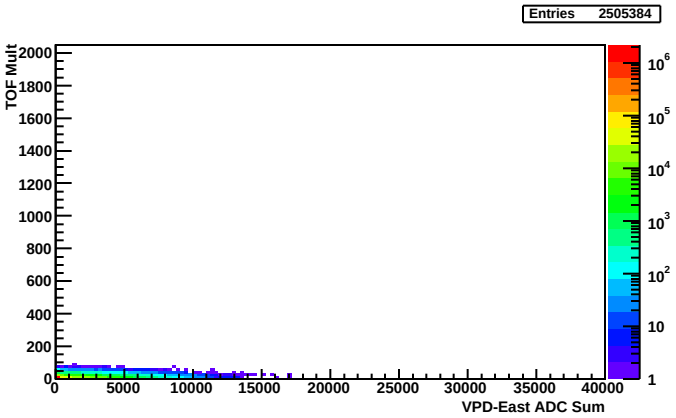

BBQ-VP004 (HI threshold)
Entries 4.008614e+07
TAC
QT Input Channel

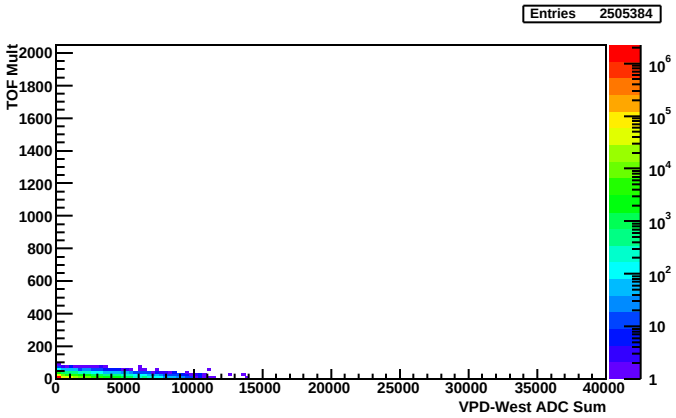

Entries 2505384
TOF Mult
BBC-L-East ADC Sum

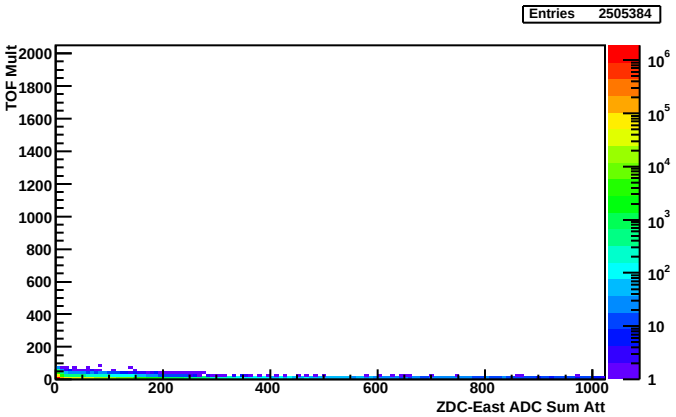

Entries 2505384
TOF Mult
BBC-L-West ADC Sum

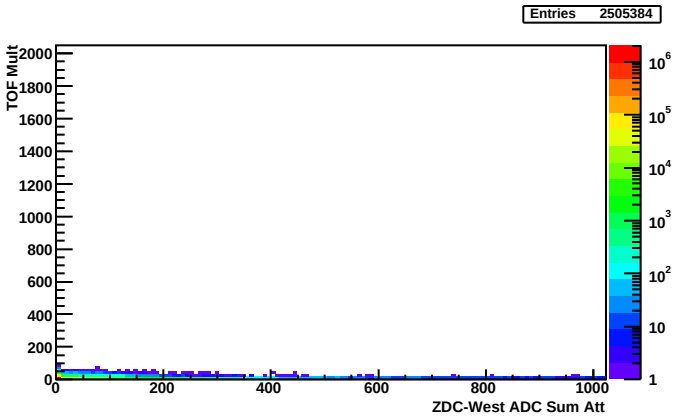

Entries 2505384
TOF Mult
BBC-S-East ADC Sum

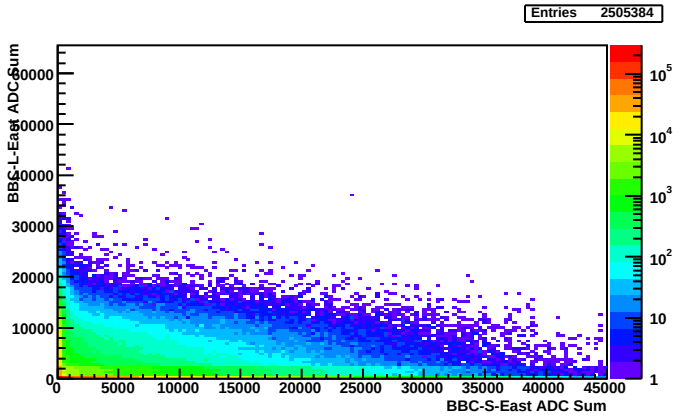

Entries 2505384
TOF Mult
BBC-S-West ADC Sum

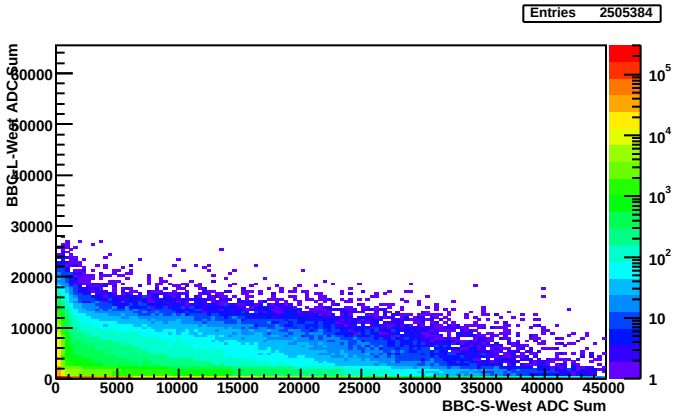

Entries 2505384
TOF Mult
VPD-East ADC Sum

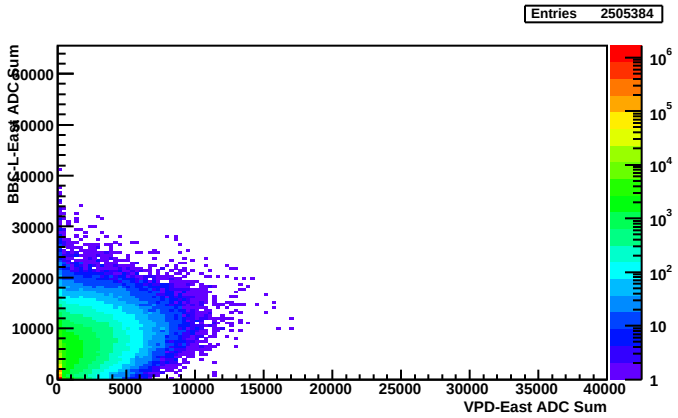

Entries 2505384
TOF Mult
VPD-West ADC Sum

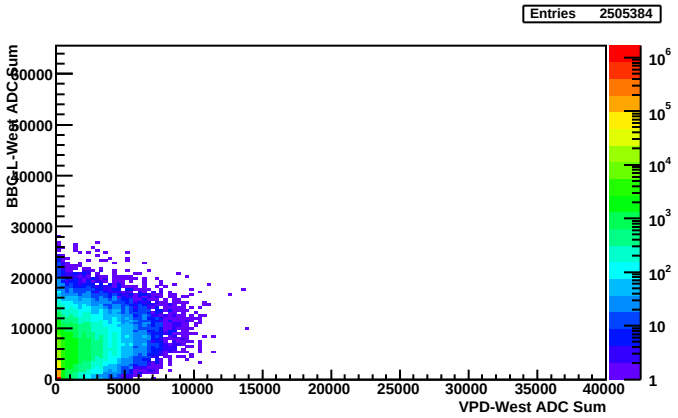

Entries 2505384
TOF Mult
ZDC-East ADC Sum Att

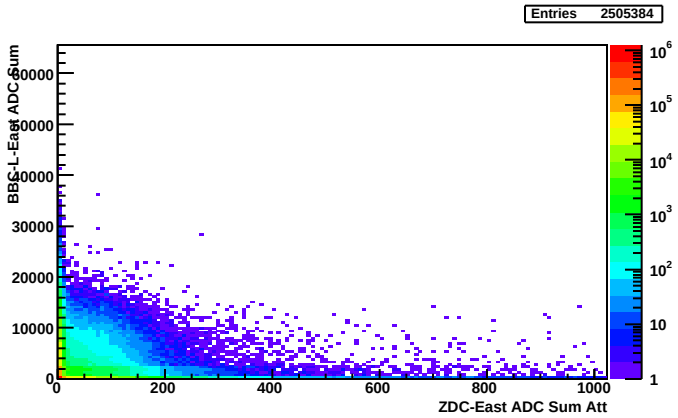

Entries 2505384
TOF Mult
ZDC-West ADC Sum Att

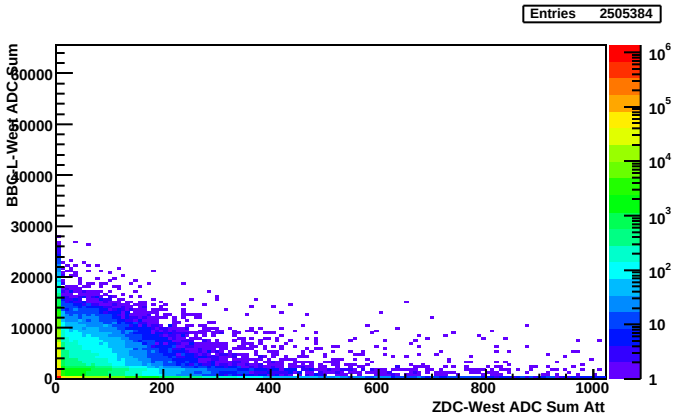

Entries 2505384
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 2505384
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 2505384
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 2505384
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 2505384
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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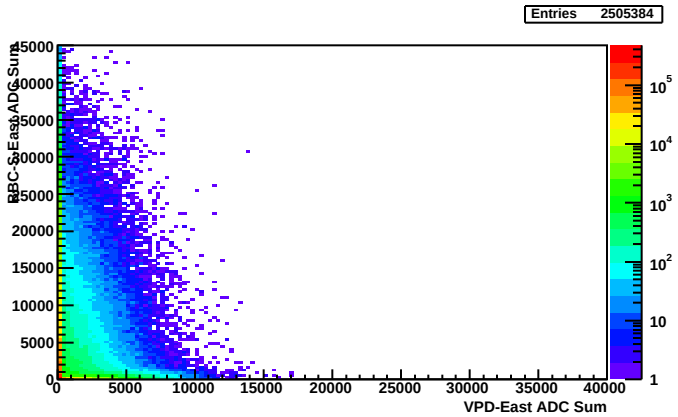
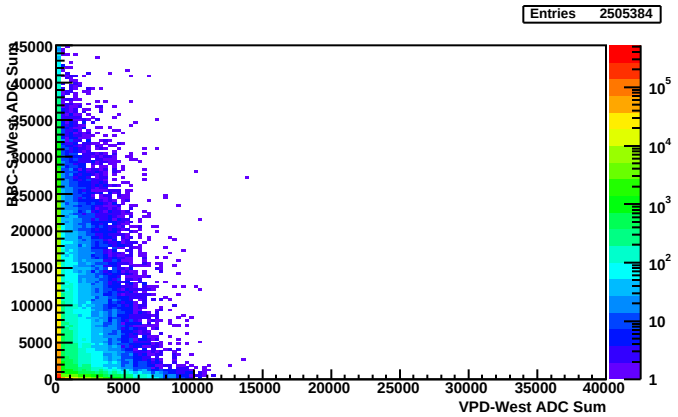
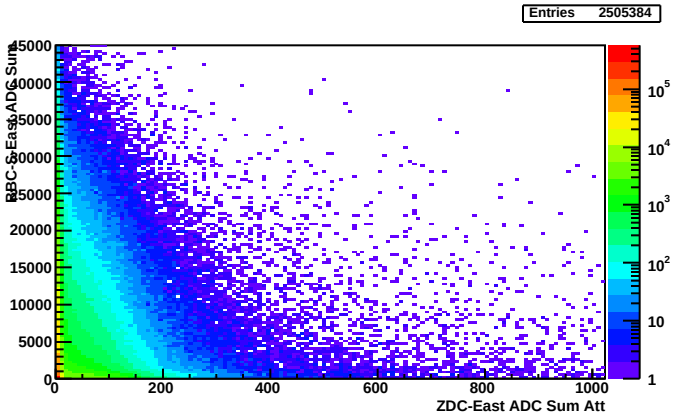
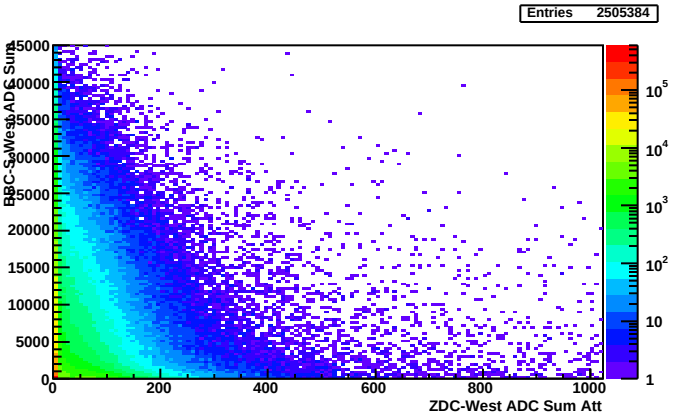
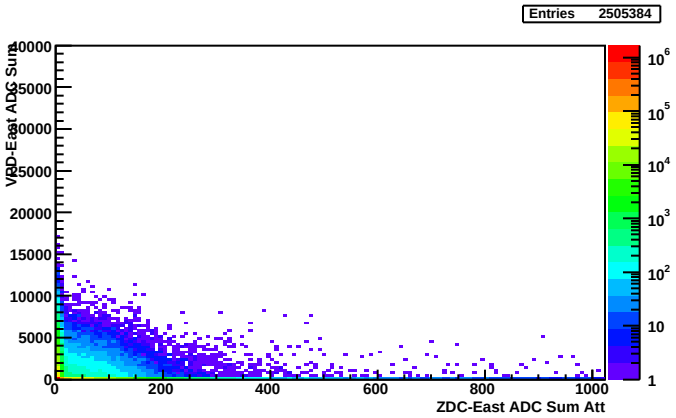
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

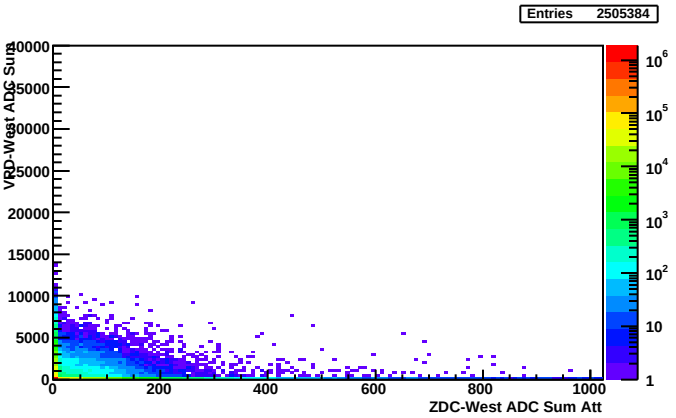

Entries 2505384
BBC-S-East ADC Sum
VPD-East ADC Sum

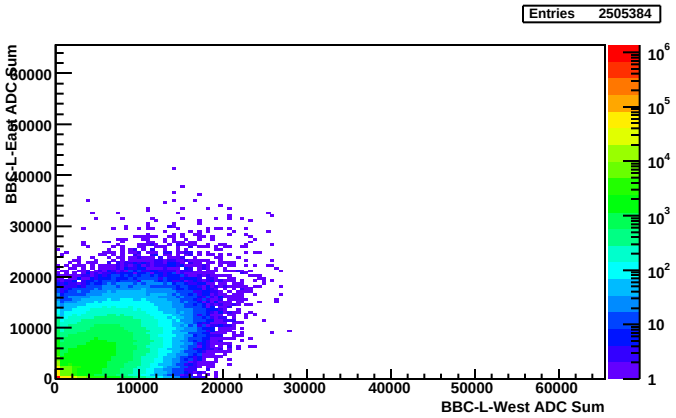

Entries 2505384
BBC-S-West ADC Sum
VPD-West ADC Sum

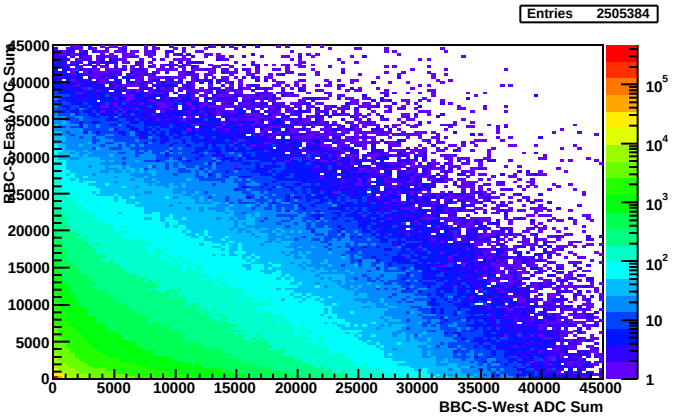

Entries 2505384
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 2505384
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 2505384
VPD-East ADC Sum
ZDC-East ADC Sum Att


Entries 2505384
VPD-West ADC Sum
ZDC-West ADC Sum Att


Entries 2505384
BBC-L-East ADC Sum
BBC-L-West ADC Sum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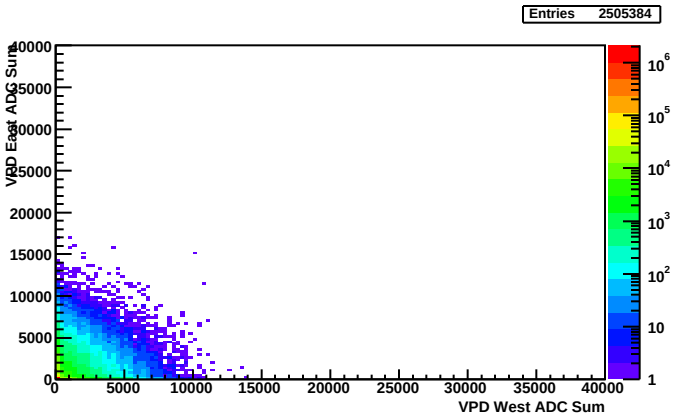
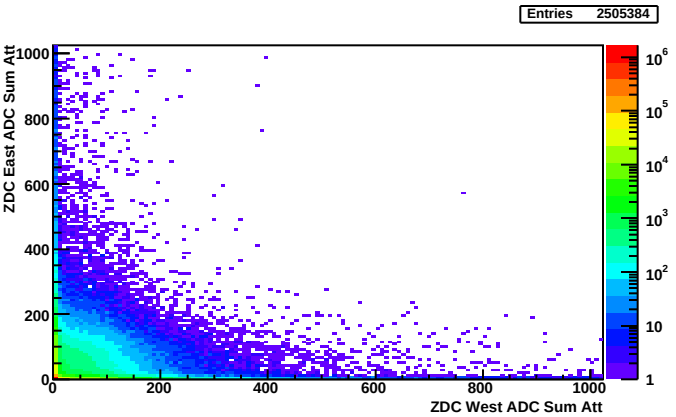
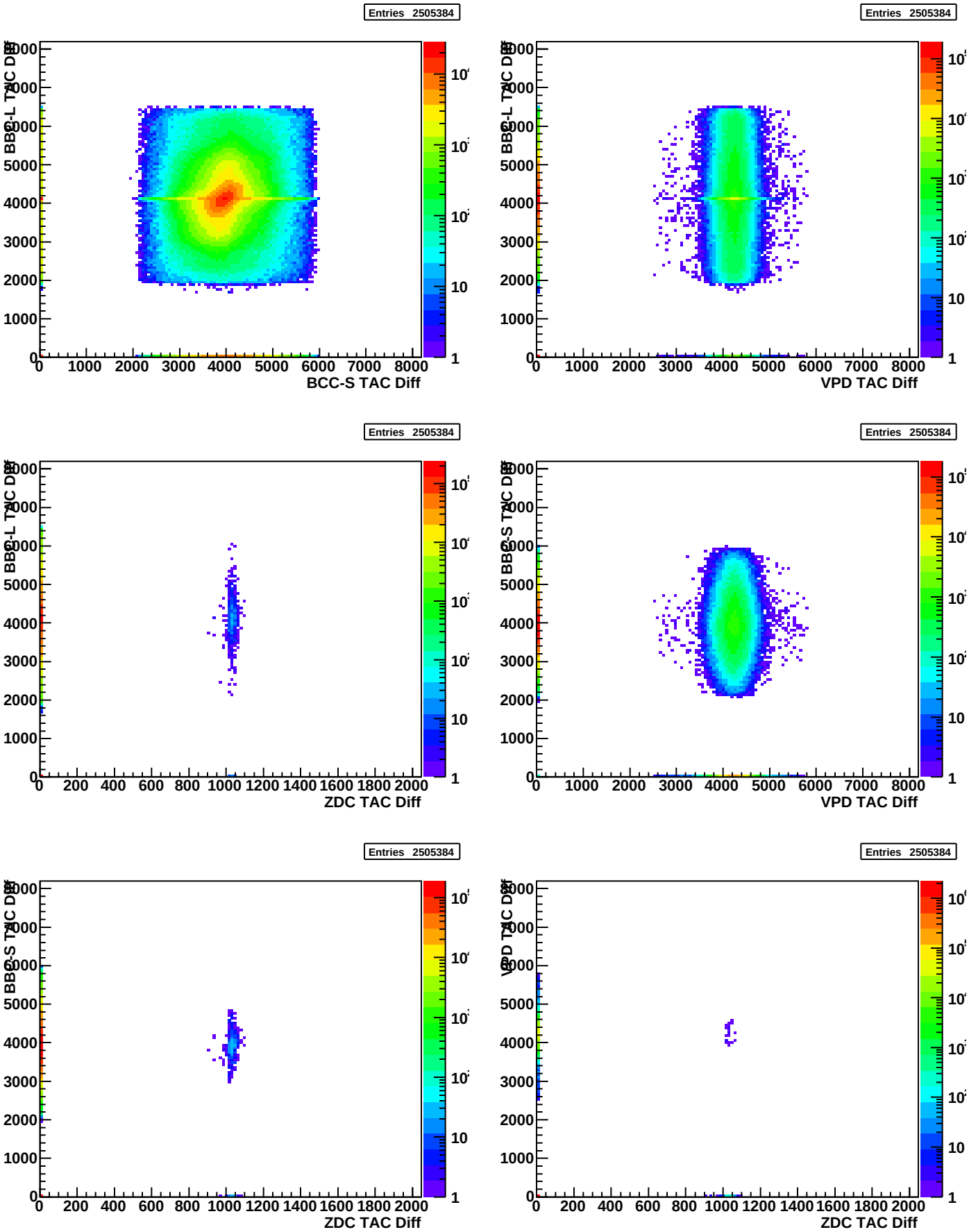
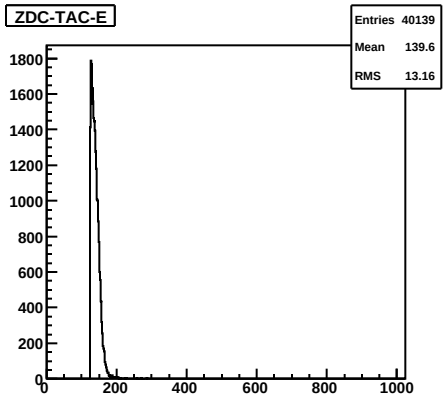
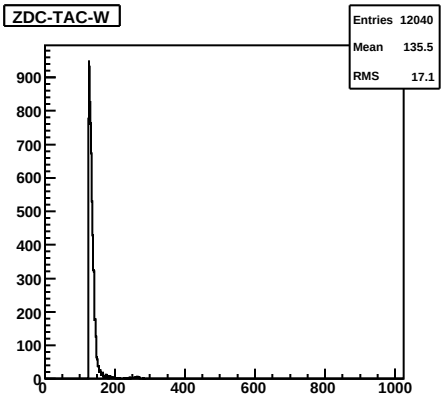
BBC-S-East ADC Sum
BBC-S-West ADC Sum

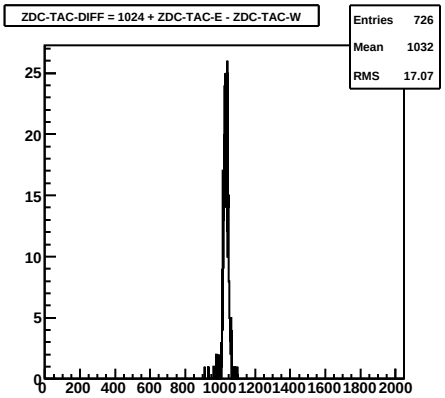

Entries 2505384
VPD East ADC Sum
VPD West ADC Sum

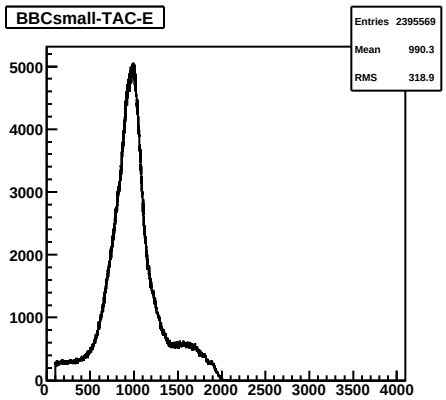

Entries 2505384
ZDC East ADC Sum Att
ZDC West ADC Sum Att

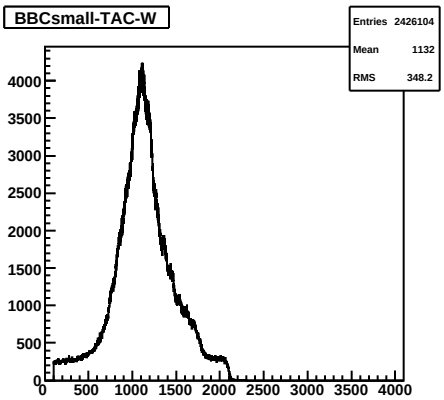

Entries 2505384
BBC-L TAC Diff
BCC-S TAC Diff
Entries 2505384
BBC-L TAC Diff
VPD TAC Diff
Entries 2505384
BBC-L TAC Diff
ZDC TAC Diff
Entries 2505384
BBC-S TAC Diff
VPD TAC Diff
Entries 2505384
BBC-S TAC Diff
ZDC TAC Diff
Entries 2505384
VPD TAC Diff
ZDC TAC Diff

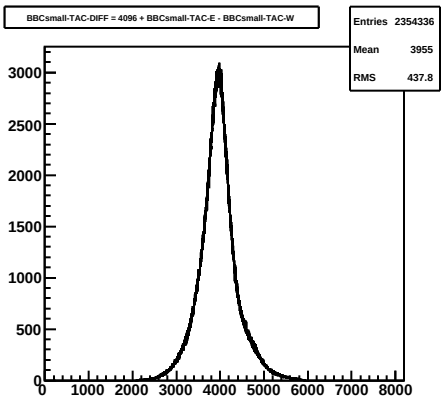

ZDC-TAC-E
Entries 40139
Mean 139.6
RMS 13.16

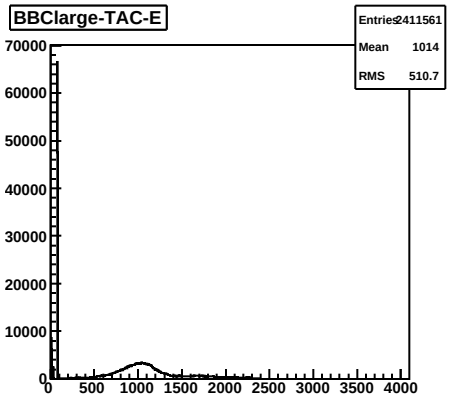

ZDC-TAC-W
Entries 12040
Mean 135.5
RMS 17.1

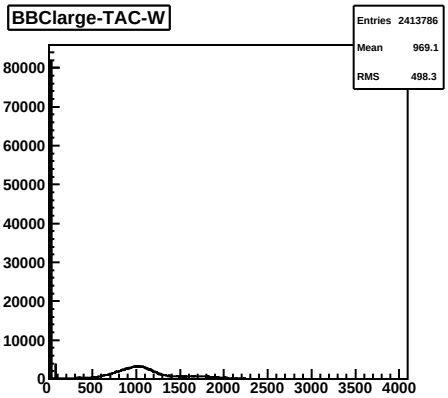

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 726
Mean 1032
RMS 17.07

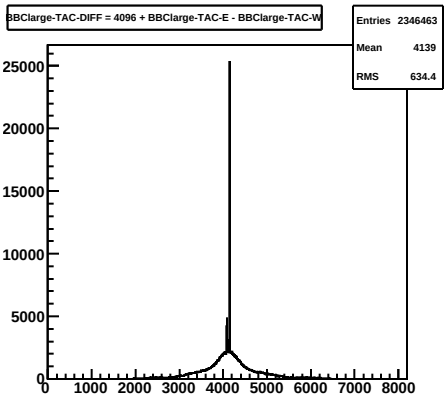

BBCsmall-TAC-E
Entries 2395569
Mean 990.3
RMS 318.9

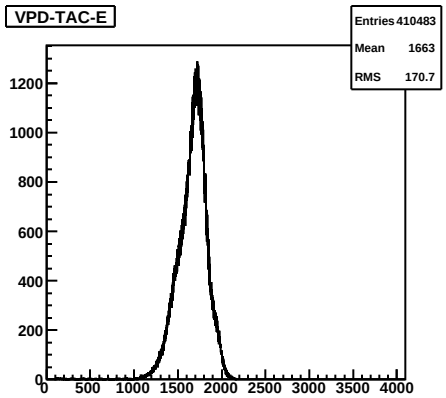

BBCsmall-TAC-W
Entries 2426104
Mean 1132
RMS 348.2

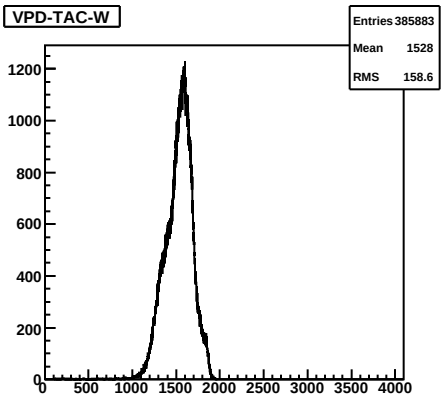

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 2354336
Mean 3955
RMS 437.8

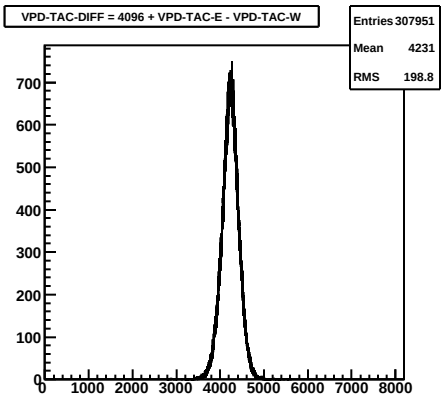

BBClarge-TAC-E
Entries 2411561
Mean 1014
RMS 510.7

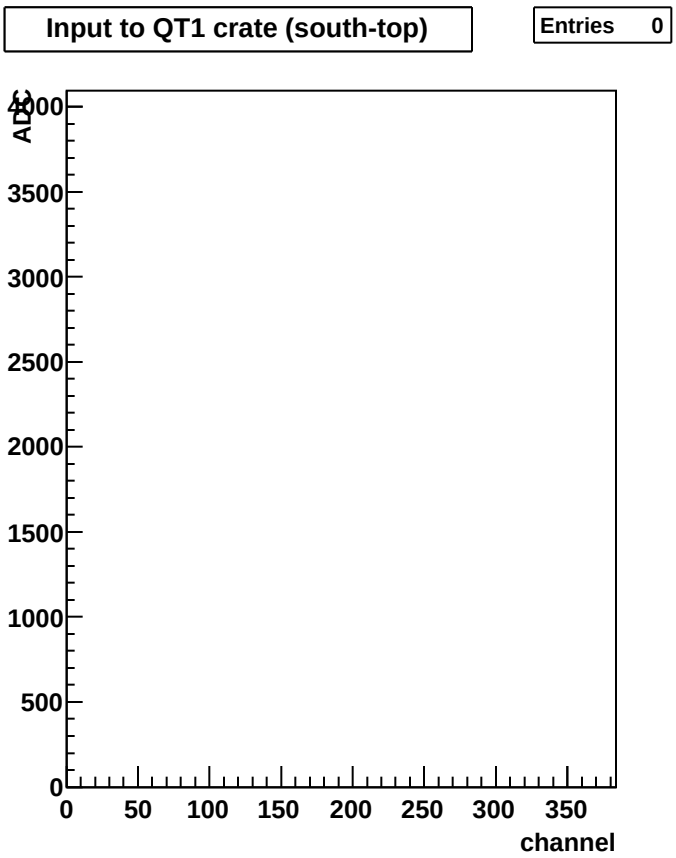

BBClarge-TAC-W
Entries 2413786
Mean 969.1
RMS 498.3

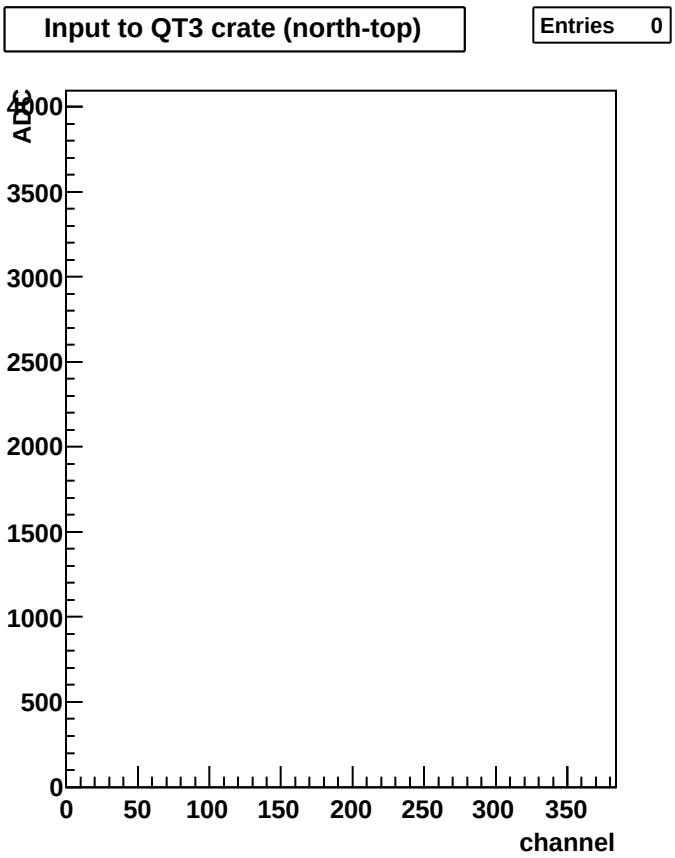

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 2346463
Mean 4139
RMS 634.4

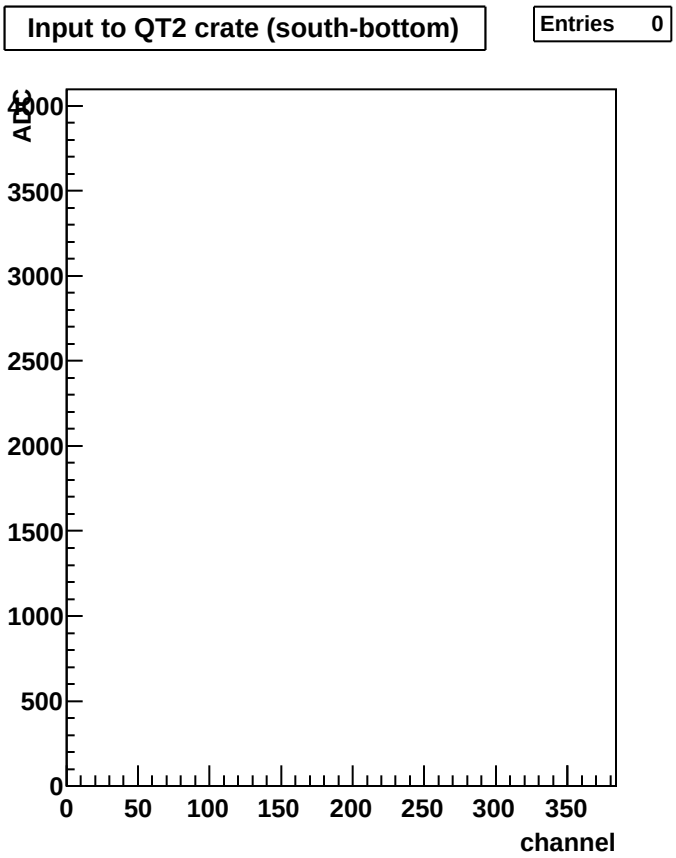

VPD-TAC-E
Entries 410483
Mean 1663
RMS 170.7

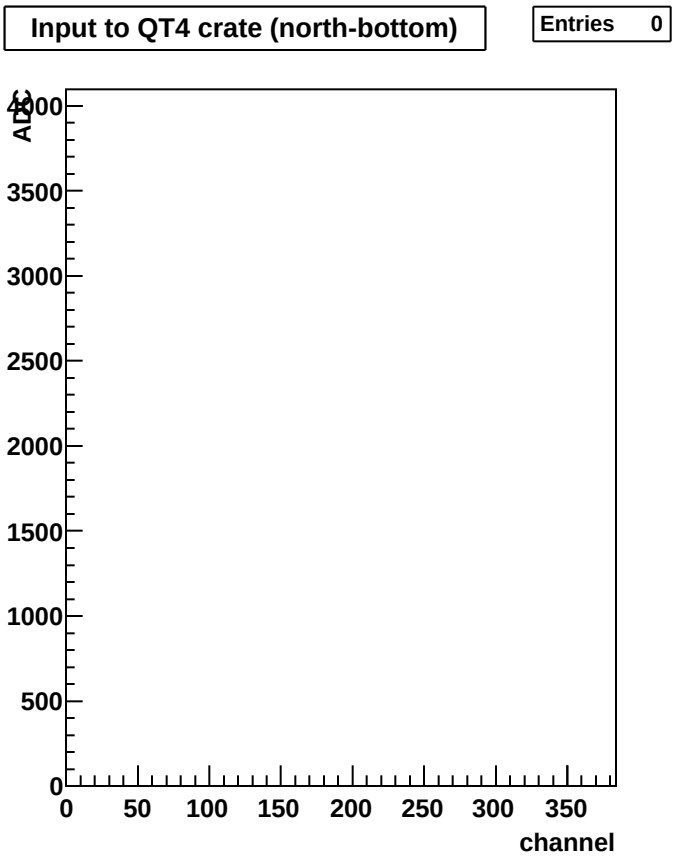

VPD-TAC-W
Entries 385883
Mean 1528
RMS 158.6

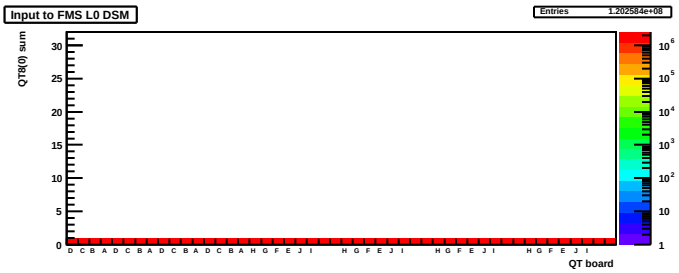

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 307951
Mean 4231
RMS 198.8

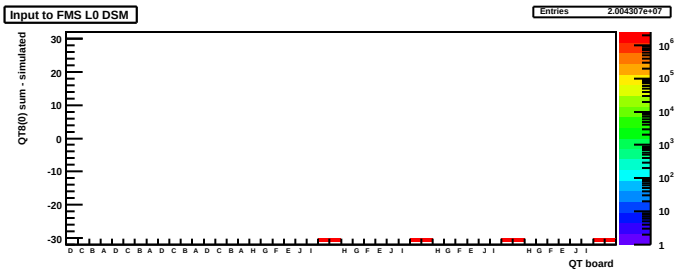

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

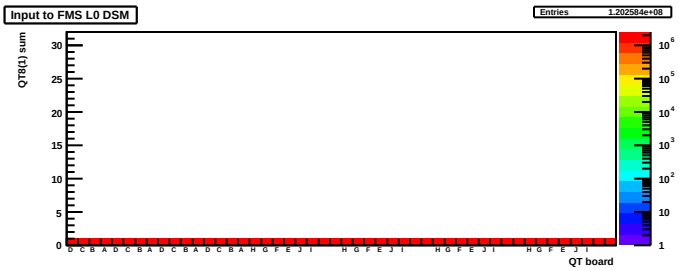

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

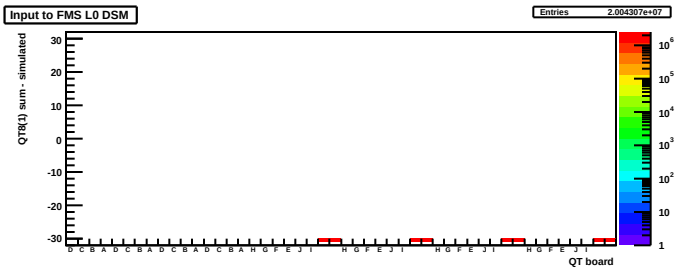

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

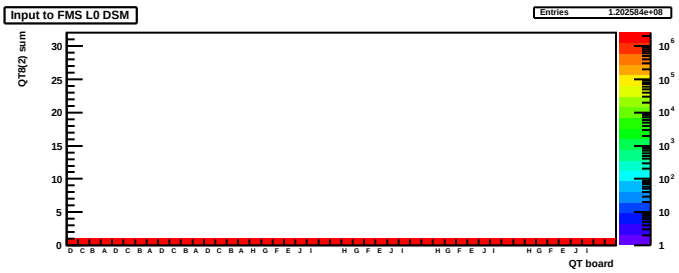

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

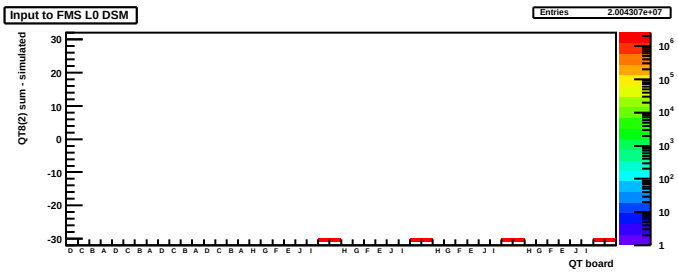

Input to FMS L0 DSM
Entries 1.202584e+08
QT8(0) sum
QT board

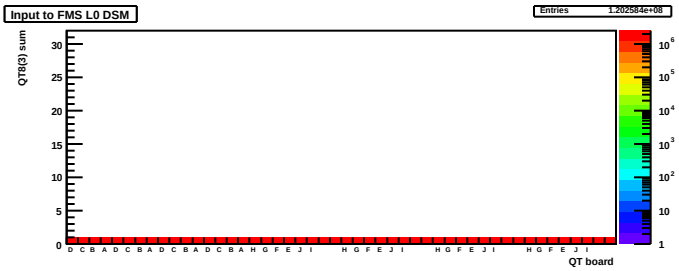

Input to FMS L0 DSM
Entries 2.004307e+07
QT8(0) sum - simulated
QT board

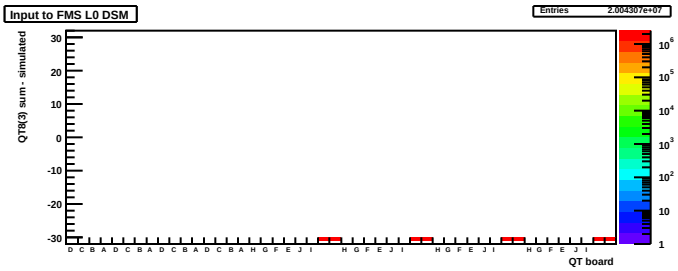

Input to FMS L0 DSM
Entries 1.202584e+08
QT8(1) sum
QT board

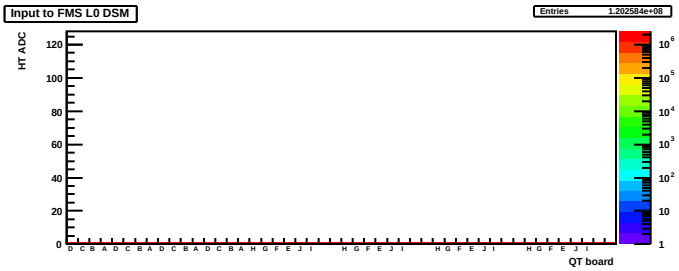

Input to FMS L0 DSM
Entries 2.004307e+07
QT8(1) sum - simulated
QT board

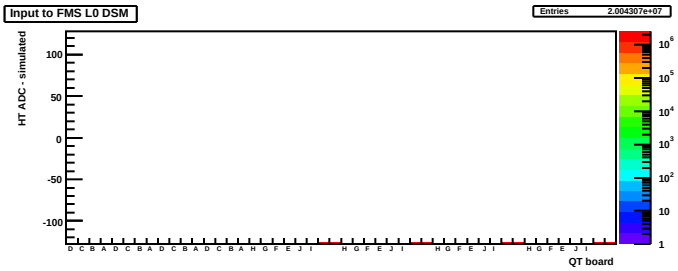

Input to FMS L0 DSM
Entries 1.202584e+08
QT8(2) sum
QT board

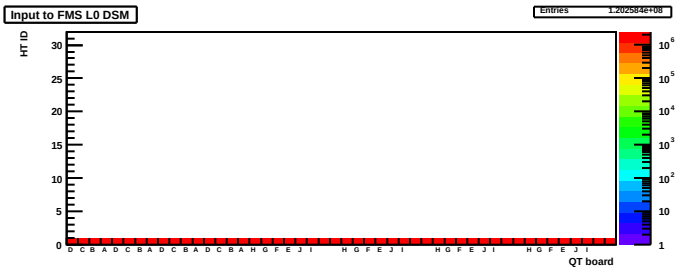

Input to FMS L0 DSM
Entries 2.004307e+07
QT8(2) sum - simulated
QT board

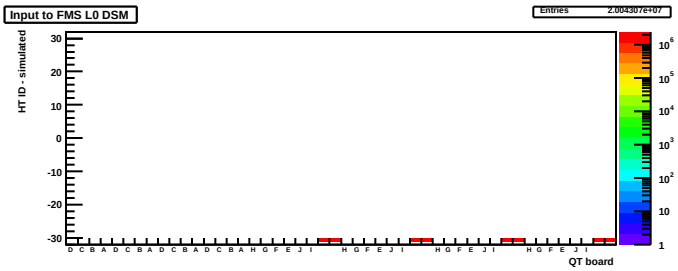

Input to FMS L0 DSM
Entries 1.202584e+08
QT8(3) sum
QT board

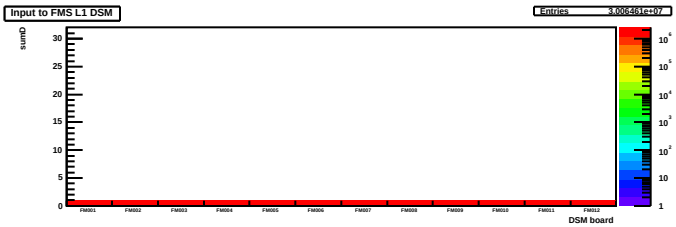

Input to FMS L0 DSM
Entries 2.004307e+07
QT8(3) sum - simulated
QT board

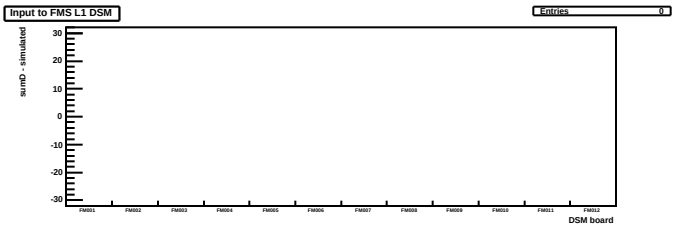

Input to FMS L0 DSM
Entries 1.202584e+08
HT ADC
QT board

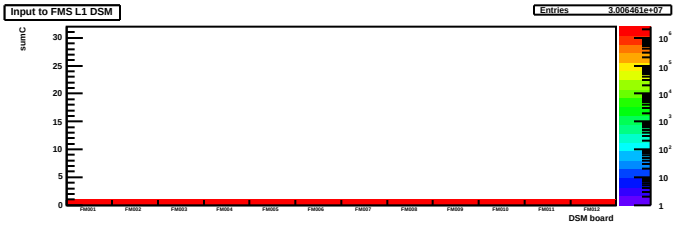

Input to FMS L0 DSM
Entries 2.004307e+07
HT ADC - simulated
QT board

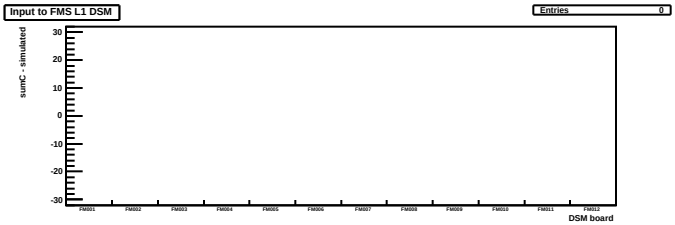

Input to FMS L0 DSM
Entries 1.202584e+08
HT ID
QT board

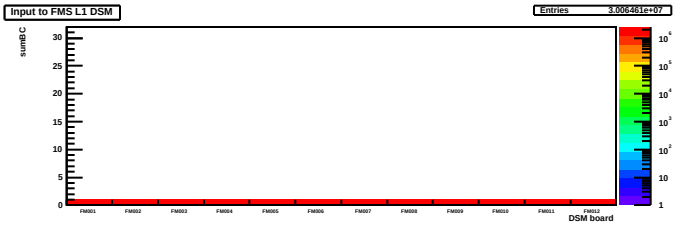

Input to FMS L0 DSM
Entries 2.004307e+07
HT ID - simulated
QT board

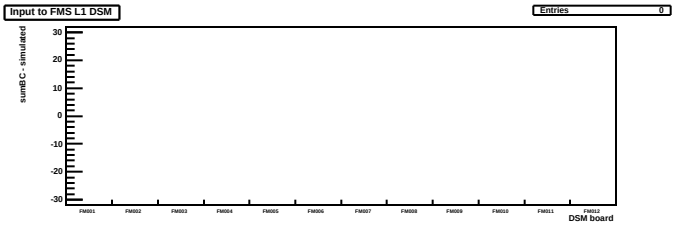

Input to FMS L1 DSM
Entries 3.006461e+07
sumD
DSM board

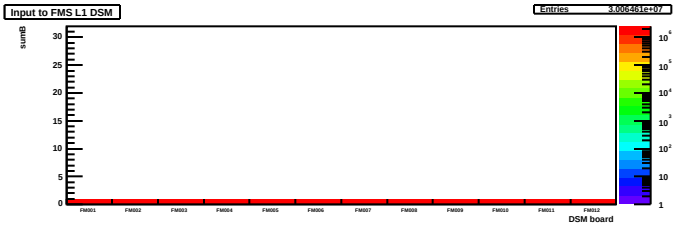

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

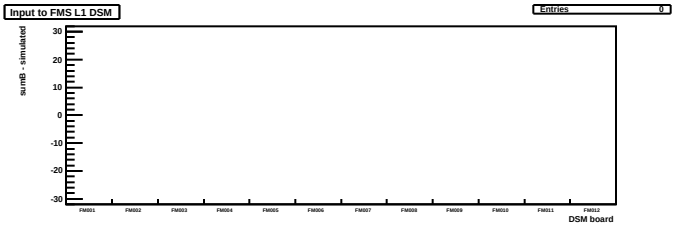

Input to FMS L1 DSM
Entries 3.006461e+07
sumC
DSM board

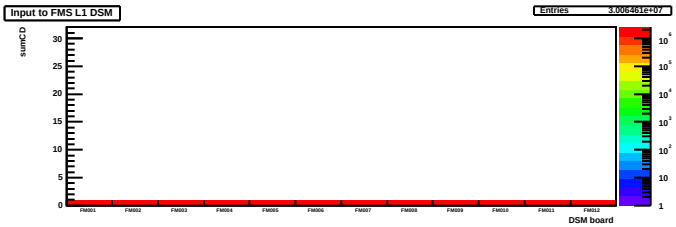

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

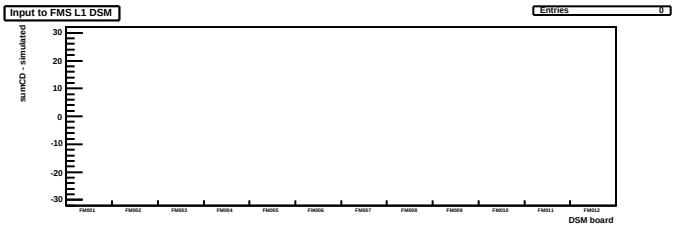

Input to FMS L1 DSM
Entries 3.006461e+07
sumBC
DSM board

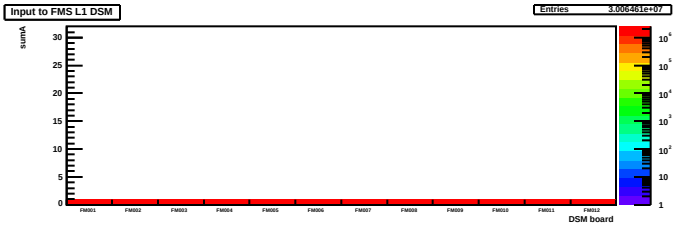

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

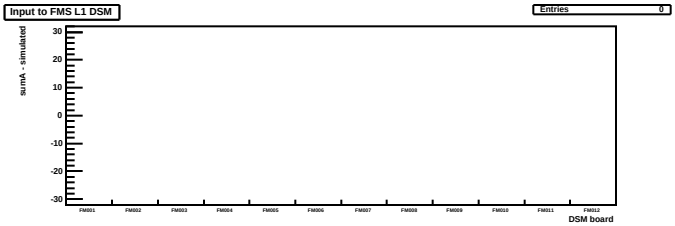

Input to FMS L1 DSM
Entries 3.006461e+07
sumB
DSM board

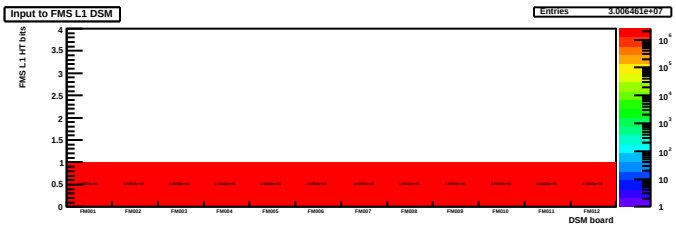

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

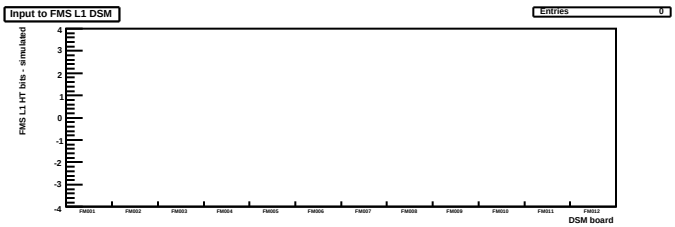

Input to FMS L1 DSM
Entries 3.006461e+07
sumCD
DSM board

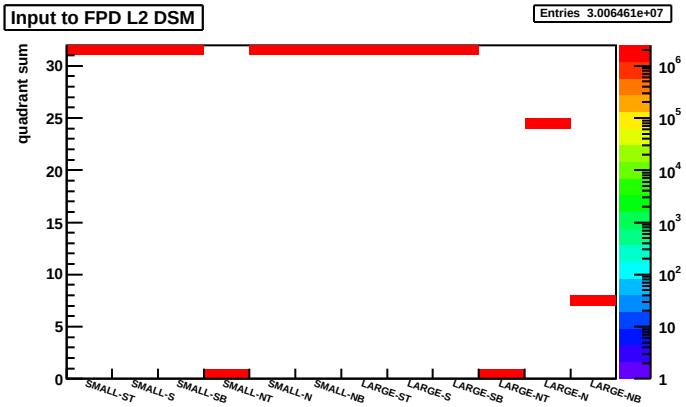

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

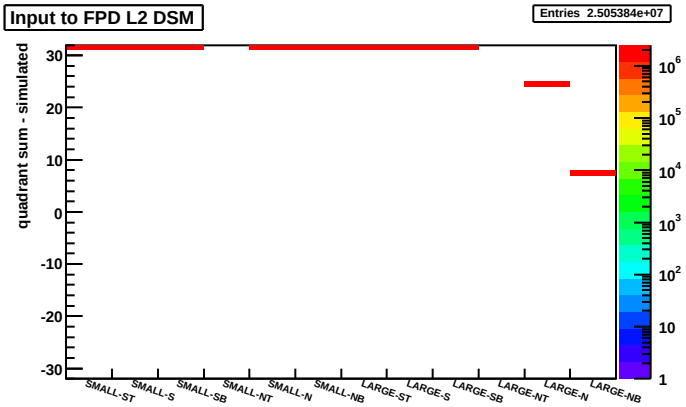

Input to FMS L1 DSM
Entries 3.006461e+07
sumA
DSM board

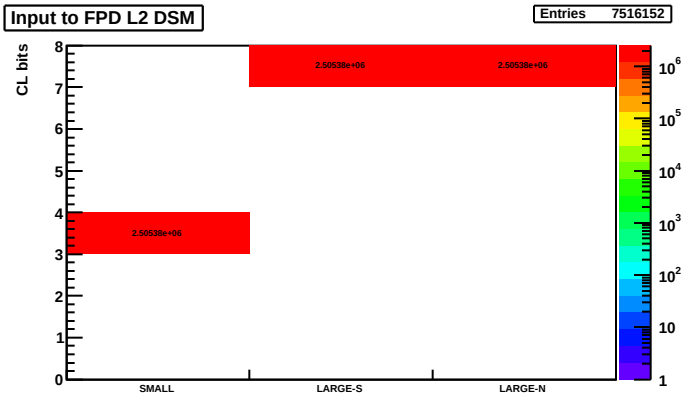

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

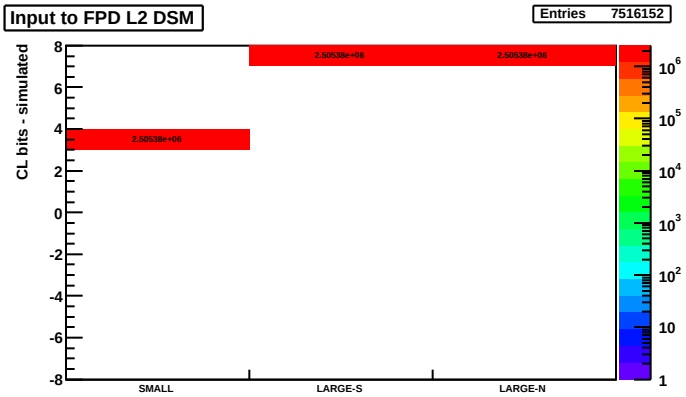

Input to FMS L1 DSM
Entries 3.006461e+07
FMS L1 HT bits
DSM board

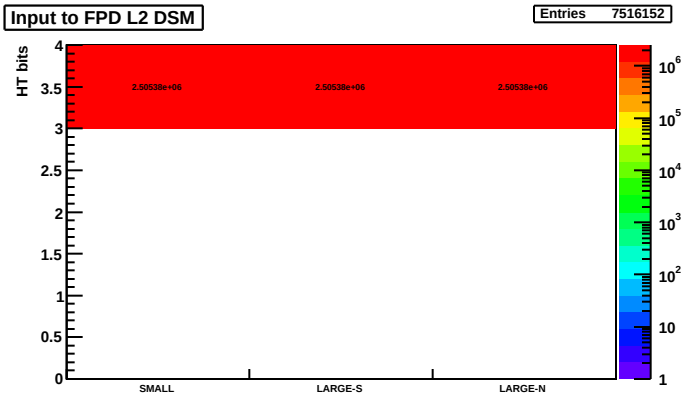

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

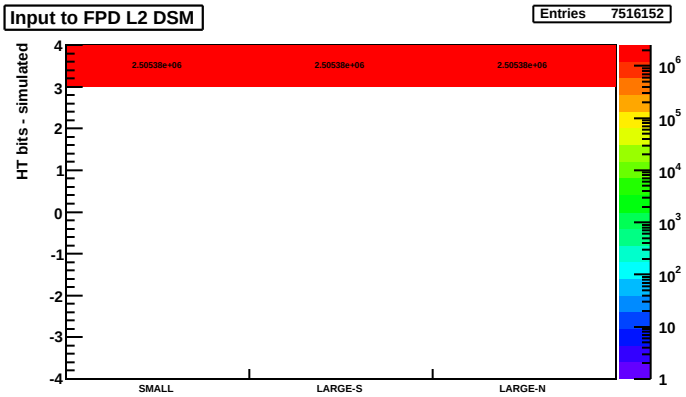

Input to FPD L2 DSM
Entries 3.006461e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

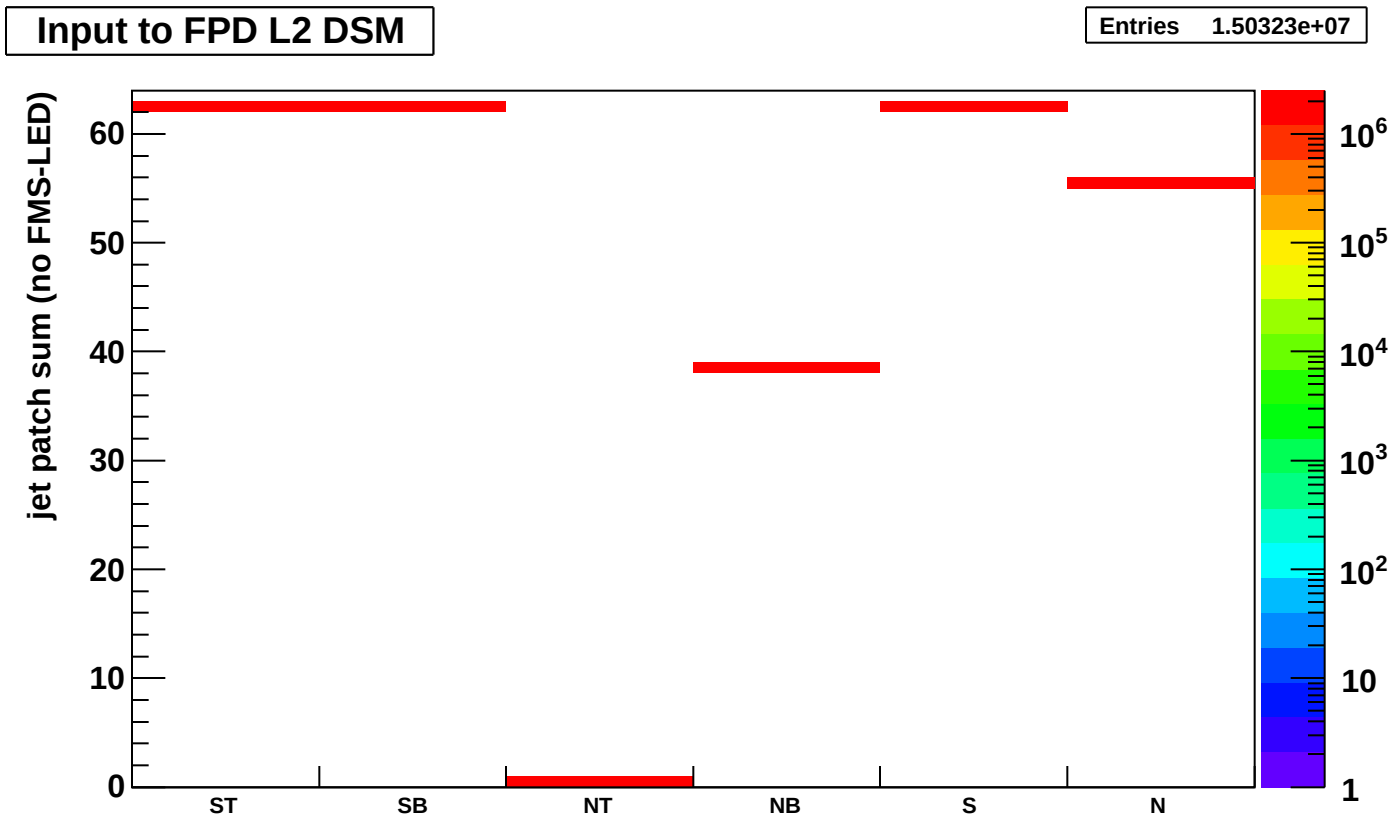

Input to FPD L2 DSM
Entries 2.505384e+07
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

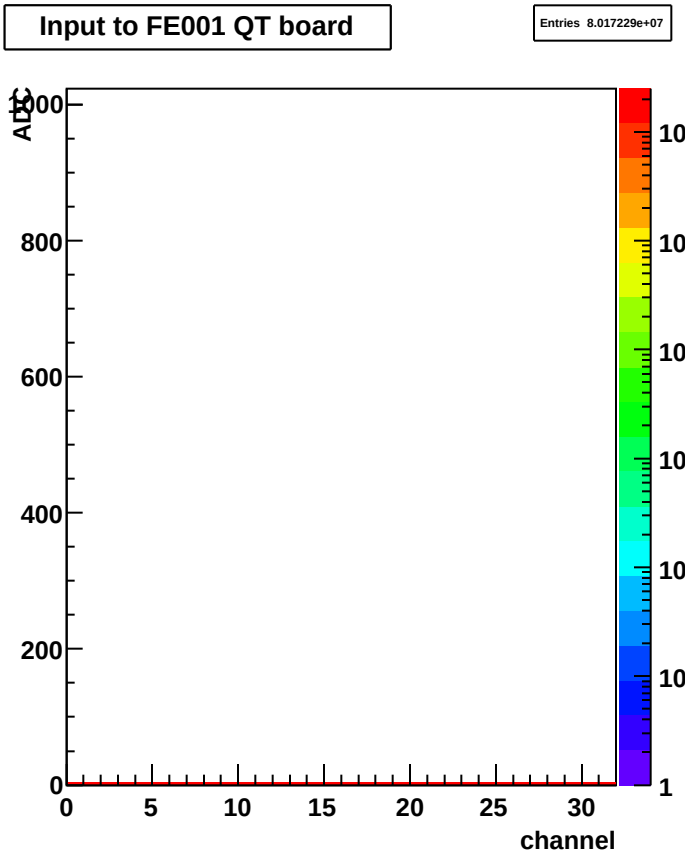

Input to FPD L2 DSM
Entries 7516152
CL bits
2.50538e+06
SMALL
LARGE-S
LARGE-N

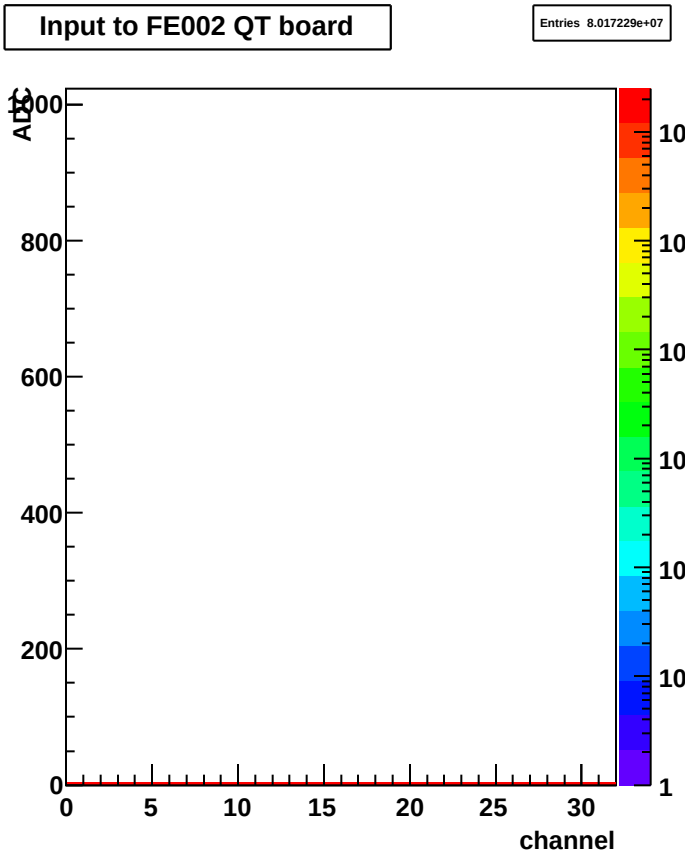

Input to FPD L2 DSM
Entries 7516152
CL bits - simulated
2.50538e+06
SMALL
LARGE-S
LARGE-N

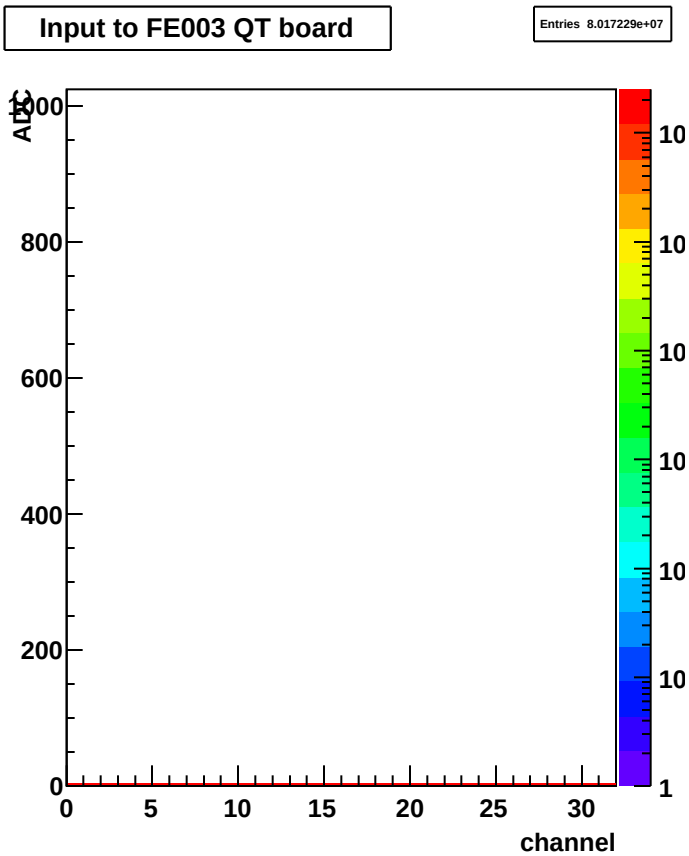

Input to FPD L2 DSM
Entries 7516152
HT bits
2.50538e+06
SMALL
LARGE-S
LARGE-N

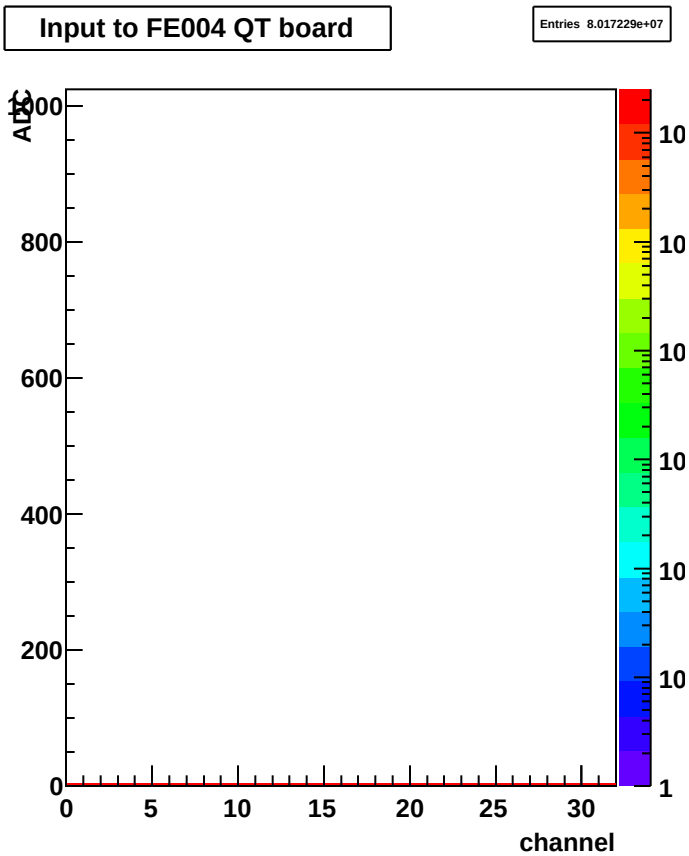

Input to FPD L2 DSM
Entries 7516152
HT bits - simulated
2.50538e+06
SMALL
LARGE-S
LARGE-N

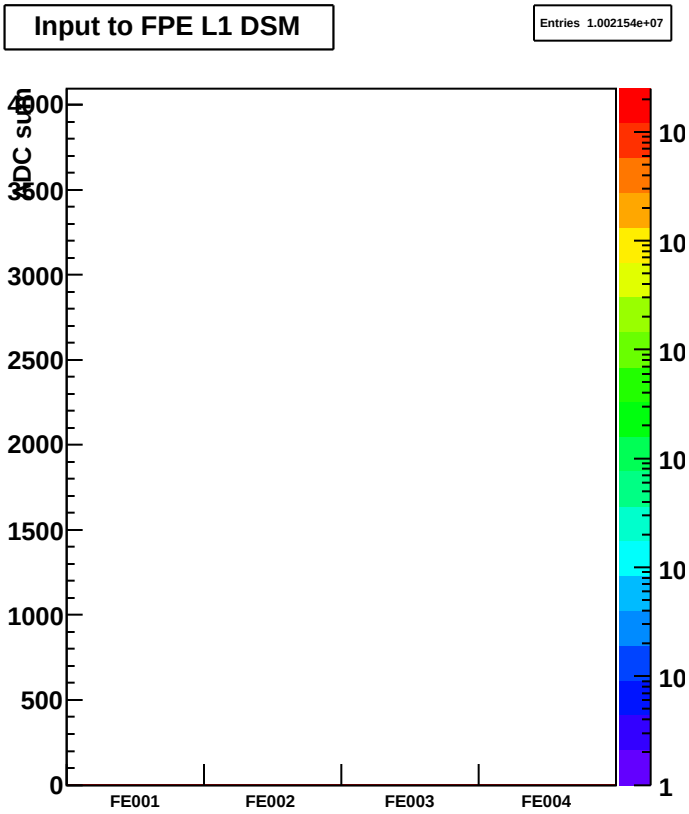

Input to FPD L2 DSM
Entries 1.50323e+07
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6

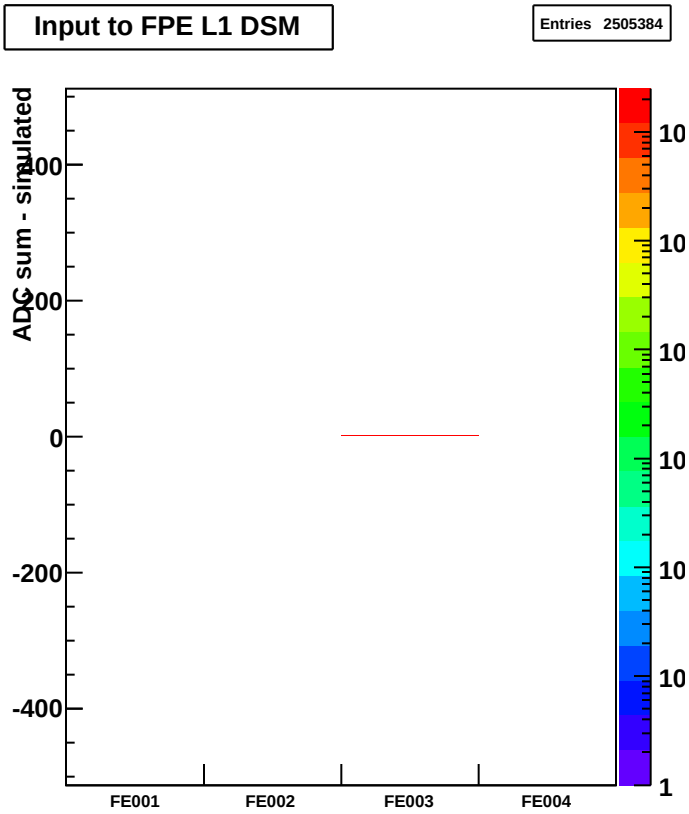

Input to FE001 QT board
Entries 8.017229e+07
ADC
channel


Input to FE002 QT board
Entries 8.017229e+07
ADC
channel

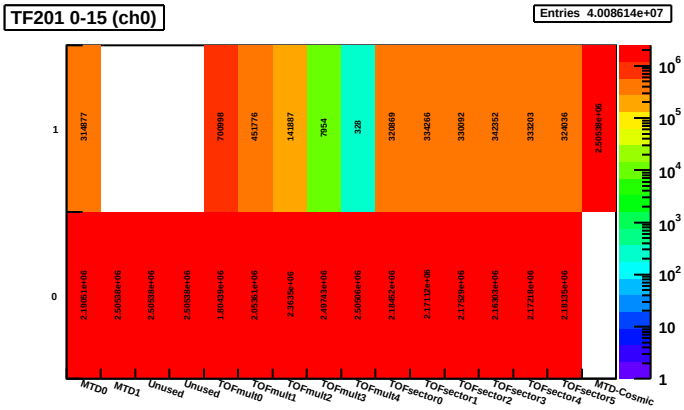

Input to FE003 QT board
Entries 8.017229e+07
ADC
channel


Input to FE004 QT board
Entries 8.017229e+07
ADC
channel


Input to FPE L1 DSM
Entries 1.002154e+07
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 2505384
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

TF201 0-15 (ch0)



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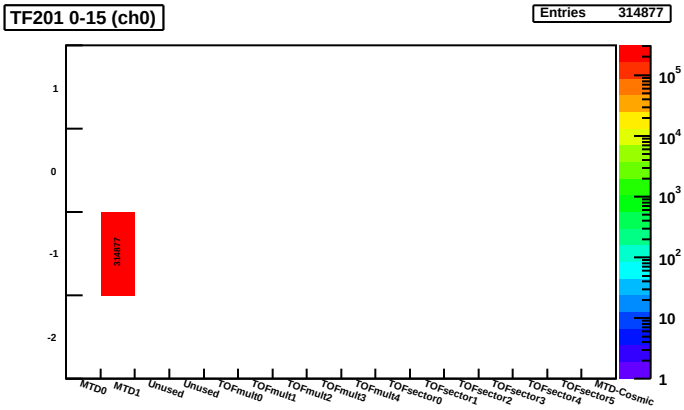

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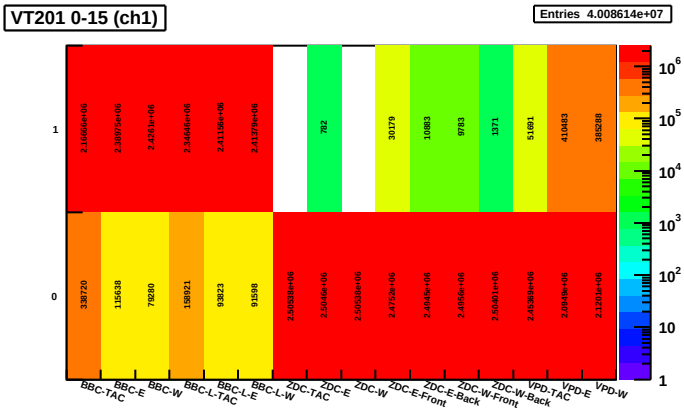

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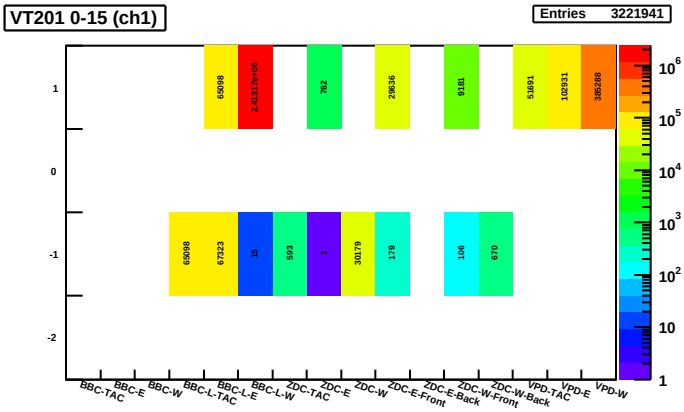

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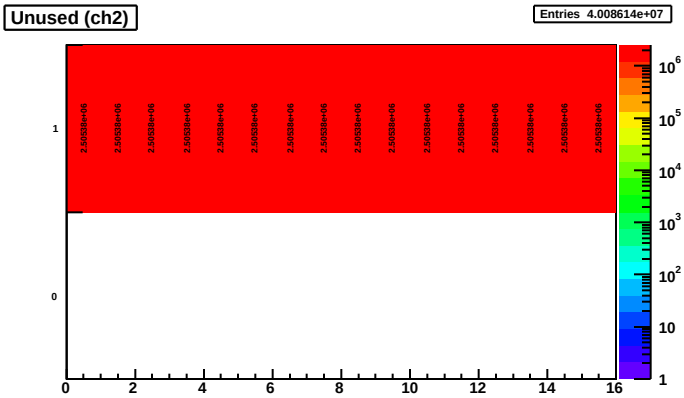

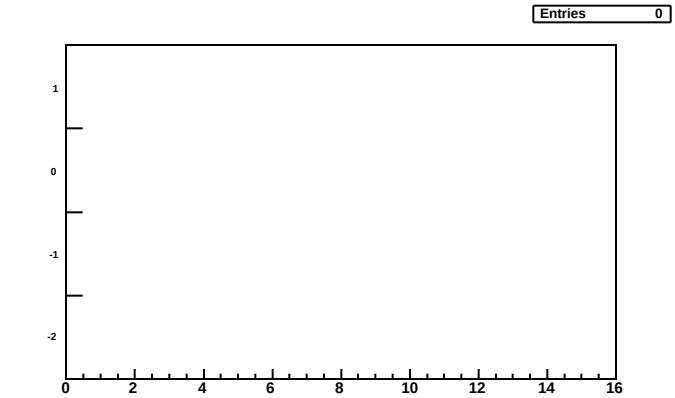

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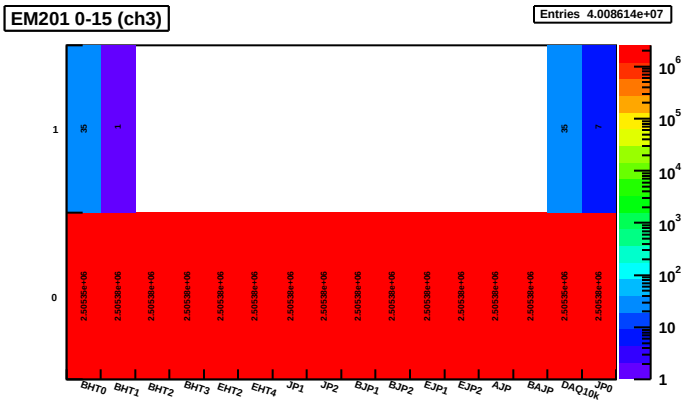

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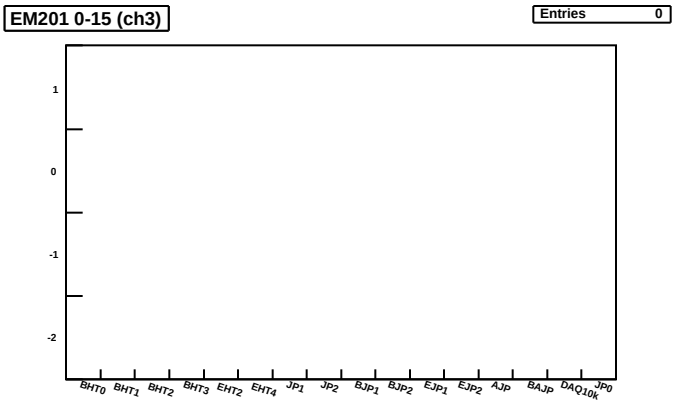
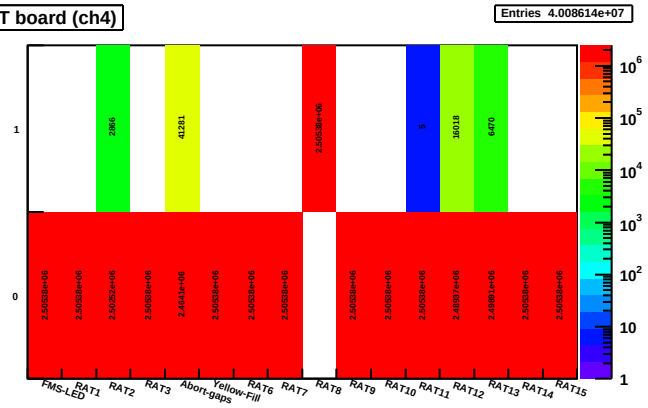
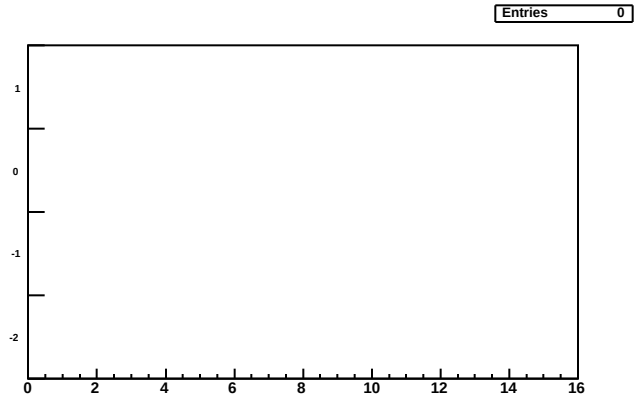


RAT board (ch4)





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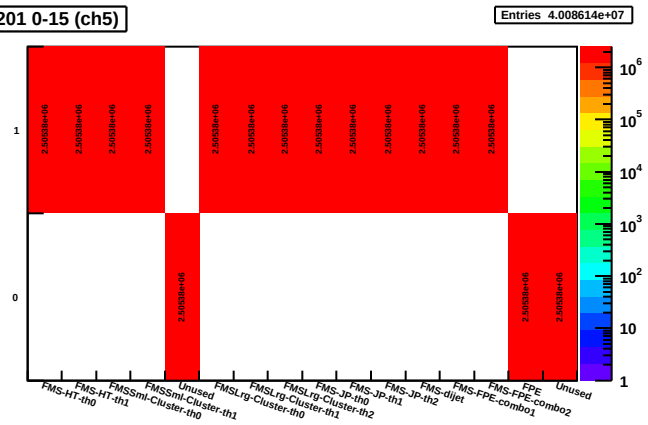

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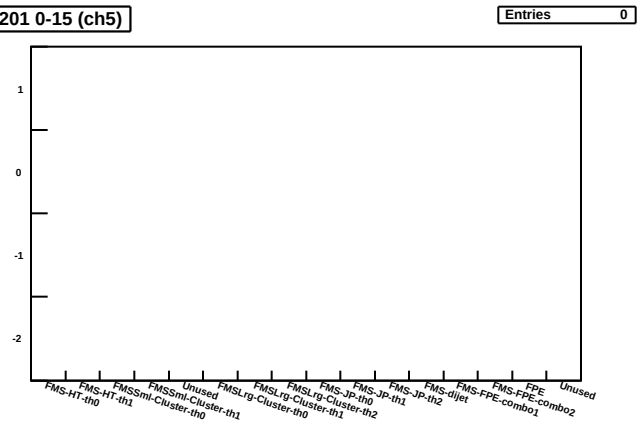

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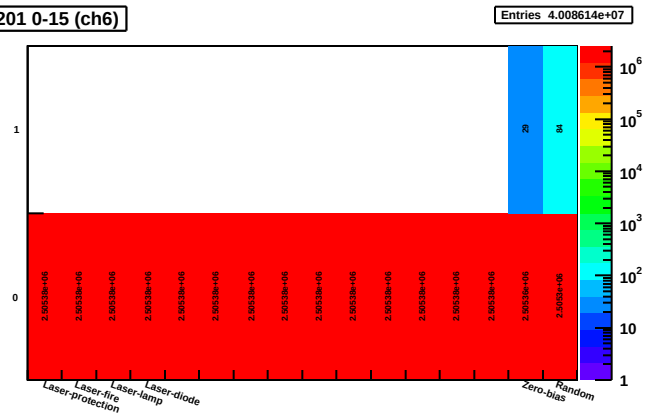

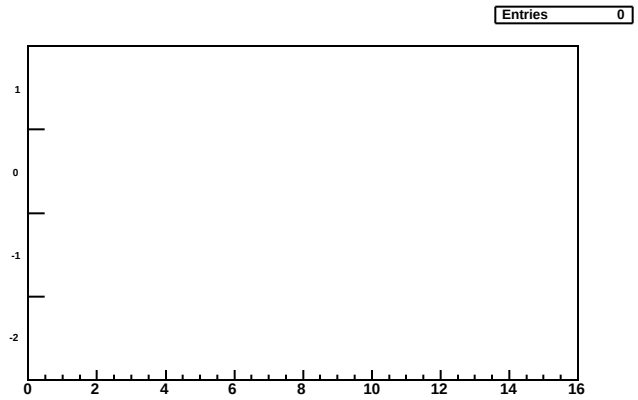
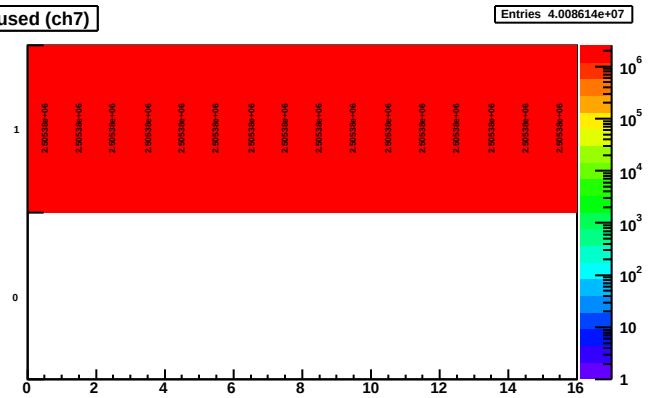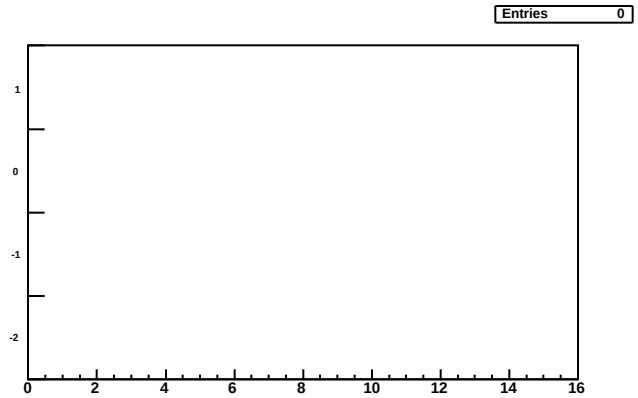
Unused (ch7)