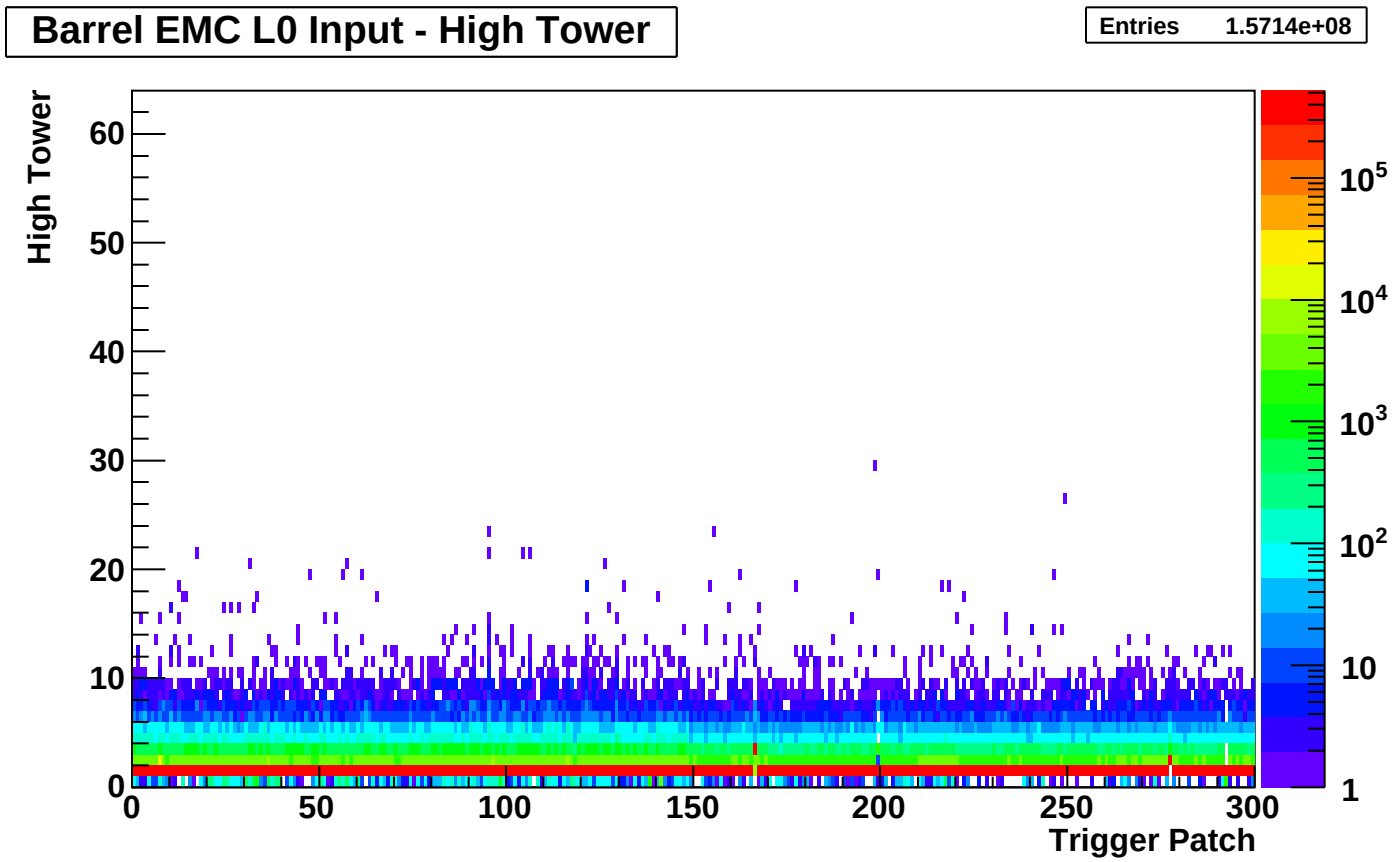
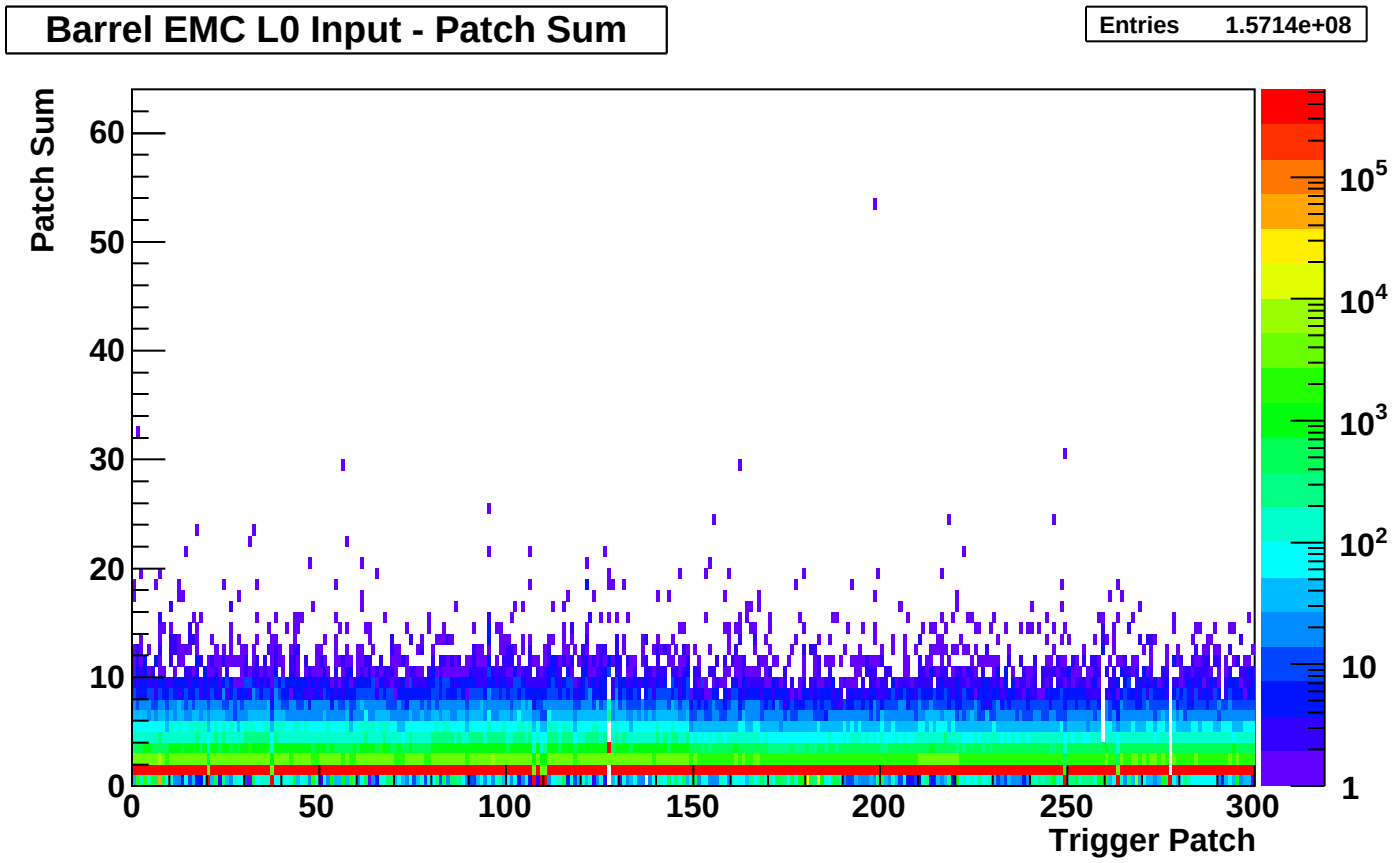
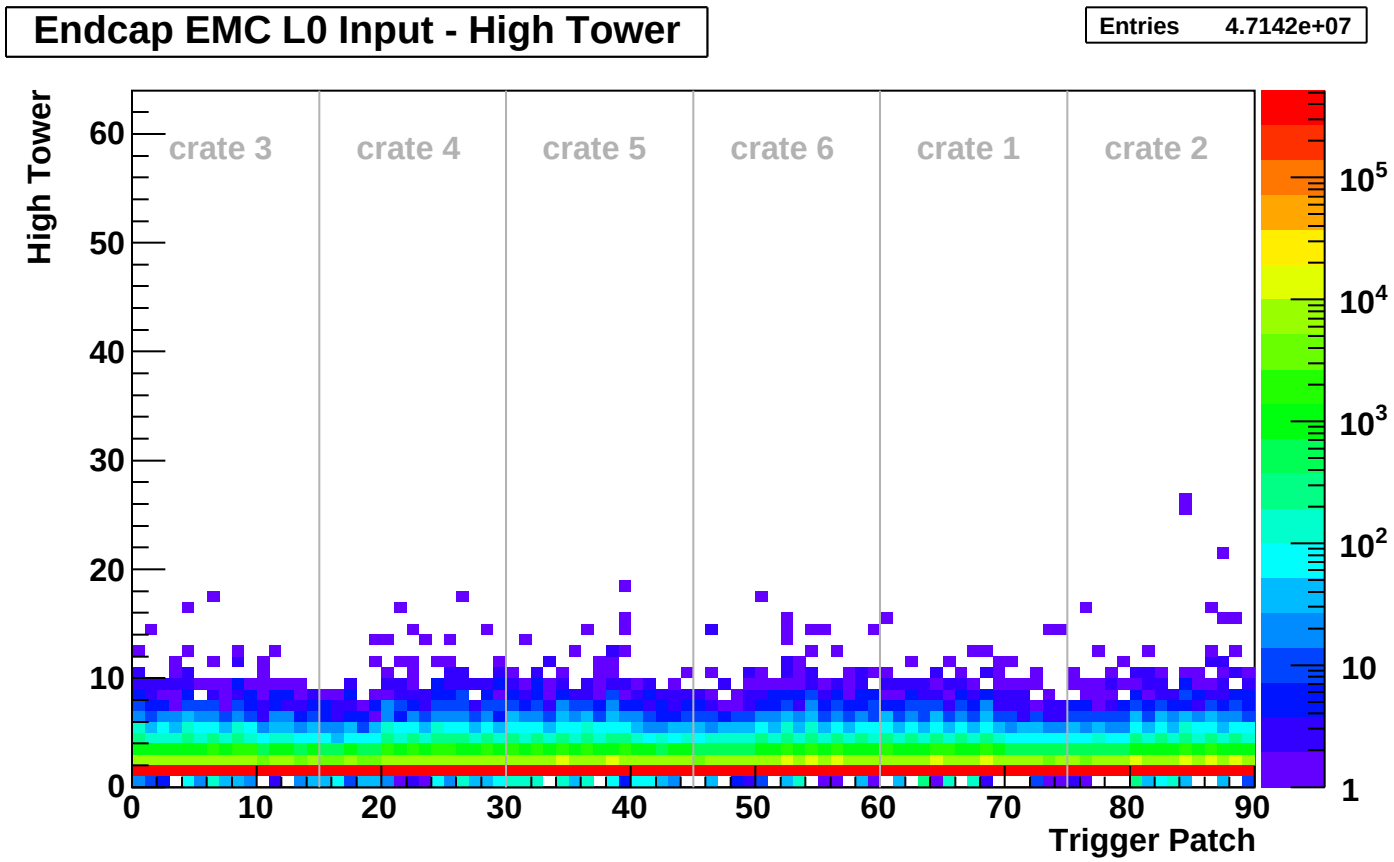
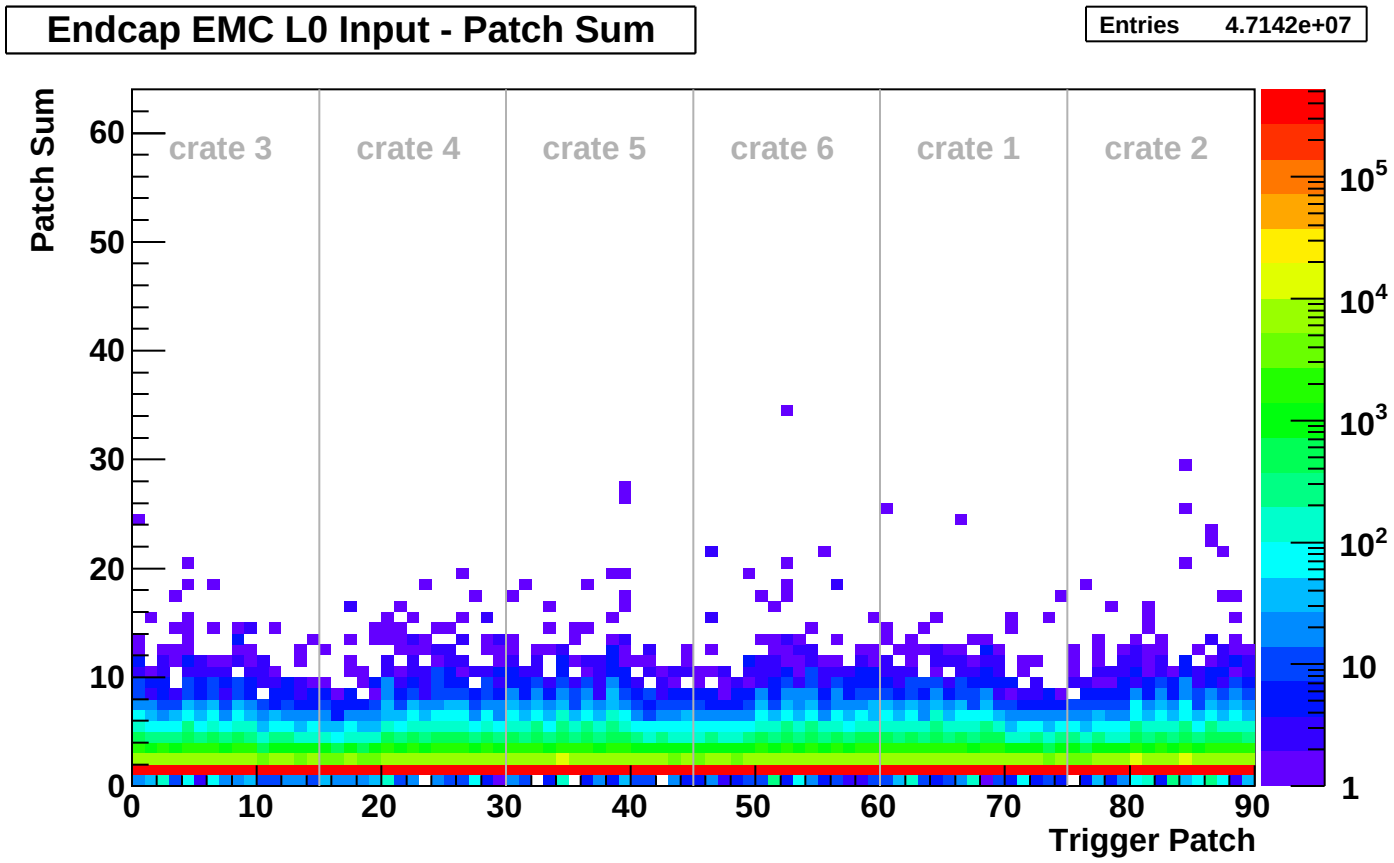
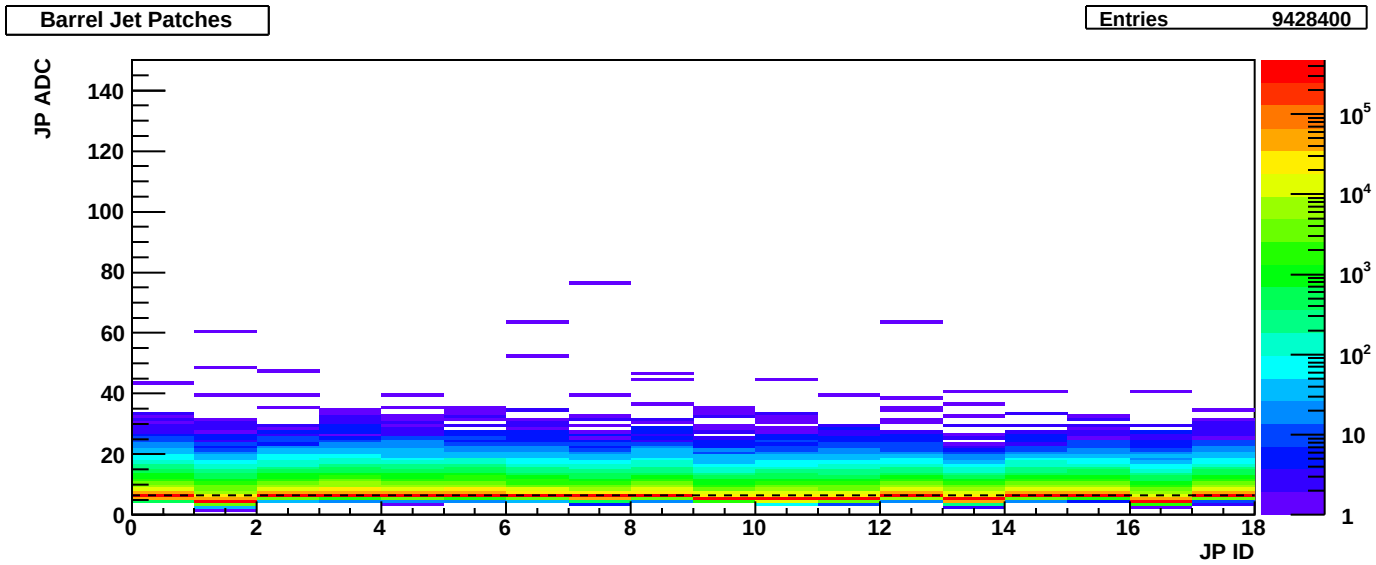
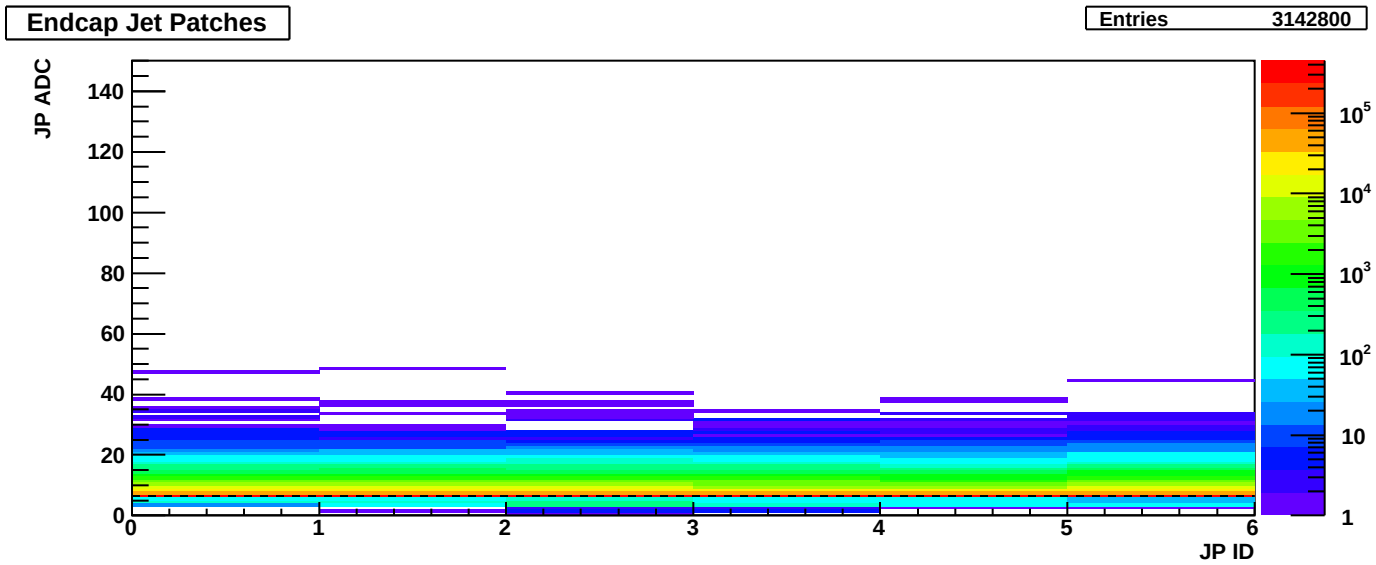

Barrel EMC L0 Input - High Tower
Entries 1.5714e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

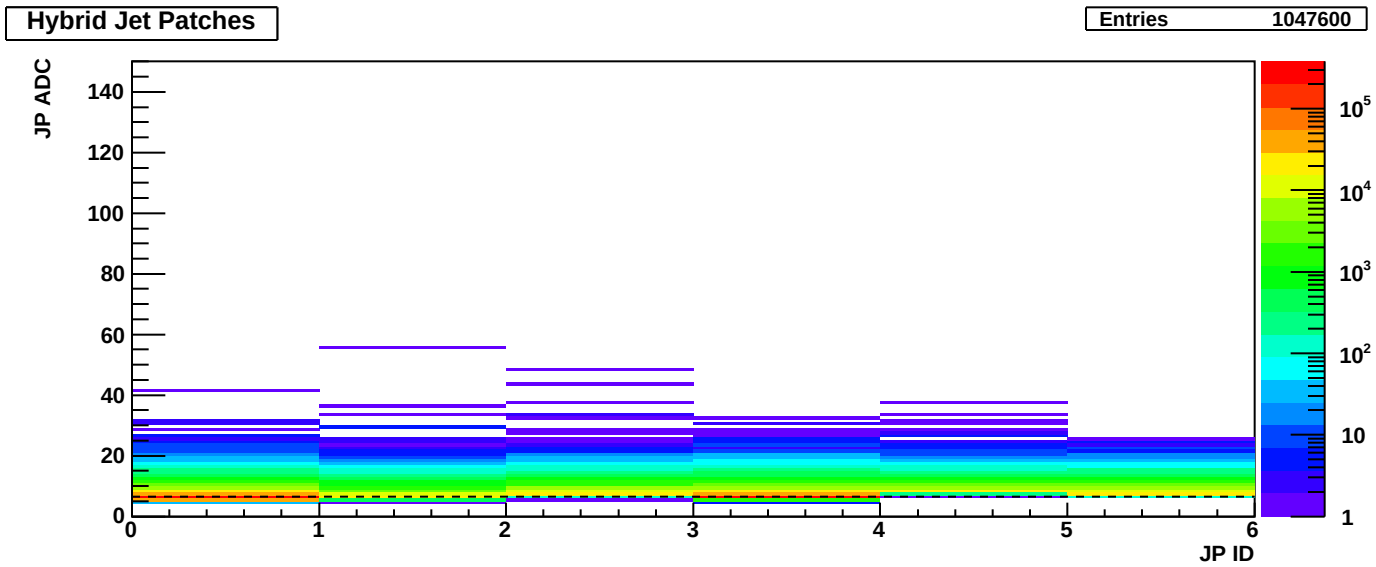

Barrel EMC L0 Input - Patch Sum
Entries 1.5714e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

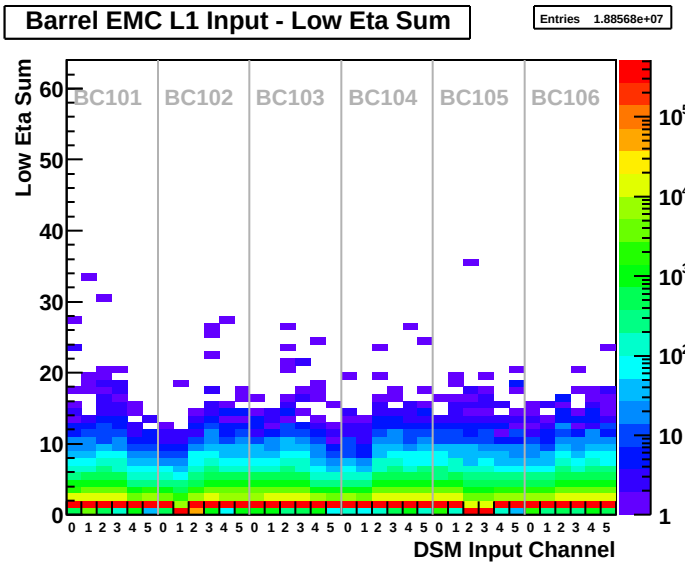

Endcap EMC L0 Input - High Tower
Entries 4.7142e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

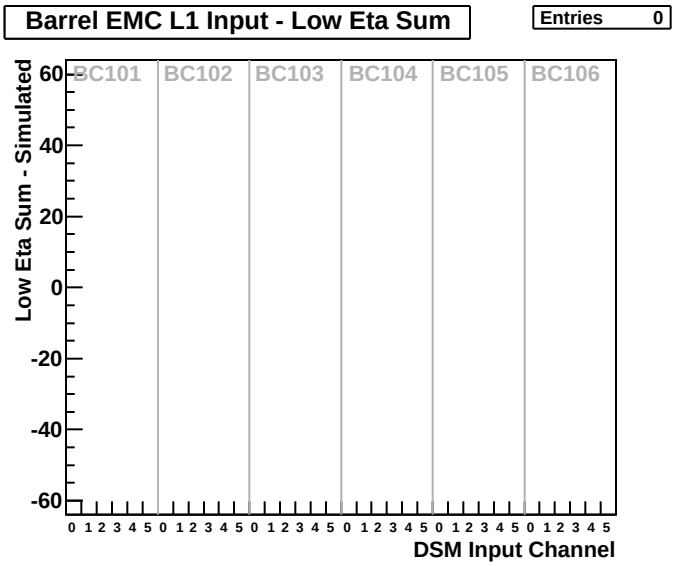

Endcap EMC L0 Input - Patch Sum
Entries 4.7142e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

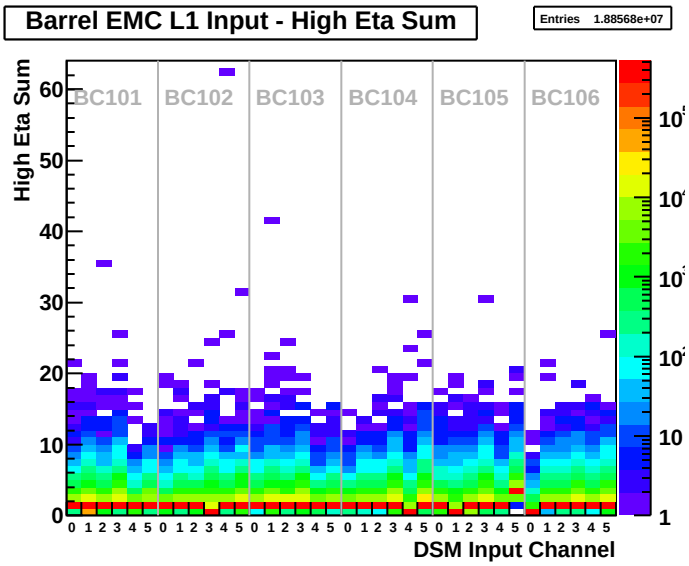

Barrel Jet Patches
Entries 9428400
JP ADC
JP ID

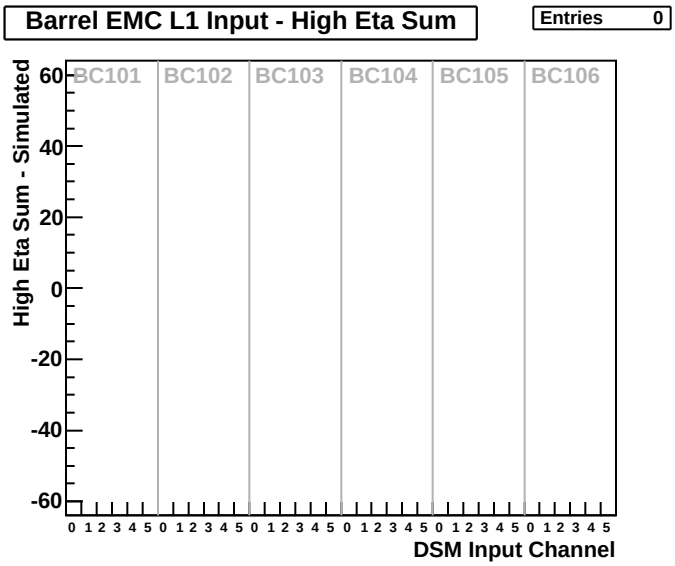

Endcap Jet Patches
Entries 3142800
JP ADC
JP ID

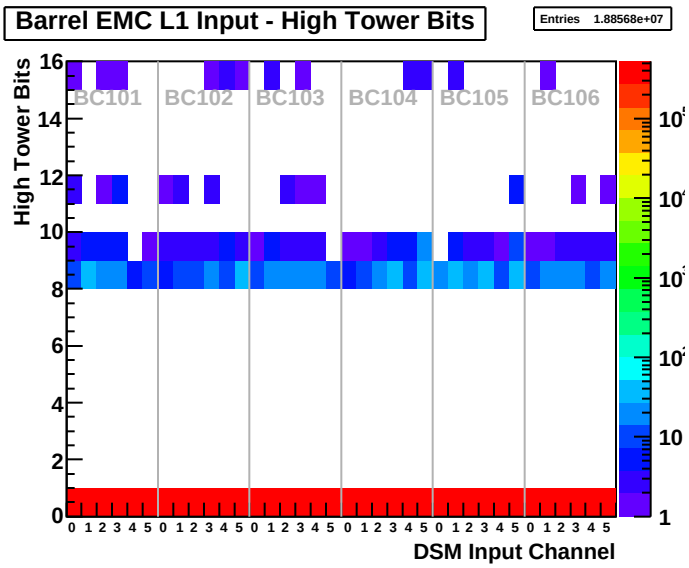

Hybrid Jet Patches
Entries 1047600
JP ADC
JP ID

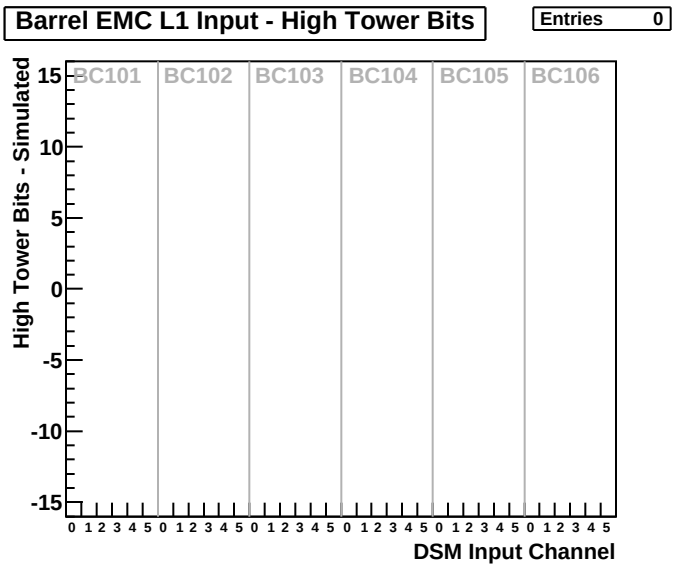

Barrel EMC L1 Input - Low Eta Sum
Entries 1.88568e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

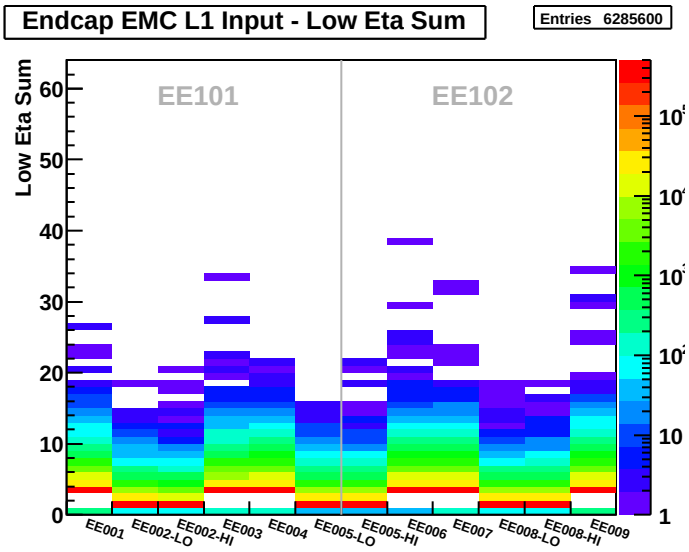

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

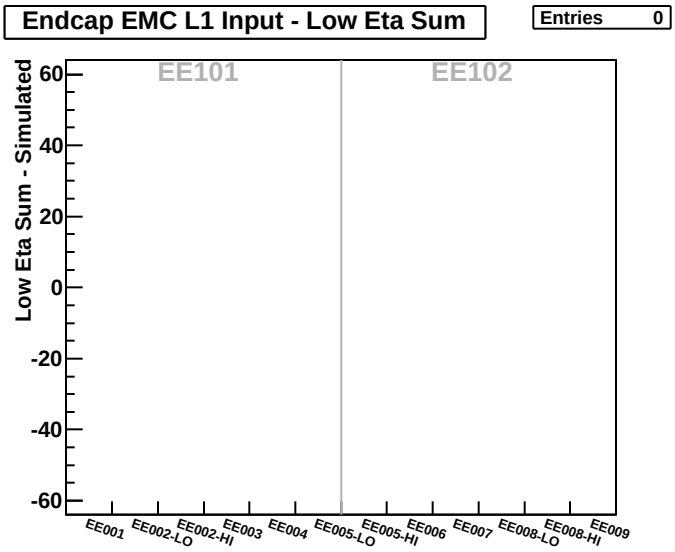

Barrel EMC L1 Input - High Eta Sum
Entries 1.88568e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

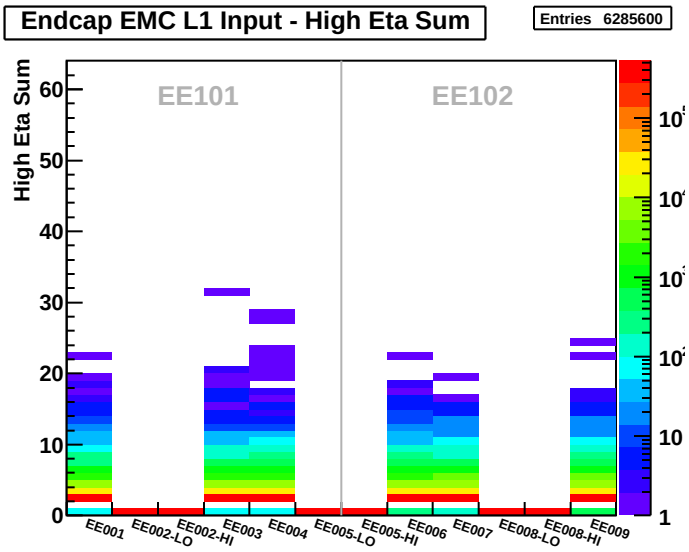

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

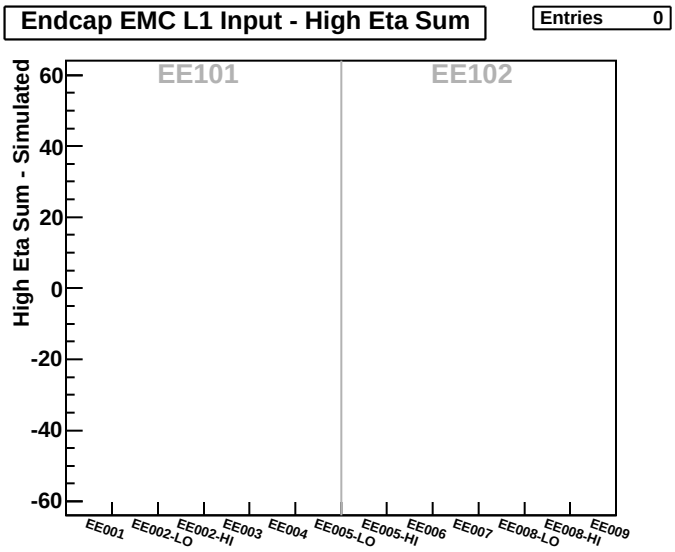

Barrel EMC L1 Input - High Tower Bits
Entries 1.88568e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

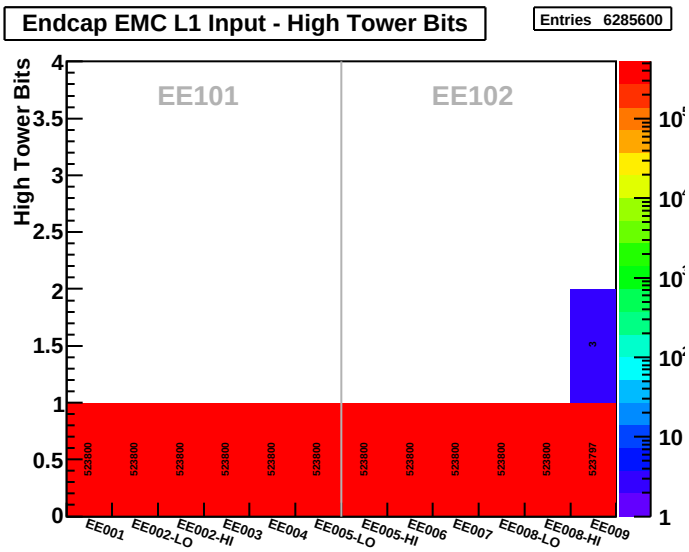

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

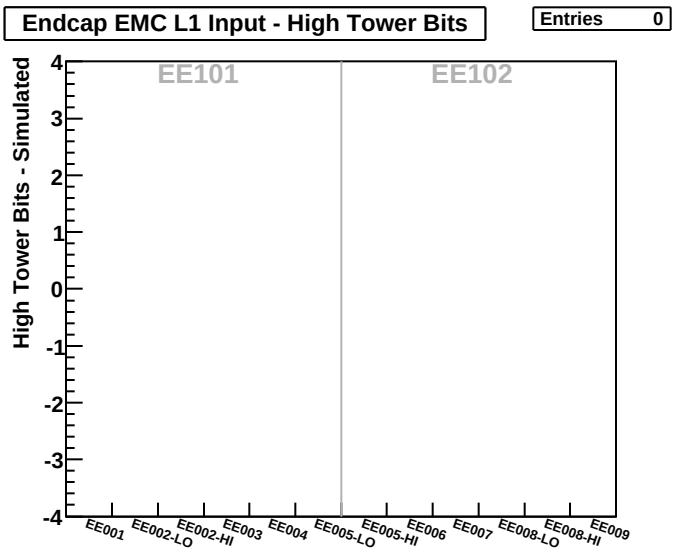

Endcap EMC L1 Input - Low Eta Sum
Entries 6285600
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

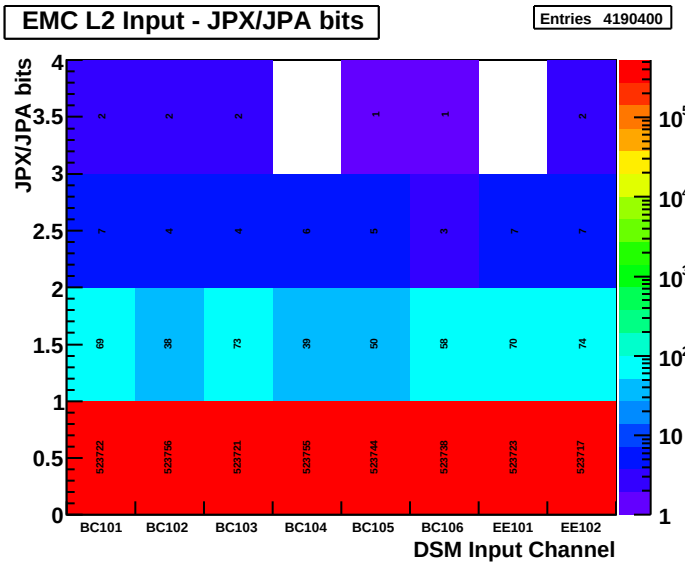

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

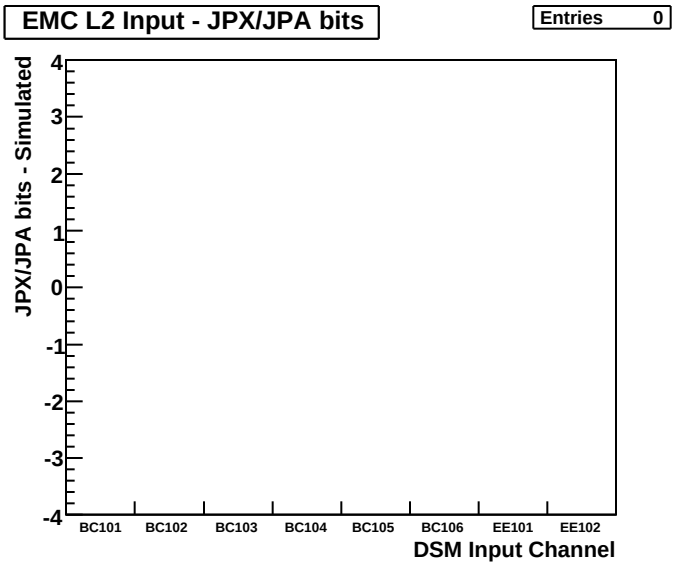

Endcap EMC L1 Input - High Eta Sum
Entries 6285600
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

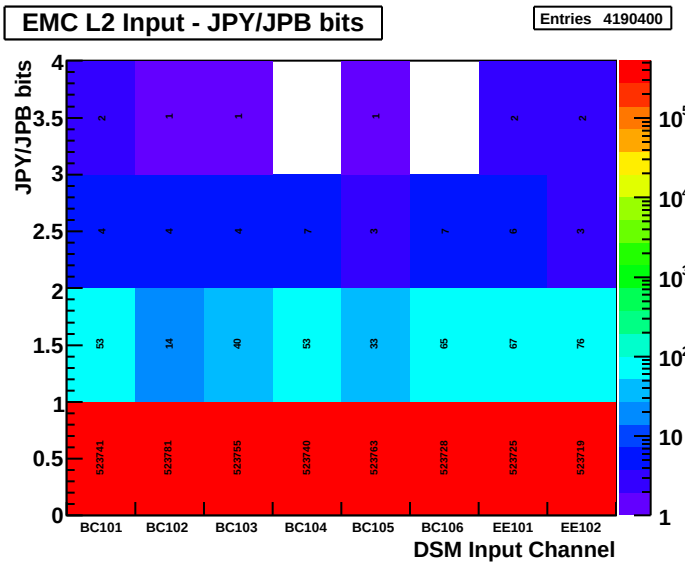

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

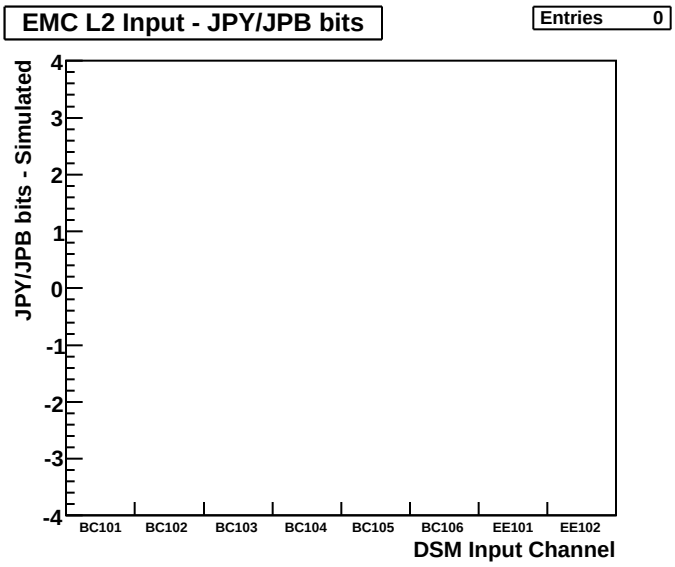

Endcap EMC L1 Input - High Tower Bits
Entries 6285600
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

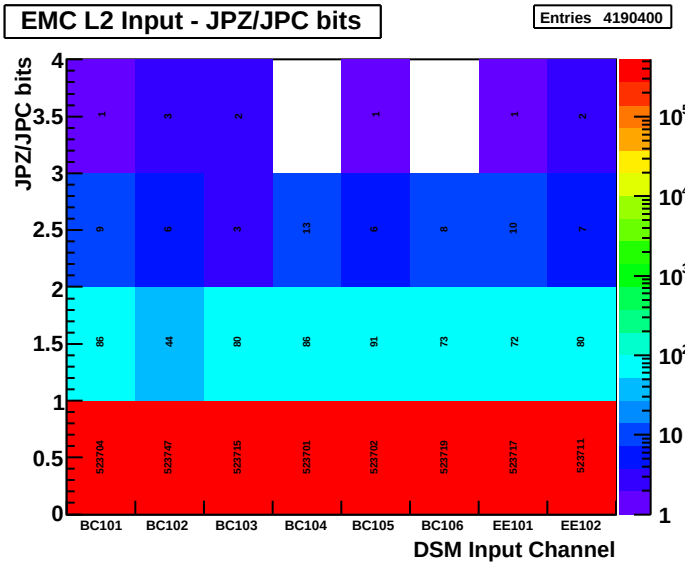

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

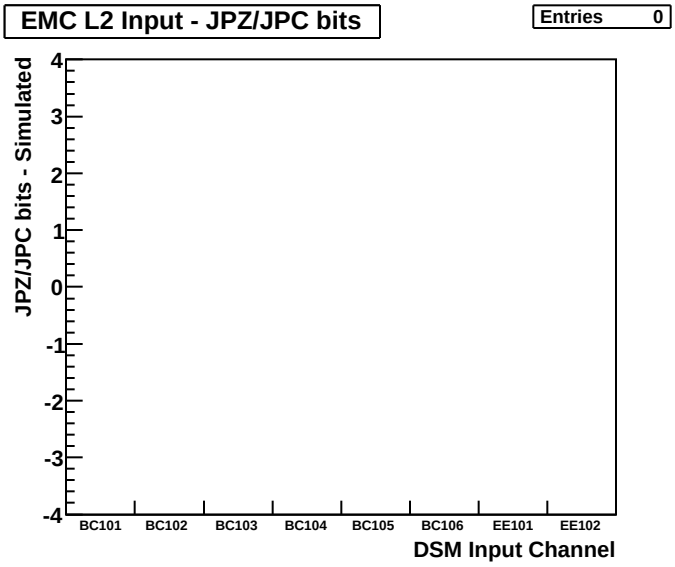

EMC L2 Input - JPX/JPA bits
Entries 4190400
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
523722 523756 523721 523755 523744 523738 523723 523717
69 38 73 39 50 58 70 74
7 4 4 6 5 3 7 7
2 2 2 1 1 2

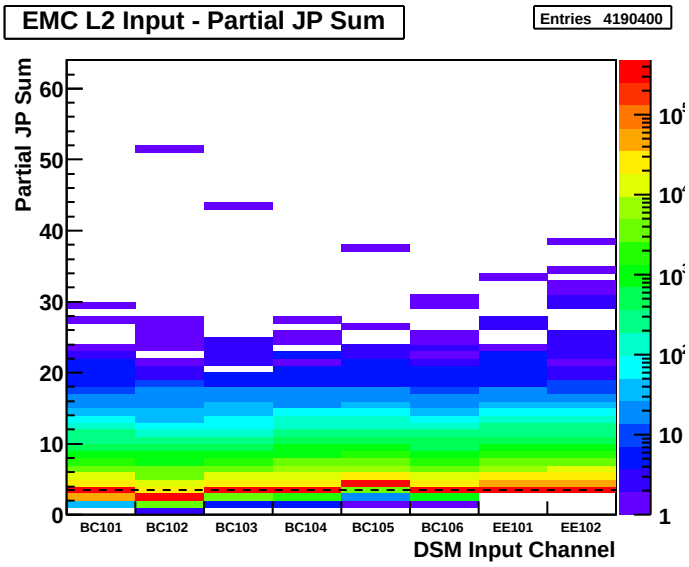

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

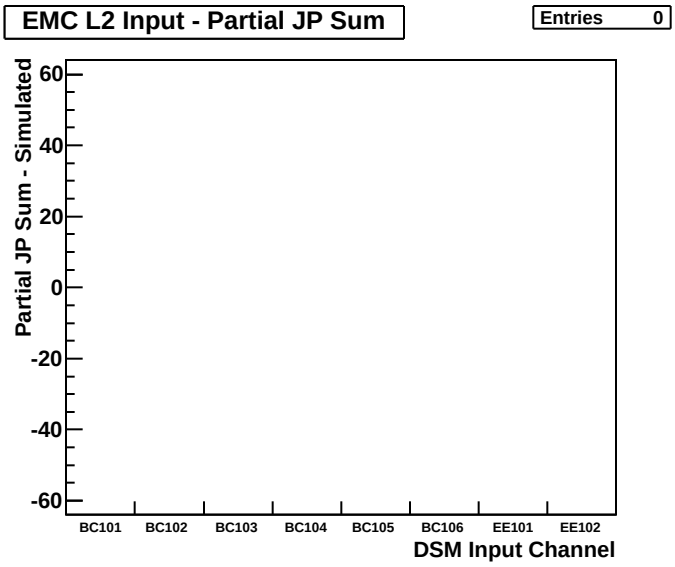

EMC L2 Input - JPY/JPB bits
Entries 4190400
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
523741 523781 523755 523740 523763 523728 523725 523719
53 14 40 53 33 65 67 76
4 4 4 7 3 7 6 3
2 1 1 1 2 2

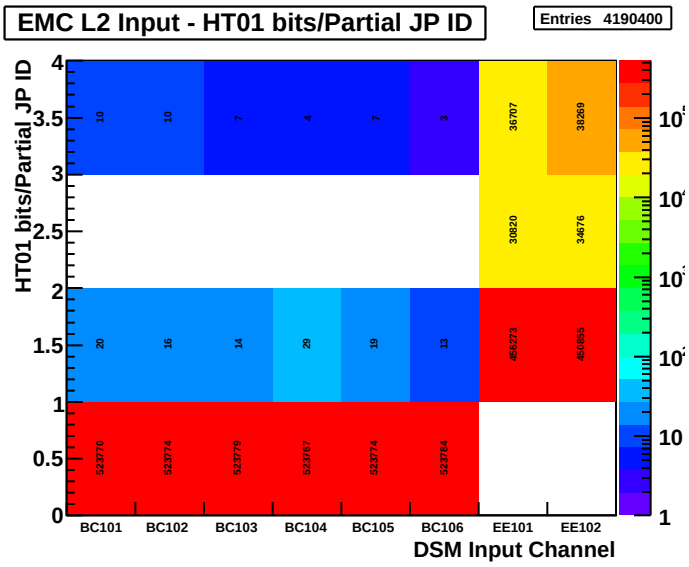

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

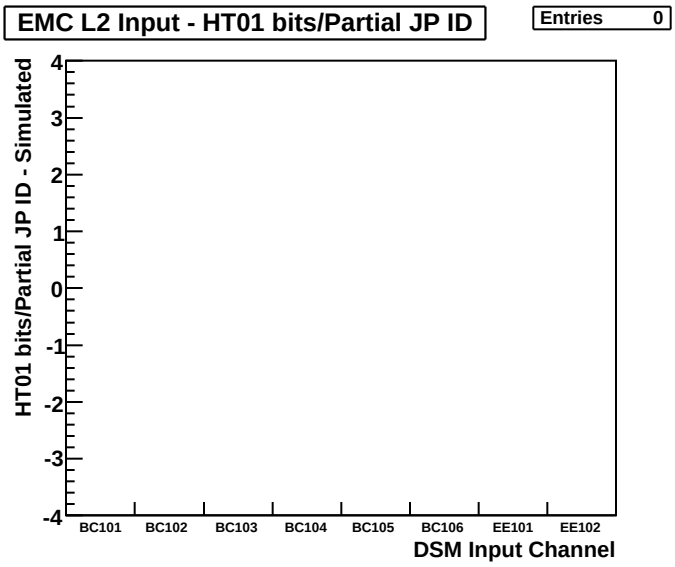

EMC L2 Input - JPZ/JPC bits
Entries 4190400
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
523704 523747 523715 523701 523702 523719 523717 523711
86 44 80 86 91 73 72 80
9 6 3 13 6 8 10 7
1 3 2 1 1 2

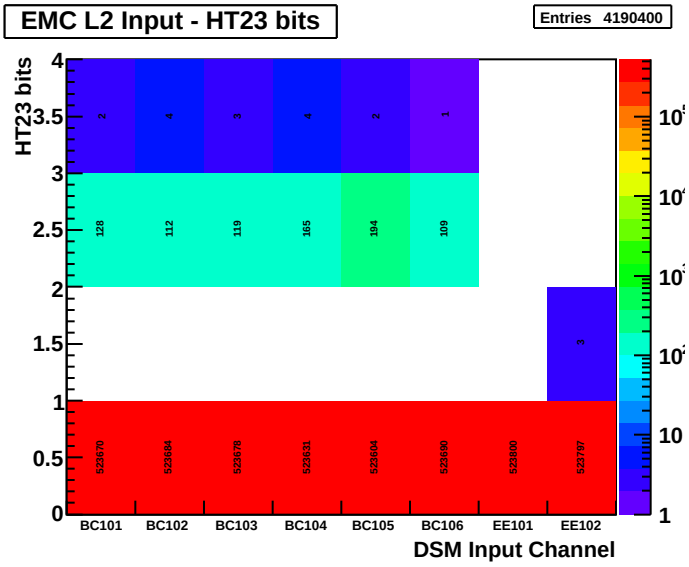

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

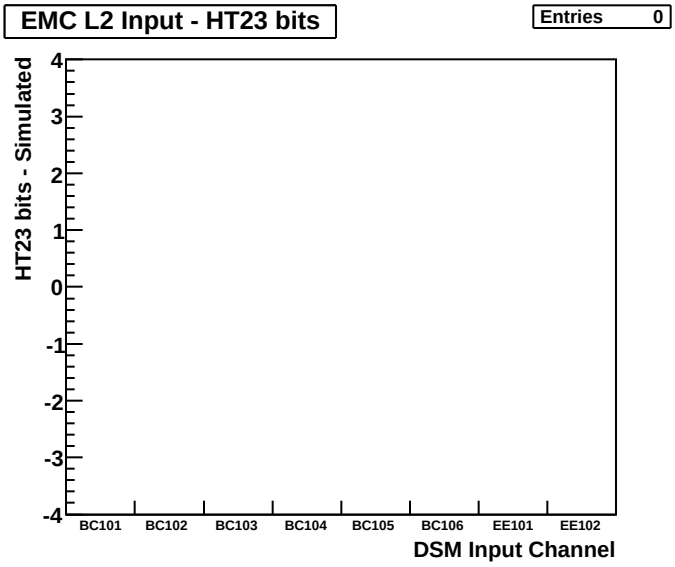

EMC L2 Input - Partial JP Sum
Entries 4190400
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

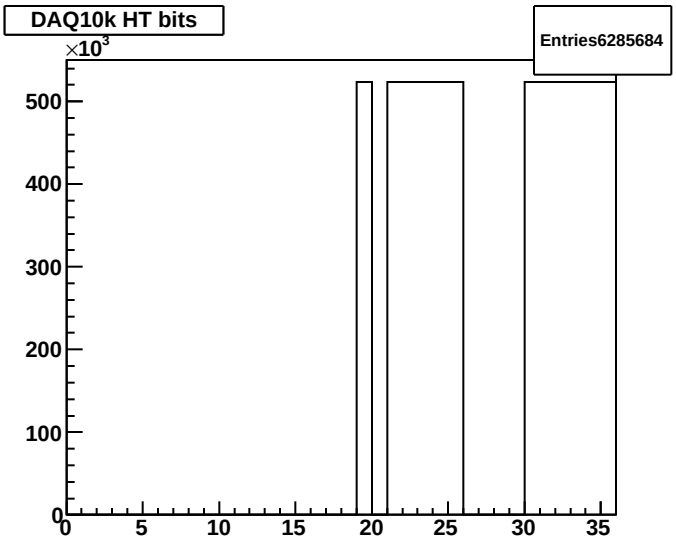

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

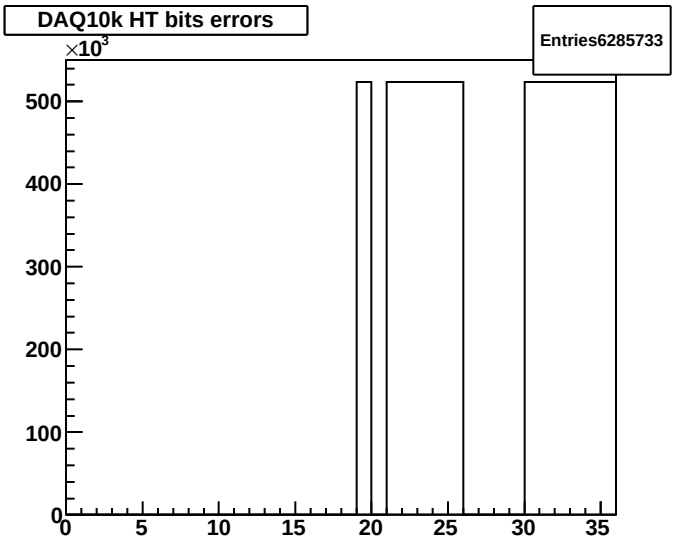

EMC L2 Input - HT01 bits/Partial JP ID
Entries 4190400
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

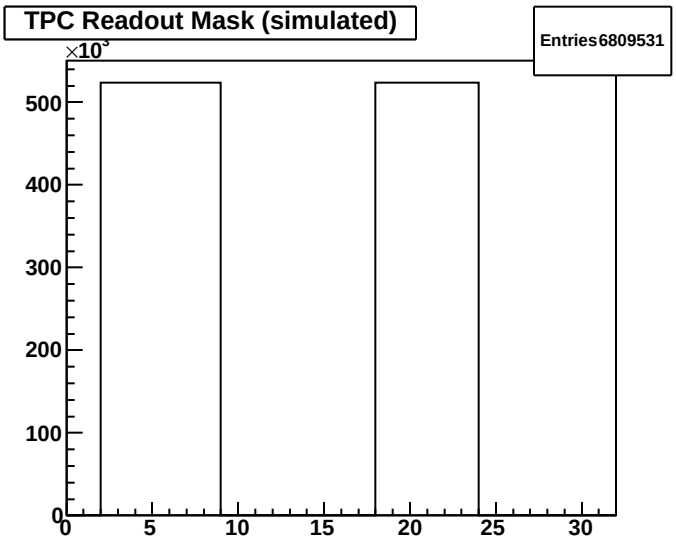

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

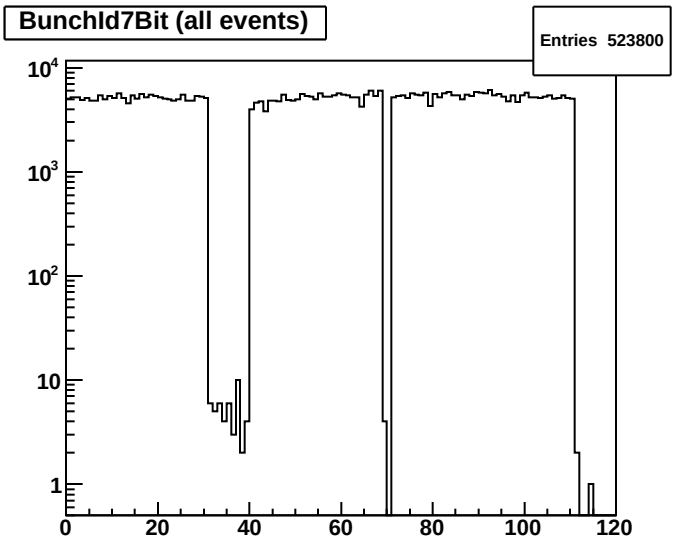

EMC L2 Input - HT23 bits
Entries 4190400
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

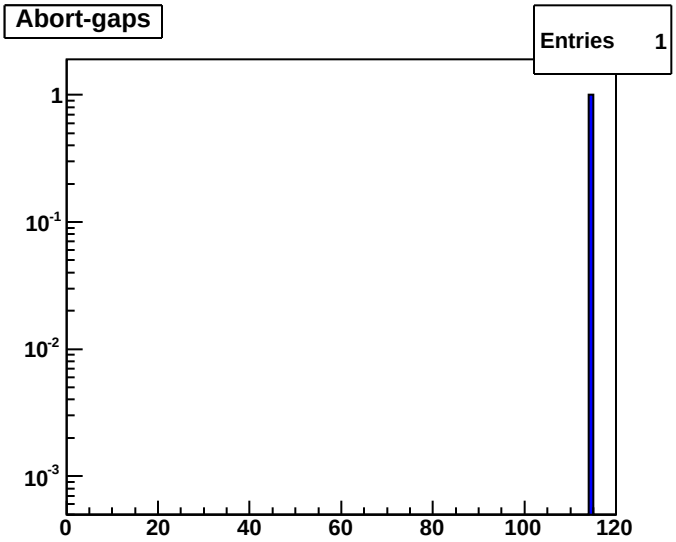

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

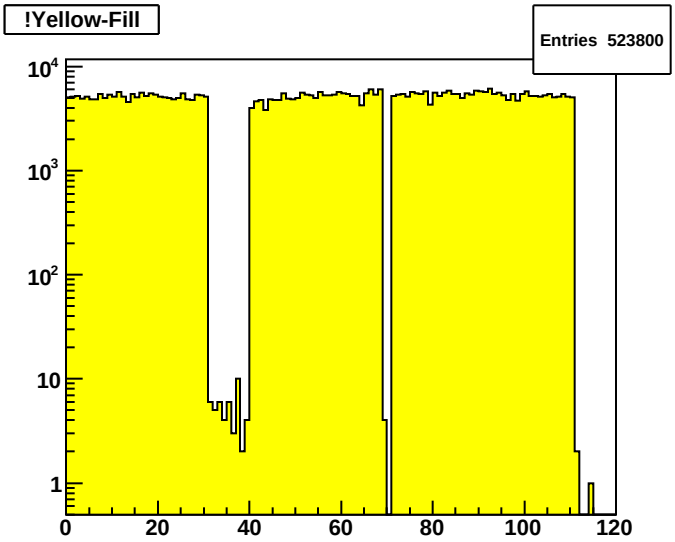

DAQ10k HT bits
Entries6285684
×10^3
500
400
300
200
100
0
0 5 10 15 20 25 30 35

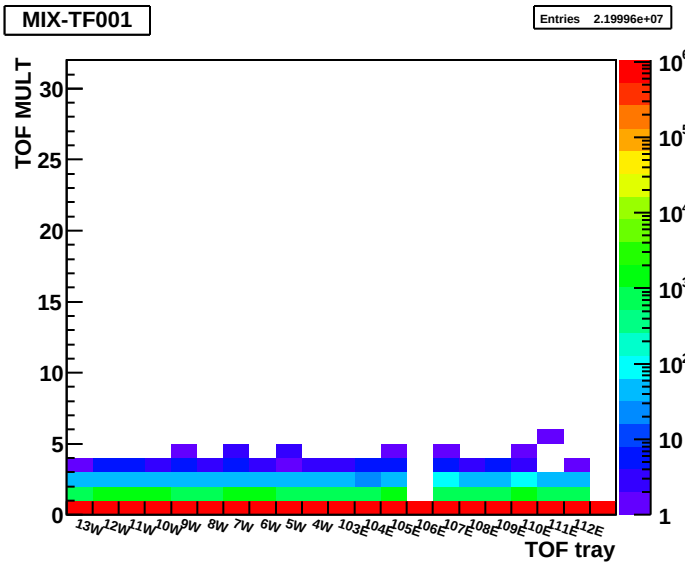

DAQ10k HT bits errors
Entries6285733
×10^3
500
400
300
200
100
0
0 5 10 15 20 25 30 35

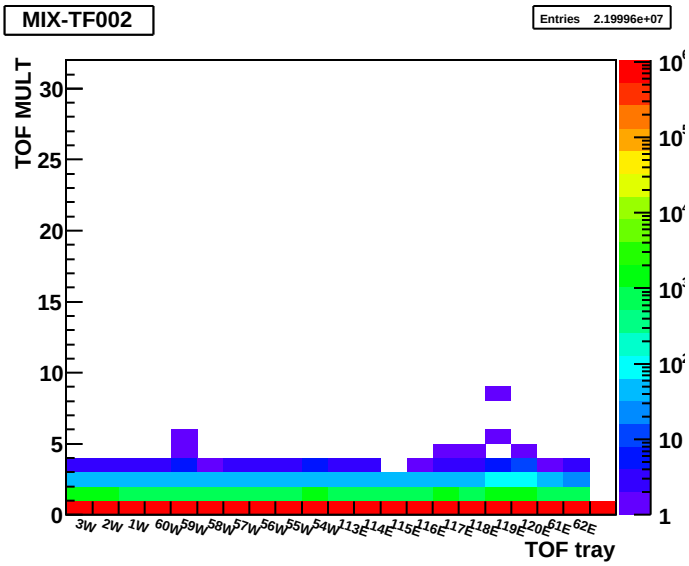

TPC Readout Mask (simulated)
Entries6809531
×10^3
500
400
300
200
100
0
0 5 10 15 20 25 30

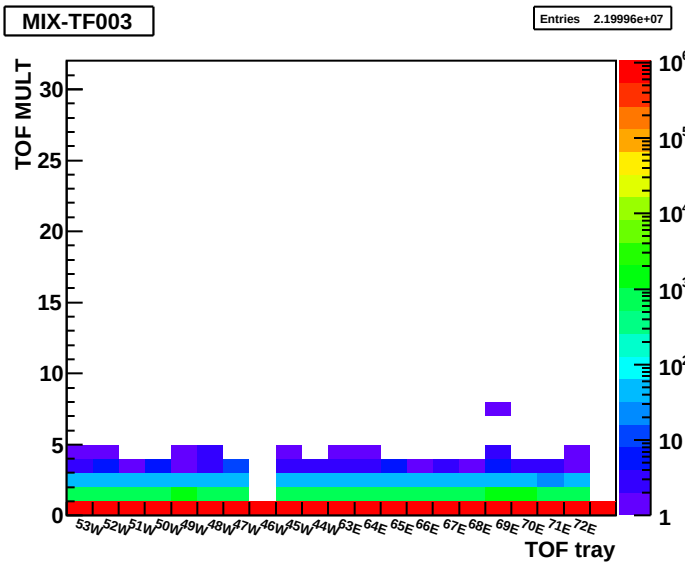

BunchId7Bit (all events)
Entries 523800
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

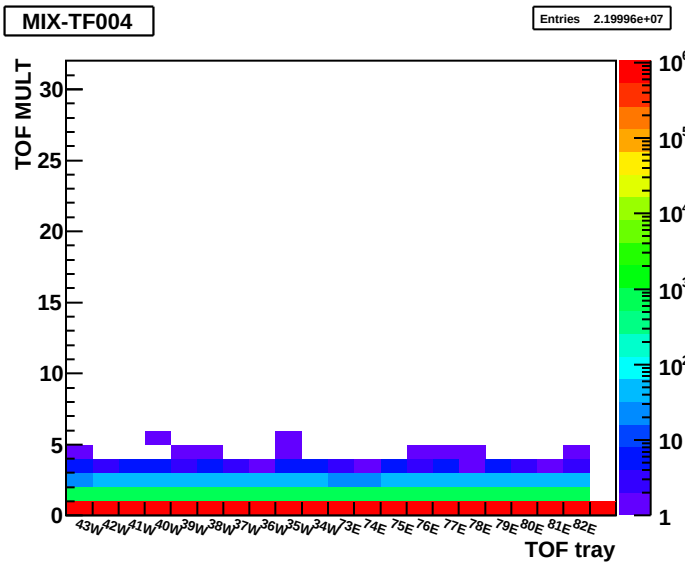

Abort-gaps
Entries 1
1
10^-1
10^-2
10^-3
0 20 40 60 80 100 120

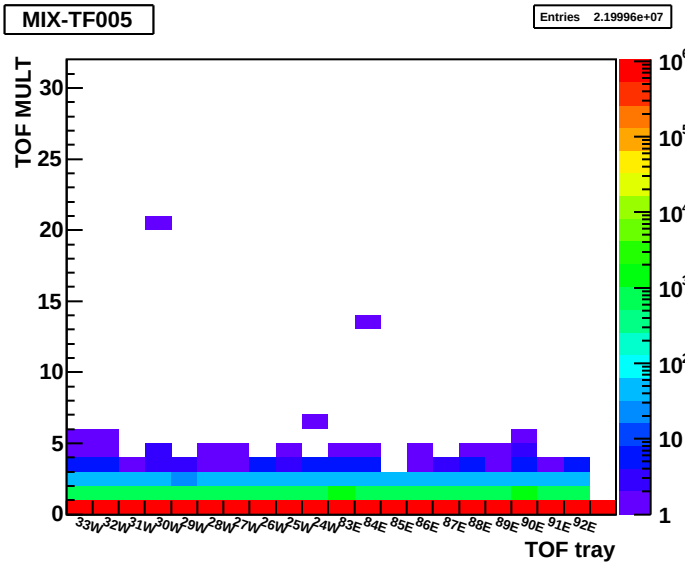

!Yellow-Fill
Entries 523800
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

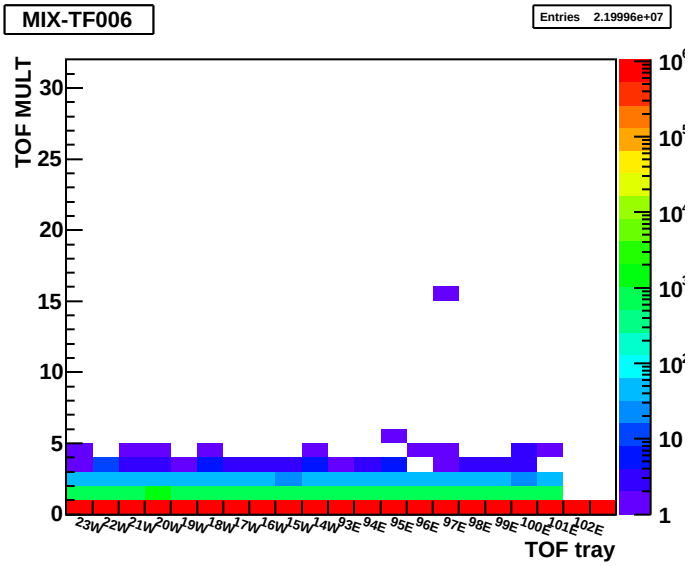

MIX-TF001
Entries 2.19996e+07
TOF MULT
TOF tray

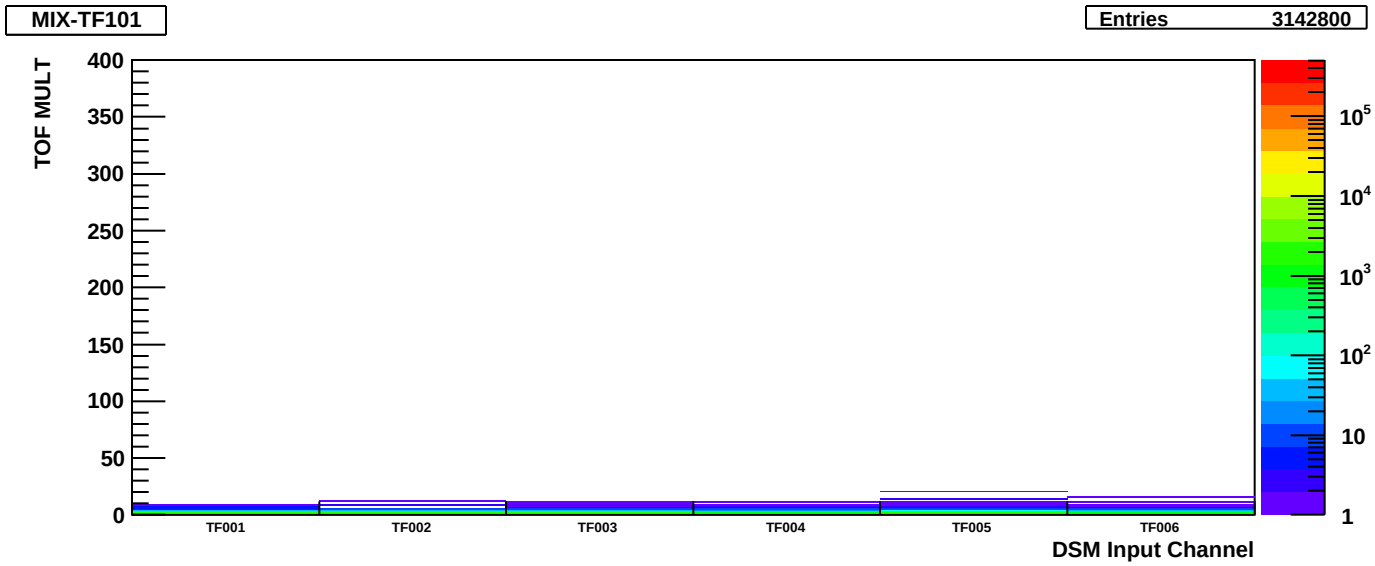

MIX-TF002
Entries 2.19996e+07
TOF MULT
TOF tray

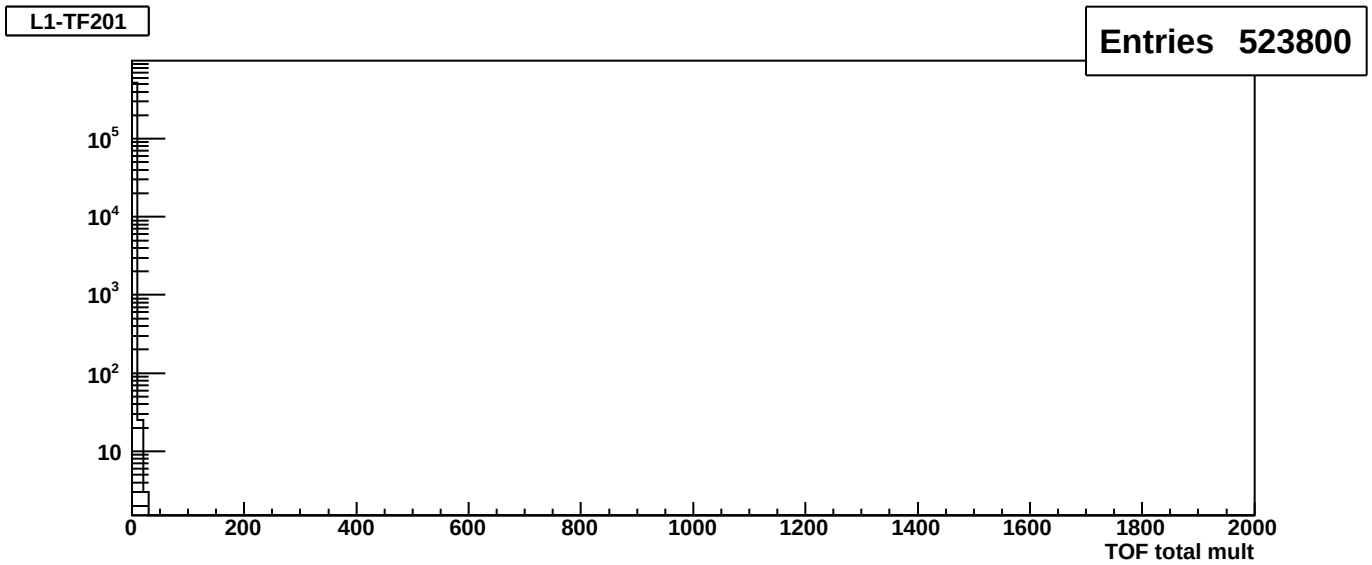

MIX-TF003
Entries 2.19996e+07
TOF MULT
TOF tray

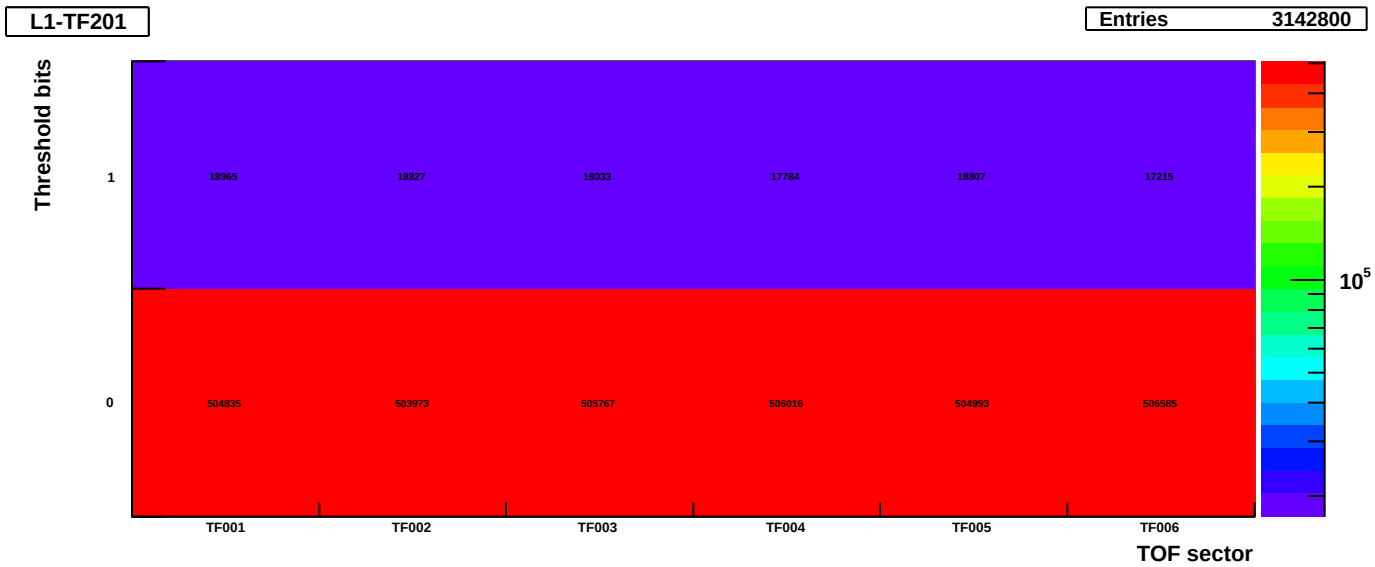

MIX-TF004
Entries 2.19996e+07
TOF MULT
TOF tray

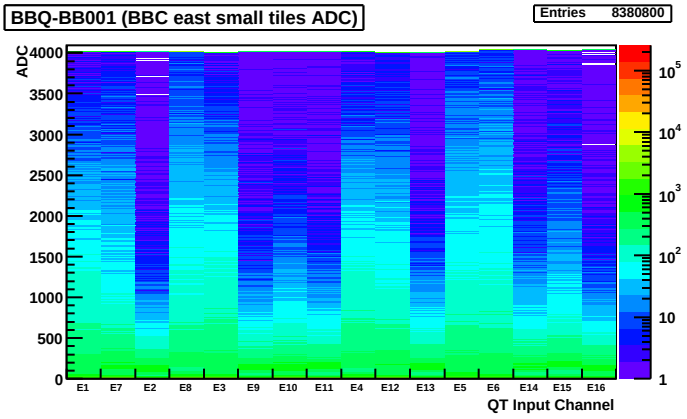

MIX-TF005
Entries 2.19996e+07
TOF MULT
TOF tray

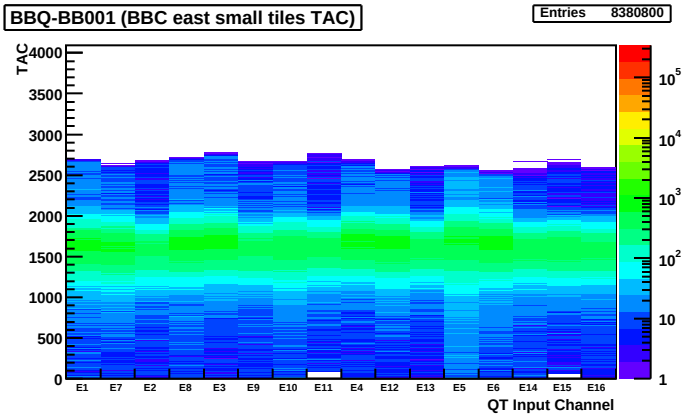

MIX-TF006
Entries 2.19996e+07
TOF MULT
TOF tray

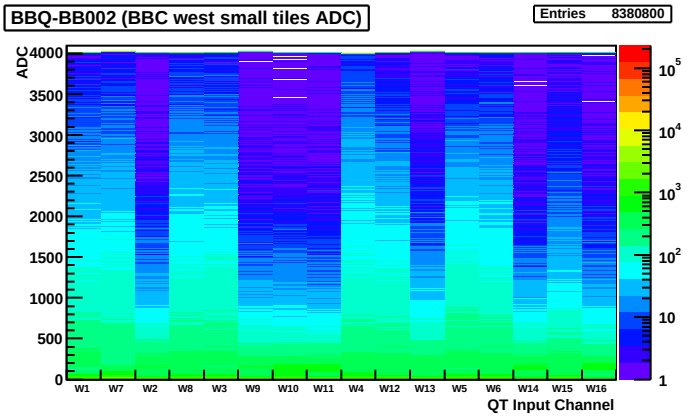

MIX-TF101
Entries 3142800
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

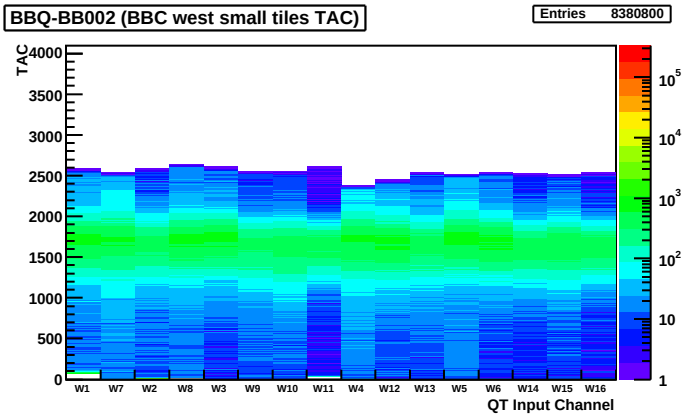

L1-TF201
Entries 523800
10^5
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

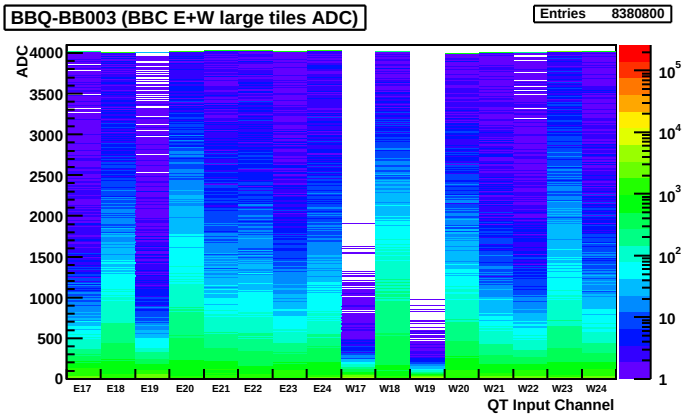

L1-TF201
Entries 3142800
Threshold bits
1
0
18965
19827
18033
17784
18807
17215
504835
503973
505767
506016
504993
506585
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

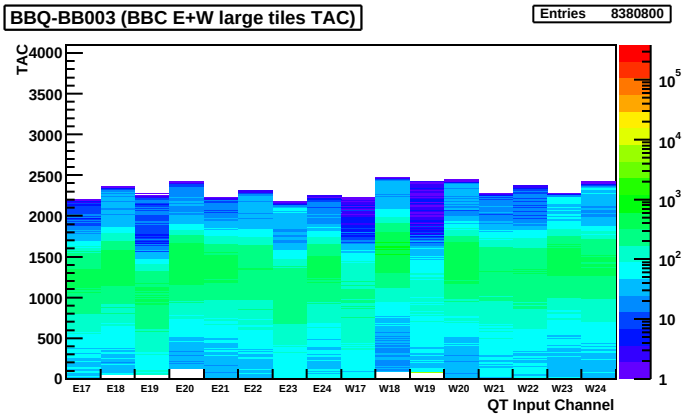

BBQ-BB001 (BBC east small tiles ADC)
Entries 8380800
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

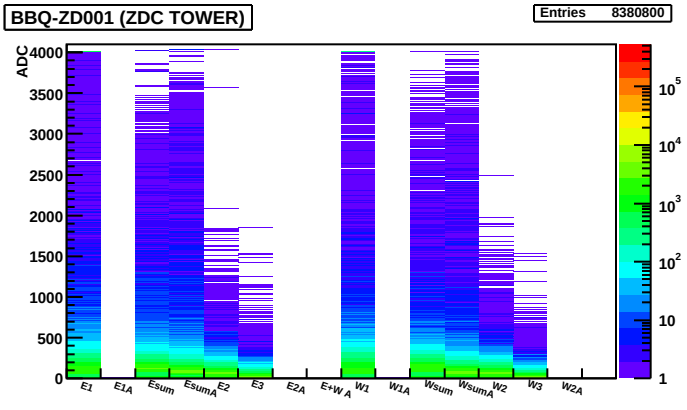

BBQ-BB001 (BBC east small tiles TAC)
Entries 8380800
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

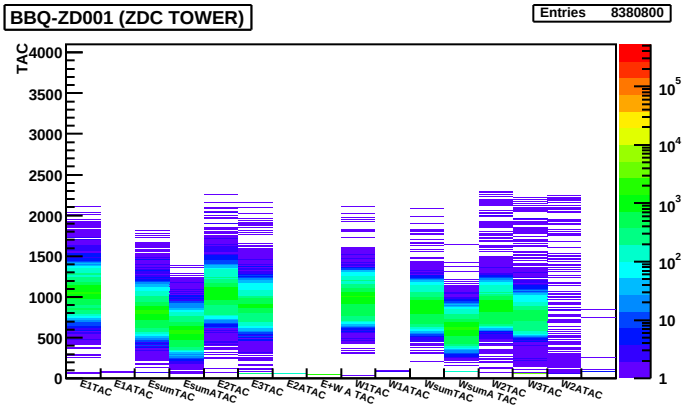

BBQ-BB002 (BBC west small tiles ADC)
Entries 8380800
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

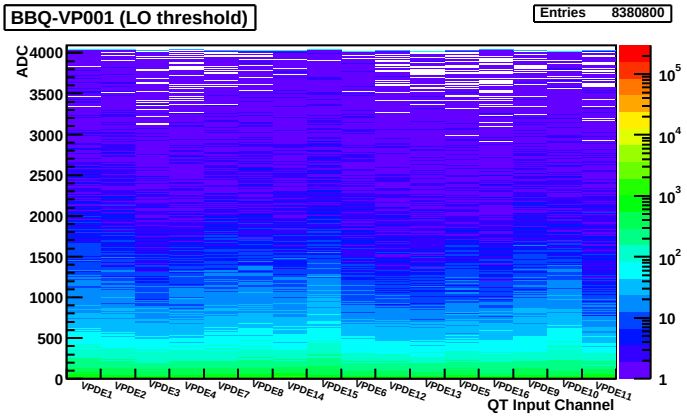

BBQ-BB002 (BBC west small tiles TAC)
Entries 8380800
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

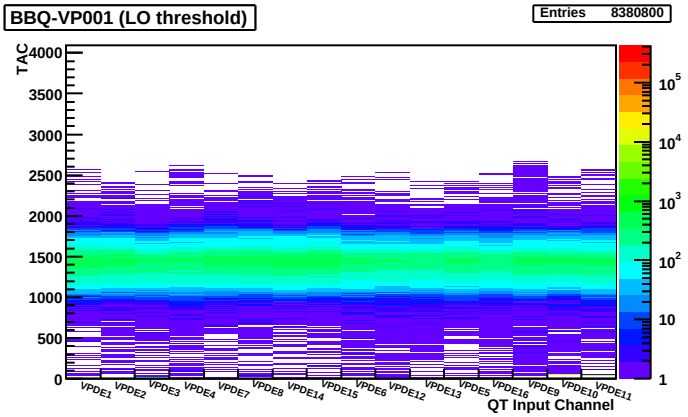

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 8380800
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

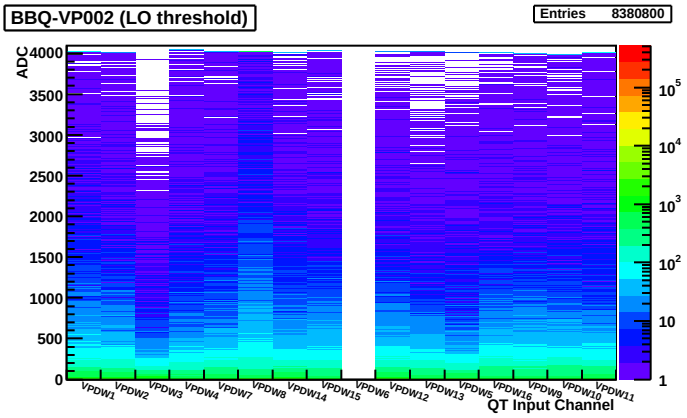

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 8380800
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

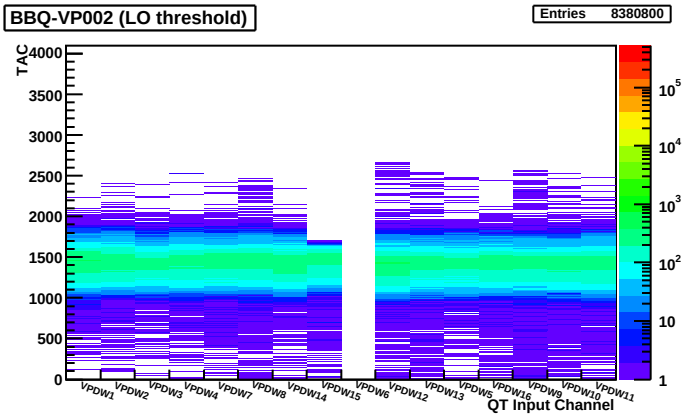

BBQ-ZD001 (ZDC TOWER)
Entries 8380800
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

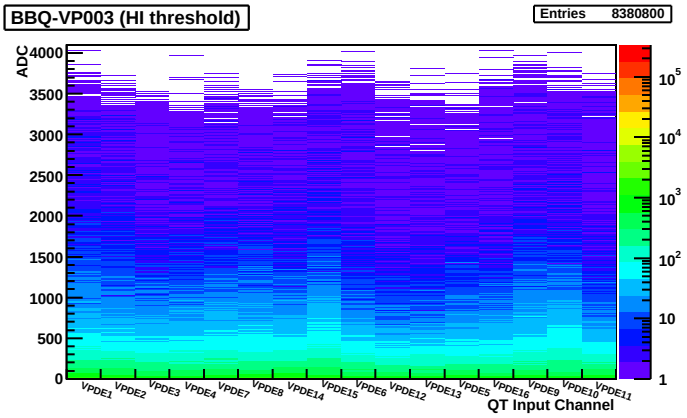

BBQ-ZD001 (ZDC TOWER)
Entries 8380800
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

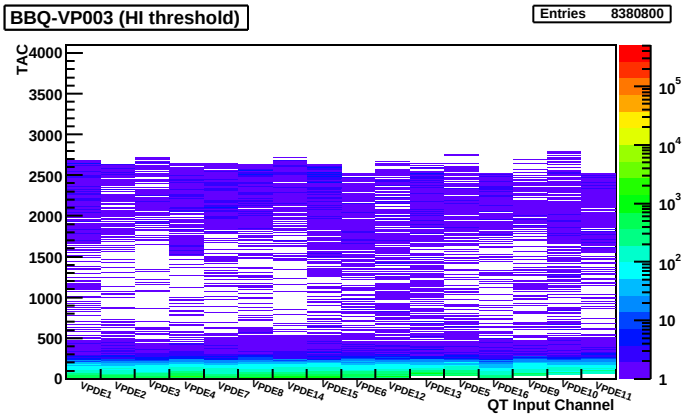

BBQ-VP001 (LO threshold)
Entries 8380800
ADC
QT Input Channel

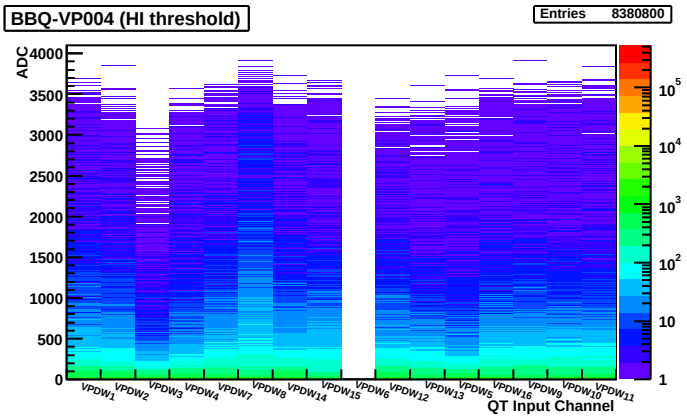

BBQ-VP001 (LO threshold)
Entries 8380800
TAC
QT Input Channel

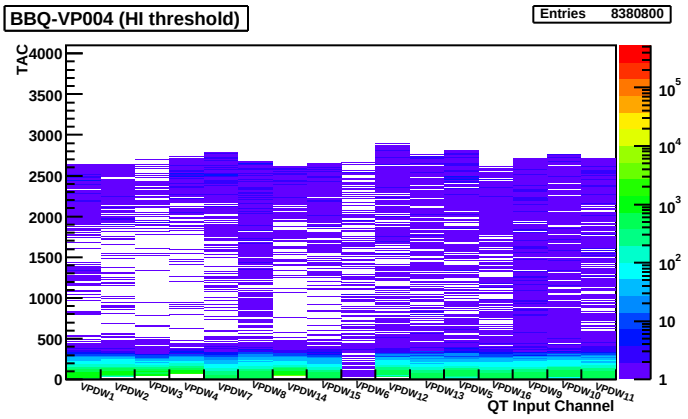

BBQ-VP002 (LO threshold)
Entries 8380800
ADC
QT Input Channel

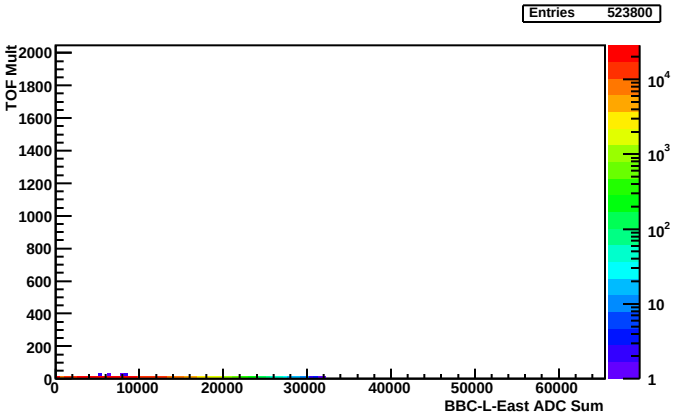

BBQ-VP002 (LO threshold)
Entries 8380800
TAC
QT Input Channel

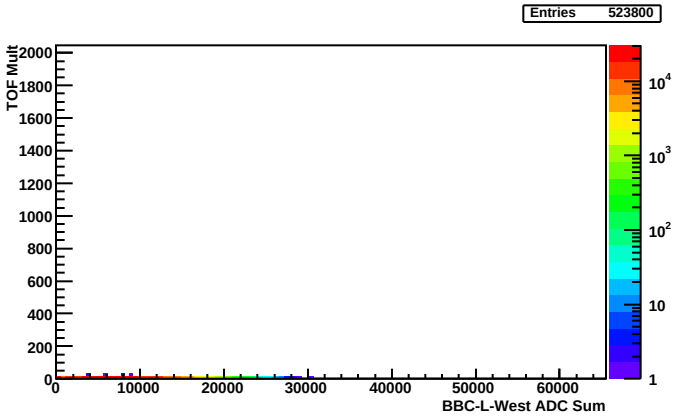

BBQ-VP003 (HI threshold)
Entries 8380800
ADC
QT Input Channel

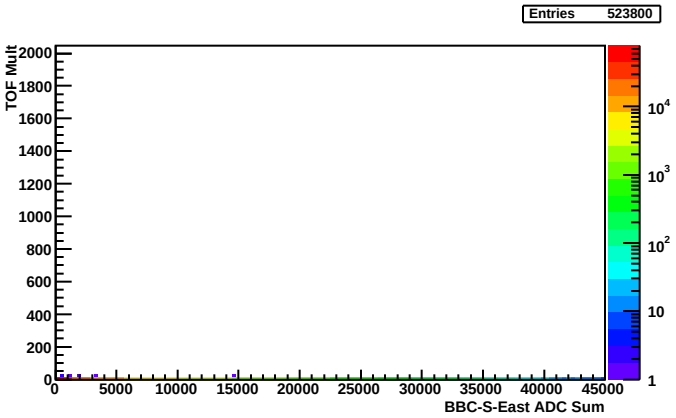

BBQ-VP003 (HI threshold)
Entries 8380800
TAC
QT Input Channel

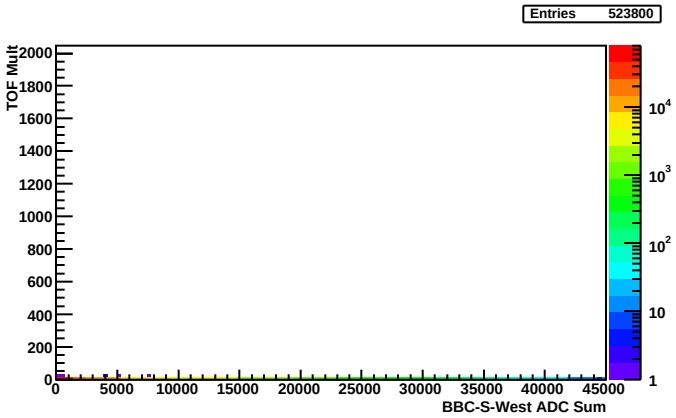

BBQ-VP004 (HI threshold)
Entries 8380800
ADC
QT Input Channel

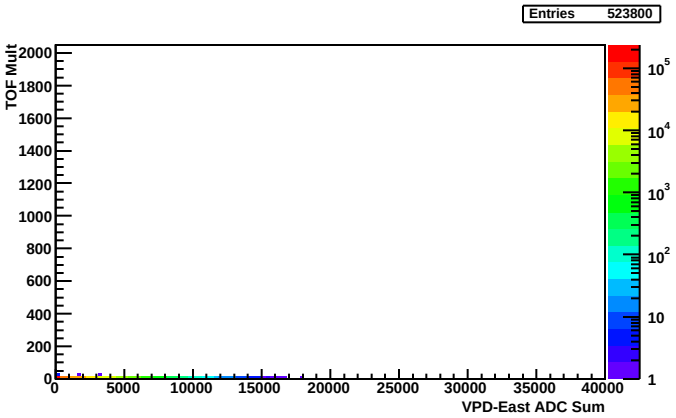

BBQ-VP004 (HI threshold)
Entries 8380800
TAC
QT Input Channel

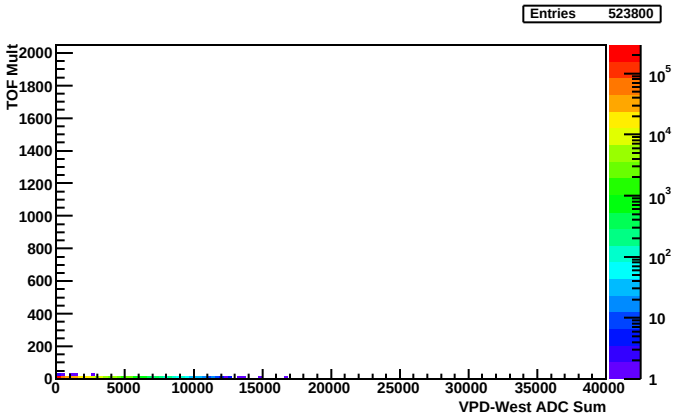

Entries 523800
TOF Mult
BBC-L-East ADC Sum

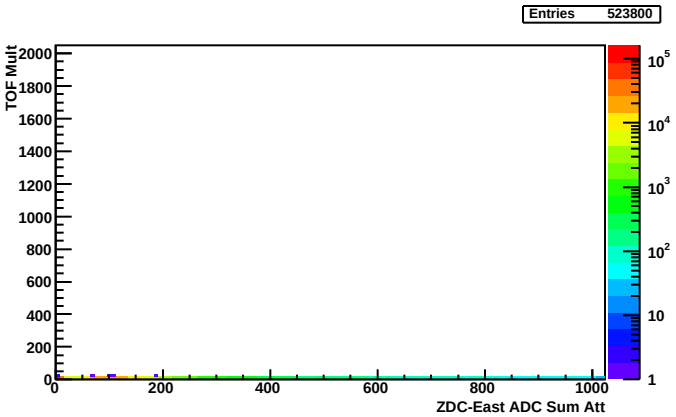

Entries 523800
TOF Mult
BBC-L-West ADC Sum

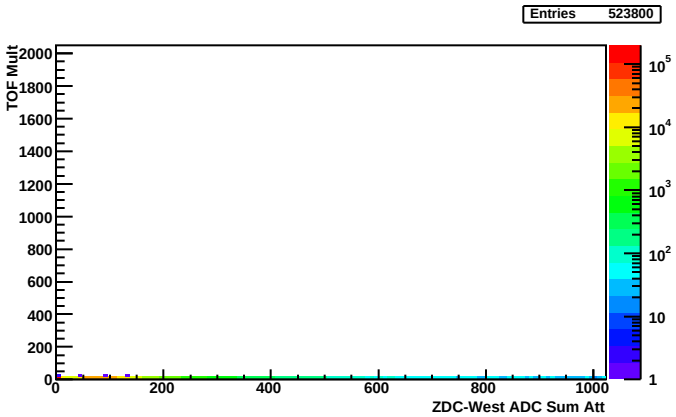

Entries 523800
TOF Mult
BBC-S-East ADC Sum

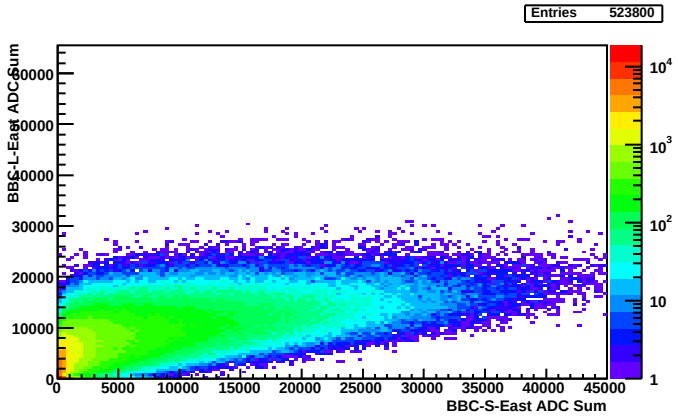

Entries 523800
TOF Mult
BBC-S-West ADC Sum

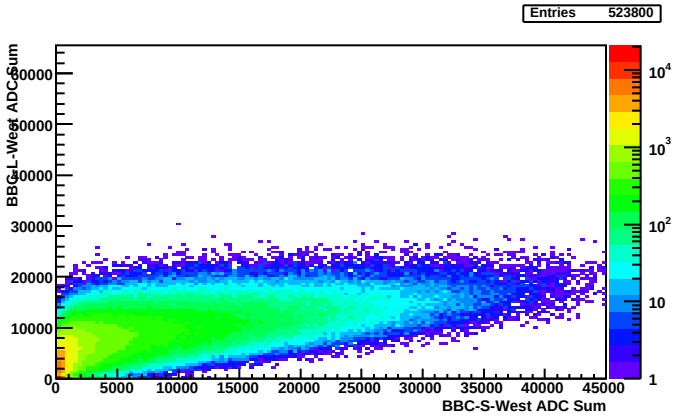

Entries 523800
TOF Mult
VPD-East ADC Sum

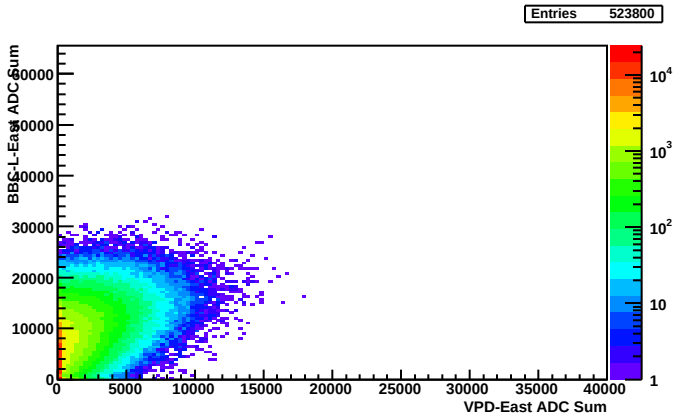

Entries 523800
TOF Mult
VPD-West ADC Sum

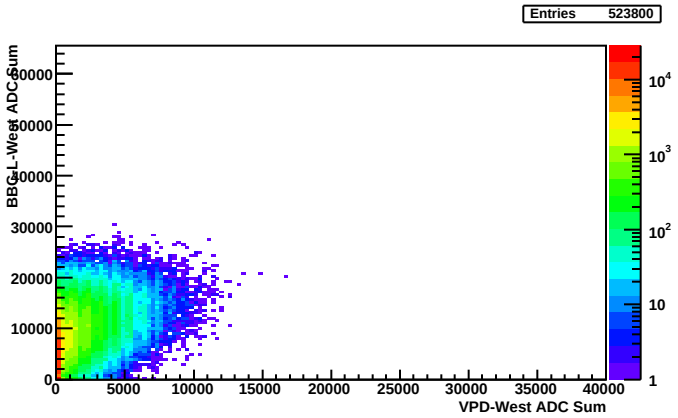

Entries 523800
TOF Mult
ZDC-East ADC Sum Att

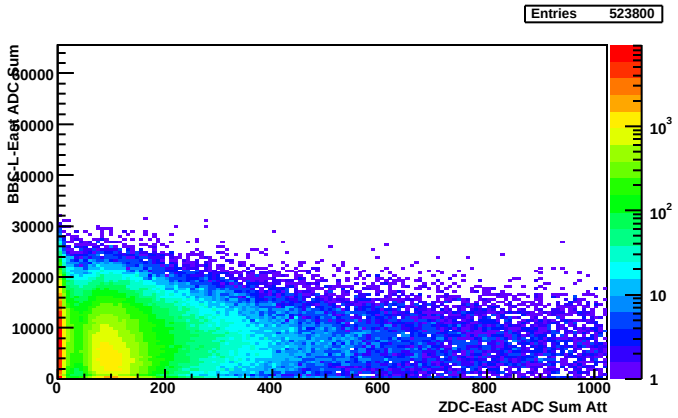

Entries 523800
TOF Mult
ZDC-West ADC Sum Att

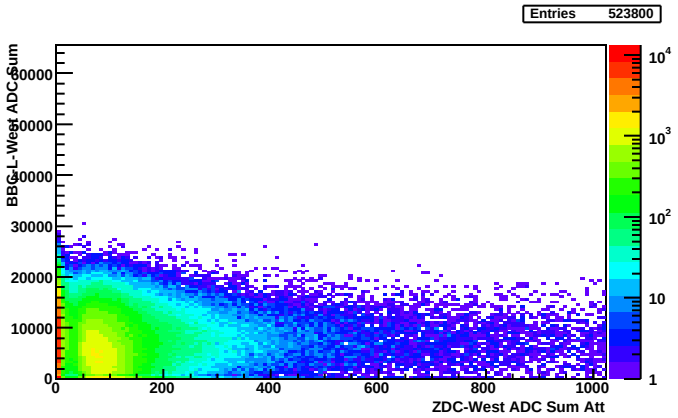

Entries 523800
BBC-L-East ADC Sum
BBC-S-East ADC Sum

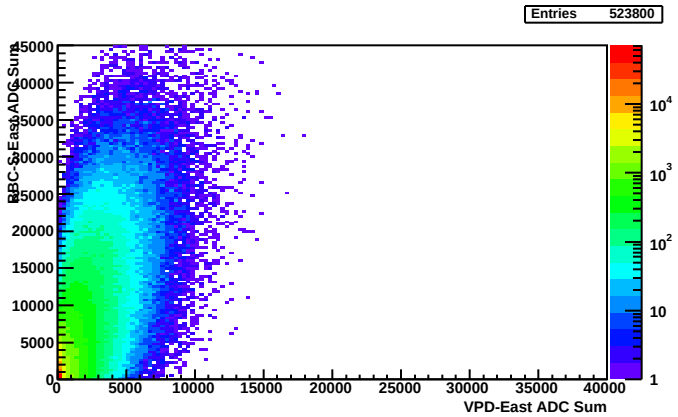

Entries 523800
BBC-L-West ADC Sum
BBC-S-West ADC Sum

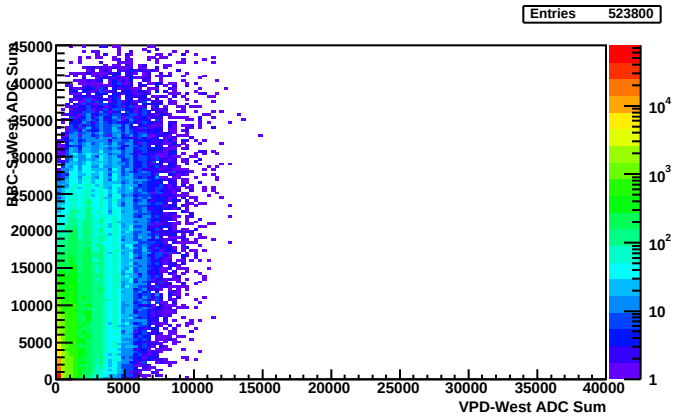

Entries 523800
BBC-L-East ADC Sum
VPD-East ADC Sum

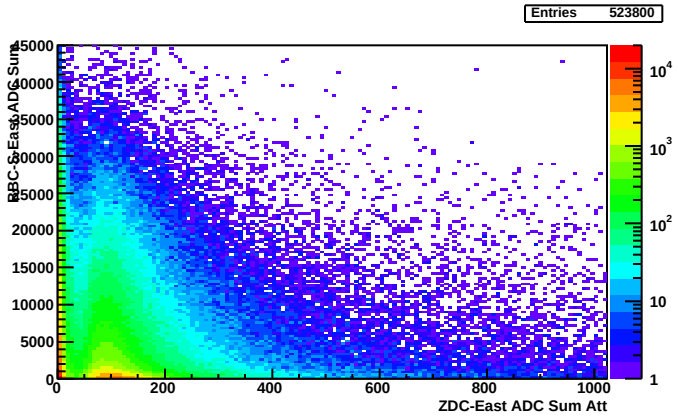

Entries 523800
BBC-L-West ADC Sum
VPD-West ADC Sum

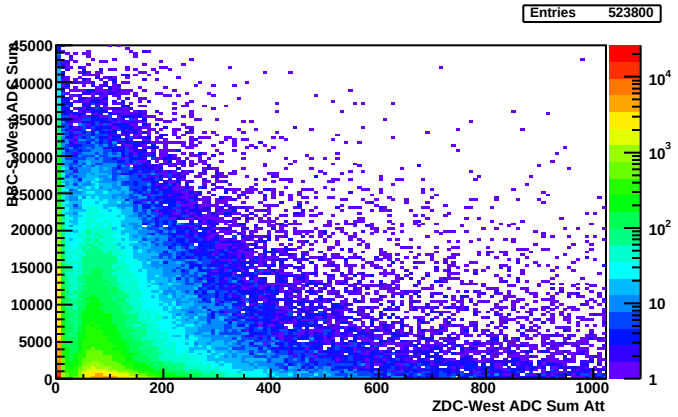

Entries 523800
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

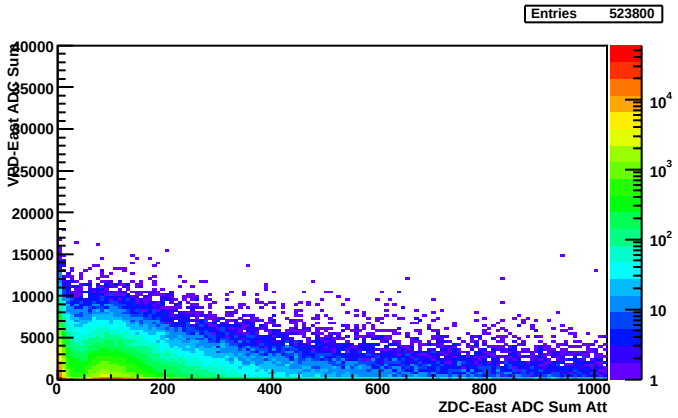

Entries 523800
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

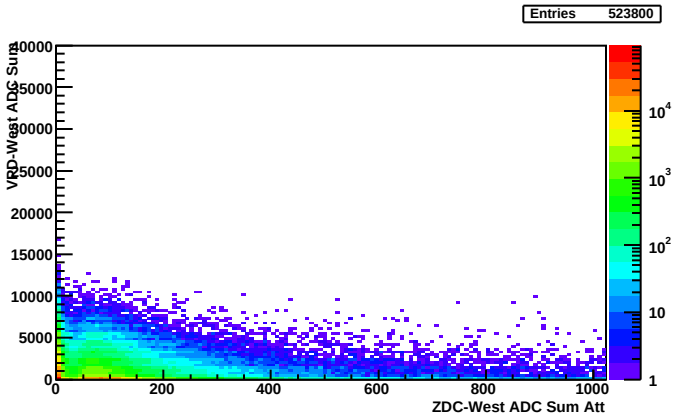

Entries 523800
BBC-S-East ADC Sum
VPD-East ADC Sum

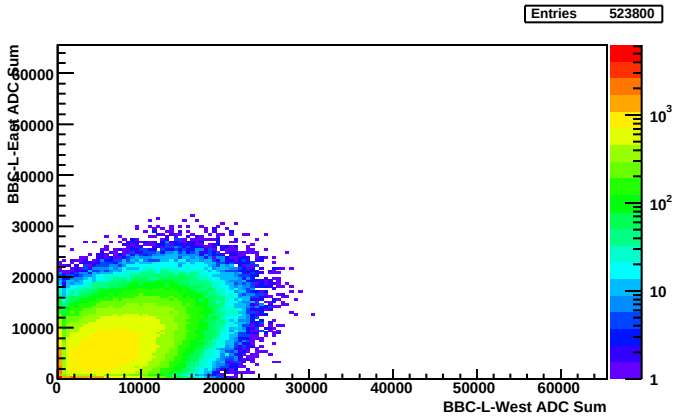

Entries 523800
BBC-S-West ADC Sum
VPD-West ADC Sum

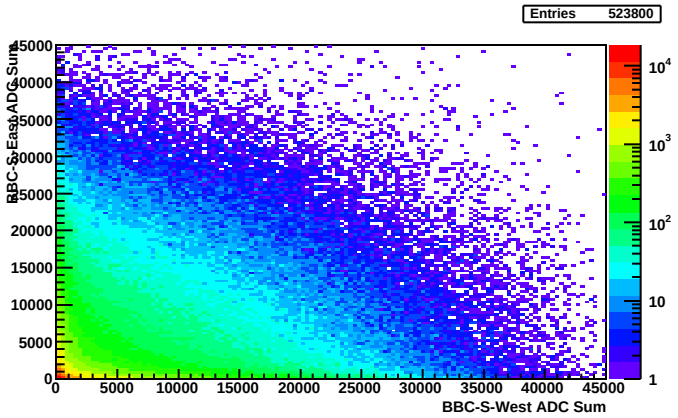

Entries 523800
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

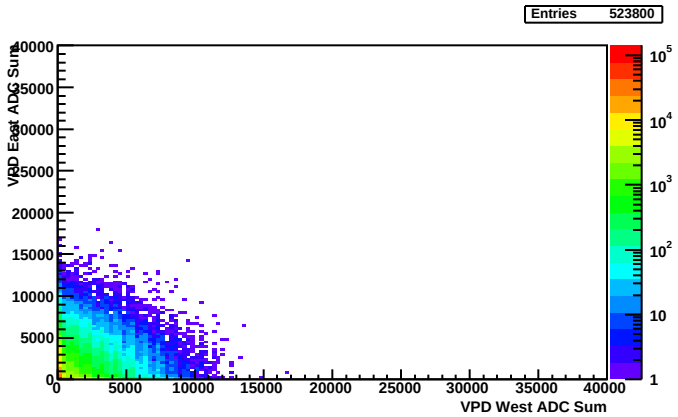

Entries 523800
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

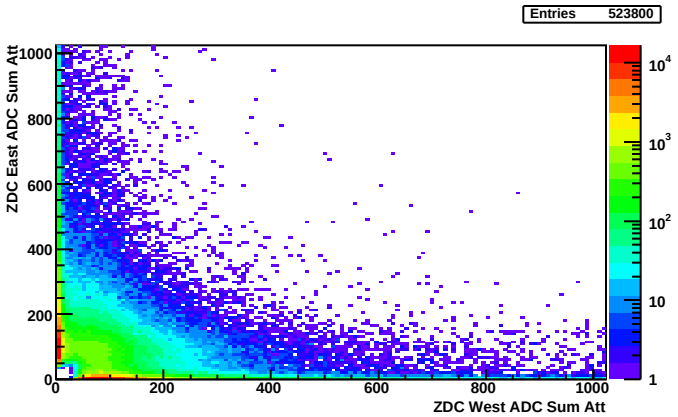

Entries 523800
VPD-East ADC Sum
ZDC-East ADC Sum Att

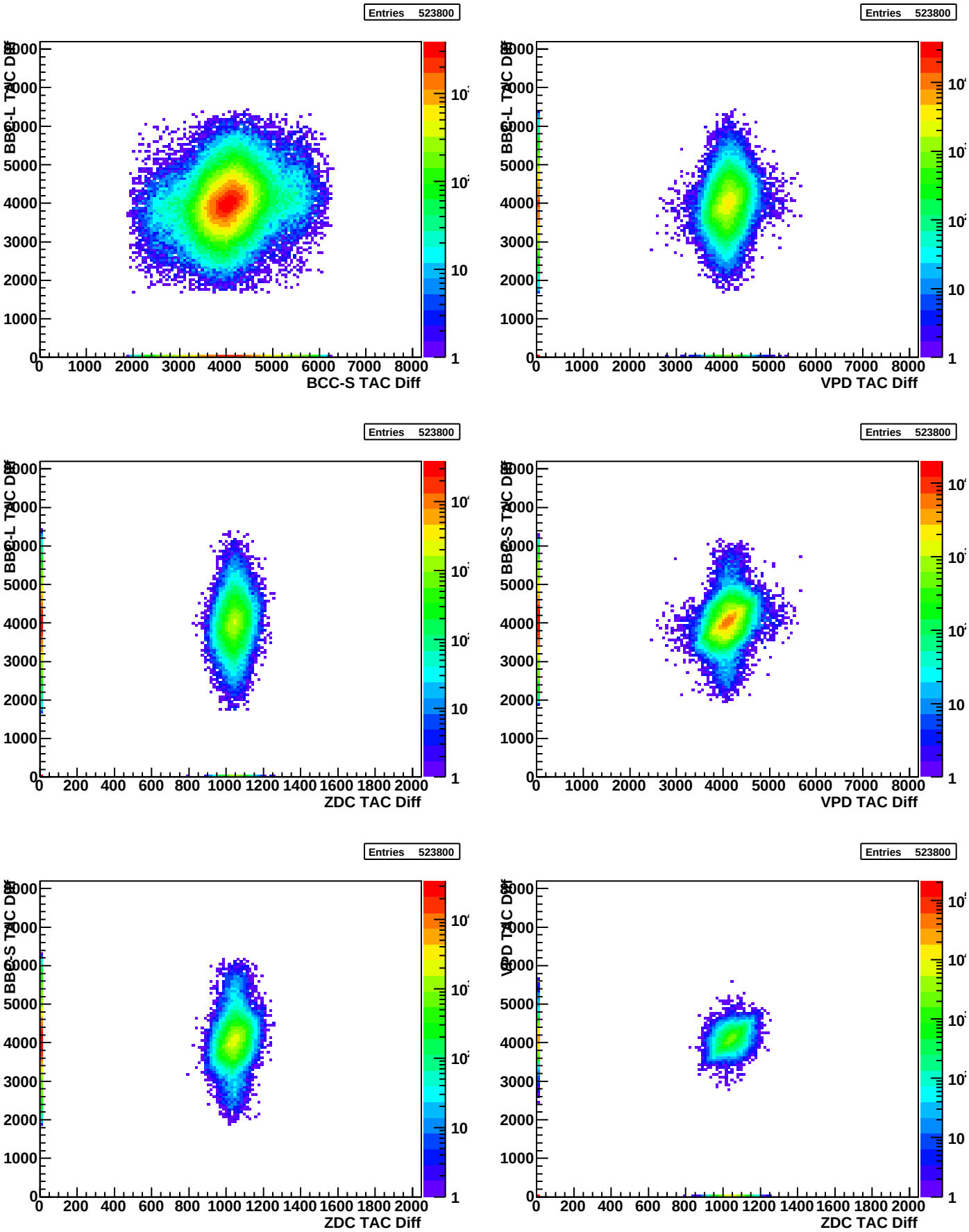

Entries 523800
VPD-West ADC Sum
ZDC-West ADC Sum Att

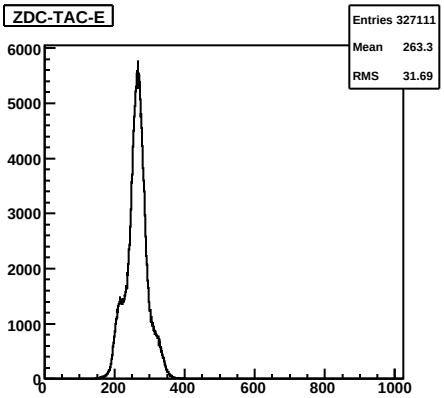

Entries 523800
BBC-L-East ADC Sum
BBC-L-West ADC Sum

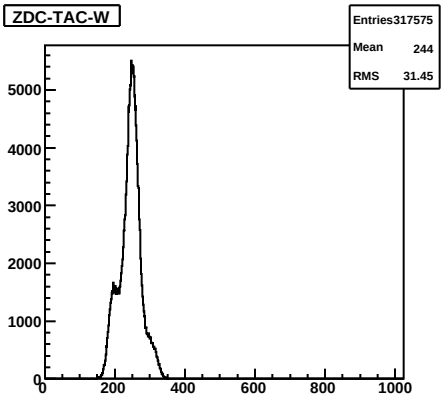

Entries 523800
BBC-S-East ADC Sum
BBC-S-West ADC Sum

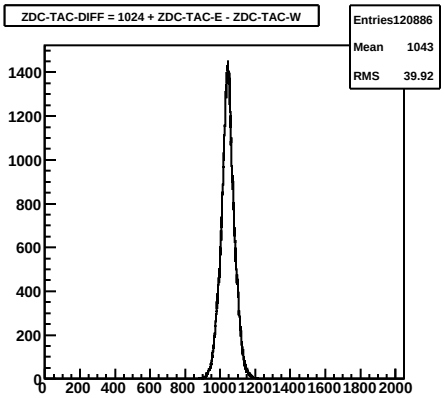

Entries 523800
VPD East ADC Sum
VPD West ADC Sum

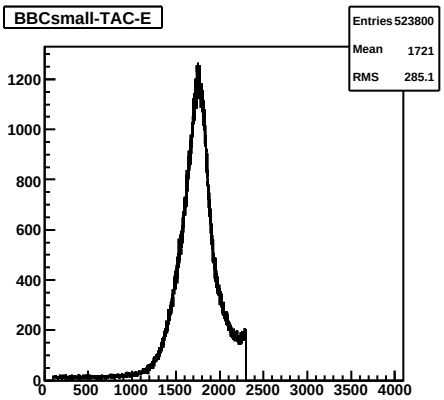

Entries 523800
ZDC East ADC Sum Att
ZDC West ADC Sum Att

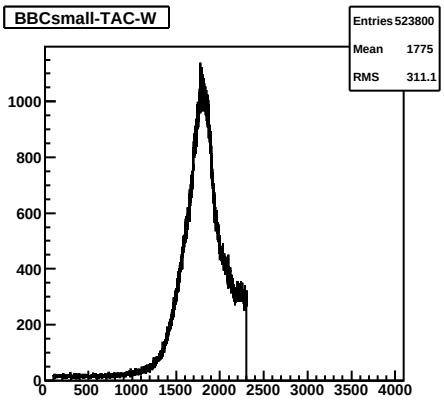

Entries 523800
BBC-L TAC Diff
BCC-S TAC Diff
Entries 523800
BBC-L TAC Diff
VPD TAC Diff
Entries 523800
BBC-L TAC Diff
ZDC TAC Diff
Entries 523800
BBC-S TAC Diff
VPD TAC Diff
Entries 523800
BBC-S TAC Diff
ZDC TAC Diff
Entries 523800
VPD TAC Diff
ZDC TAC Diff

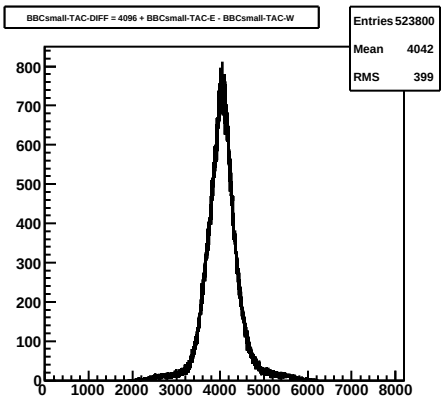

ZDC-TAC-E
Entries 327111
Mean 263.3
RMS 31.69

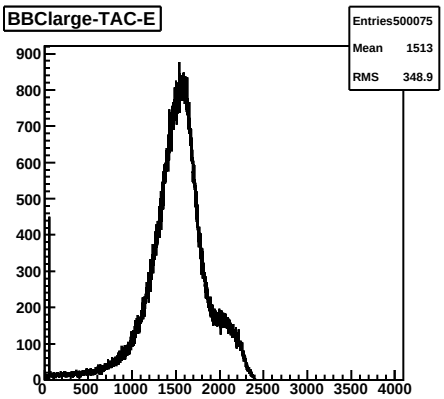

ZDC-TAC-W
Entries 317575
Mean 244
RMS 31.45

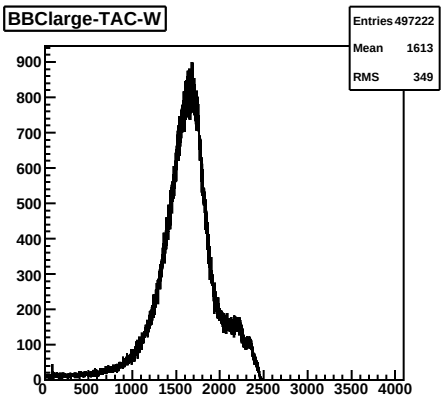

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 120886
Mean 1043
RMS 39.92

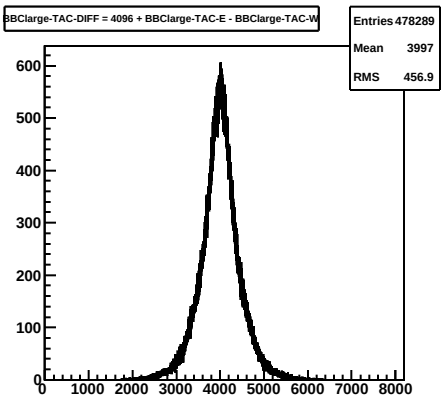

BBCsmall-TAC-E
Entries 523800
Mean 1721
RMS 285.1

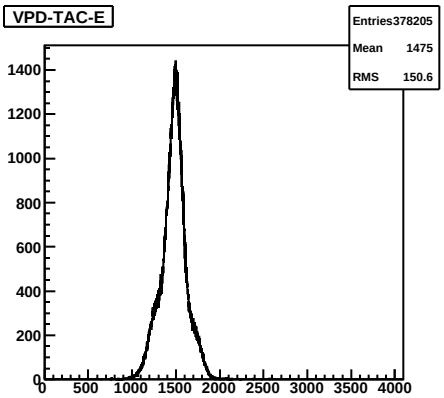

BBCsmall-TAC-W
Entries 523800
Mean 1775
RMS 311.1

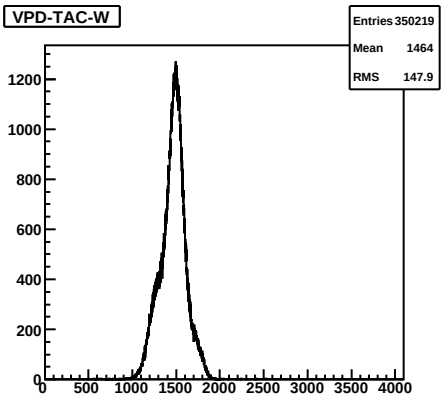

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 523800
Mean 4042
RMS 399

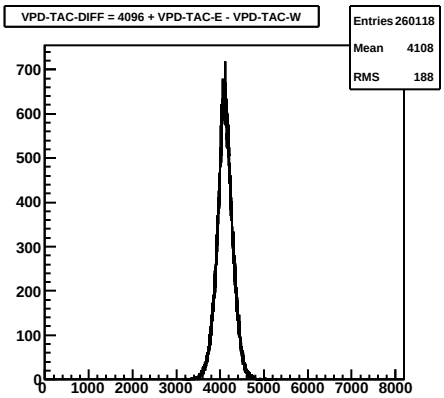

BBClarge-TAC-E
Entries 500075
Mean 1513
RMS 348.9

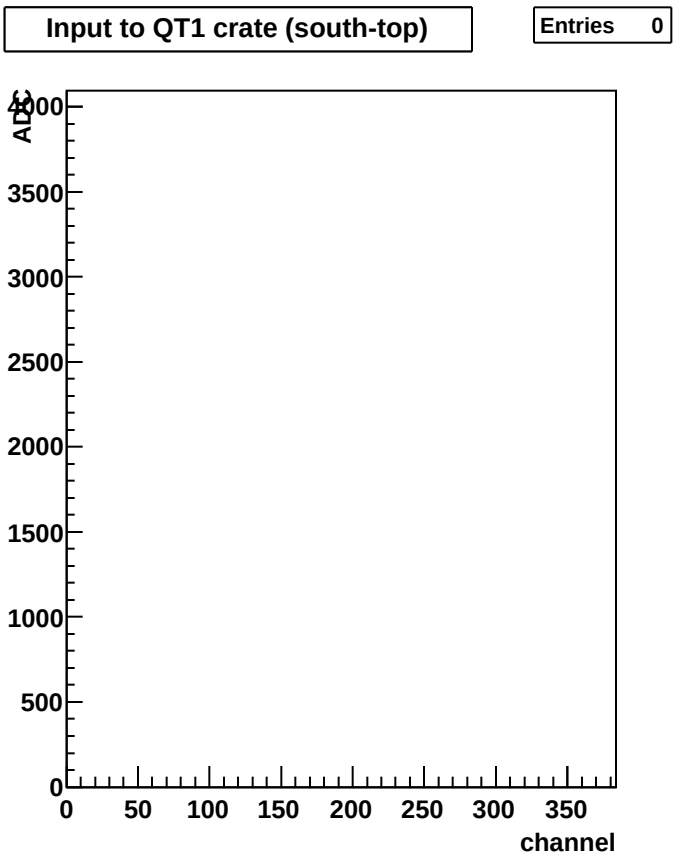

BBClarge-TAC-W
Entries 497222
Mean 1613
RMS 349

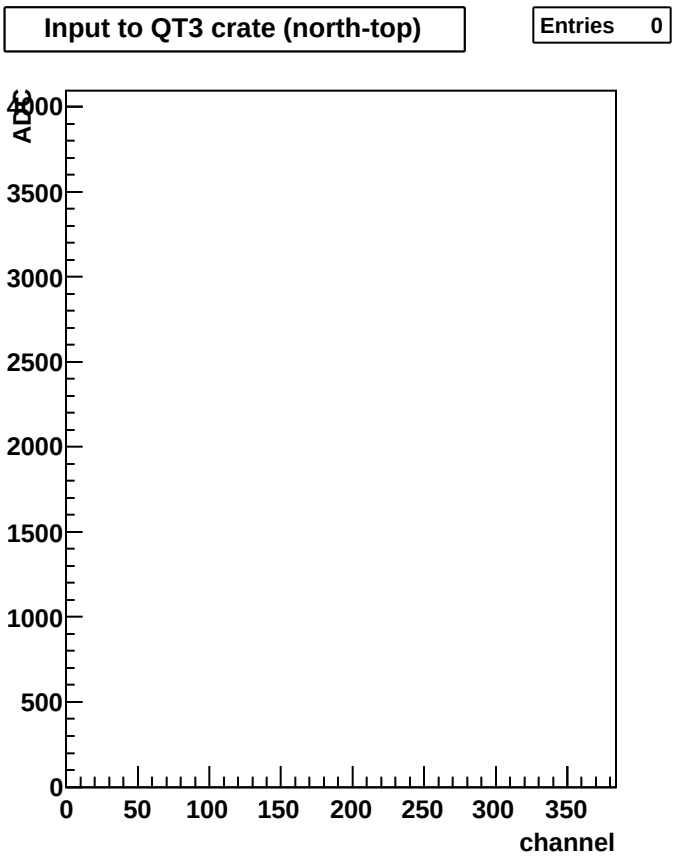

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 478289
Mean 3997
RMS 456.9

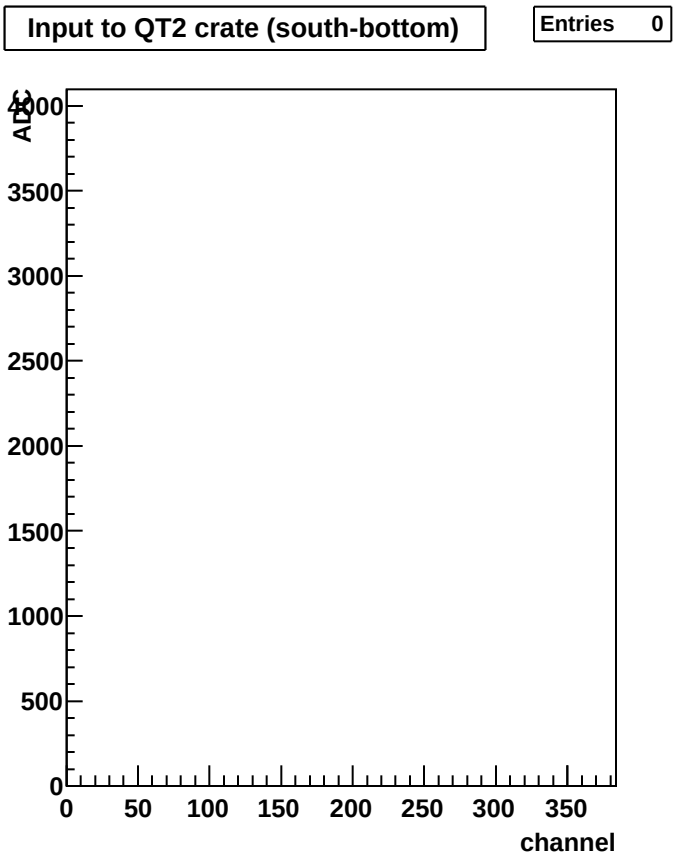

VPD-TAC-E
Entries 378205
Mean 1475
RMS 150.6

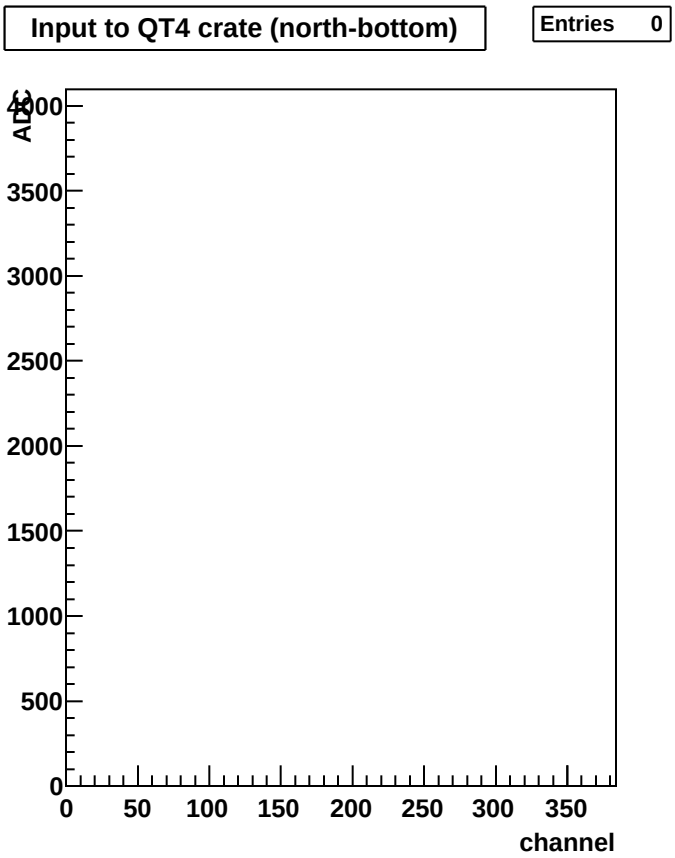

VPD-TAC-W
Entries 350219
Mean 1464
RMS 147.9

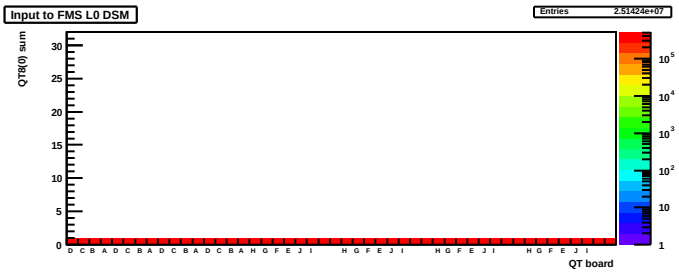

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 260118
Mean 4108
RMS 188

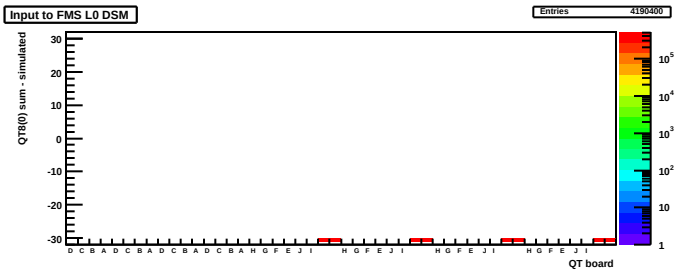

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

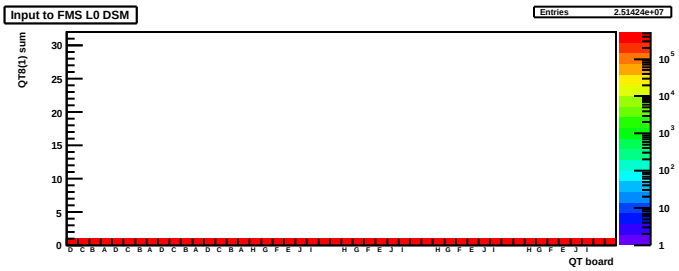

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

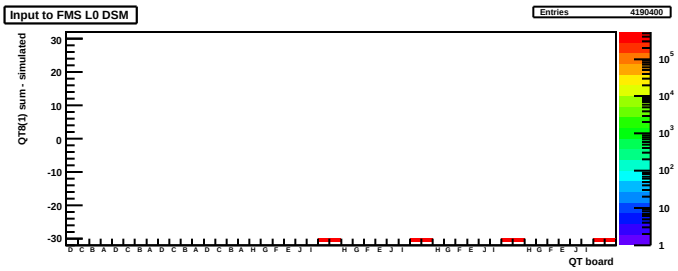

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

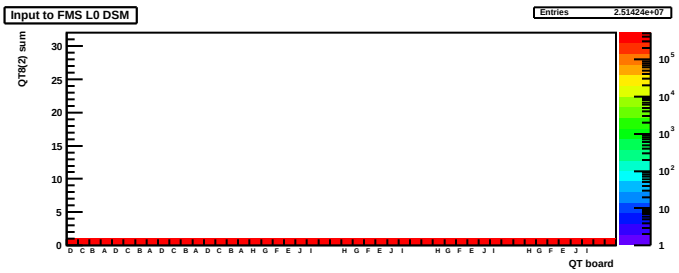

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

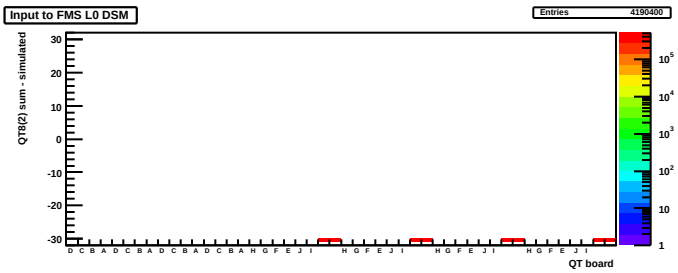

Input to FMS L0 DSM
Entries 2.51424e+07
QT8(0) sum
QT board

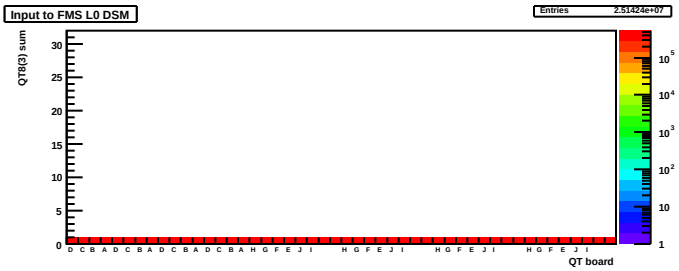

Input to FMS L0 DSM
Entries 4190400
QT8(0) sum - simulated
QT board

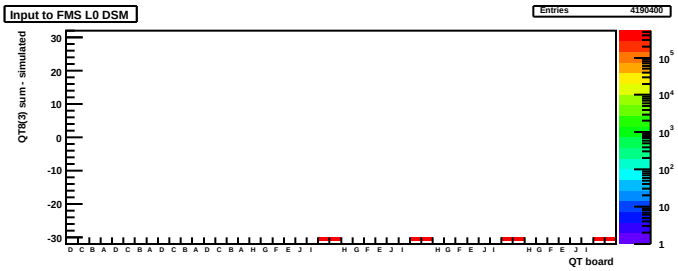

Input to FMS L0 DSM
Entries 2.51424e+07
QT8(1) sum
QT board

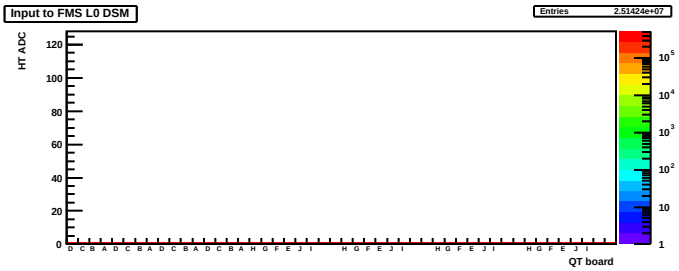

Input to FMS L0 DSM
Entries 4190400
QT8(1) sum - simulated
QT board

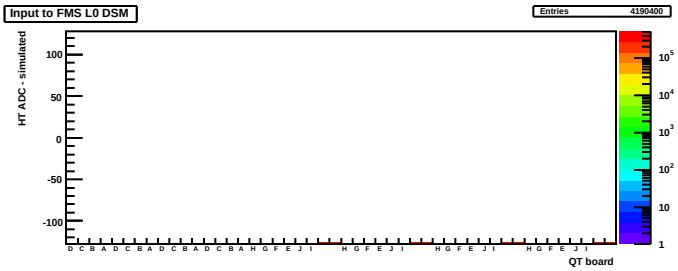

Input to FMS L0 DSM
Entries 2.51424e+07
QT8(2) sum
QT board

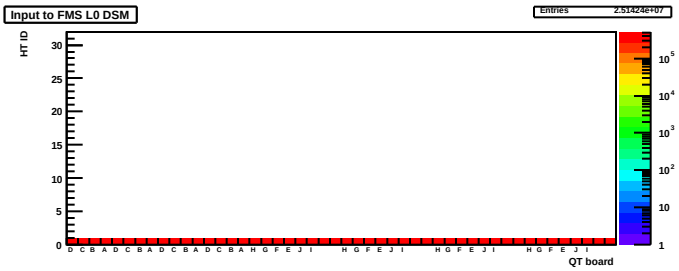

Input to FMS L0 DSM
Entries 4190400
QT8(2) sum - simulated
QT board

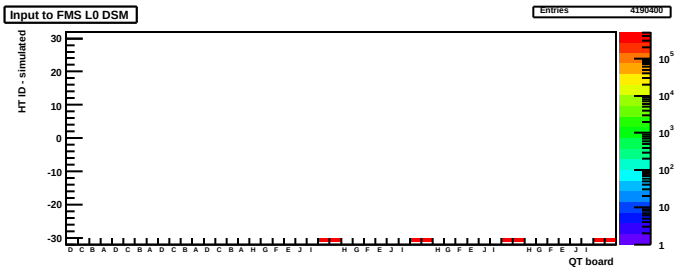

Input to FMS L0 DSM
Entries 2.51424e+07
QT8(3) sum
QT board

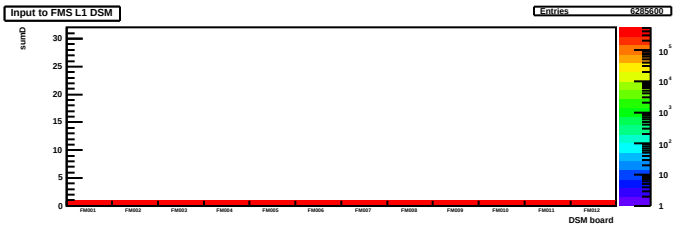

Input to FMS L0 DSM
Entries 4190400
QT8(3) sum - simulated
QT board

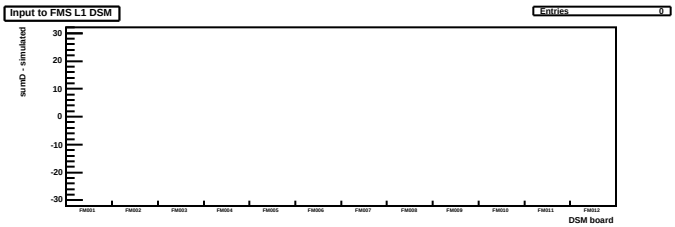

Input to FMS L0 DSM
Entries 2.51424e+07
HT ADC
QT board

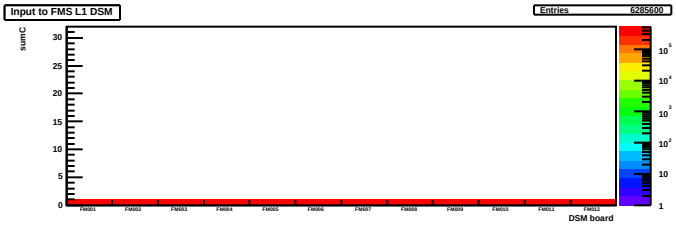

Input to FMS L0 DSM
Entries 4190400
HT ADC - simulated
QT board

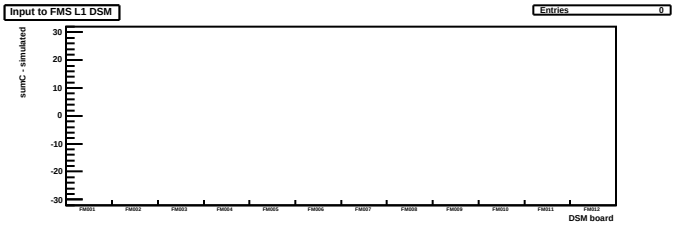

Input to FMS L0 DSM
Entries 2.51424e+07
HT ID
QT board

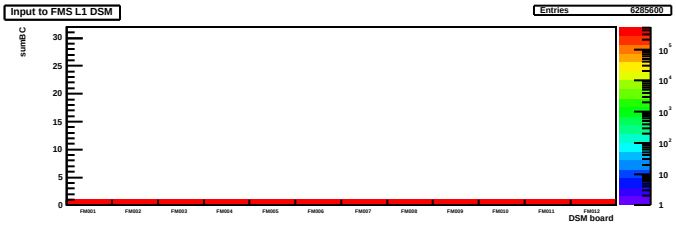

Input to FMS L0 DSM
Entries 4190400
HT ID - simulated
QT board

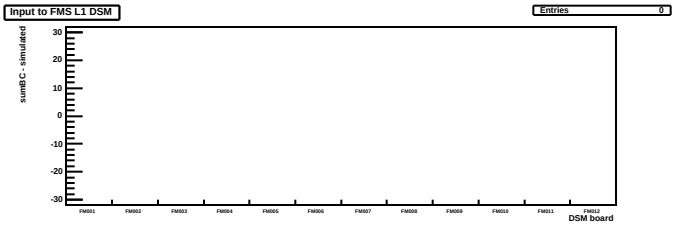

Input to FMS L1 DSM
Entries 6285600
sumD
DSM board

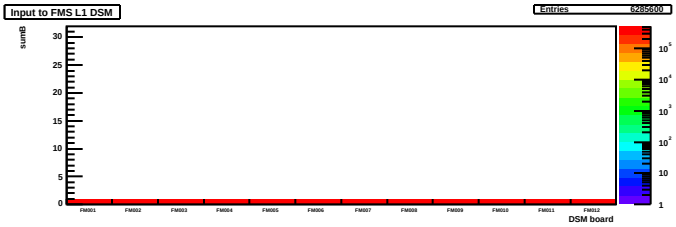

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

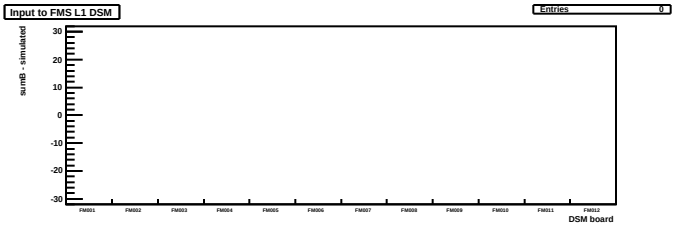

Input to FMS L1 DSM
Entries 6285600
sumC
DSM board

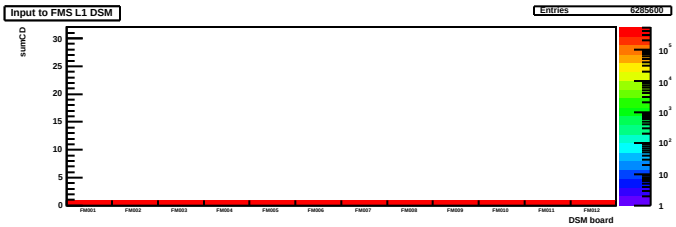

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

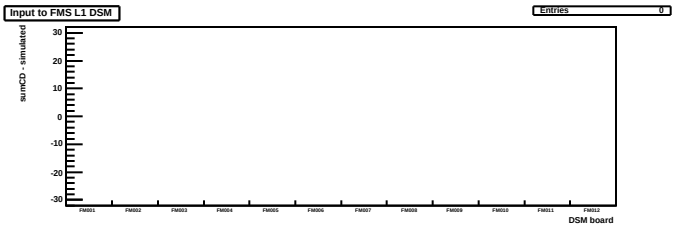

Input to FMS L1 DSM
Entries 6285600
sumBC
DSM board

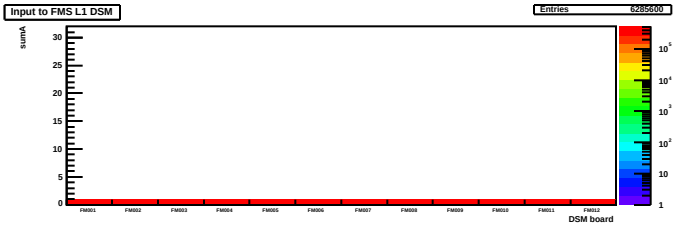

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

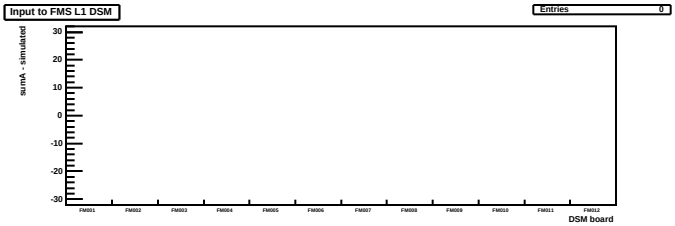

Input to FMS L1 DSM
Entries 6285600
sumB
DSM board

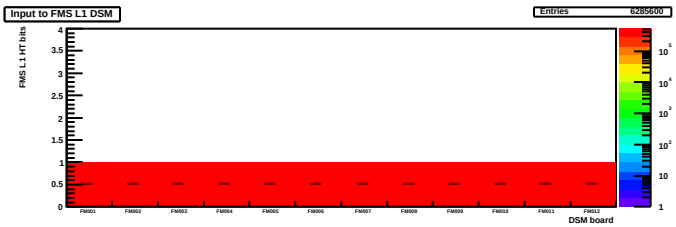

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

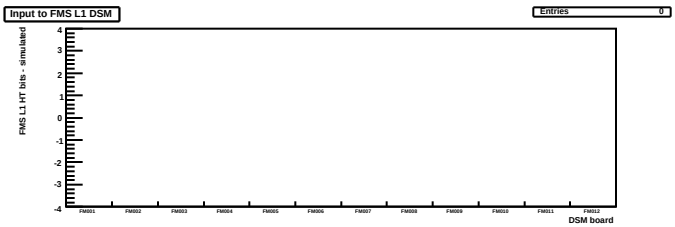

Input to FMS L1 DSM
Entries 6285600
sumCD
DSM board

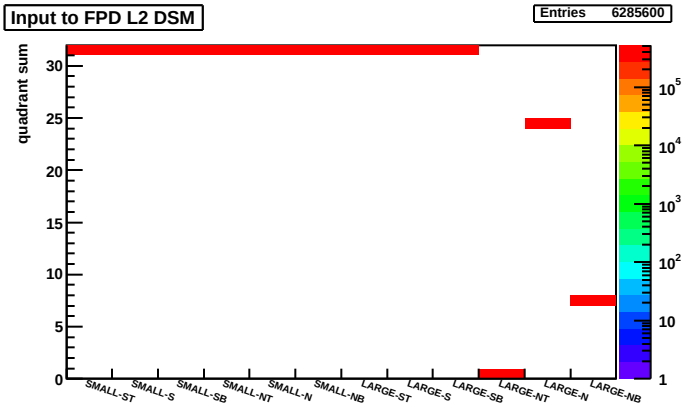

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

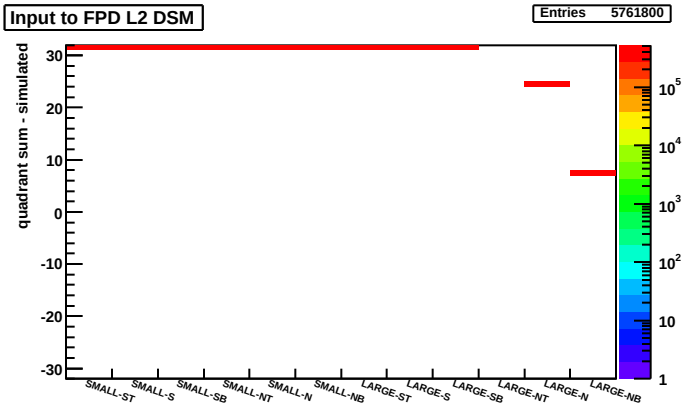

Input to FMS L1 DSM
Entries 6285600
sumA
DSM board

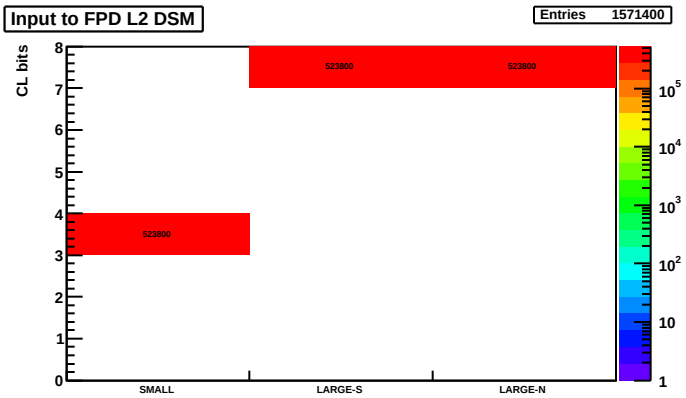

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

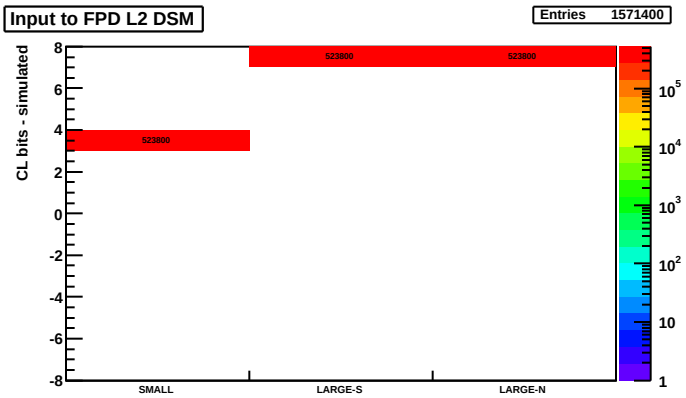

Input to FMS L1 DSM
Entries 6285600
FMS L1 HT bits
DSM board

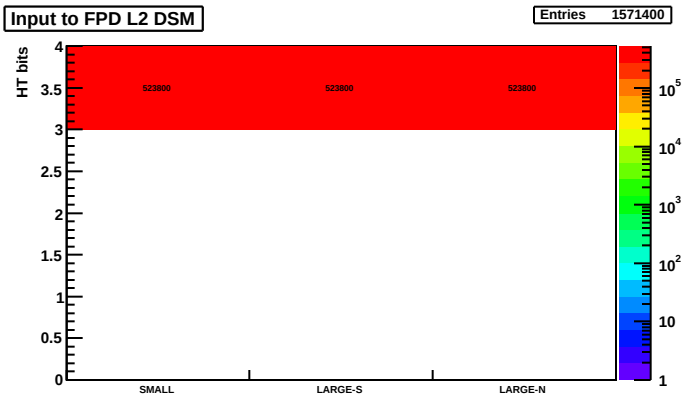

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

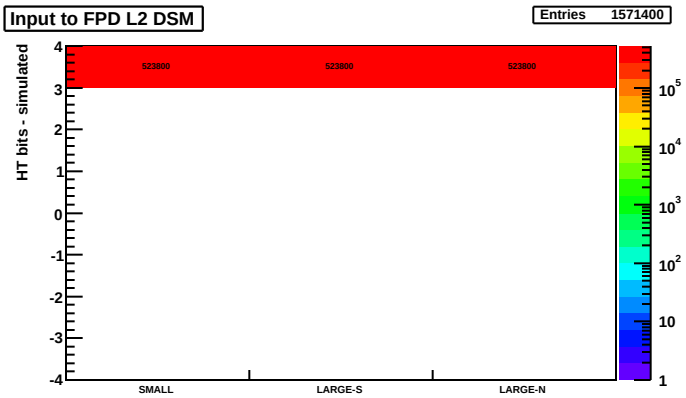

Input to FPD L2 DSM
Entries 6285600
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

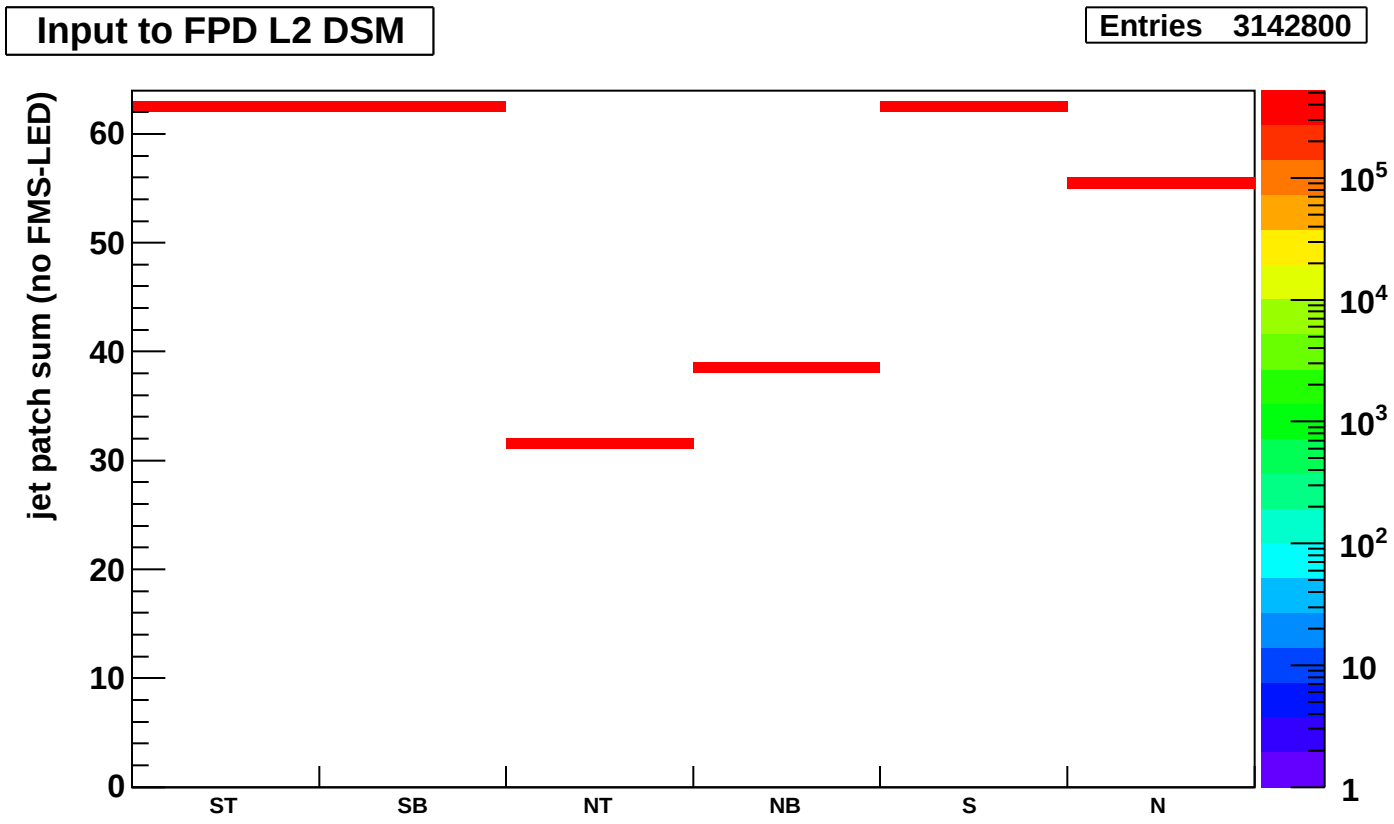

Input to FPD L2 DSM
Entries 5761800
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

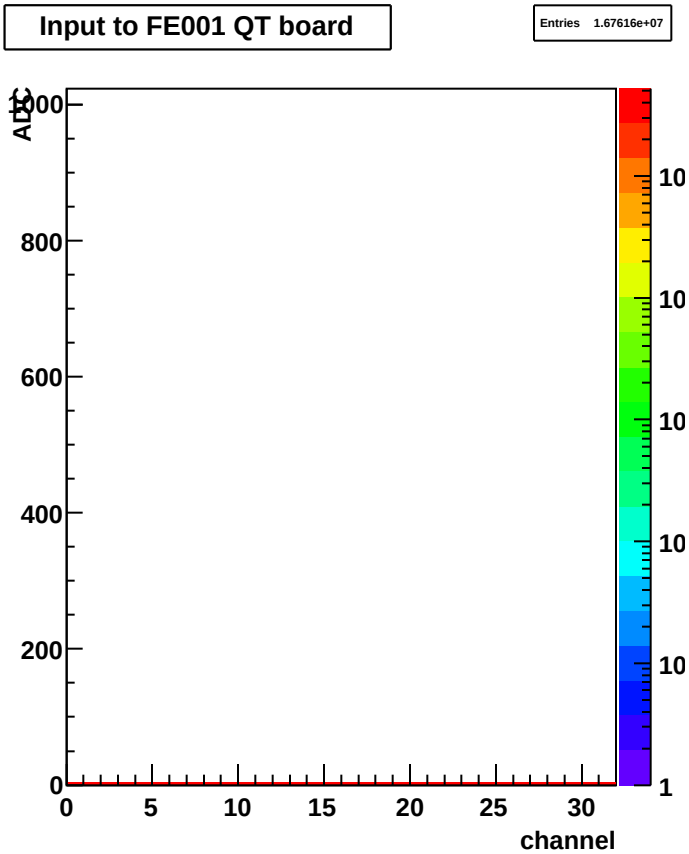

Input to FPD L2 DSM
Entries 1571400
CL bits
523800
523800
523800
SMALL
LARGE-S
LARGE-N

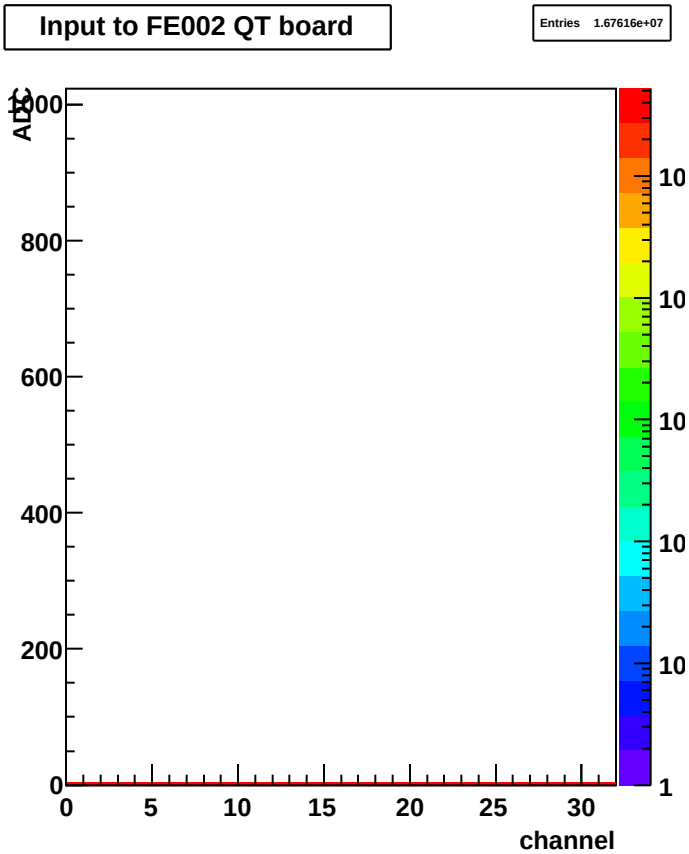

Input to FPD L2 DSM
Entries 1571400
CL bits - simulated
523800
523800
523800
SMALL
LARGE-S
LARGE-N

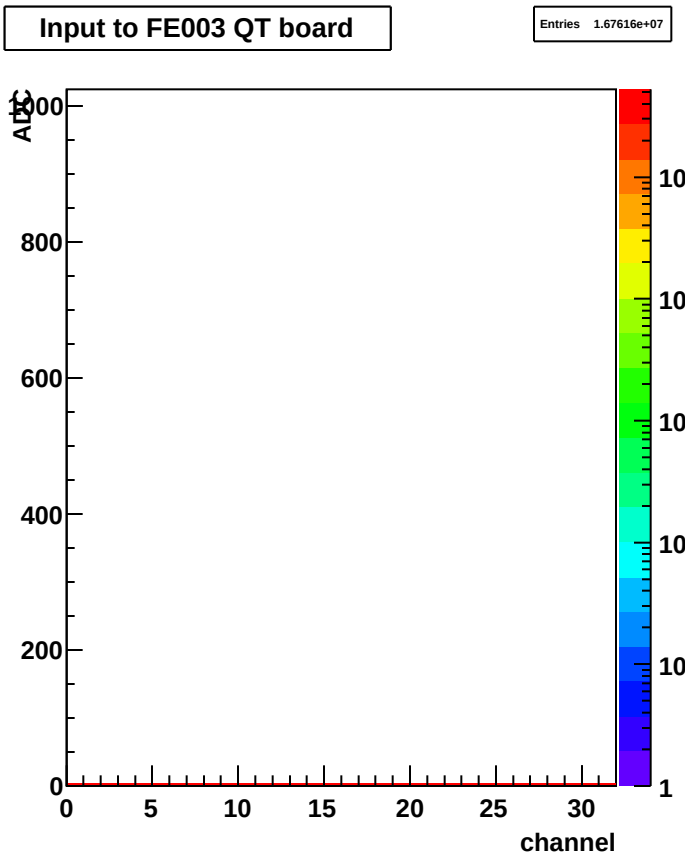

Input to FPD L2 DSM
Entries 1571400
HT bits
523800
523800
523800
SMALL
LARGE-S
LARGE-N

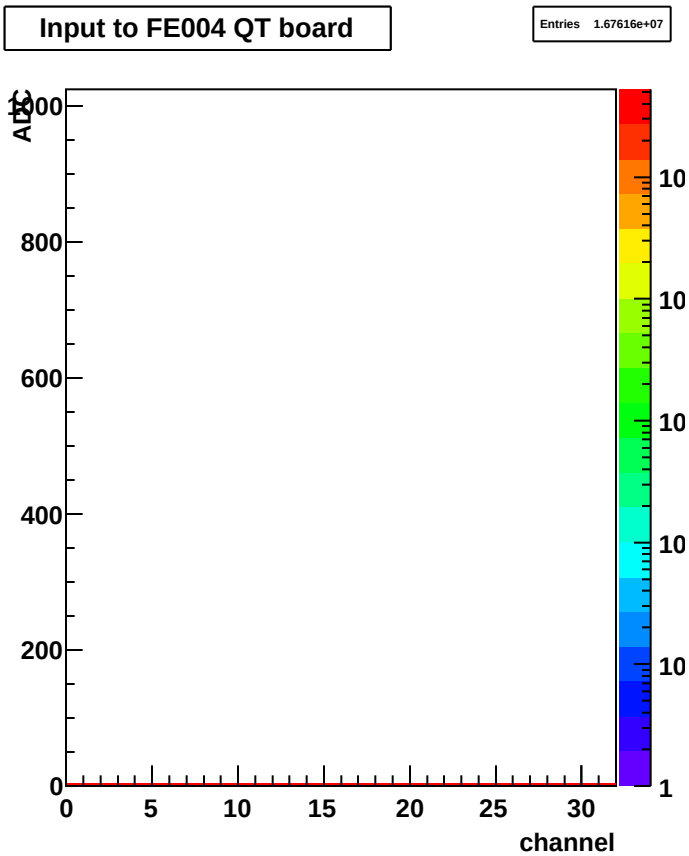

Input to FPD L2 DSM
Entries 1571400
HT bits - simulated
523800
523800
523800
SMALL
LARGE-S
LARGE-N

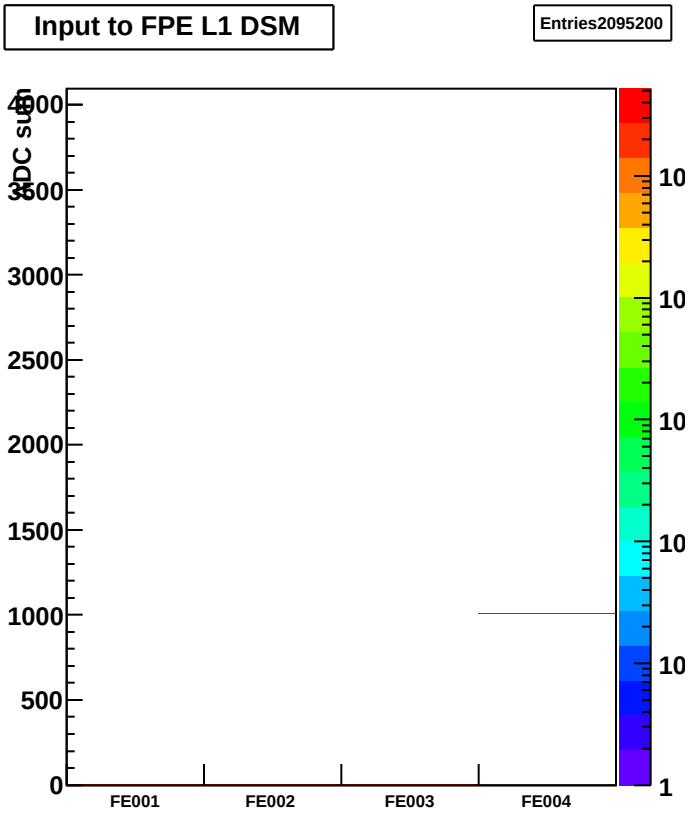

Input to FPD L2 DSM
Entries 3142800
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

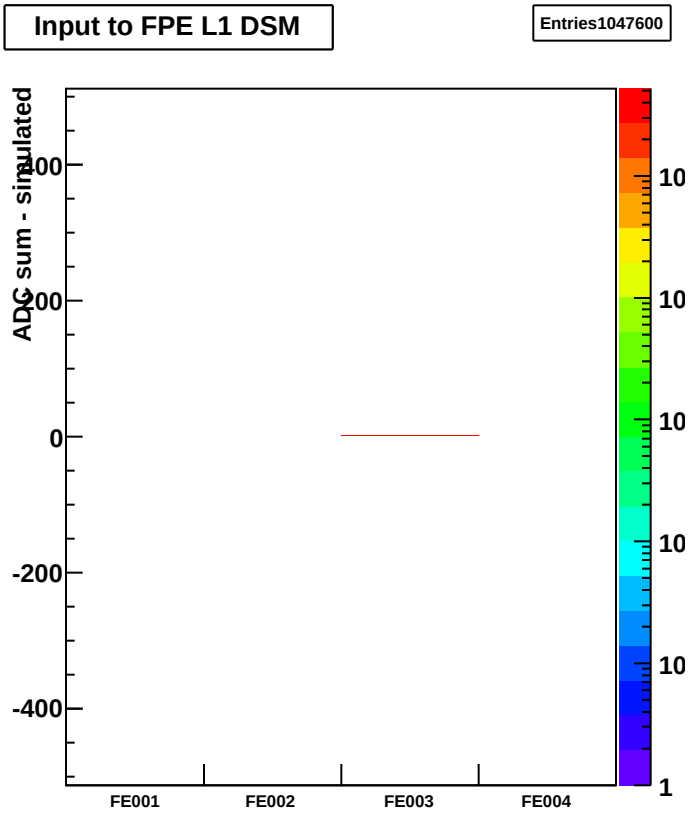

Input to FE001 QT board
Entries 1.67616e+07
ADC
channel

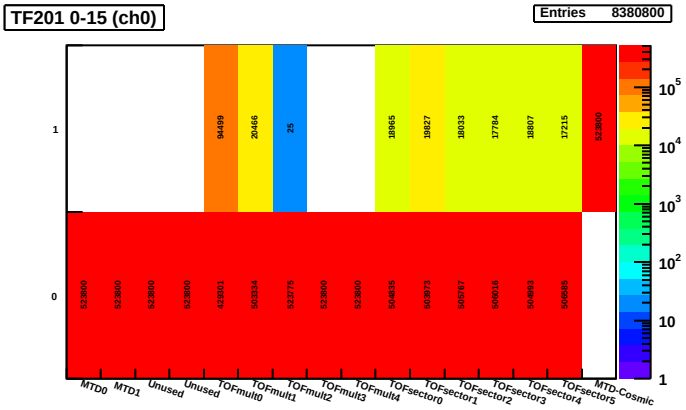

Input to FE002 QT board
Entries 1.67616e+07
ADC
channel


Input to FE003 QT board
Entries 1.67616e+07
ADC
channel


Input to FE004 QT board
Entries 1.67616e+07
ADC
channel


Input to FPE L1 DSM
Entries2095200
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries1047600
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1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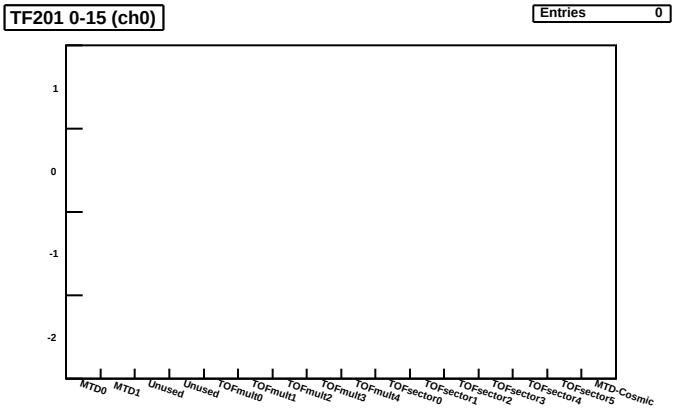
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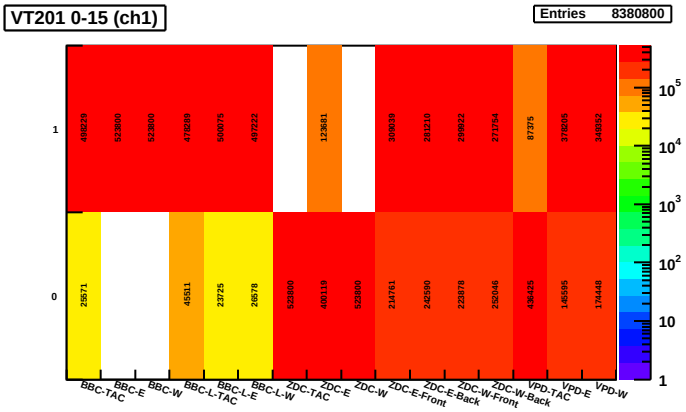
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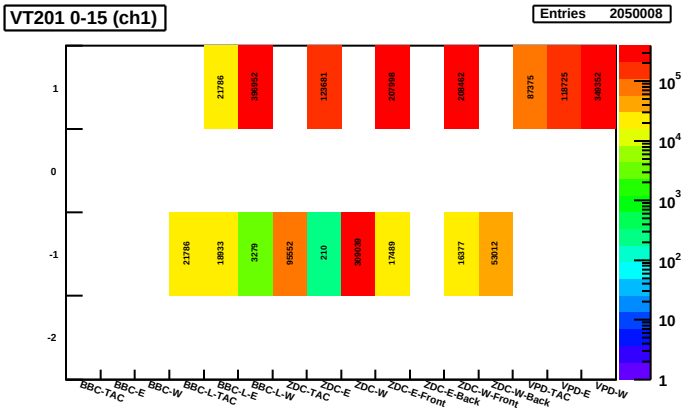
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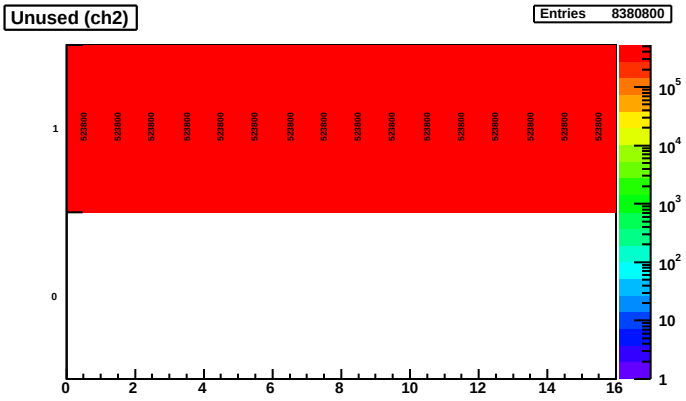
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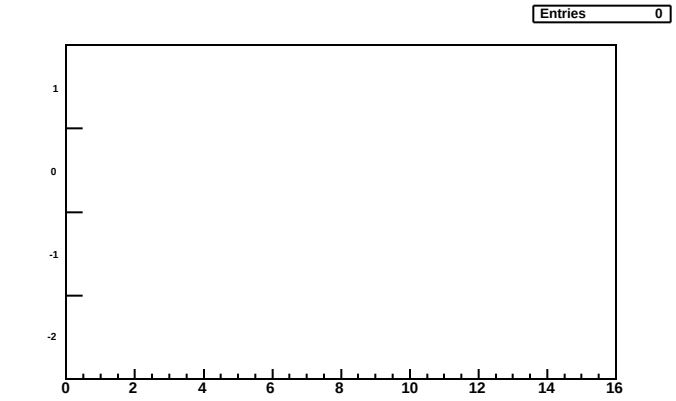
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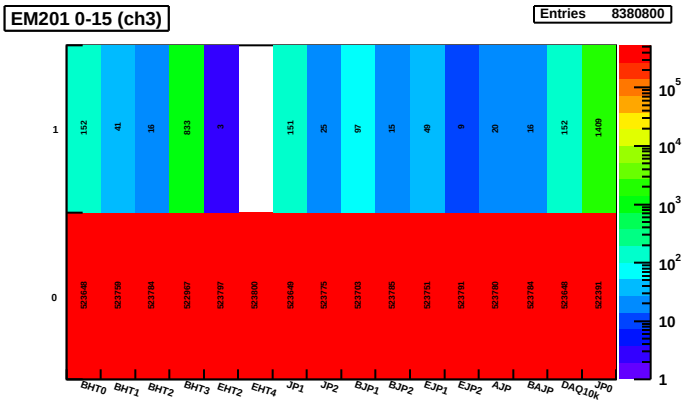
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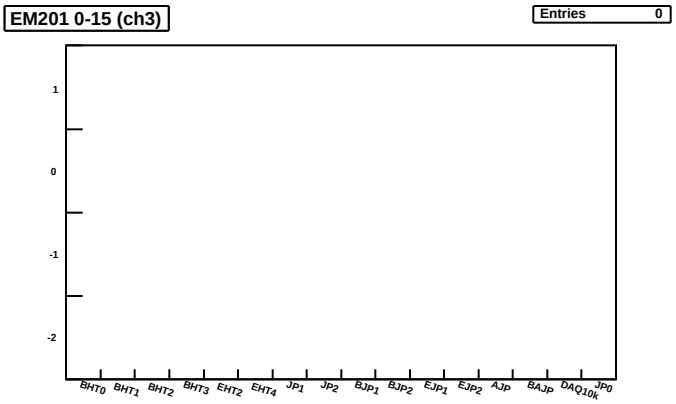
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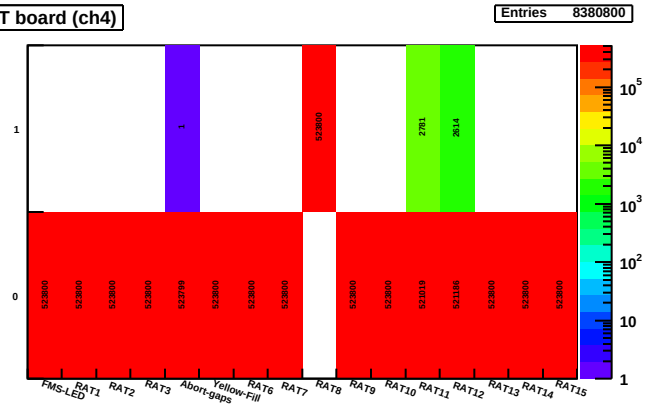
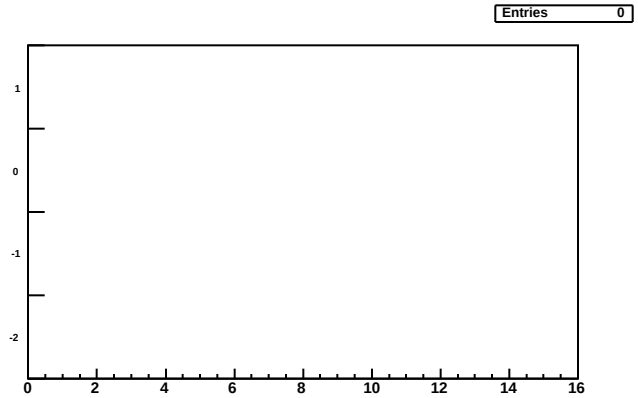
RAT board (ch4)





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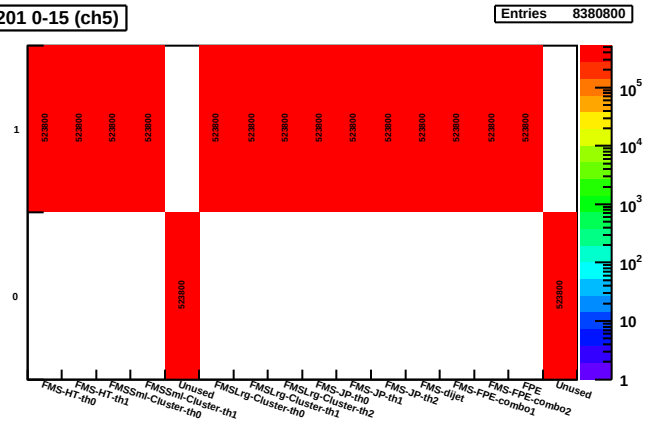

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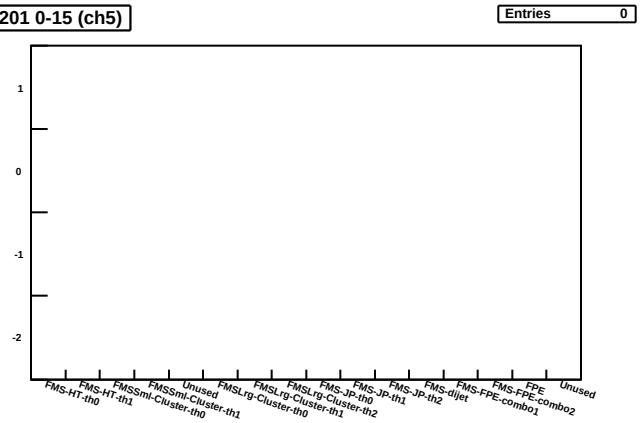
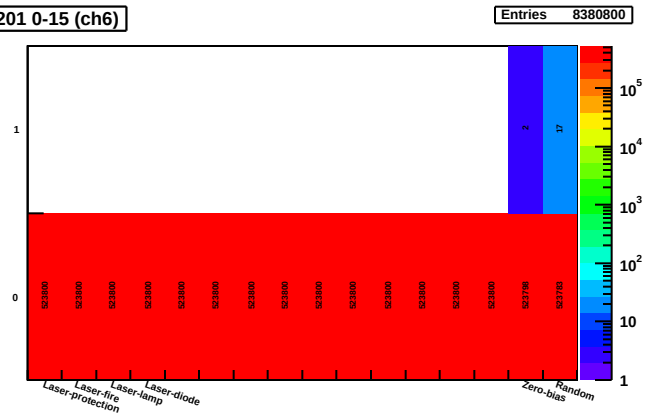
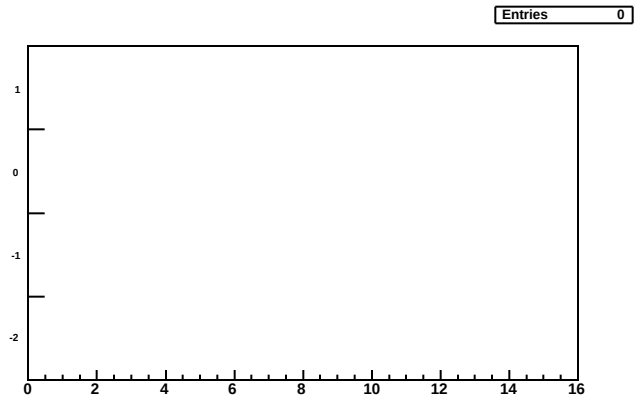
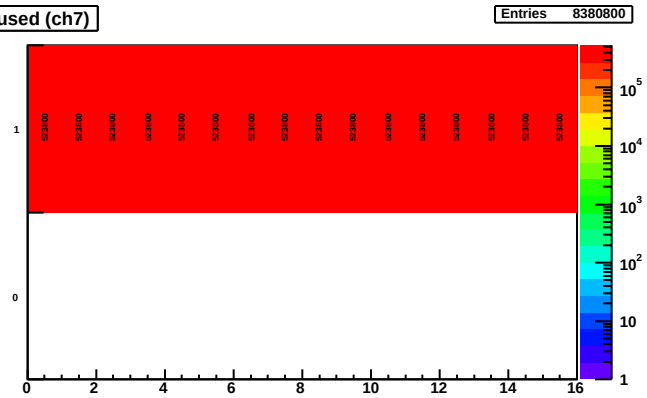
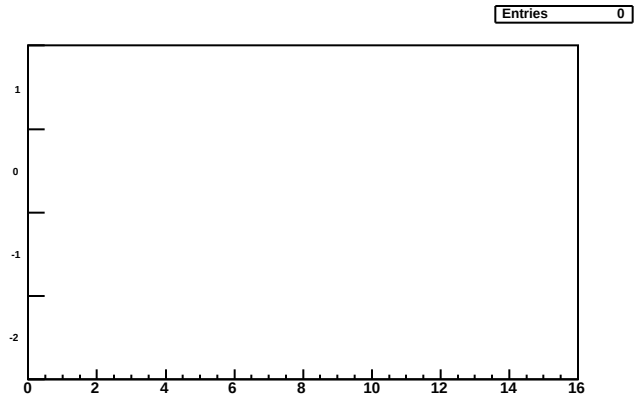


ST201 0-15 (ch6)





Unused (ch7)