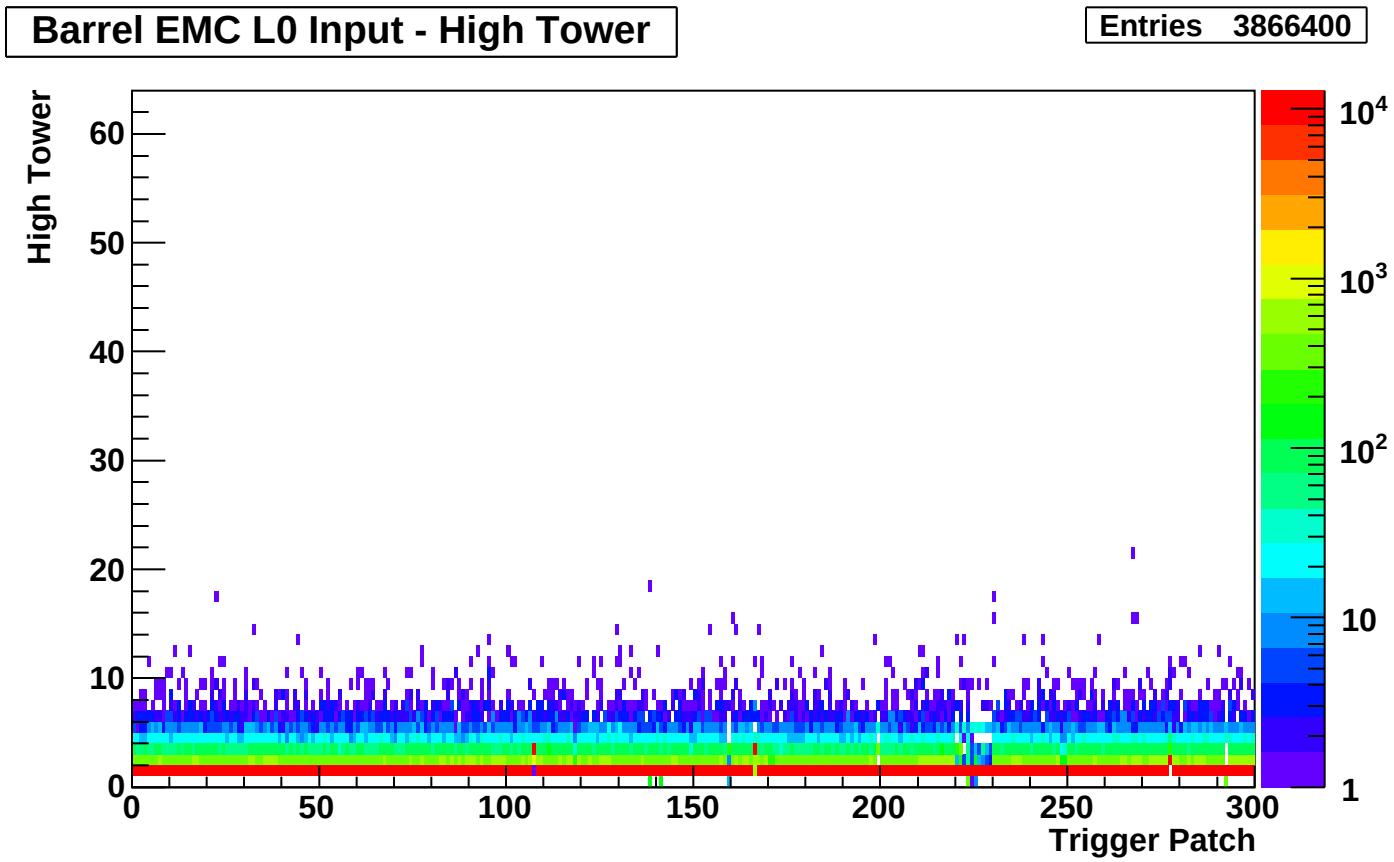
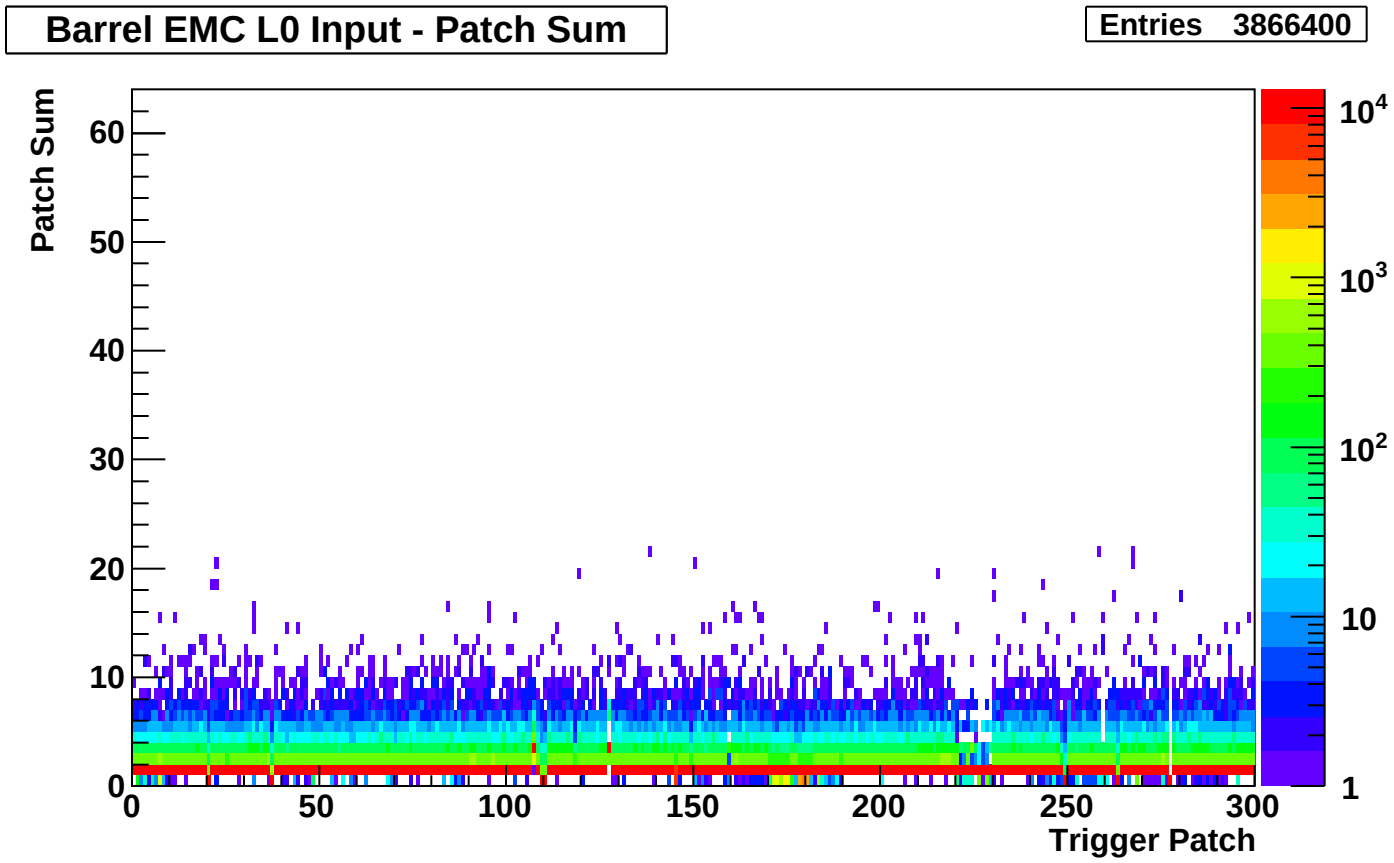
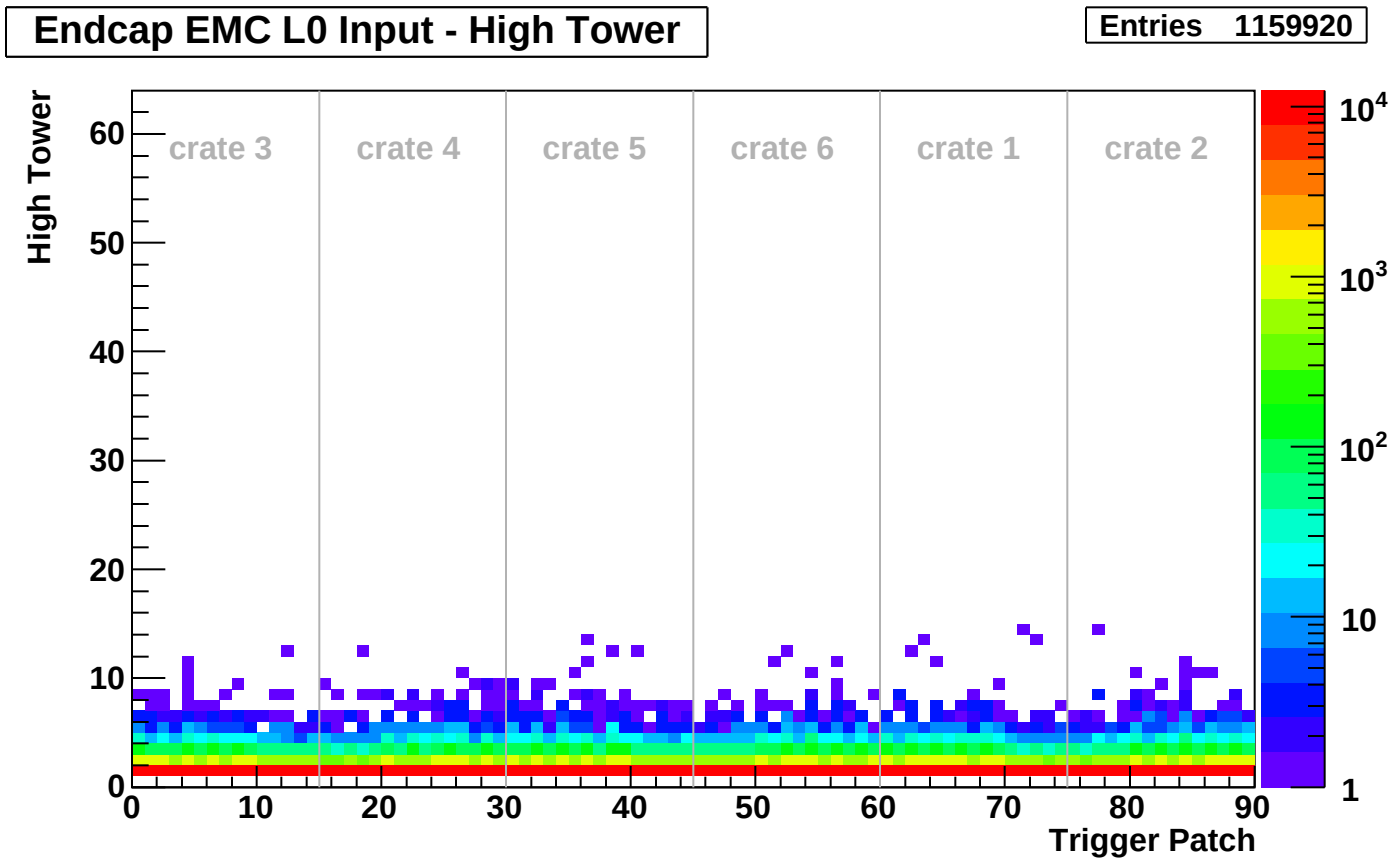
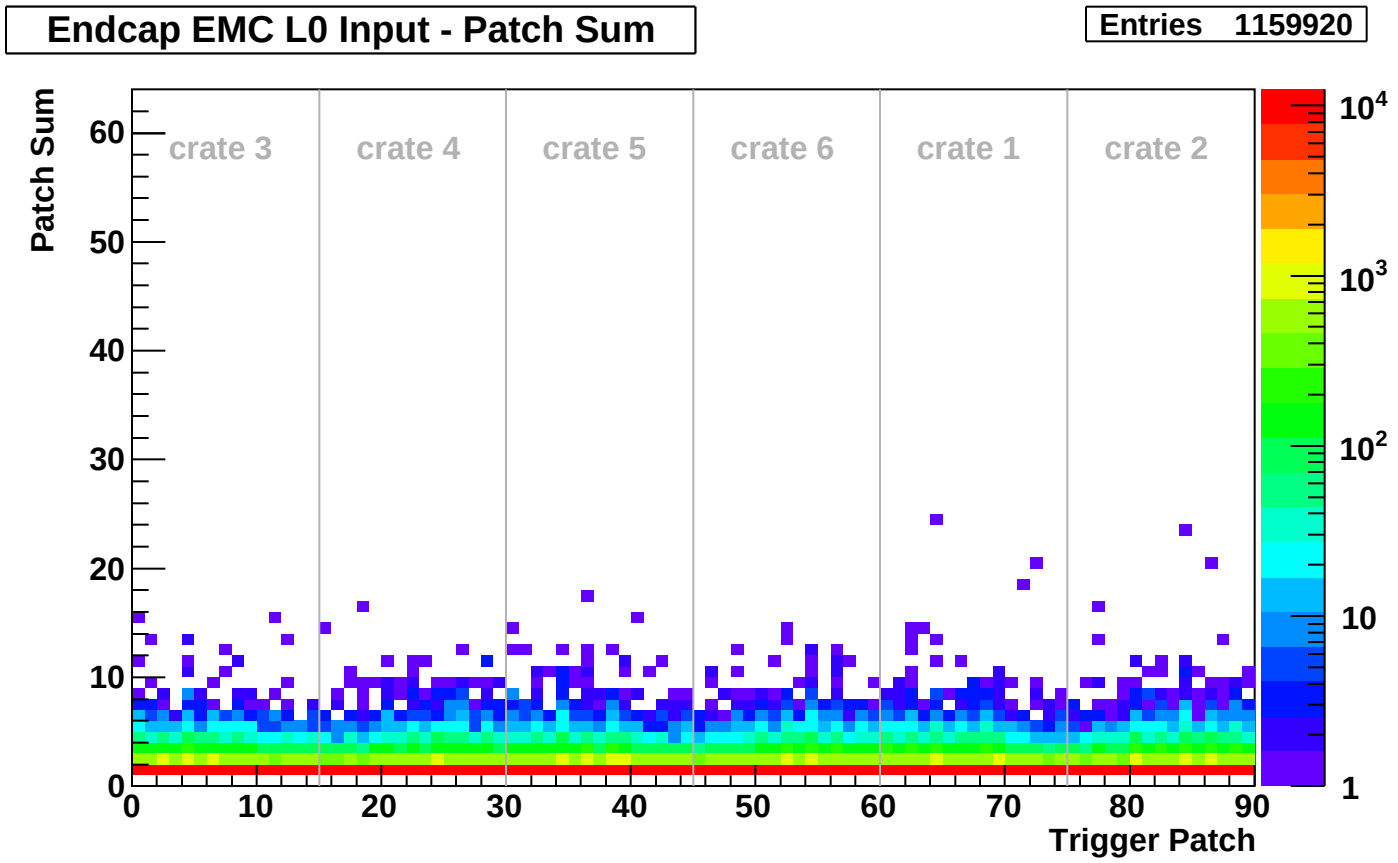
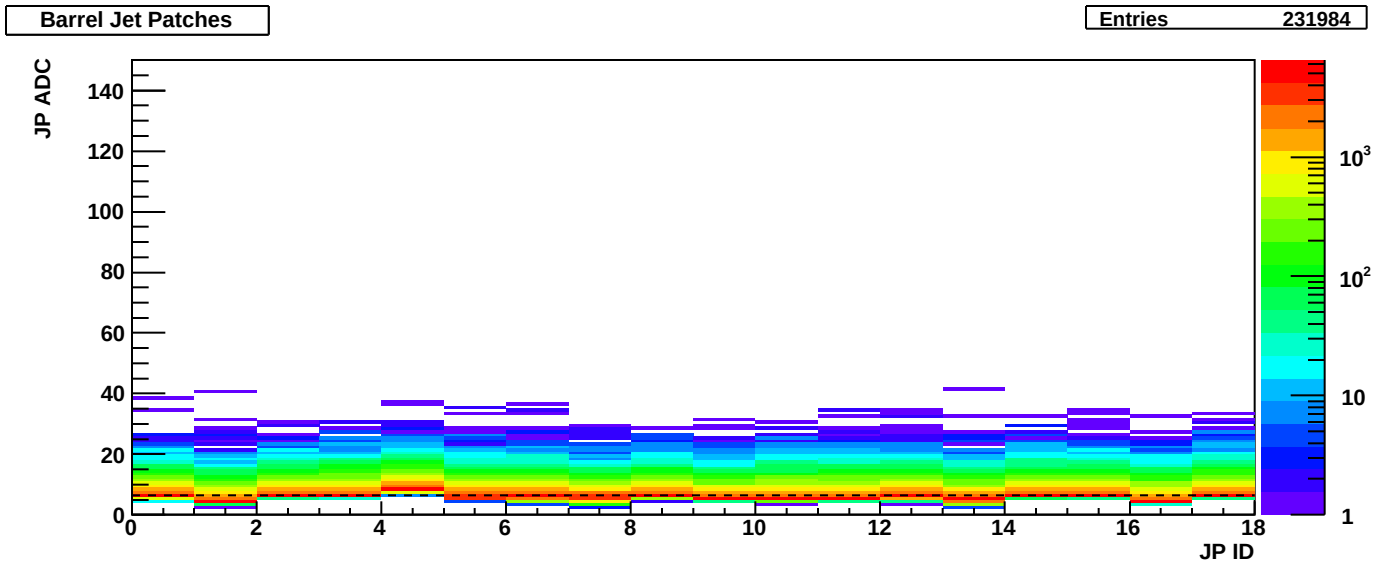
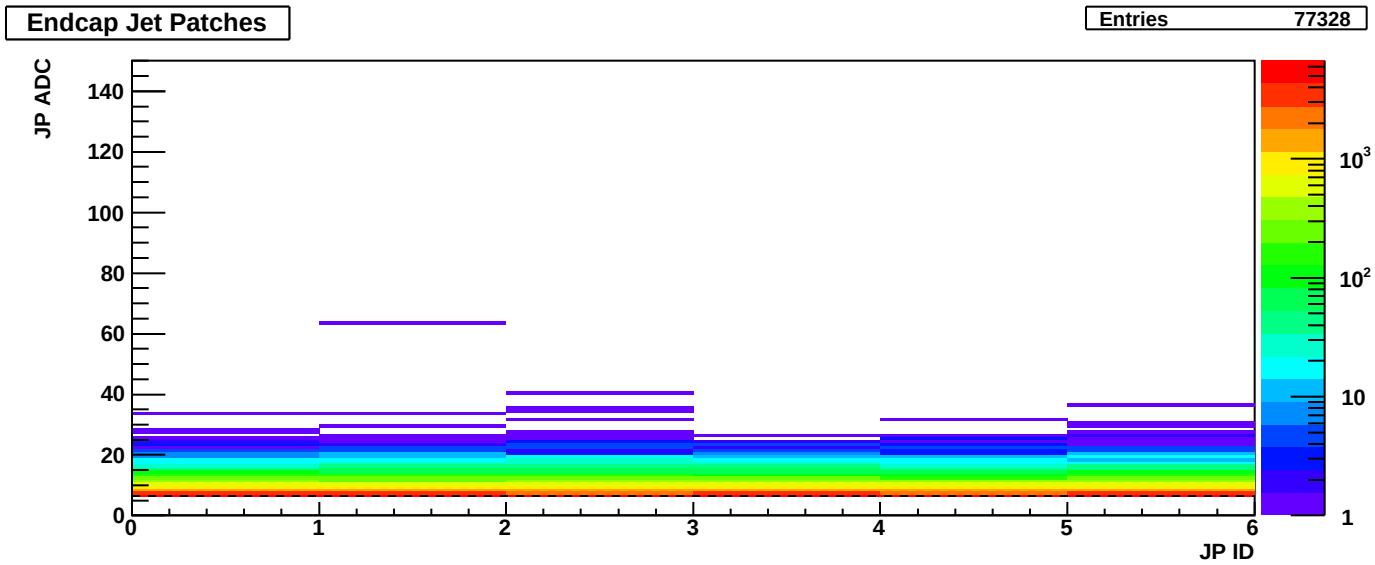

Barrel EMC L0 Input - High Tower
Entries 3866400
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

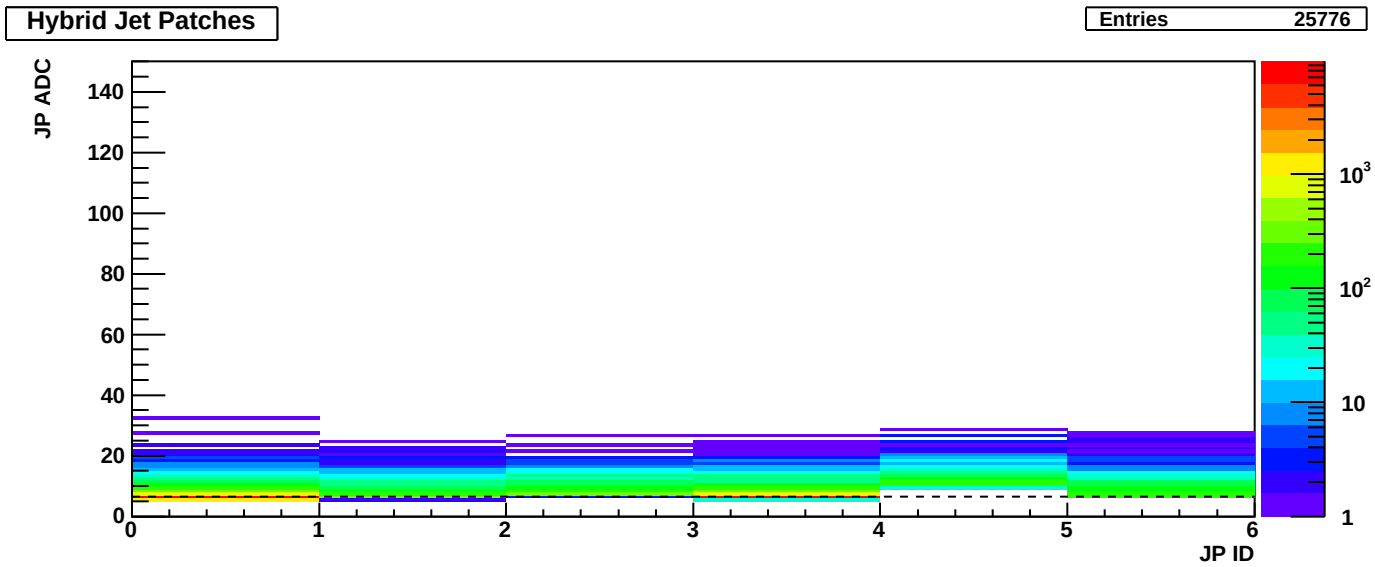

Barrel EMC L0 Input - Patch Sum
Entries 3866400
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

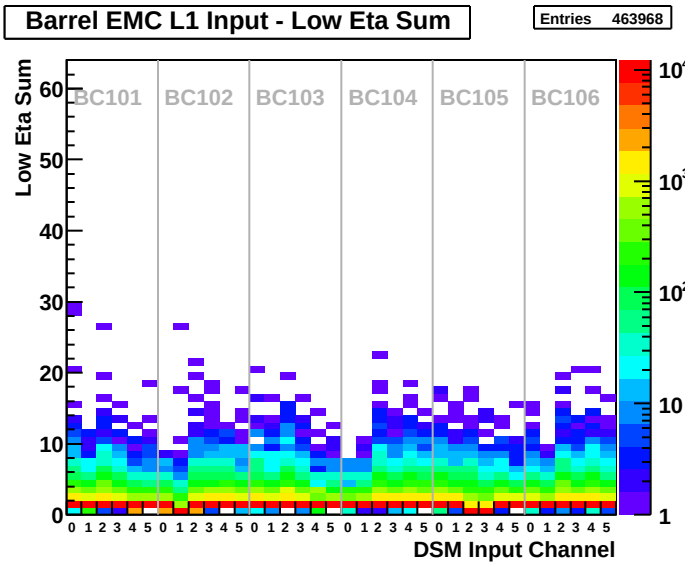

Endcap EMC L0 Input - High Tower
Entries 1159920
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

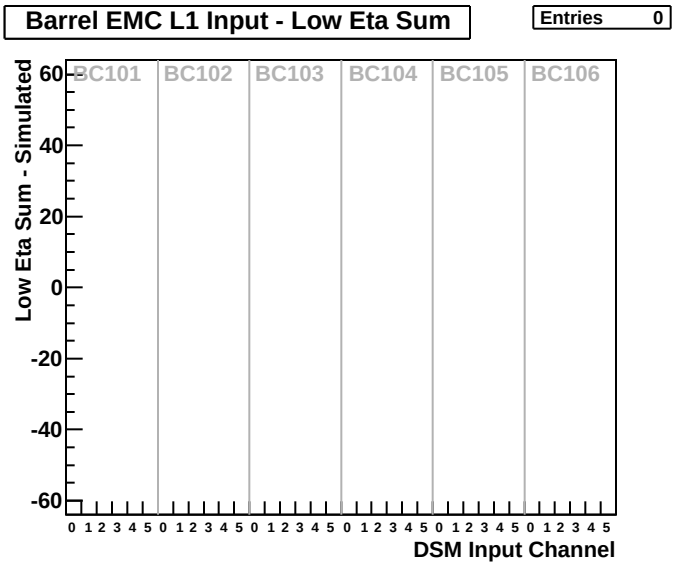

Endcap EMC L0 Input - Patch Sum
Entries 1159920
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

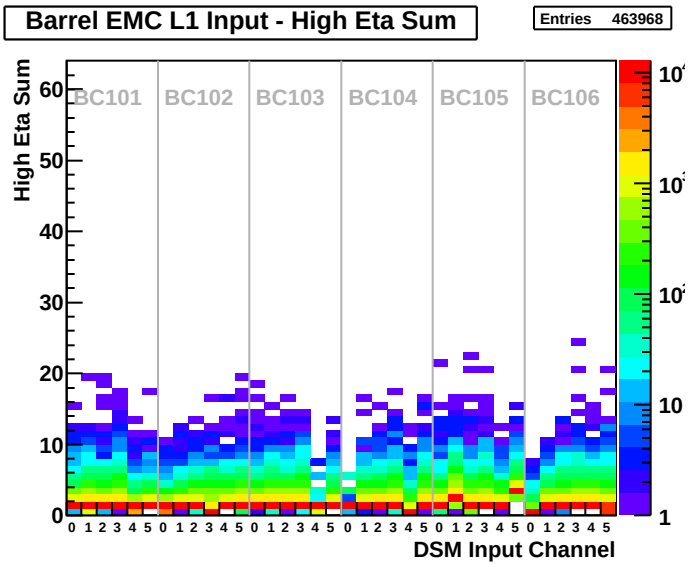

Barrel Jet Patches
Entries 231984
JP ADC
JP ID

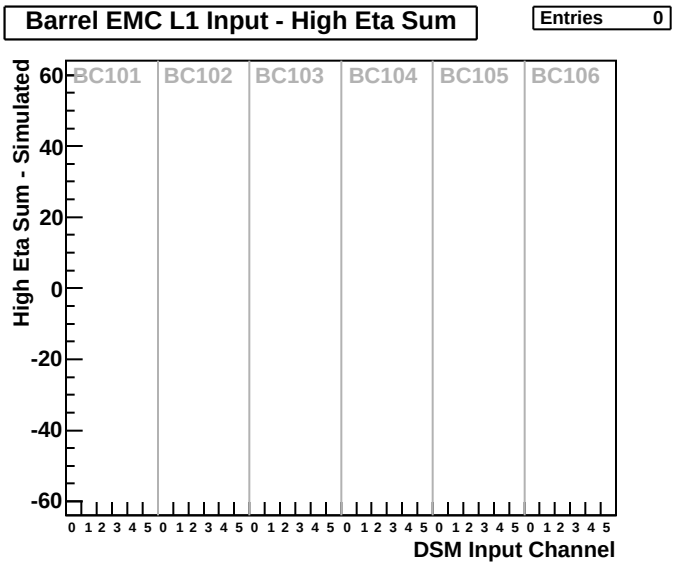

Endcap Jet Patches
Entries 77328
JP ADC
JP ID

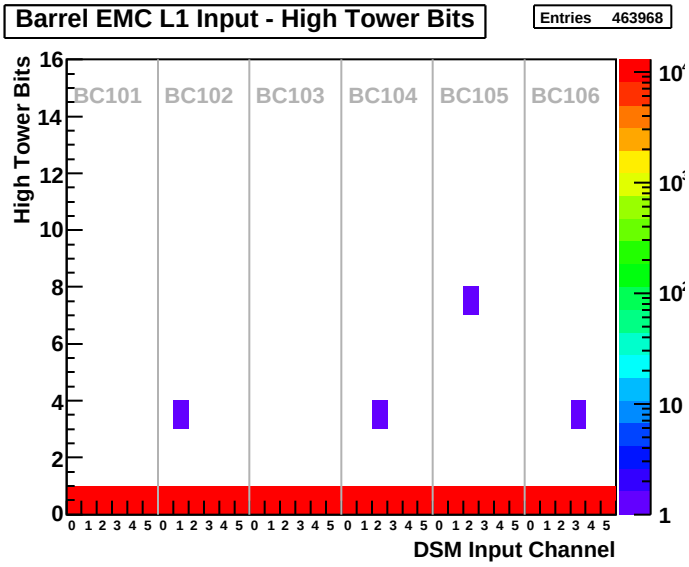

Hybrid Jet Patches
Entries 25776
JP ADC
JP ID

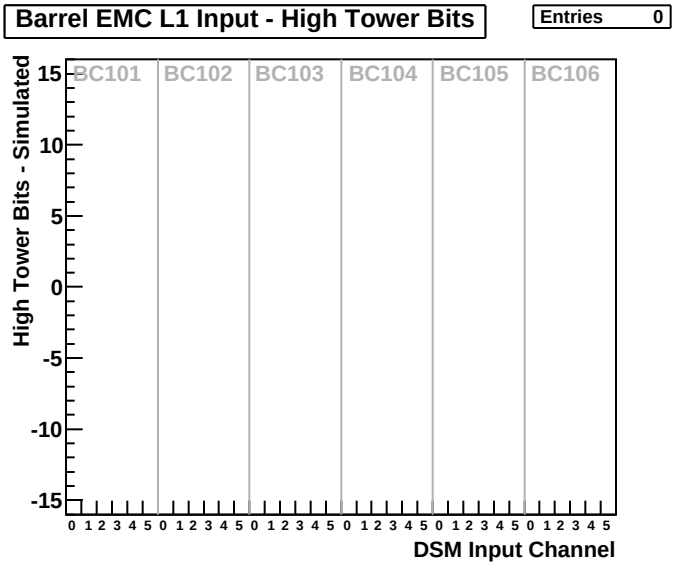

Barrel EMC L1 Input - Low Eta Sum
Entries 463968
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

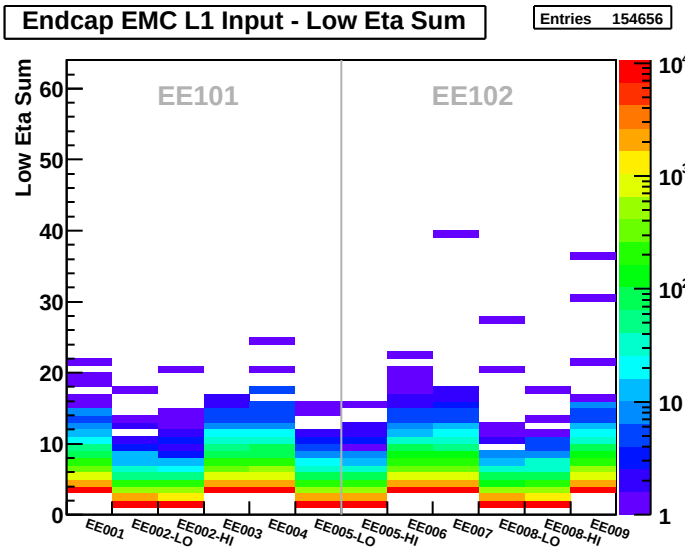

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

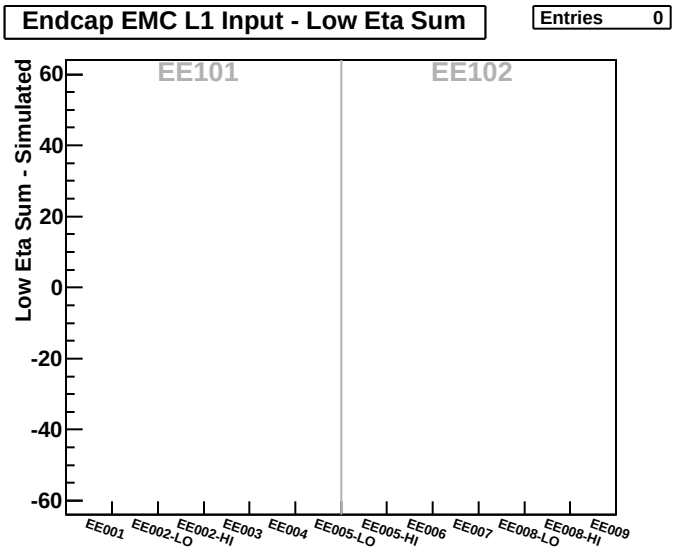

Barrel EMC L1 Input - High Eta Sum
Entries 463968
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

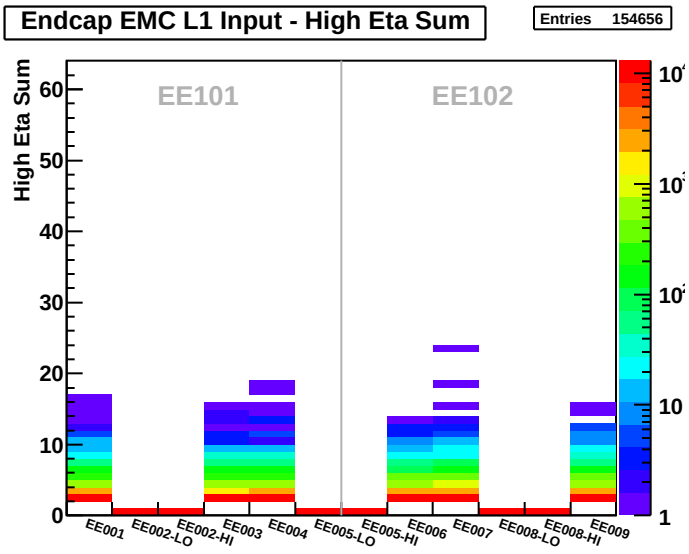

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

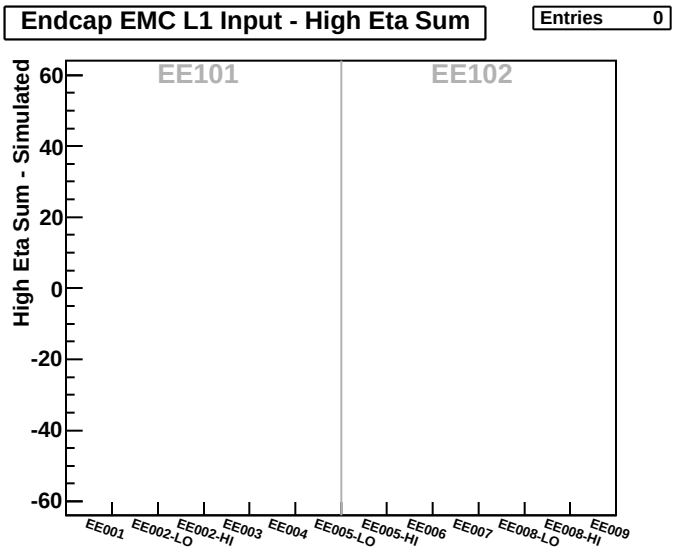

Barrel EMC L1 Input - High Tower Bits
Entries 463968
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

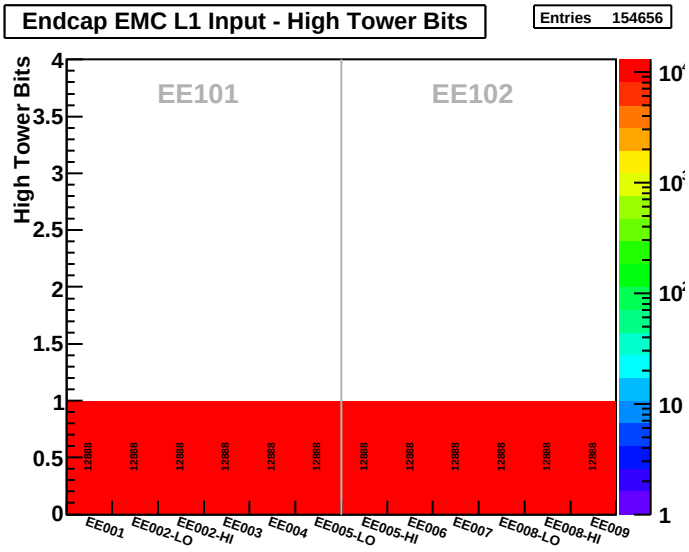

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

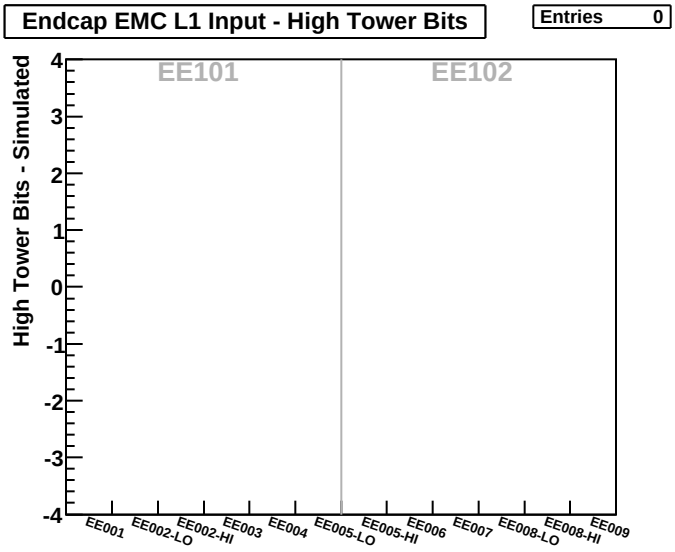

Endcap EMC L1 Input - Low Eta Sum
Entries 154656
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

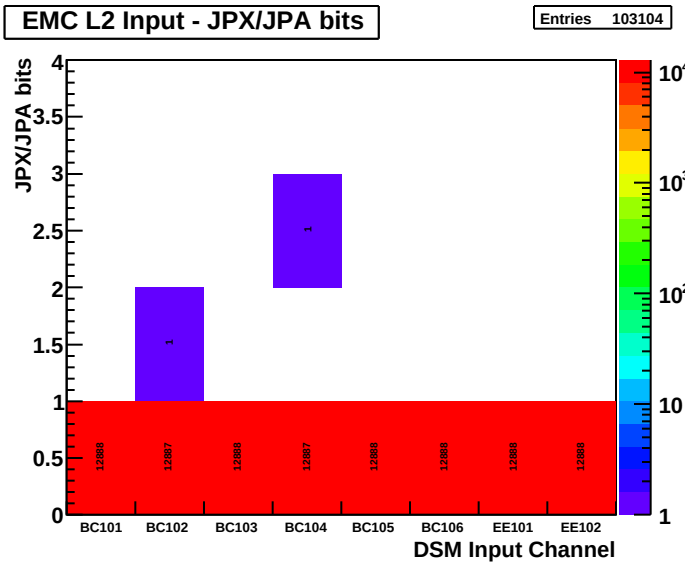

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

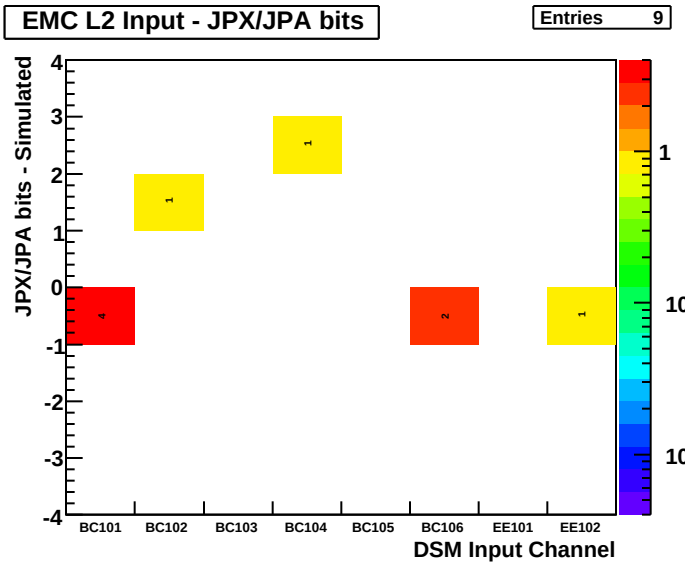

Endcap EMC L1 Input - High Eta Sum
Entries 154656
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

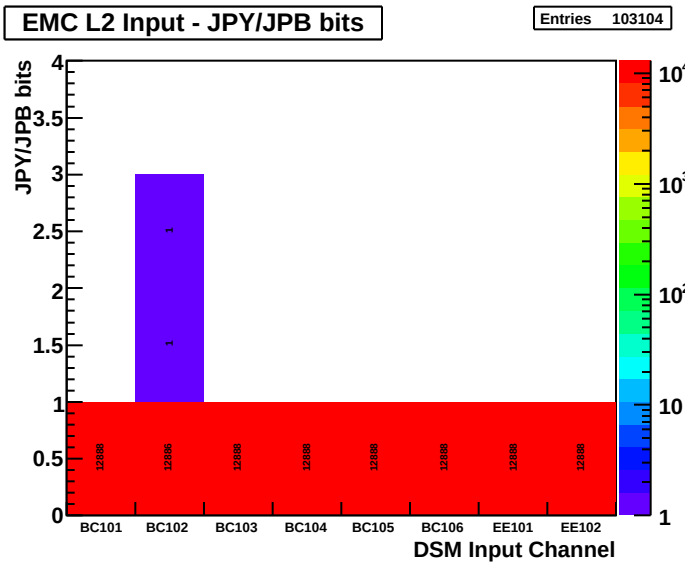

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

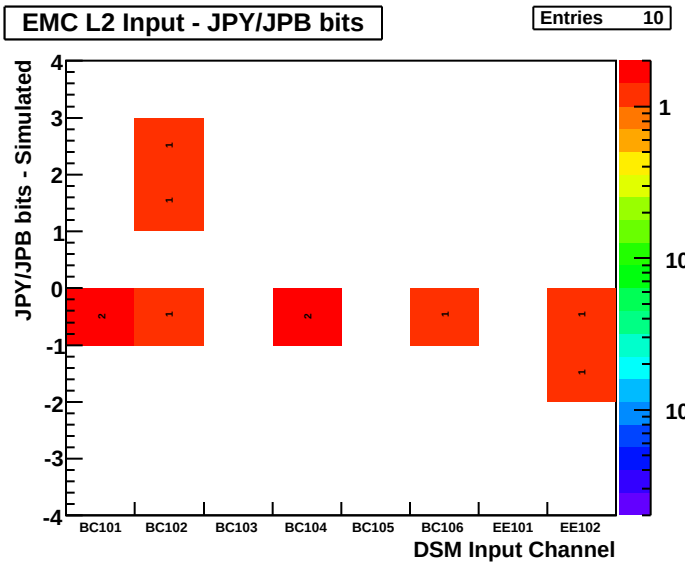

Endcap EMC L1 Input - High Tower Bits
Entries 154656
High Tower Bits
EE101
EE102
12888
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

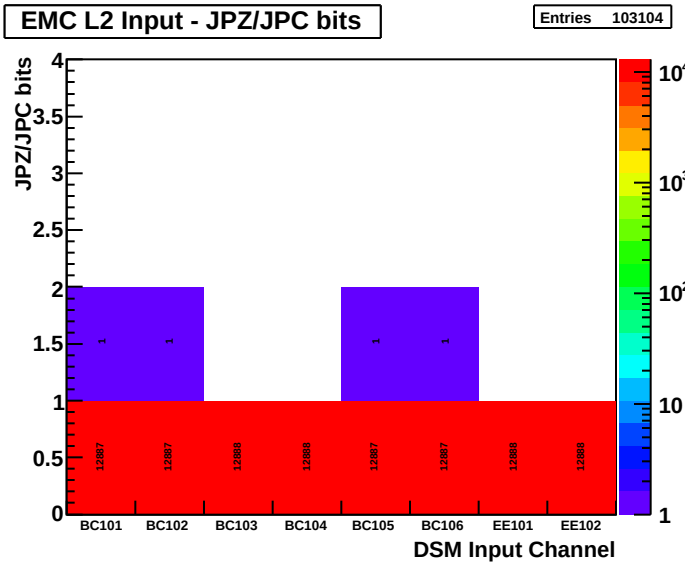

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

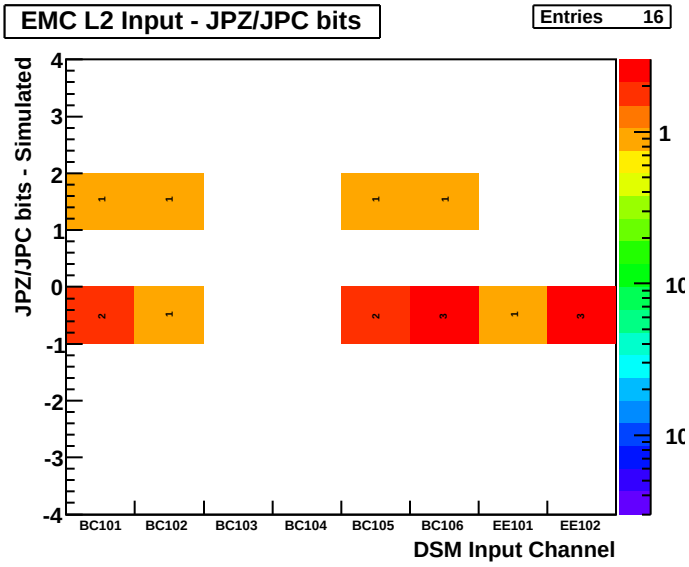

EMC L2 Input - JPX/JPA bits
Entries 103104
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

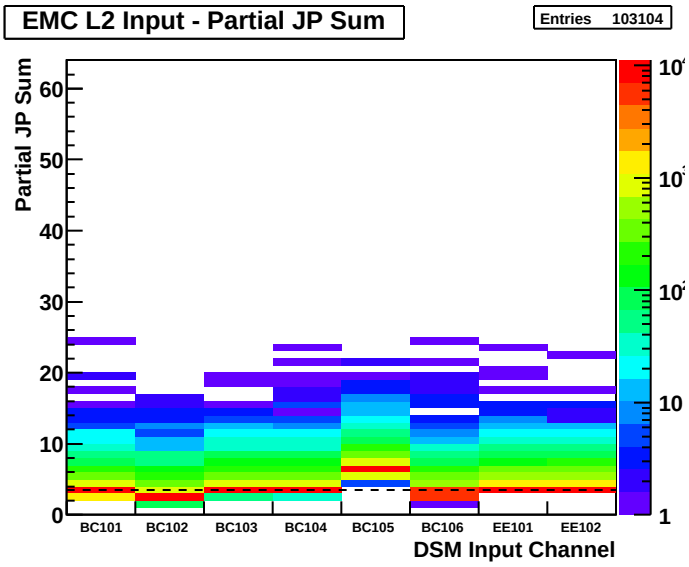

EMC L2 Input - JPX/JPA bits
Entries 9
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

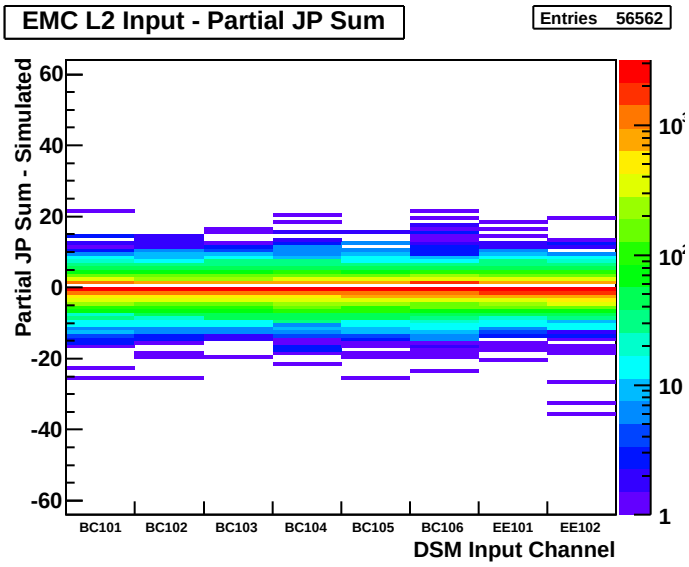

EMC L2 Input - JPY/JPB bits
Entries 103104
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

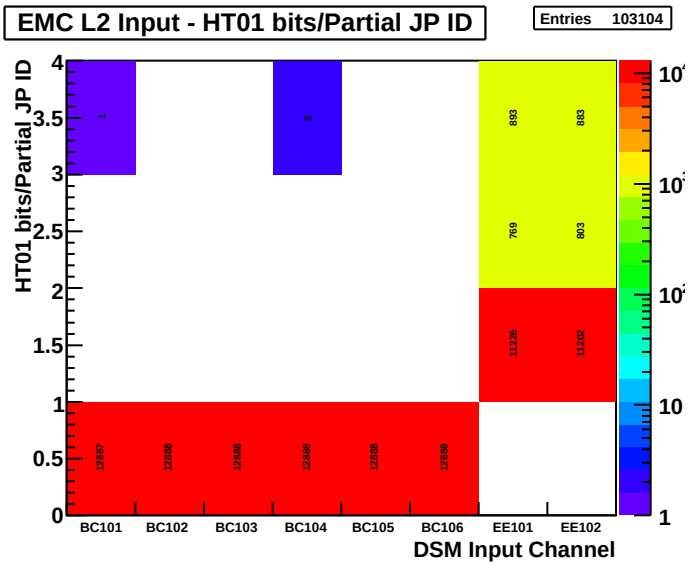

EMC L2 Input - JPY/JPB bits
Entries 10
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

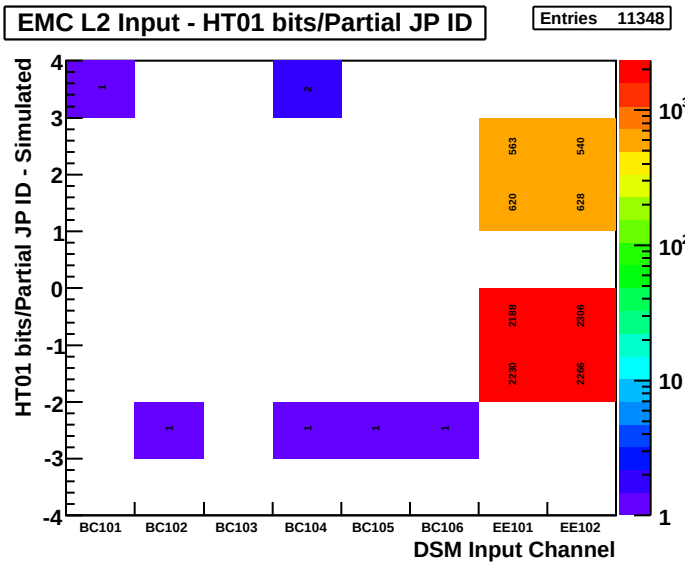

EMC L2 Input - JPZ/JPC bits
Entries 103104
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

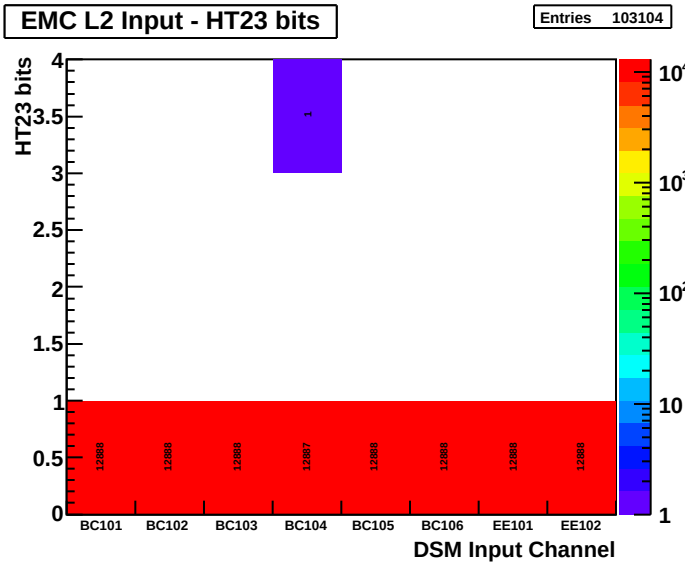

EMC L2 Input - JPZ/JPC bits
Entries 16
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

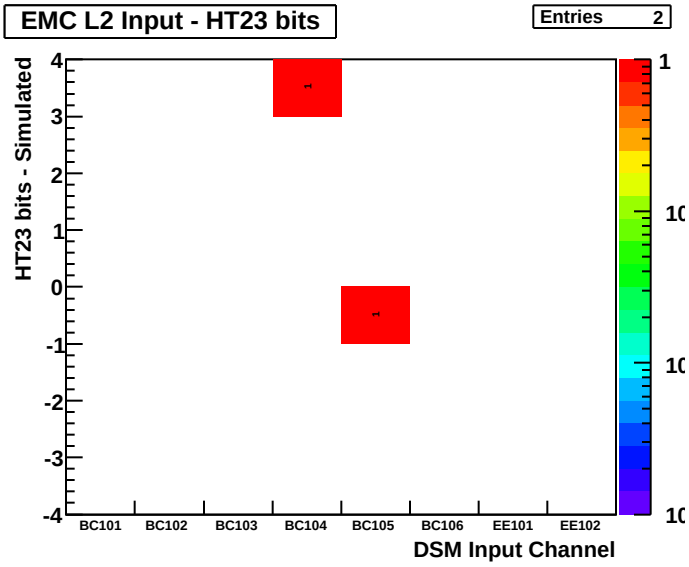

EMC L2 Input - Partial JP Sum
Entries 103104
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

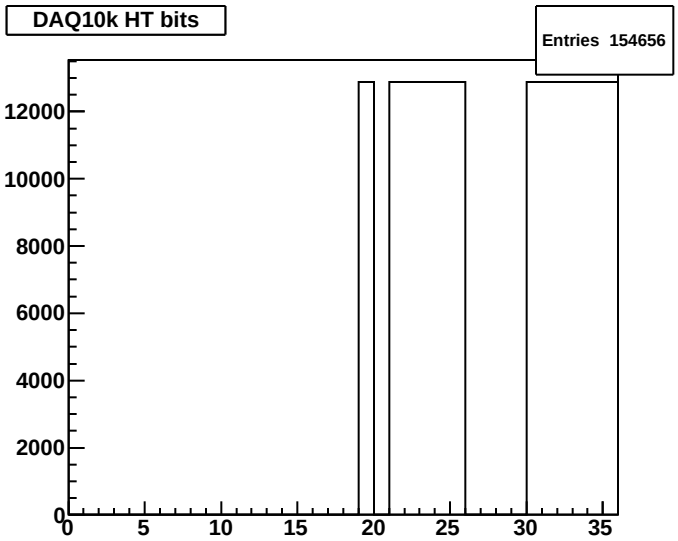

EMC L2 Input - Partial JP Sum
Entries 56562
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

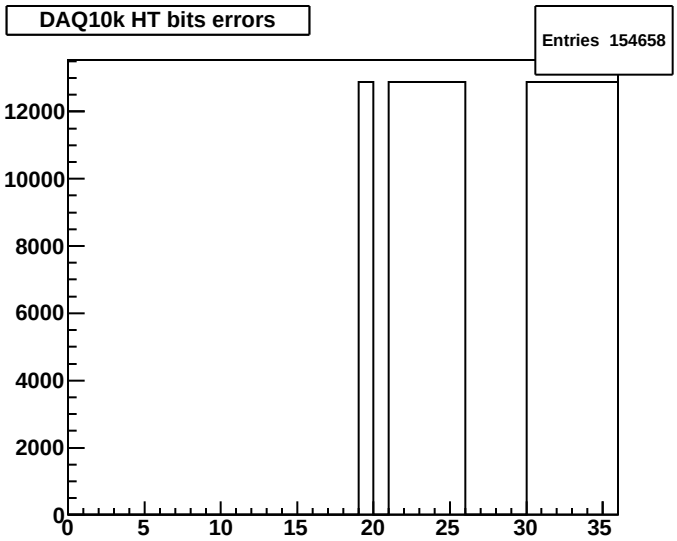

EMC L2 Input - HT01 bits/Partial JP ID
Entries 103104
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

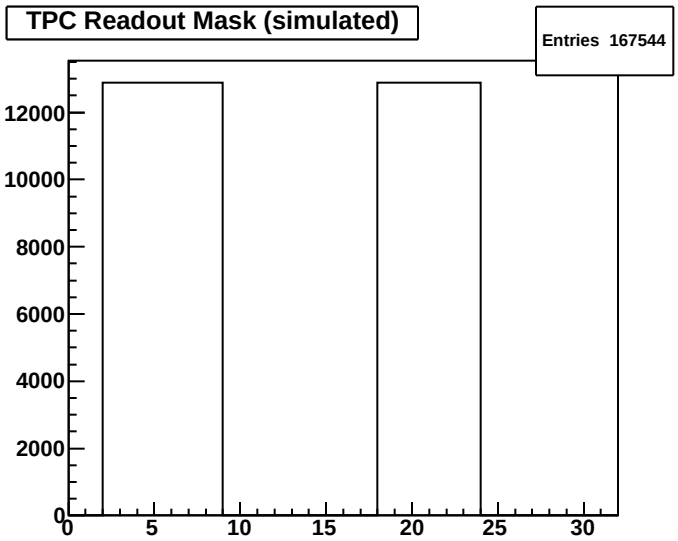

EMC L2 Input - HT01 bits/Partial JP ID
Entries 11348
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

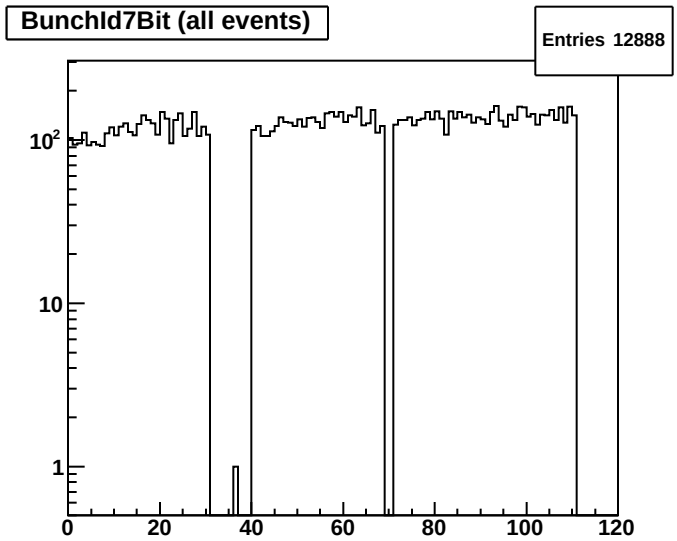

EMC L2 Input - HT23 bits
Entries 103104
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

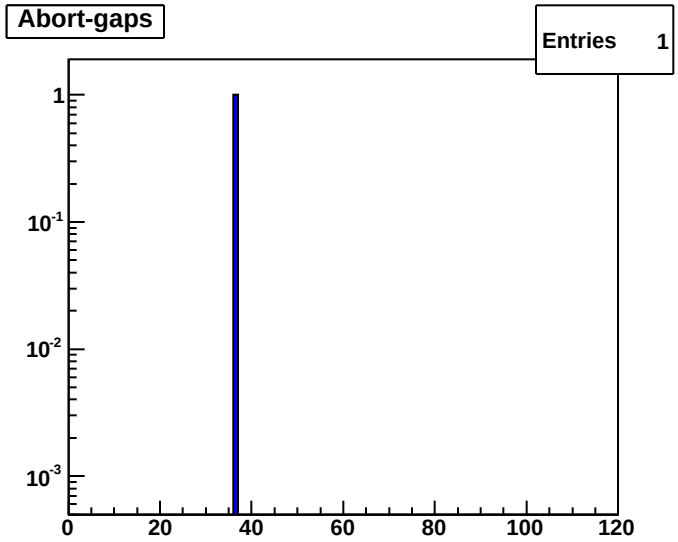

EMC L2 Input - HT23 bits
Entries 2
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

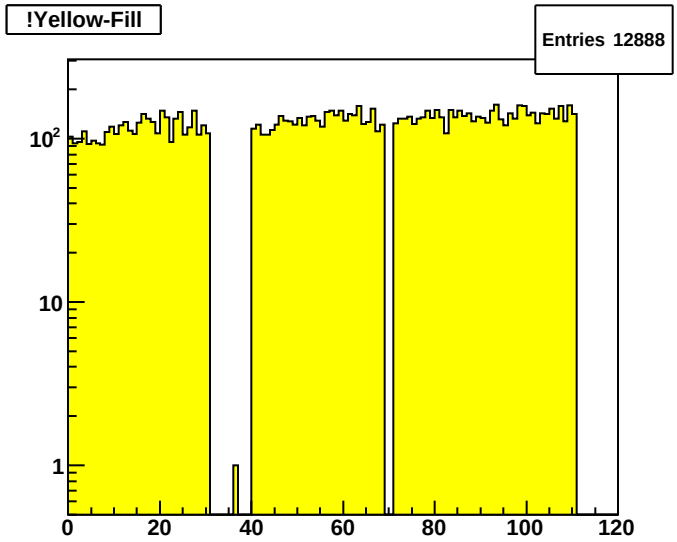

DAQ10k HT bits
Entries 154656
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

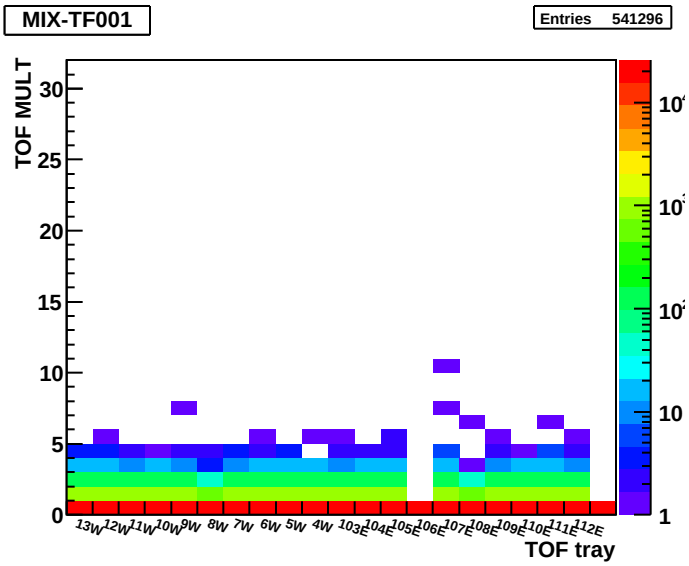

DAQ10k HT bits errors
Entries 154658
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

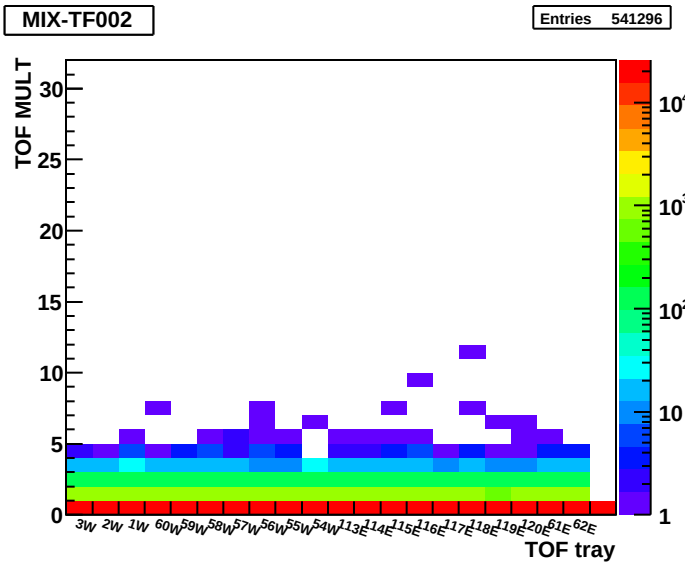

TPC Readout Mask (simulated)
Entries 167544
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

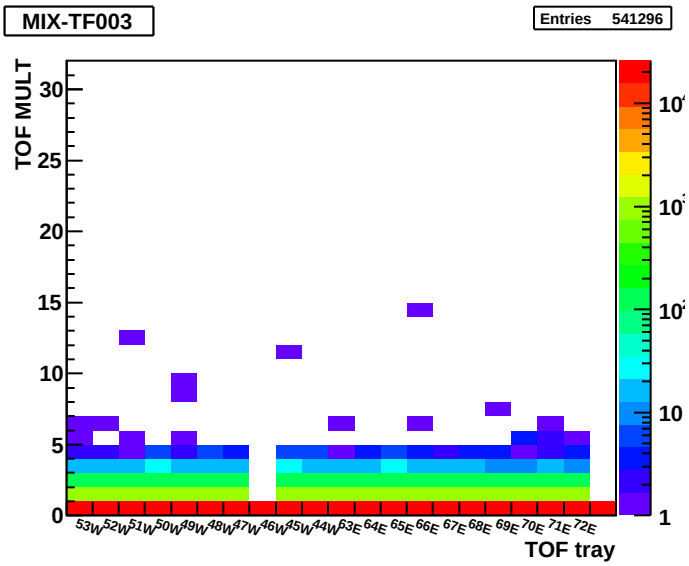

BunchId7Bit (all events)
Entries 12888
10^2
10
1
0 20 40 60 80 100 120

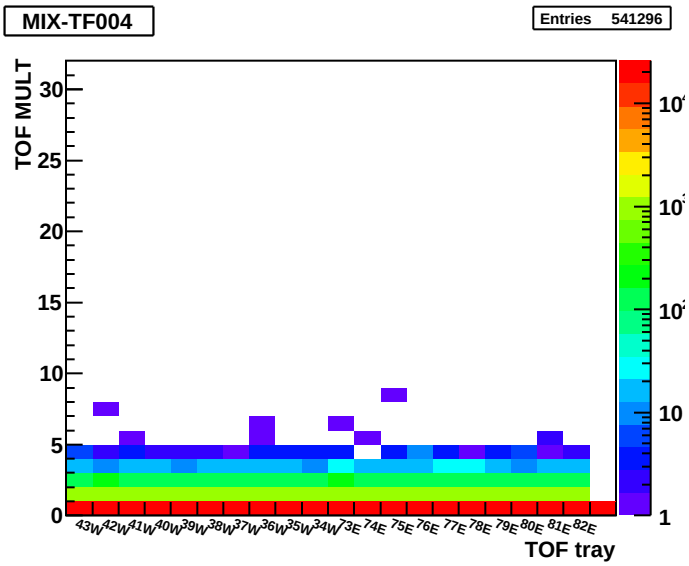

Abort-gaps
Entries 1
1
10^{-1}
10^{-2}
10^{-3}
0 20 40 60 80 100 120

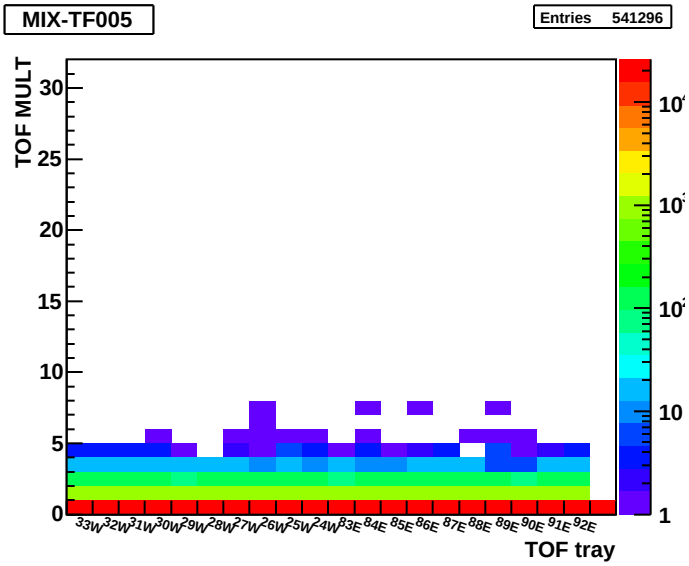

!Yellow-Fill
Entries 12888
10^2
10
1
0 20 40 60 80 100 120

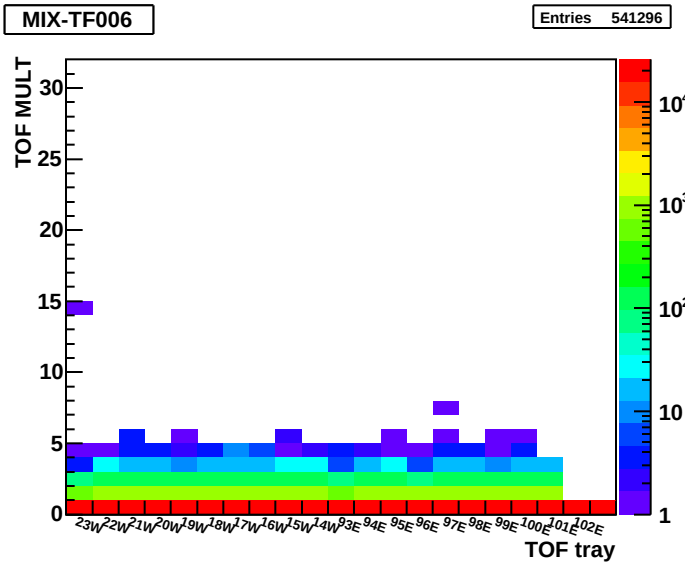

MIX-TF001
Entries 541296
TOF MULT
TOF tray

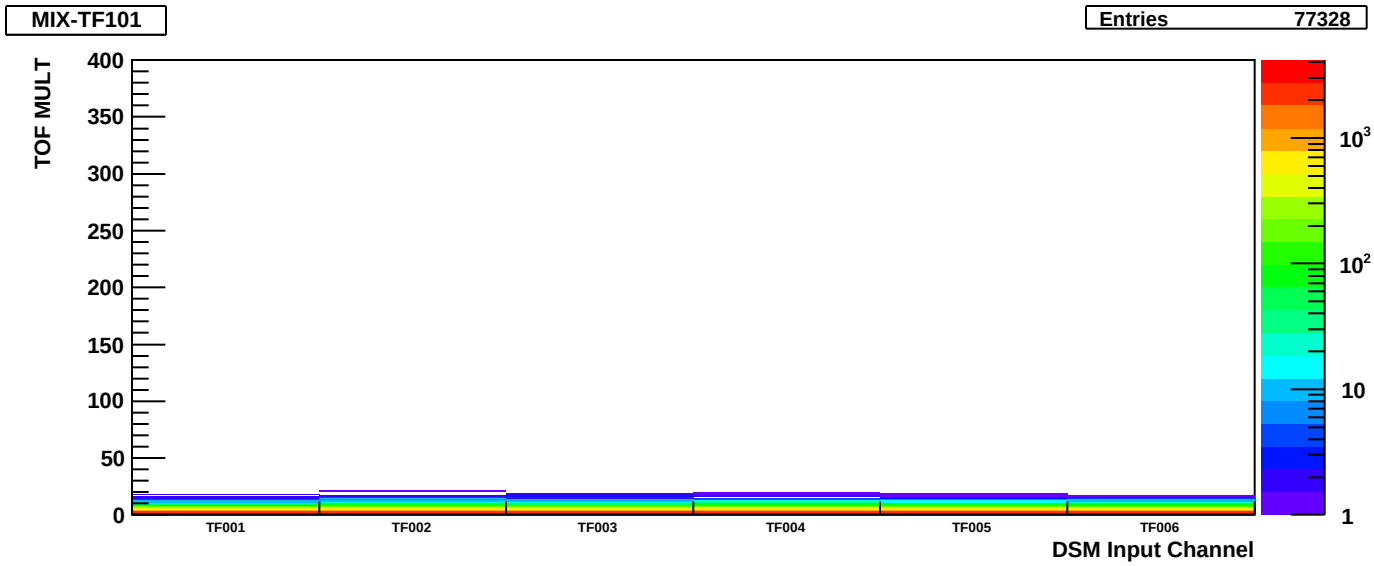

MIX-TF002
Entries 541296
TOF MULT
TOF tray

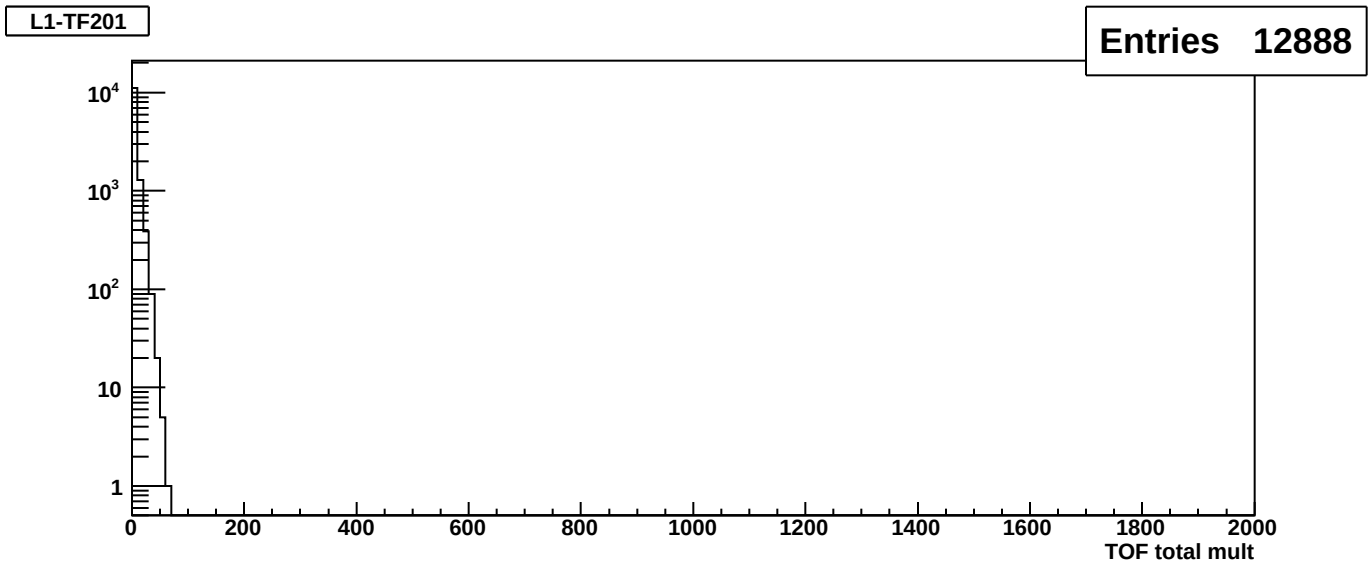

MIX-TF003
Entries 541296
TOF MULT
TOF tray

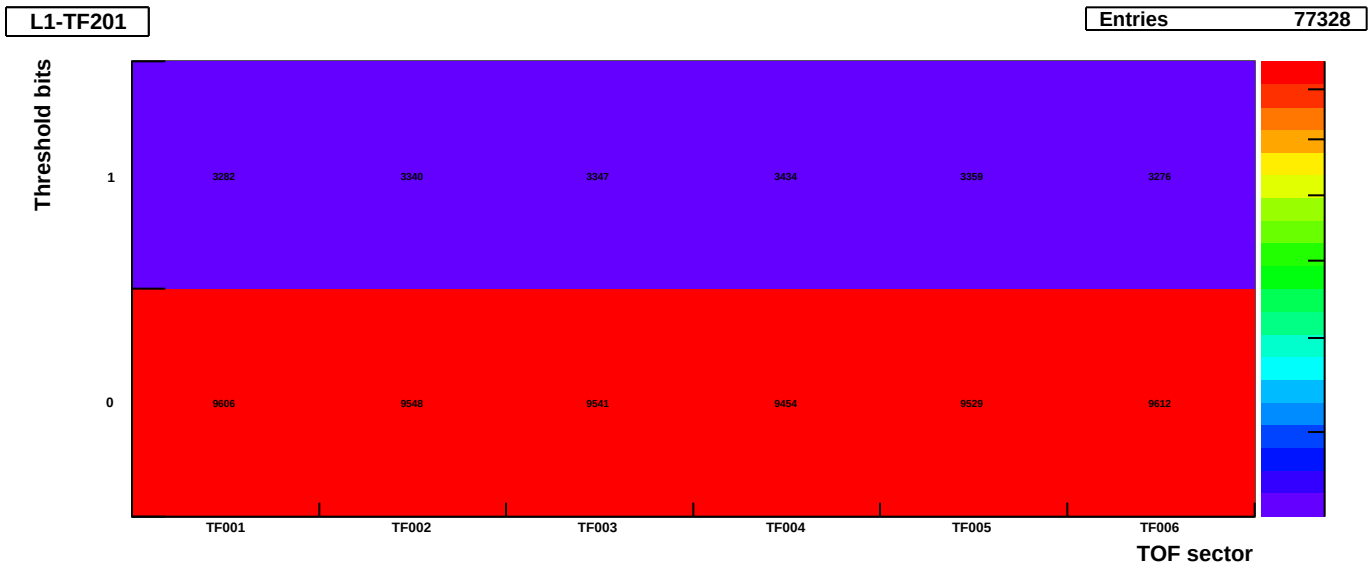

MIX-TF004
Entries 541296
TOF MULT
TOF tray

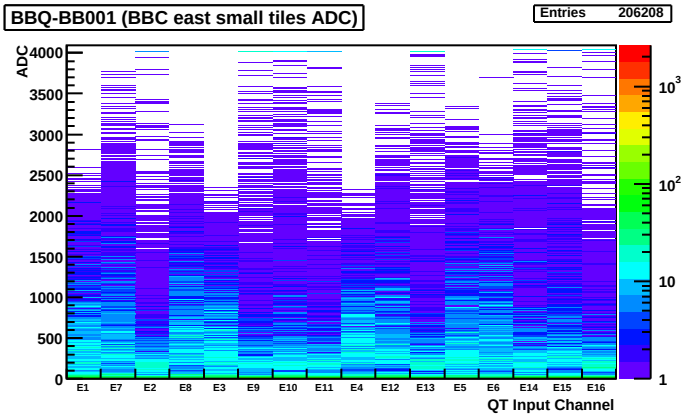

MIX-TF005
Entries 541296
TOF MULT
TOF tray

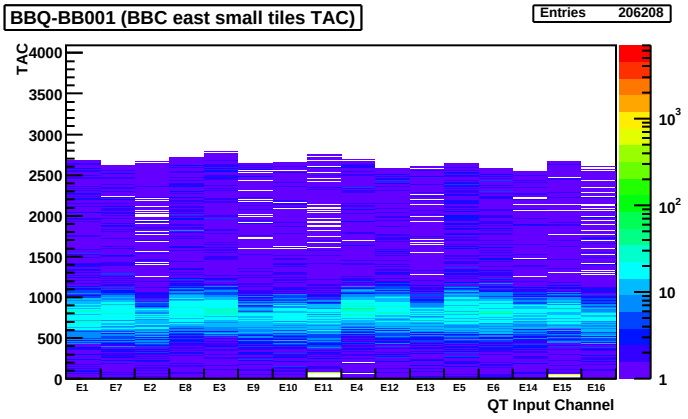

MIX-TF006
Entries 541296
TOF MULT
TOF tray

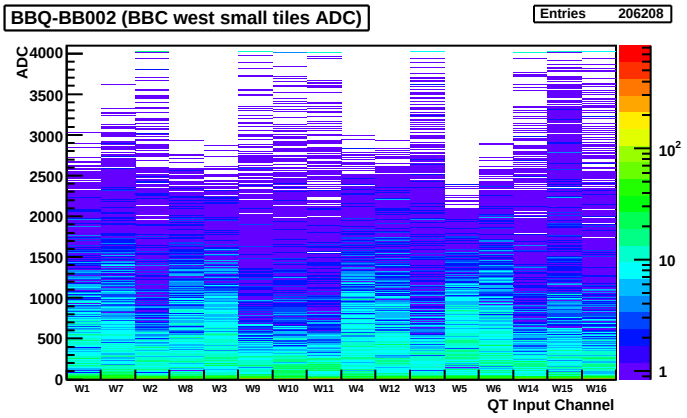

MIX-TF101
Entries 77328
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

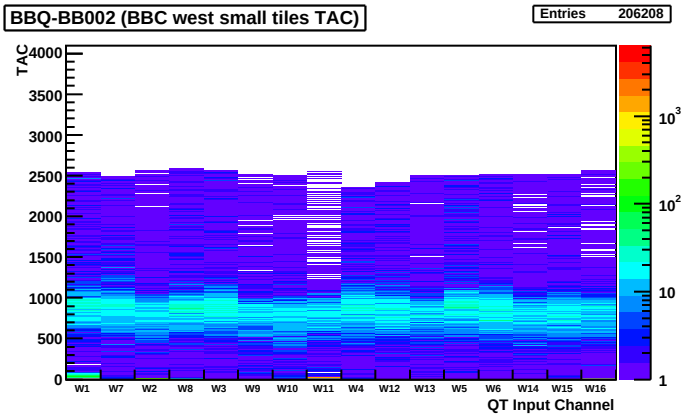

L1-TF201
Entries 12888
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

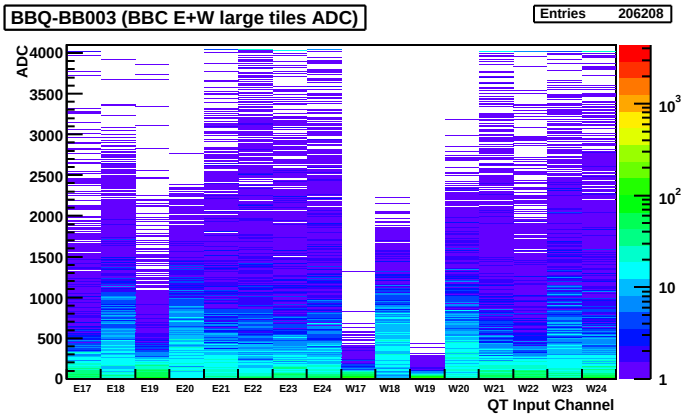

L1-TF201
Entries 77328
Threshold bits
1
0
3282
3340
3347
3434
3359
3276
9606
9548
9541
9454
9529
9612
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

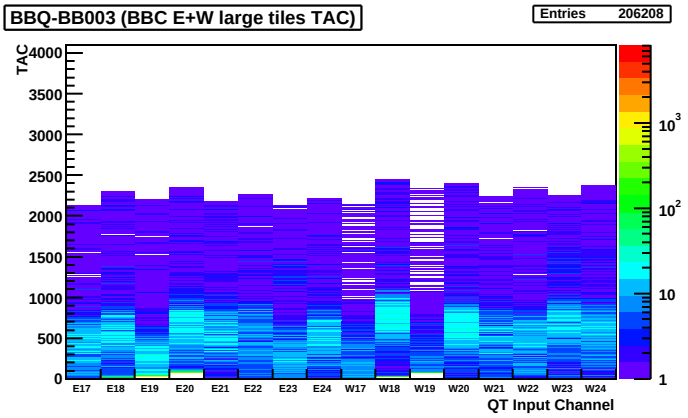

BBQ-BB001 (BBC east small tiles ADC)
Entries 206208
ADC
QT Input Channel

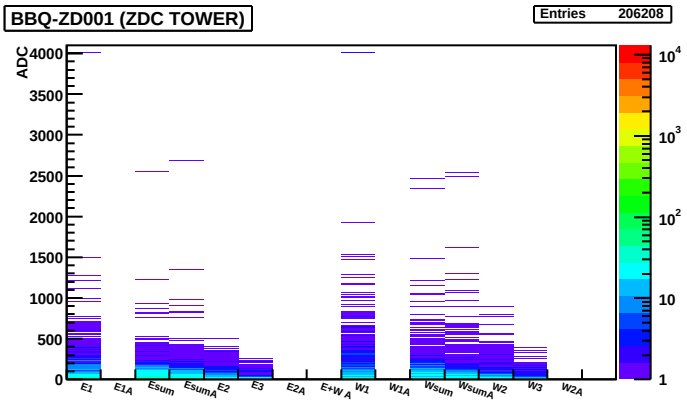

BBQ-BB001 (BBC east small tiles TAC)
Entries 206208
TAC
QT Input Channel

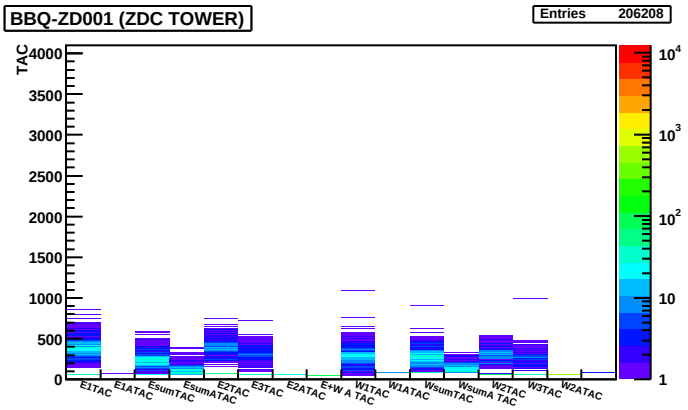

BBQ-BB002 (BBC west small tiles ADC)
Entries 206208
ADC
QT Input Channel

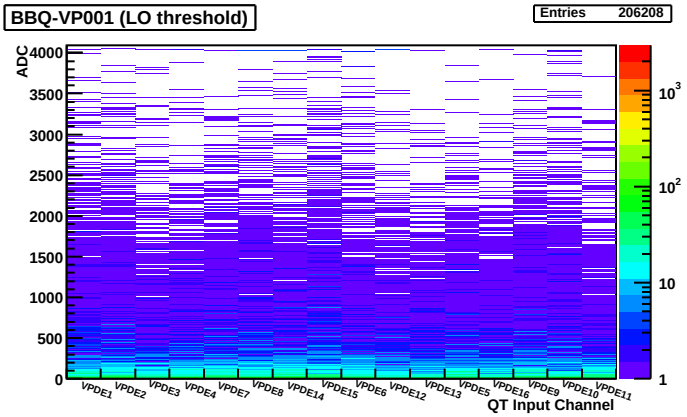

BBQ-BB002 (BBC west small tiles TAC)
Entries 206208
TAC
QT Input Channel

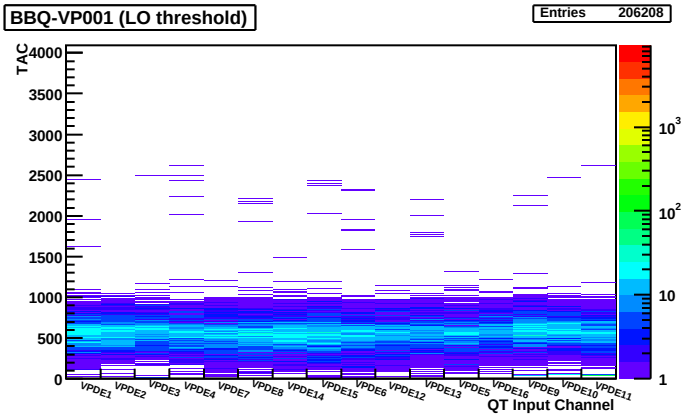

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 206208
ADC
QT Input Channel

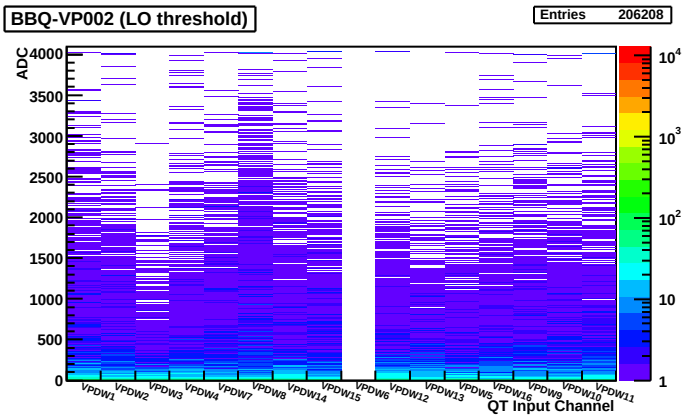

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 206208
TAC
QT Input Channel

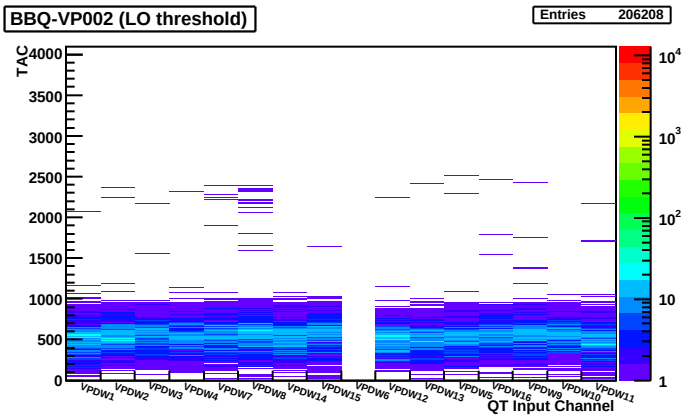

BBQ-ZD001 (ZDC TOWER)
Entries 206208
ADC

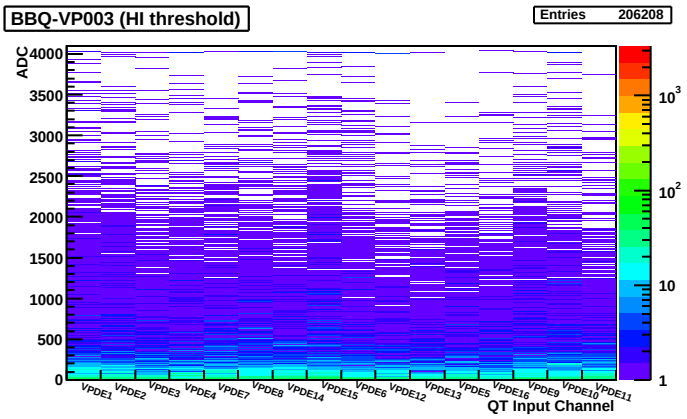

BBQ-ZD001 (ZDC TOWER)
Entries 206208
TAC

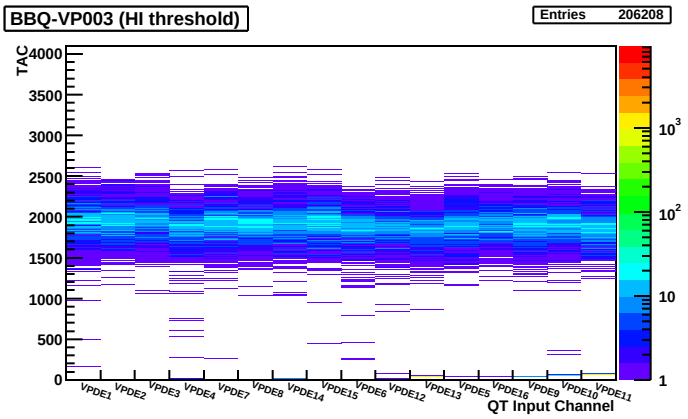

BBQ-VP001 (LO threshold)
Entries 206208
ADC
QT Input Channel

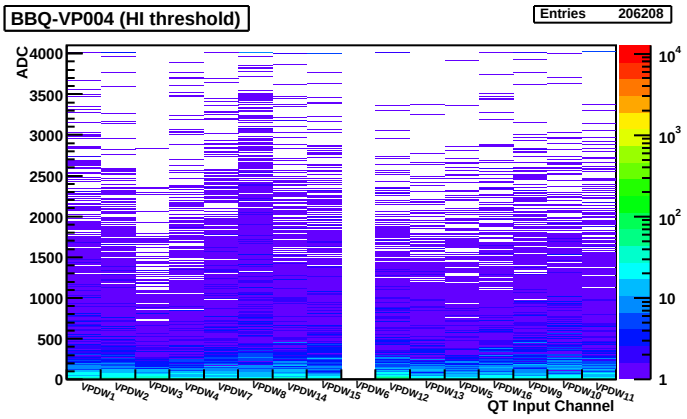

BBQ-VP001 (LO threshold)
Entries 206208
TAC
QT Input Channel

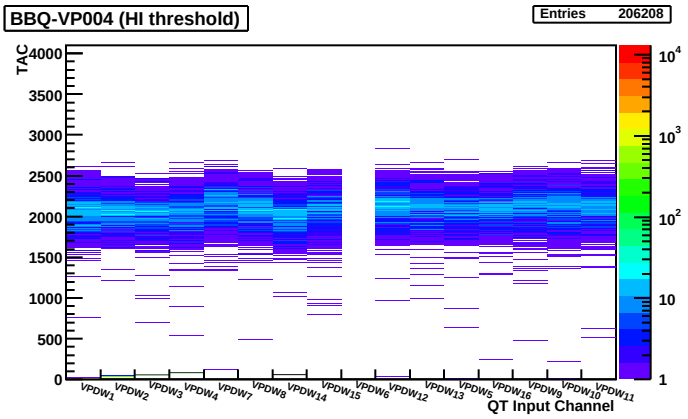

BBQ-VP002 (LO threshold)
Entries 206208
ADC
QT Input Channel

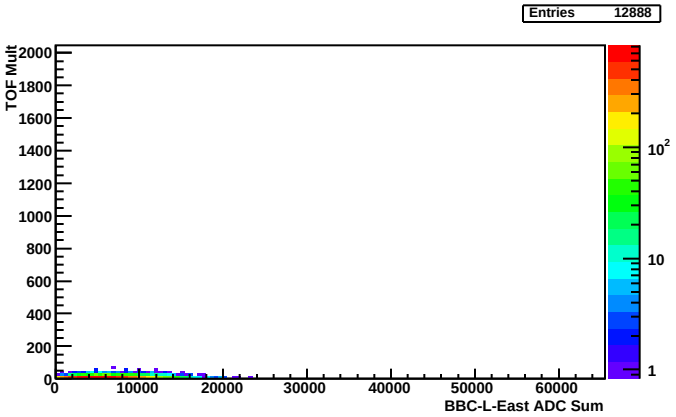

BBQ-VP002 (LO threshold)
Entries 206208
TAC
QT Input Channel

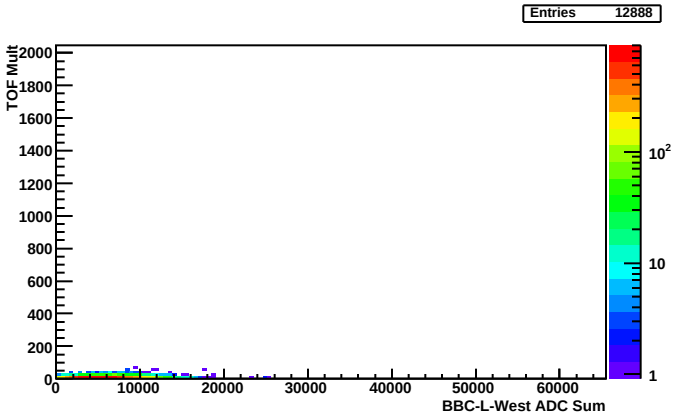

BBQ-VP003 (HI threshold)
Entries 206208
ADC
QT Input Channel

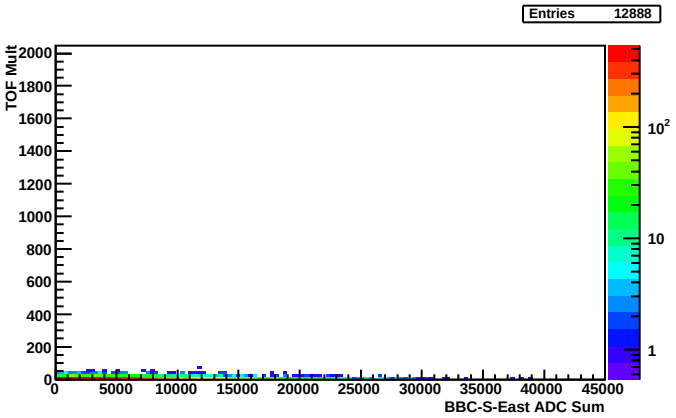

BBQ-VP003 (HI threshold)
Entries 206208
TAC
QT Input Channel

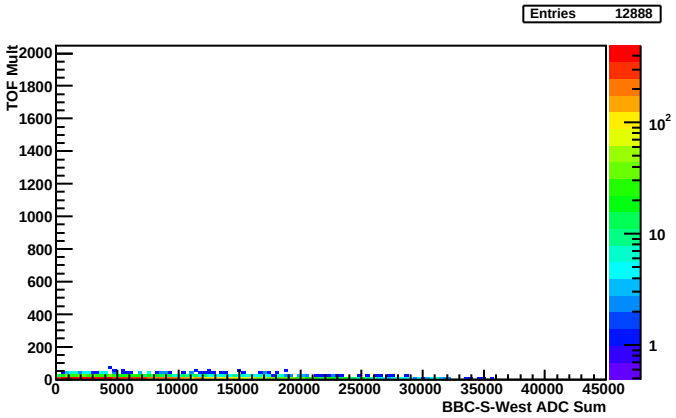

BBQ-VP004 (HI threshold)
Entries 206208
ADC
QT Input Channel

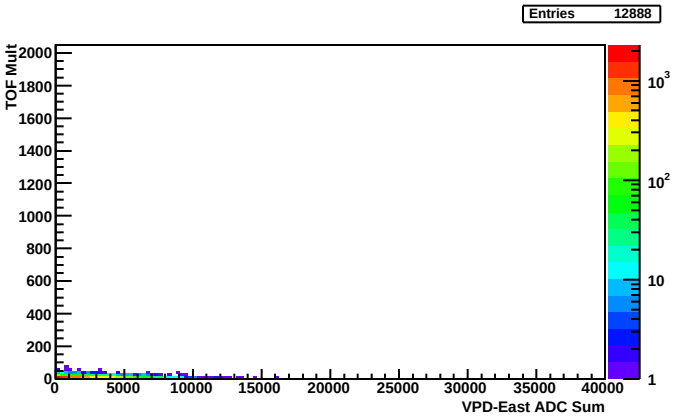

BBQ-VP004 (HI threshold)
Entries 206208
TAC
QT Input Channel

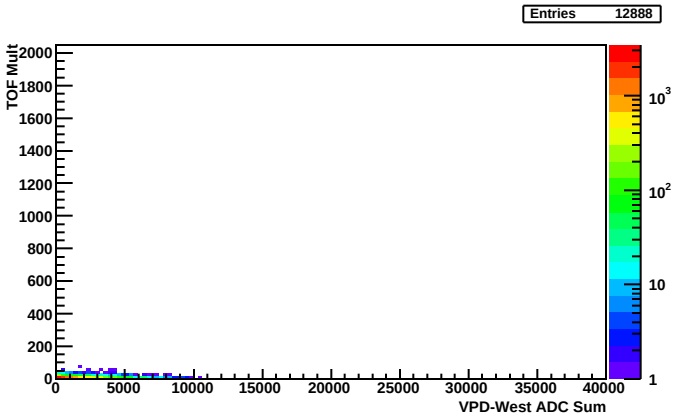

Entries 12888
TOF Mult
BBC-L-East ADC Sum

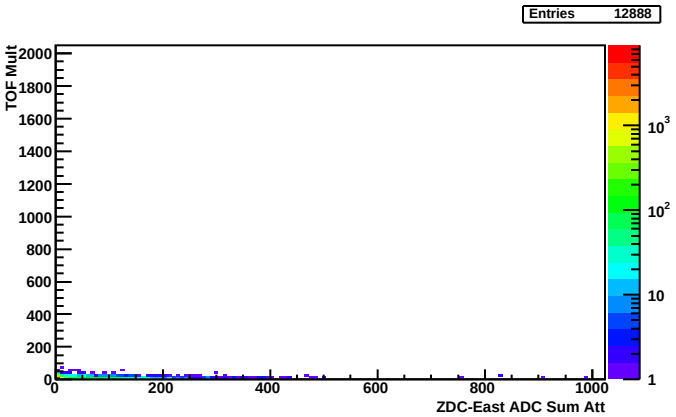

Entries 12888
TOF Mult
BBC-L-West ADC Sum

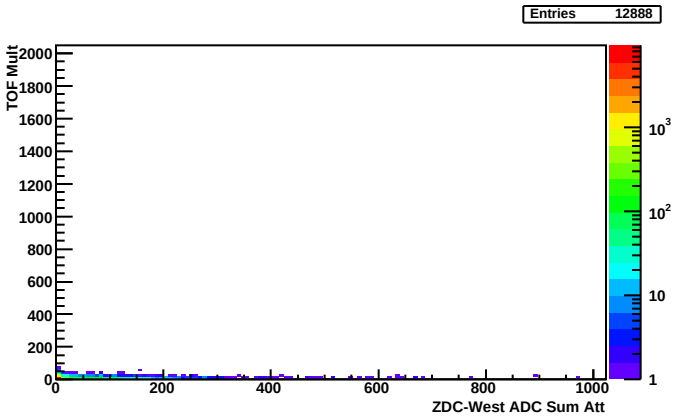

Entries 12888
TOF Mult
BBC-S-East ADC Sum

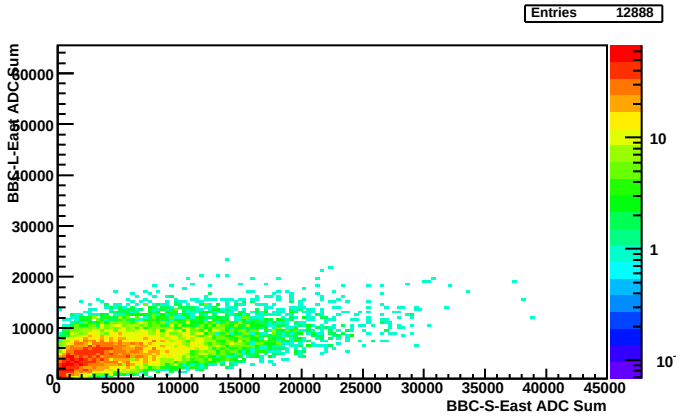

Entries 12888
TOF Mult
BBC-S-West ADC Sum

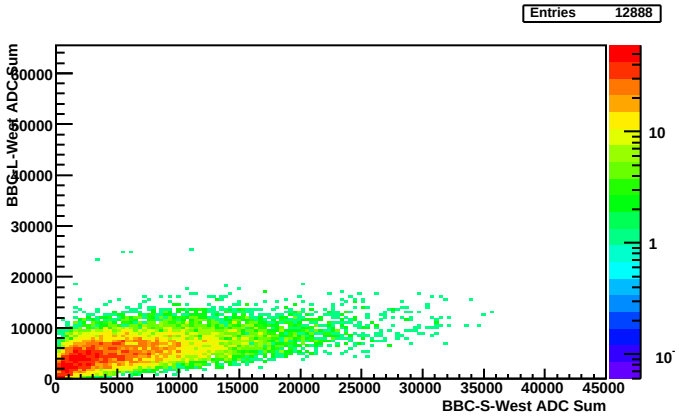

Entries 12888
TOF Mult
VPD-East ADC Sum

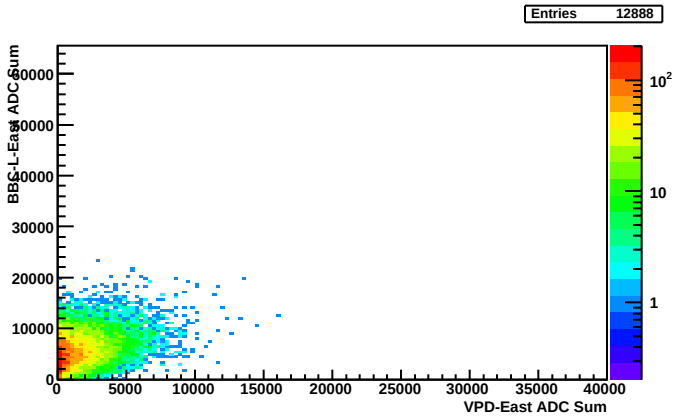

Entries 12888
TOF Mult
VPD-West ADC Sum

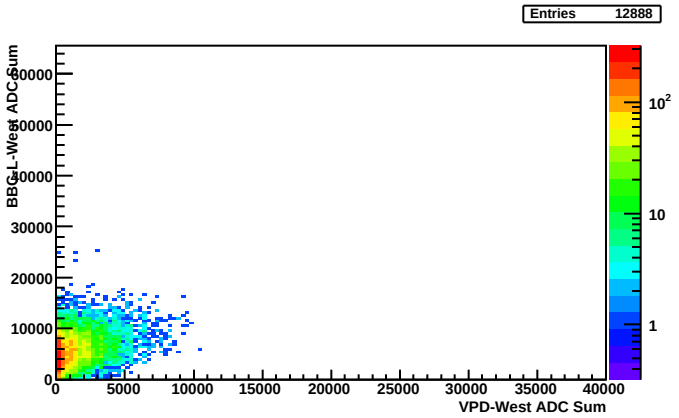

Entries 12888
TOF Mult
ZDC-East ADC Sum Att

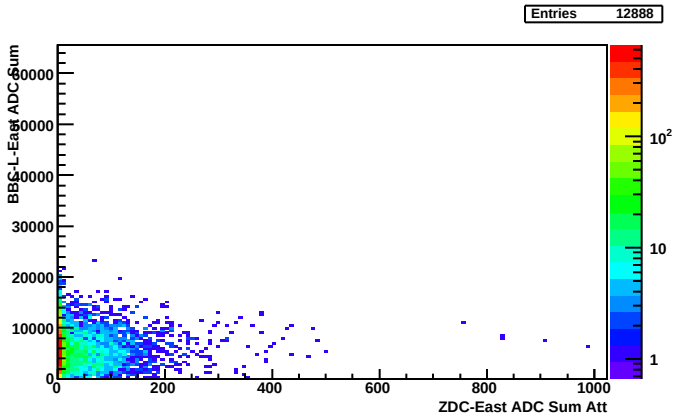

Entries 12888
TOF Mult
ZDC-West ADC Sum Att

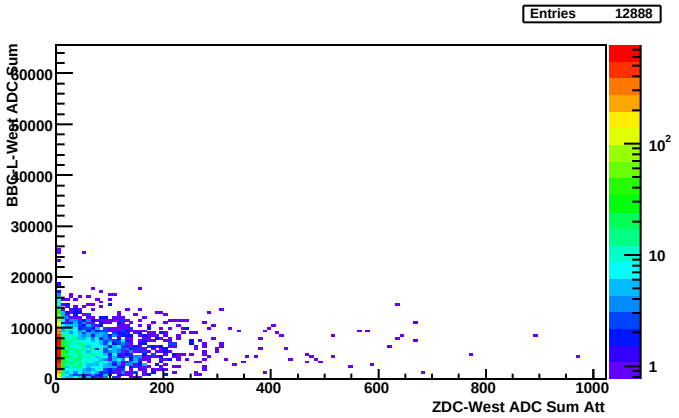

Entries 12888
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 12888
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 12888
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 12888
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 12888
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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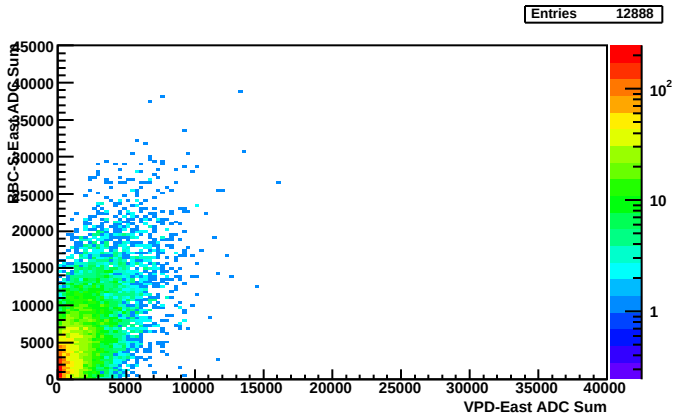
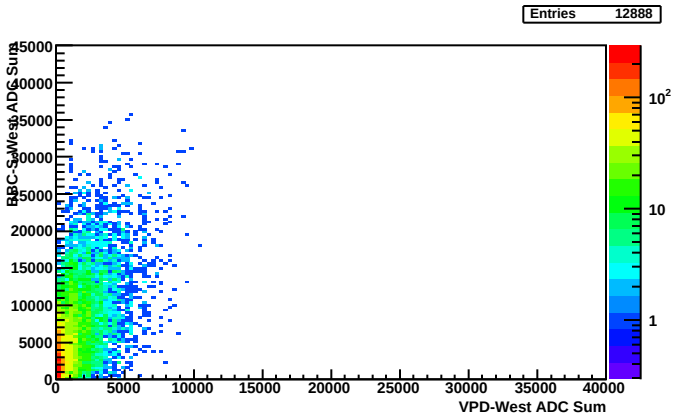
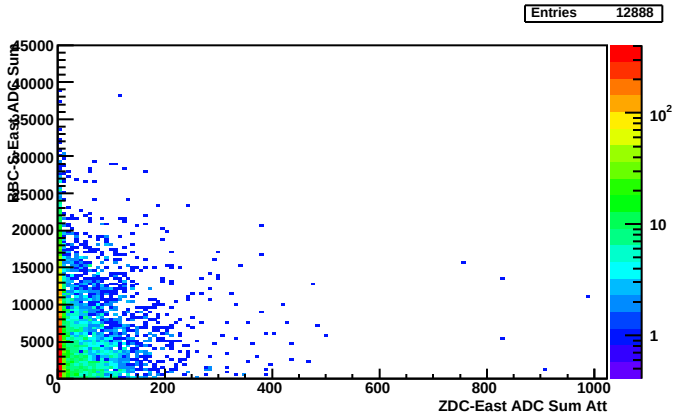
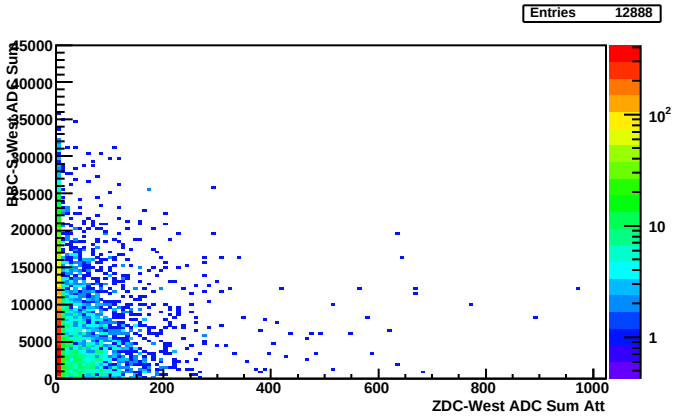
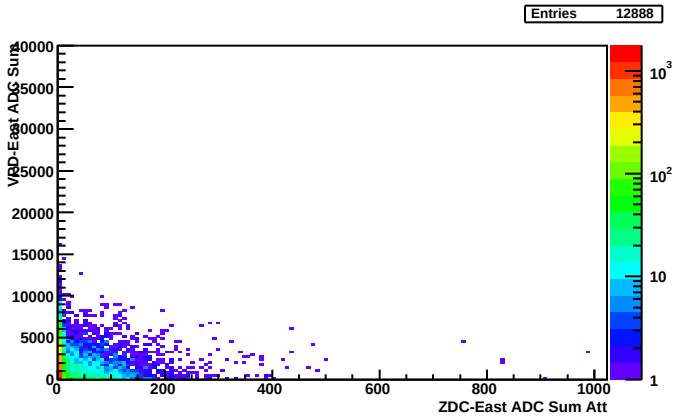
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

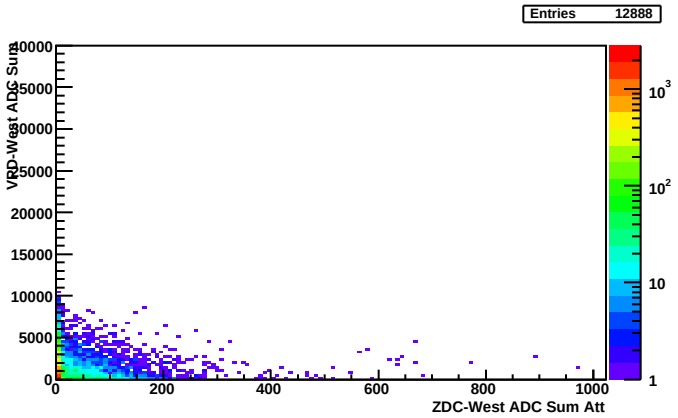

Entries 12888
BBC-S-East ADC Sum
VPD-East ADC Sum

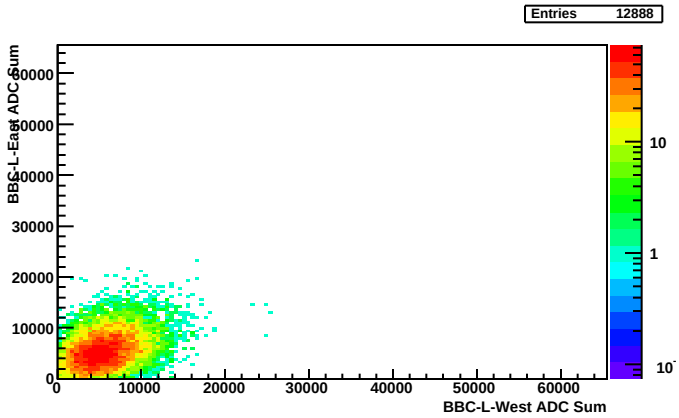

Entries 12888
BBC-S-West ADC Sum
VPD-West ADC Sum

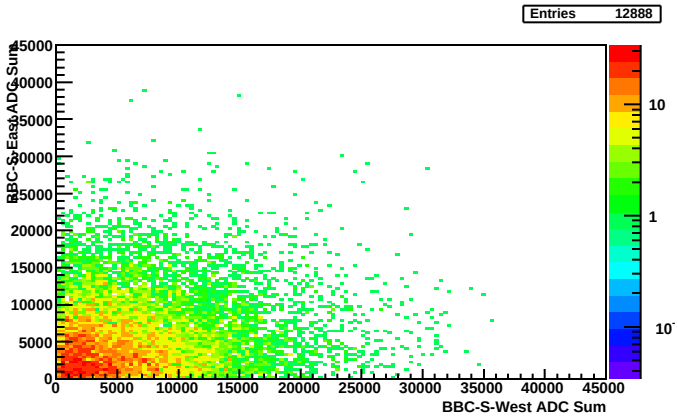

Entries 12888
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

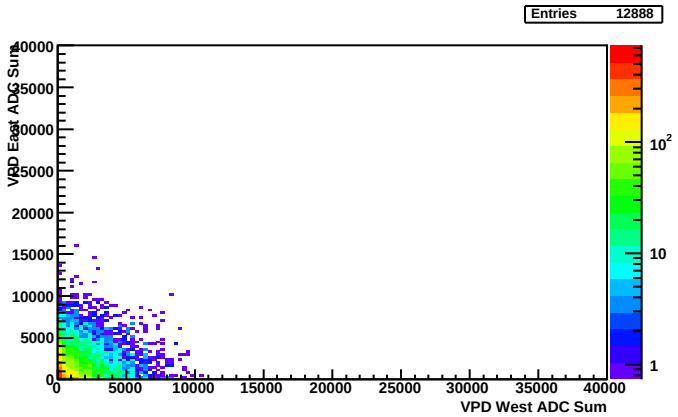

Entries 12888
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

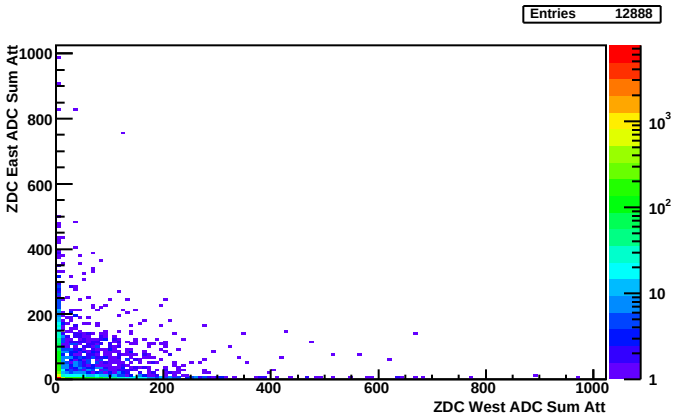

Entries 12888
VPD-East ADC Sum
ZDC-East ADC Sum Att

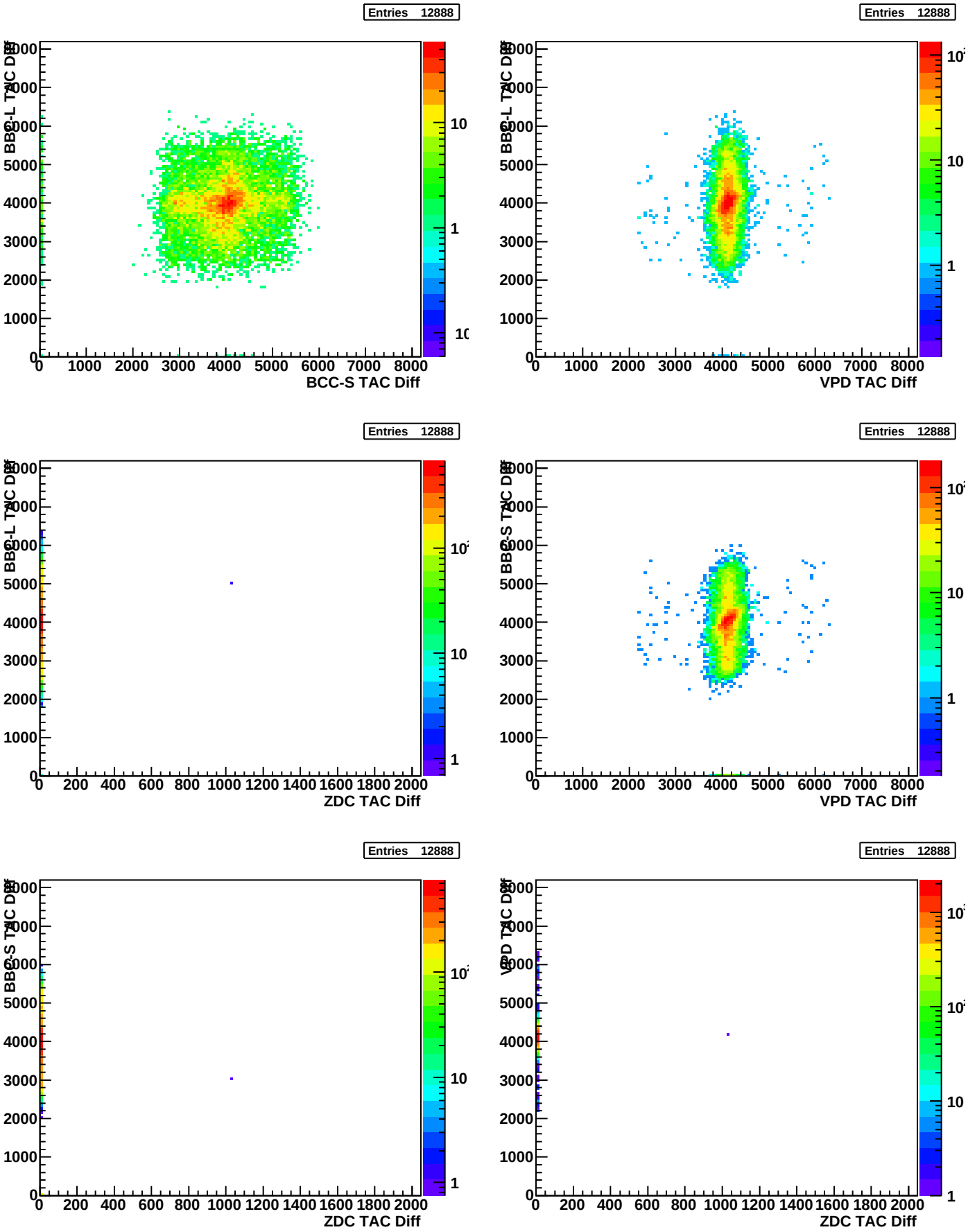

Entries 12888
VPD-West ADC Sum
ZDC-West ADC Sum Att

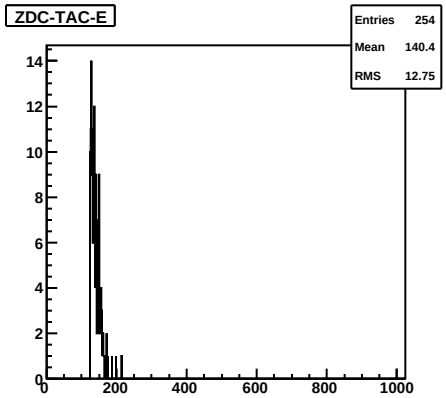

Entries 12888
BBC-L-East ADC Sum
BBC-L-West ADC Sum

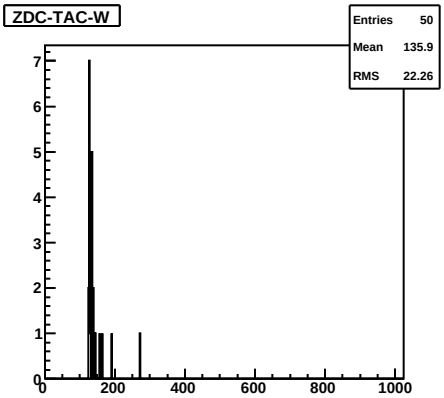

Entries 12888
BBC-S-East ADC Sum
BBC-S-West ADC Sum

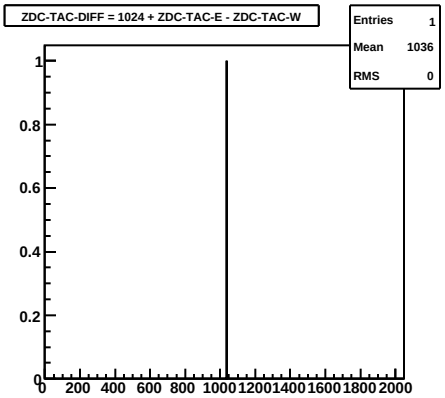

Entries 12888
VPD East ADC Sum
VPD West ADC Sum

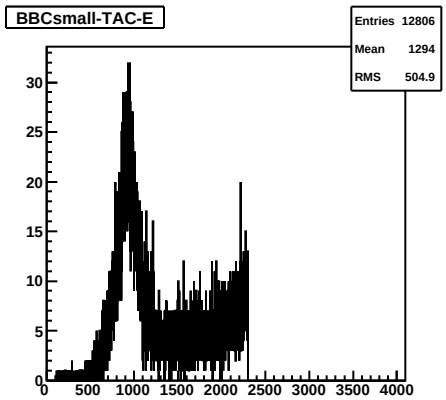

Entries 12888
ZDC East ADC Sum Att
ZDC West ADC Sum Att

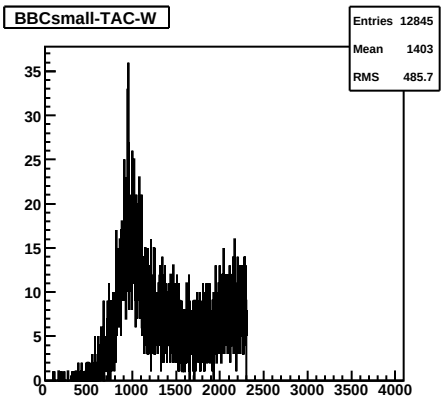

Entries 12888
BBC-L TAC Diff
BCC-S TAC Diff
Entries 12888
BBC-L TAC Diff
VPD TAC Diff
Entries 12888
BBC-L TAC Diff
ZDC TAC Diff
Entries 12888
BBC-S TAC Diff
VPD TAC Diff
Entries 12888
BBC-S TAC Diff
ZDC TAC Diff
Entries 12888
VPD TAC Diff
ZDC TAC Diff

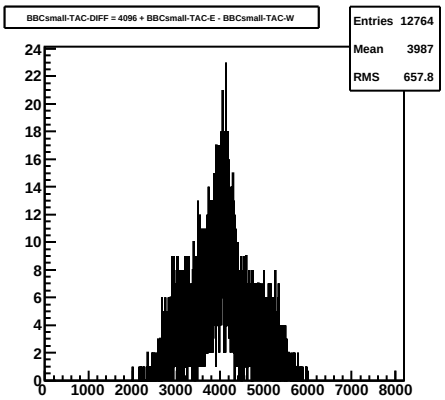

ZDC-TAC-E
Entries 254
Mean 140.4
RMS 12.75

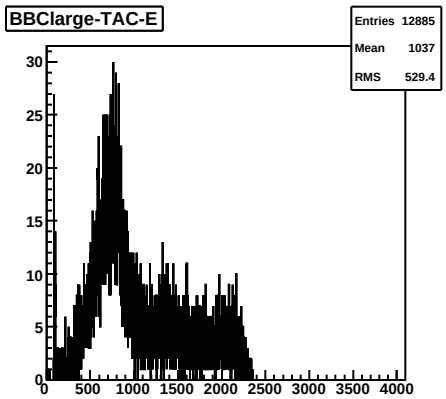

ZDC-TAC-W
Entries 50
Mean 135.9
RMS 22.26

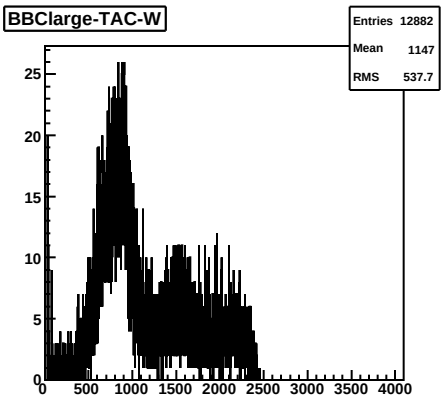

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1
Mean 1036
RMS 0

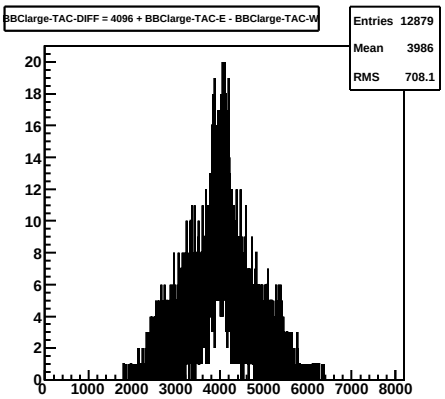

BBCsmall-TAC-E
Entries 12806
Mean 1294
RMS 504.9

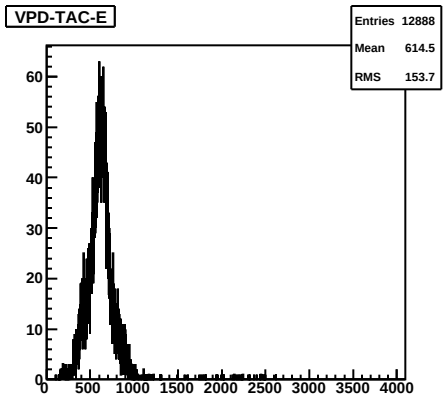

BBCsmall-TAC-W
Entries 12845
Mean 1403
RMS 485.7

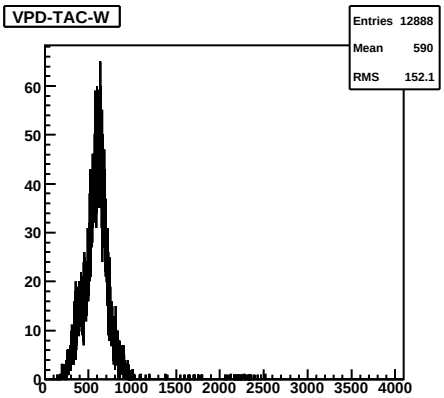

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 12764
Mean 3987
RMS 657.8

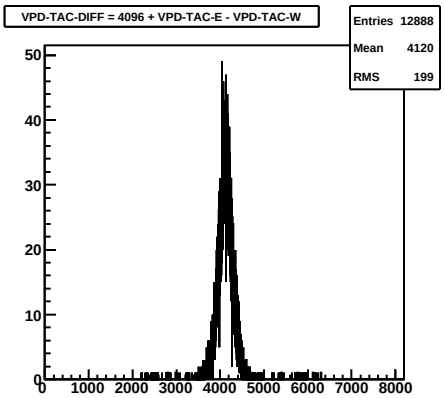

BBClarge-TAC-E
Entries 12885
Mean 1037
RMS 529.4

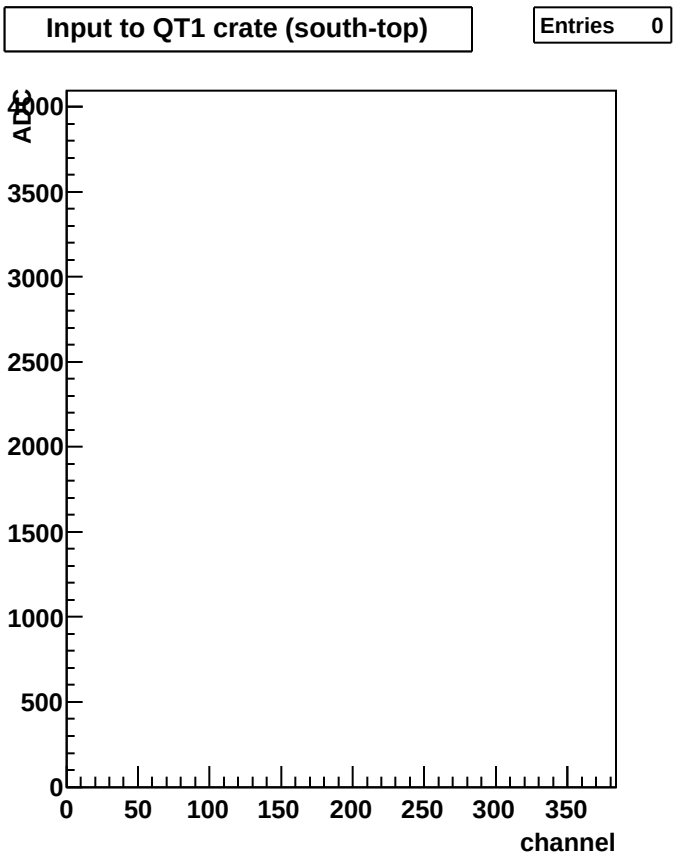

BBClarge-TAC-W
Entries 12882
Mean 1147
RMS 537.7

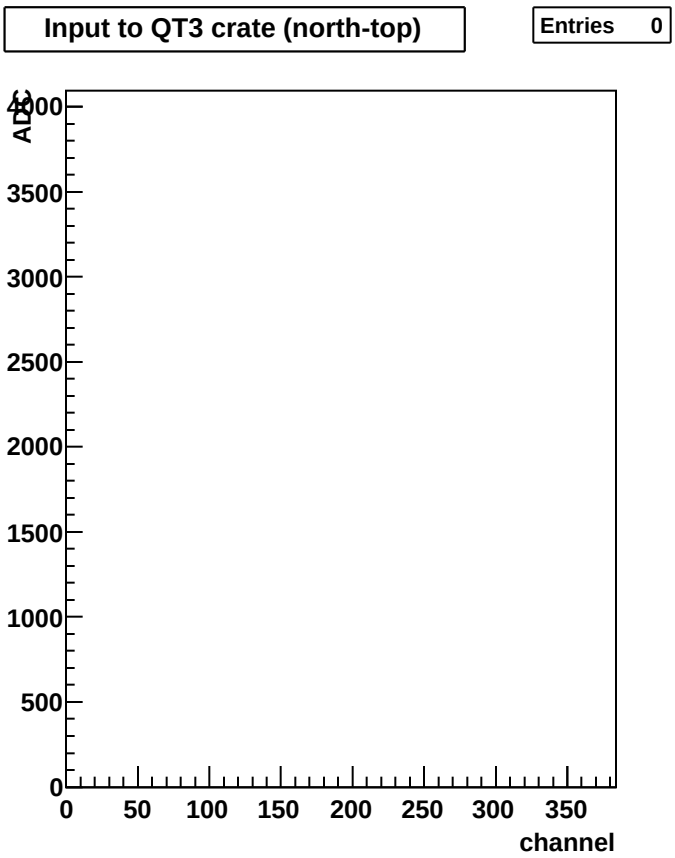

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 12879
Mean 3986
RMS 708.1

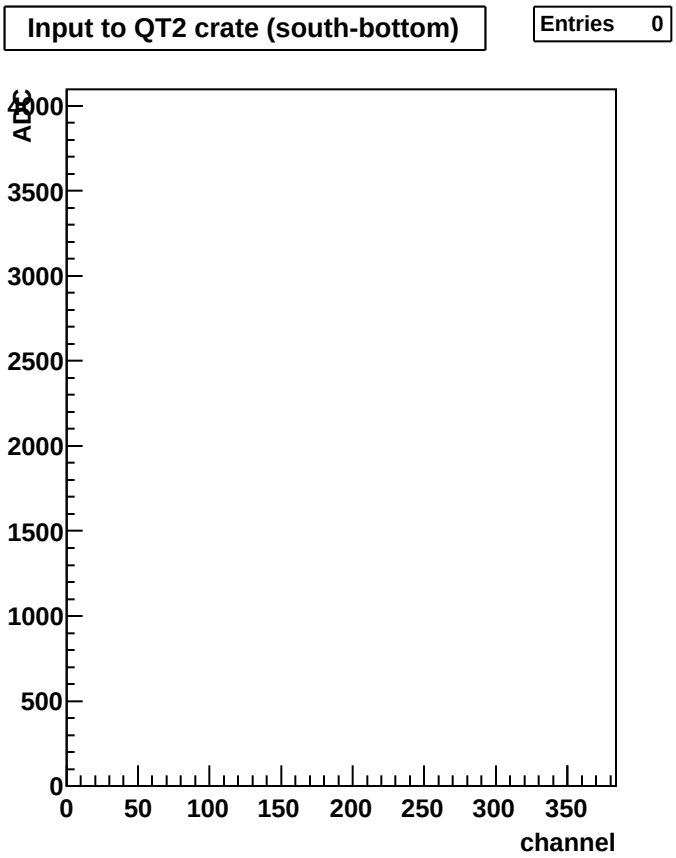

VPD-TAC-E
Entries 12888
Mean 614.5
RMS 153.7

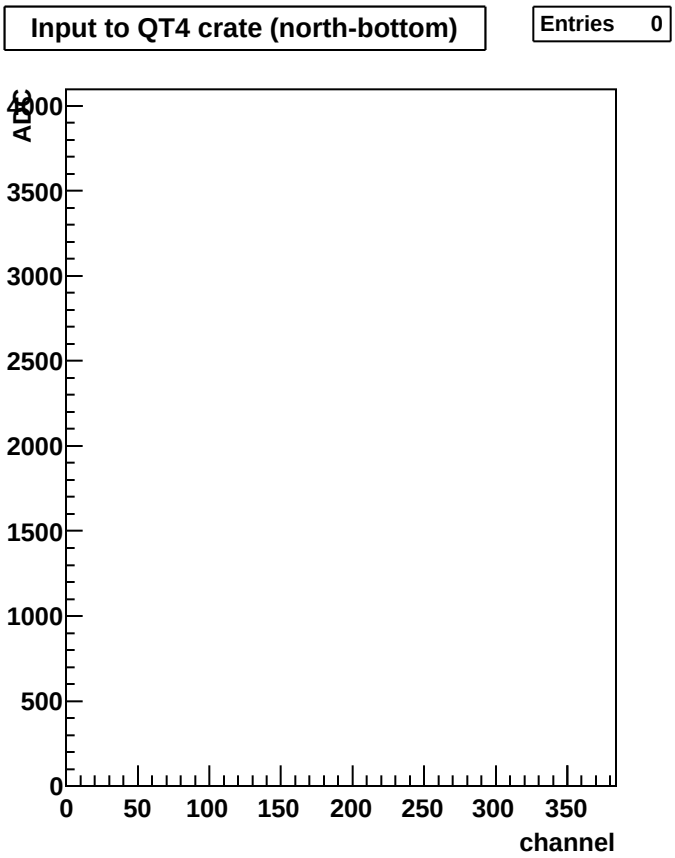

VPD-TAC-W
Entries 12888
Mean 590
RMS 152.1

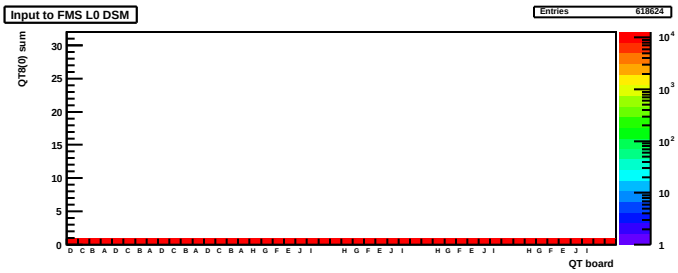

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 12888
Mean 4120
RMS 199

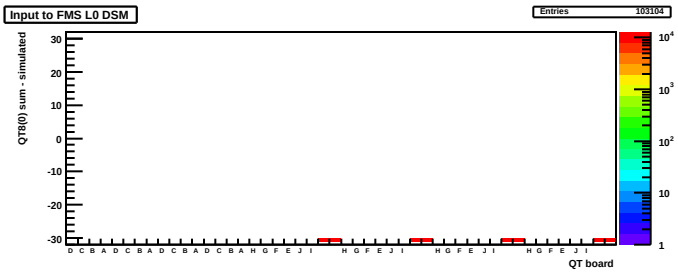

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

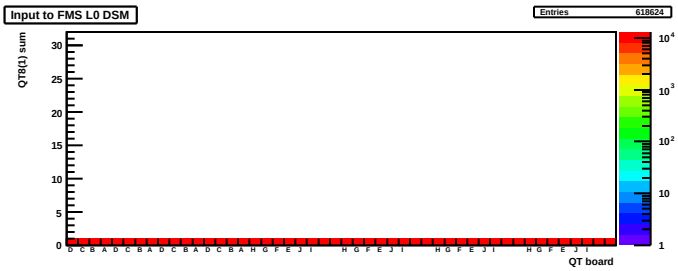

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

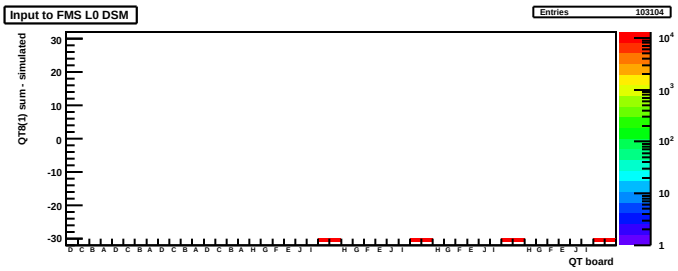

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

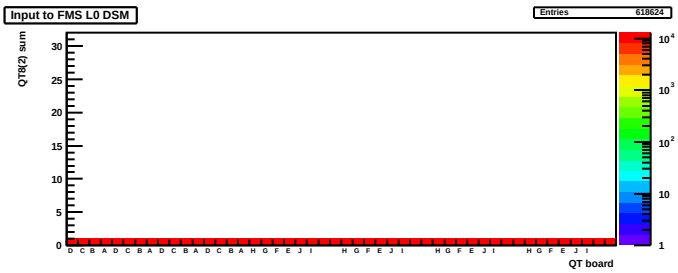

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

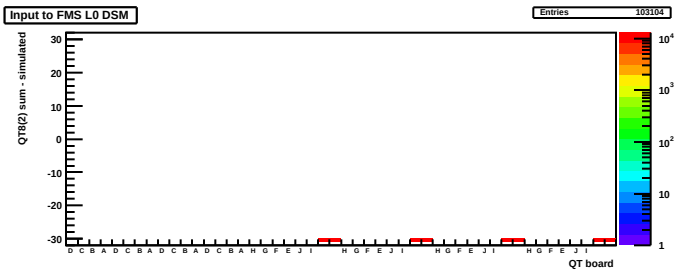

Input to FMS L0 DSM
Entries 618624
QT8(0) sum
QT board

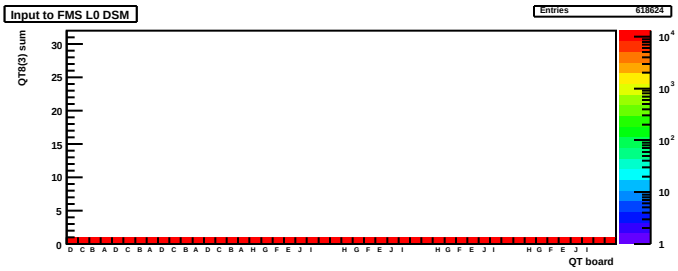

Input to FMS L0 DSM
Entries 103104
QT8(0) sum - simulated
QT board

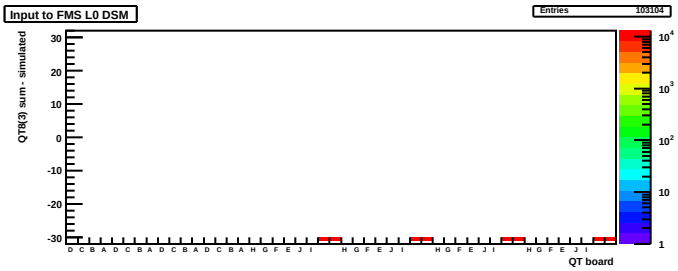

Input to FMS L0 DSM
Entries 618624
QT8(1) sum
QT board

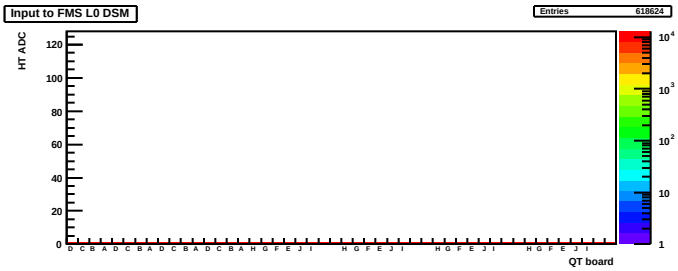

Input to FMS L0 DSM
Entries 103104
QT8(1) sum - simulated
QT board

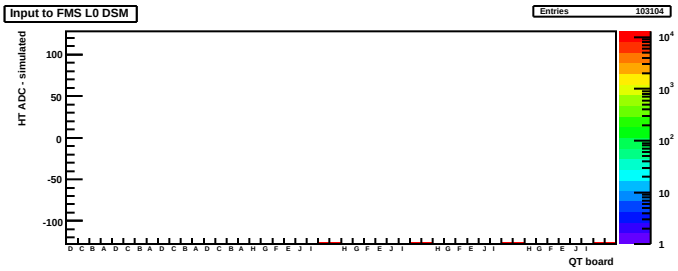

Input to FMS L0 DSM
Entries 618624
QT8(2) sum
QT board

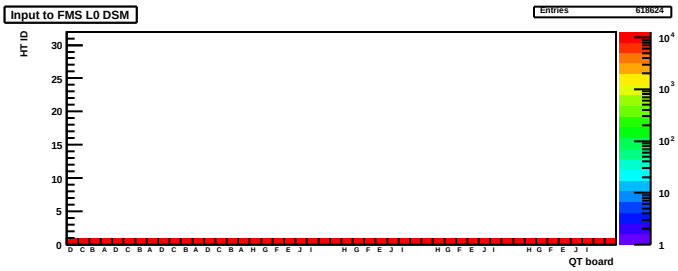

Input to FMS L0 DSM
Entries 103104
QT8(2) sum - simulated
QT board

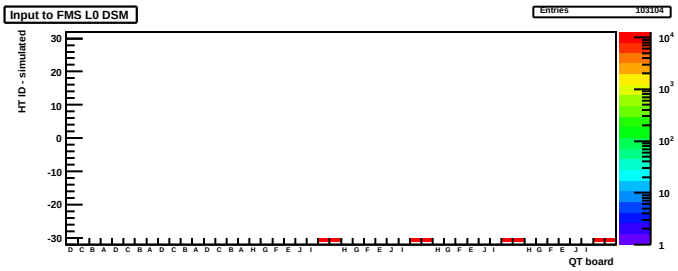

Input to FMS L0 DSM
Entries 618624
QT8(3) sum
QT board

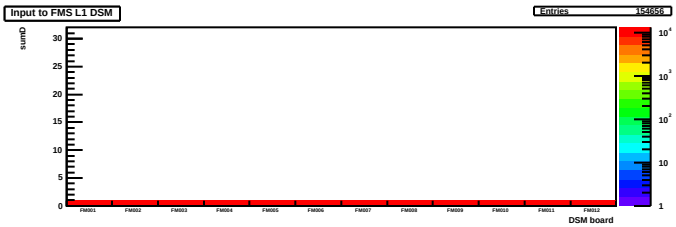

Input to FMS L0 DSM
Entries 103104
QT8(3) sum - simulated
QT board

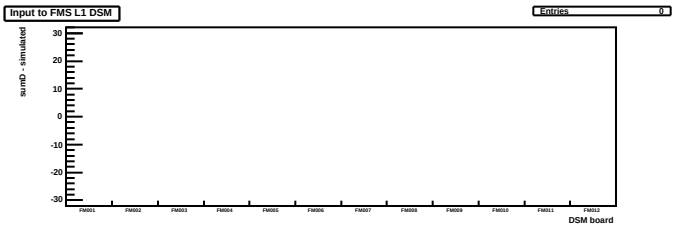

Input to FMS L0 DSM
Entries 618624
HT ADC
QT board

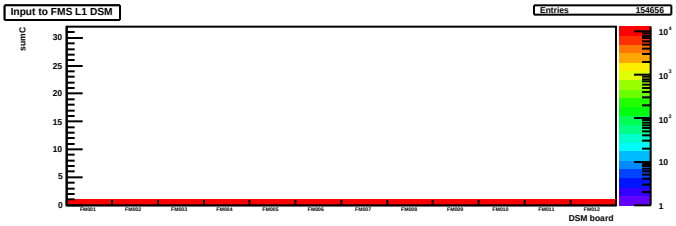

Input to FMS L0 DSM
Entries 103104
HT ADC - simulated
QT board

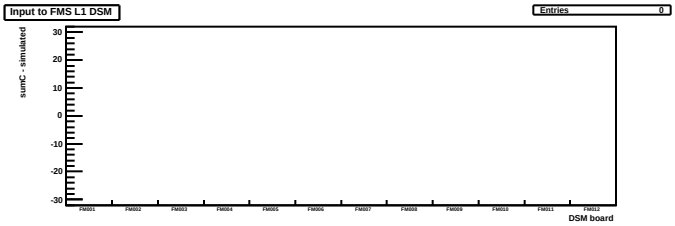

Input to FMS L0 DSM
Entries 618624
HT ID
QT board

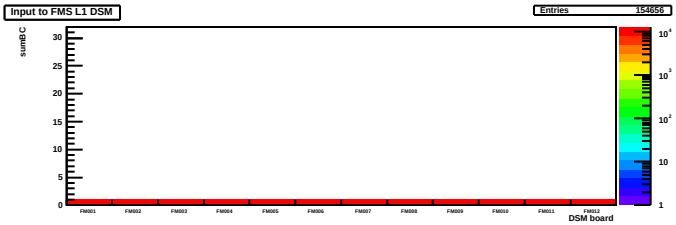

Input to FMS L0 DSM
Entries 103104
HT ID - simulated
QT board

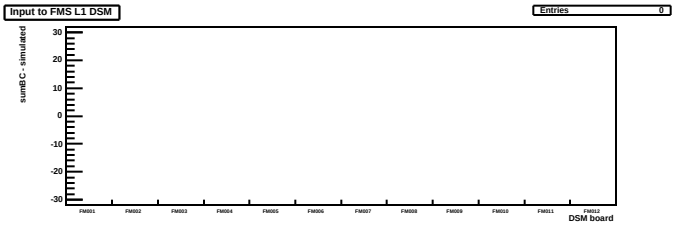

Input to FMS L1 DSM
Entries 154656
sumD
DSM board

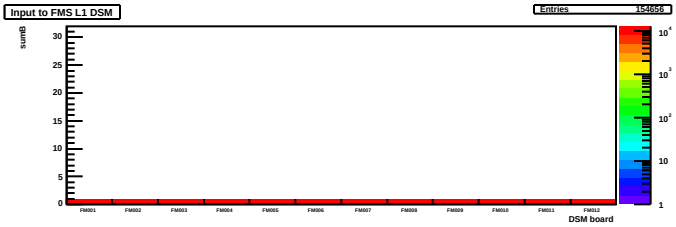

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

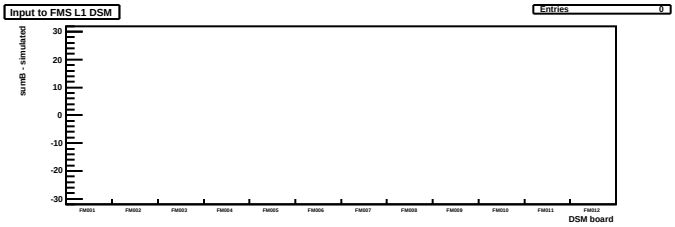

Input to FMS L1 DSM
Entries 154656
sumC
DSM board

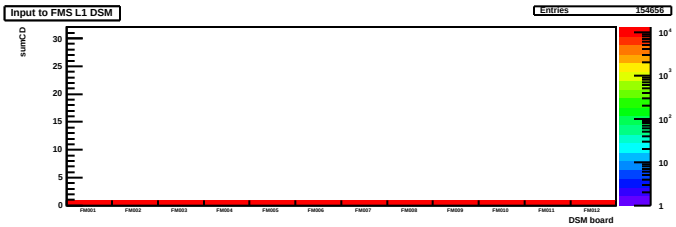

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

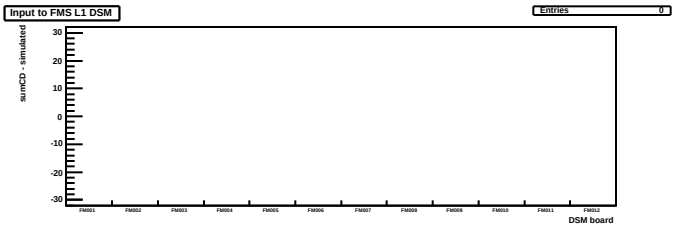

Input to FMS L1 DSM
Entries 154656
sumBC
DSM board

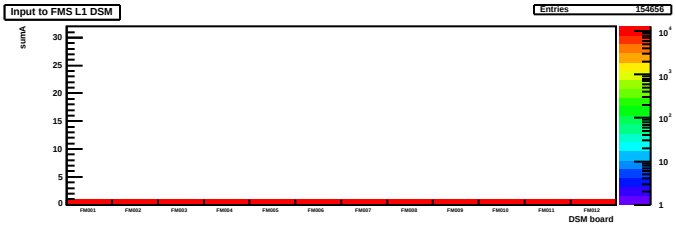

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

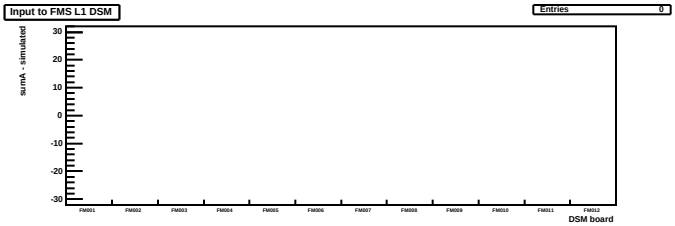

Input to FMS L1 DSM
Entries 154656
sumB
DSM board

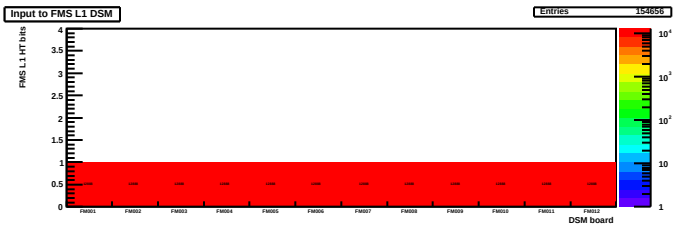

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

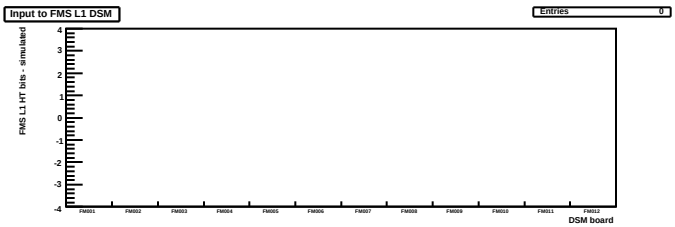

Input to FMS L1 DSM
Entries 154656
sumCD
DSM board

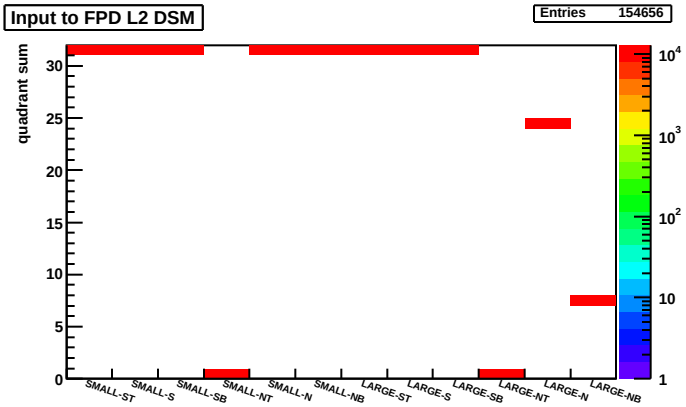

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

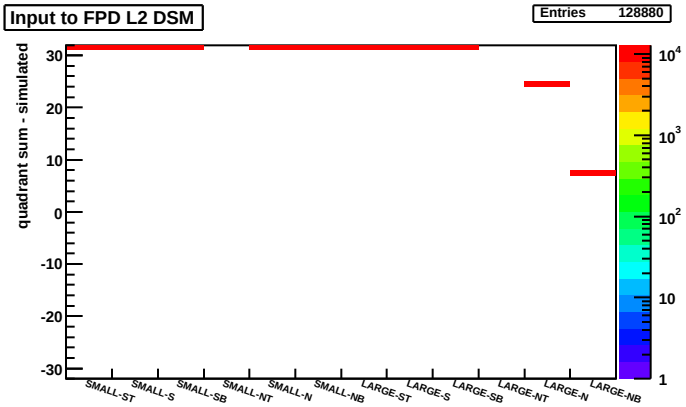

Input to FMS L1 DSM
Entries 154656
sumA
DSM board

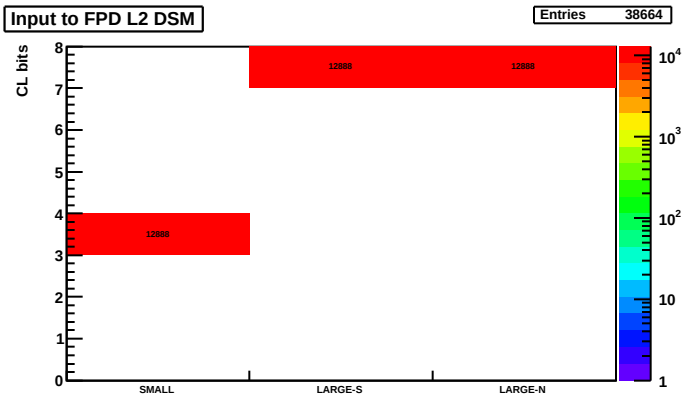

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

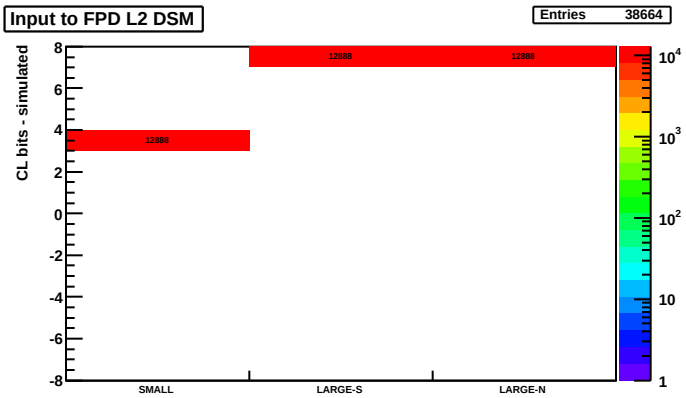

Input to FMS L1 DSM
Entries 154656
FMS L1 HT bits
DSM board

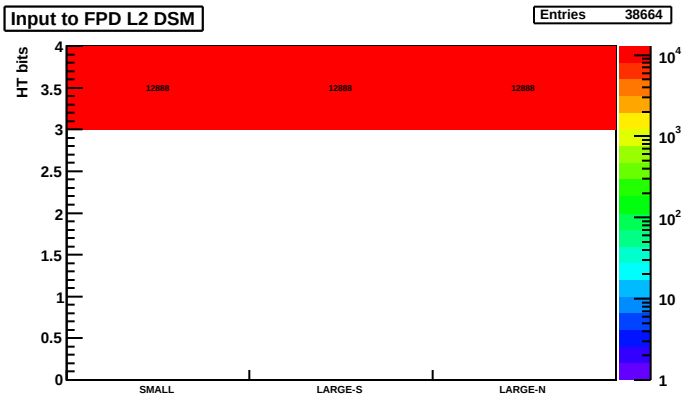

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

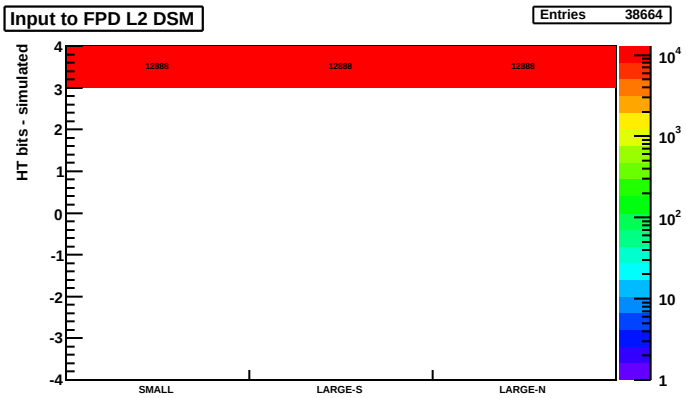

Input to FPD L2 DSM
Entries 154656
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

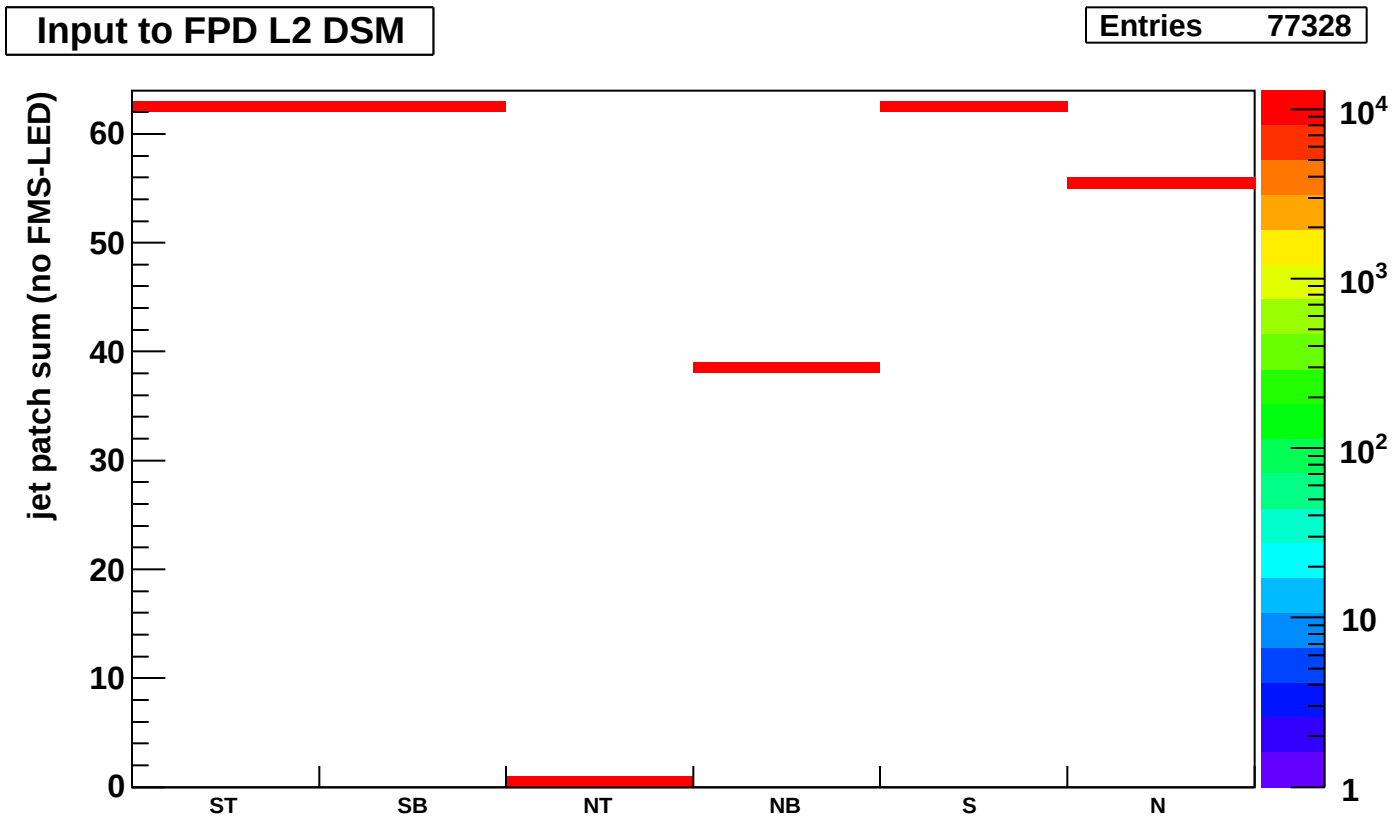

Input to FPD L2 DSM
Entries 128880
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

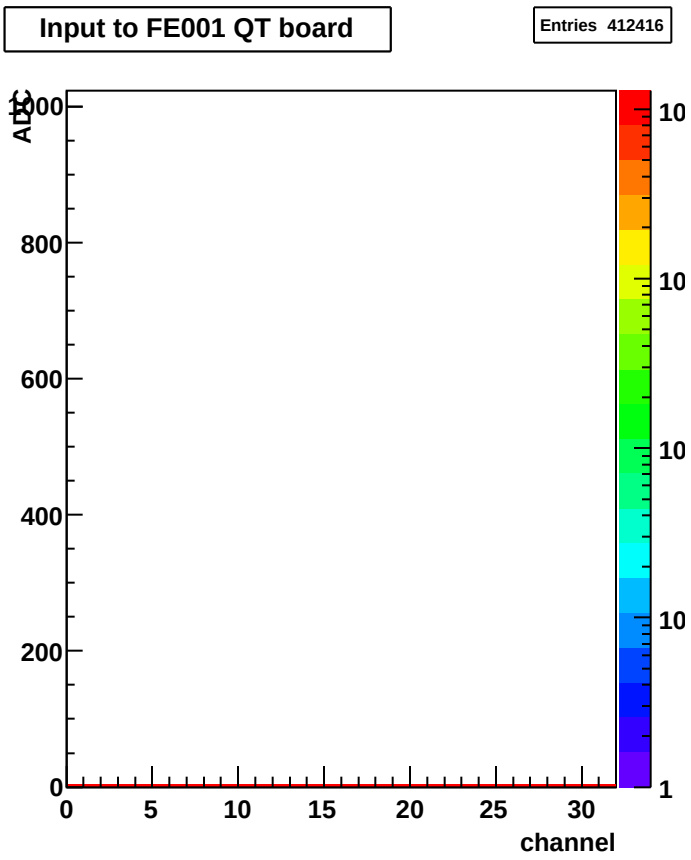

Input to FPD L2 DSM
Entries 38664
CL bits
12888
12888
12888
SMALL
LARGE-S
LARGE-N

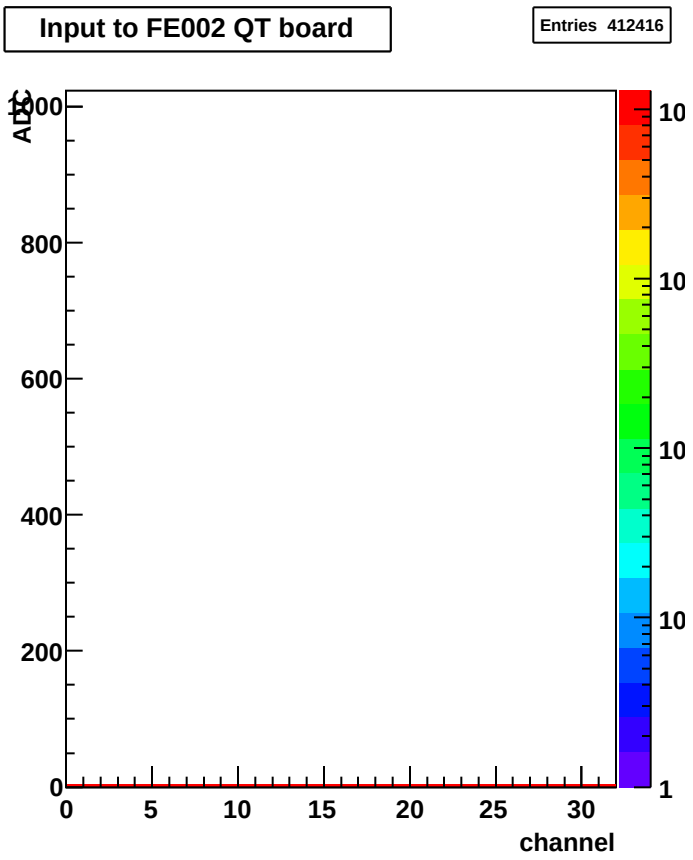

Input to FPD L2 DSM
Entries 38664
CL bits - simulated
12888
12888
12888
SMALL
LARGE-S
LARGE-N

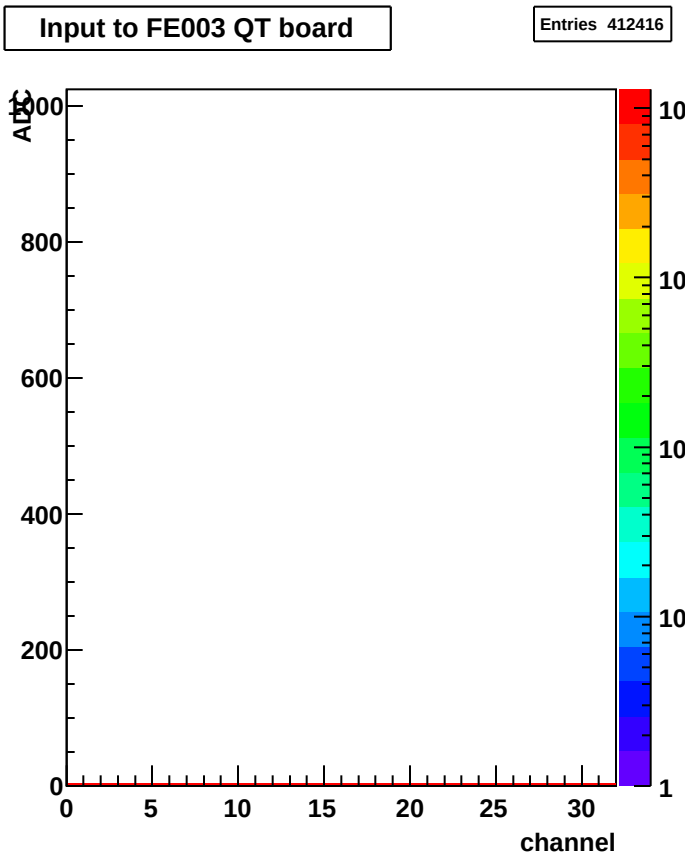

Input to FPD L2 DSM
Entries 38664
HT bits
12888
12888
12888
SMALL
LARGE-S
LARGE-N

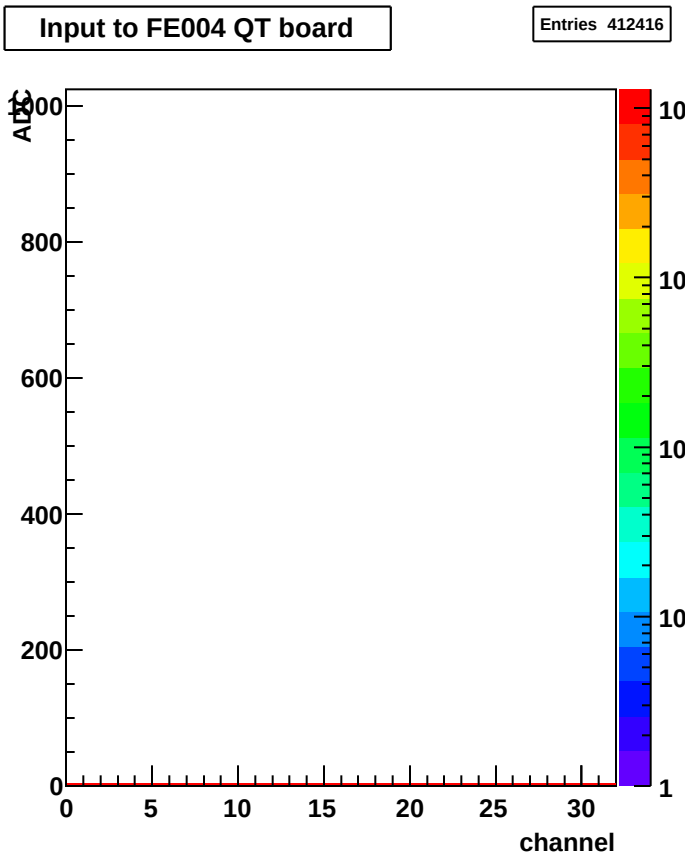

Input to FPD L2 DSM
Entries 38664
HT bits - simulated
12888
12888
12888
SMALL
LARGE-S
LARGE-N

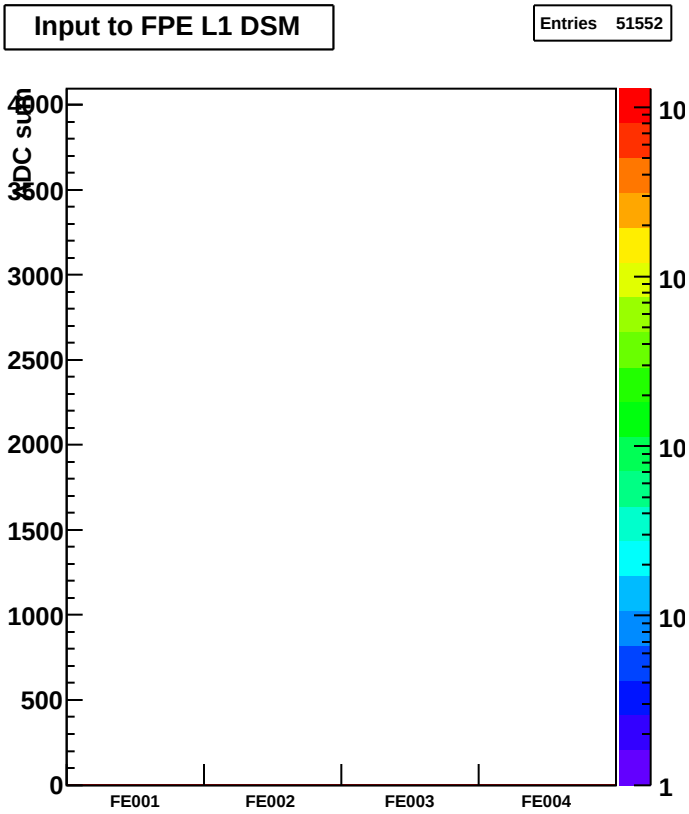

Input to FPD L2 DSM
Entries 77328
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

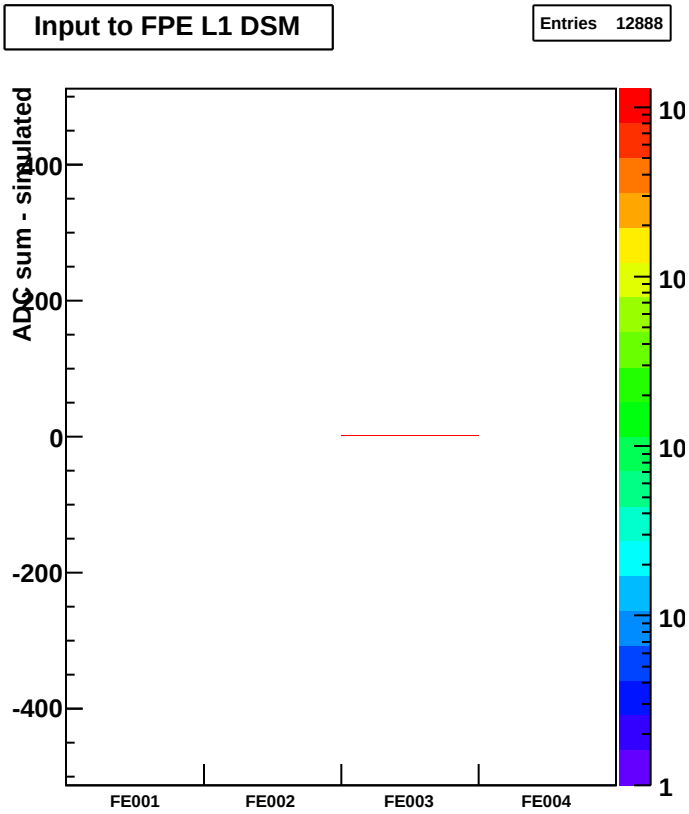

Input to FE001 QT board
Entries 412416
ADC
channel


Input to FE002 QT board
Entries 412416
ADC
channel

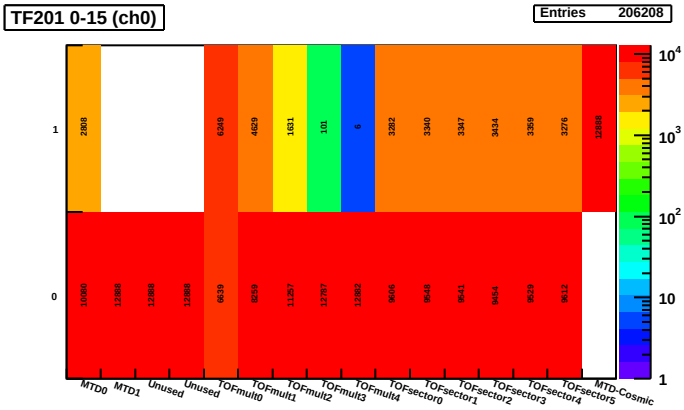

Input to FE003 QT board
Entries 412416
ADC
channel


Input to FE004 QT board
Entries 412416
ADC
channel

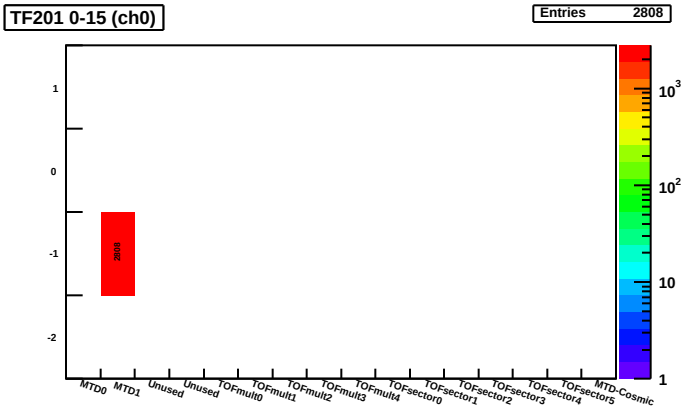

Input to FPE L1 DSM
Entries 51552
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 12888
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

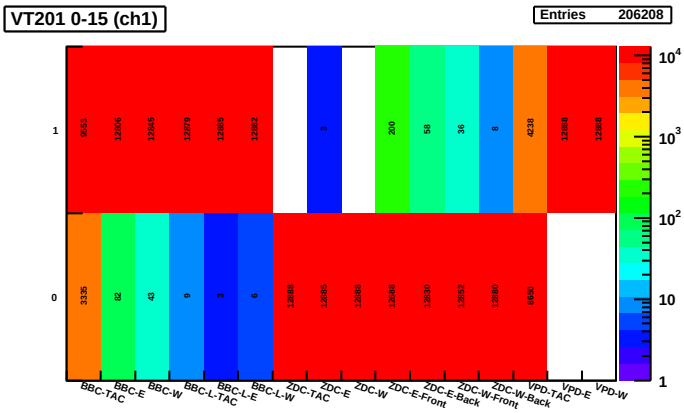
TF201 0-15 (ch0)



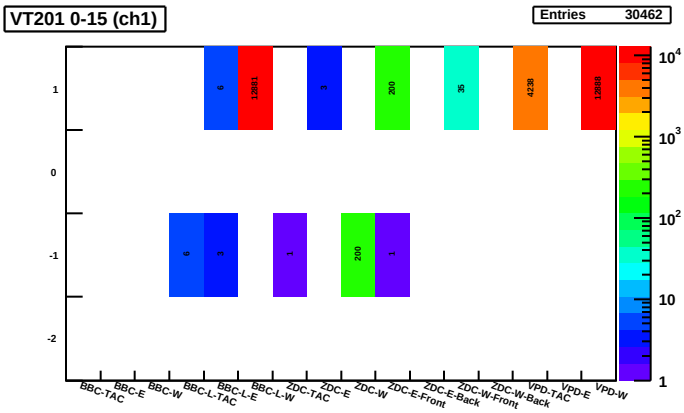
TF201 0-15 (ch0)



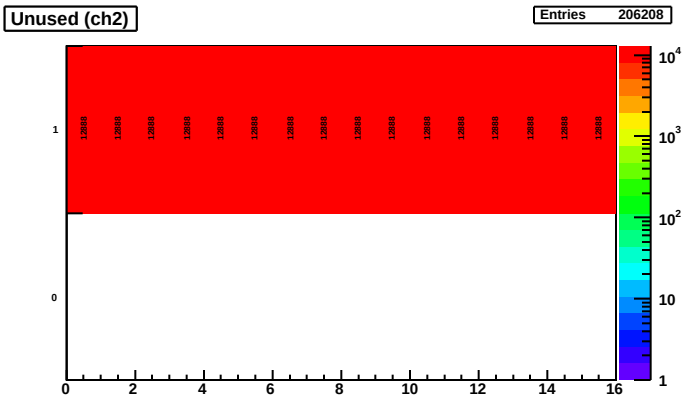
VT201 0-15 (ch1)

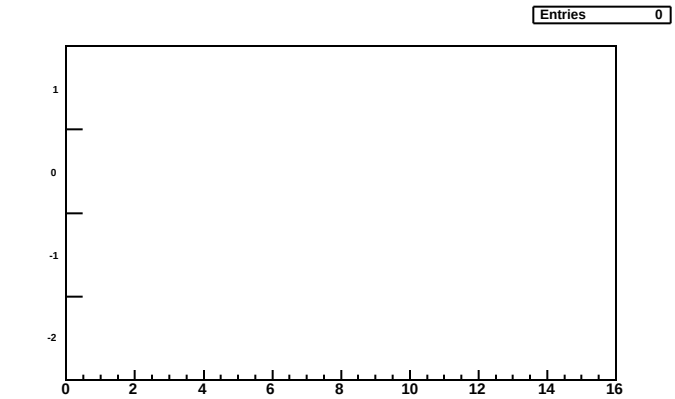


VT201 0-15 (ch1)

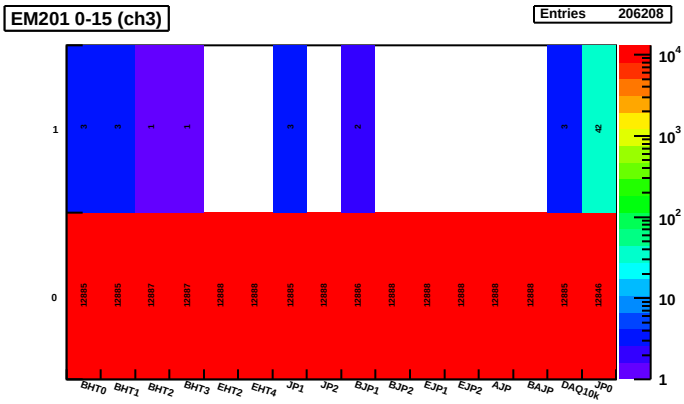


Unused (ch2)





EM201 0-15 (ch3)



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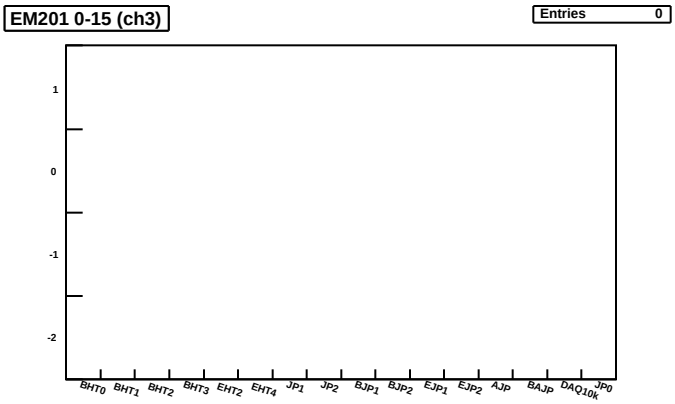
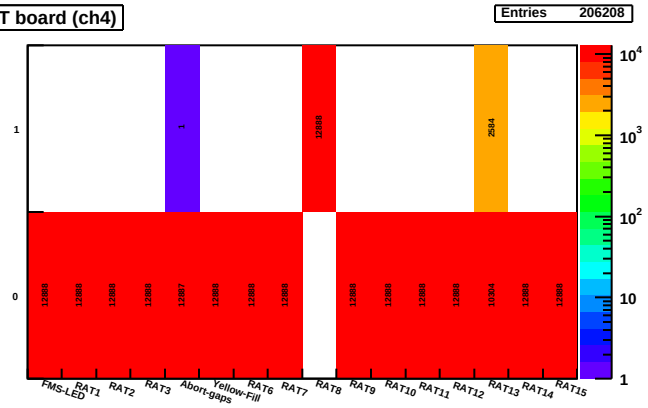
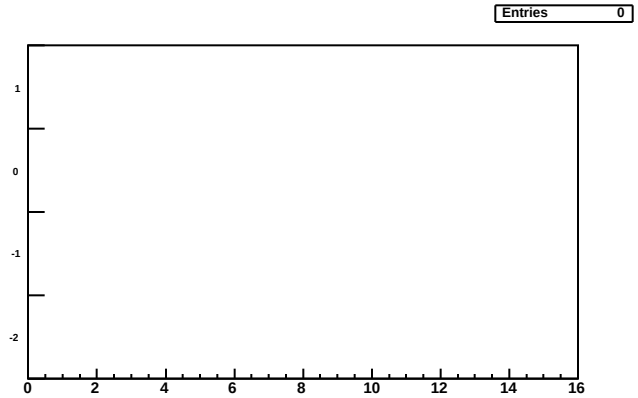
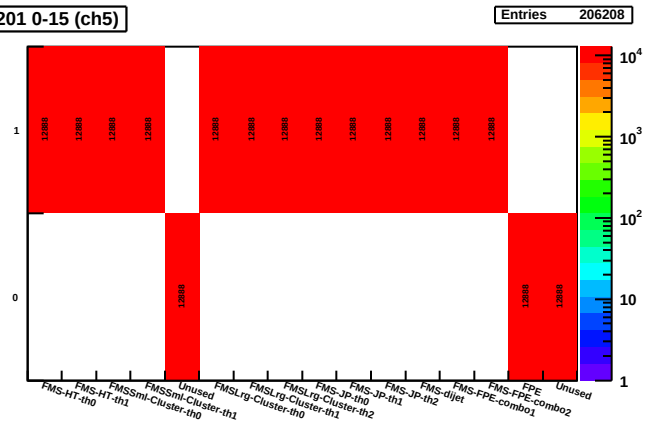


RAT board (ch4)





FP201 0-15 (ch5)



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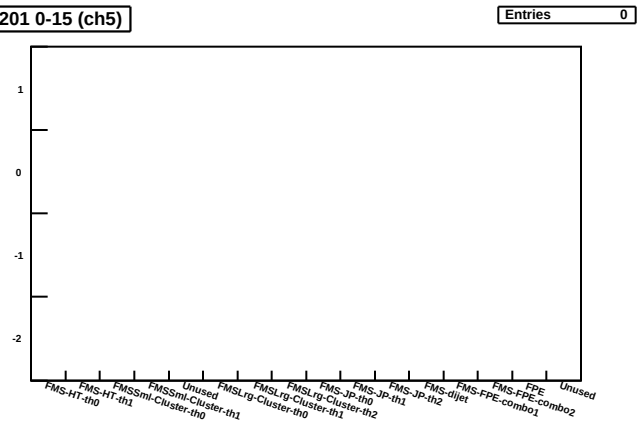

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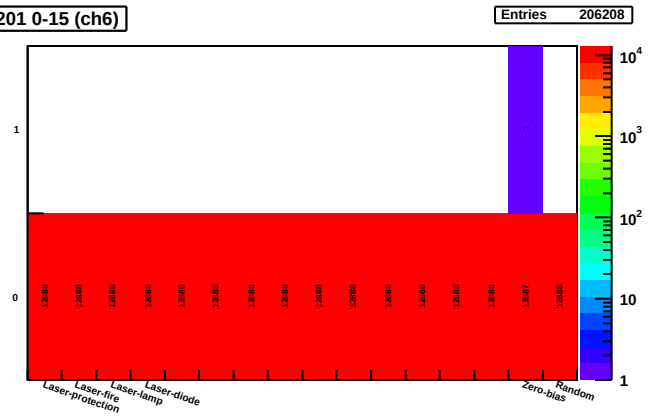

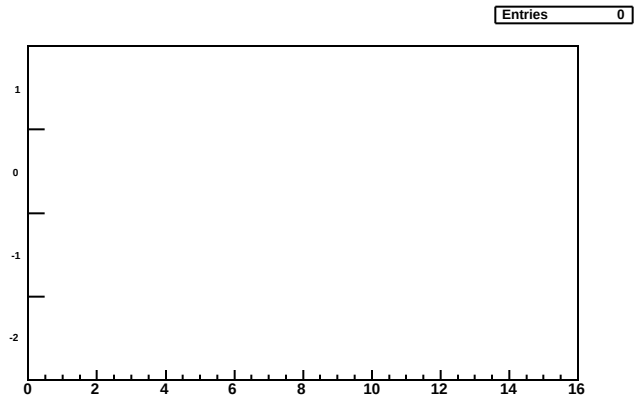
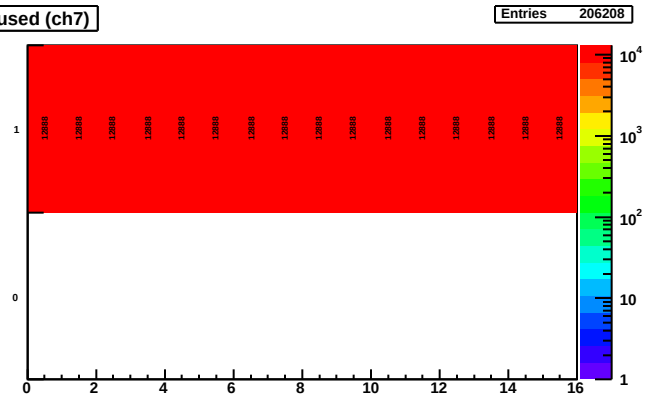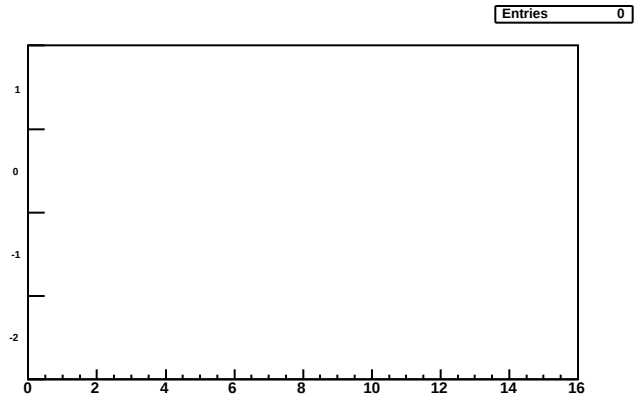
Unused (ch7)