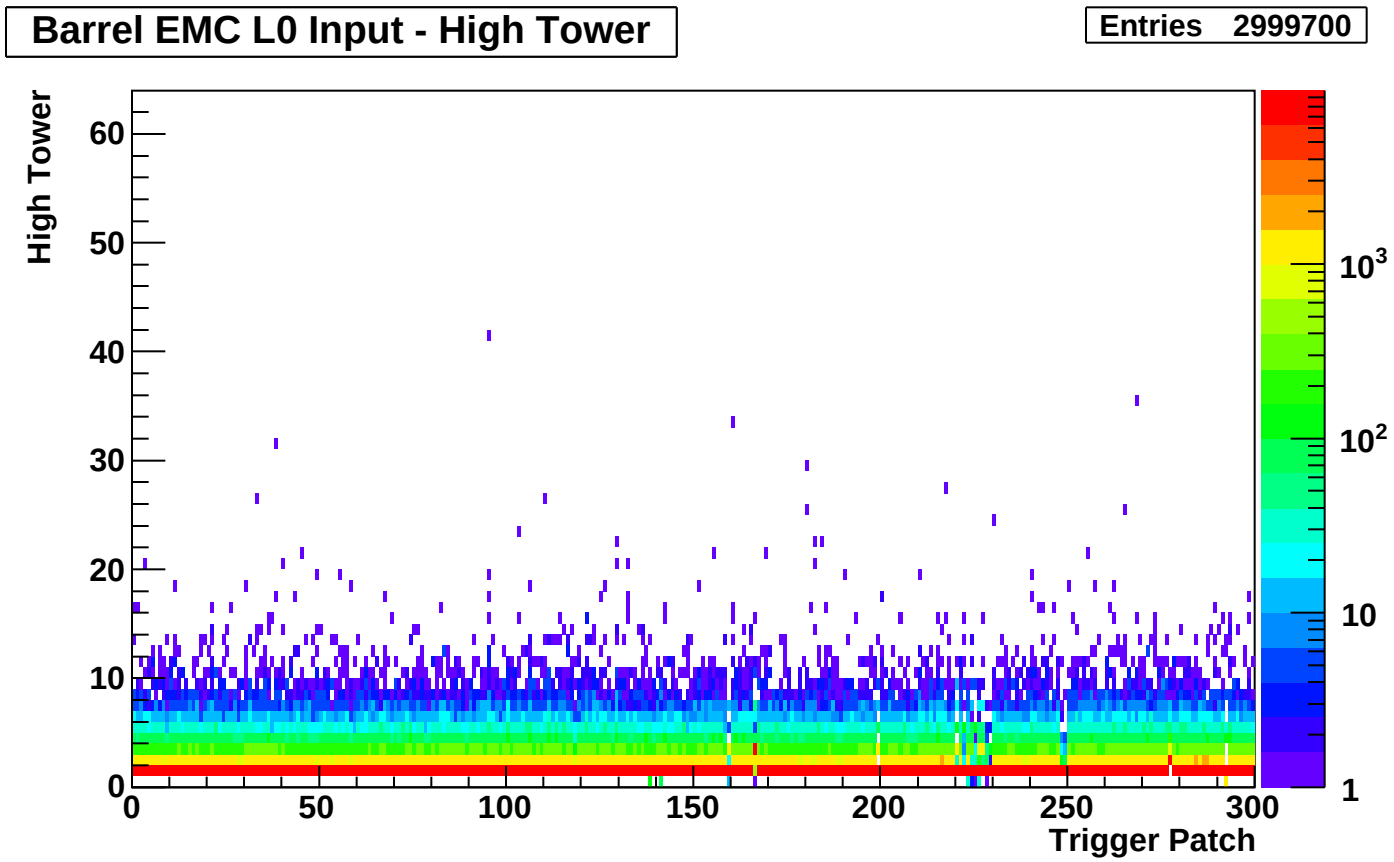
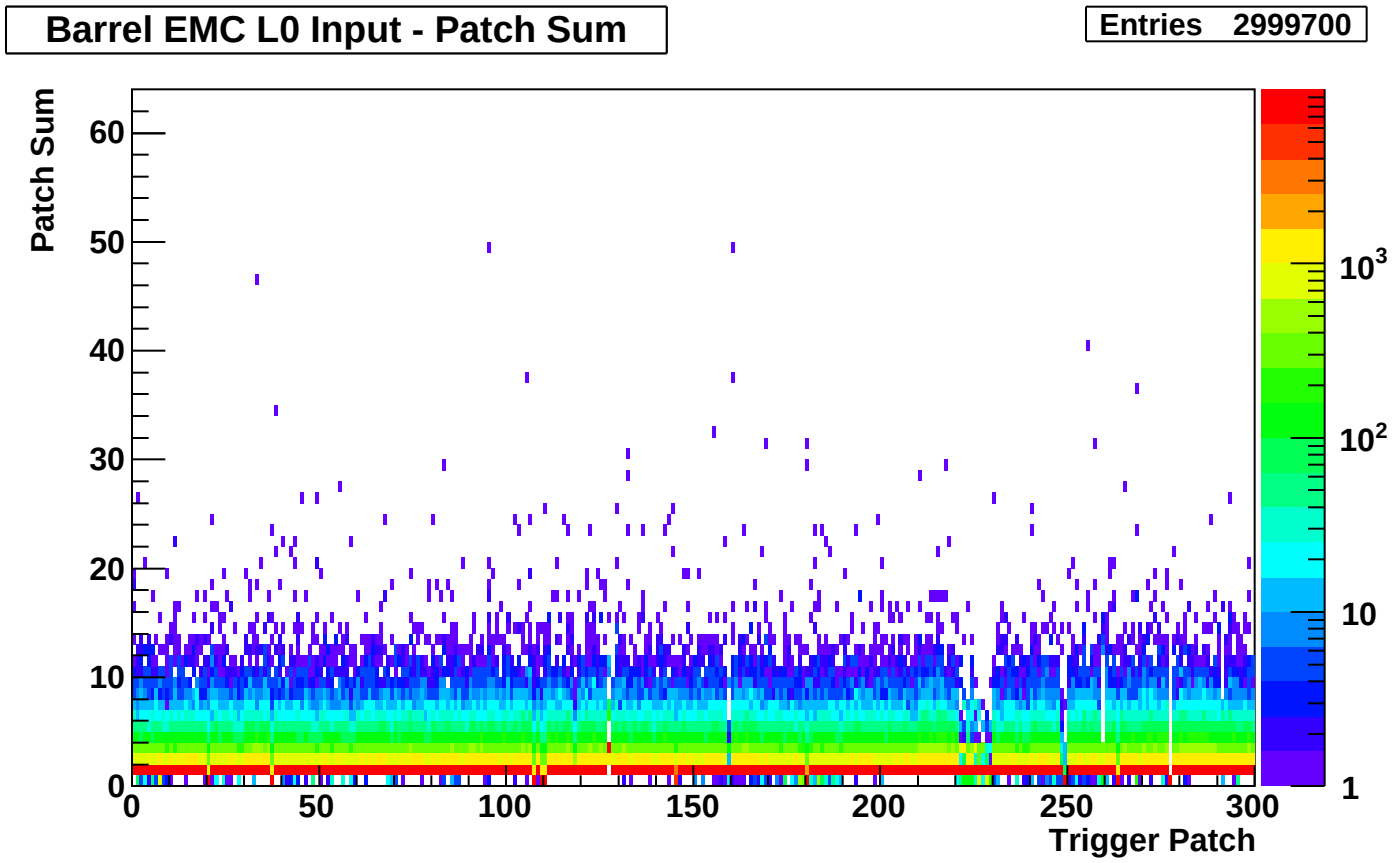
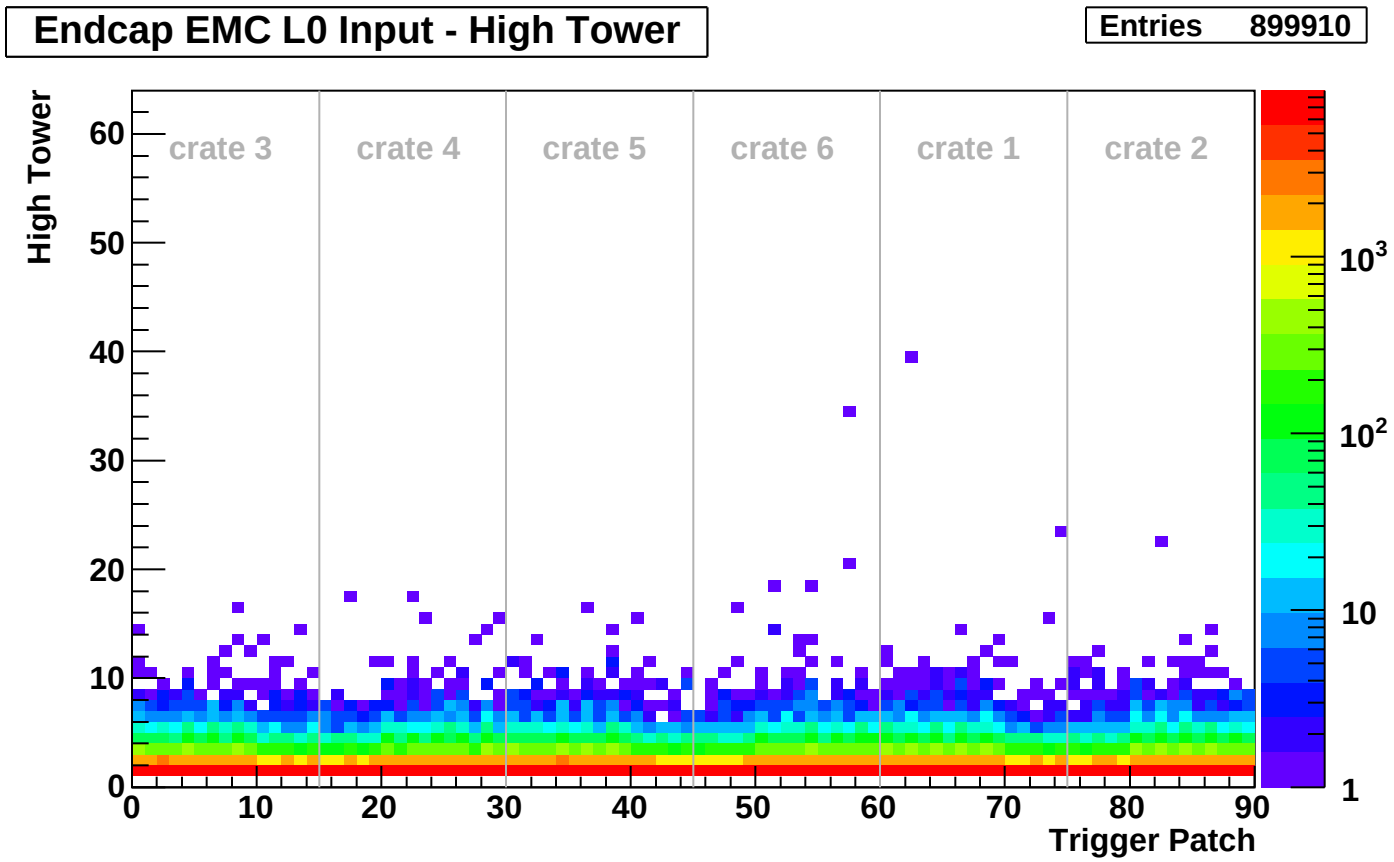
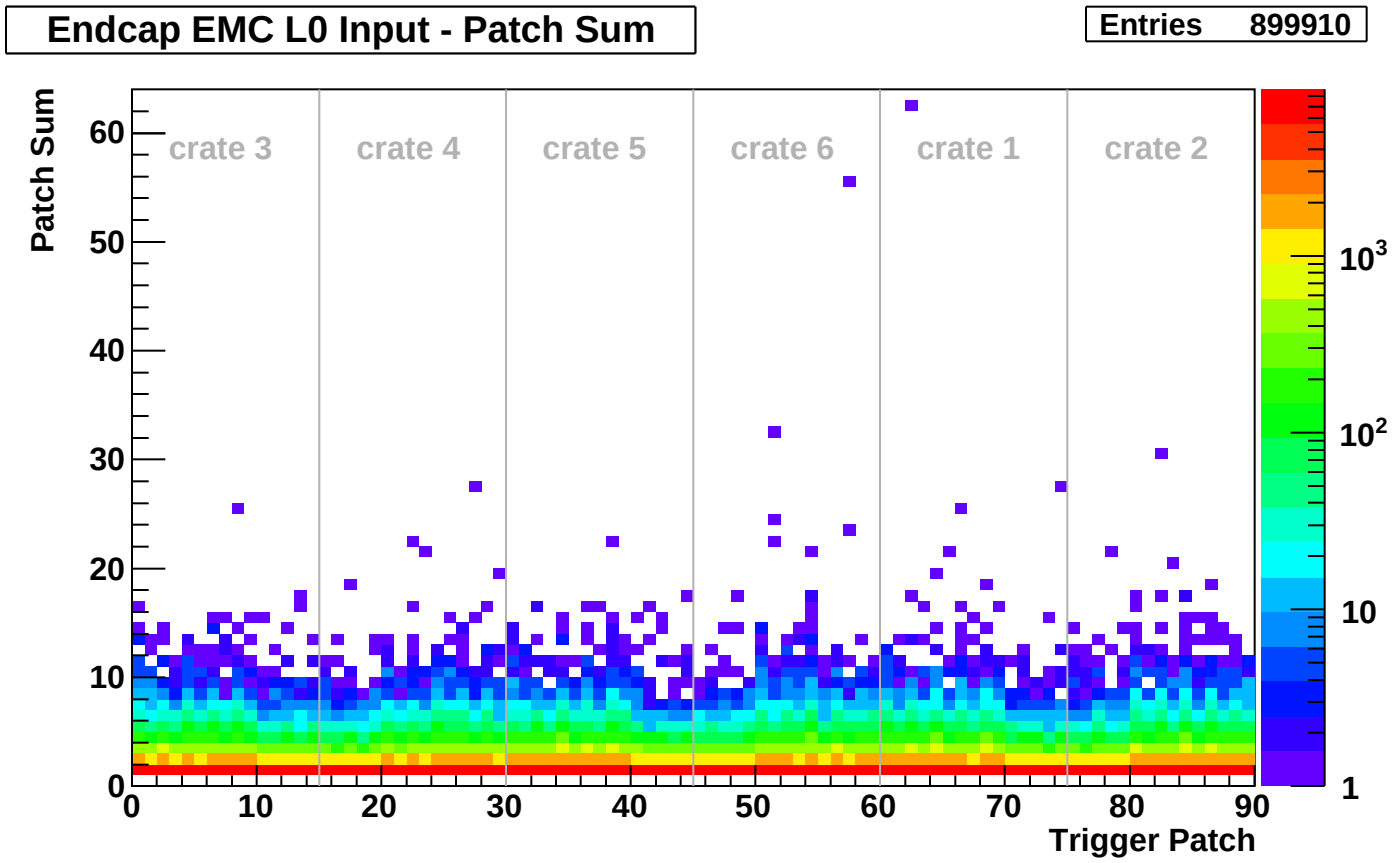
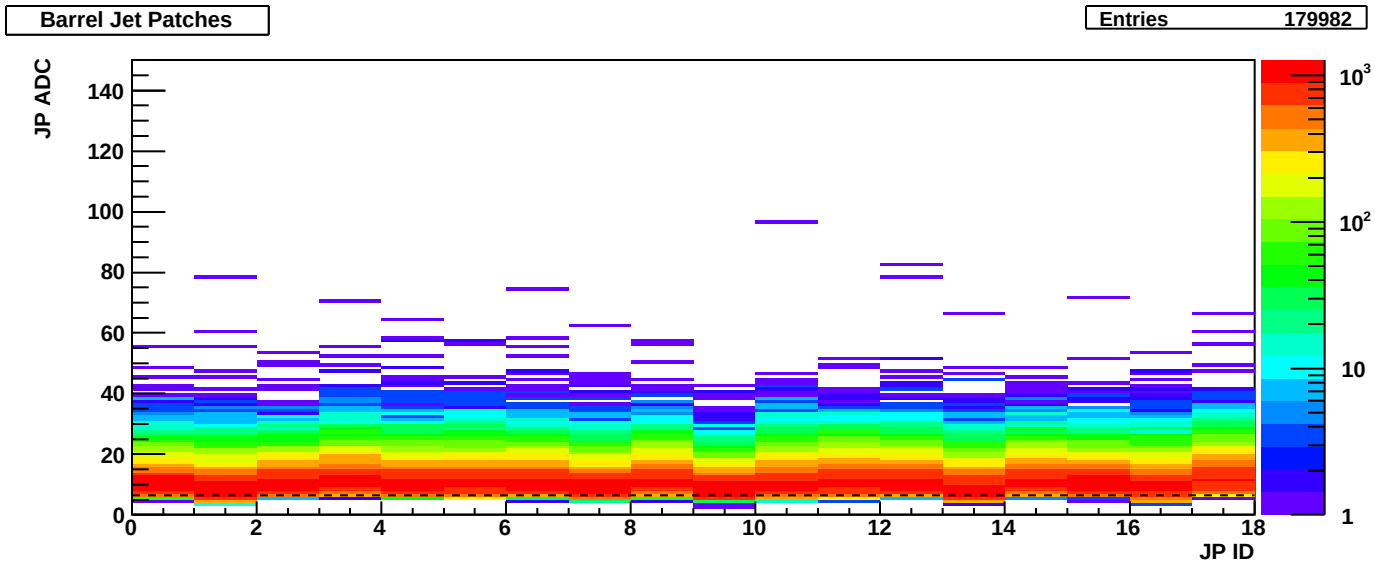
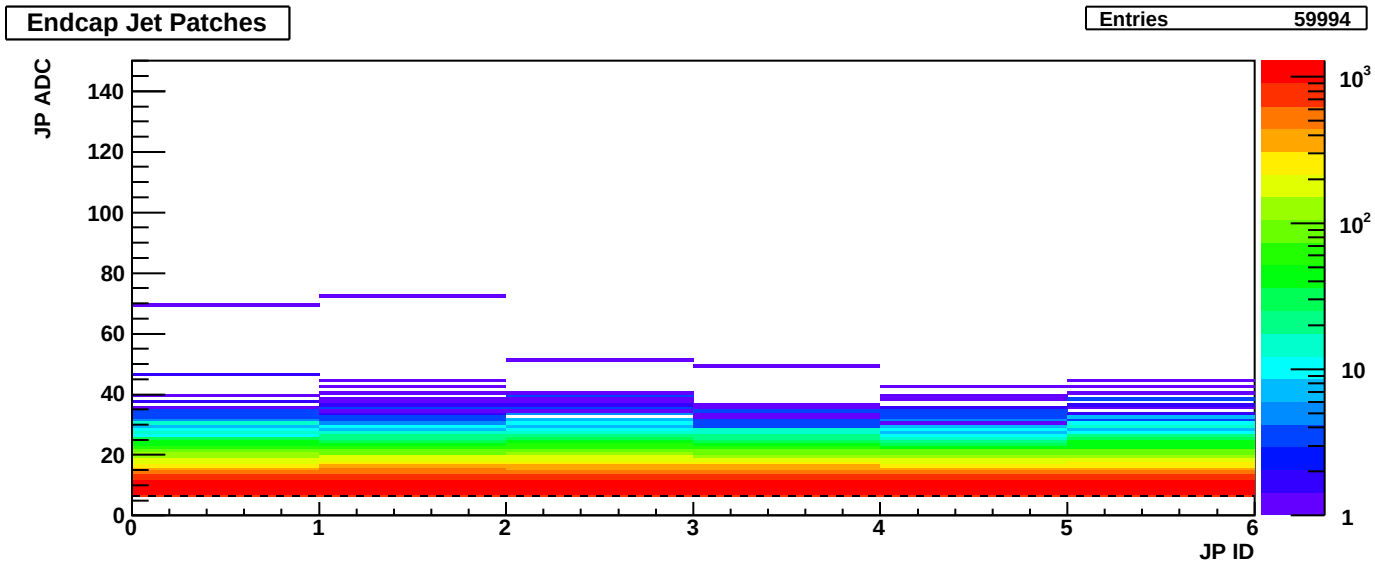

Barrel EMC L0 Input - High Tower
Entries 2999700
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

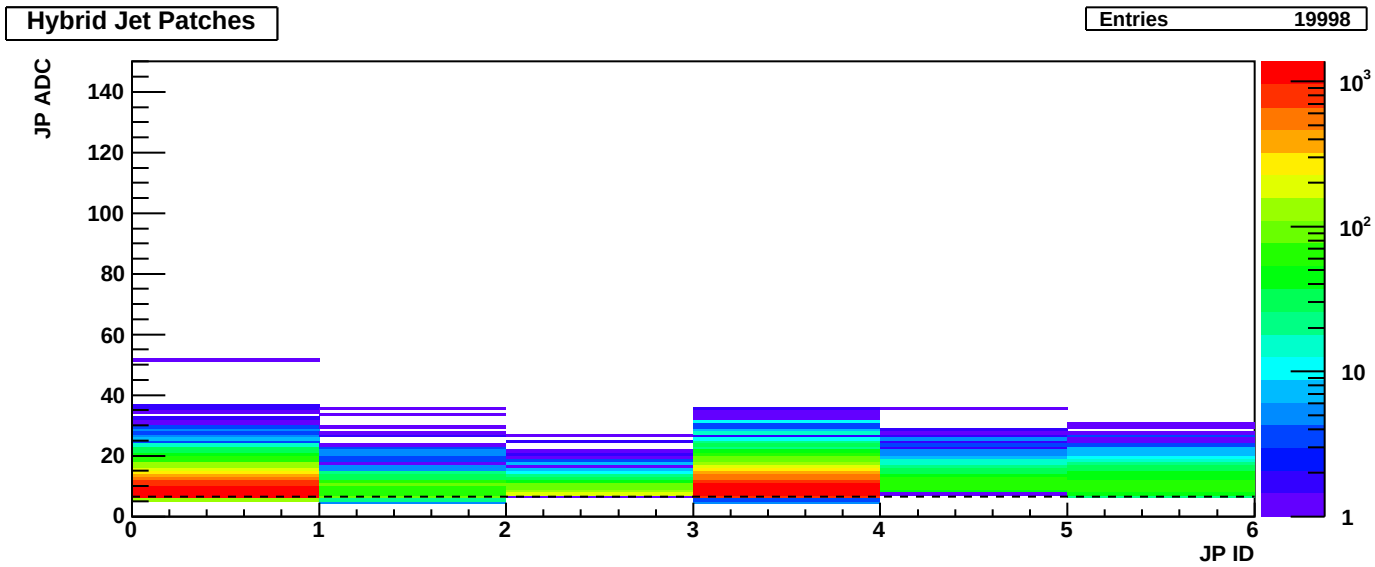

Barrel EMC L0 Input - Patch Sum
Entries 2999700
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

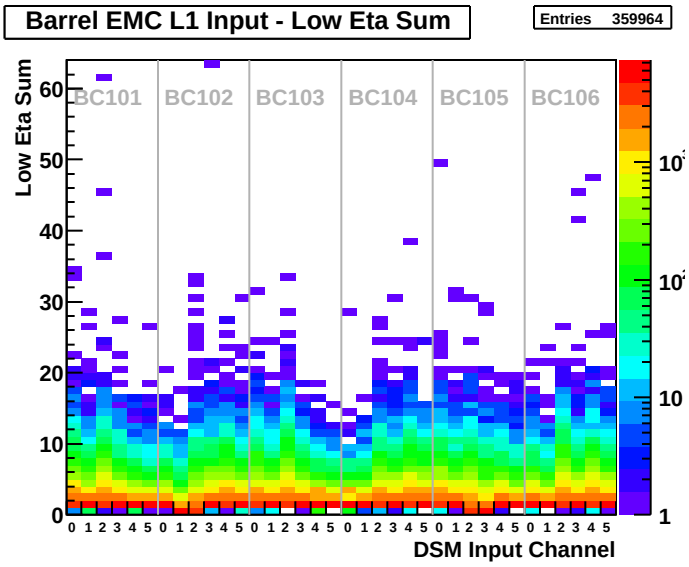

Endcap EMC L0 Input - High Tower
Entries 899910
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3

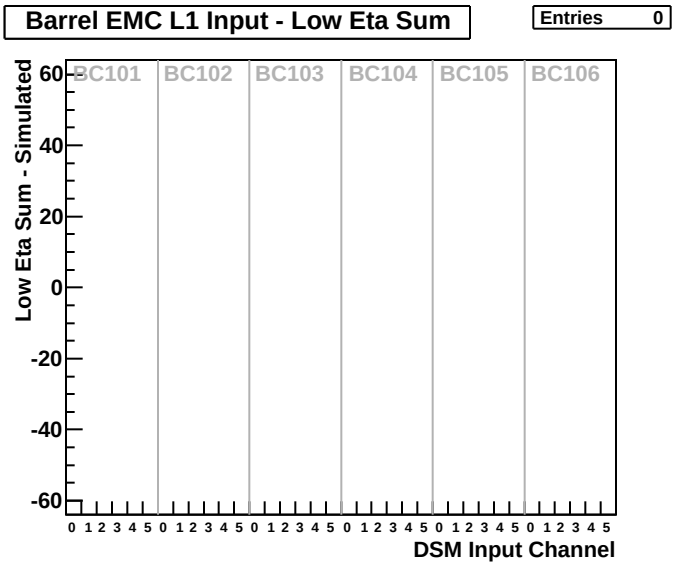

Endcap EMC L0 Input - Patch Sum
Entries 899910
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3

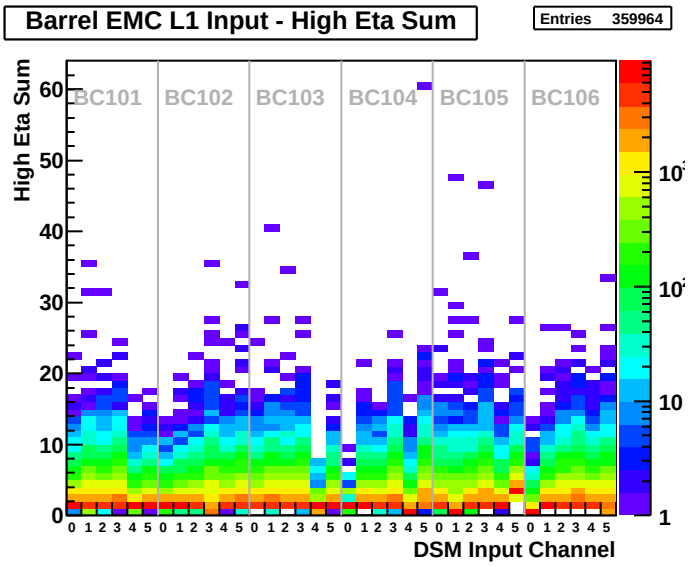

Barrel Jet Patches
Entries 179982
JP ADC
JP ID

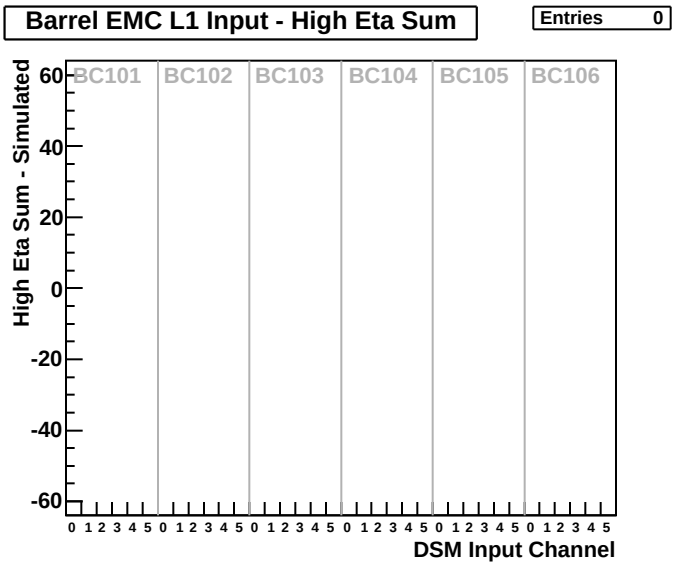

Endcap Jet Patches
Entries 59994
JP ADC
JP ID

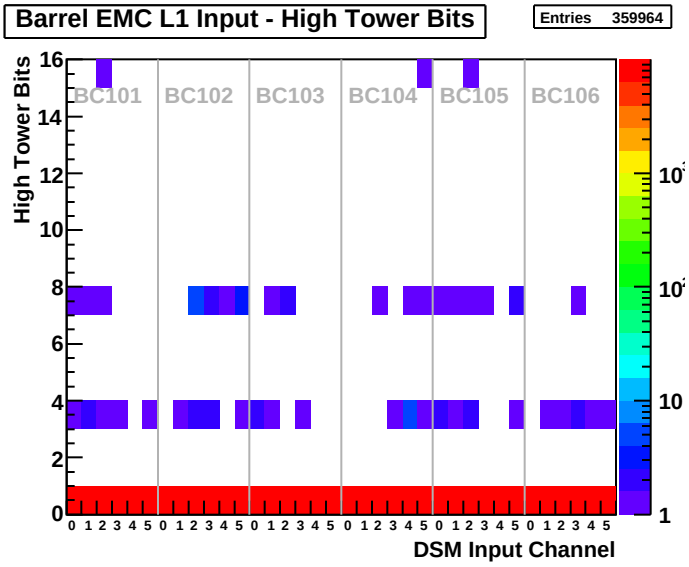

Hybrid Jet Patches
Entries 19998
JP ADC
JP ID

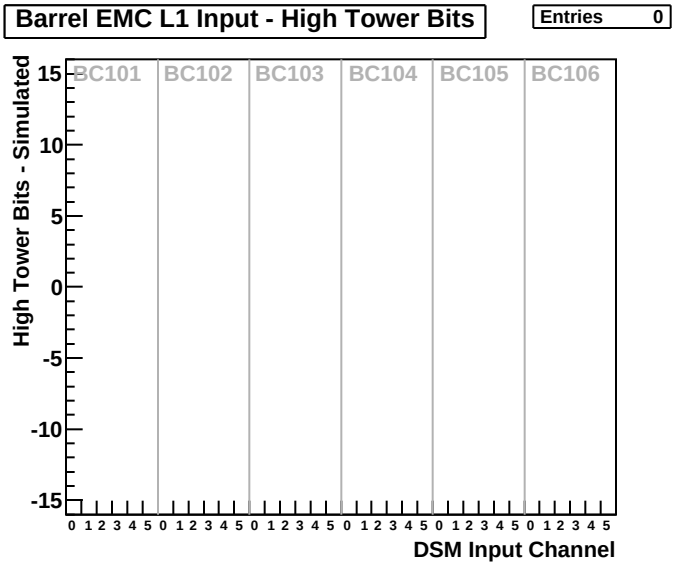

Barrel EMC L1 Input - Low Eta Sum
Entries 359964
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

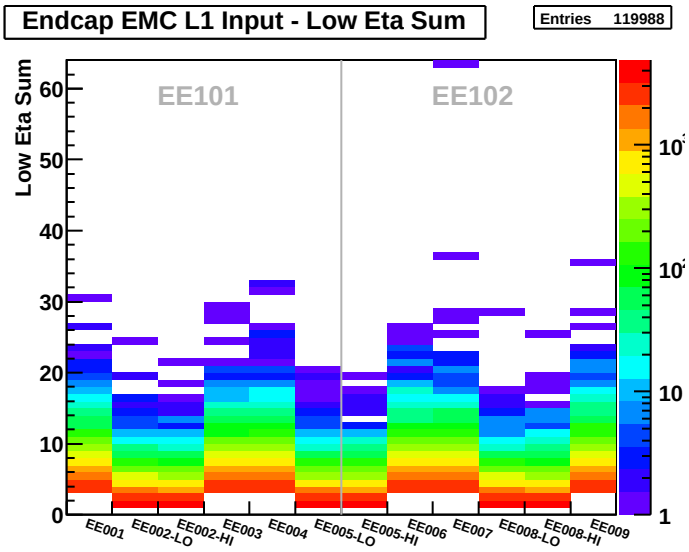

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

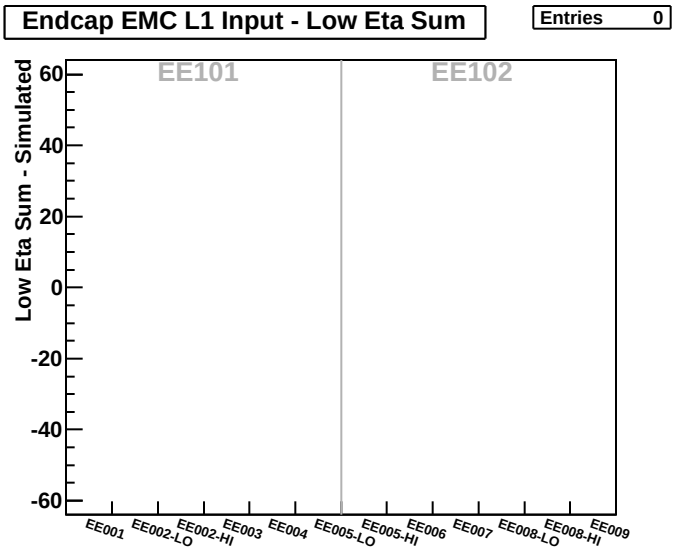

Barrel EMC L1 Input - High Eta Sum
Entries 359964
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

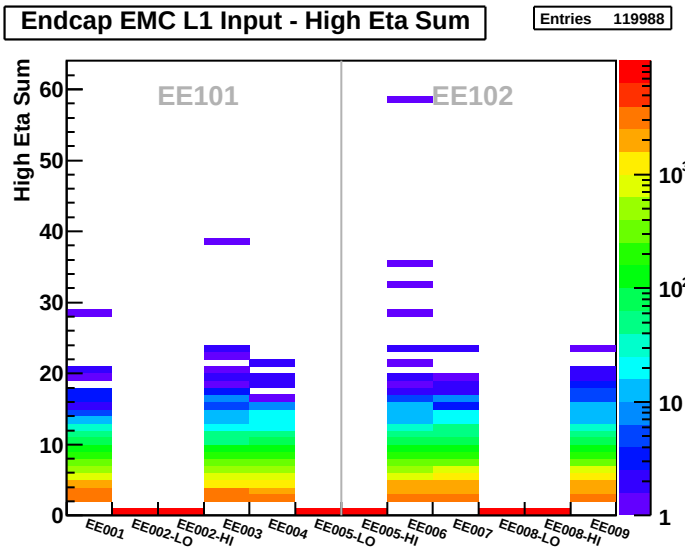

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

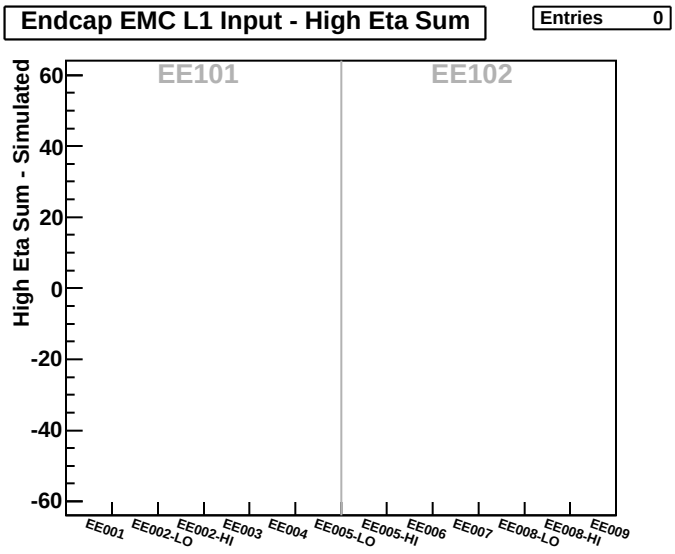

Barrel EMC L1 Input - High Tower Bits
Entries 359964
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

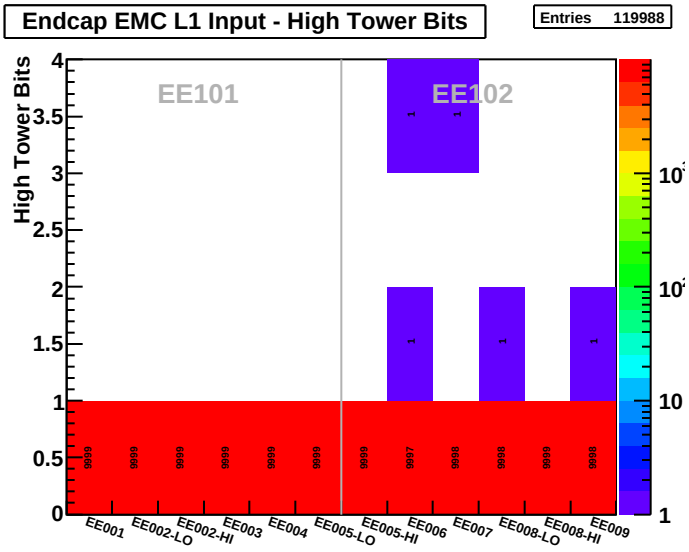

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

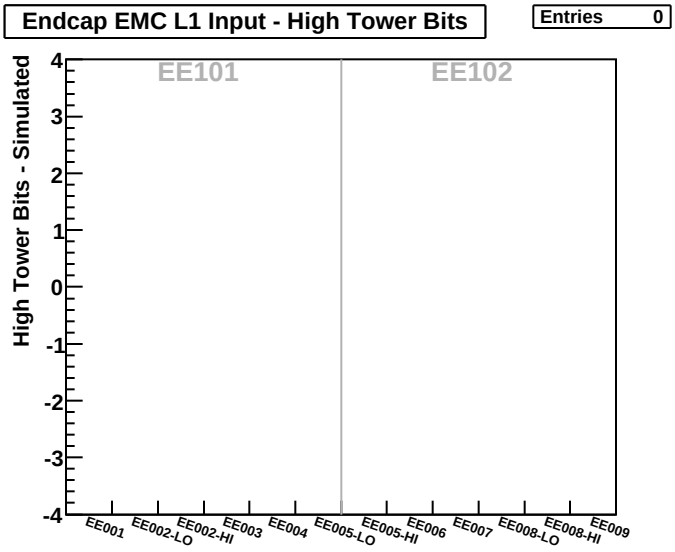

Endcap EMC L1 Input - Low Eta Sum
Entries 119988
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

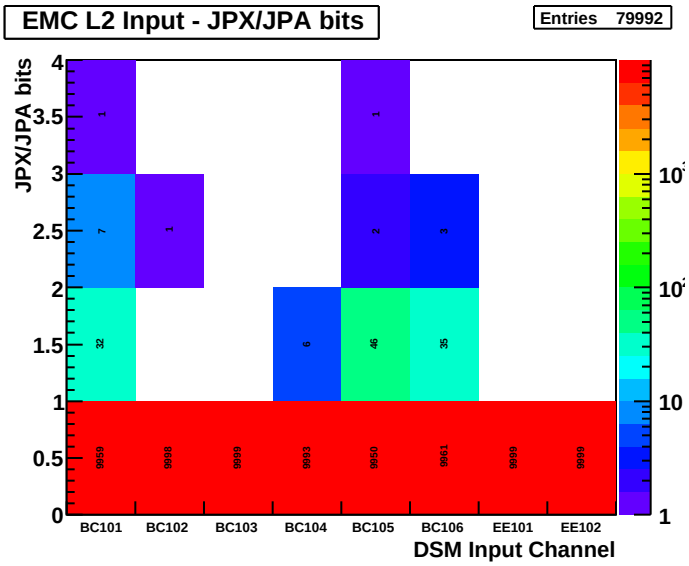

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

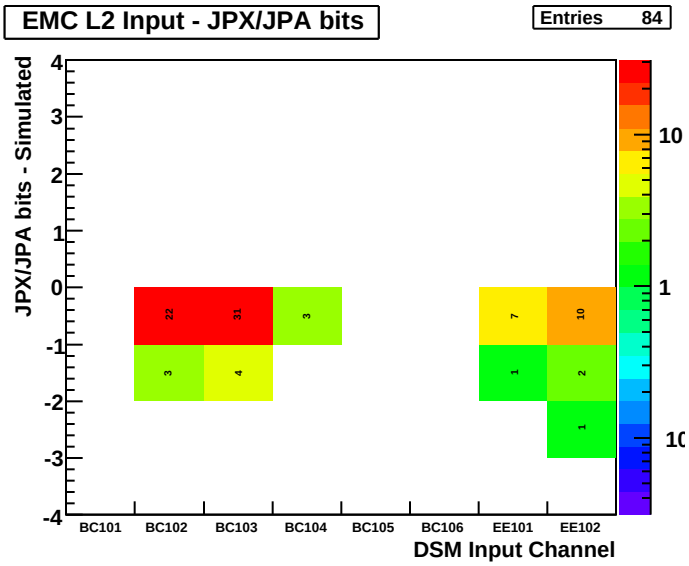

Endcap EMC L1 Input - High Eta Sum
Entries 119988
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

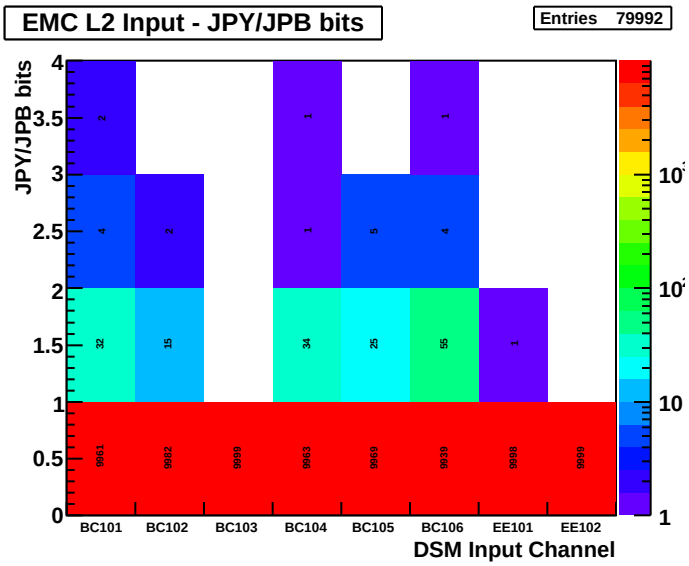

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

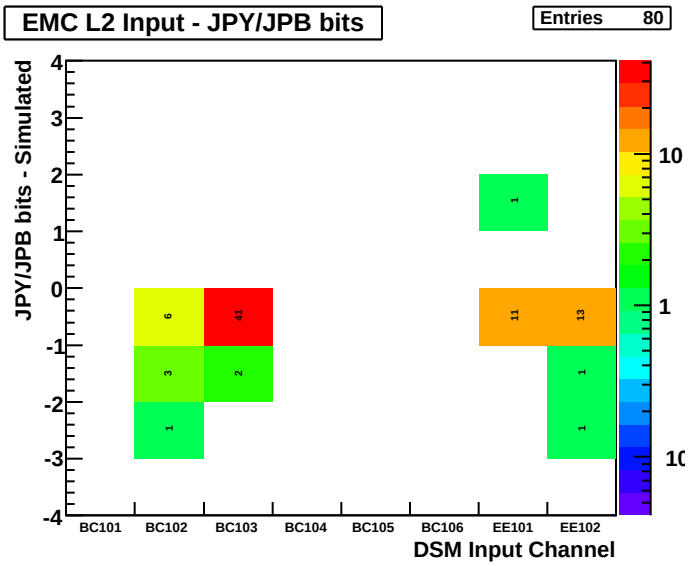

Endcap EMC L1 Input - High Tower Bits
Entries 119988
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

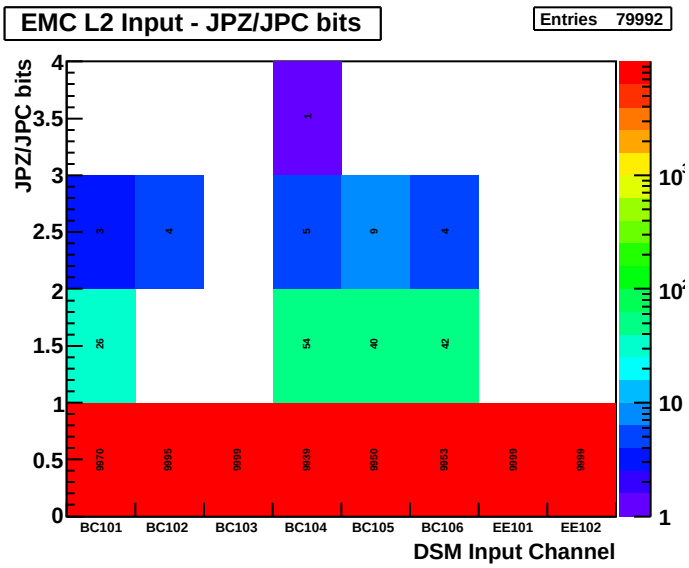

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

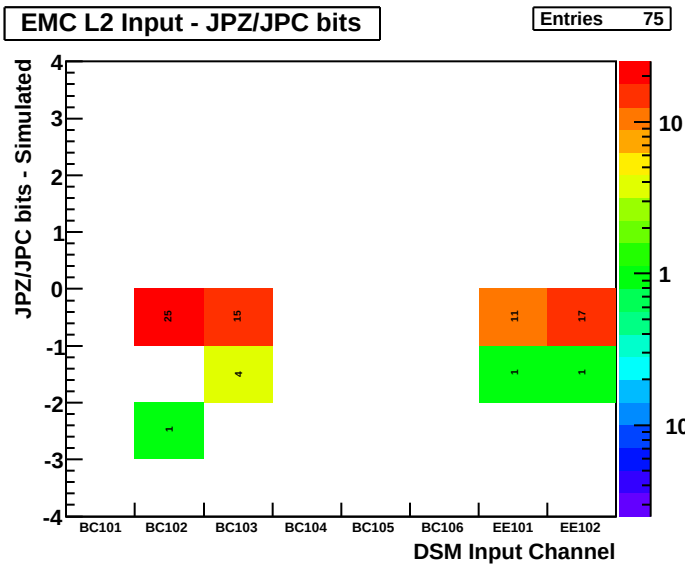

EMC L2 Input - JPX/JPA bits
Entries 79992
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

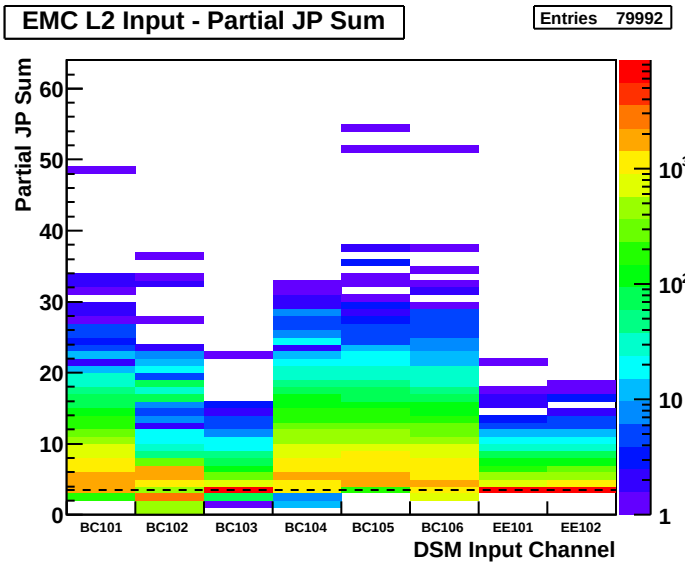

EMC L2 Input - JPX/JPA bits
Entries 84
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

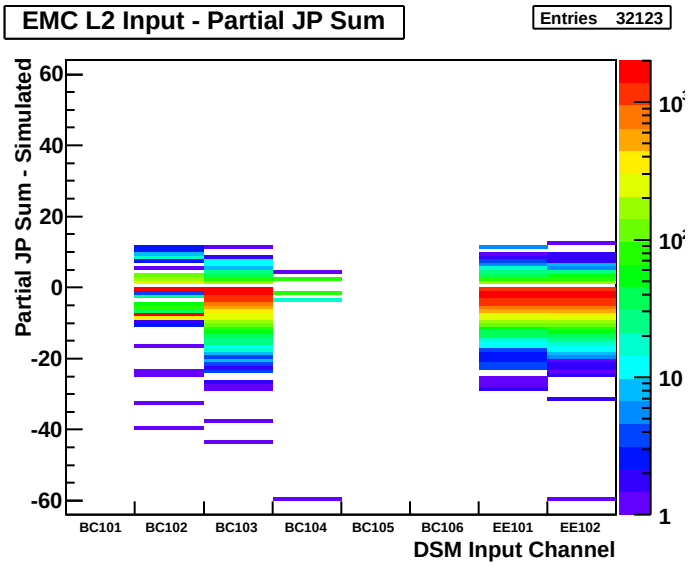

EMC L2 Input - JPY/JPB bits
Entries 79992
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

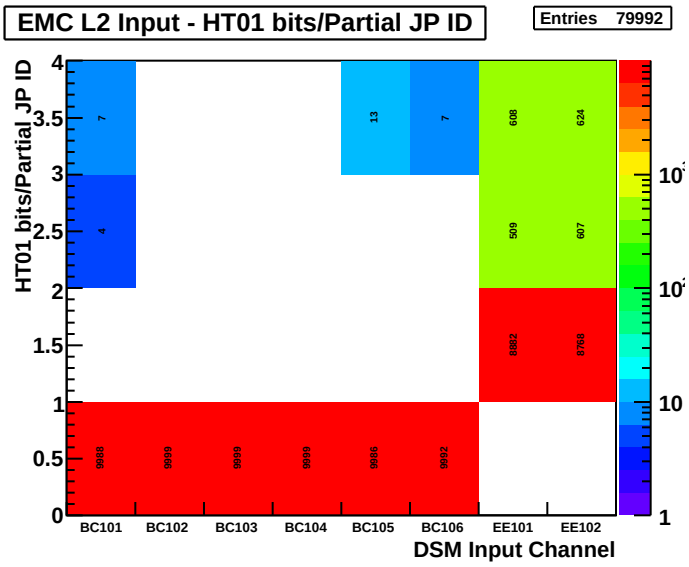

EMC L2 Input - JPY/JPB bits
Entries 80
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

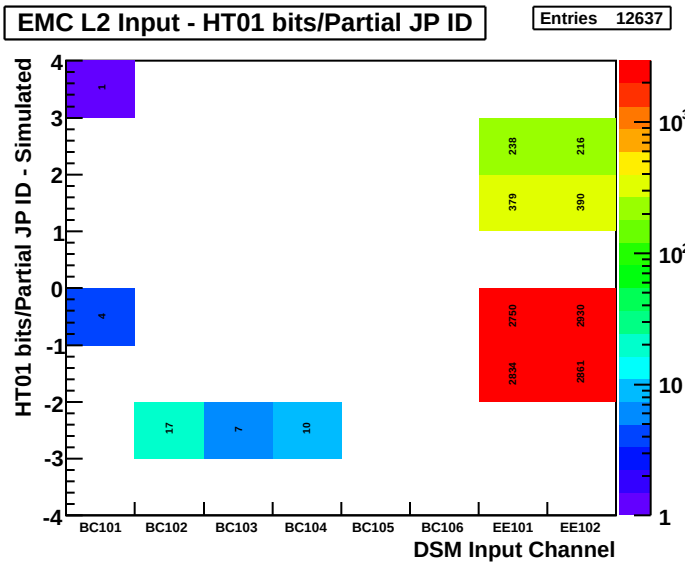

EMC L2 Input - JPZ/JPC bits
Entries 79992
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

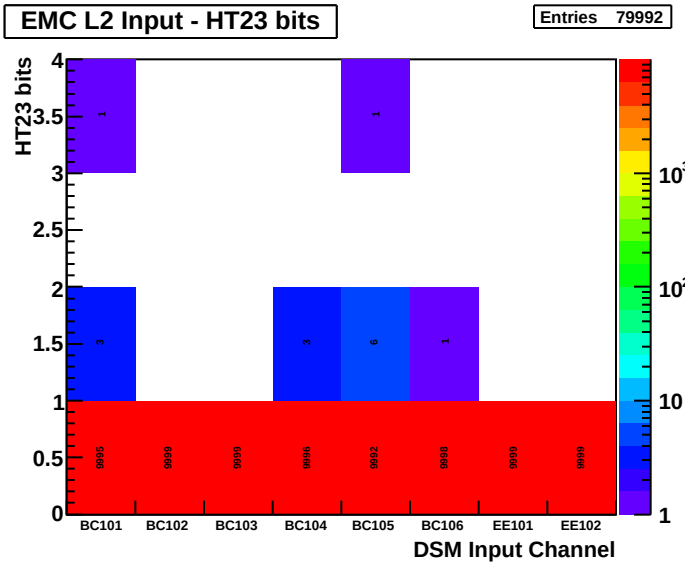

EMC L2 Input - JPZ/JPC bits
Entries 75
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

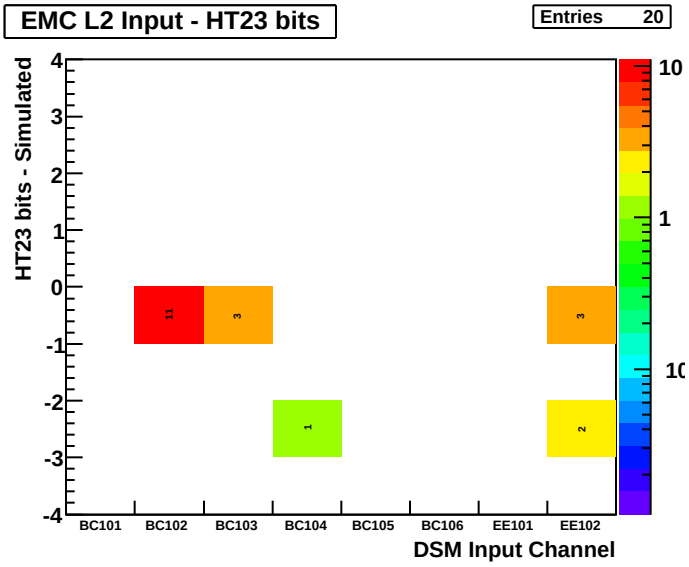

EMC L2 Input - Partial JP Sum
Entries 79992
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

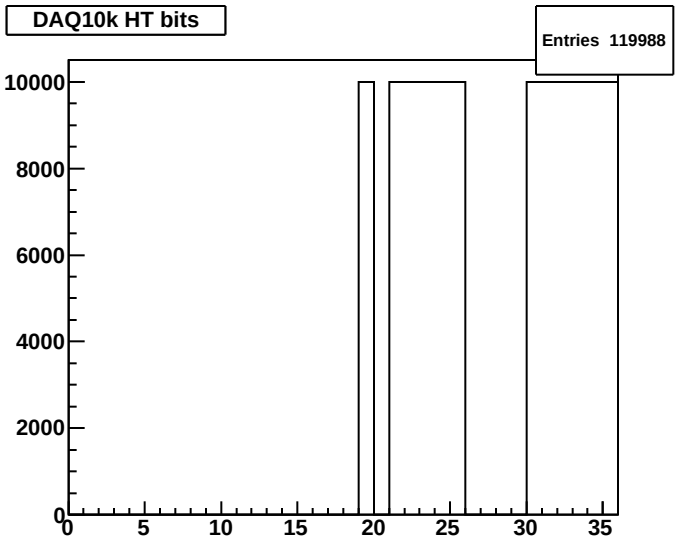

EMC L2 Input - Partial JP Sum
Entries 32123
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

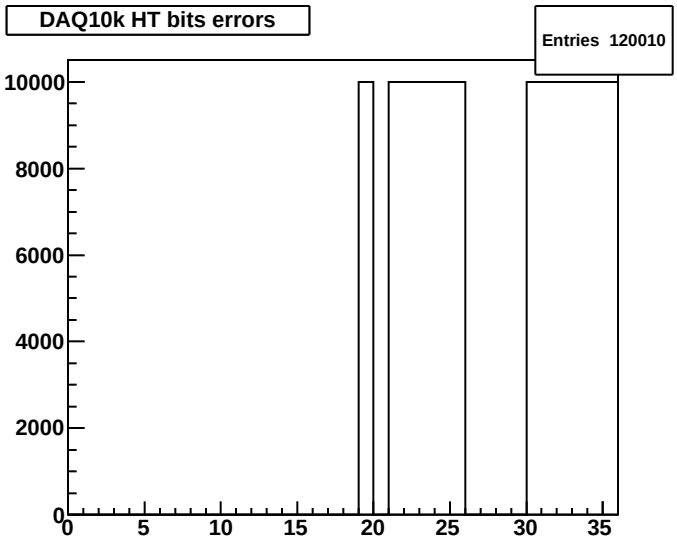

EMC L2 Input - HT01 bits/Partial JP ID
Entries 79992
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

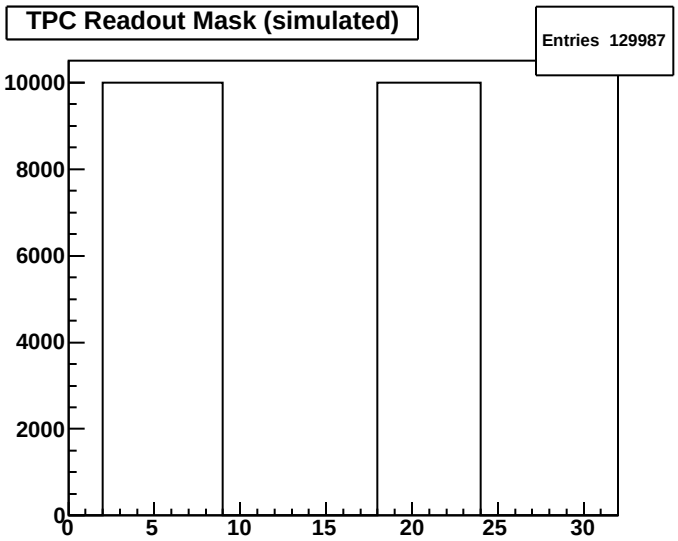

EMC L2 Input - HT01 bits/Partial JP ID
Entries 12637
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

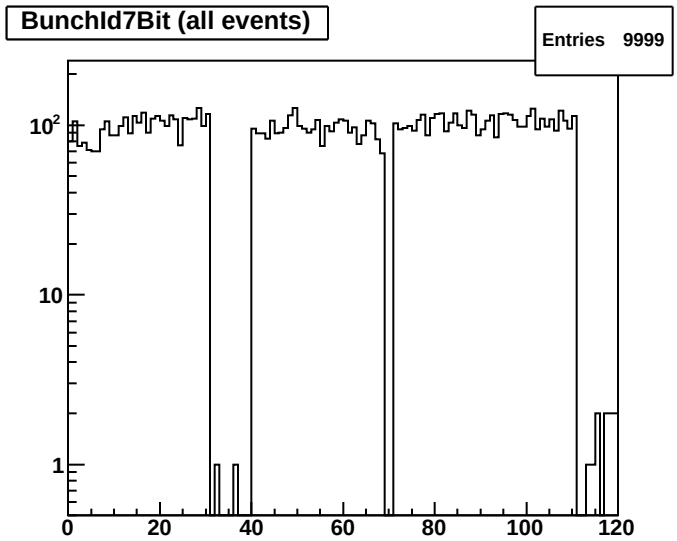

EMC L2 Input - HT23 bits
Entries 79992
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

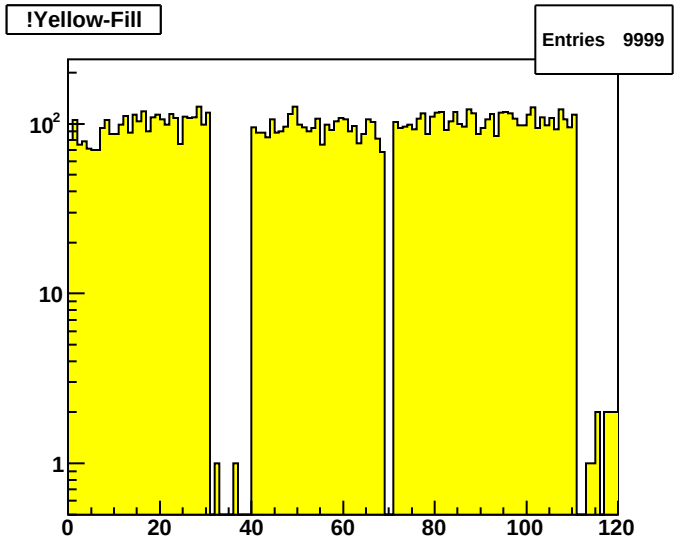

EMC L2 Input - HT23 bits
Entries 20
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

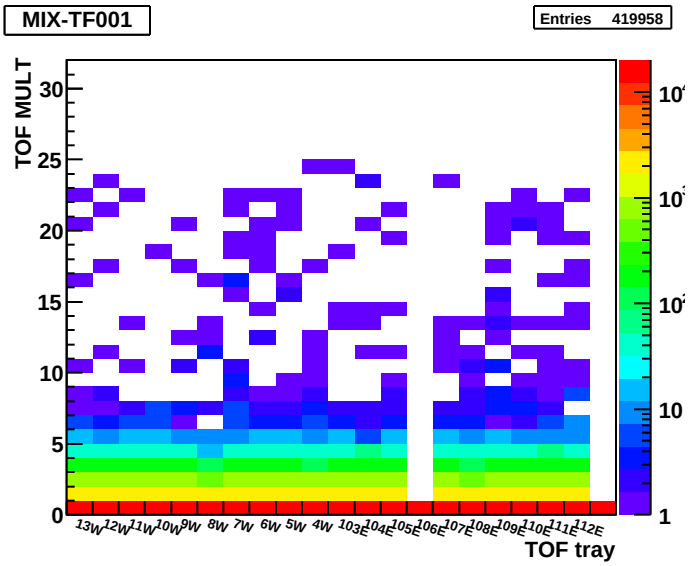

DAQ10k HT bits
Entries 119988
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

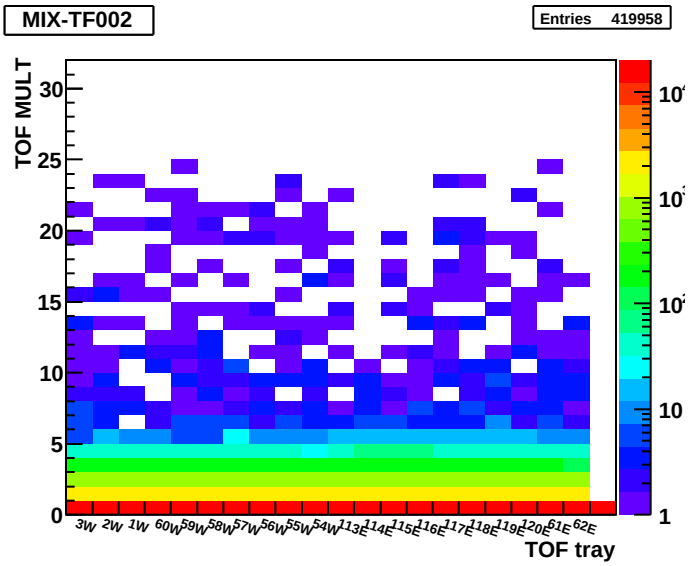

DAQ10k HT bits errors
Entries 120010
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

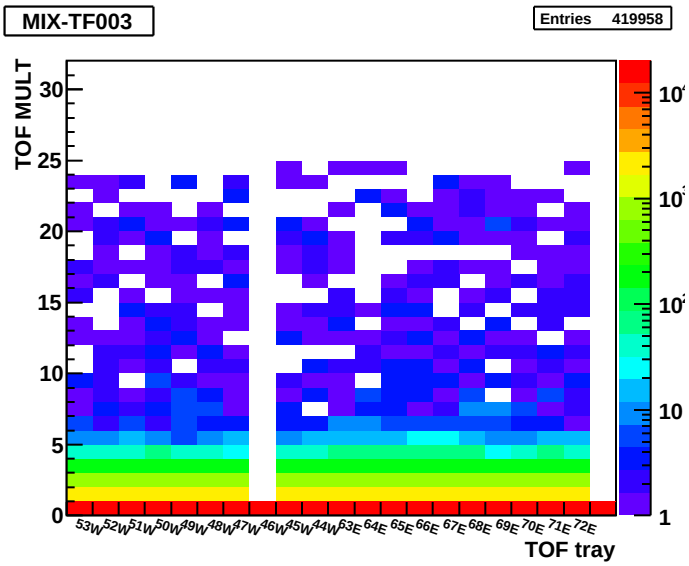

TPC Readout Mask (simulated)
Entries 129987
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

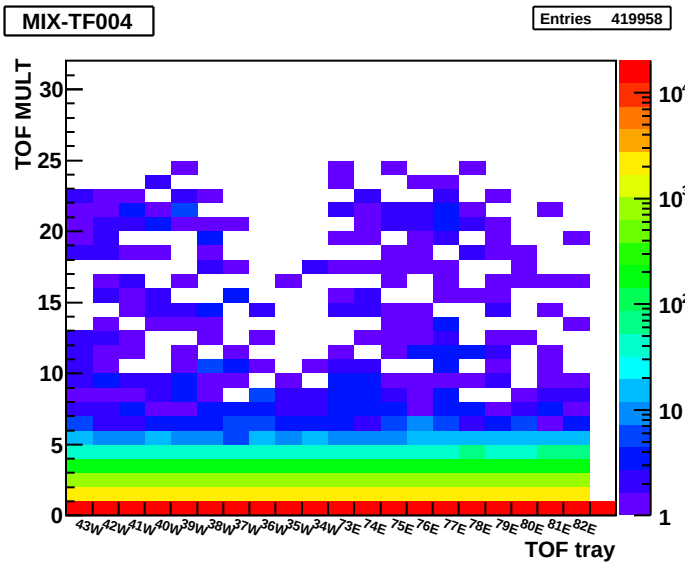

BunchId7Bit (all events)
Entries 9999
10^2
10
1
0 20 40 60 80 100 120

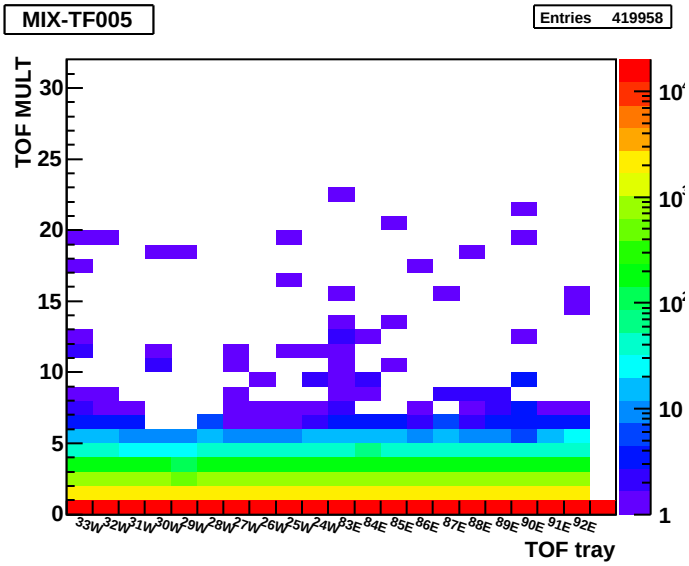

!Yellow-Fill
Entries 9999
10^2
10
1
0 20 40 60 80 100 120

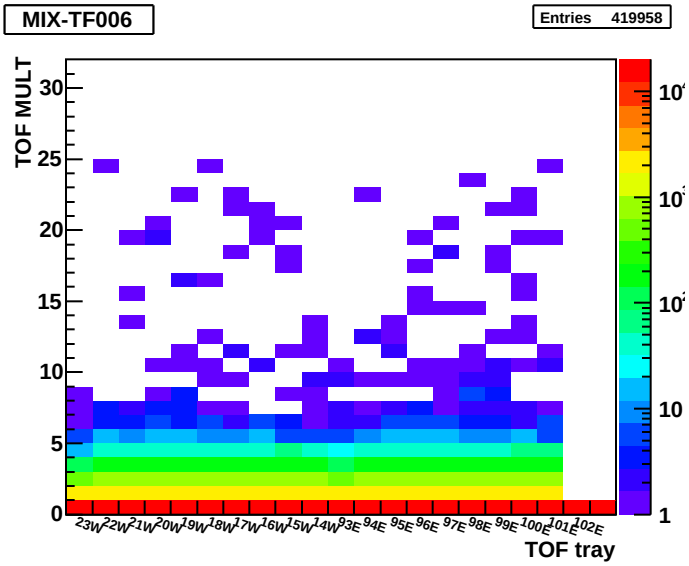

MIX-TF001
Entries 419958
TOF MULT
TOF tray

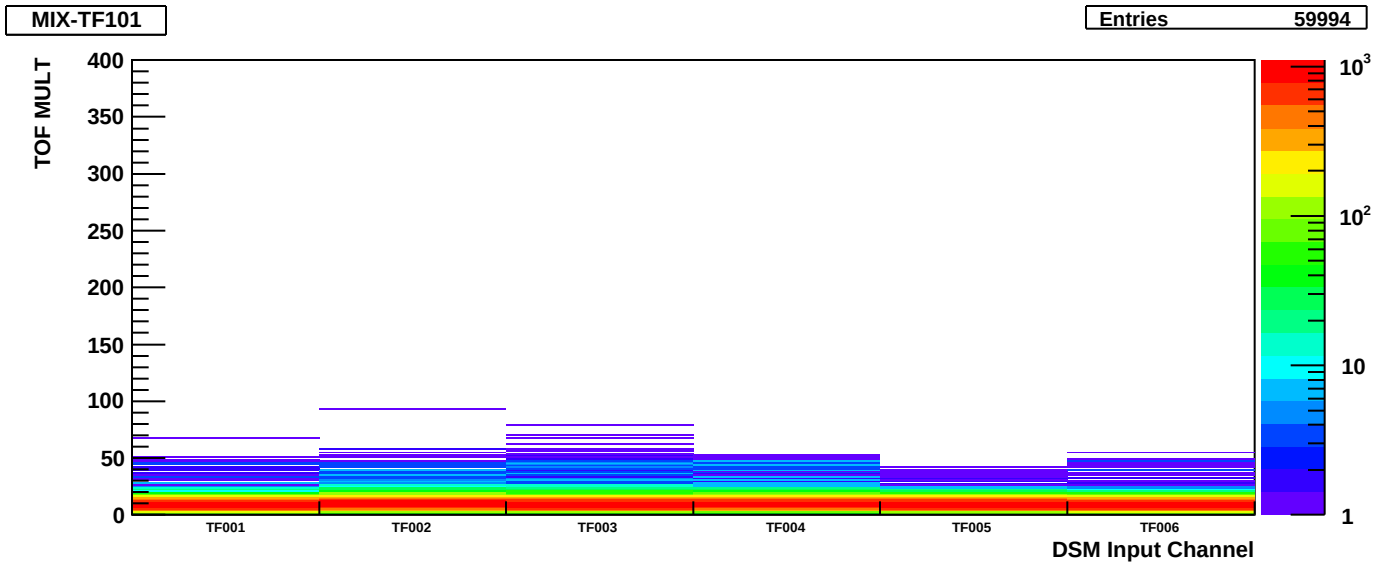

MIX-TF002
Entries 419958
TOF MULT
TOF tray

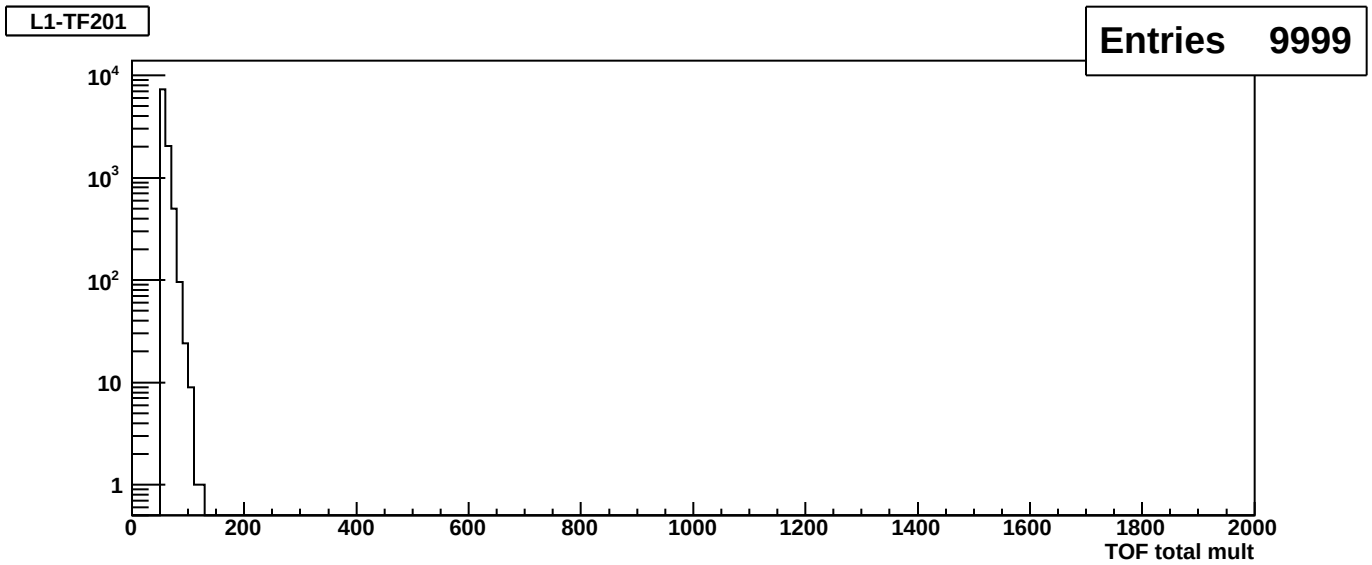

MIX-TF003
Entries 419958
TOF MULT
TOF tray

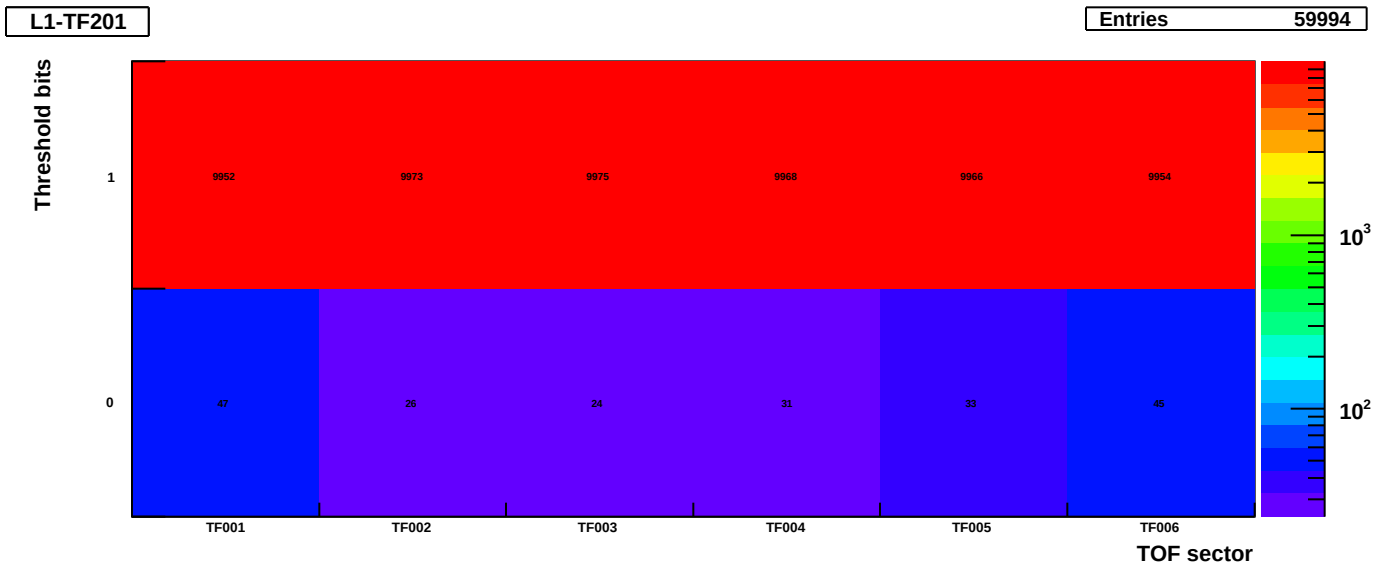

MIX-TF004
Entries 419958
TOF MULT
TOF tray

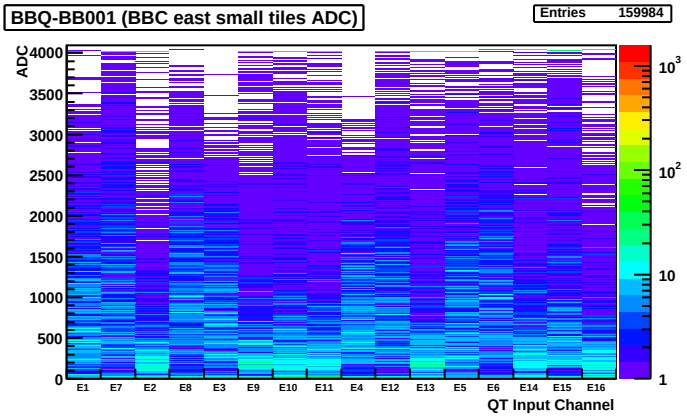

MIX-TF005
Entries 419958
TOF MULT
TOF tray

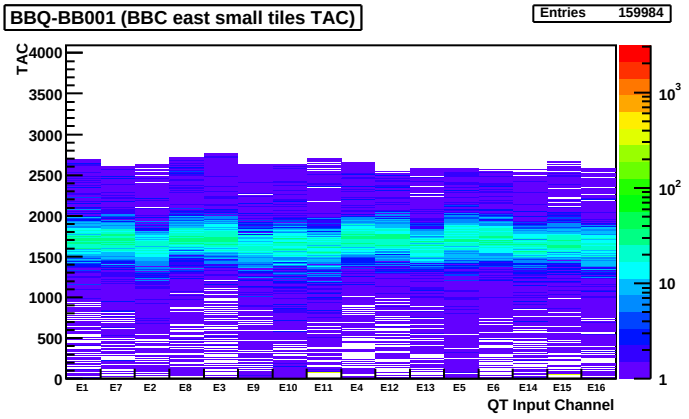

MIX-TF006
Entries 419958
TOF MULT
TOF tray

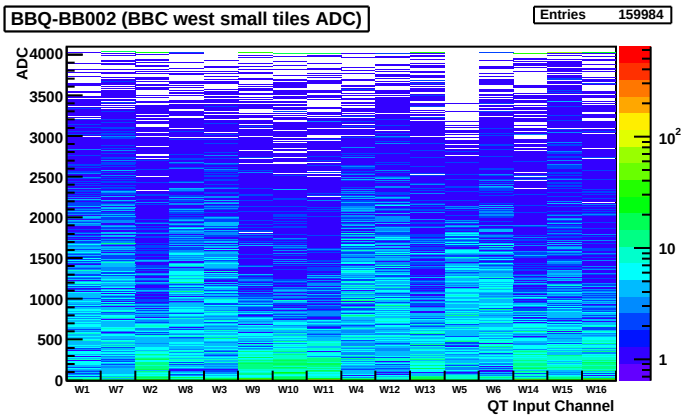

MIX-TF101
Entries 59994
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

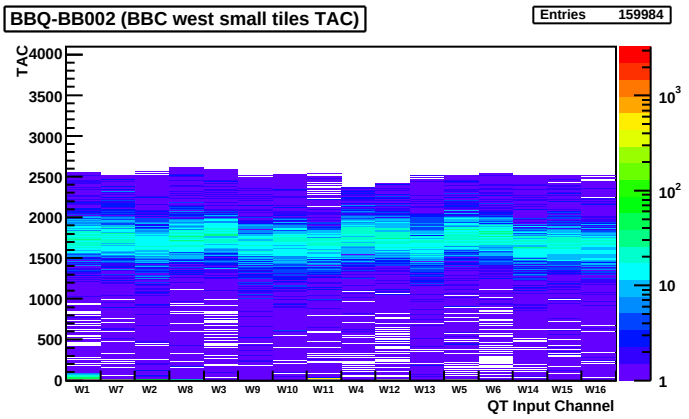

L1-TF201
Entries 9999
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

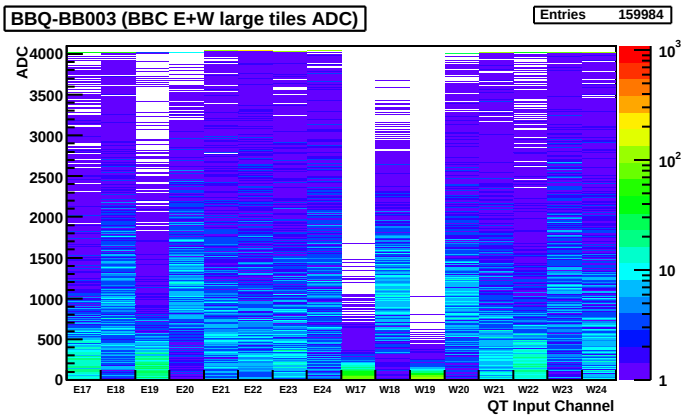

L1-TF201
Entries 59994
Threshold bits
1
0
9952
9973
9975
9968
9966
9954
47
26
24
31
33
45
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3
10^2

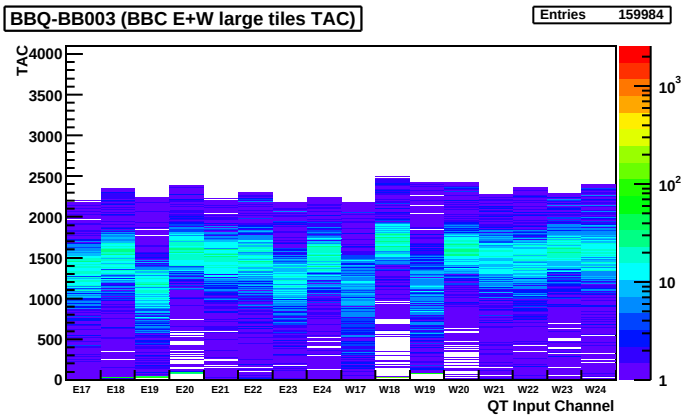

BBQ-BB001 (BBC east small tiles ADC)
Entries 159984
ADC
QT Input Channel

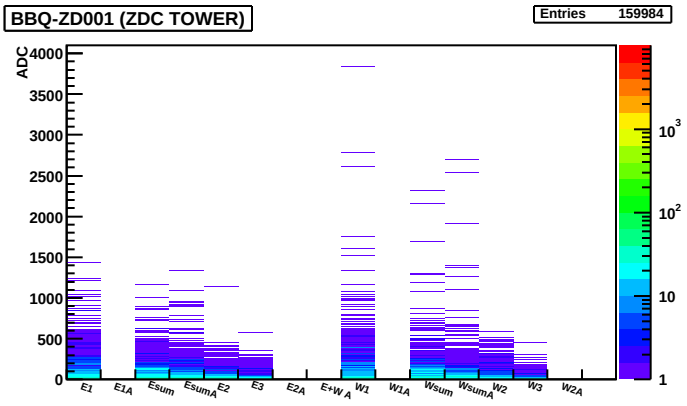

BBQ-BB001 (BBC east small tiles TAC)
Entries 159984
TAC
QT Input Channel

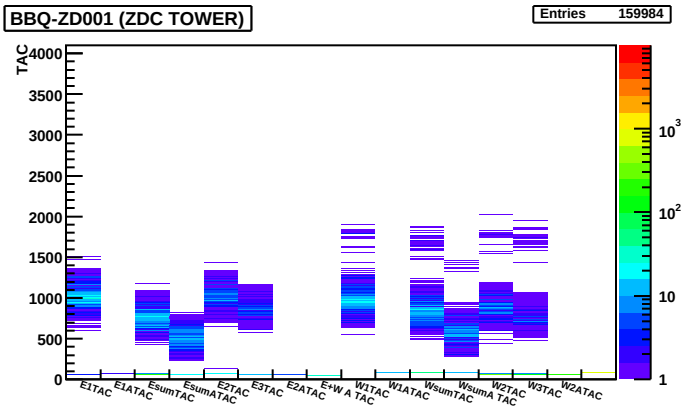

BBQ-BB002 (BBC west small tiles ADC)
Entries 159984
ADC
QT Input Channel

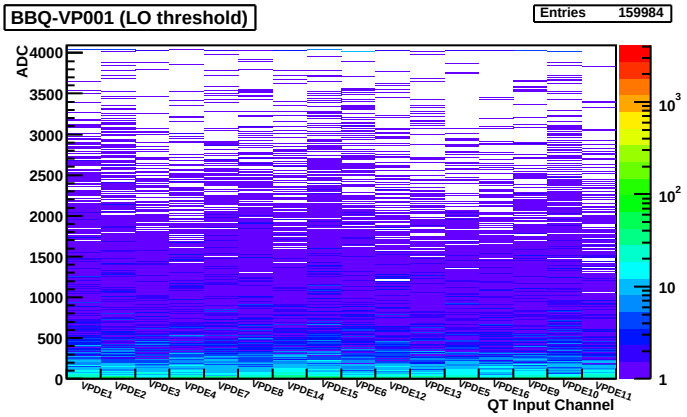

BBQ-BB002 (BBC west small tiles TAC)
Entries 159984
TAC
QT Input Channel

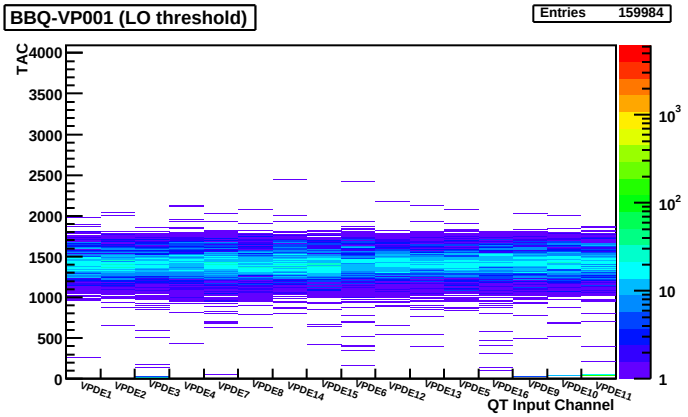

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 159984
ADC
QT Input Channel

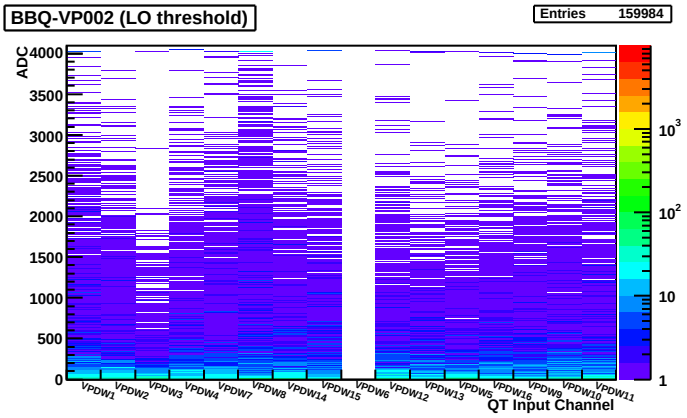

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 159984
TAC
QT Input Channel

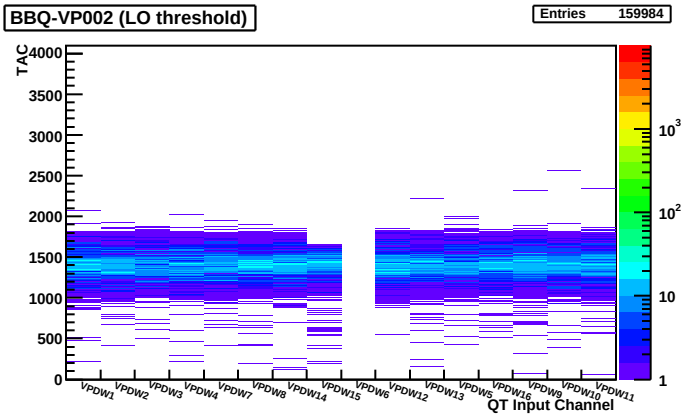

BBQ-ZD001 (ZDC TOWER)
Entries 159984
ADC

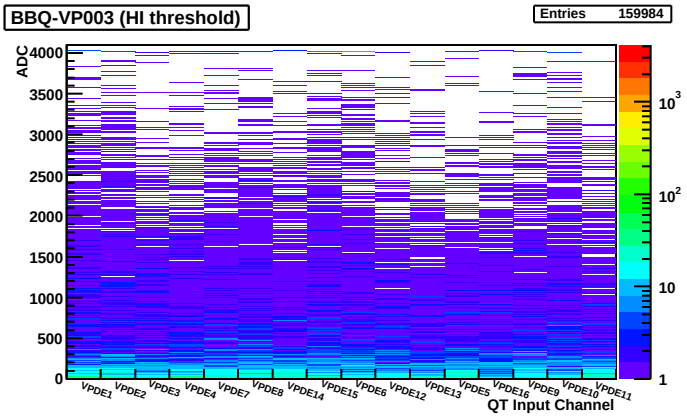

BBQ-ZD001 (ZDC TOWER)
Entries 159984
TAC

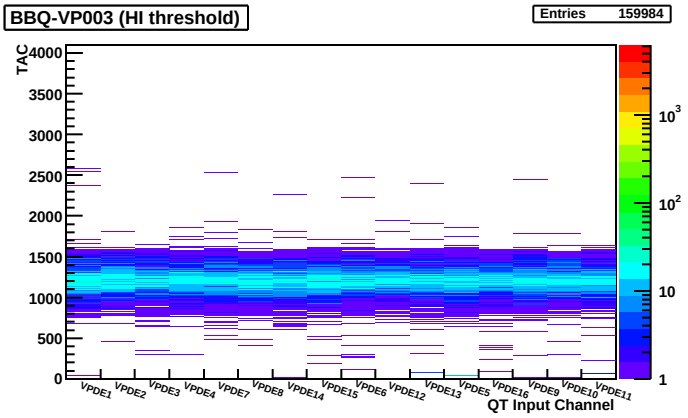

BBQ-VP001 (LO threshold)
Entries 159984
ADC
QT Input Channel

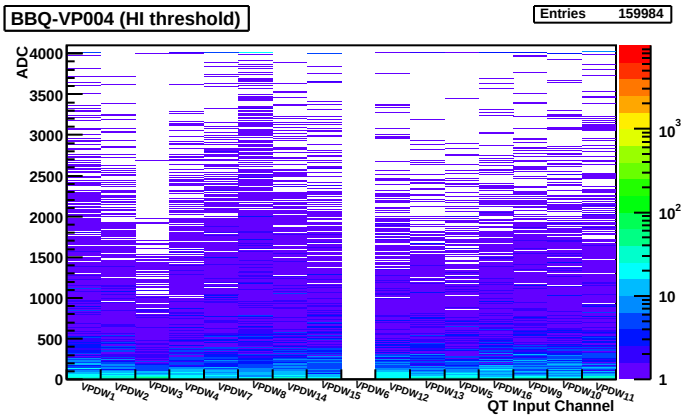

BBQ-VP001 (LO threshold)
Entries 159984
TAC
QT Input Channel

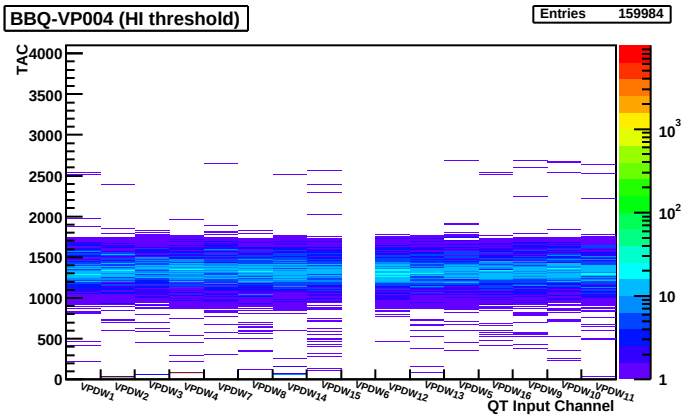

BBQ-VP002 (LO threshold)
Entries 159984
ADC
QT Input Channel

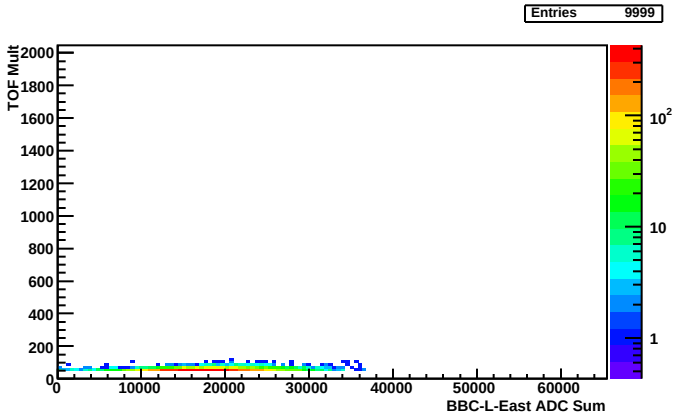

BBQ-VP002 (LO threshold)
Entries 159984
TAC
QT Input Channel

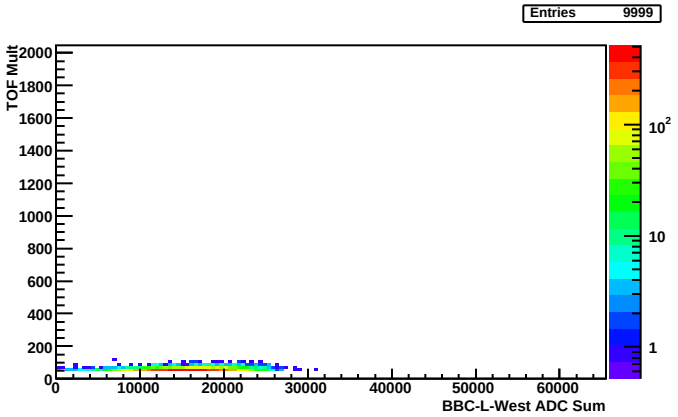

BBQ-VP003 (HI threshold)
Entries 159984
ADC
QT Input Channel

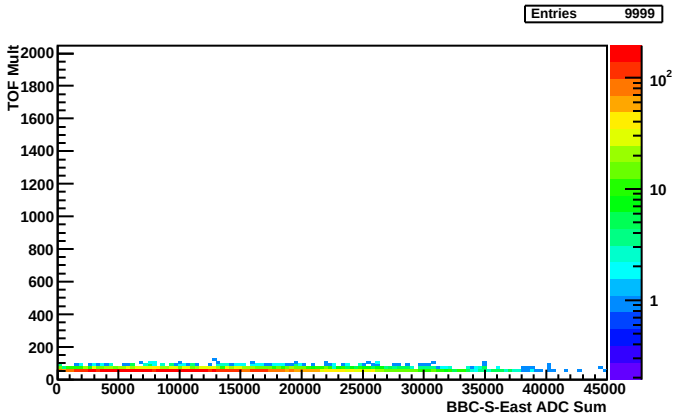

BBQ-VP003 (HI threshold)
Entries 159984
TAC
QT Input Channel

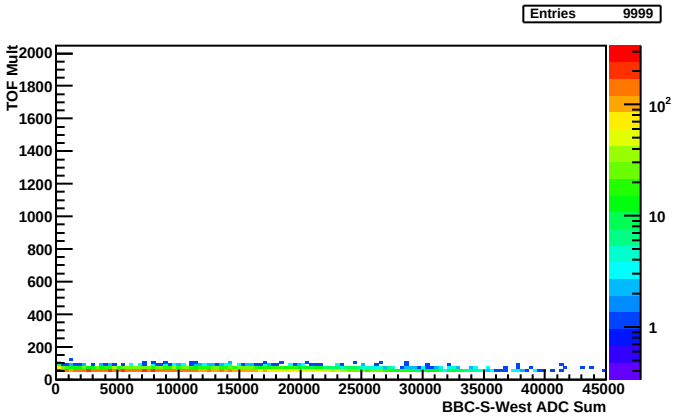

BBQ-VP004 (HI threshold)
Entries 159984
ADC
QT Input Channel

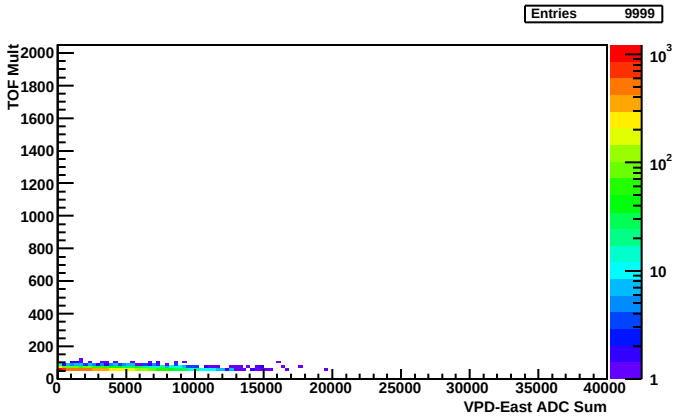

BBQ-VP004 (HI threshold)
Entries 159984
TAC
QT Input Channel

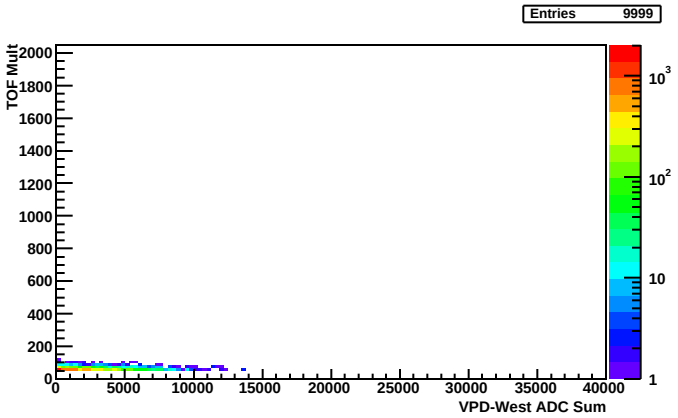

Entries 9999
TOF Mult
BBC-L-East ADC Sum

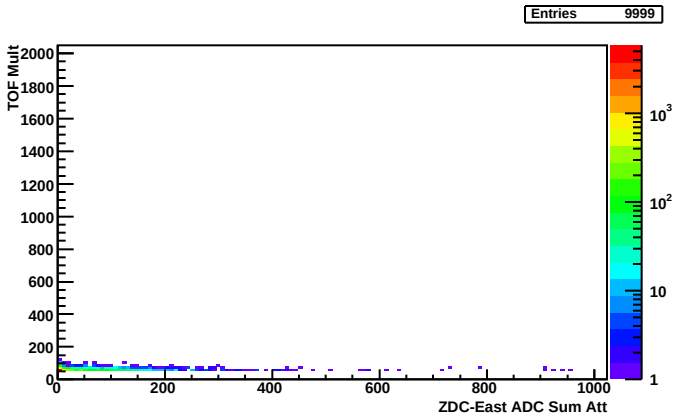

Entries 9999
TOF Mult
BBC-L-West ADC Sum

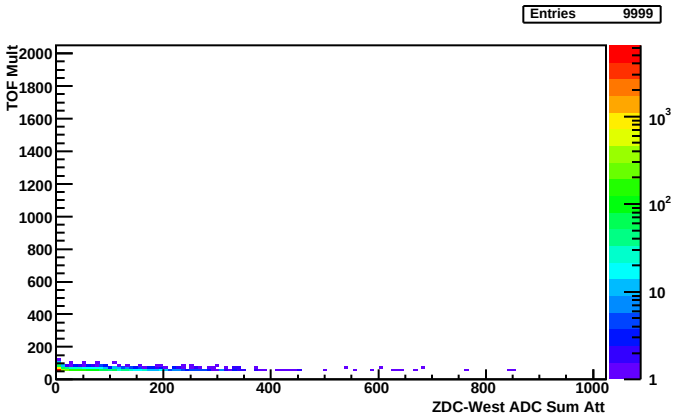

Entries 9999
TOF Mult
BBC-S-East ADC Sum

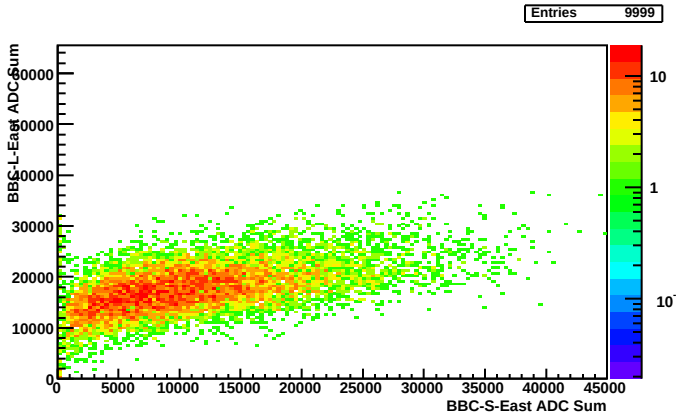

Entries 9999
TOF Mult
BBC-S-West ADC Sum

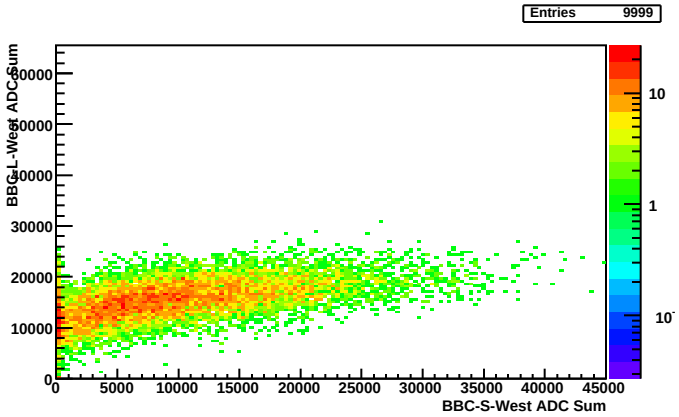

Entries 9999
TOF Mult
VPD-East ADC Sum

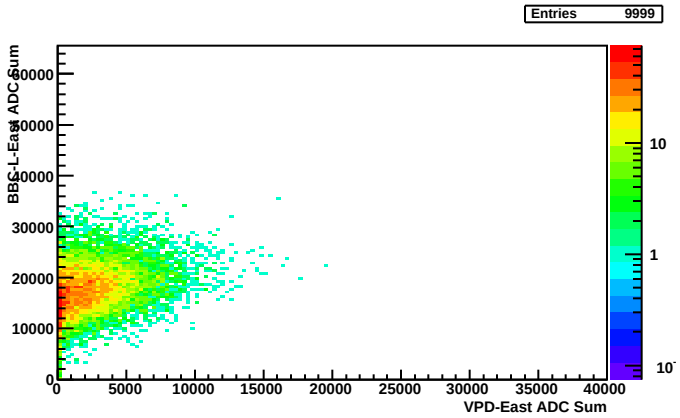

Entries 9999
TOF Mult
VPD-West ADC Sum

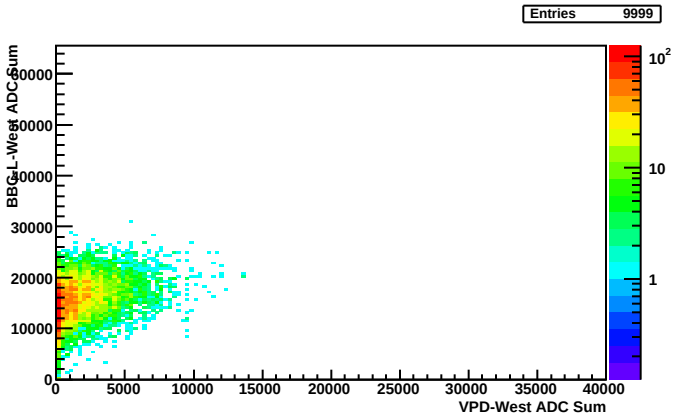

Entries 9999
TOF Mult
ZDC-East ADC Sum Att

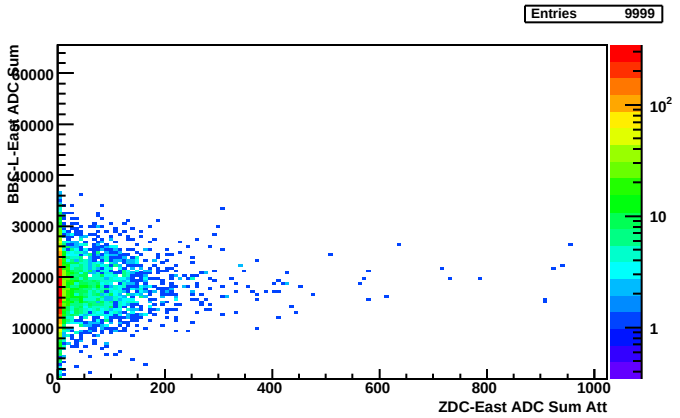

Entries 9999
TOF Mult
ZDC-West ADC Sum Att

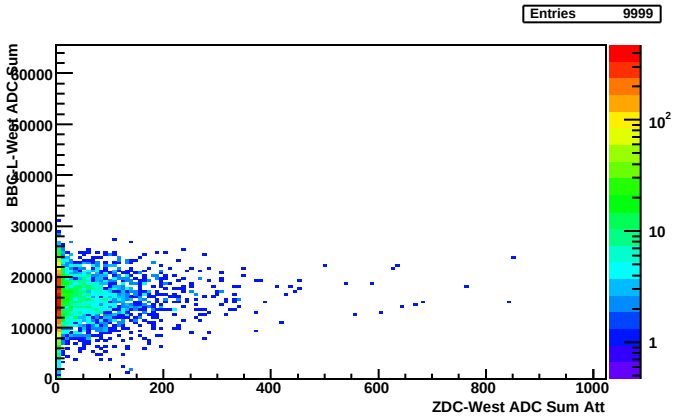

Entries 9999
BBC-L-East ADC Sum
BBC-S-East ADC Sum

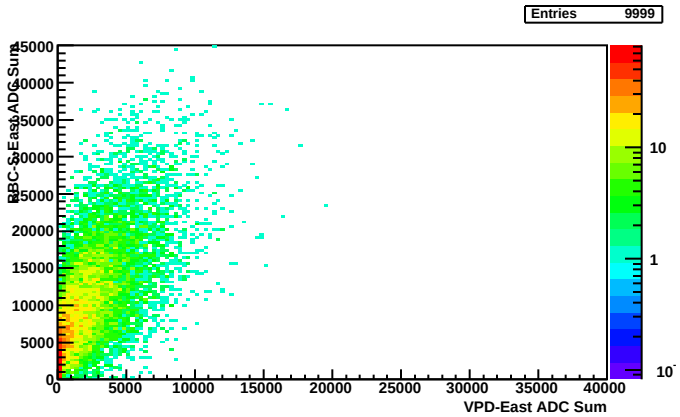

Entries 9999
BBC-L-West ADC Sum
BBC-S-West ADC Sum

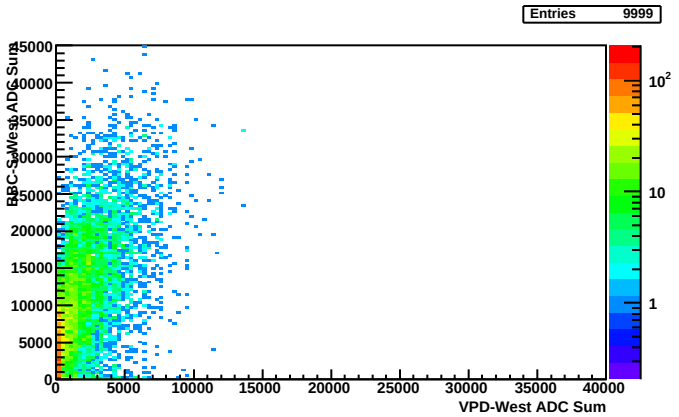

Entries 9999
BBC-L-East ADC Sum
VPD-East ADC Sum

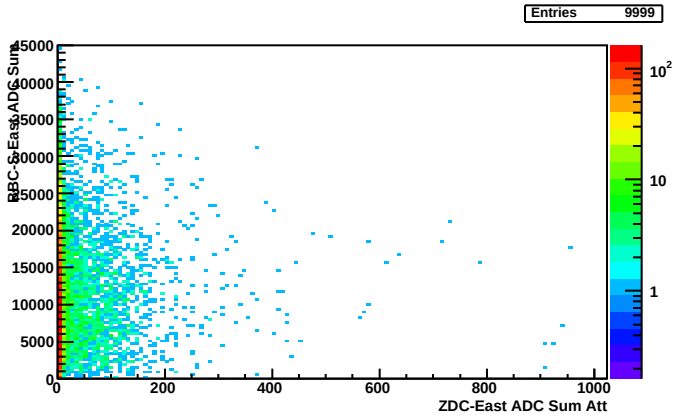

Entries 9999
BBC-L-West ADC Sum
VPD-West ADC Sum

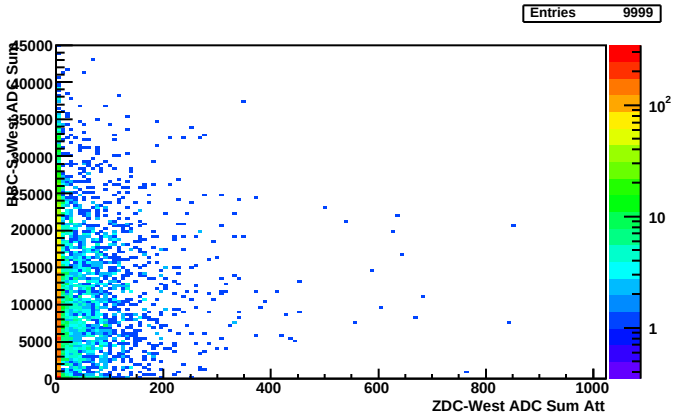

Entries 9999
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

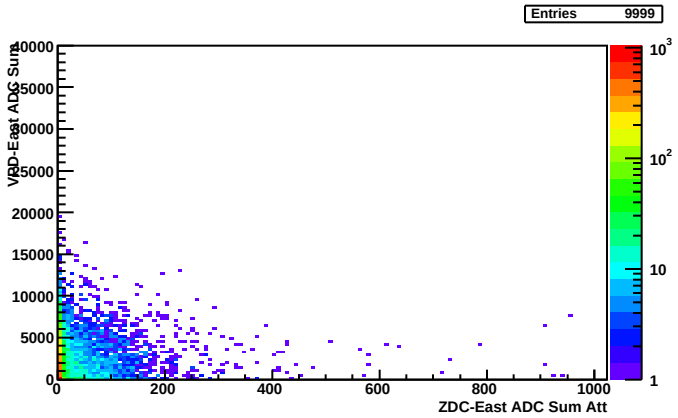

Entries 9999
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

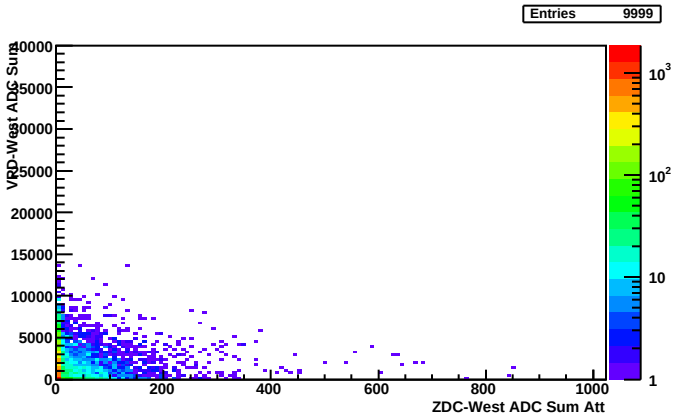

Entries 9999
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 9999
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 9999
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 9999
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 9999
VPD-East ADC Sum
ZDC-East ADC Sum Att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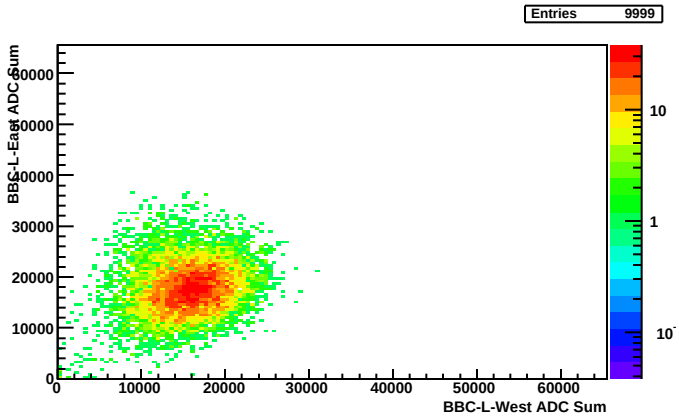
VPD-West ADC Sum
ZDC-West ADC Sum Att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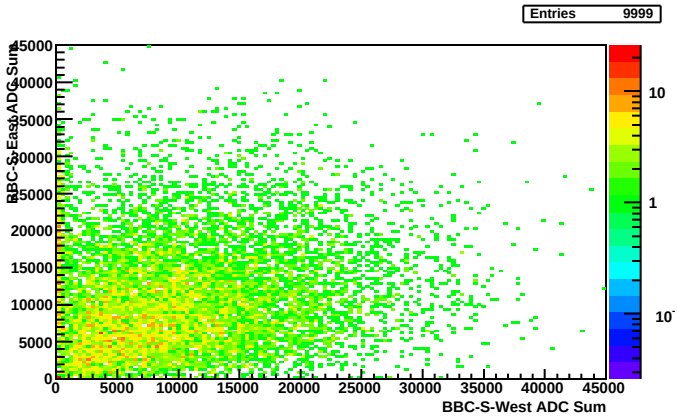
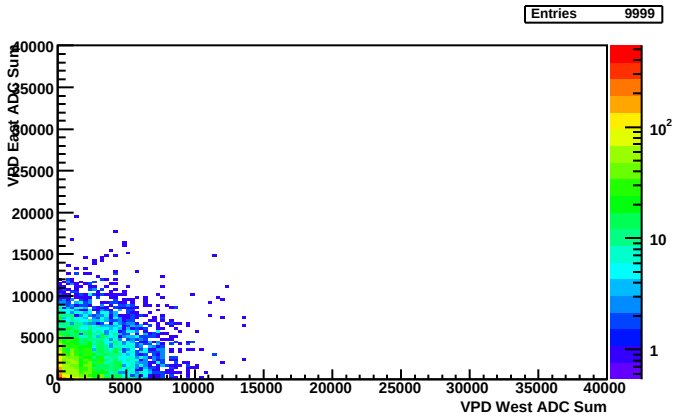
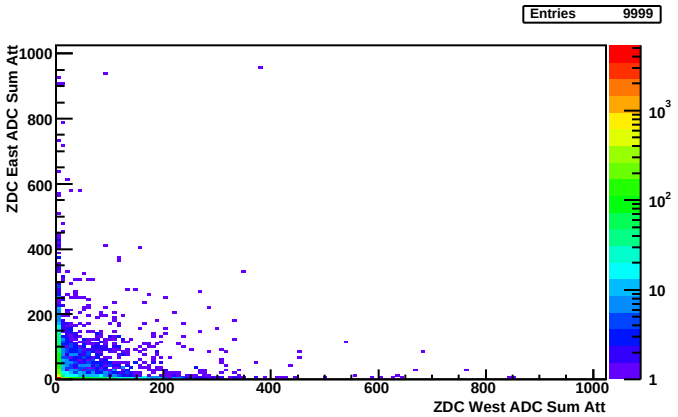
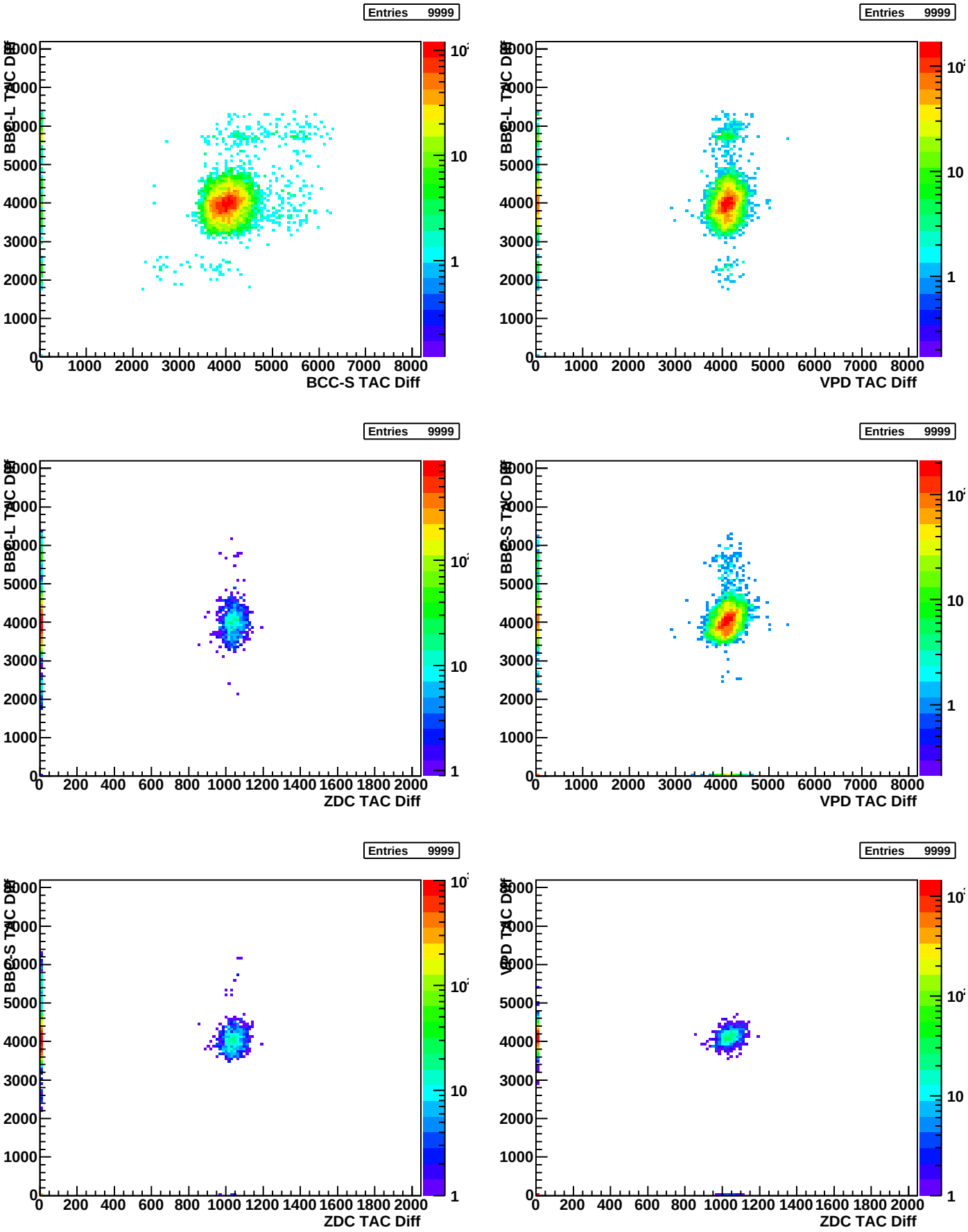
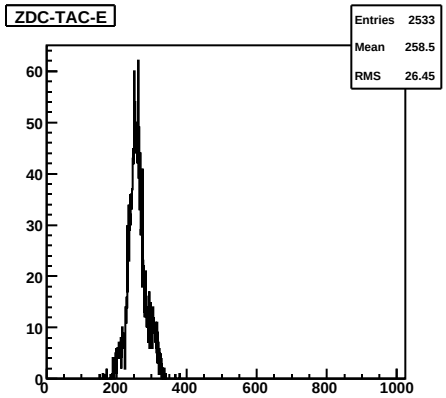
BBC-L-East ADC Sum
BBC-L-West ADC Sum

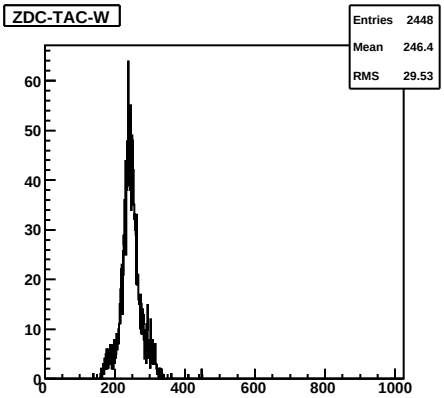

Entries 9999
BBC-S-East ADC Sum
BBC-S-West ADC Sum

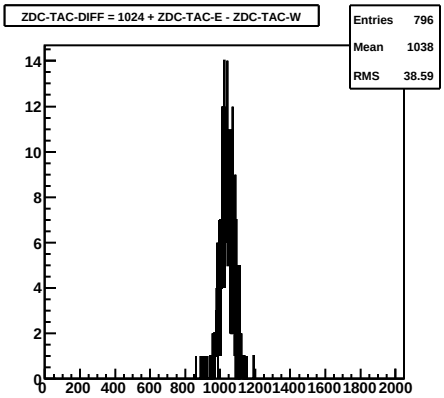

Entries 9999
VPD East ADC Sum
VPD West ADC Sum

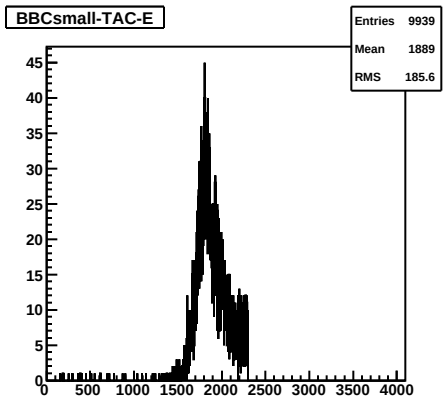

Entries 9999
ZDC East ADC Sum Att
ZDC West ADC Sum Att

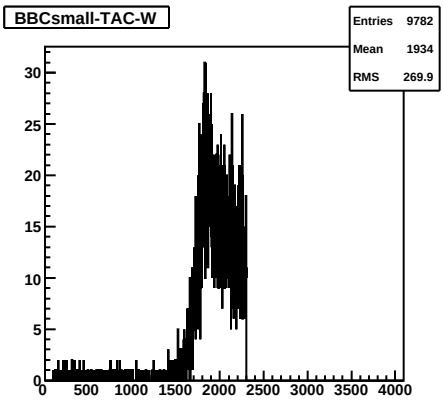

Entries 9999
BBC-L TAC Diff
BCC-S TAC Diff
Entries 9999
BBC-L TAC Diff
VPD TAC Diff
Entries 9999
BBC-L TAC Diff
ZDC TAC Diff
Entries 9999
BBC-S TAC Diff
VPD TAC Diff
Entries 9999
BBC-S TAC Diff
ZDC TAC Diff
Entries 9999
VPD TAC Diff
ZDC TAC Diff

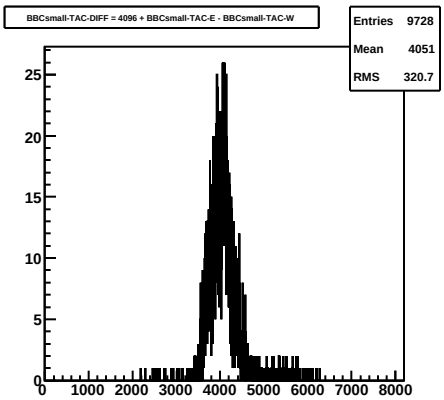

ZDC-TAC-E
Entries 2533
Mean 258.5
RMS 26.45

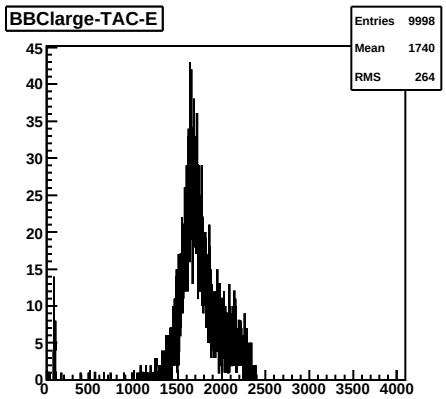

ZDC-TAC-W
Entries 2448
Mean 246.4
RMS 29.53

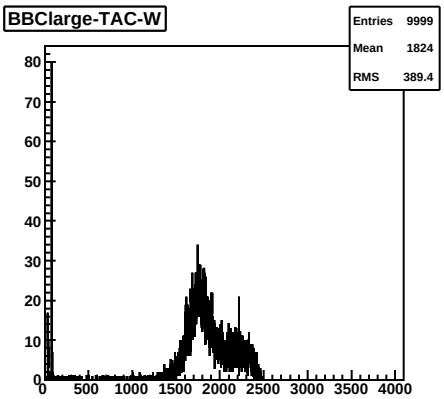

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 796
Mean 1038
RMS 38.59

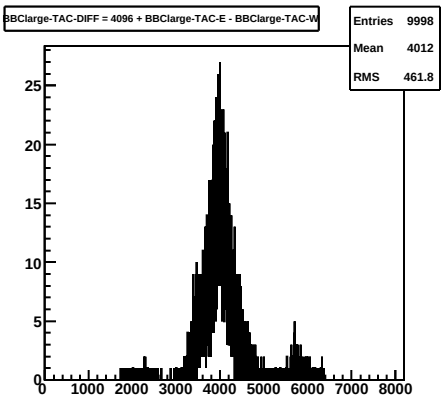

BBCsmall-TAC-E
Entries 9939
Mean 1889
RMS 185.6

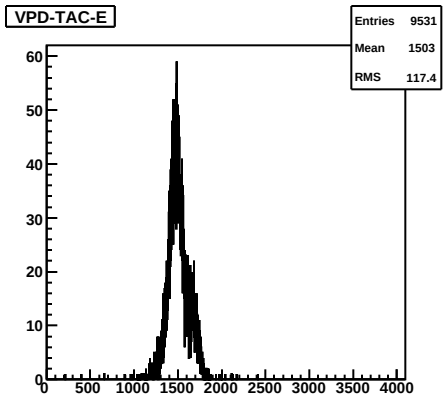

BBCsmall-TAC-W
Entries 9782
Mean 1934
RMS 269.9

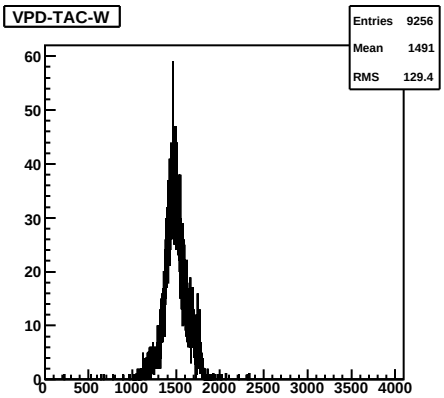

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 9728
Mean 4051
RMS 320.7

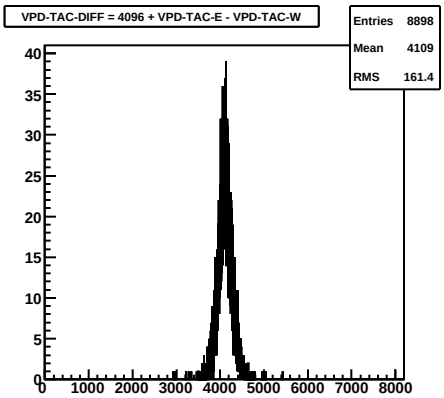

BBClarge-TAC-E
Entries 9998
Mean 1740
RMS 264

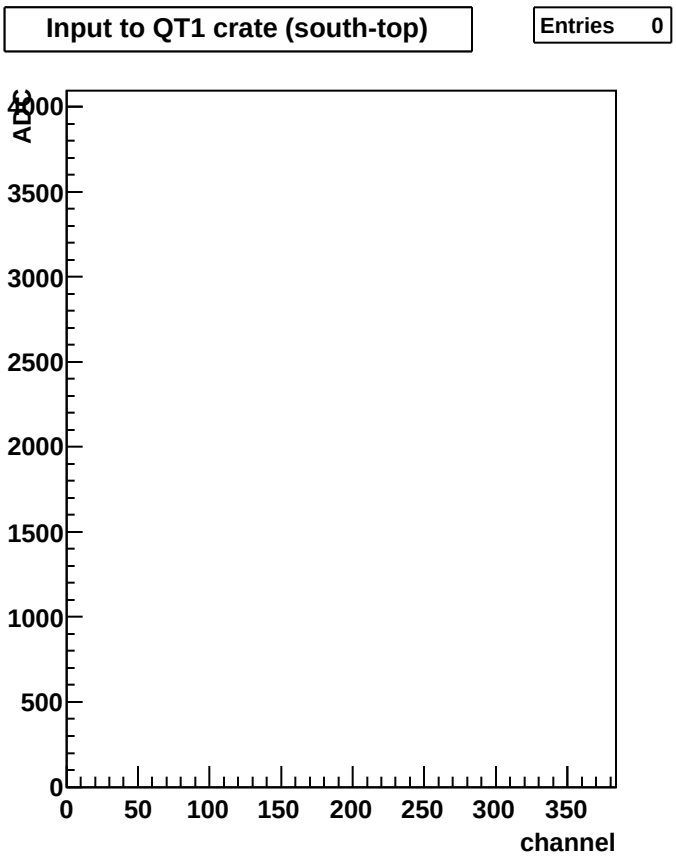

BBClarge-TAC-W
Entries 9999
Mean 1824
RMS 389.4

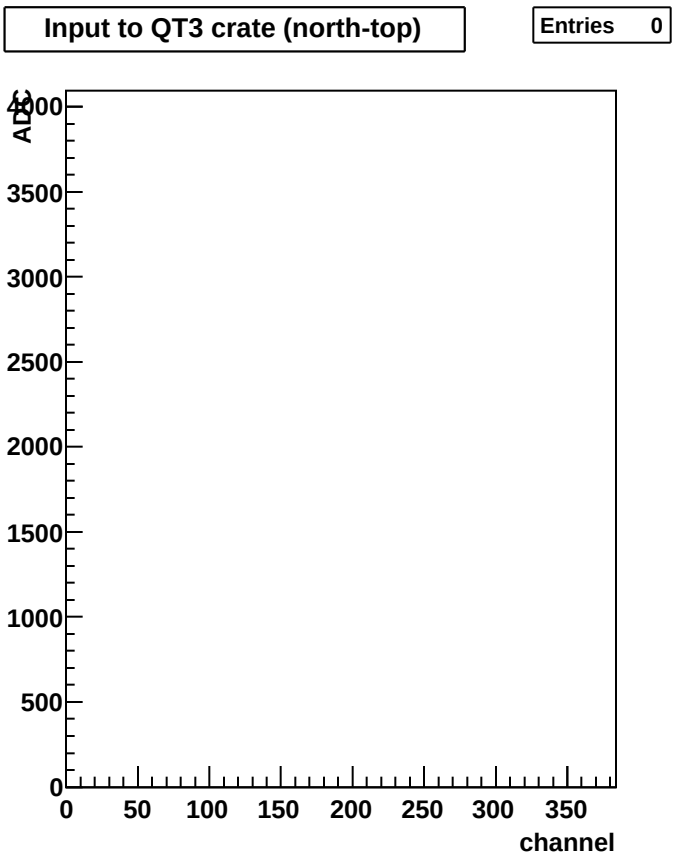

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 9998
Mean 4012
RMS 461.8

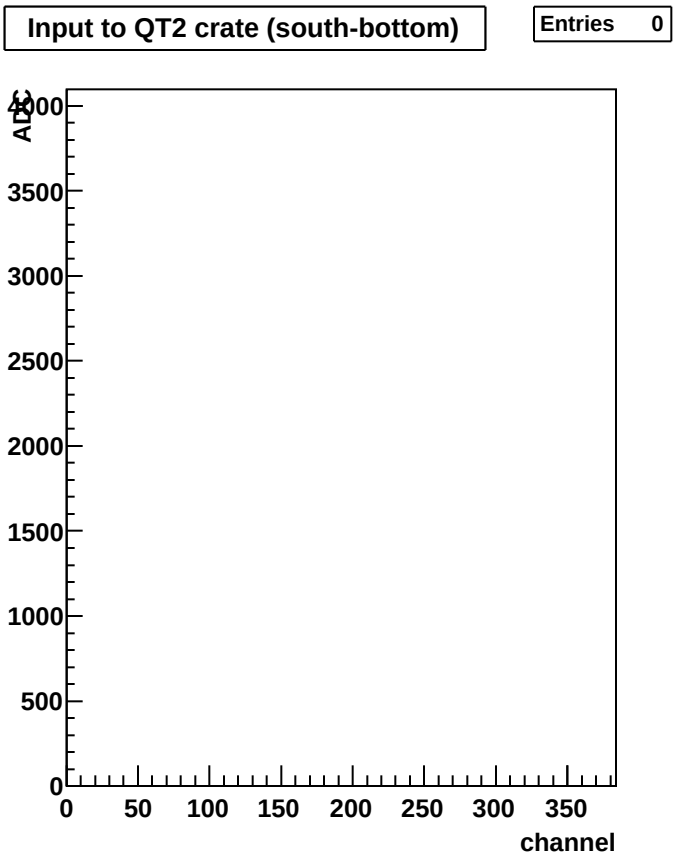

VPD-TAC-E
Entries 9531
Mean 1503
RMS 117.4

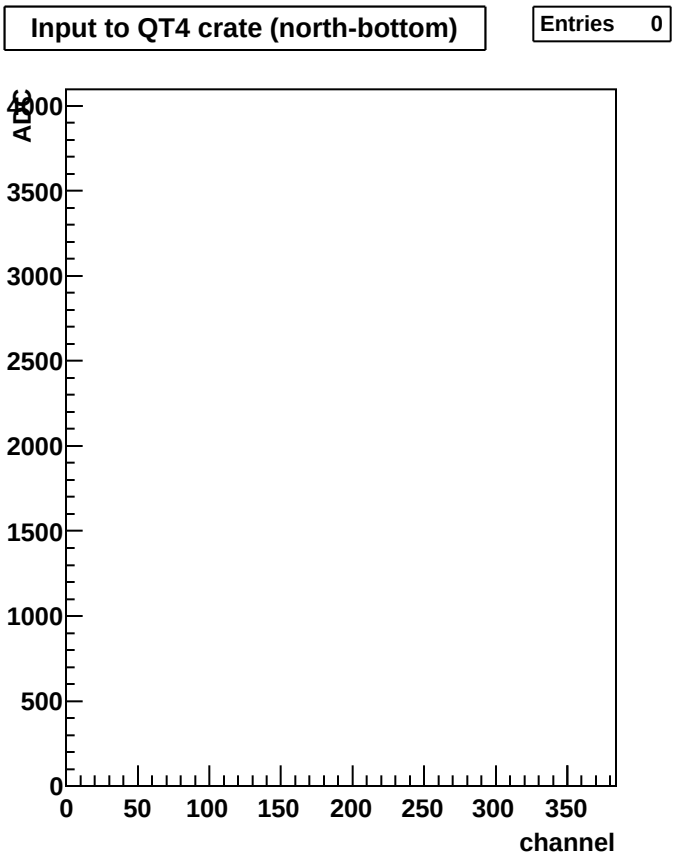

VPD-TAC-W
Entries 9256
Mean 1491
RMS 129.4

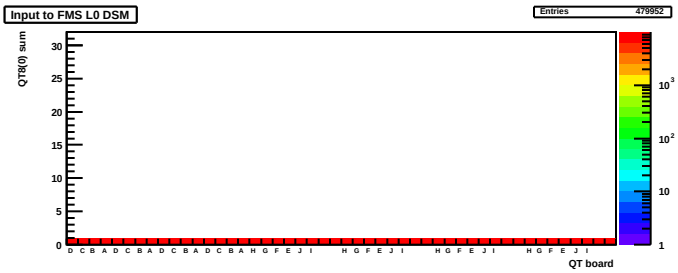

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 8898
Mean 4109
RMS 161.4

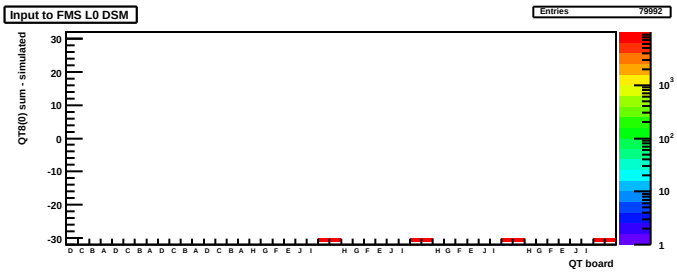

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

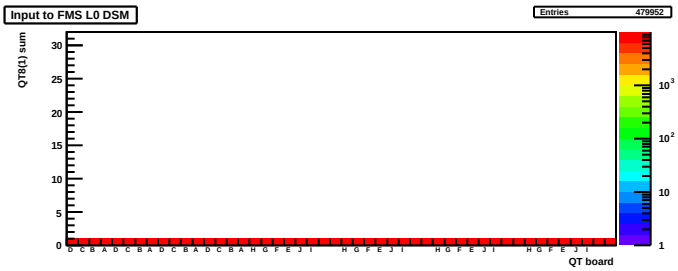

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

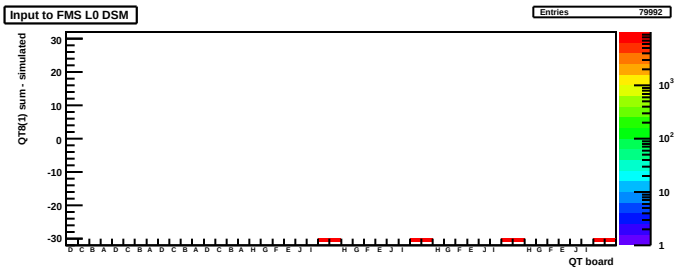

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

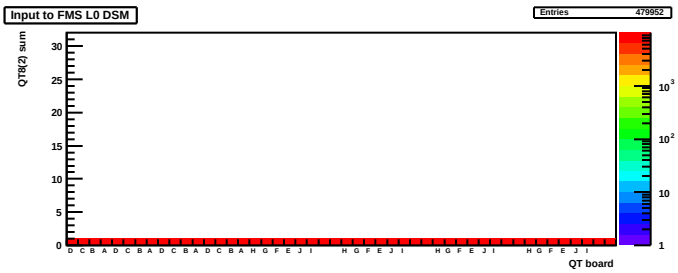

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

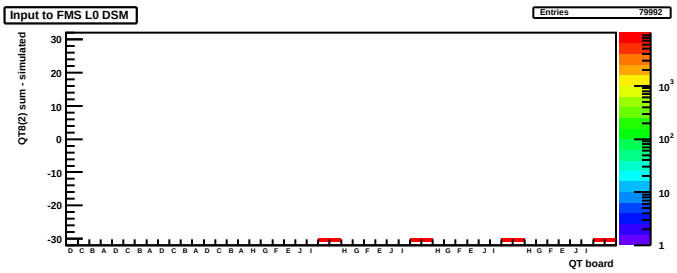

Input to FMS L0 DSM
Entries 479952
QT8(0) sum
QT board

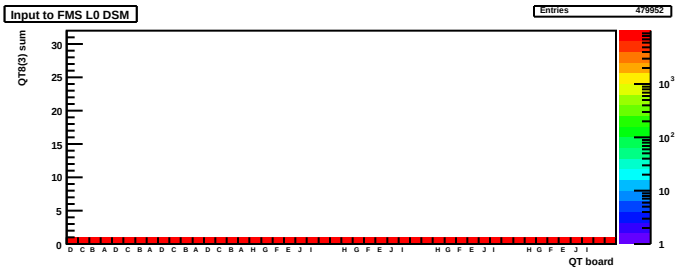

Input to FMS L0 DSM
Entries 79992
QT8(0) sum - simulated
QT board

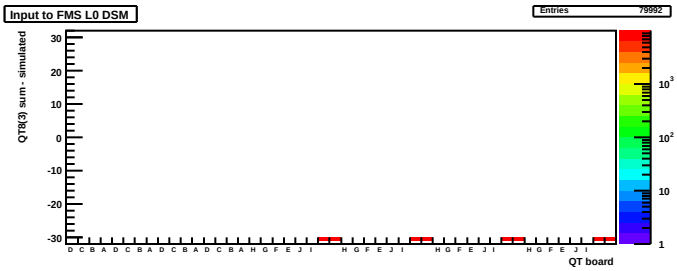

Input to FMS L0 DSM
Entries 479952
QT8(1) sum
QT board

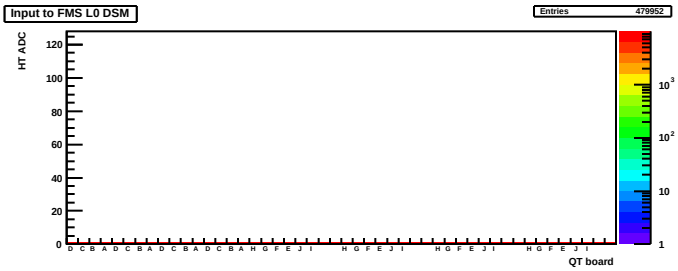

Input to FMS L0 DSM
Entries 79992
QT8(1) sum - simulated
QT board

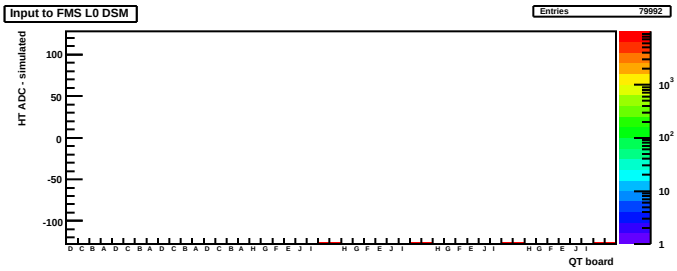

Input to FMS L0 DSM
Entries 479952
QT8(2) sum
QT board

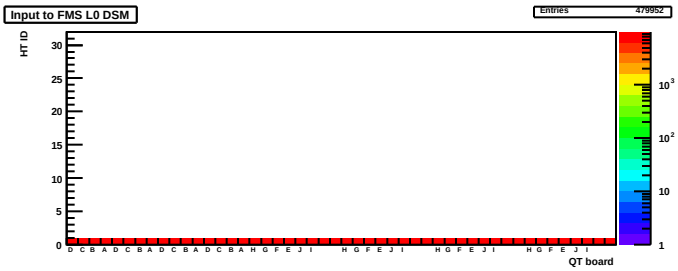

Input to FMS L0 DSM
Entries 79992
QT8(2) sum - simulated
QT board

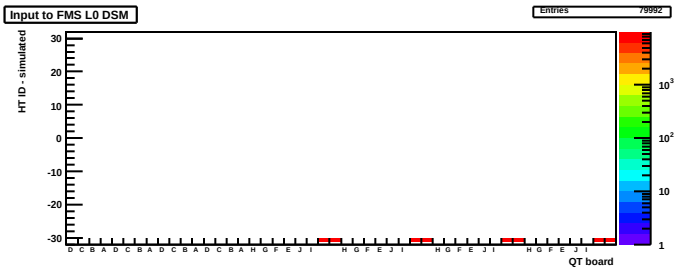

Input to FMS L0 DSM
Entries 479952
QT8(3) sum
QT board

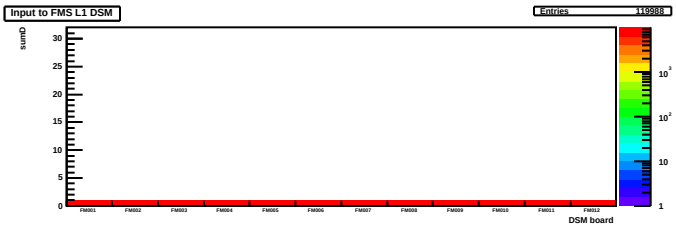

Input to FMS L0 DSM
Entries 79992
QT8(3) sum - simulated
QT board

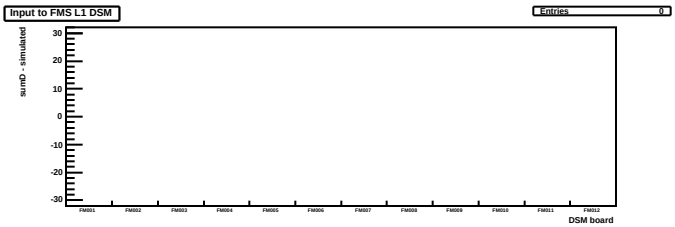

Input to FMS L0 DSM
Entries 479952
HT ADC
QT board

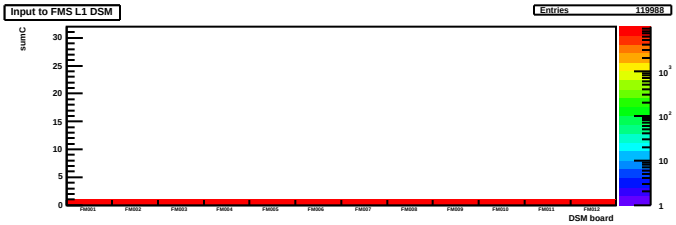

Input to FMS L0 DSM
Entries 79992
HT ADC - simulated
QT board

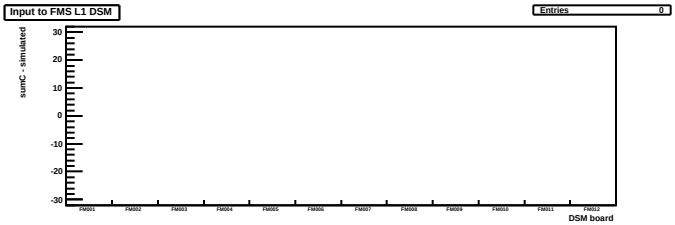

Input to FMS L0 DSM
Entries 479952
HT ID
QT board

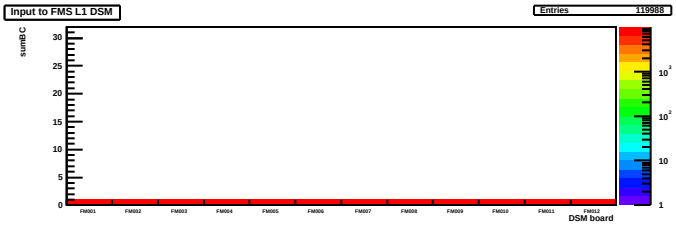

Input to FMS L0 DSM
Entries 79992
HT ID - simulated
QT board

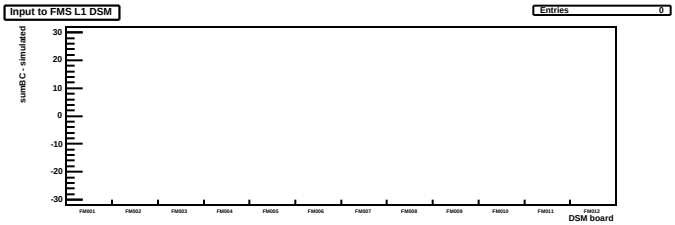

Input to FMS L1 DSM
Entries 119988
sumD
DSM board

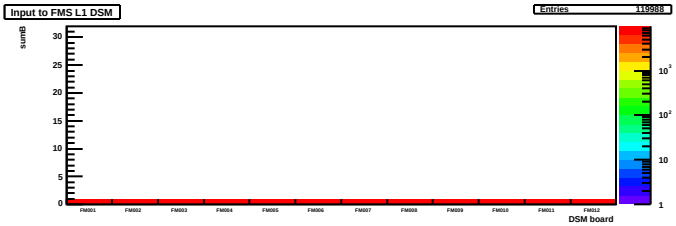

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

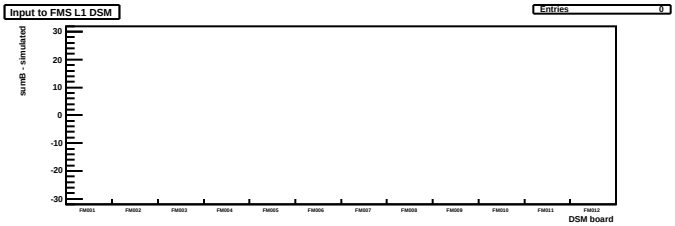

Input to FMS L1 DSM
Entries 119988
sumC
DSM board

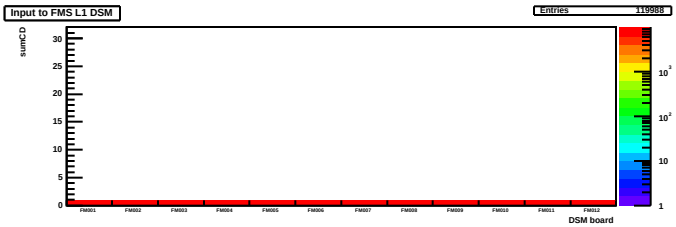

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

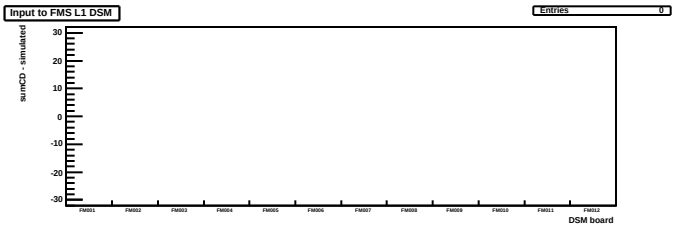

Input to FMS L1 DSM
Entries 119988
sumBC
DSM board

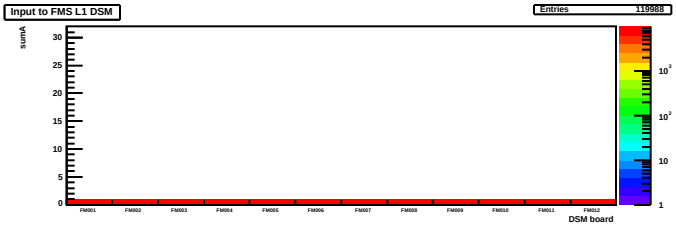

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

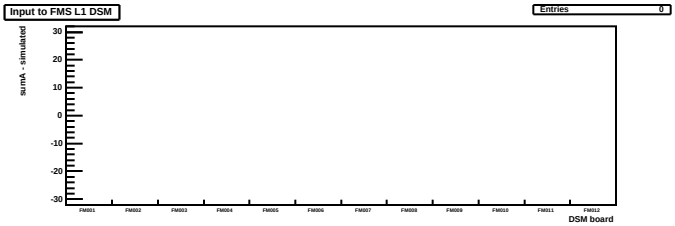

Input to FMS L1 DSM
Entries 119988
sumB
DSM board

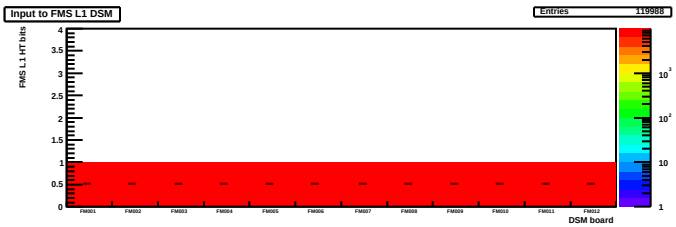

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

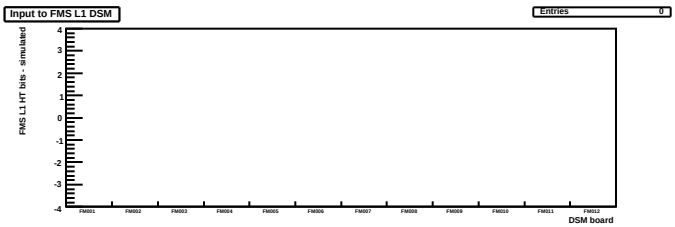

Input to FMS L1 DSM
Entries 119988
sumCD
DSM board

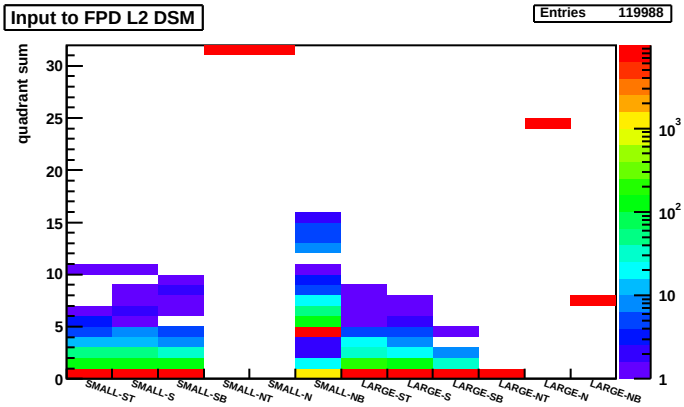

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

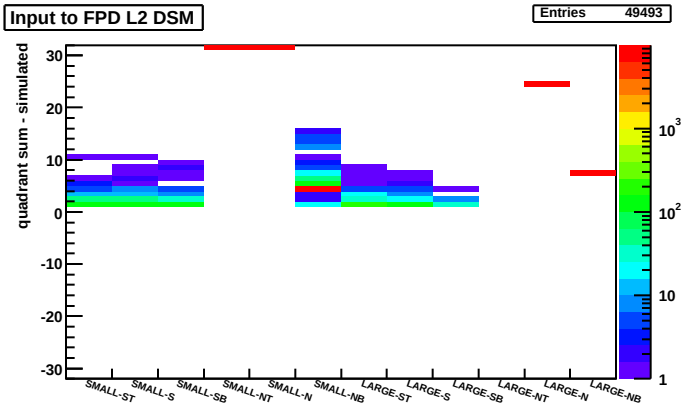

Input to FMS L1 DSM
Entries 119988
sumA
DSM board

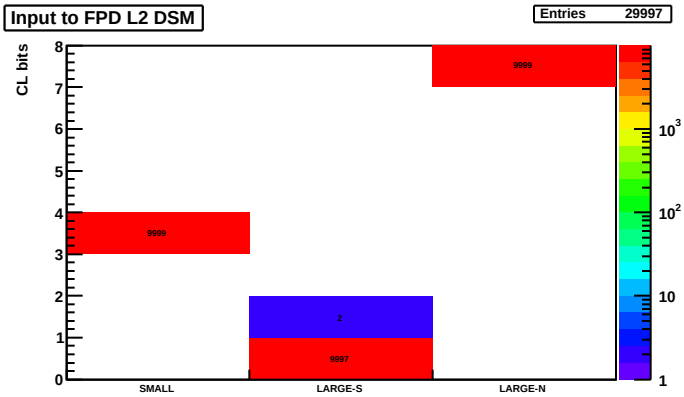

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

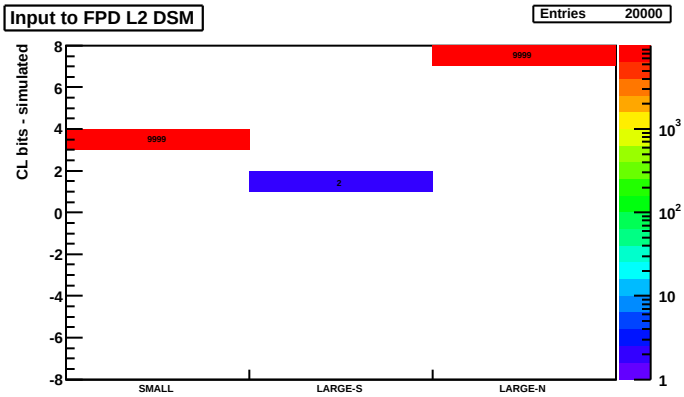

Input to FMS L1 DSM
Entries 119988
FMS L1 HT bits
DSM board

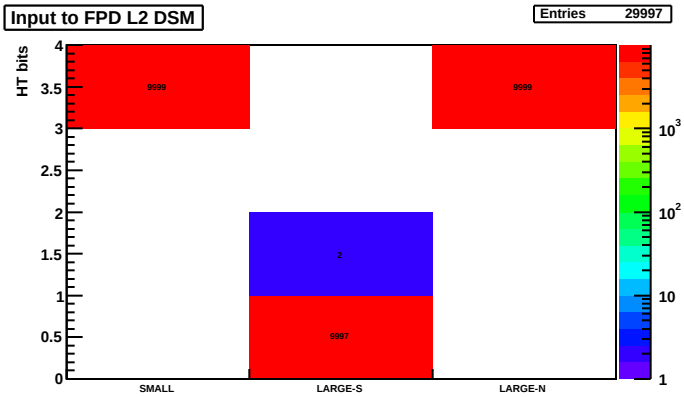

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

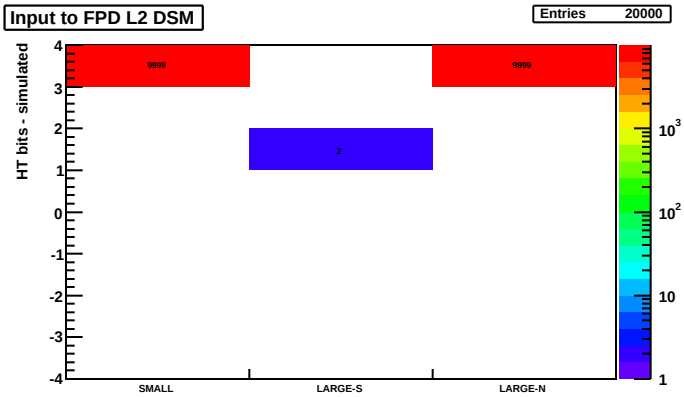

Input to FPD L2 DSM
Entries 119988
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

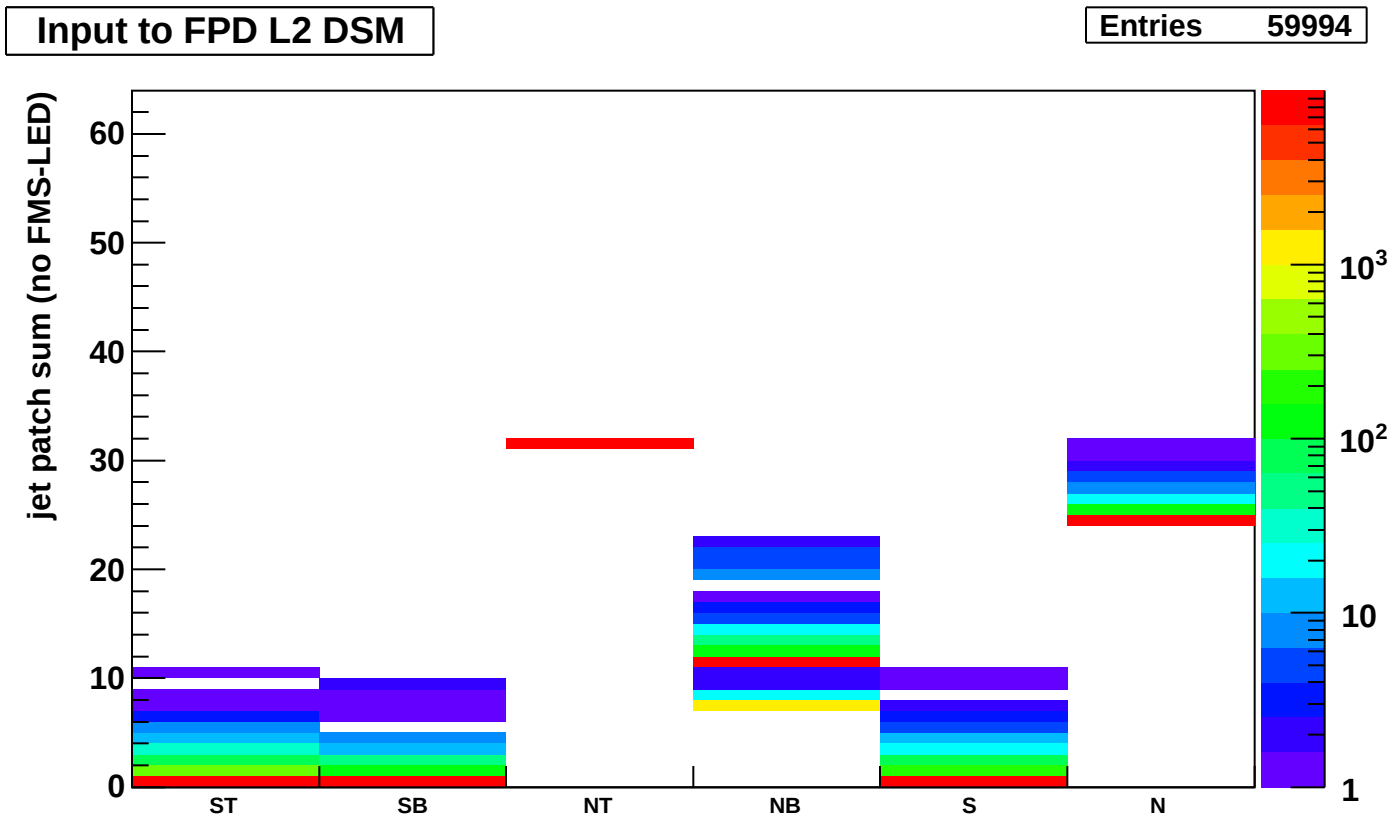

Input to FPD L2 DSM
Entries 49493
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

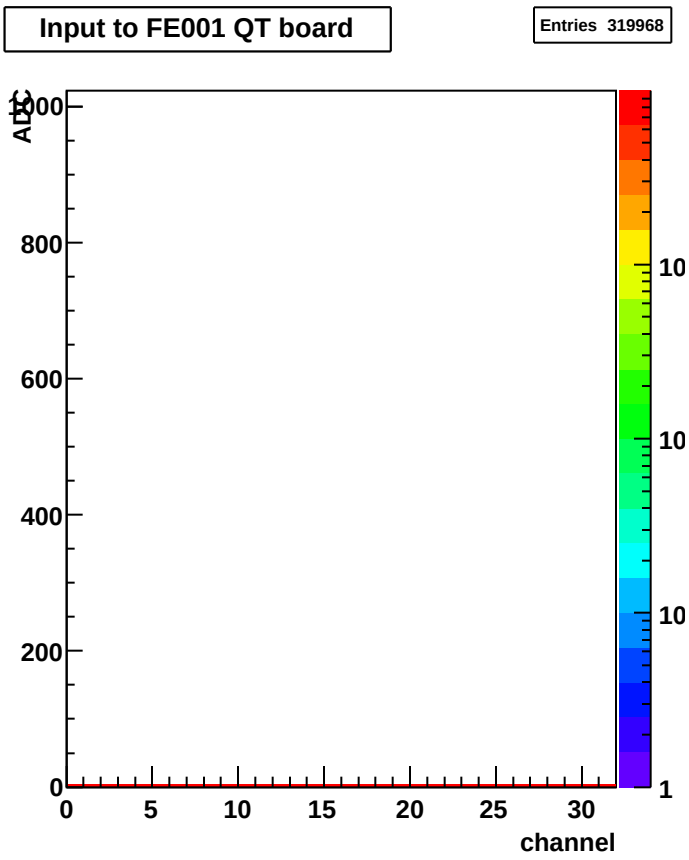

Input to FPD L2 DSM
Entries 29997
CL bits
9999
2
9997
SMALL
LARGE-S
LARGE-N

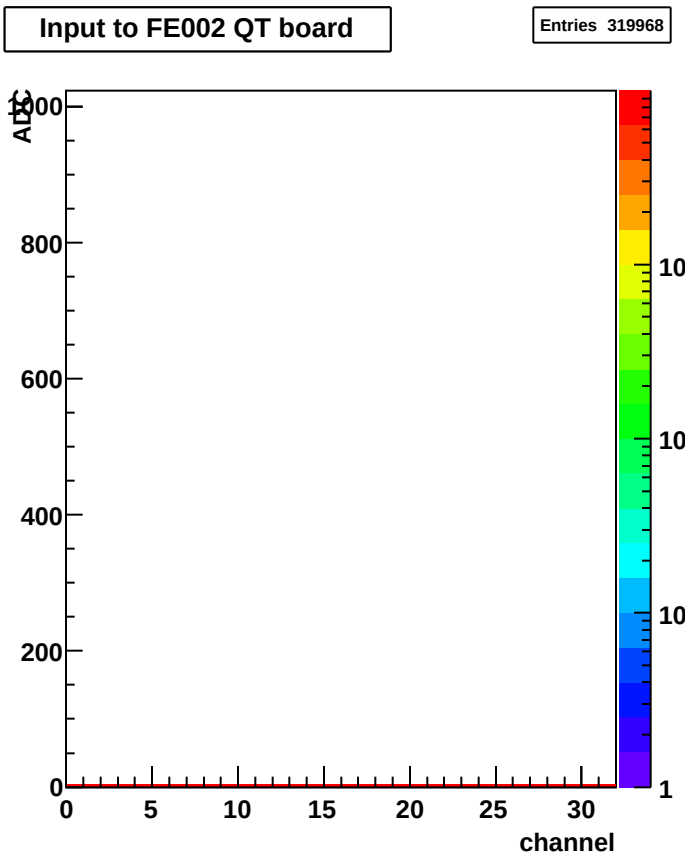

Input to FPD L2 DSM
Entries 20000
CL bits - simulated
9999
2
SMALL
LARGE-S
LARGE-N

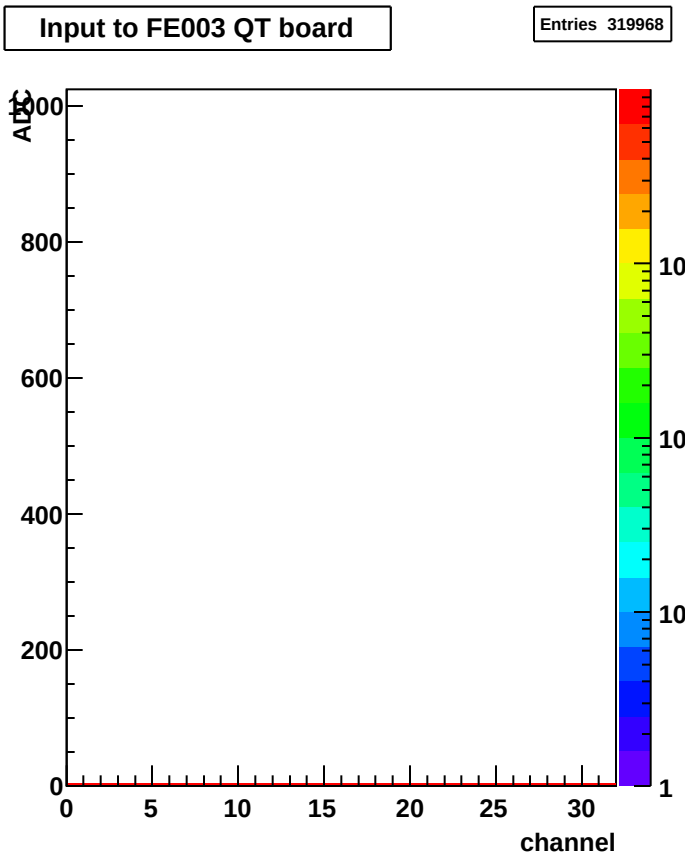

Input to FPD L2 DSM
Entries 29997
HT bits
9999
2
9997
SMALL
LARGE-S
LARGE-N

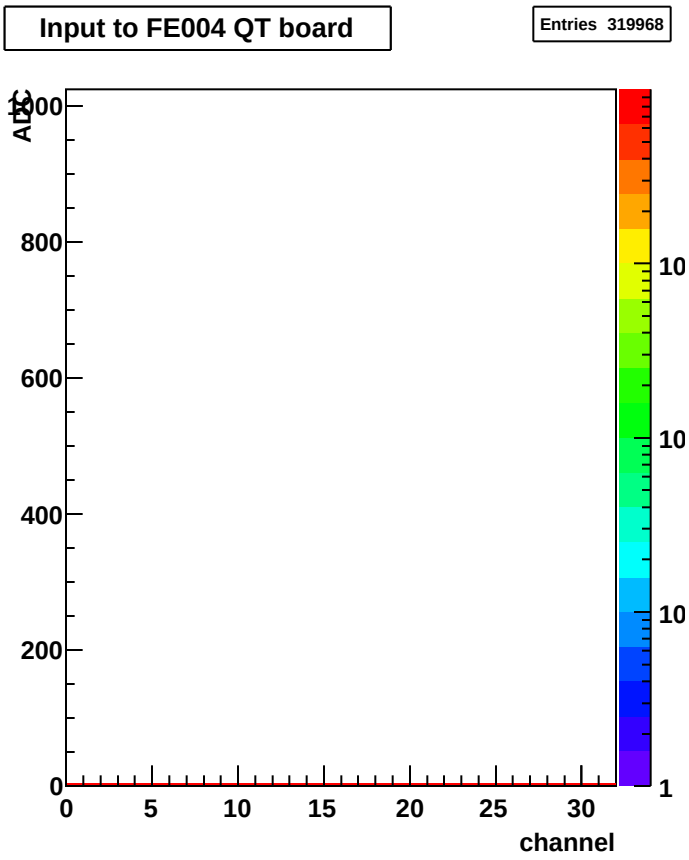

Input to FPD L2 DSM
Entries 20000
HT bits - simulated
9999
2
SMALL
LARGE-S
LARGE-N

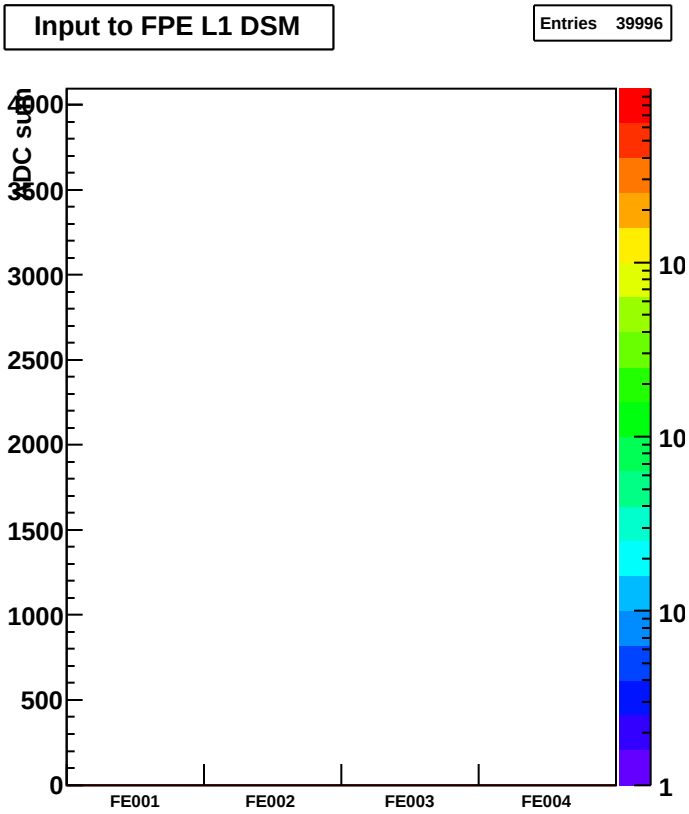

Input to FPD L2 DSM
Entries 59994
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

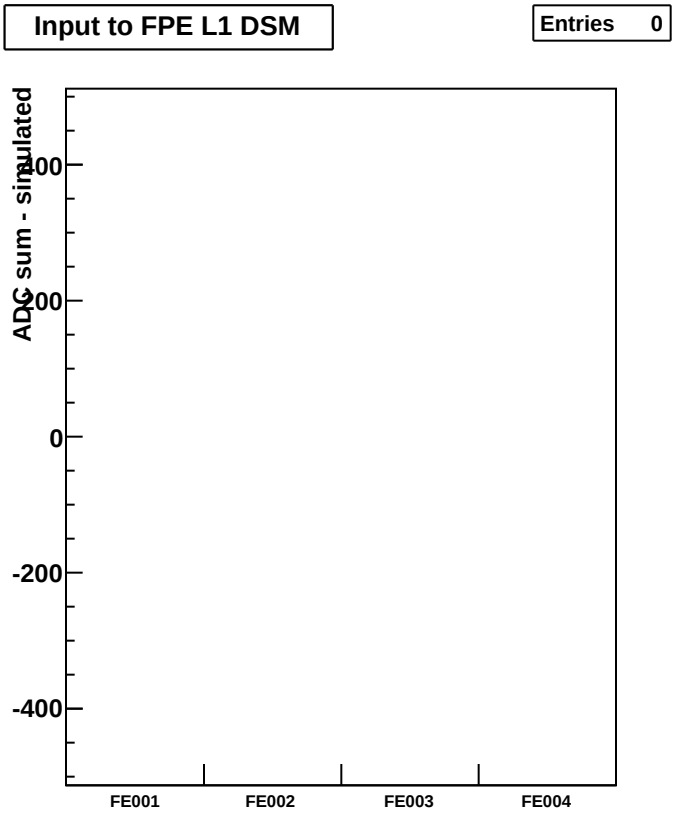

Input to FE001 QT board
Entries 319968
ADC
channel

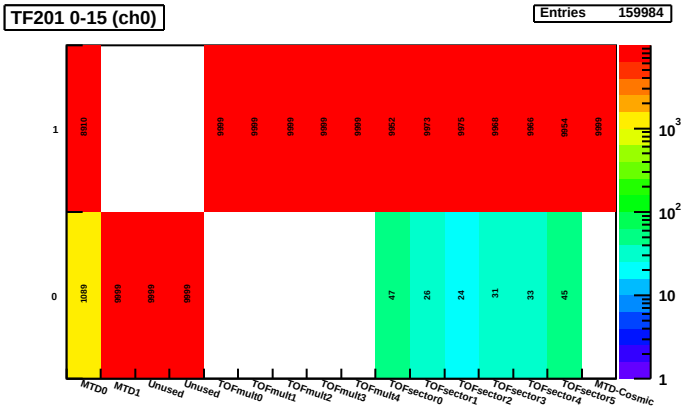

Input to FE002 QT board
Entries 319968
ADC
channel

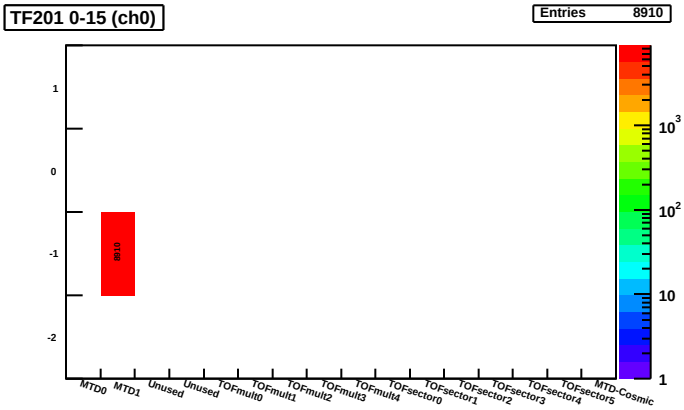

Input to FE003 QT board
Entries 319968
ADC
channel

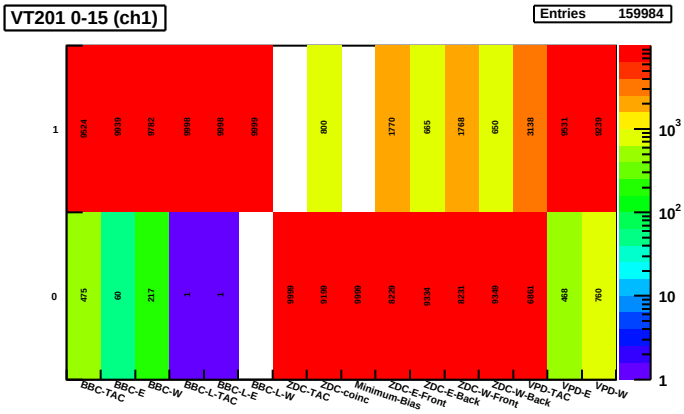

Input to FE004 QT board
Entries 319968
ADC
channel

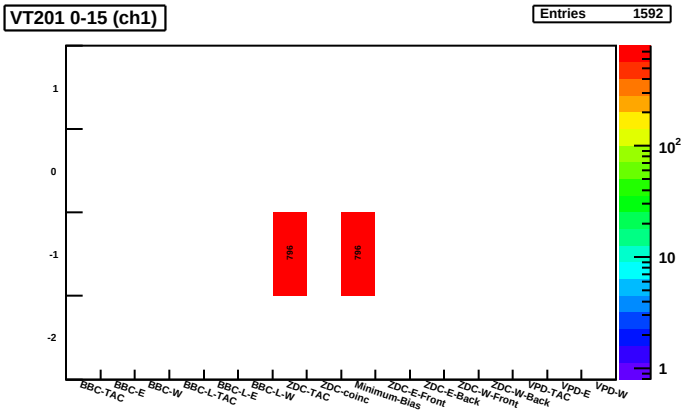

Input to FPE L1 DSM
Entries 39996
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1

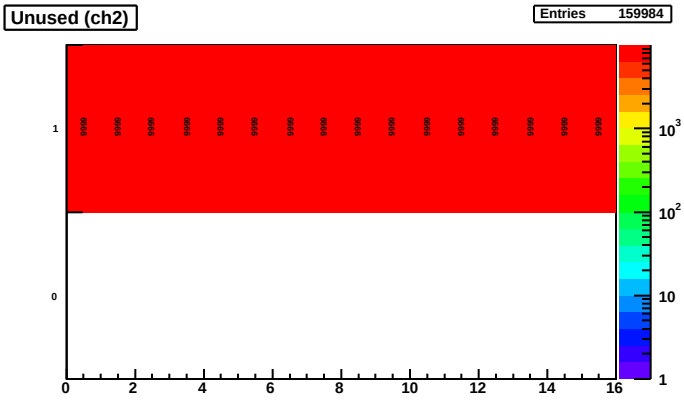

Input to FPE L1 DSM
Entries 0
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004


TF201 0-15 (ch0)
Entries 159984
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 8910
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 159984
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 1592
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W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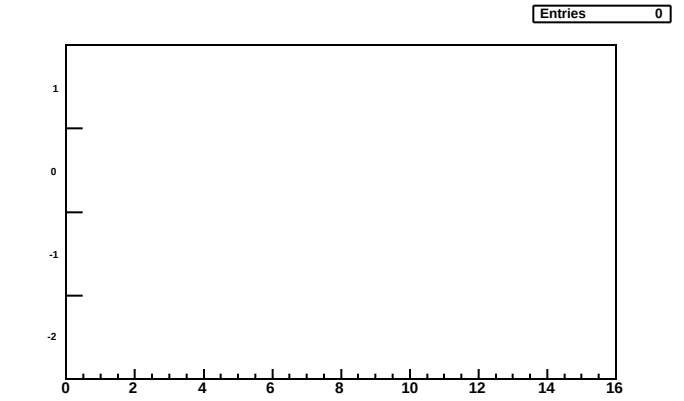
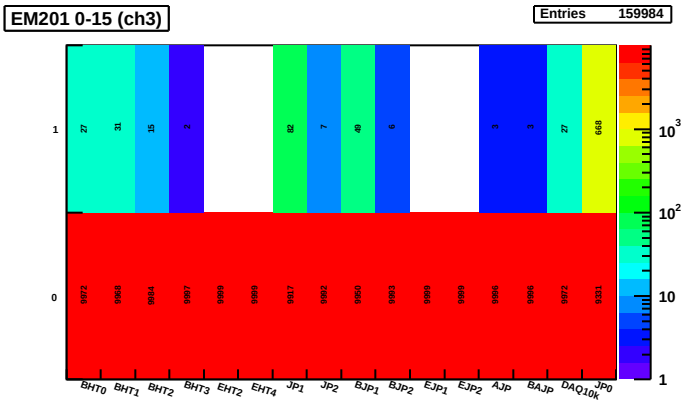
Entries 159984


Entries 0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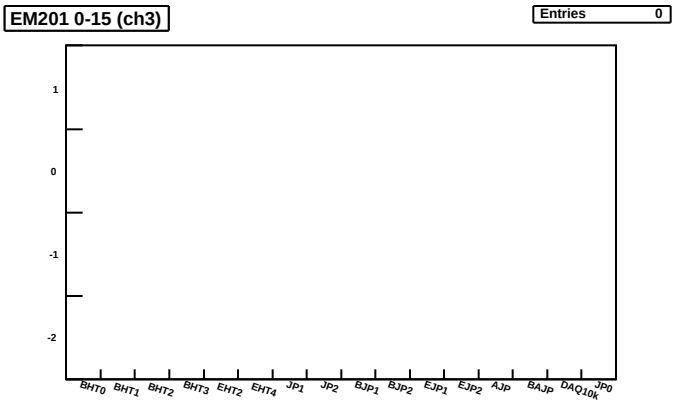
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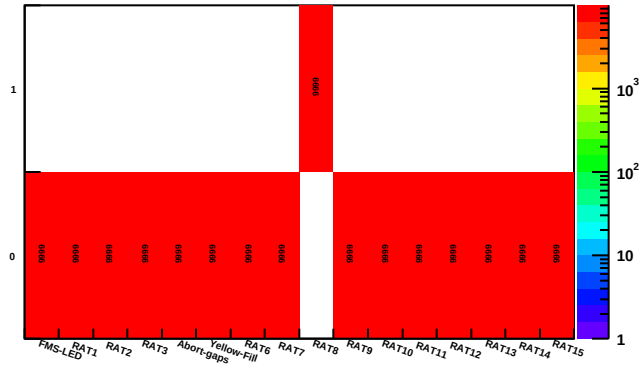
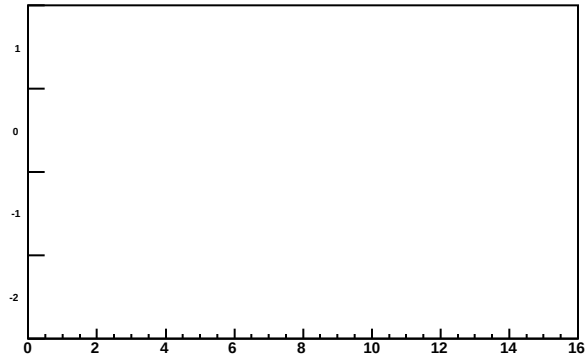
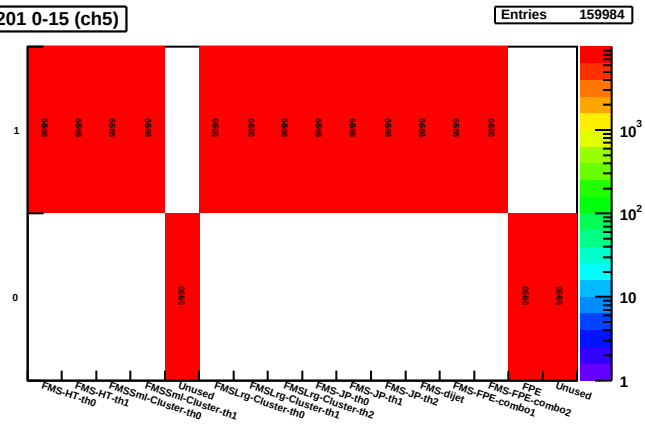
RAT board (ch4)





FP201 0-15 (ch5)



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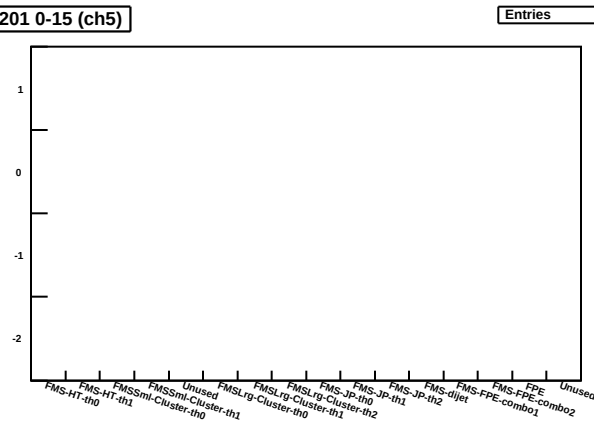
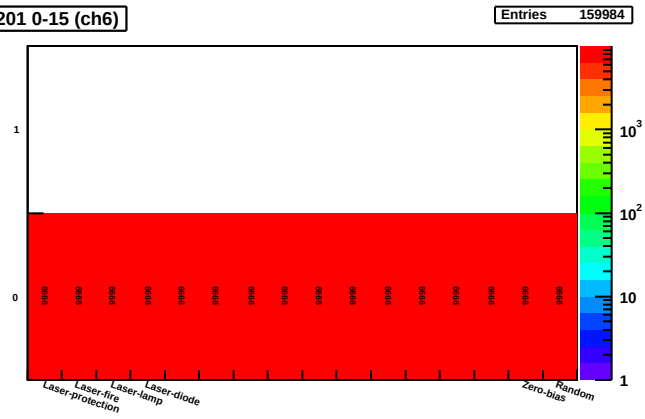
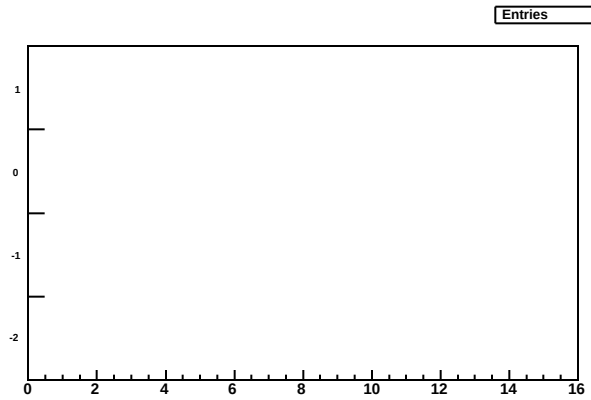
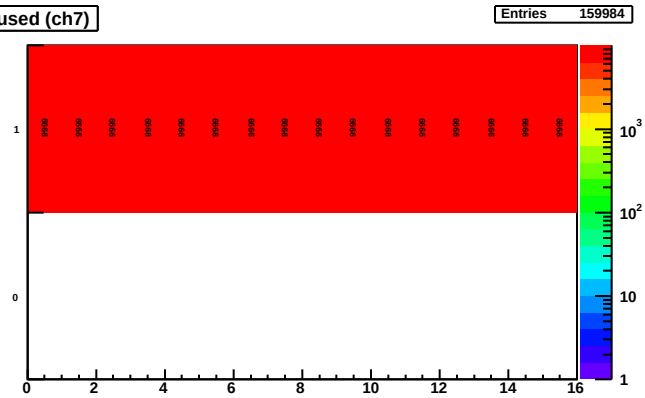
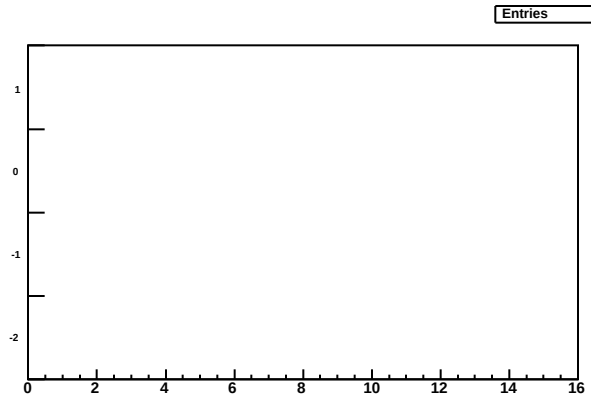


ST201 0-15 (ch6)





Unused (ch7)