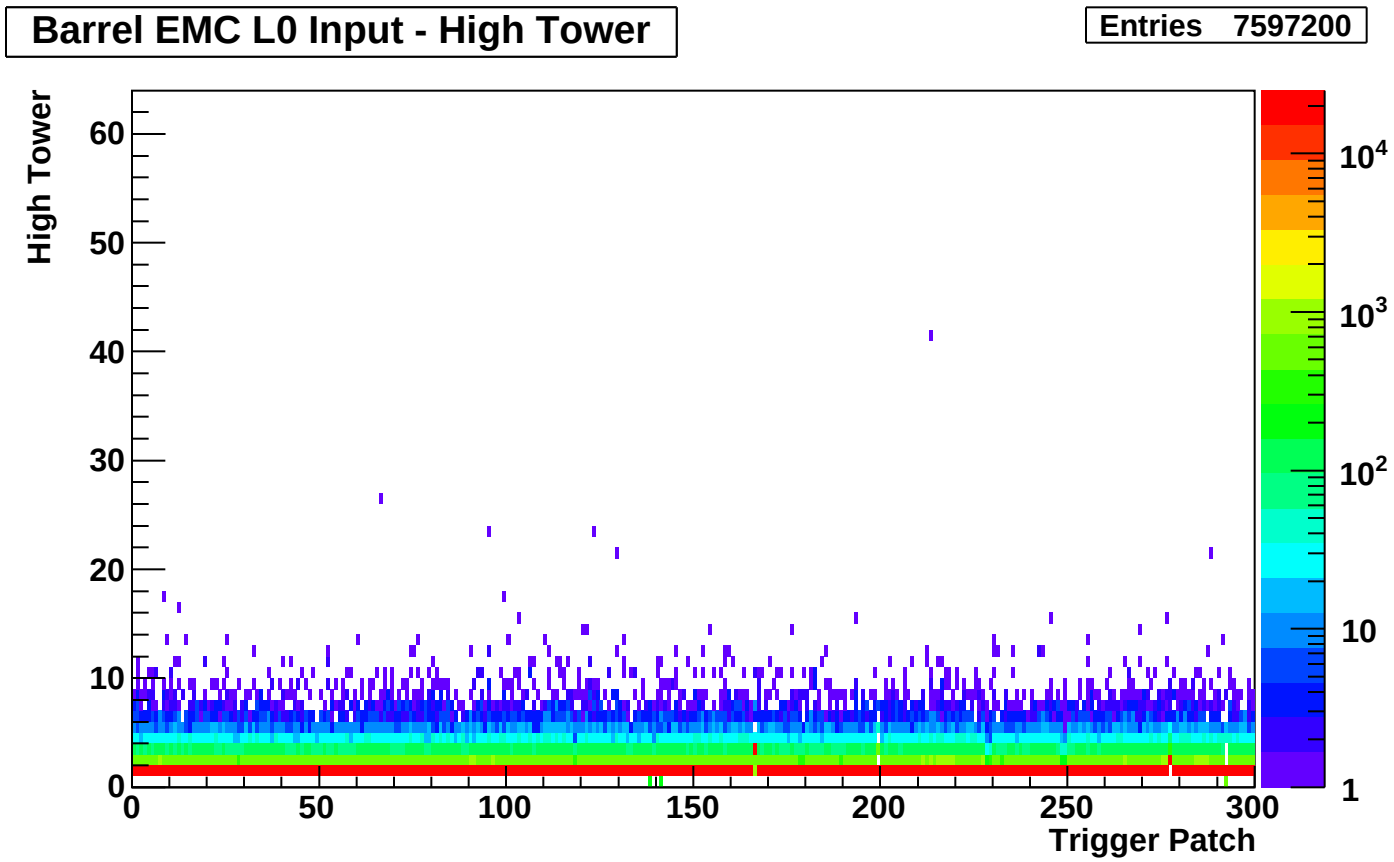
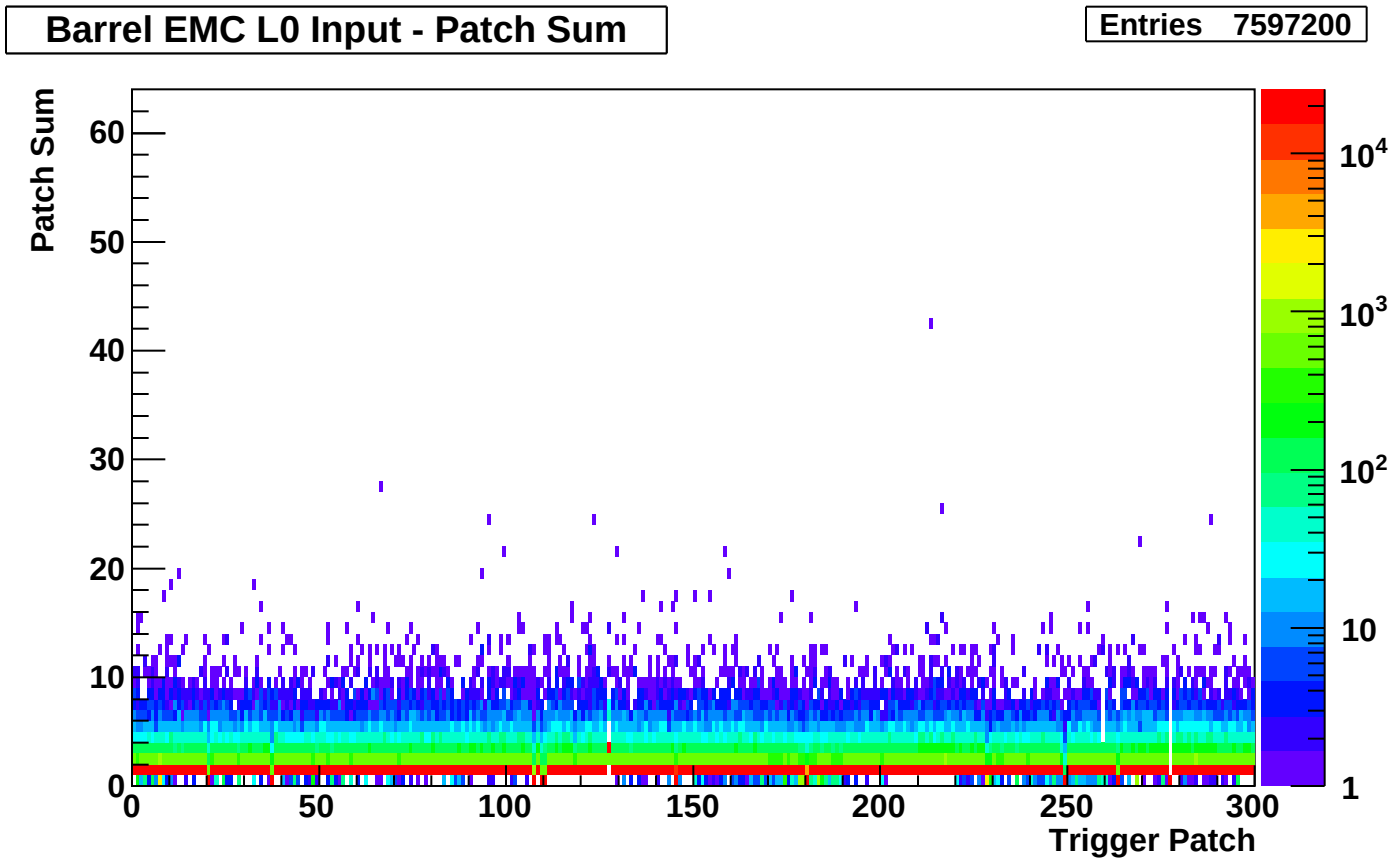
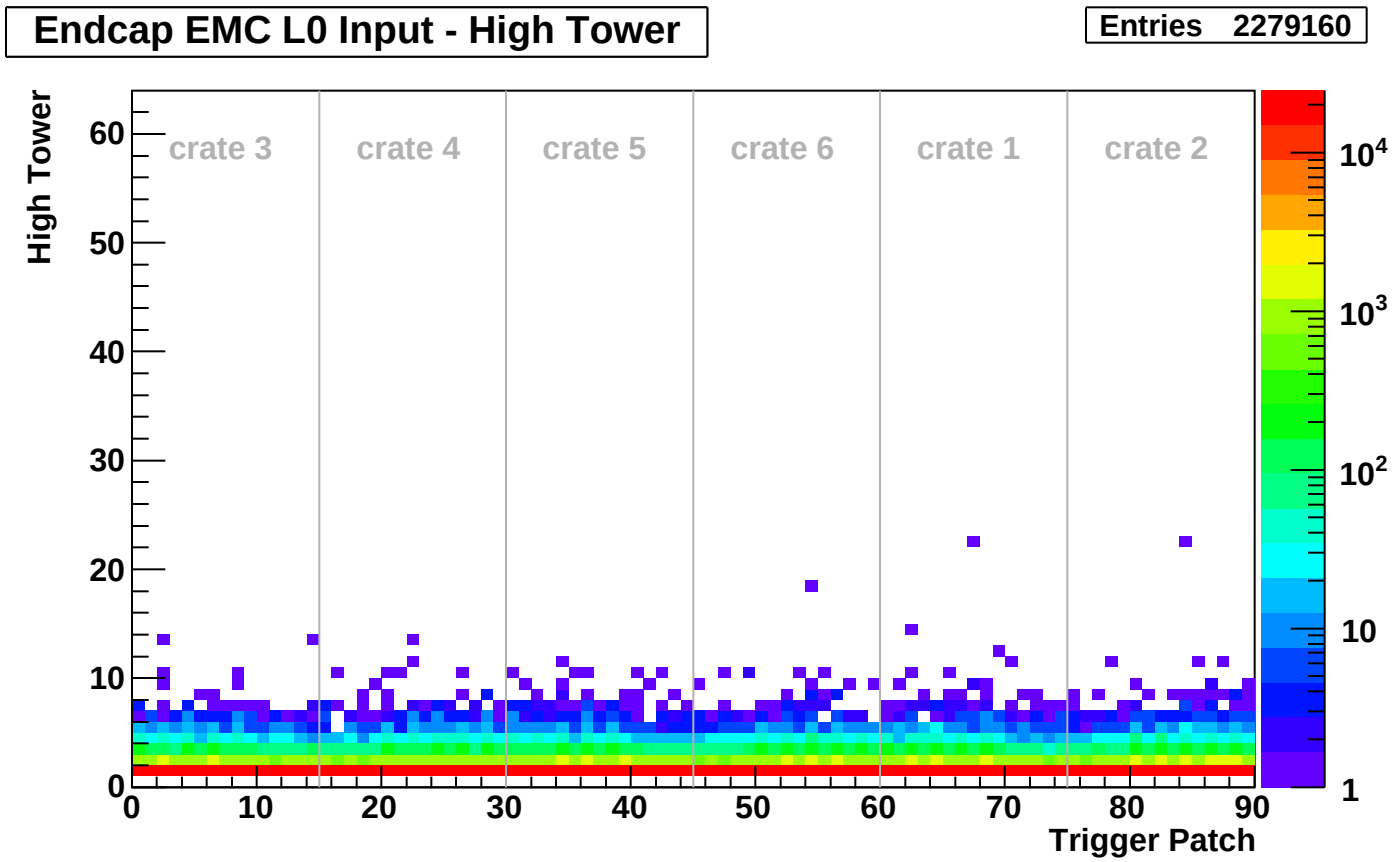
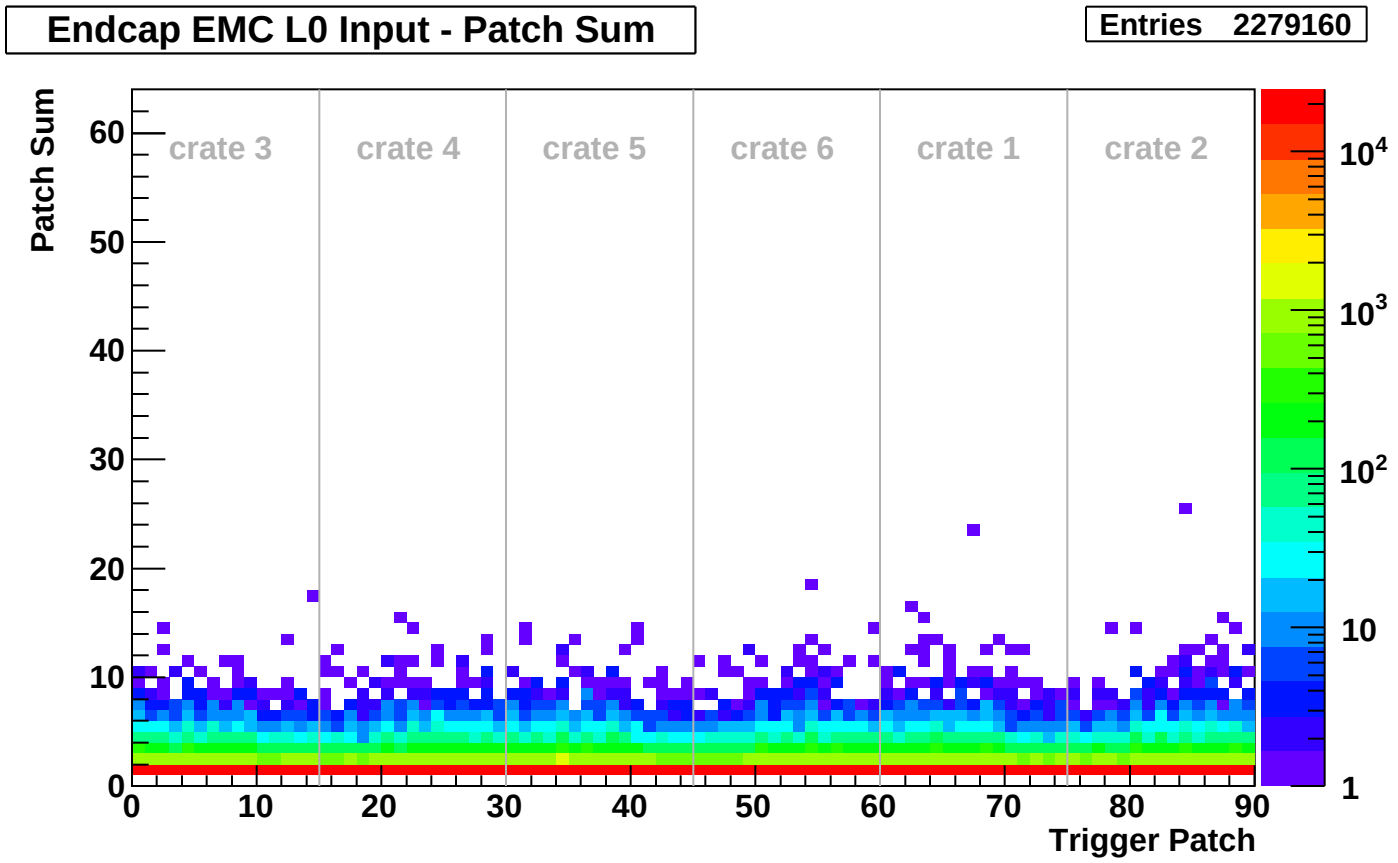
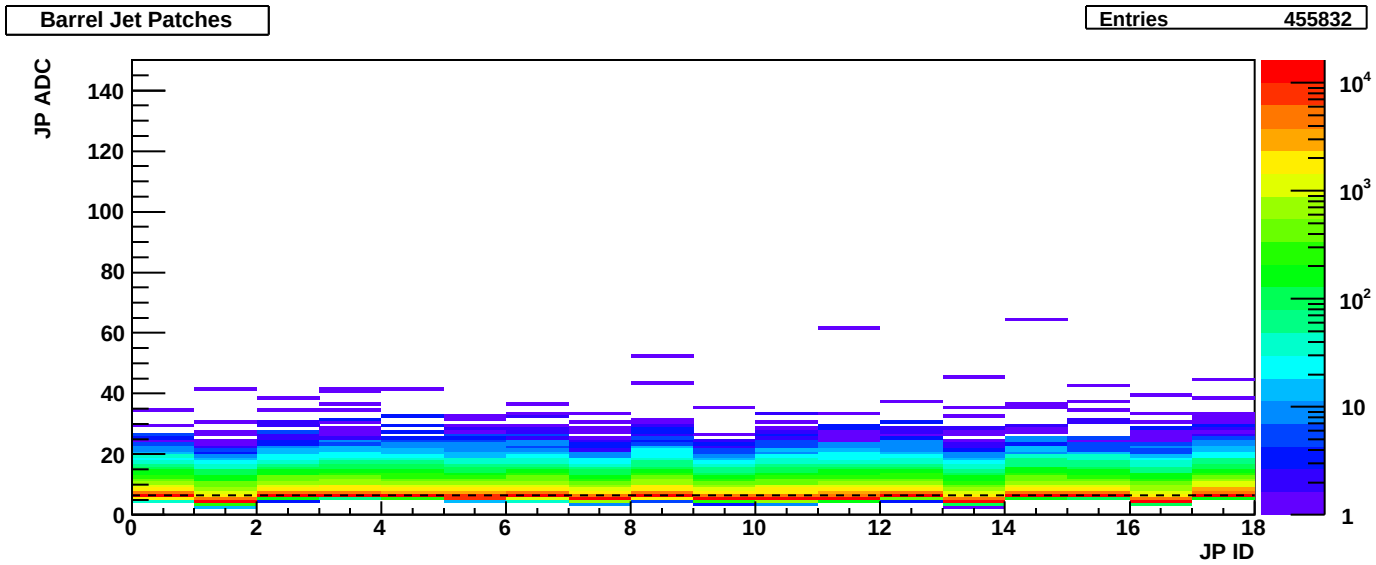
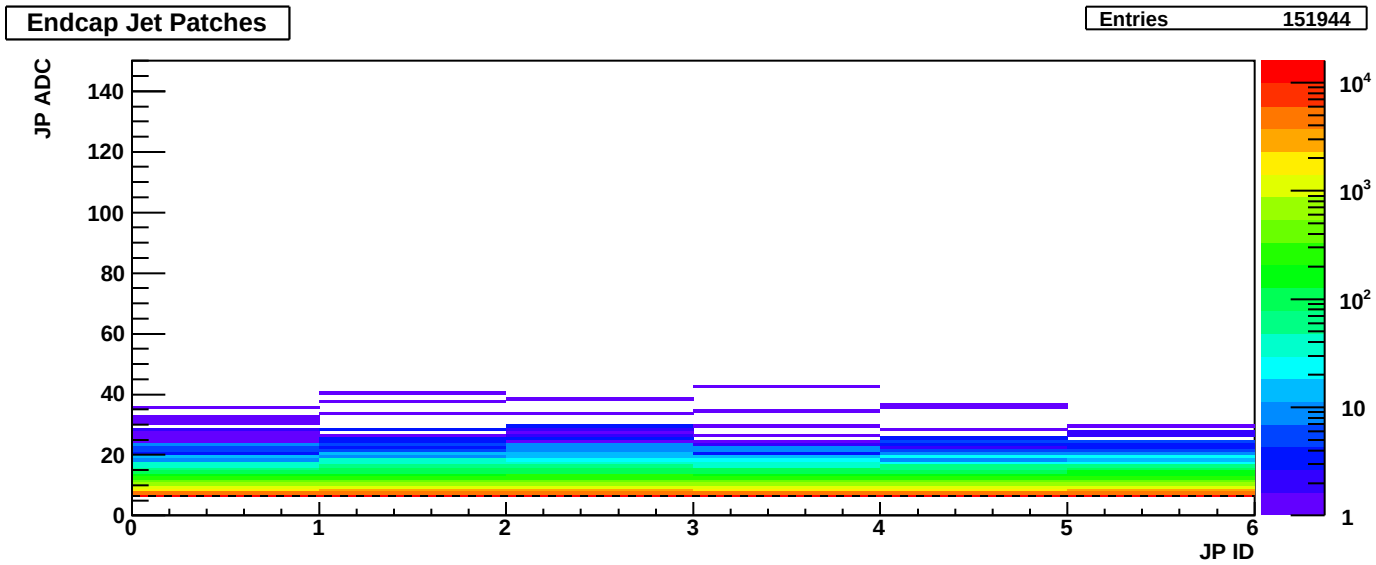

Barrel EMC L0 Input - High Tower
Entries 7597200
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

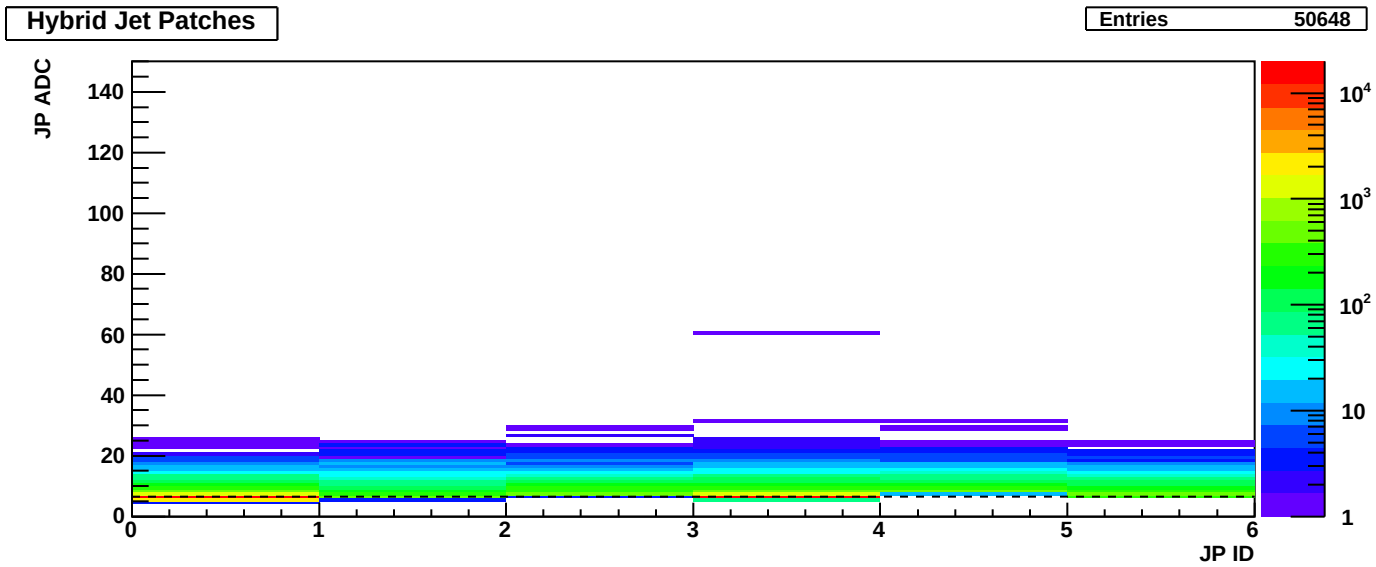

Barrel EMC L0 Input - Patch Sum
Entries 7597200
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

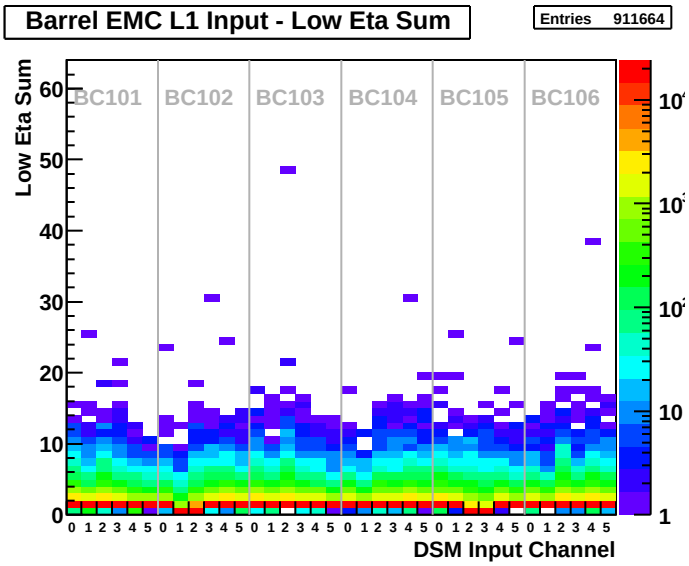

Endcap EMC L0 Input - High Tower
Entries 2279160
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

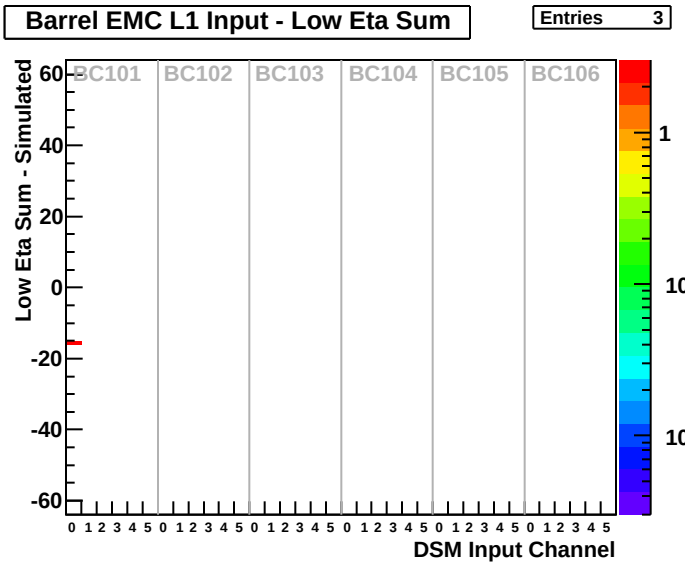

Endcap EMC L0 Input - Patch Sum
Entries 2279160
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

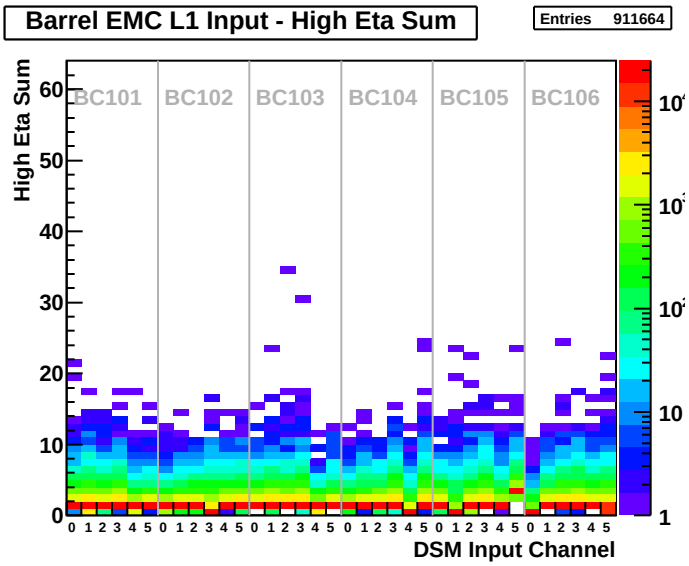

Barrel Jet Patches
Entries 455832
JP ADC
JP ID

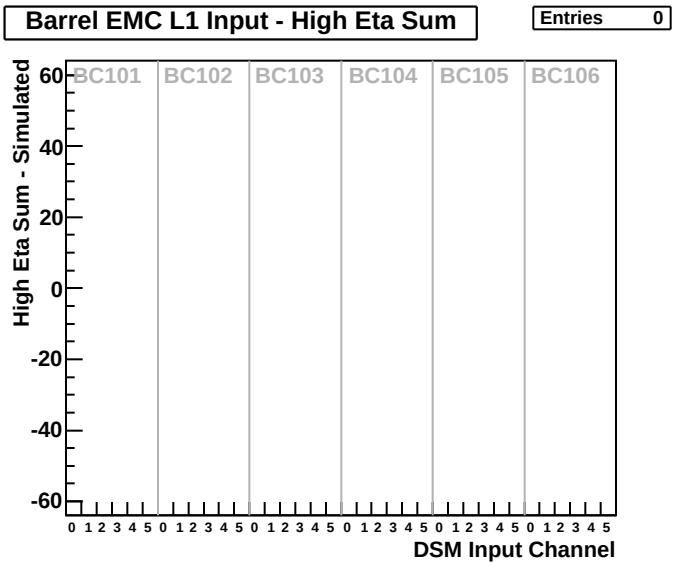

Endcap Jet Patches
Entries 151944
JP ADC
JP ID

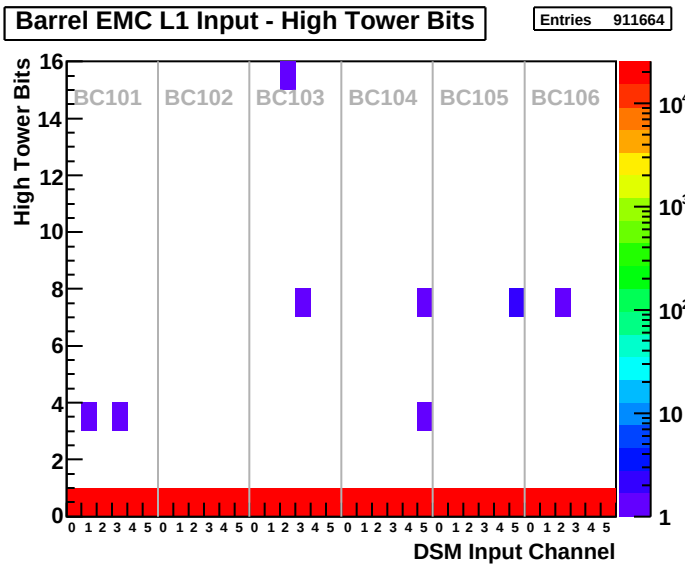

Hybrid Jet Patches
Entries 50648
JP ADC
JP ID

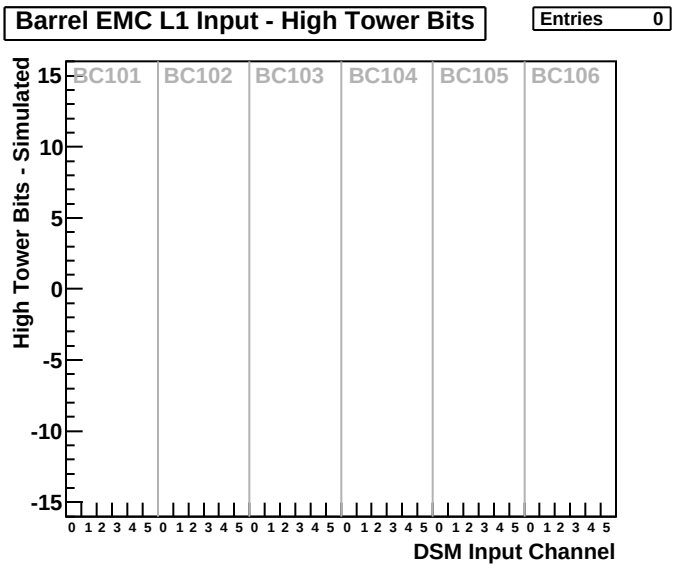

Barrel EMC L1 Input - Low Eta Sum
Entries 911664
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

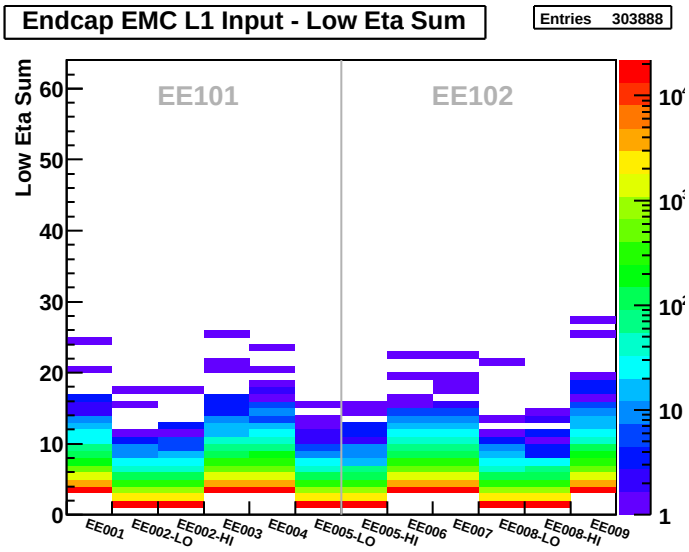

Barrel EMC L1 Input - Low Eta Sum
Entries 3
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

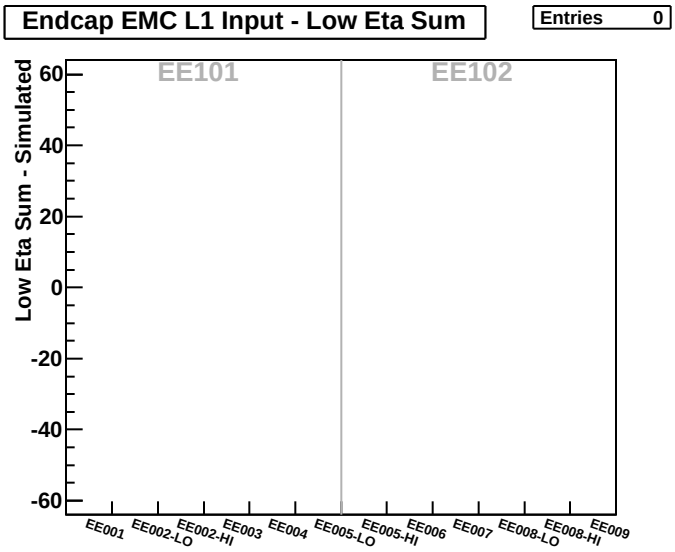

Barrel EMC L1 Input - High Eta Sum
Entries 911664
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

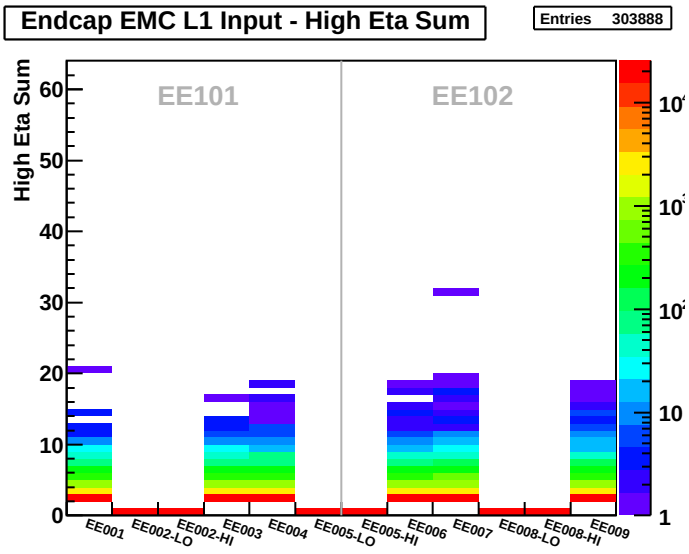

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

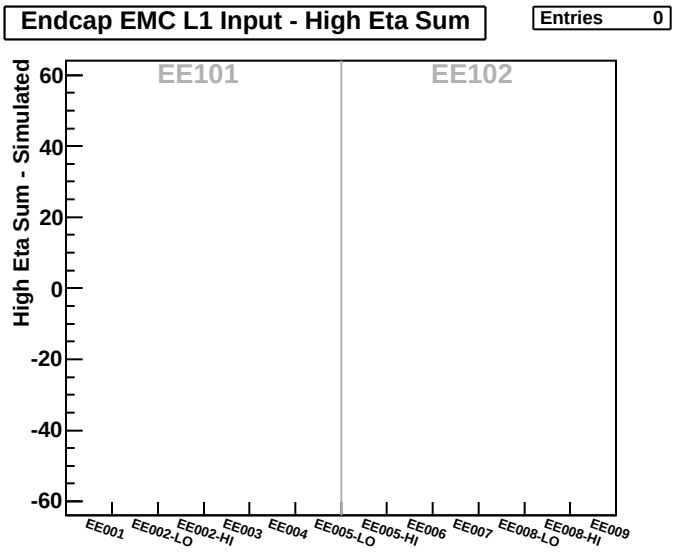

Barrel EMC L1 Input - High Tower Bits
Entries 911664
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

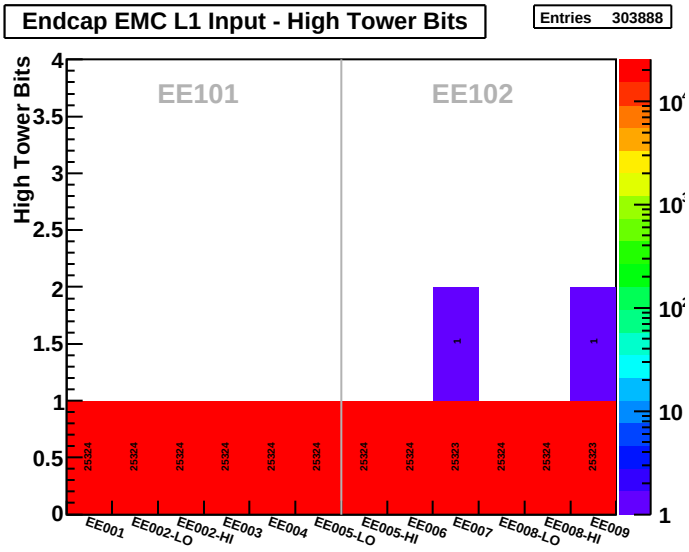

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

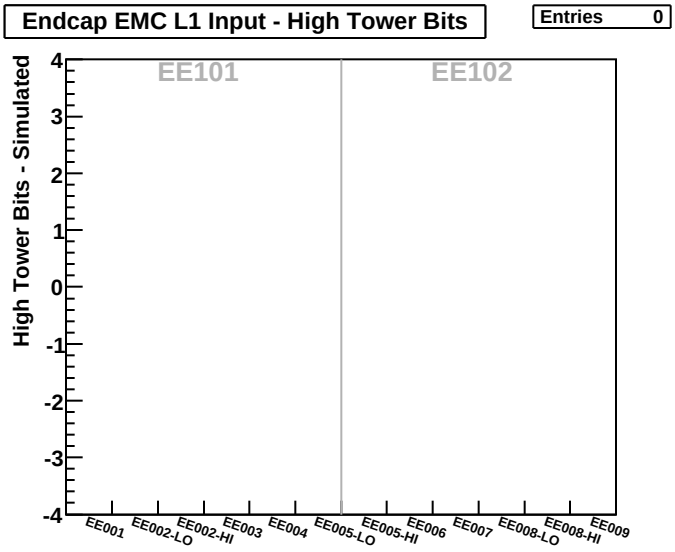

Endcap EMC L1 Input - Low Eta Sum
Entries 303888
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

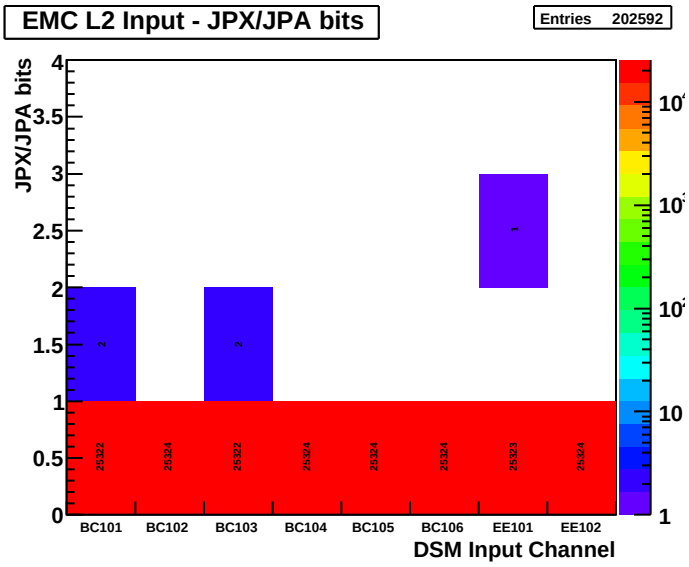

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

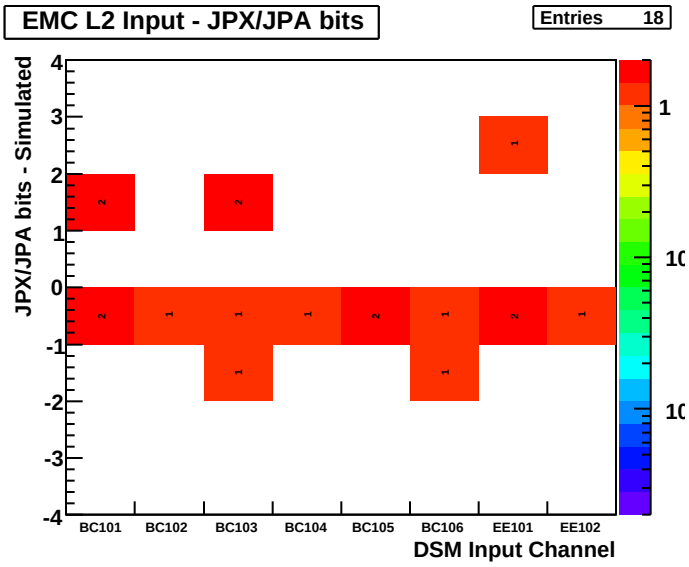

Endcap EMC L1 Input - High Eta Sum
Entries 303888
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

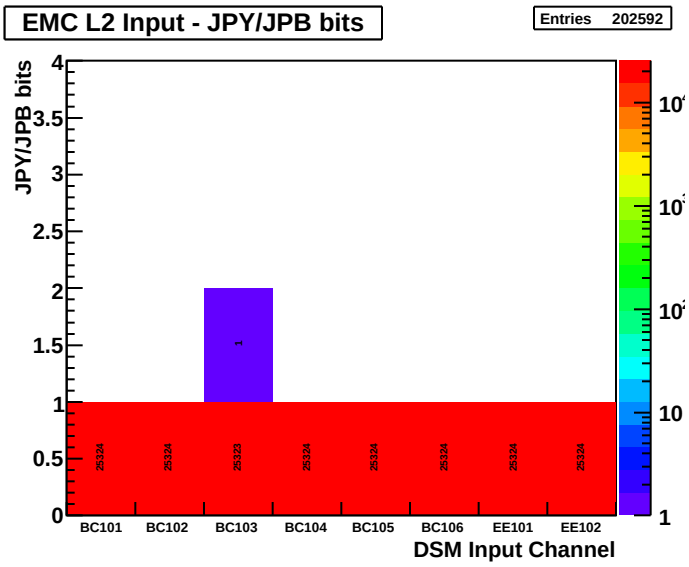

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

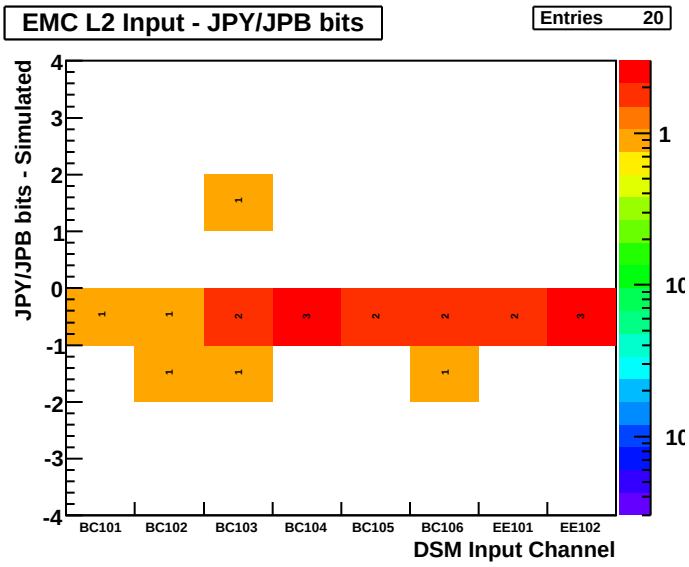

Endcap EMC L1 Input - High Tower Bits
Entries 303888
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

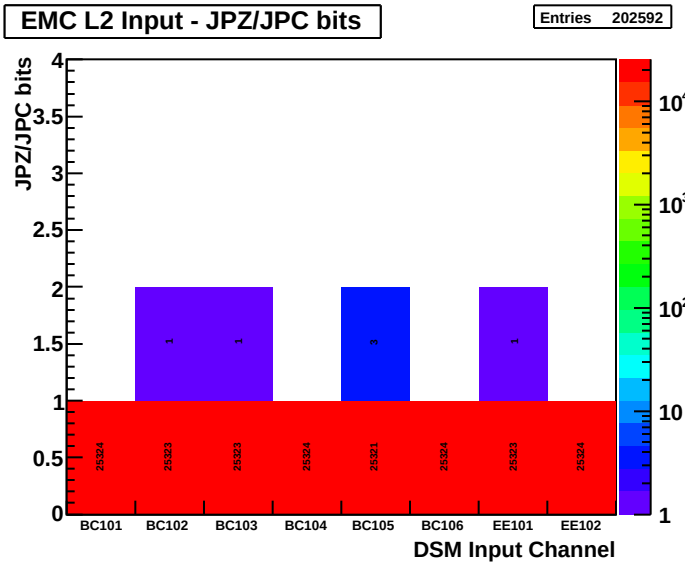

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

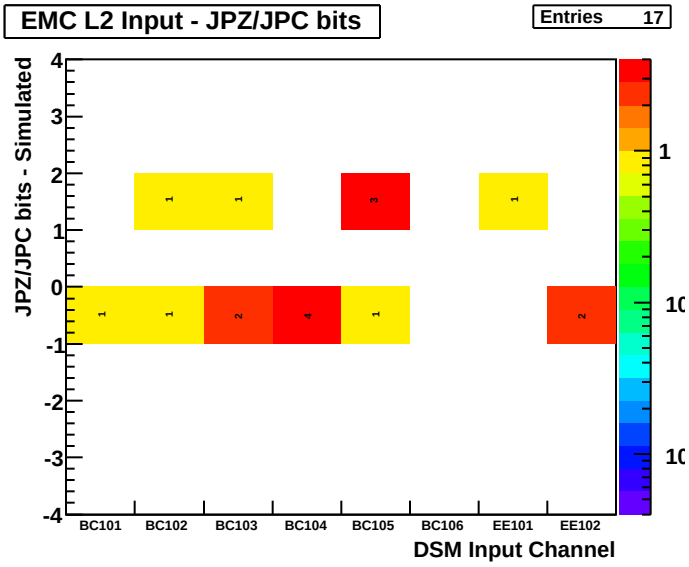

EMC L2 Input - JPX/JPA bits
Entries 202592
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

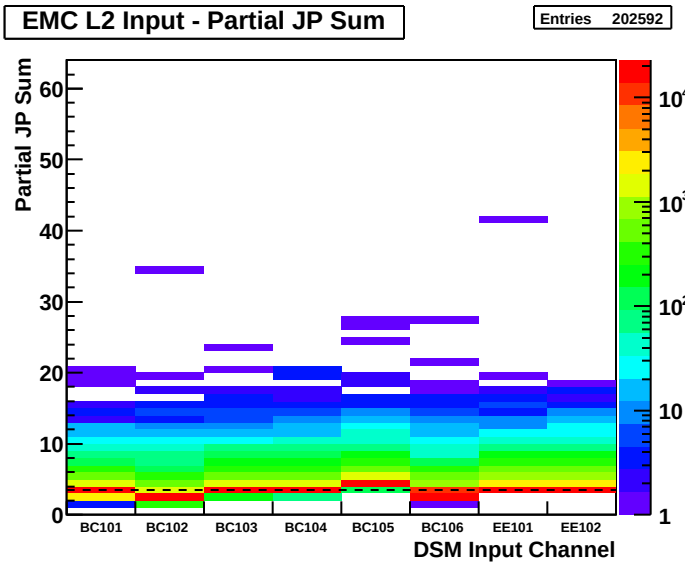

EMC L2 Input - JPX/JPA bits
Entries 18
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

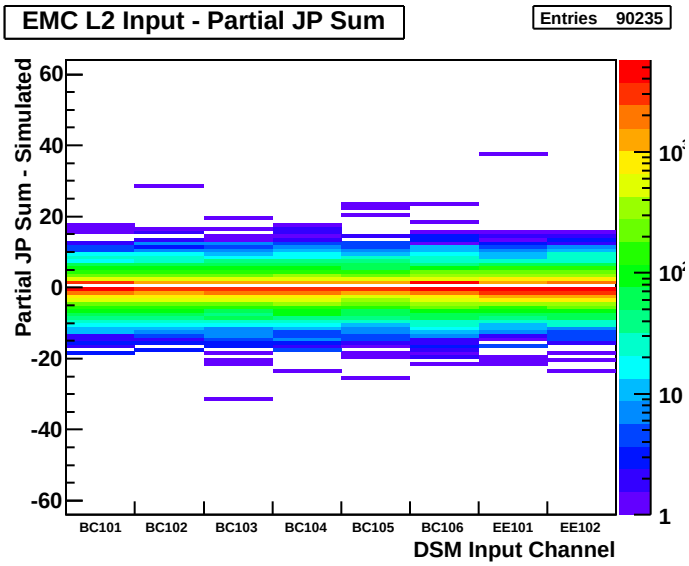

EMC L2 Input - JPY/JPB bits
Entries 202592
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

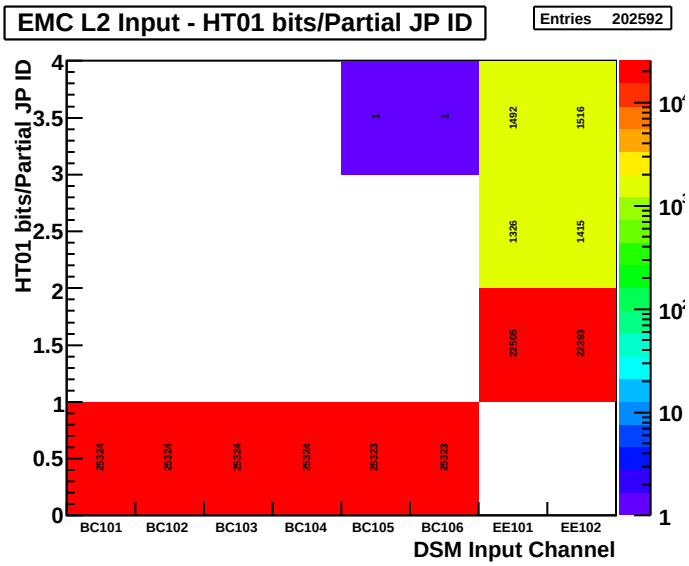

EMC L2 Input - JPY/JPB bits
Entries 20
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

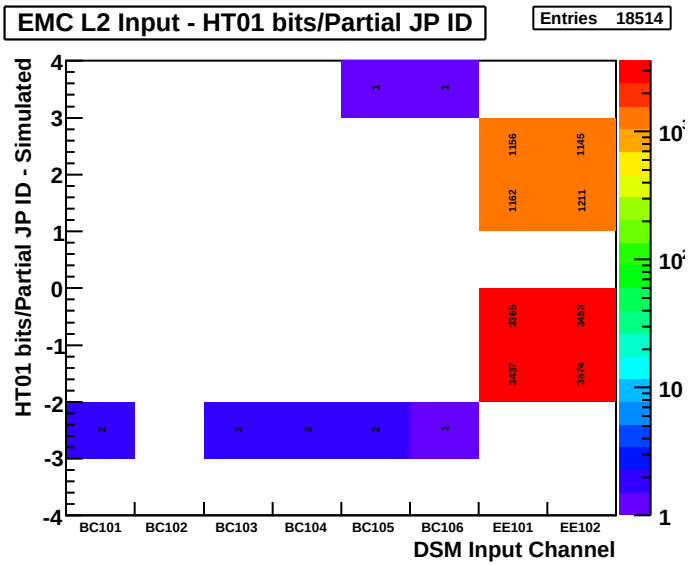

EMC L2 Input - JPZ/JPC bits
Entries 202592
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

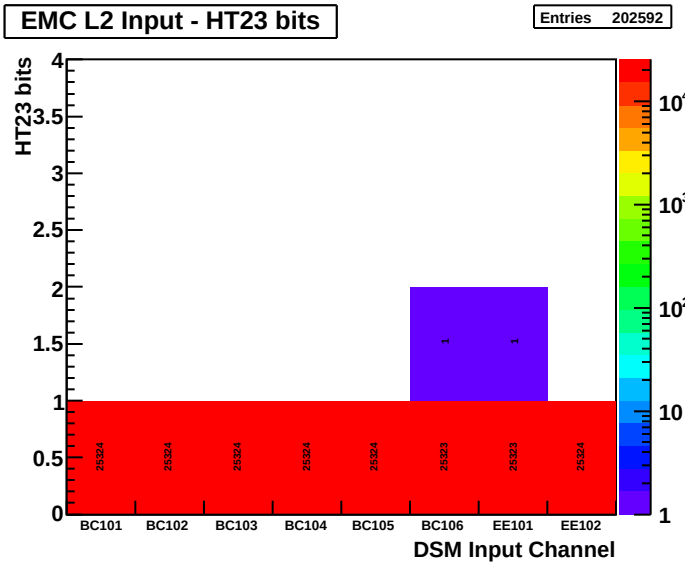

EMC L2 Input - JPZ/JPC bits
Entries 17
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

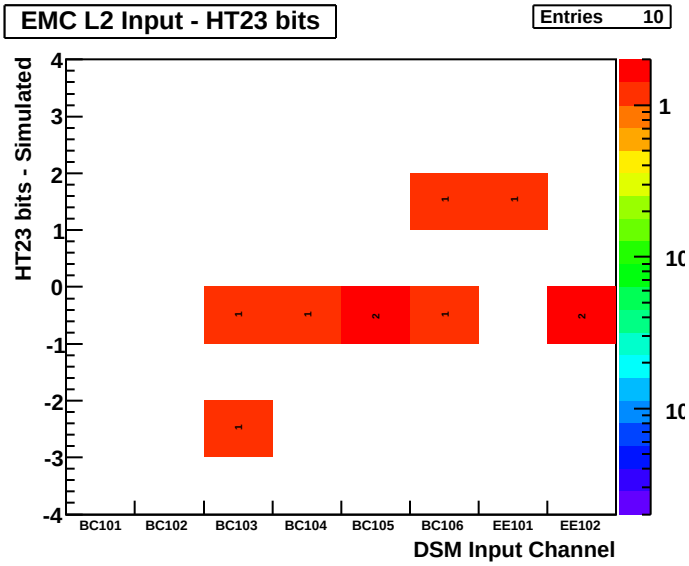

EMC L2 Input - Partial JP Sum
Entries 202592
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

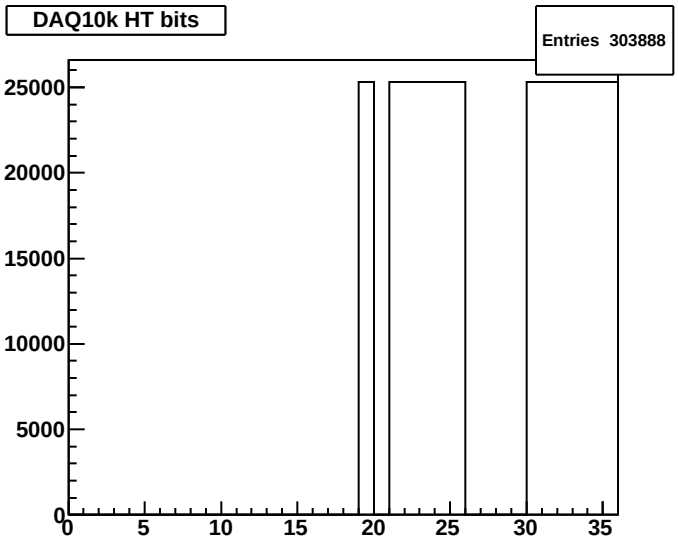

EMC L2 Input - Partial JP Sum
Entries 90235
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

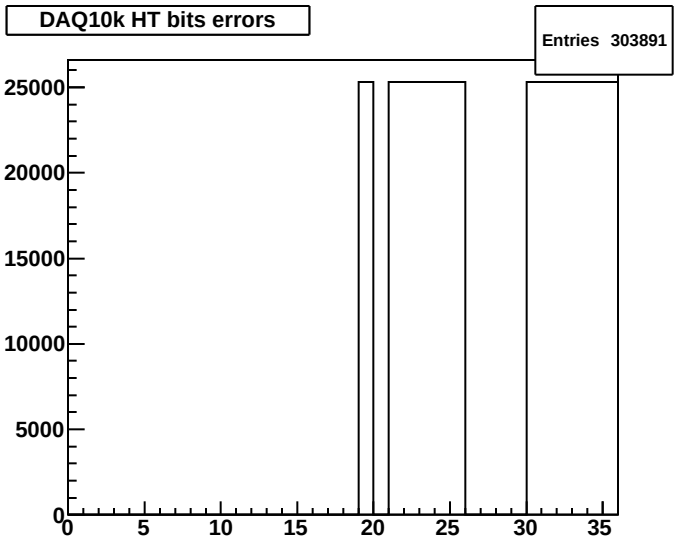

EMC L2 Input - HT01 bits/Partial JP ID
Entries 202592
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

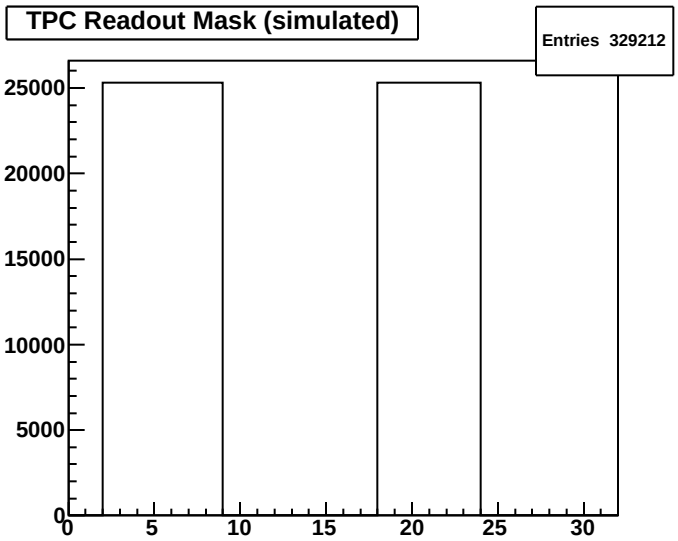

EMC L2 Input - HT01 bits/Partial JP ID
Entries 18514
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

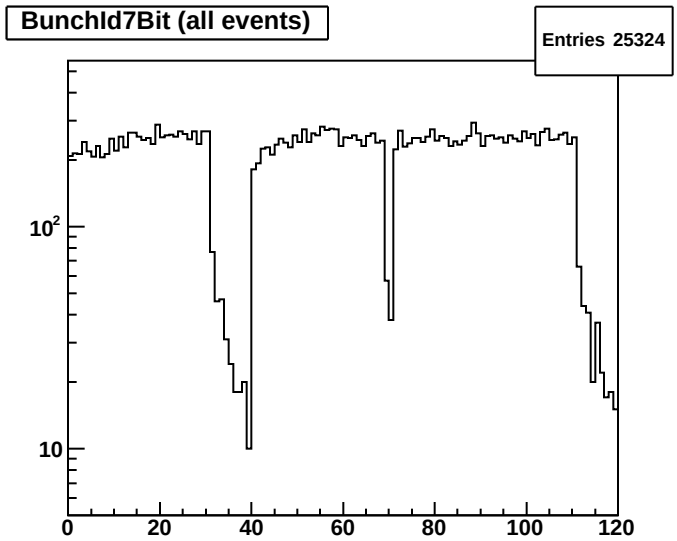

EMC L2 Input - HT23 bits
Entries 202592
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

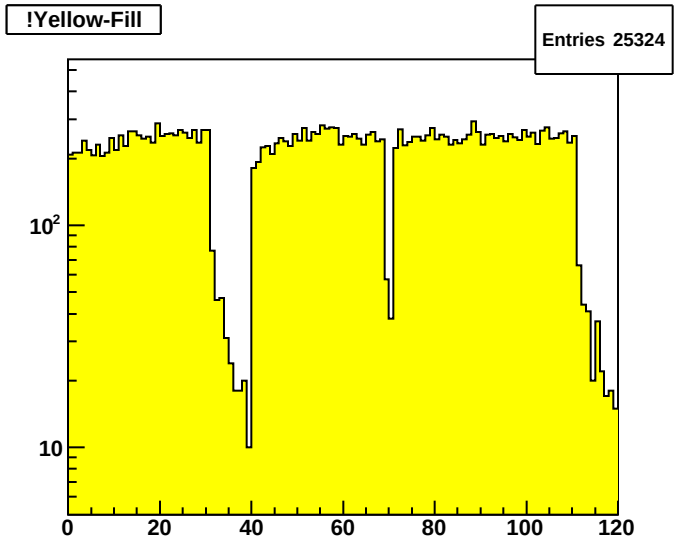

EMC L2 Input - HT23 bits
Entries 10
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

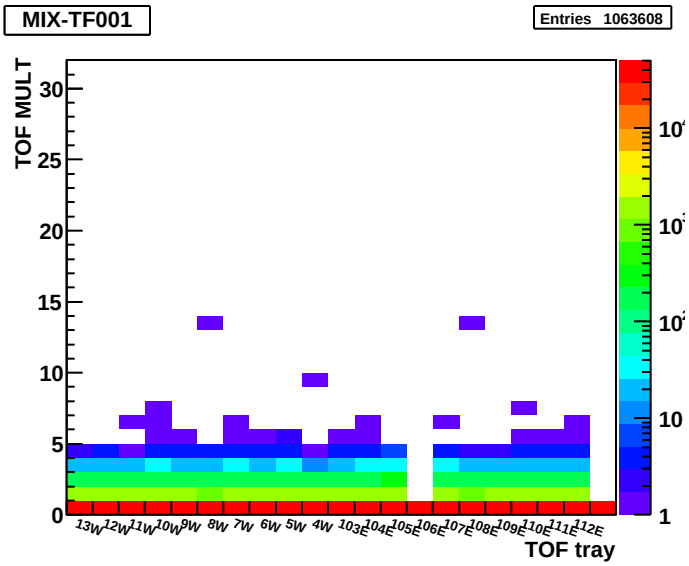

DAQ10k HT bits
Entries 303888
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

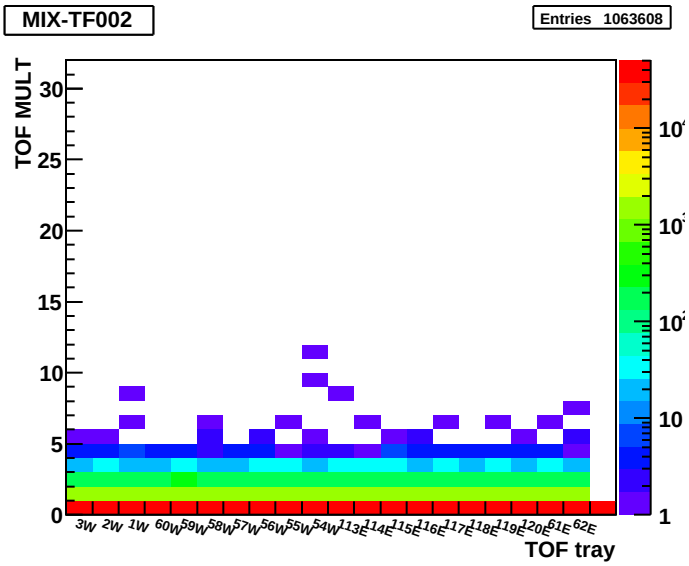

DAQ10k HT bits errors
Entries 303891
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

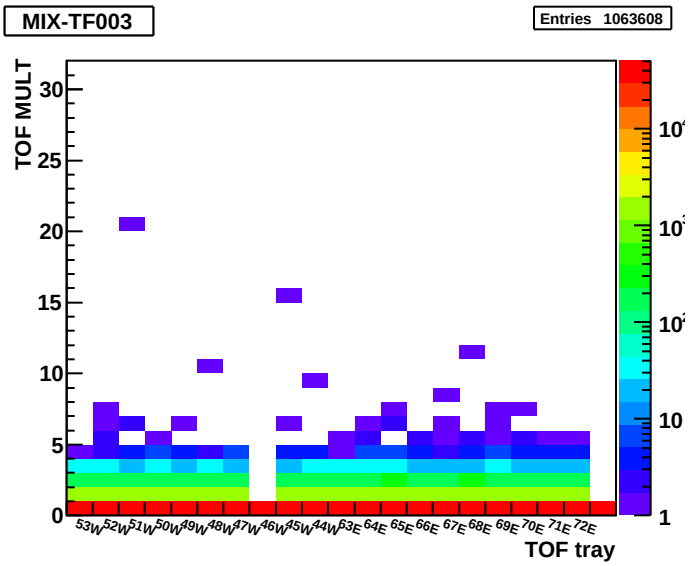

TPC Readout Mask (simulated)
Entries 329212
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

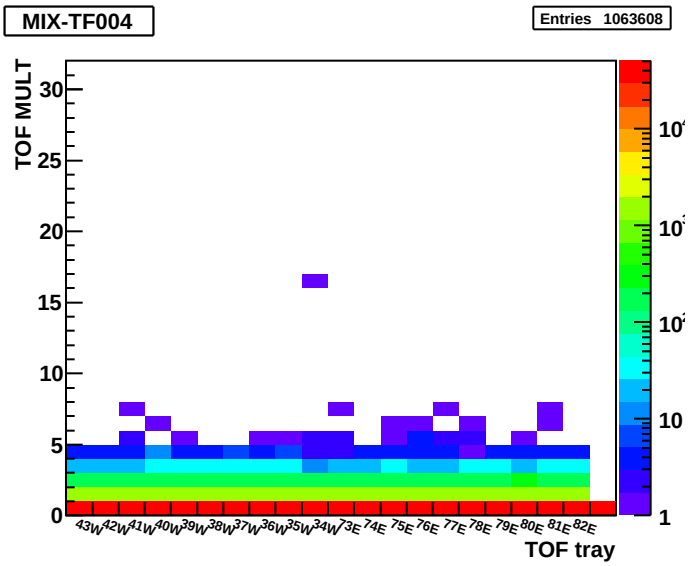

BunchId7Bit (all events)
Entries 25324
10^2
10
0 20 40 60 80 100 120

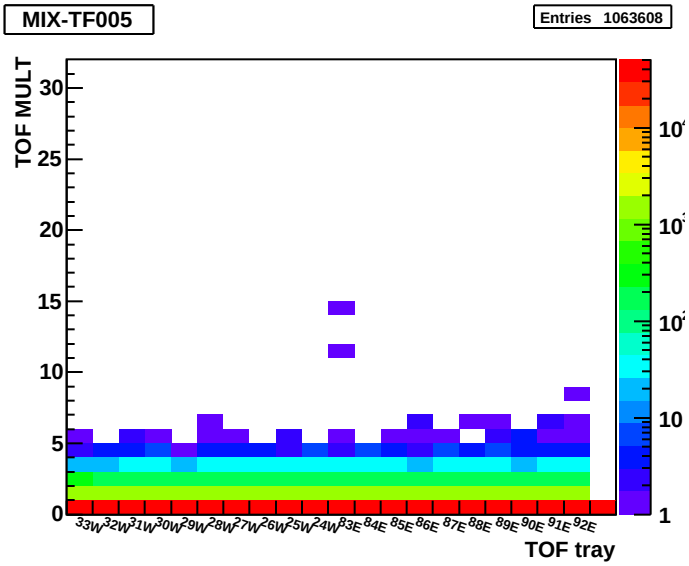

!Yellow-Fill
Entries 25324
10^2
10
0 20 40 60 80 100 120

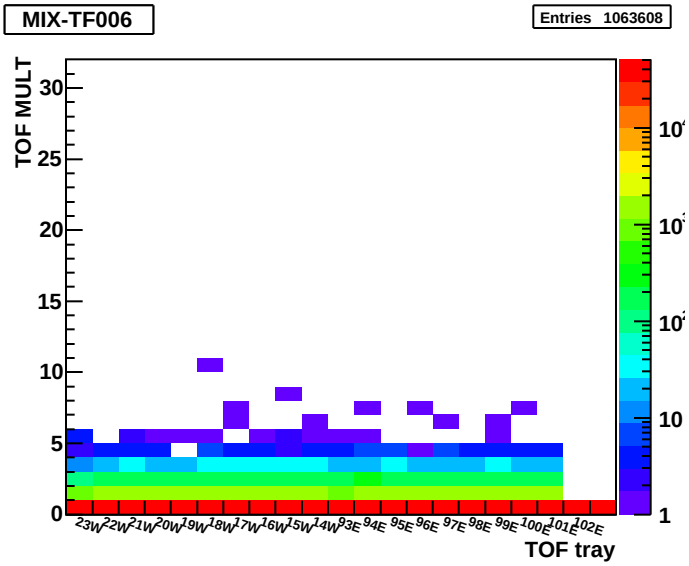

MIX-TF001
Entries 1063608
TOF MULT
TOF tray

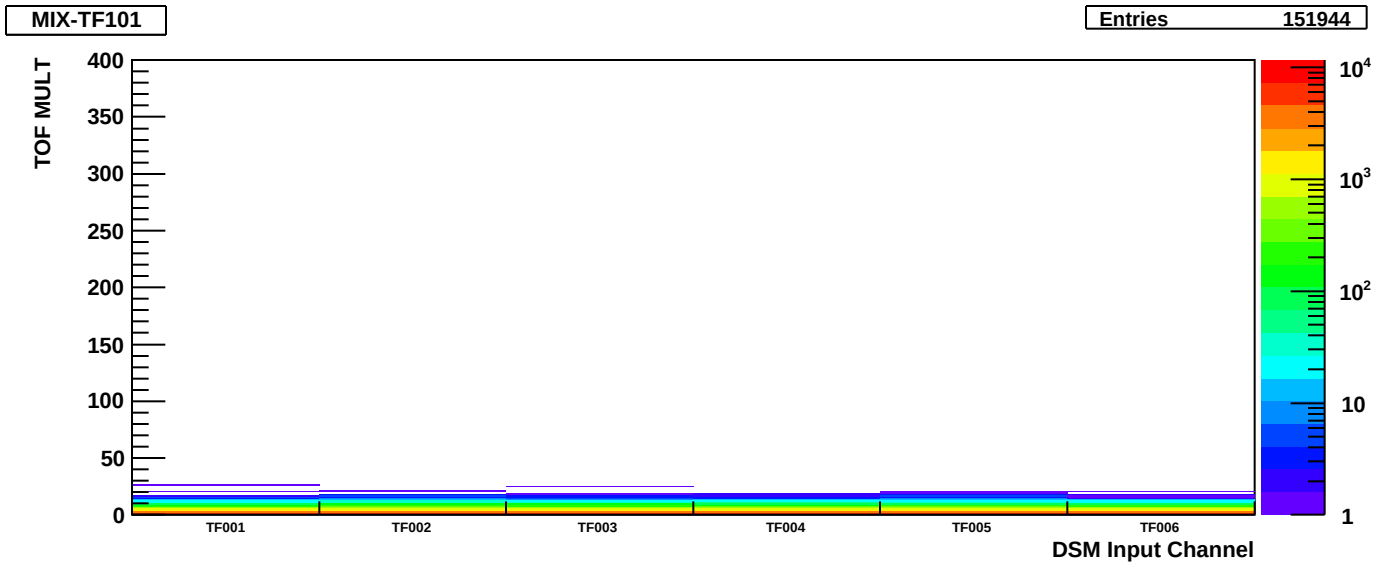

MIX-TF002
Entries 1063608
TOF MULT
TOF tray

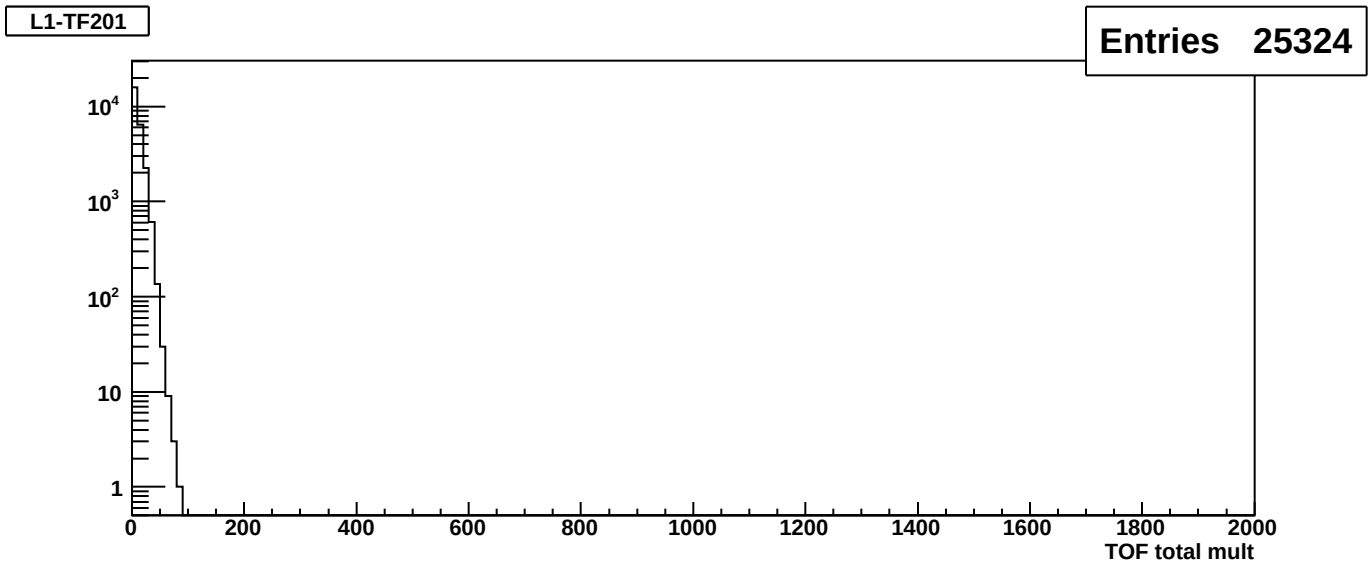

MIX-TF003
Entries 1063608
TOF MULT
TOF tray

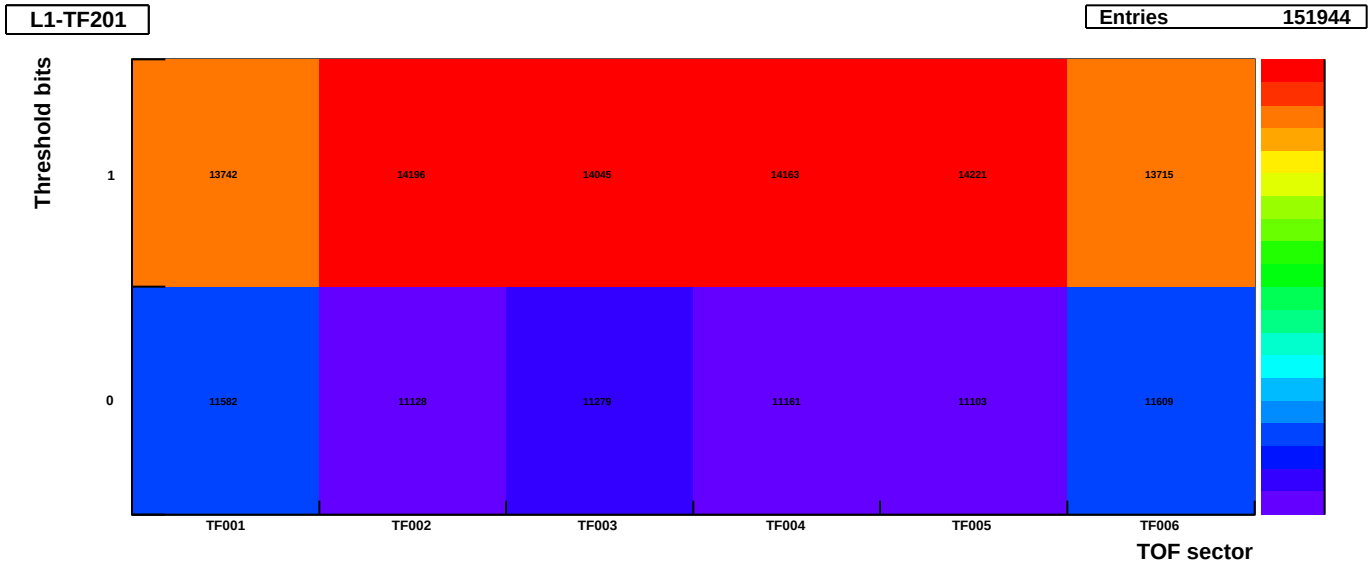

MIX-TF004
Entries 1063608
TOF MULT
TOF tray

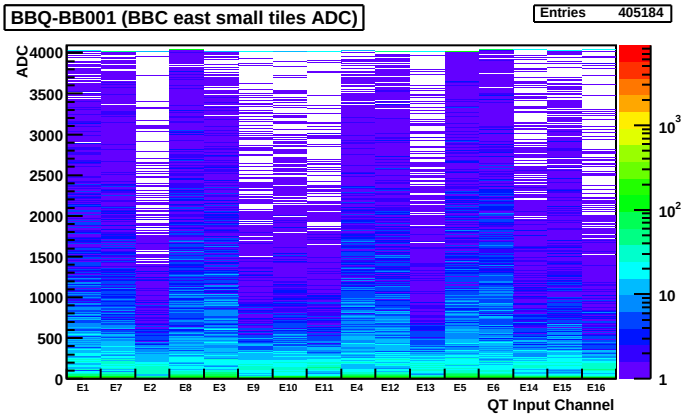

MIX-TF005
Entries 1063608
TOF MULT
TOF tray

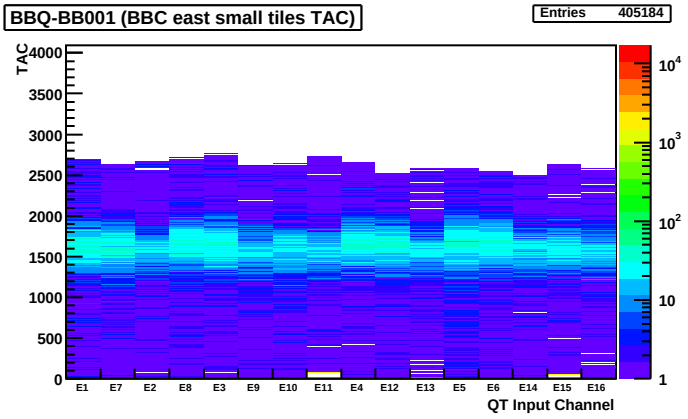

MIX-TF006
Entries 1063608
TOF MULT
TOF tray

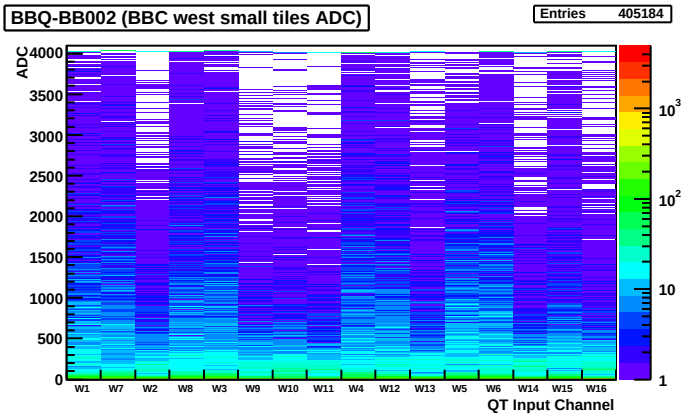

MIX-TF101
Entries 151944
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

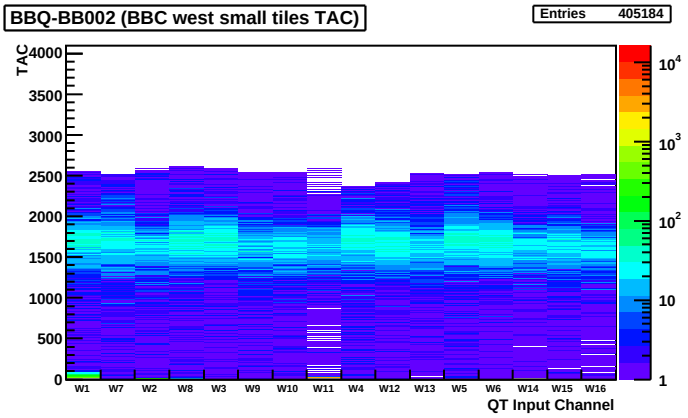

L1-TF201
Entries 25324
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

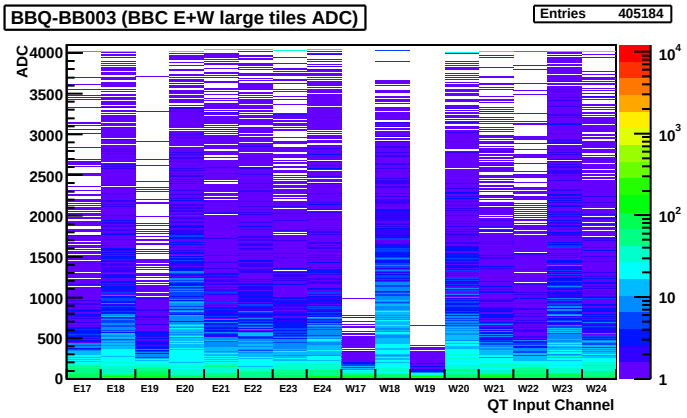

L1-TF201
Entries 151944
Threshold bits
1
0
13742
14196
14045
14163
14221
13715
11582
11128
11279
11161
11103
11609
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

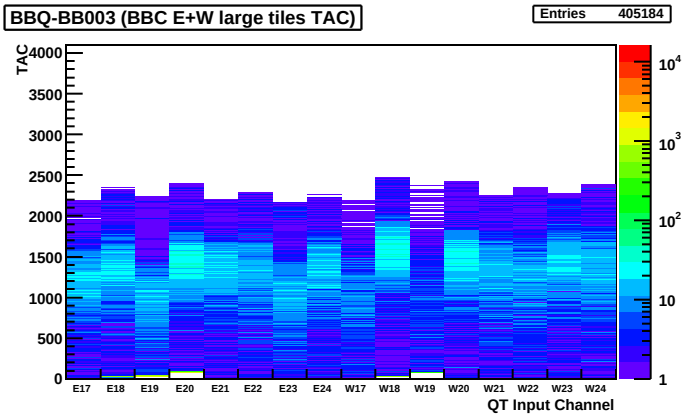

BBQ-BB001 (BBC east small tiles ADC)
Entries 405184
ADC
QT Input Channel

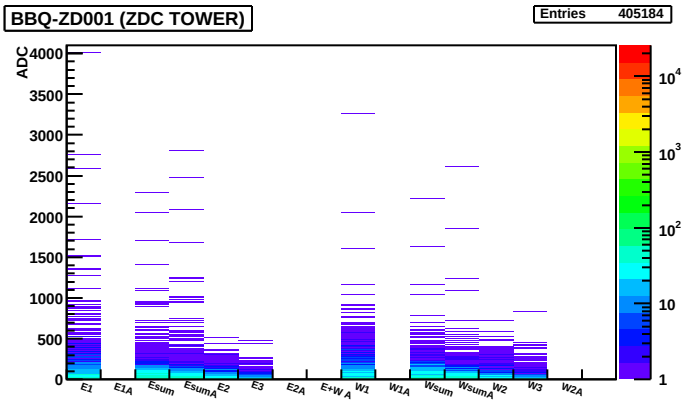

BBQ-BB001 (BBC east small tiles TAC)
Entries 405184
TAC
QT Input Channel

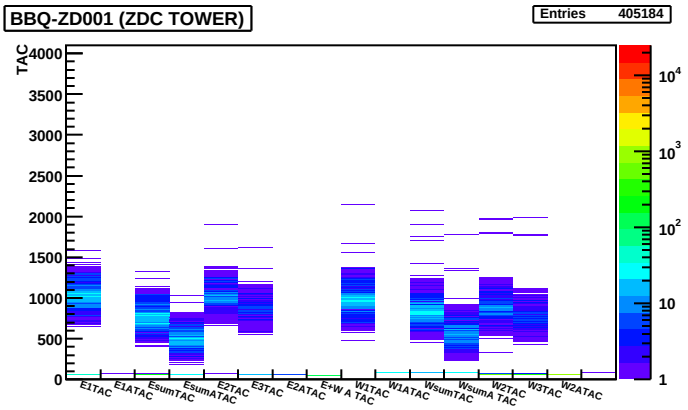

BBQ-BB002 (BBC west small tiles ADC)
Entries 405184
ADC
QT Input Channel

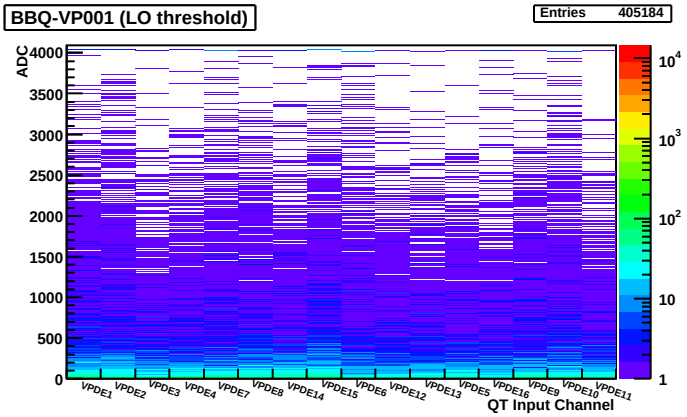

BBQ-BB002 (BBC west small tiles TAC)
Entries 405184
TAC
QT Input Channel

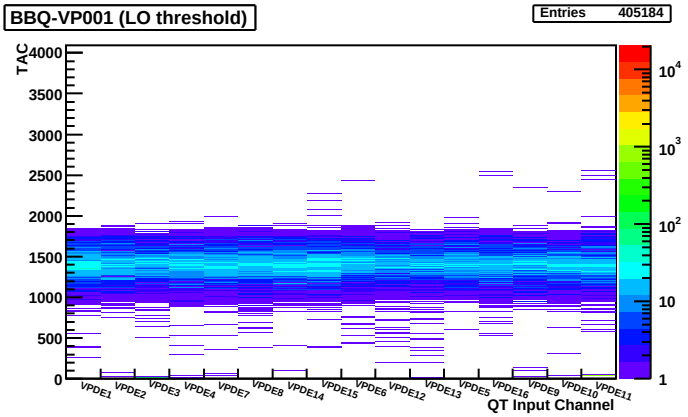

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 405184
ADC
QT Input Channel

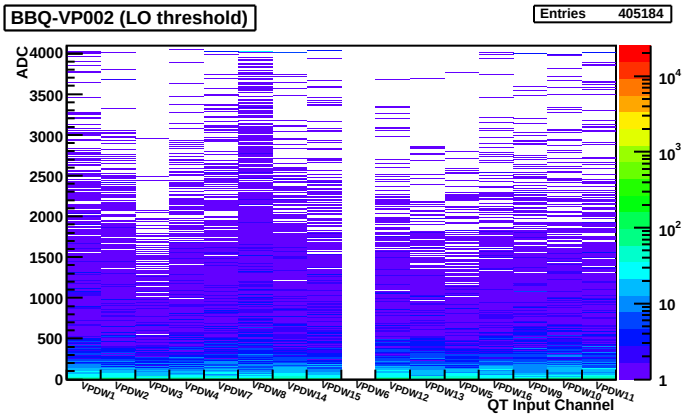

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 405184
TAC
QT Input Channel

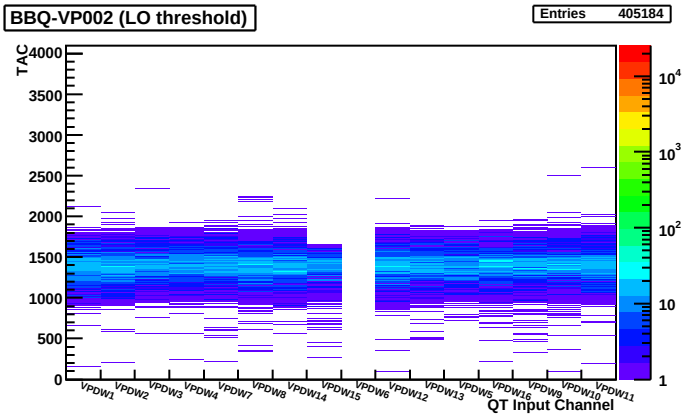

BBQ-ZD001 (ZDC TOWER)
Entries 405184
ADC

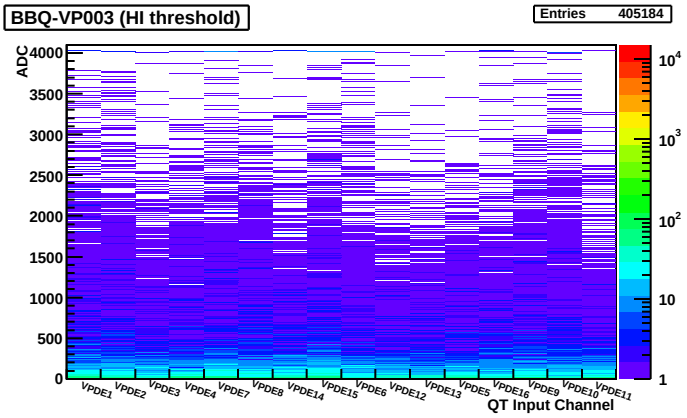

BBQ-ZD001 (ZDC TOWER)
Entries 405184
TAC

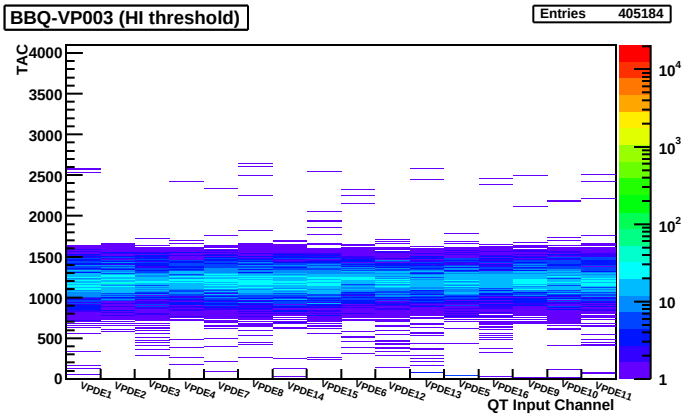

BBQ-VP001 (LO threshold)
Entries 405184
ADC
QT Input Channel

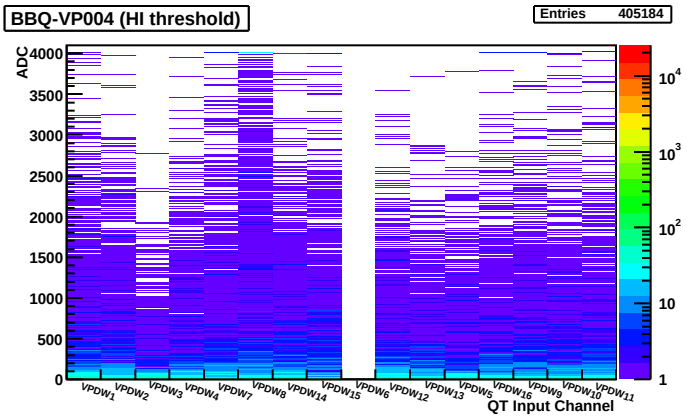

BBQ-VP001 (LO threshold)
Entries 405184
TAC
QT Input Channel

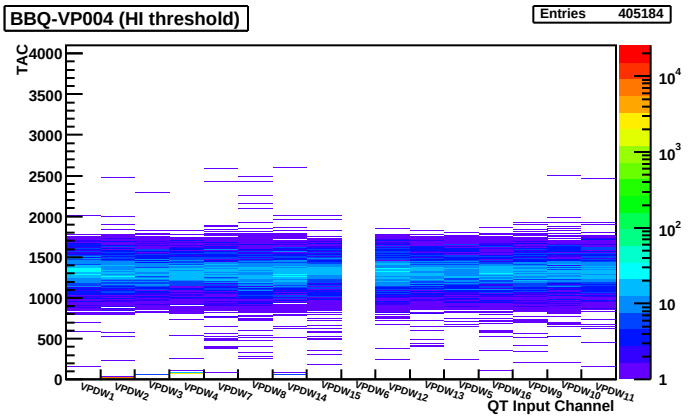

BBQ-VP002 (LO threshold)
Entries 405184
ADC
QT Input Channel

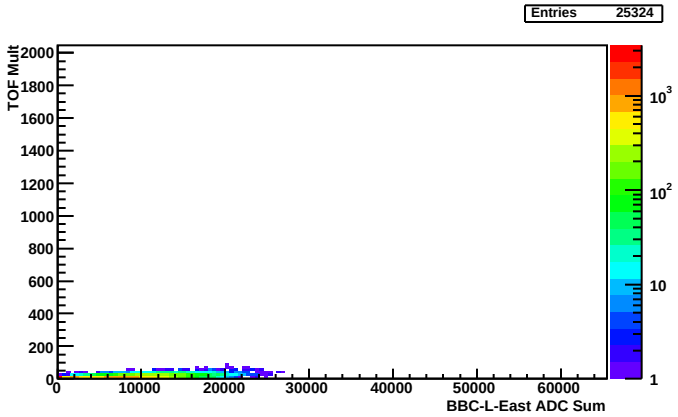

BBQ-VP002 (LO threshold)
Entries 405184
TAC
QT Input Channel

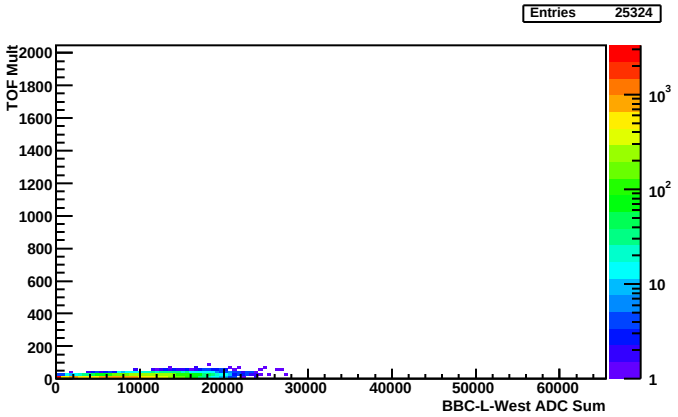

BBQ-VP003 (HI threshold)
Entries 405184
ADC
QT Input Channel

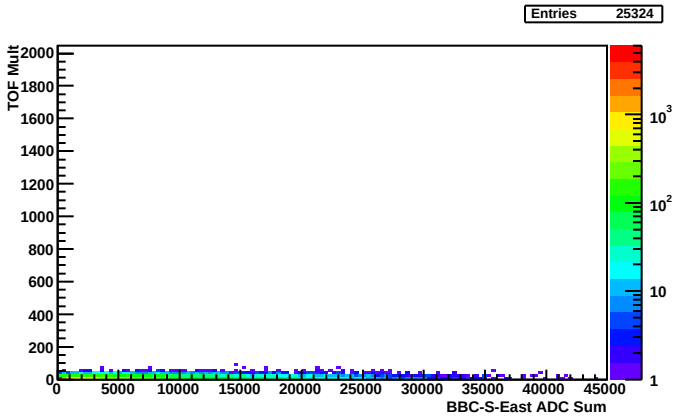

BBQ-VP003 (HI threshold)
Entries 405184
TAC
QT Input Channel

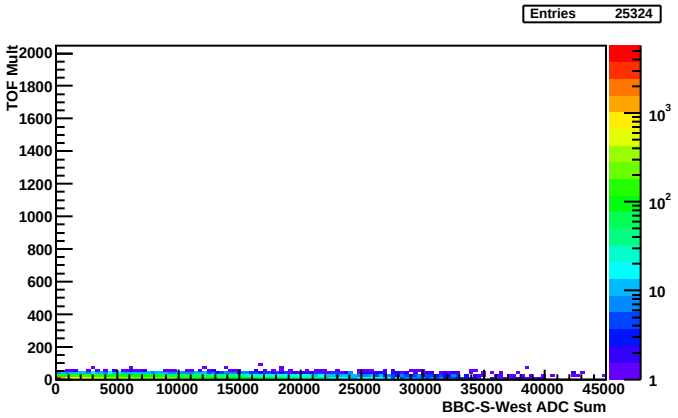

BBQ-VP004 (HI threshold)
Entries 405184
ADC
QT Input Channel

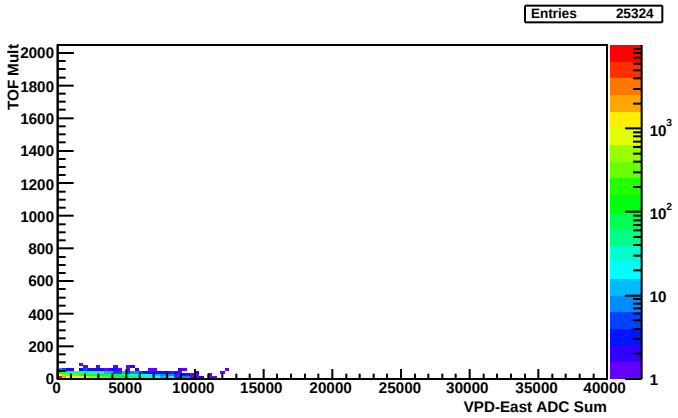

BBQ-VP004 (HI threshold)
Entries 405184
TAC
QT Input Channel

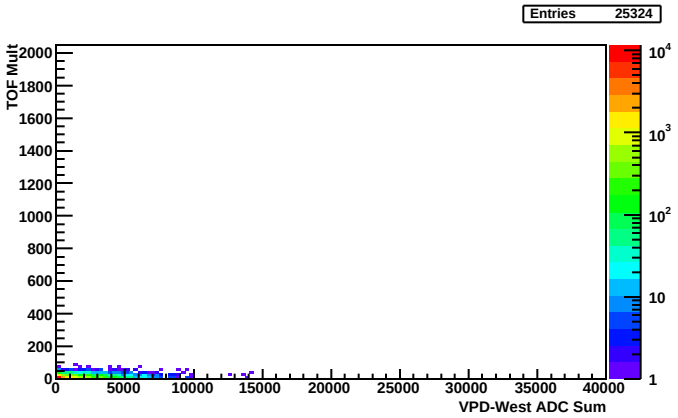

Entries 25324
TOF Mult
BBC-L-East ADC Sum

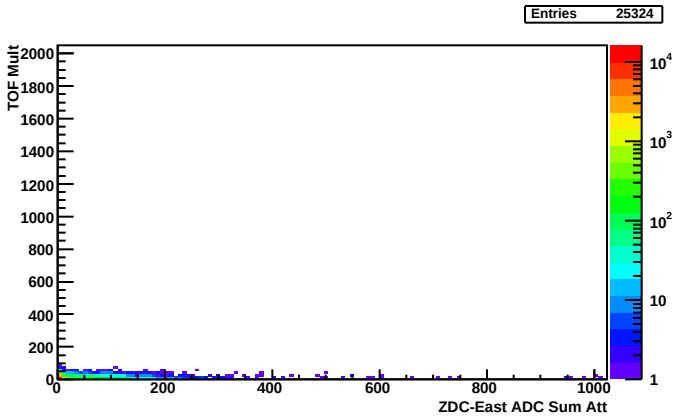

Entries 25324
TOF Mult
BBC-L-West ADC Sum

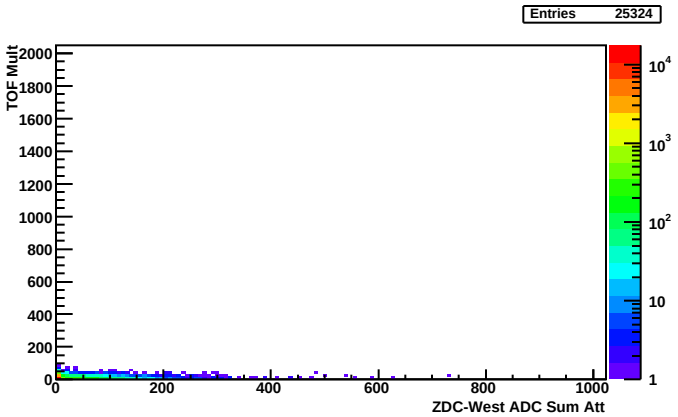

Entries 25324
TOF Mult
BBC-S-East ADC Sum

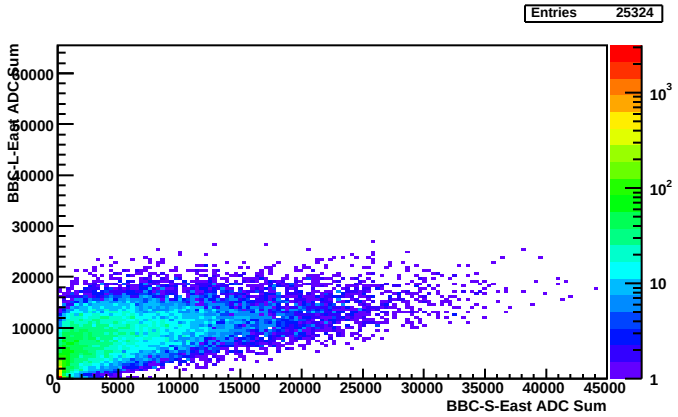

Entries 25324
TOF Mult
BBC-S-West ADC Sum

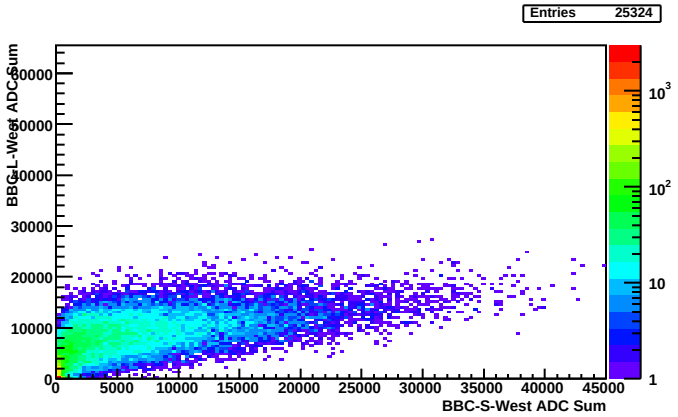

Entries 25324
TOF Mult
VPD-East ADC Sum

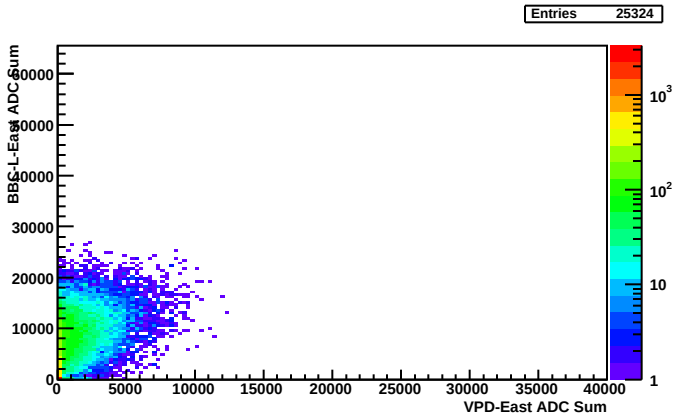

Entries 25324
TOF Mult
VPD-West ADC Sum

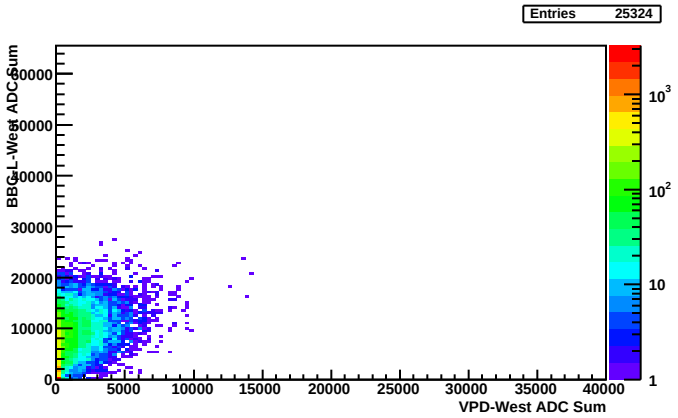

Entries 25324
TOF Mult
ZDC-East ADC Sum Att

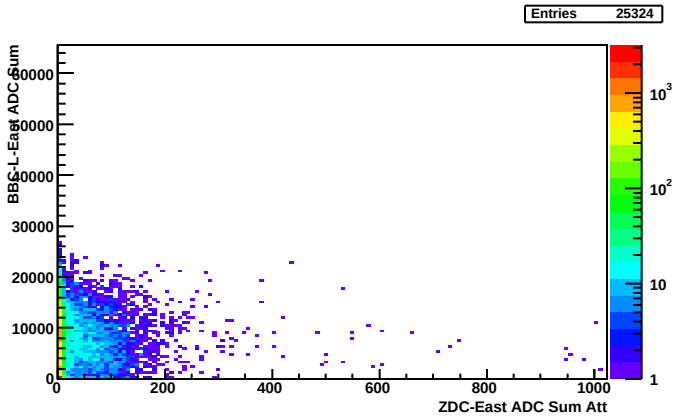

Entries 25324
TOF Mult
ZDC-West ADC Sum Att

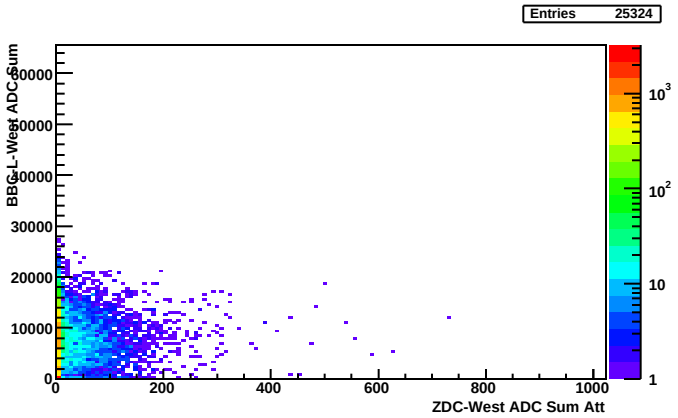

Entries 25324
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 25324
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 25324
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 25324
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 25324
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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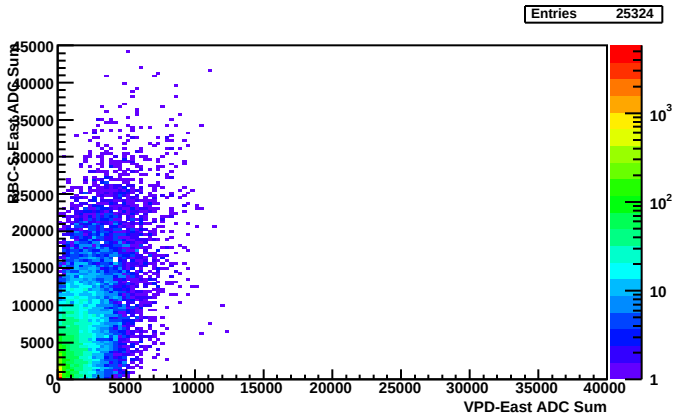
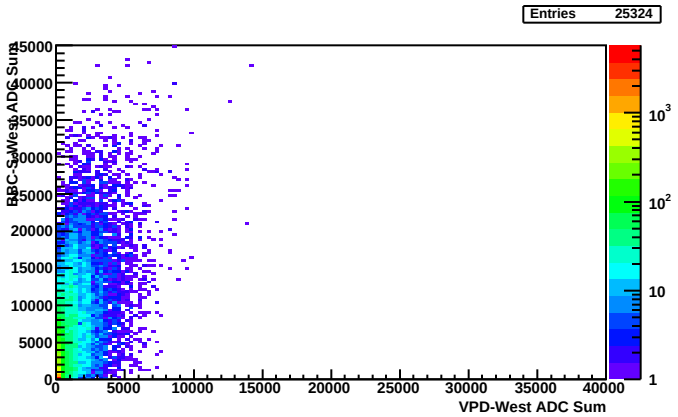
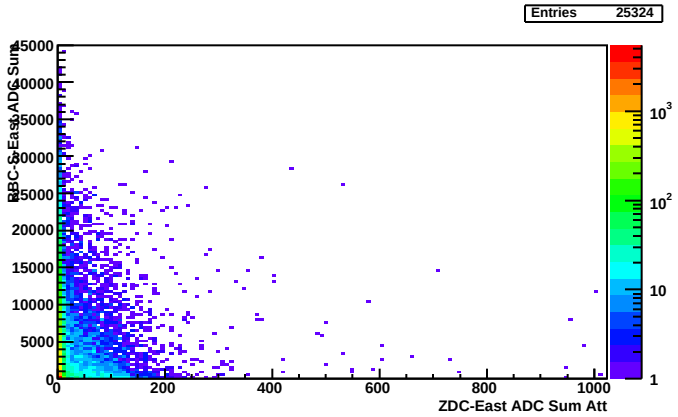
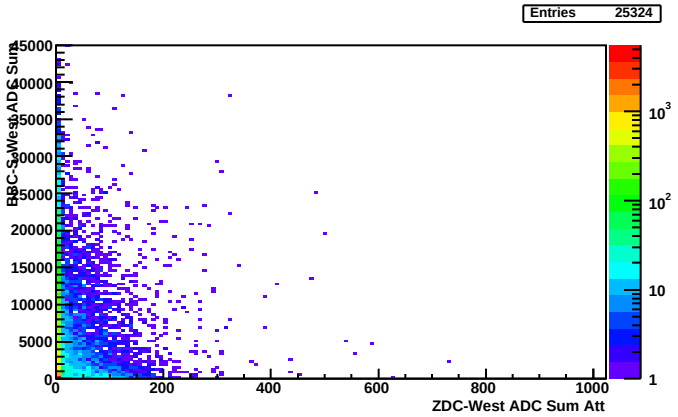
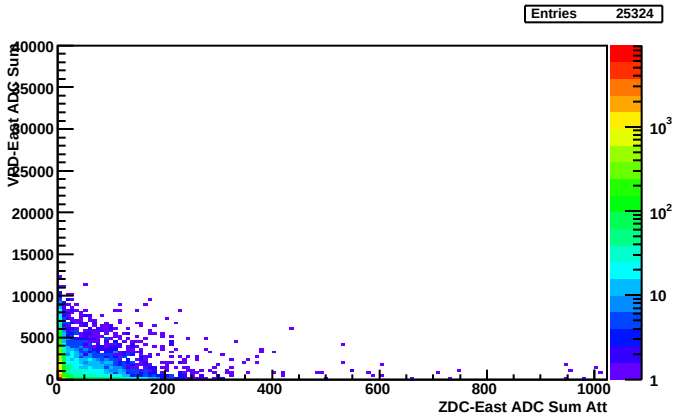
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

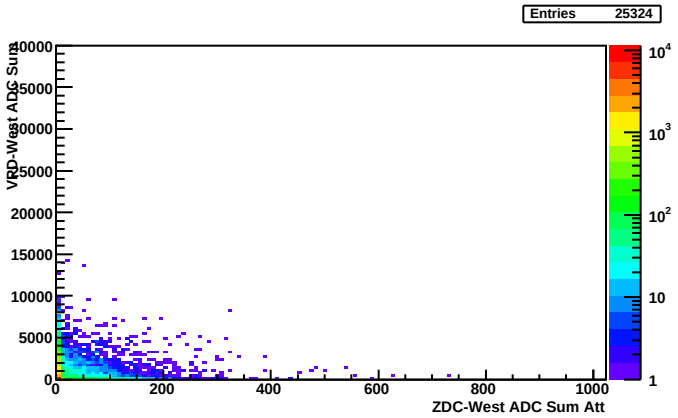

Entries 25324
BBC-S-East ADC Sum
VPD-East ADC Sum

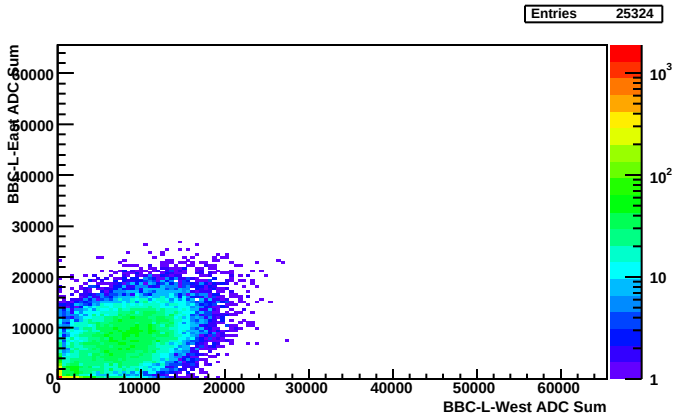

Entries 25324
BBC-S-West ADC Sum
VPD-West ADC Sum

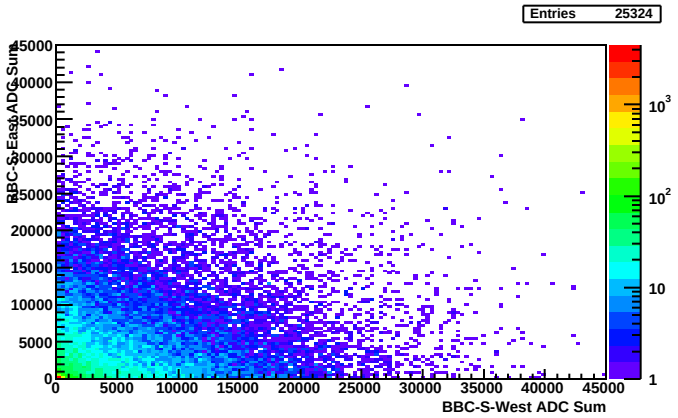

Entries 25324
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

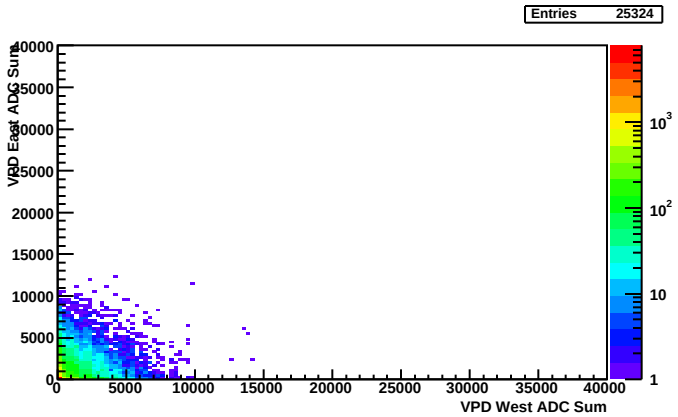

Entries 25324
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

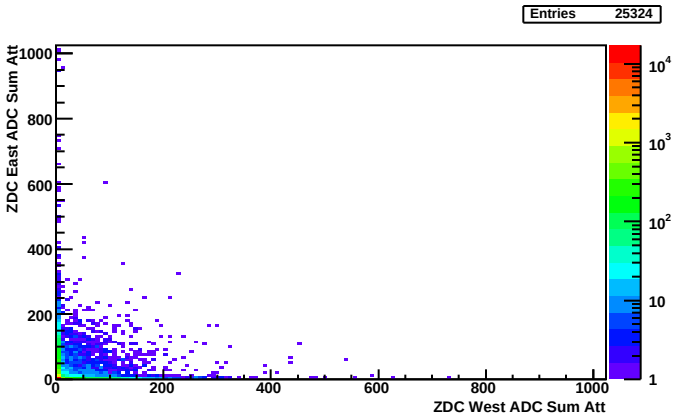

Entries 25324
VPD-East ADC Sum
ZDC-East ADC Sum Att

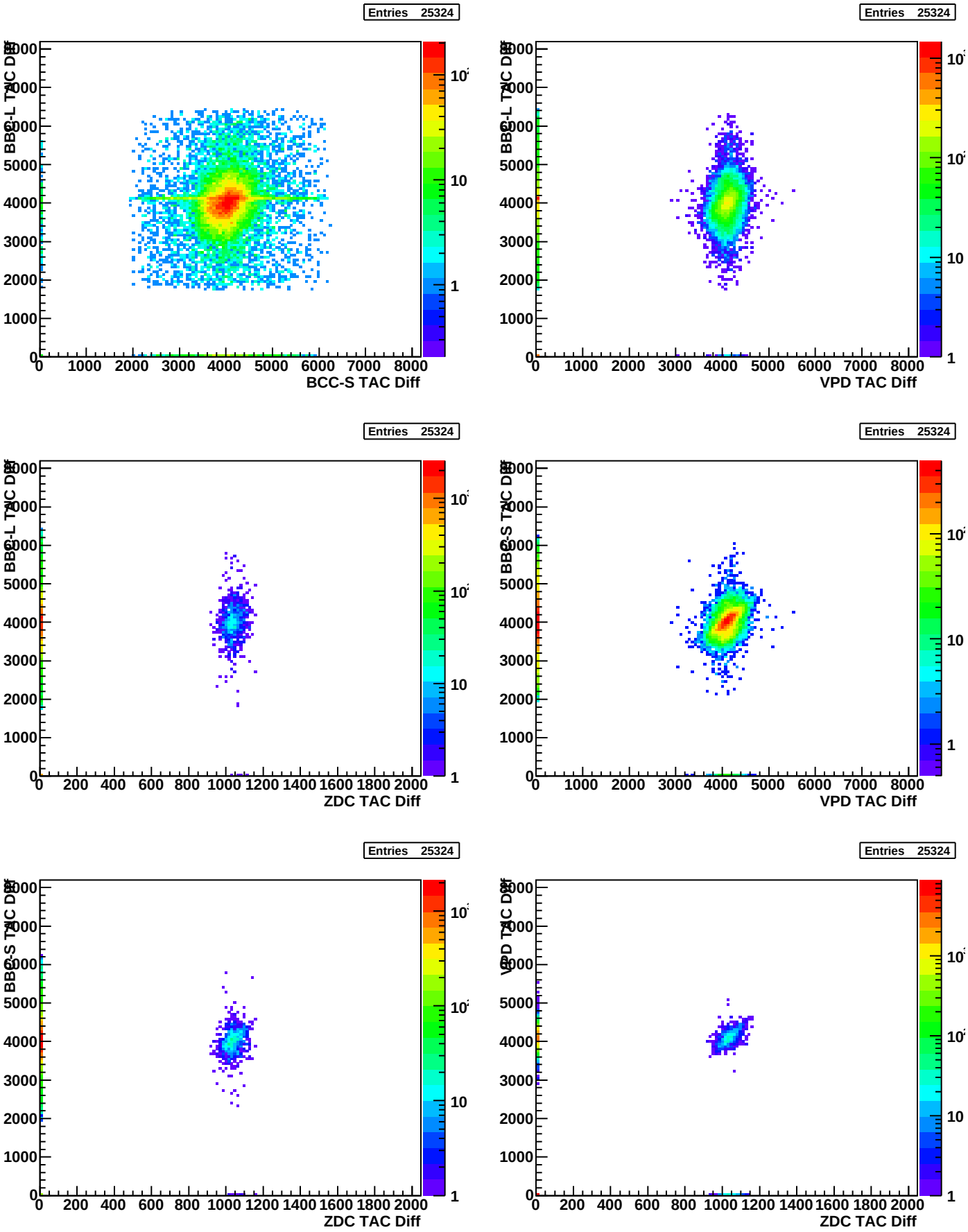

Entries 25324
VPD-West ADC Sum
ZDC-West ADC Sum Att

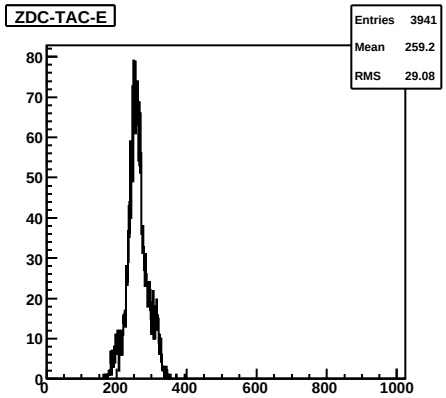

Entries 25324
BBC-L-East ADC Sum
BBC-L-West ADC Sum

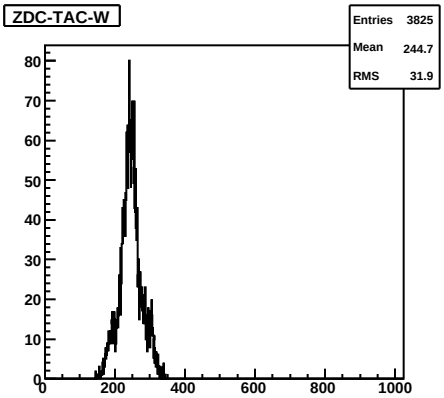

Entries 25324
BBC-S-East ADC Sum
BBC-S-West ADC Sum

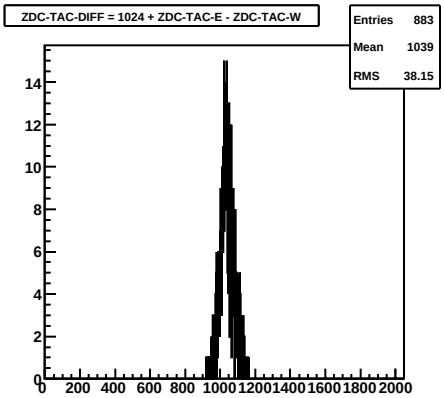

Entries 25324
VPD East ADC Sum
VPD West ADC Sum

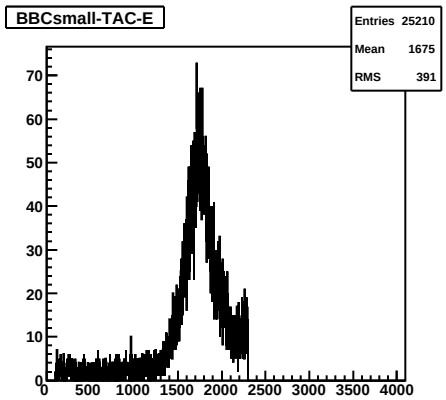

Entries 25324
ZDC East ADC Sum Att
ZDC West ADC Sum Att

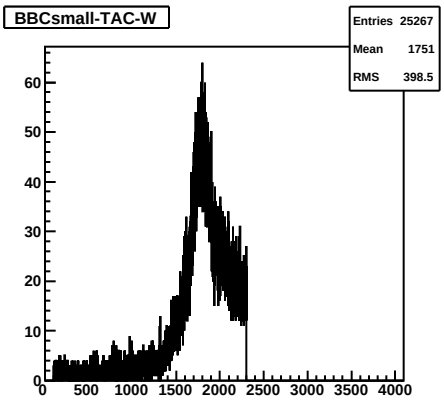

Entries 25324
BBC-L TAC Diff
BCC-S TAC Diff
Entries 25324
BBC-L TAC Diff
VPD TAC Diff
Entries 25324
BBC-L TAC Diff
ZDC TAC Diff
Entries 25324
BBC-S TAC Diff
VPD TAC Diff
Entries 25324
BBC-S TAC Diff
ZDC TAC Diff
Entries 25324
VPD TAC Diff
ZDC TAC Diff

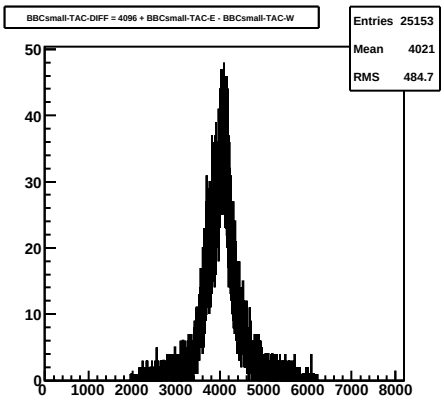

ZDC-TAC-E
Entries 3941
Mean 259.2
RMS 29.08

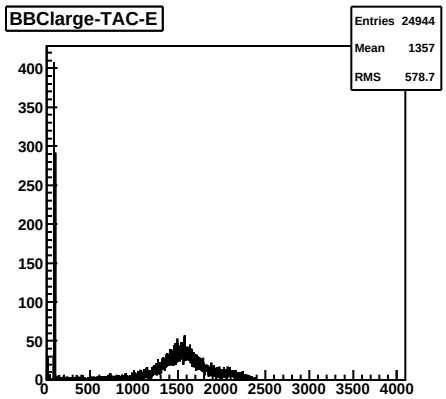

ZDC-TAC-W
Entries 3825
Mean 244.7
RMS 31.9

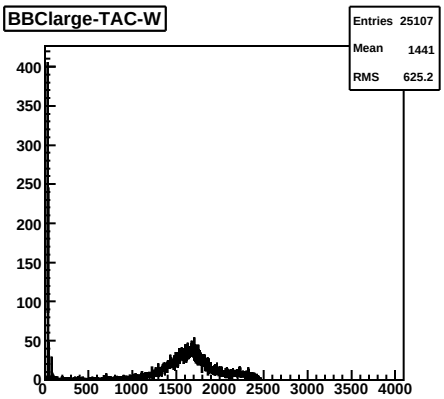

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 883
Mean 1039
RMS 38.15

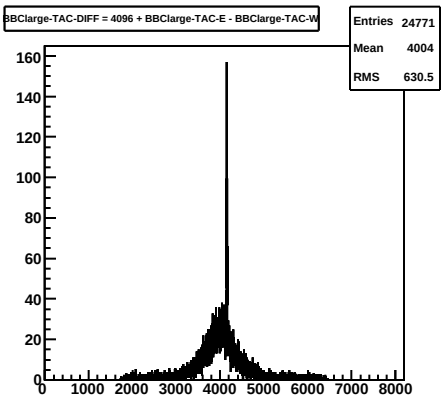

BBCsmall-TAC-E
Entries 25210
Mean 1675
RMS 391

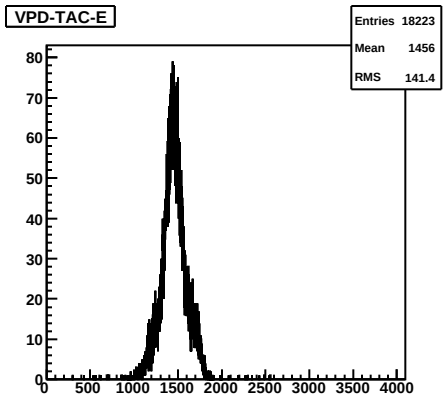

BBCsmall-TAC-W
Entries 25267
Mean 1751
RMS 398.5

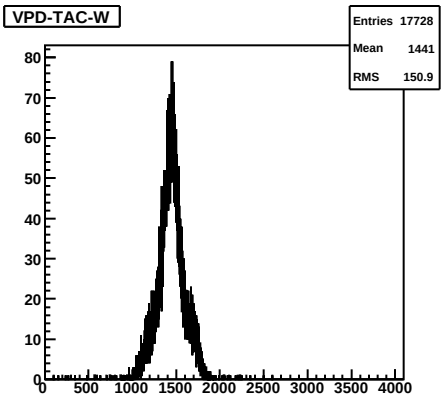

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 25153
Mean 4021
RMS 484.7

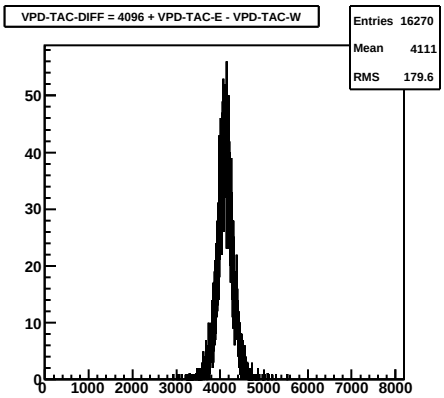

BBClarge-TAC-E
Entries 24944
Mean 1357
RMS 578.7

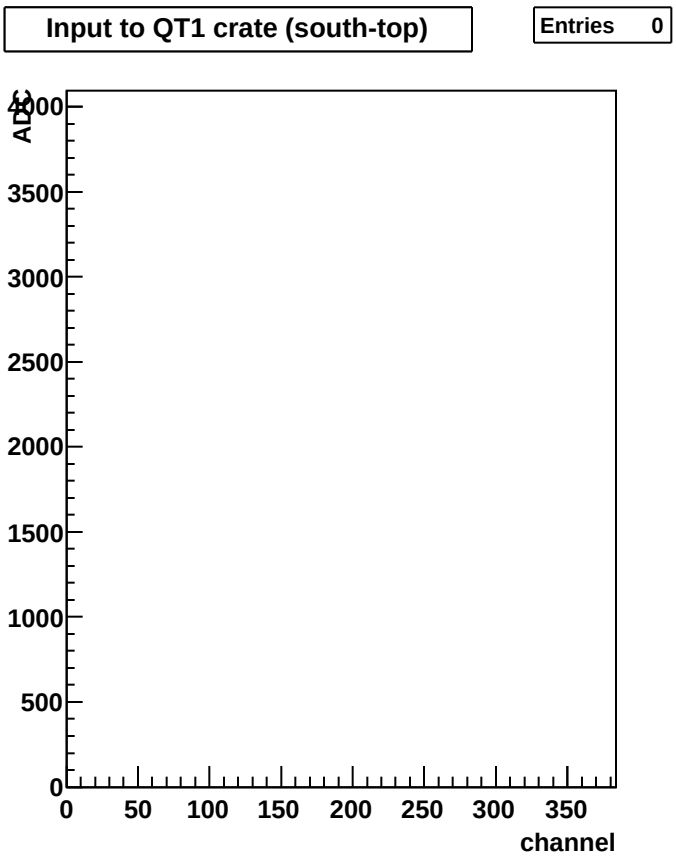

BBClarge-TAC-W
Entries 25107
Mean 1441
RMS 625.2

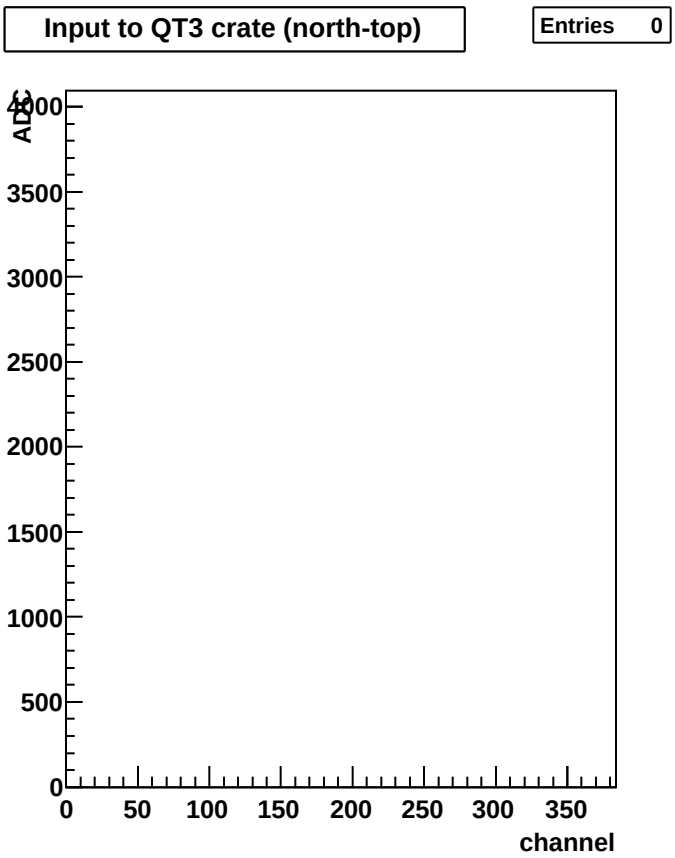

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 24771
Mean 4004
RMS 630.5

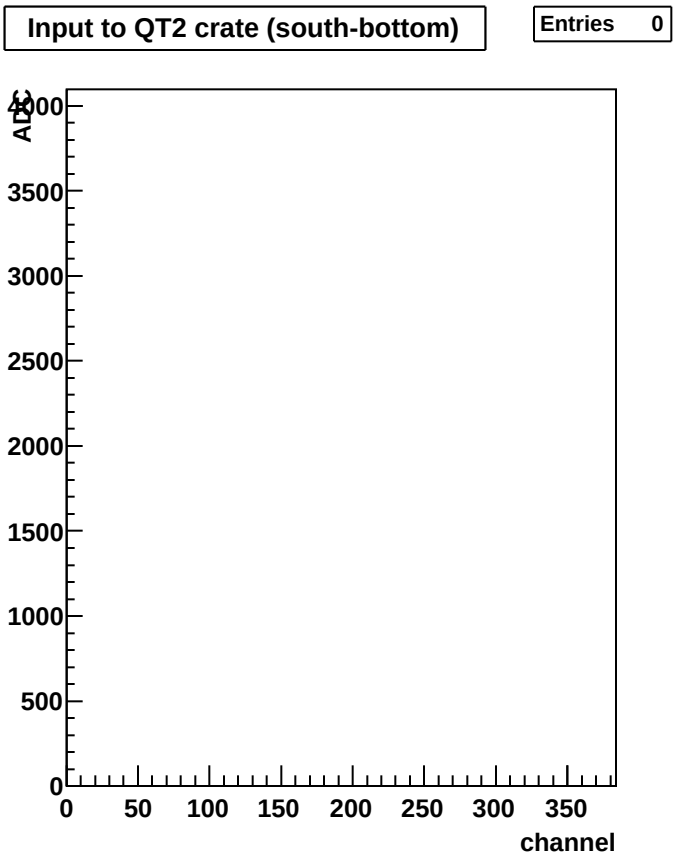

VPD-TAC-E
Entries 18223
Mean 1456
RMS 141.4

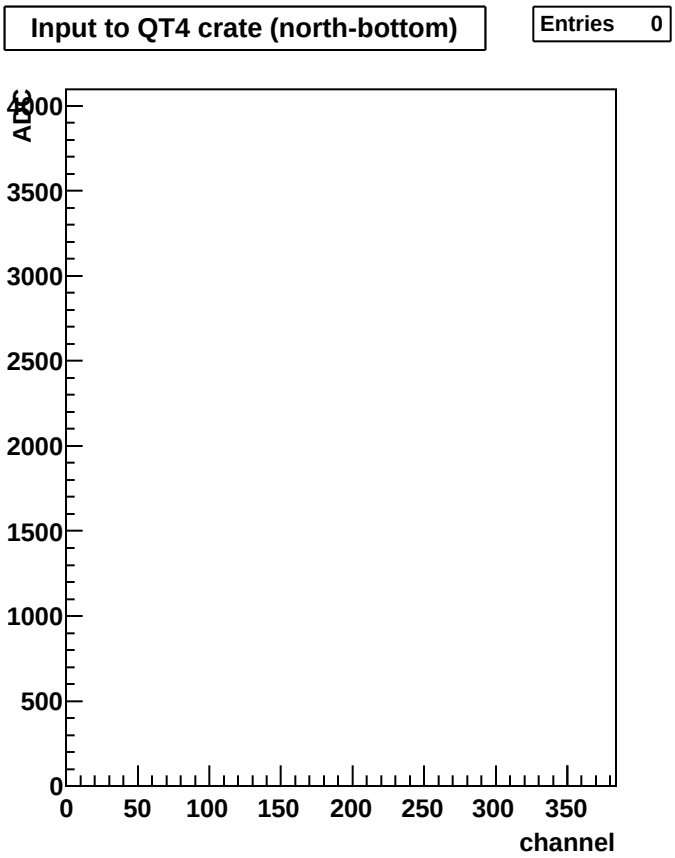

VPD-TAC-W
Entries 17728
Mean 1441
RMS 150.9

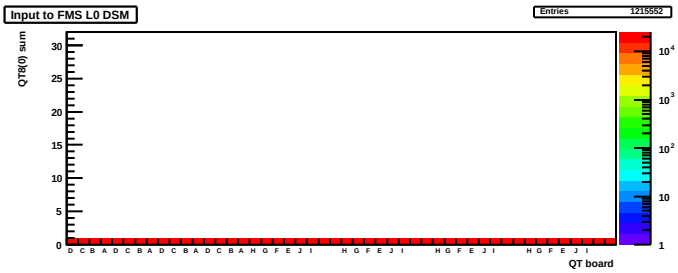

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 16270
Mean 4111
RMS 179.6

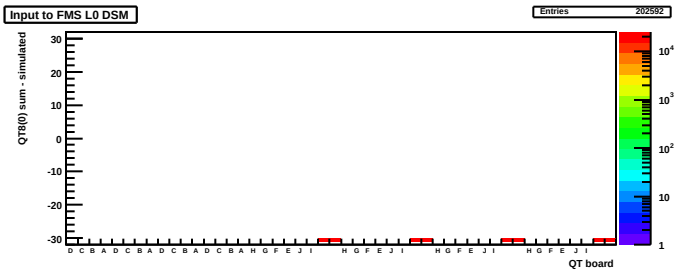

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

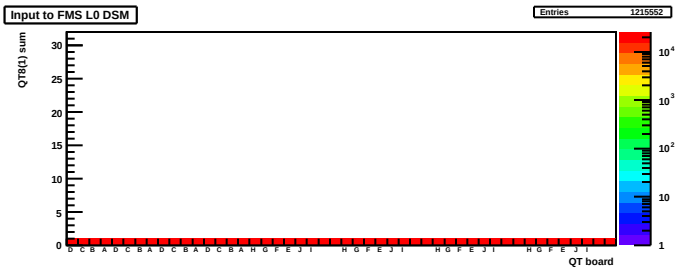

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

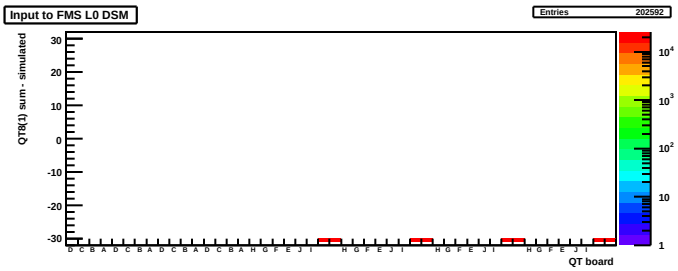

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

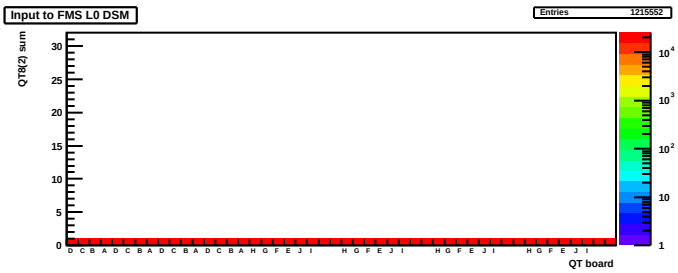

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

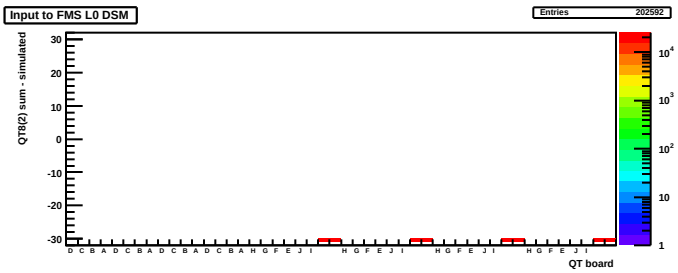

Input to FMS L0 DSM
Entries 1215552
QT8(0) sum
QT board

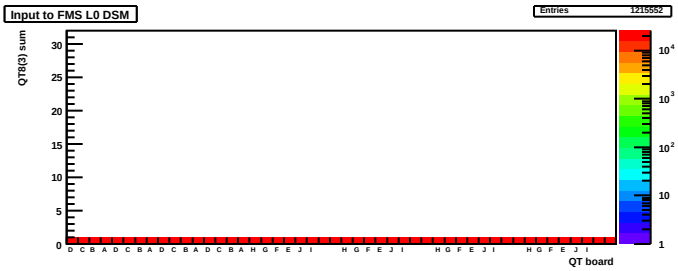

Input to FMS L0 DSM
Entries 202592
QT8(0) sum - simulated
QT board

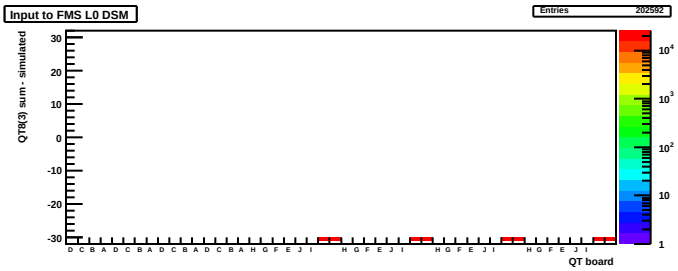

Input to FMS L0 DSM
Entries 1215552
QT8(1) sum
QT board

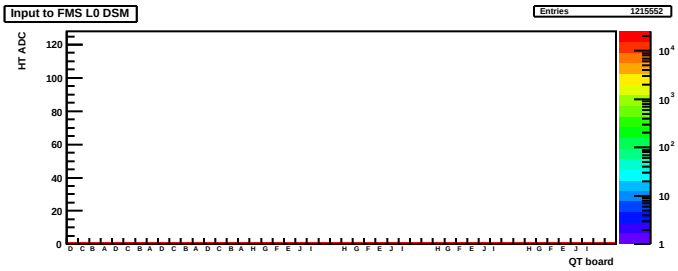

Input to FMS L0 DSM
Entries 202592
QT8(1) sum - simulated
QT board

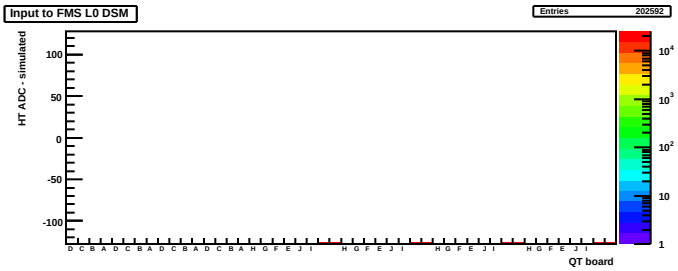

Input to FMS L0 DSM
Entries 1215552
QT8(2) sum
QT board

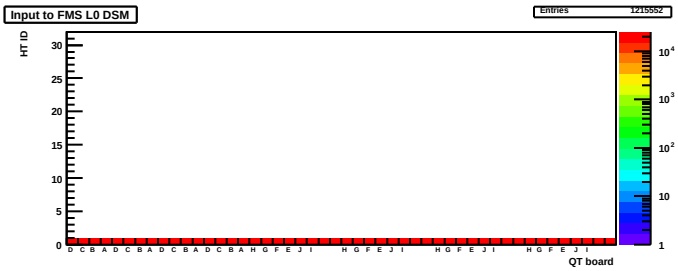

Input to FMS L0 DSM
Entries 202592
QT8(2) sum - simulated
QT board

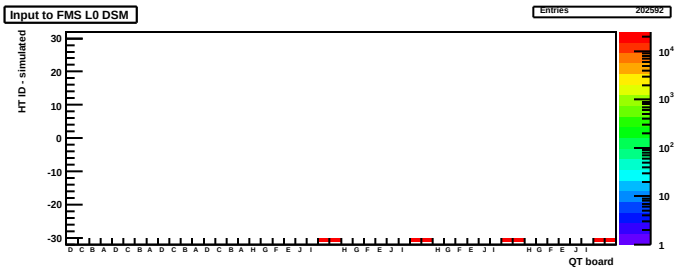

Input to FMS L0 DSM
Entries 1215552
QT8(3) sum
QT board

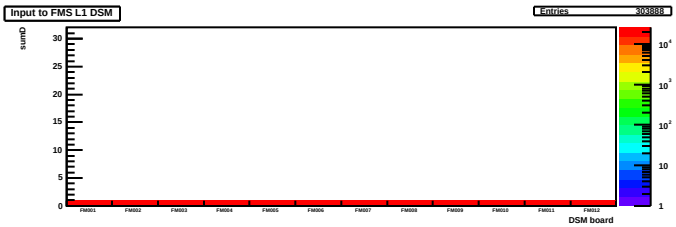

Input to FMS L0 DSM
Entries 202592
QT8(3) sum - simulated
QT board

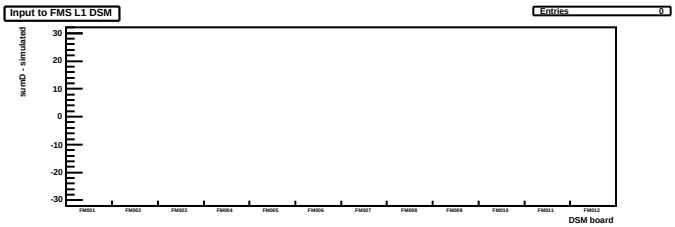

Input to FMS L0 DSM
Entries 1215552
HT ADC
QT board

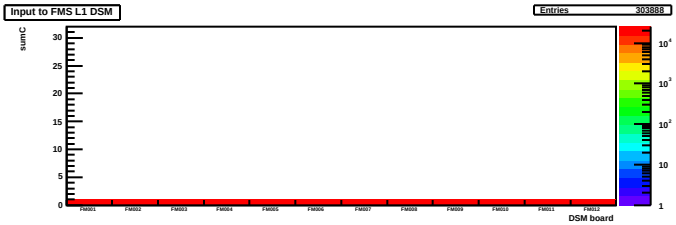

Input to FMS L0 DSM
Entries 202592
HT ADC - simulated
QT board

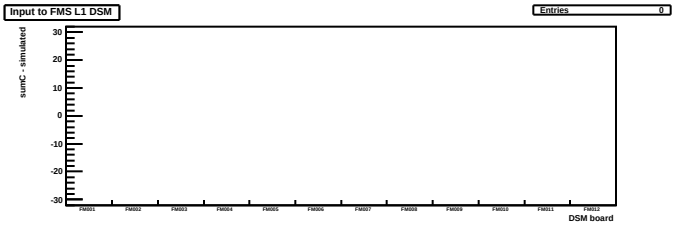

Input to FMS L0 DSM
Entries 1215552
HT ID
QT board

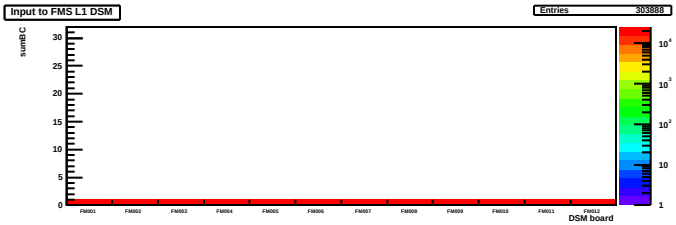

Input to FMS L0 DSM
Entries 202592
HT ID - simulated
QT board

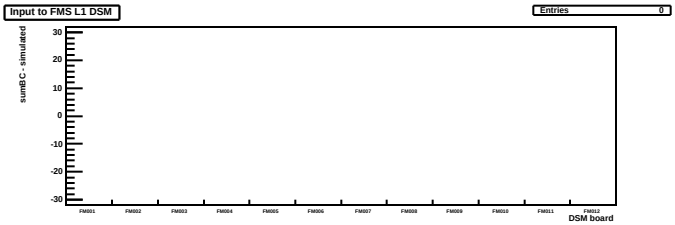

Input to FMS L1 DSM
Entries 303888
sumD
DSM board

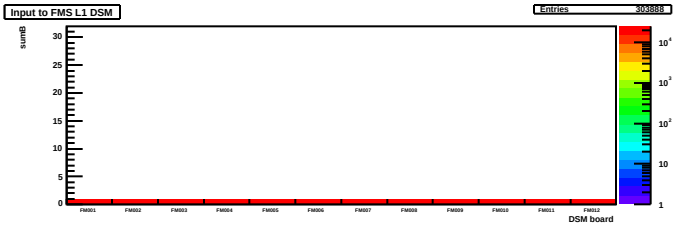

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

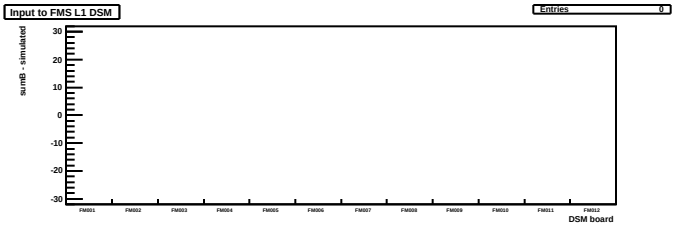

Input to FMS L1 DSM
Entries 303888
sumC
DSM board

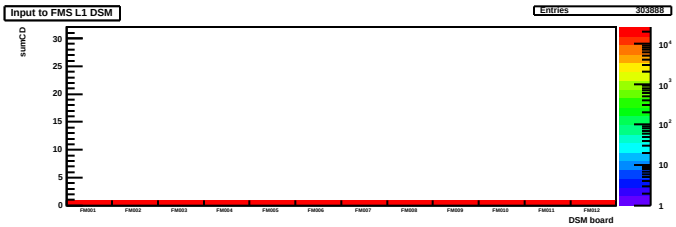

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

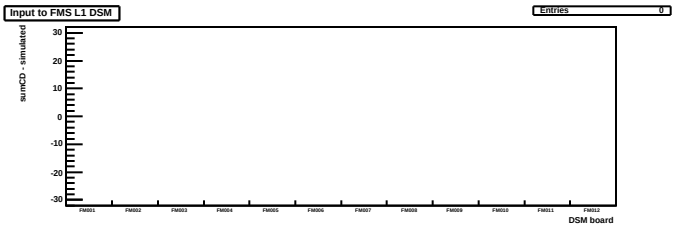

Input to FMS L1 DSM
Entries 303888
sumBC
DSM board

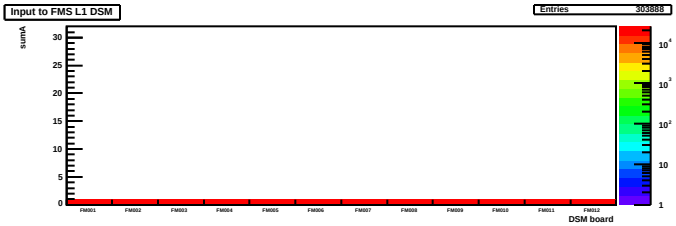

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

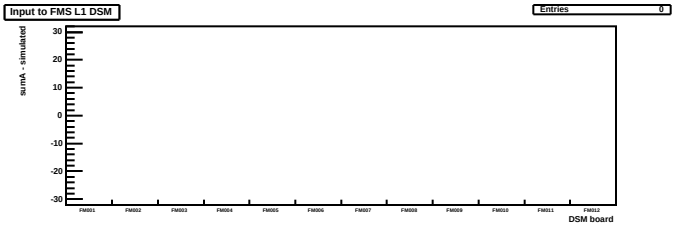

Input to FMS L1 DSM
Entries 303888
sumB
DSM board

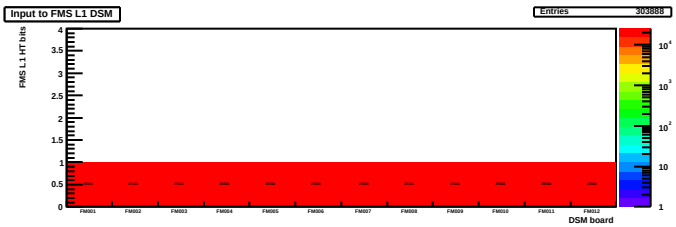

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

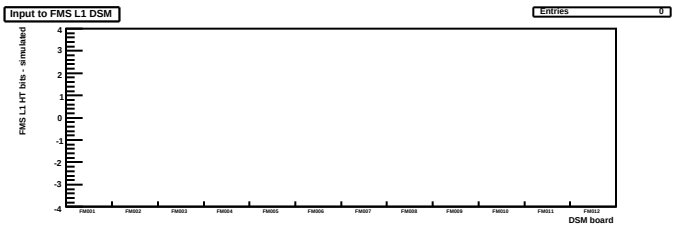

Input to FMS L1 DSM
Entries 303888
sumCD
DSM board

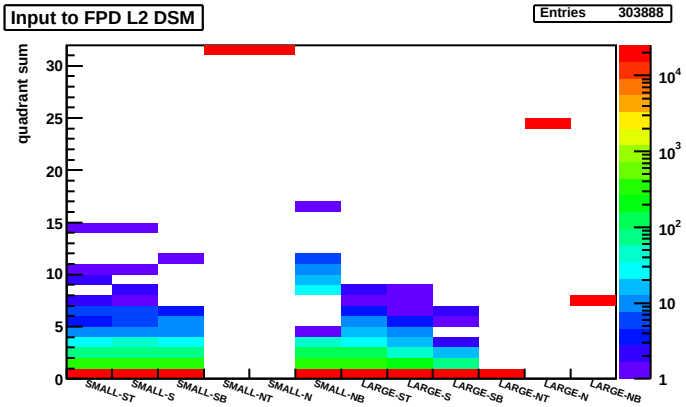

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

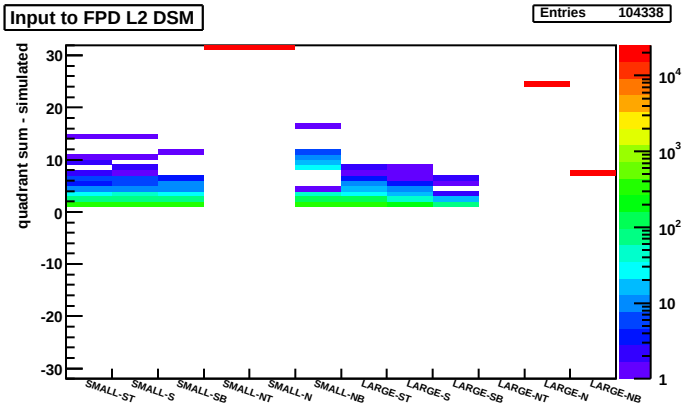

Input to FMS L1 DSM
Entries 303888
sumA
DSM board

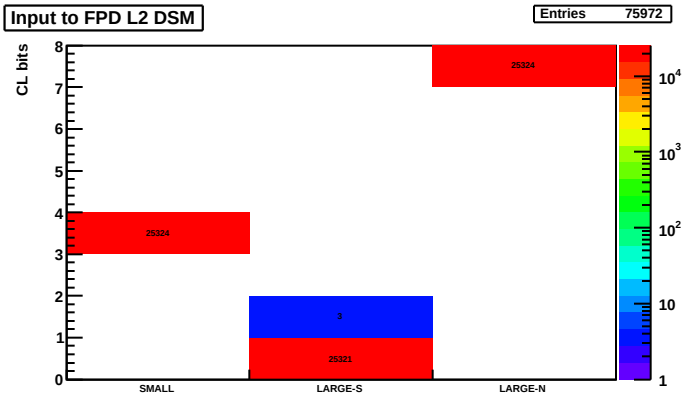

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

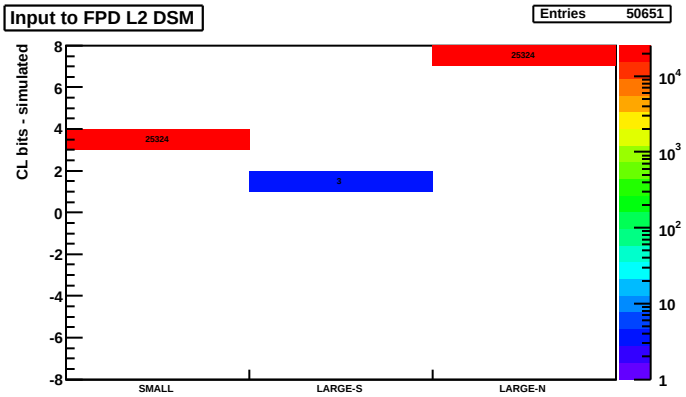

Input to FMS L1 DSM
Entries 303888
FMS L1 HT bits
DSM board

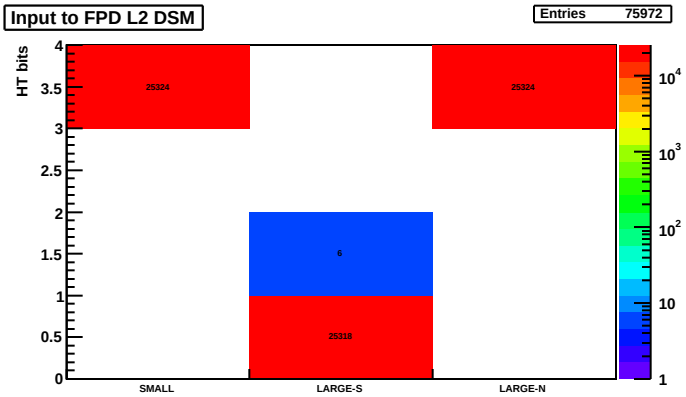

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

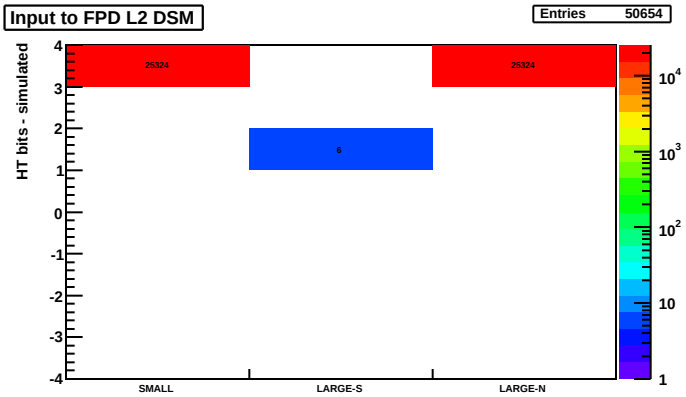

Input to FPD L2 DSM
Entries 303888
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

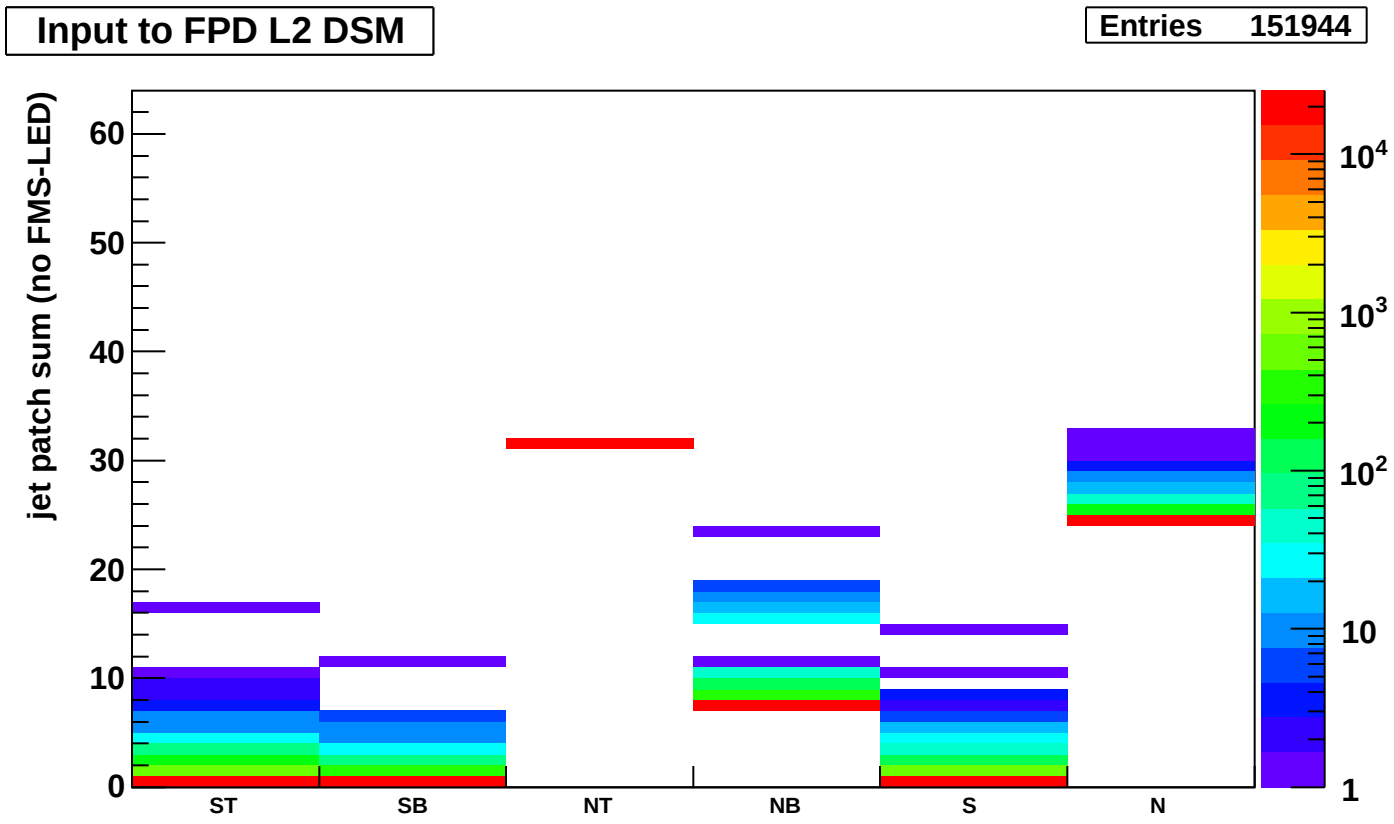

Input to FPD L2 DSM
Entries 104338
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

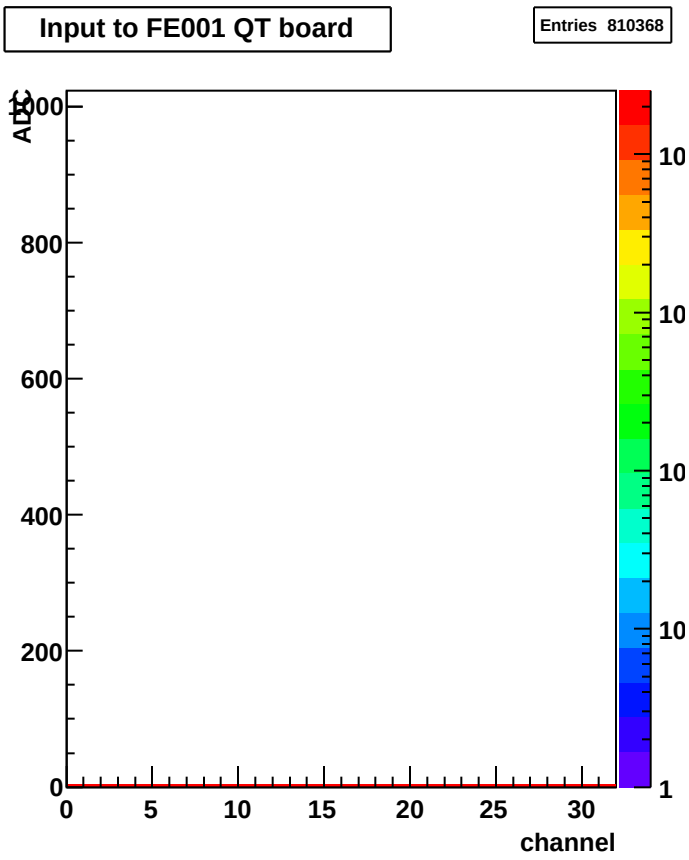

Input to FPD L2 DSM
Entries 75972
CL bits
25324
3
25321
SMALL
LARGE-S
LARGE-N

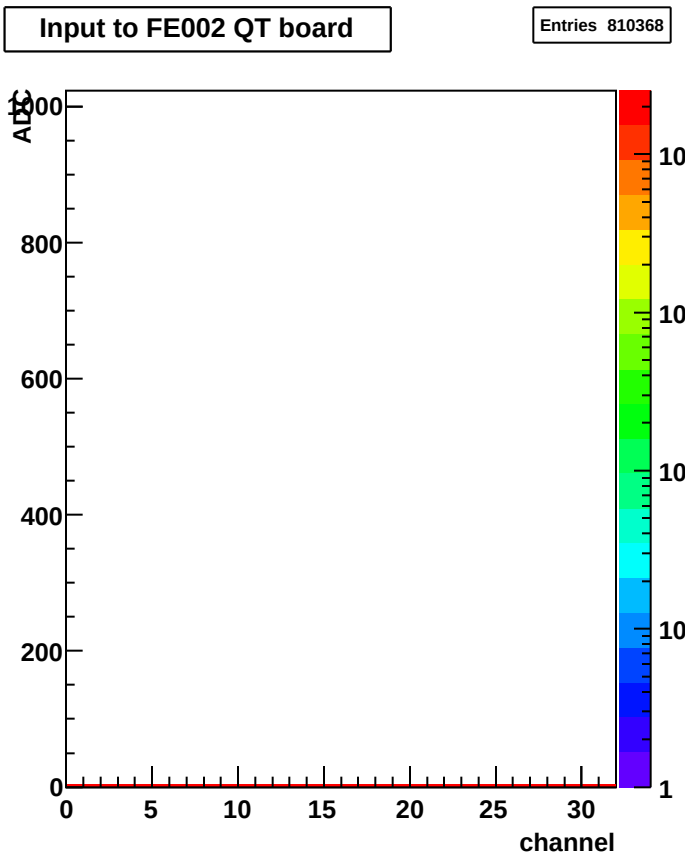

Input to FPD L2 DSM
Entries 50651
CL bits - simulated
25324
3
25324
SMALL
LARGE-S
LARGE-N

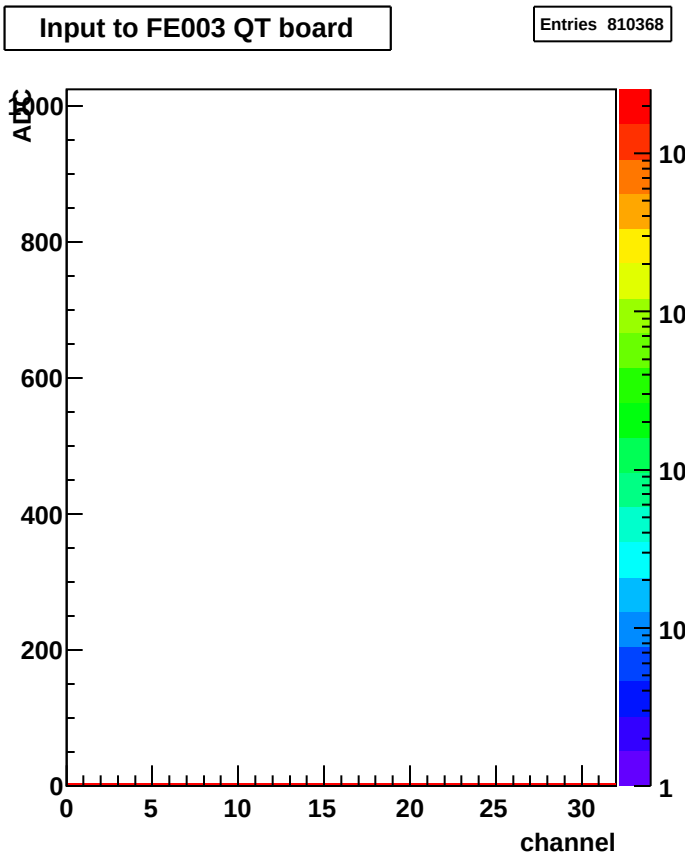

Input to FPD L2 DSM
Entries 75972
HT bits
25324
6
25318
25324
SMALL
LARGE-S
LARGE-N

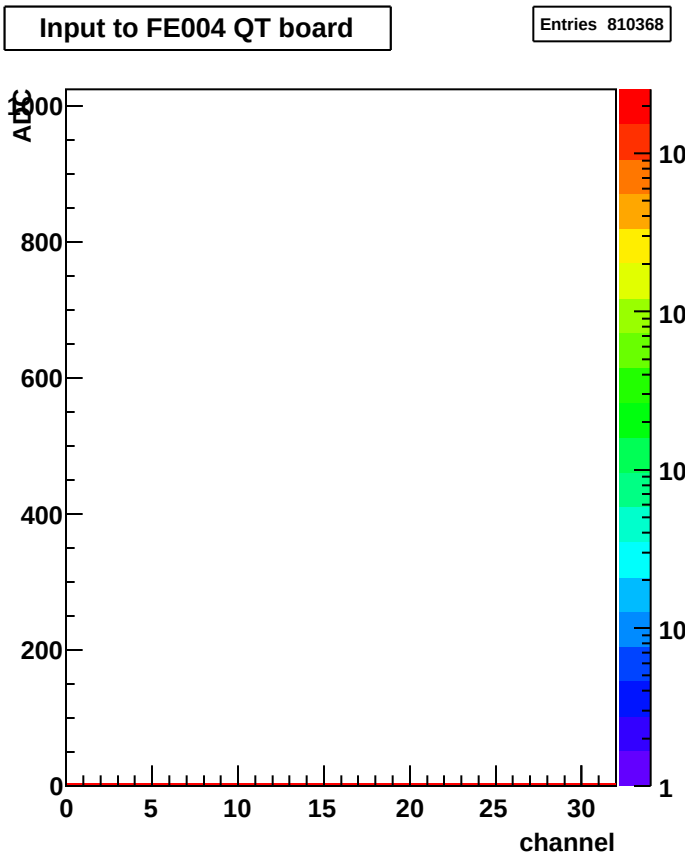

Input to FPD L2 DSM
Entries 50654
HT bits - simulated
25324
6
25324
SMALL
LARGE-S
LARGE-N

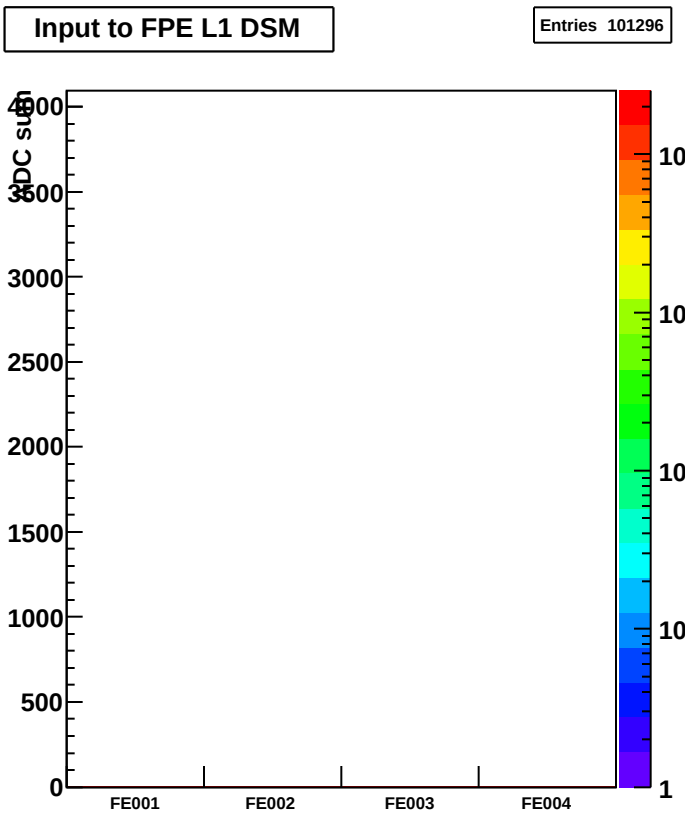

Input to FPD L2 DSM
Entries 151944
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

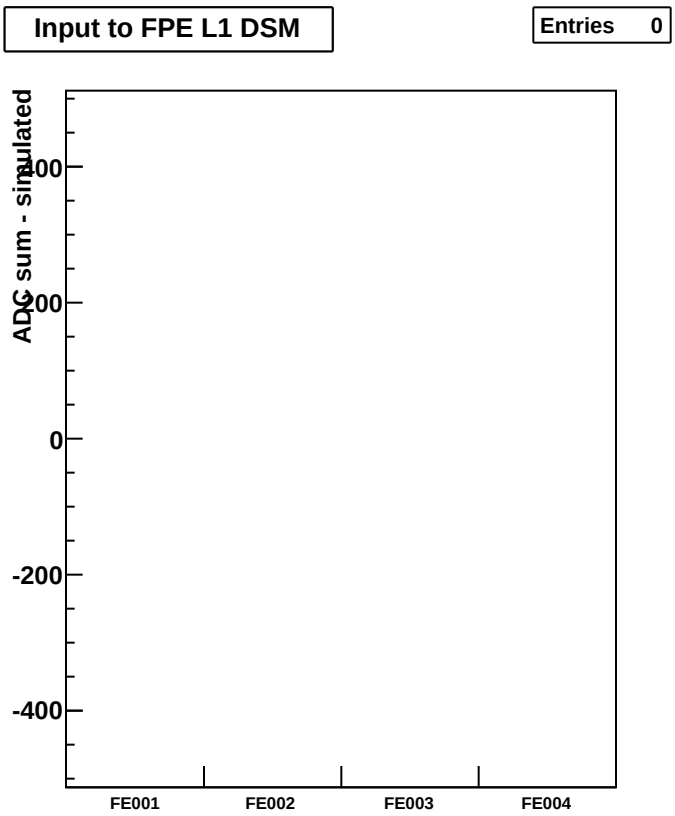

Input to FE001 QT board
Entries 810368
ADC
channel

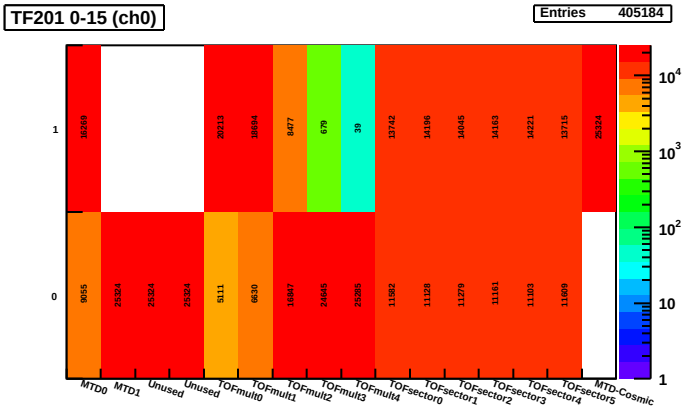

Input to FE002 QT board
Entries 810368
ADC
channel

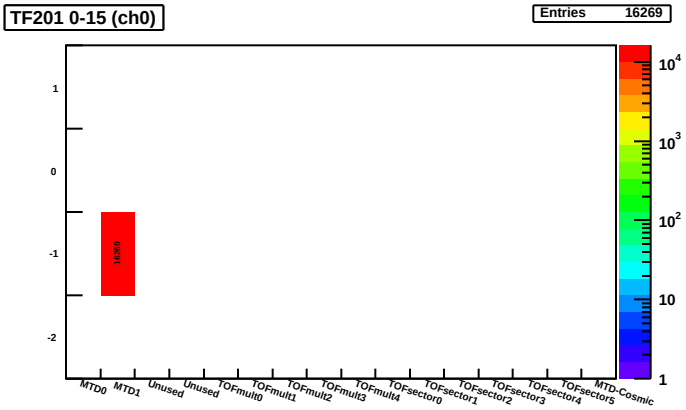

Input to FE003 QT board
Entries 810368
ADC
channel

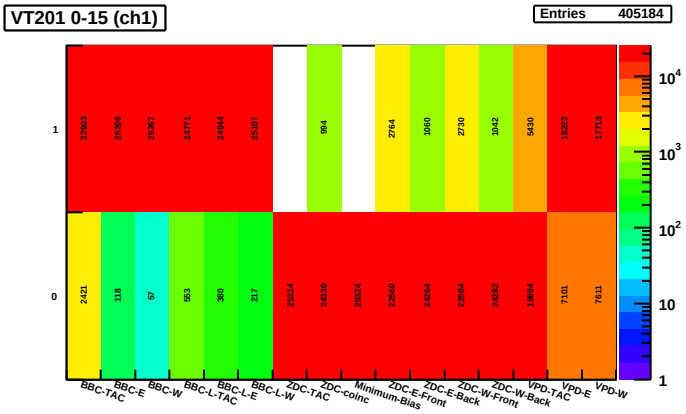

Input to FE004 QT board
Entries 810368
ADC
channel

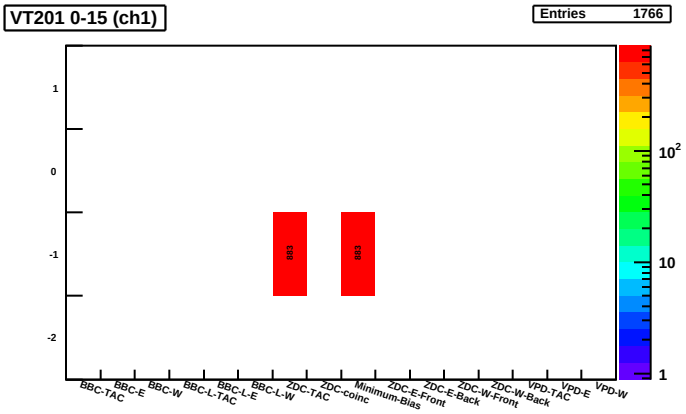

Input to FPE L1 DSM
Entries 101296
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

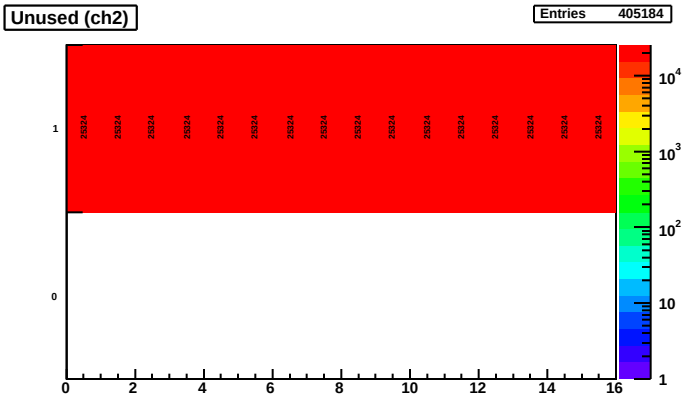

Input to FPE L1 DSM
Entries 0
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004


TF201 0-15 (ch0)
Entries 405184
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 16269
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 405184
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 1766
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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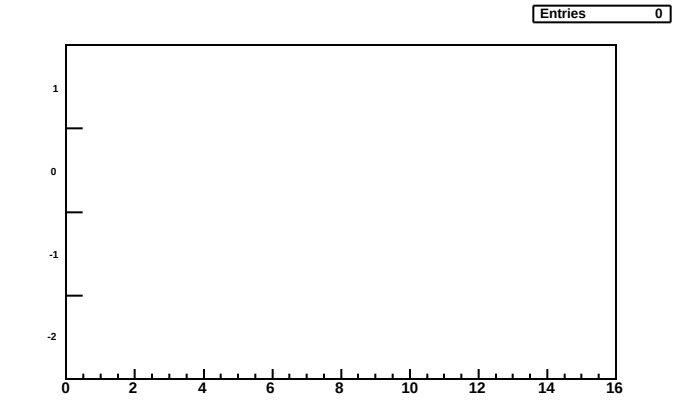
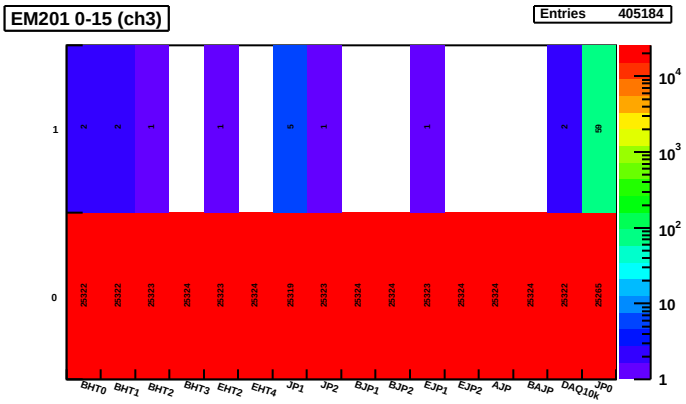
Entries 405184


Entries 0


EM201 0-15 (ch3)
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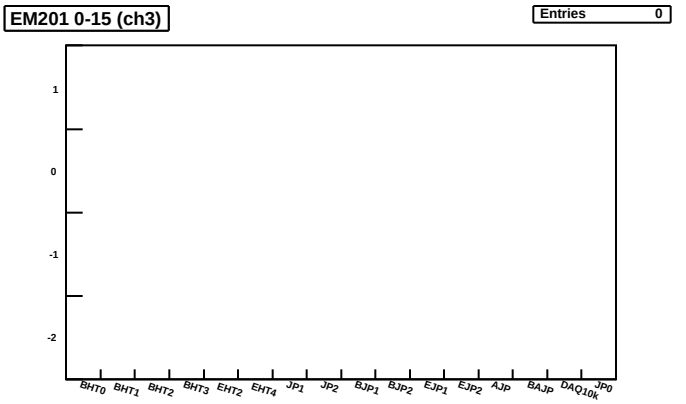
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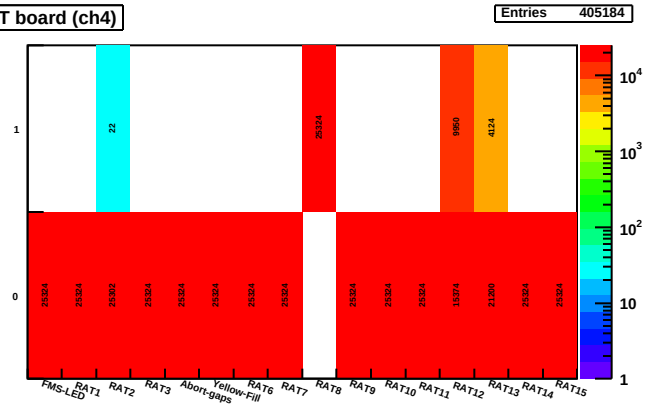
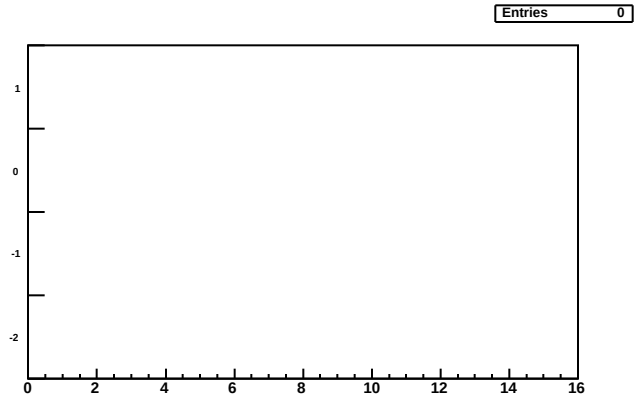
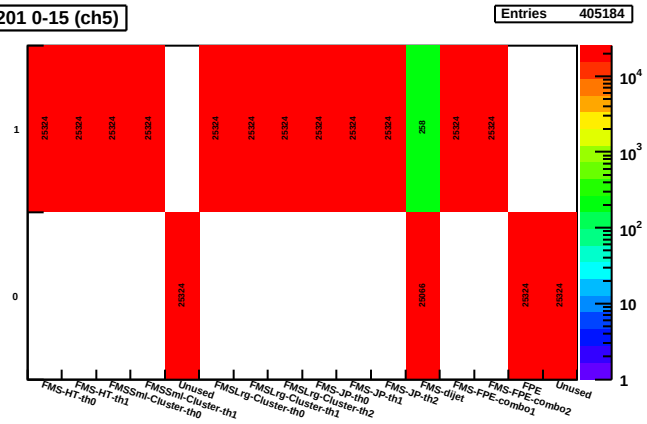
RAT board (ch4)





FP201 0-15 (ch5)



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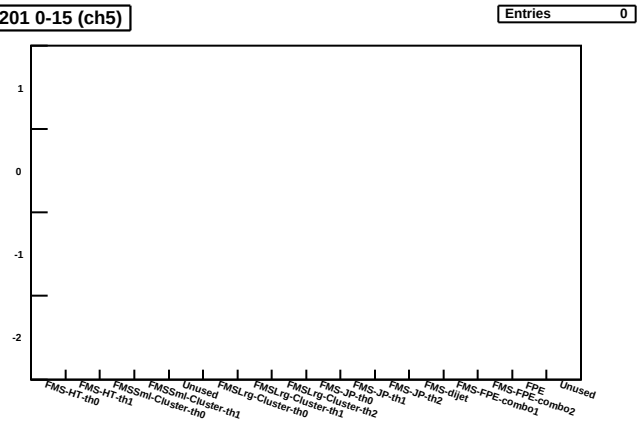
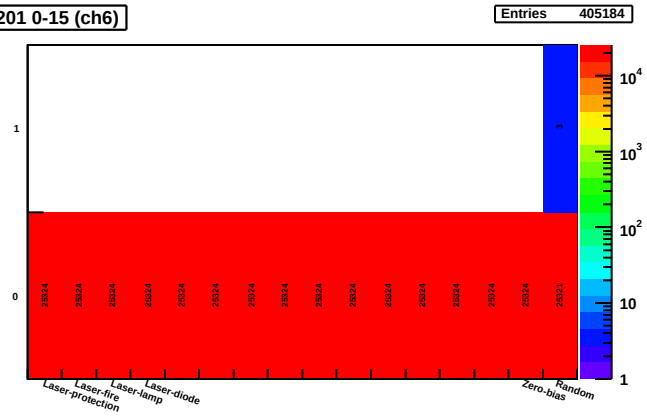
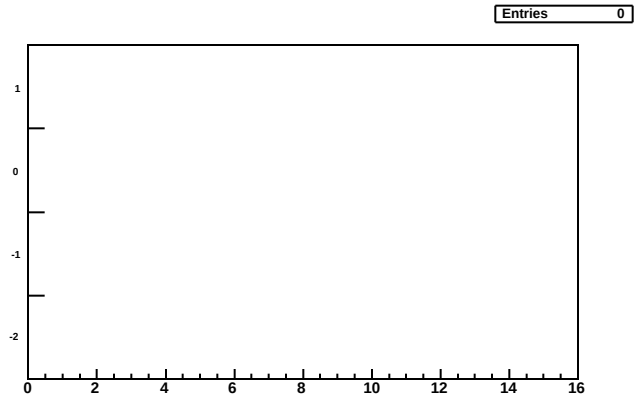
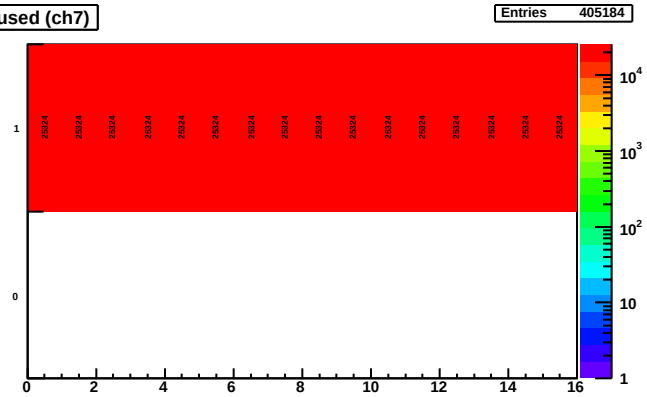
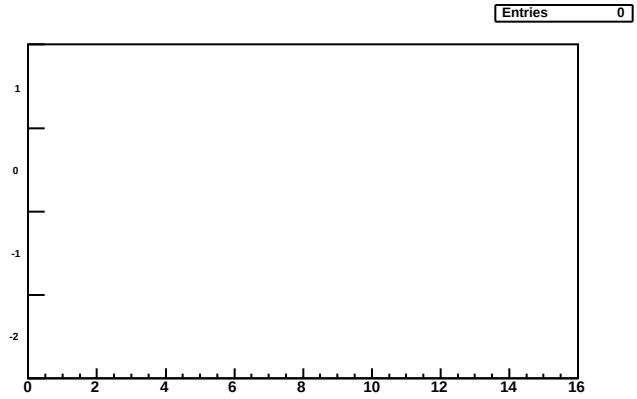


ST201 0-15 (ch6)





Unused (ch7)