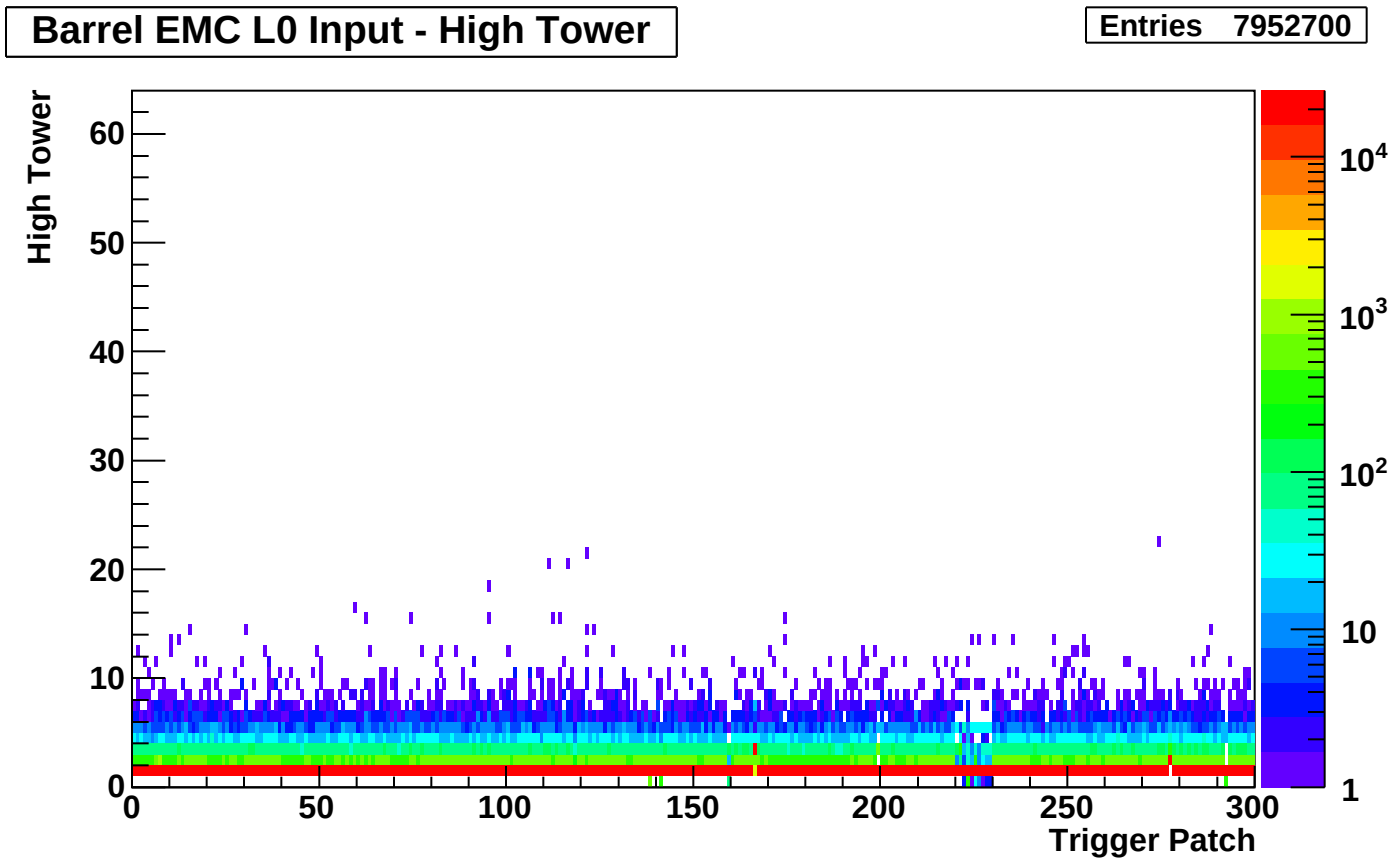
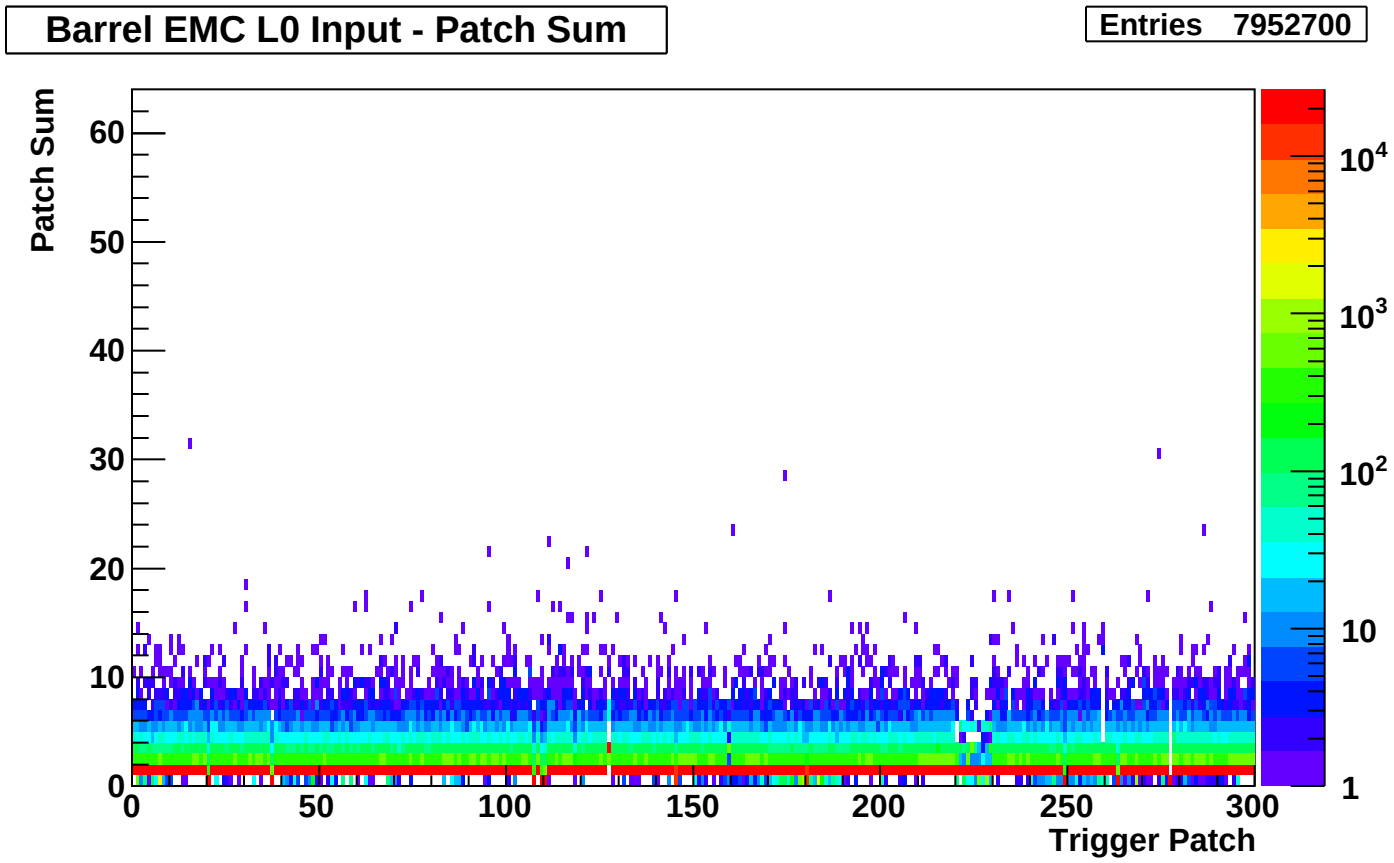
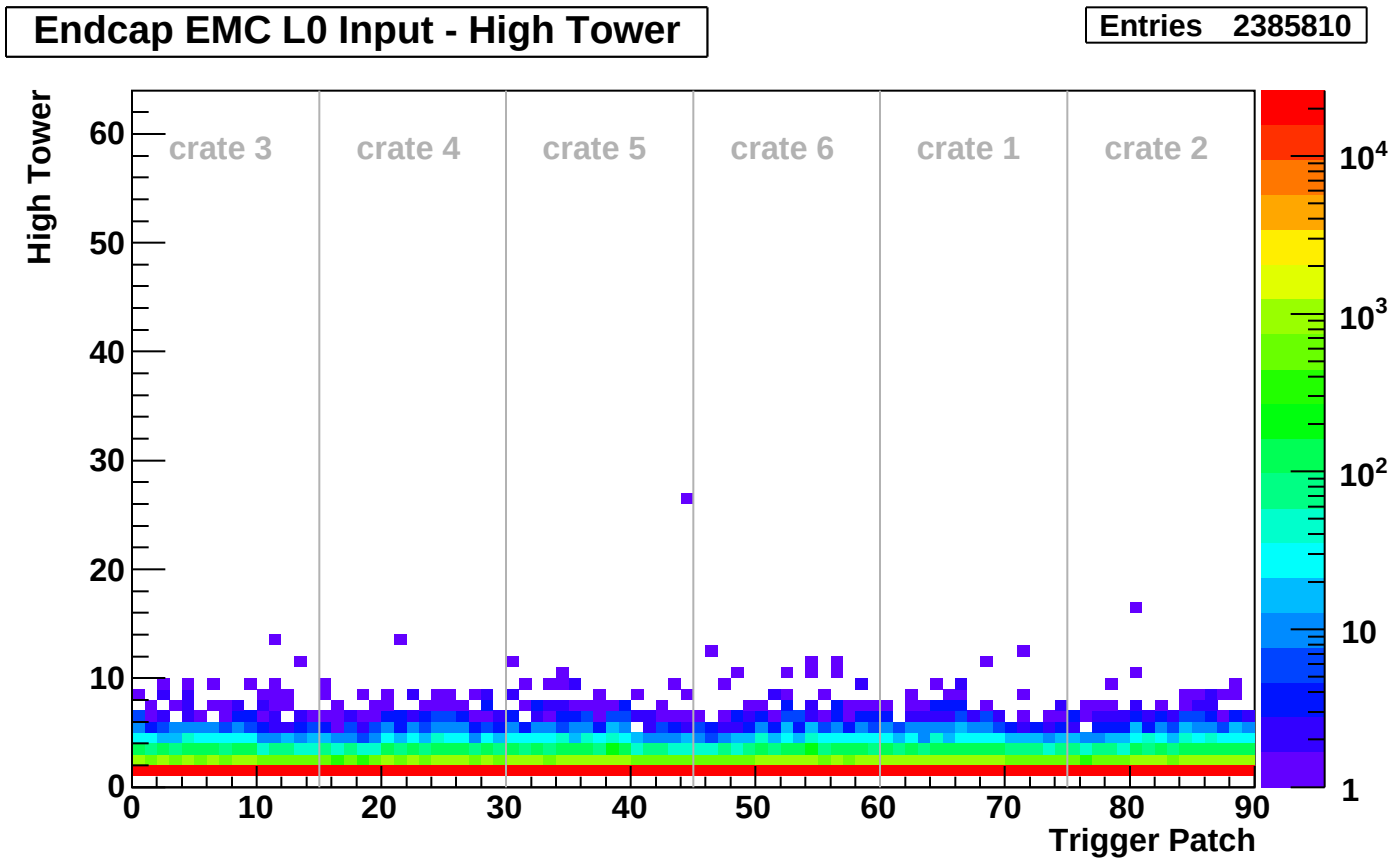
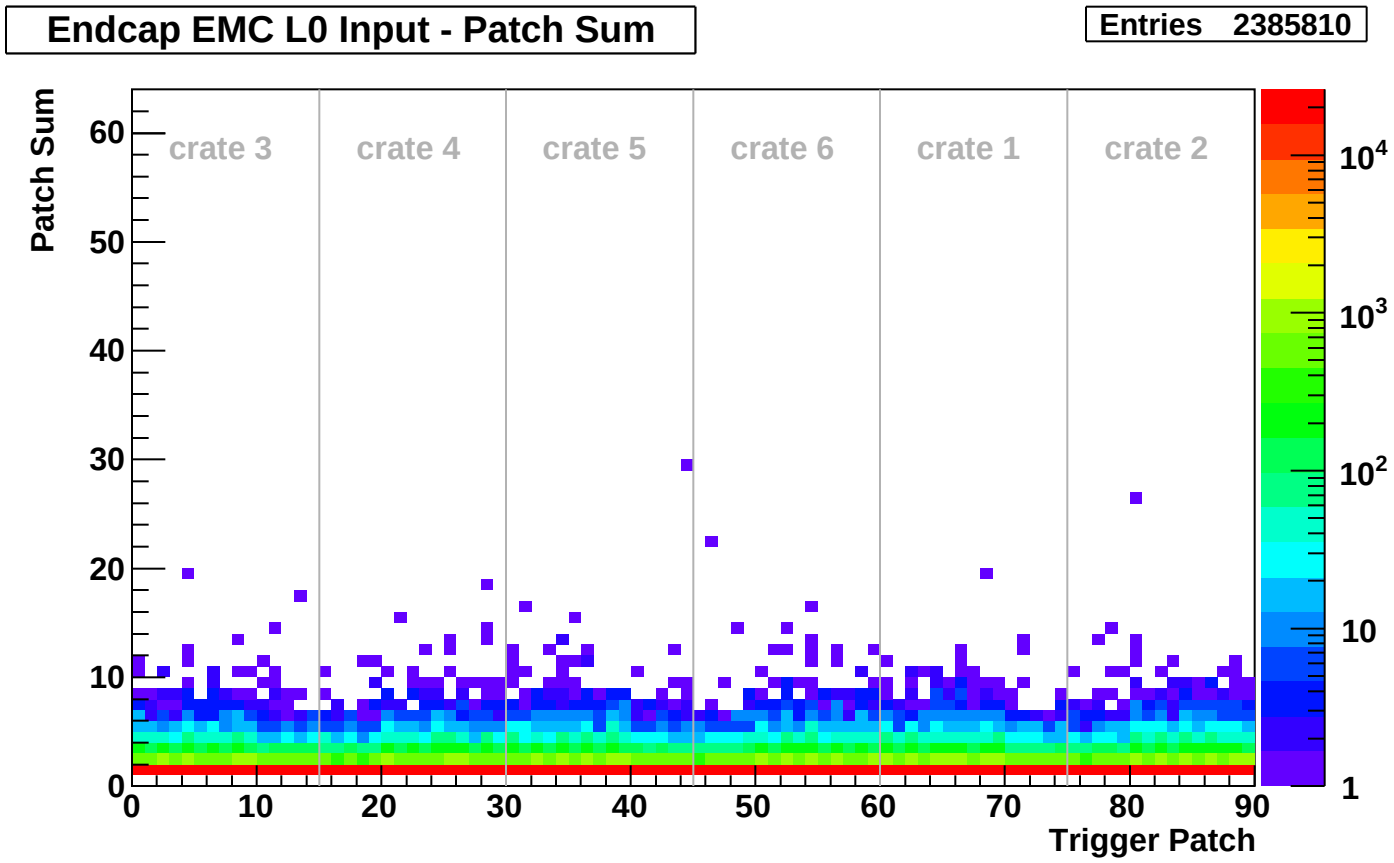
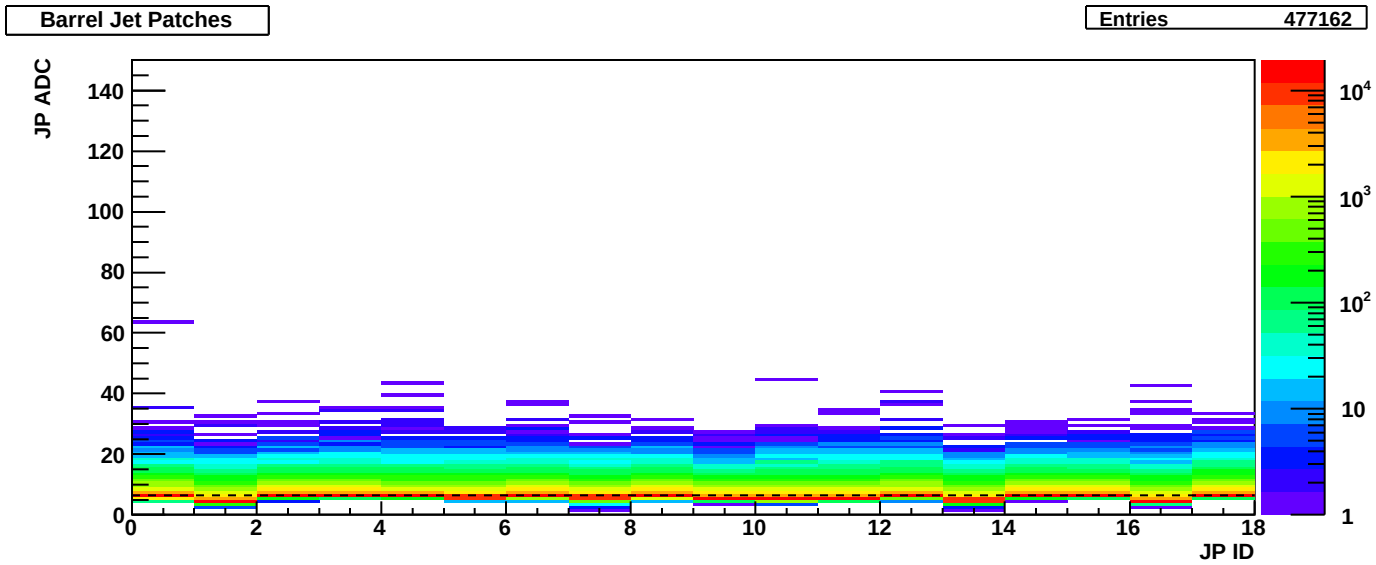
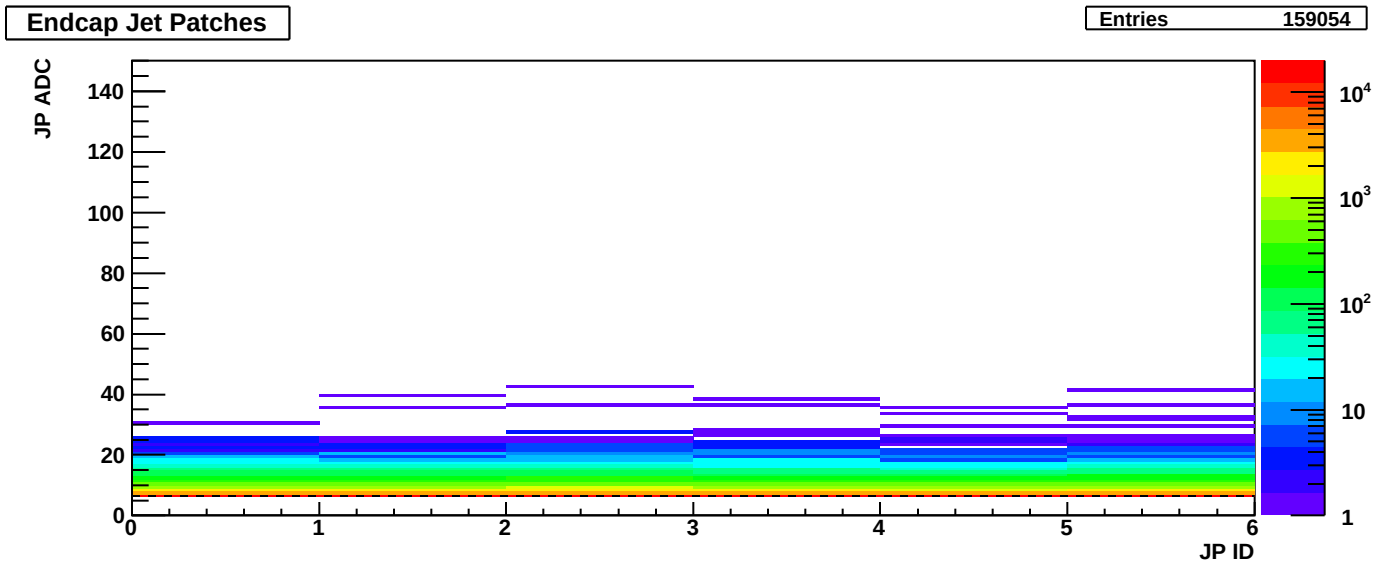

Barrel EMC L0 Input - High Tower
Entries 7952700
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

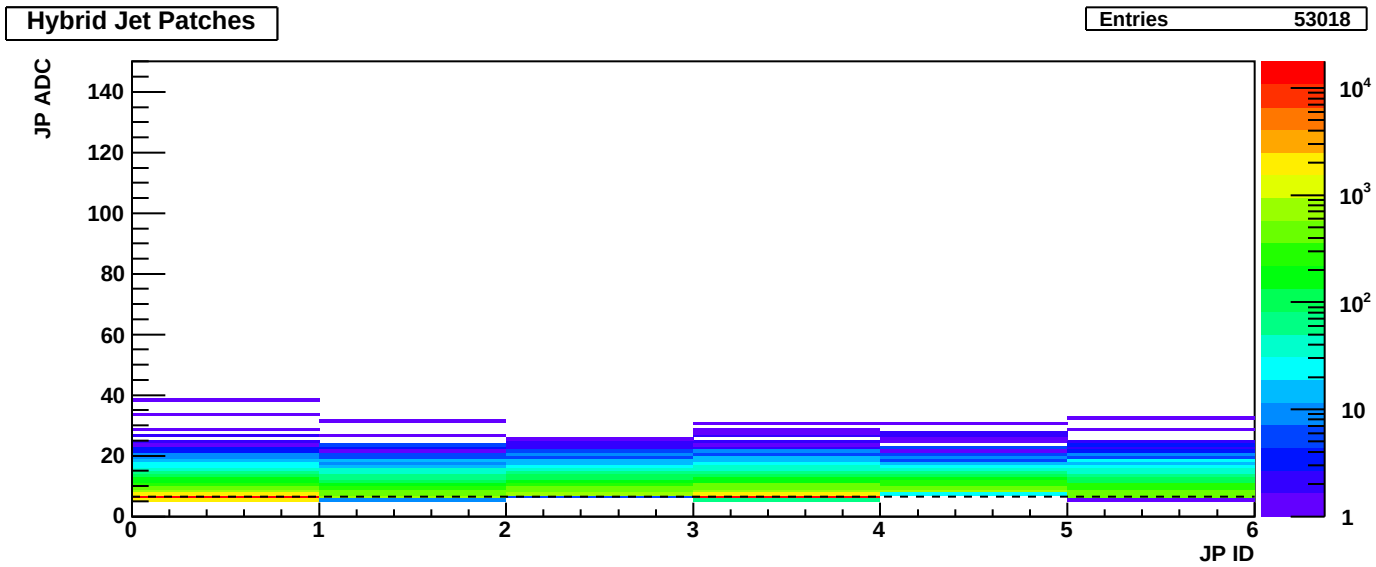

Barrel EMC L0 Input - Patch Sum
Entries 7952700
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

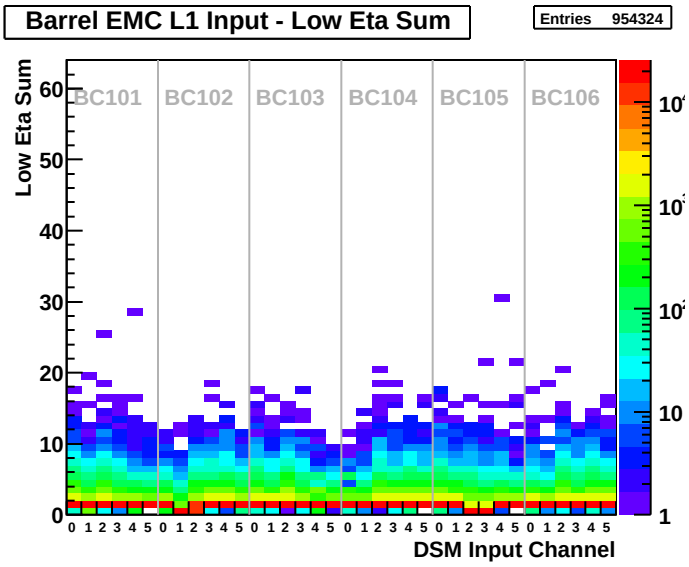

Endcap EMC L0 Input - High Tower
Entries 2385810
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

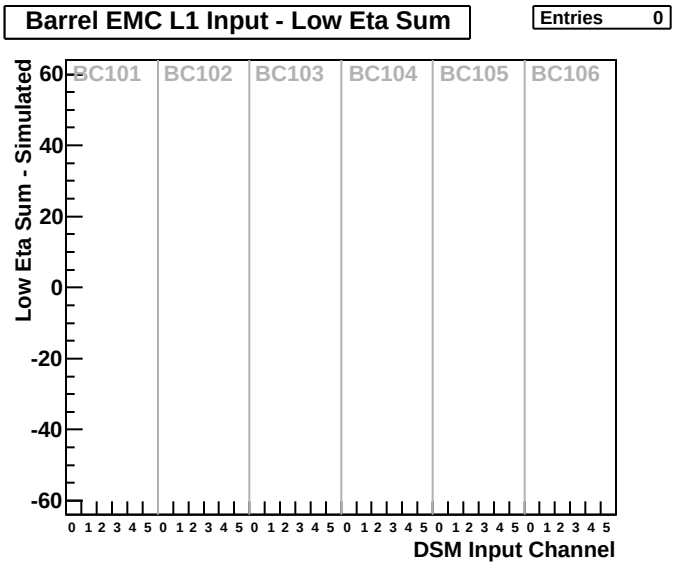

Endcap EMC L0 Input - Patch Sum
Entries 2385810
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

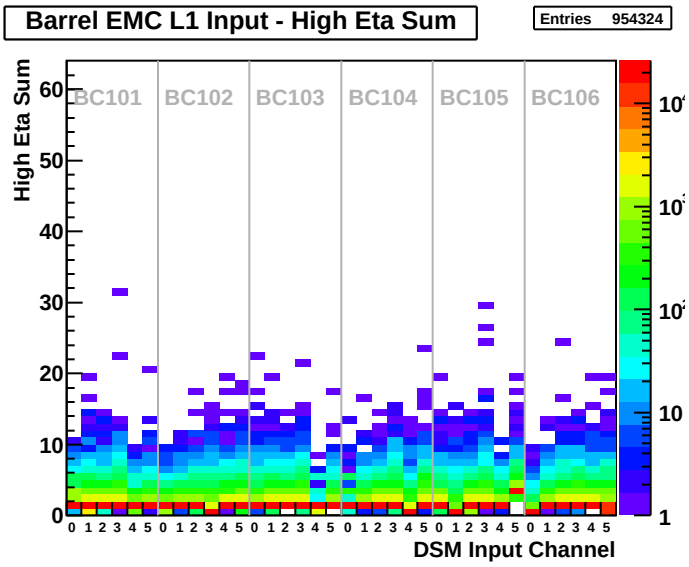

Barrel Jet Patches
Entries 477162
JP ADC
JP ID

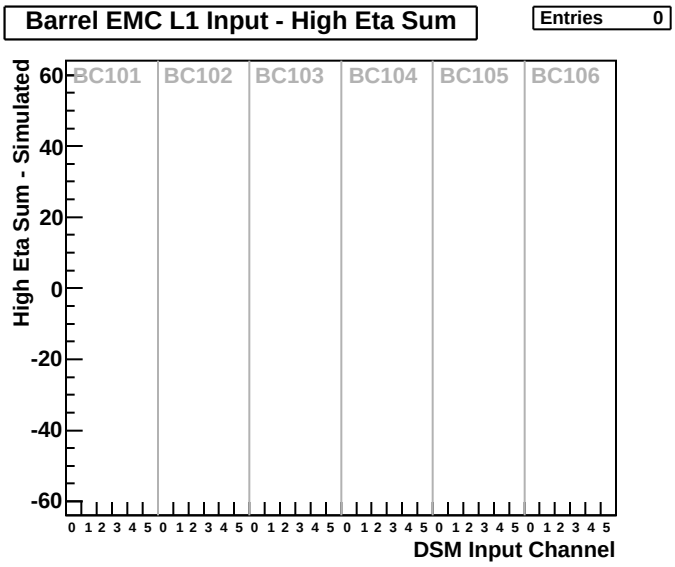

Endcap Jet Patches
Entries 159054
JP ADC
JP ID

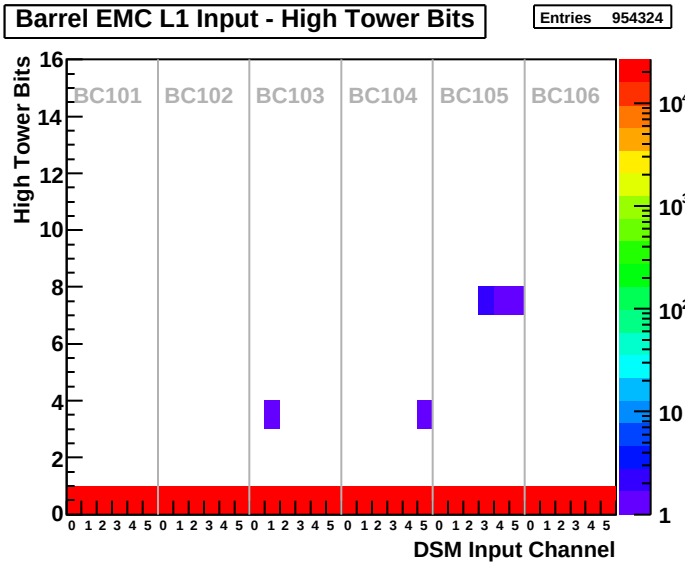

Hybrid Jet Patches
Entries 53018
JP ADC
JP ID

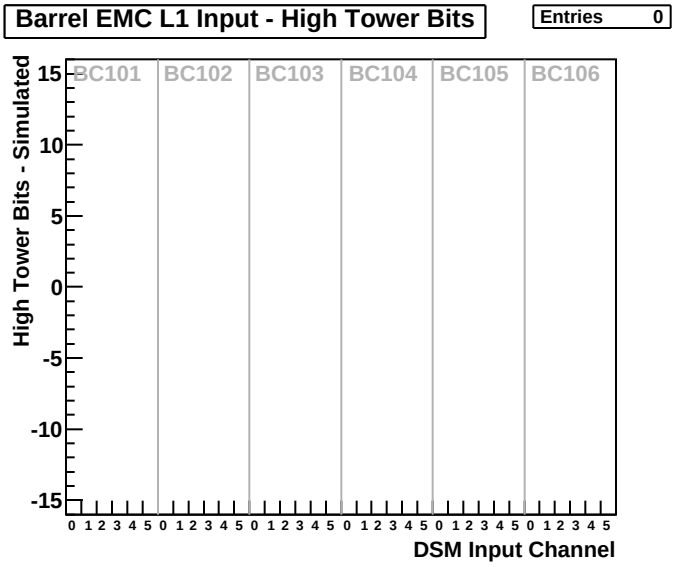

Barrel EMC L1 Input - Low Eta Sum
Entries 954324
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

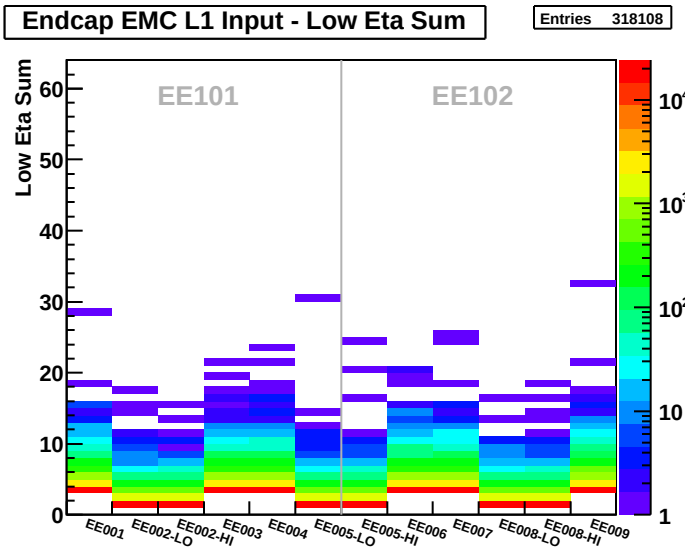

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

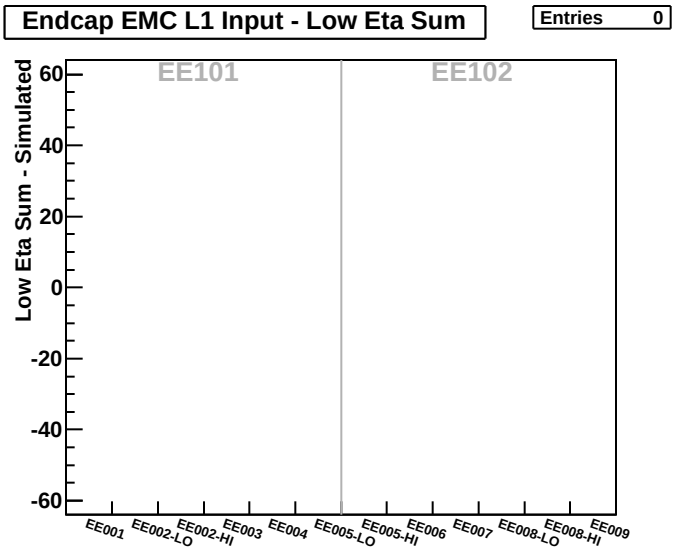

Barrel EMC L1 Input - High Eta Sum
Entries 954324
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

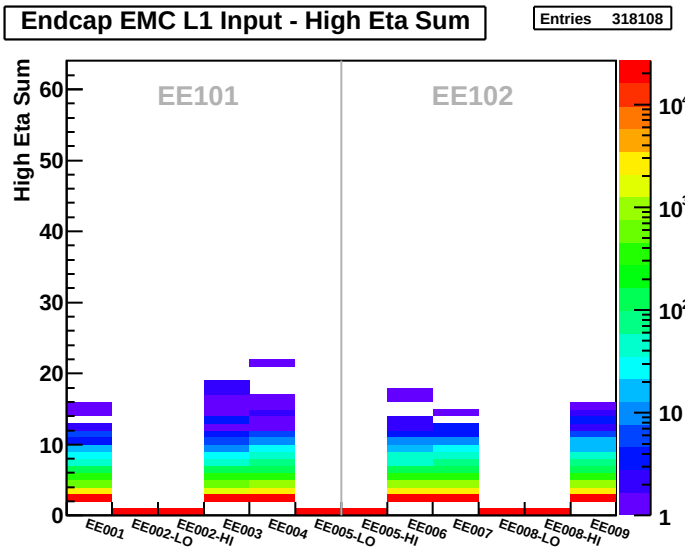

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

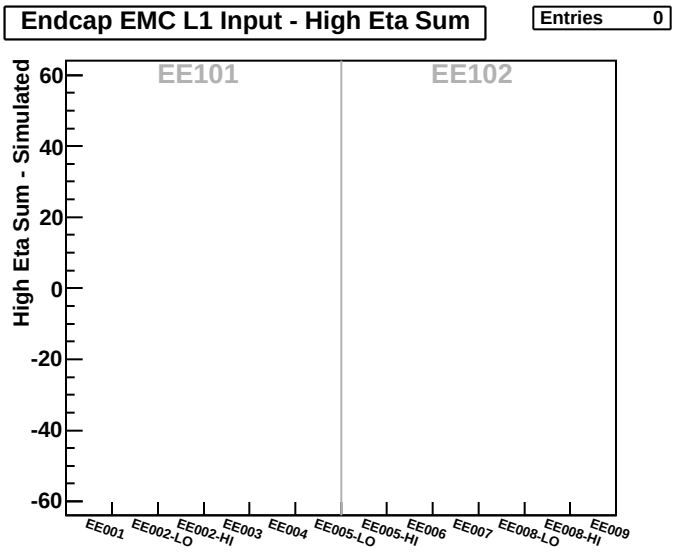

Barrel EMC L1 Input - High Tower Bits
Entries 954324
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

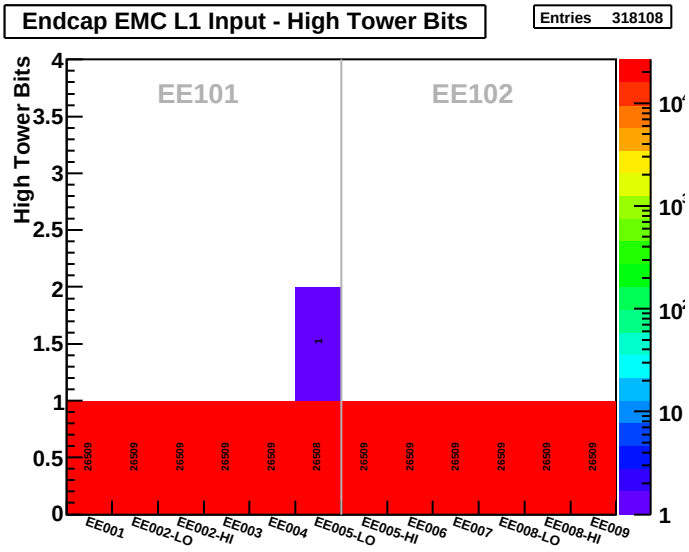

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

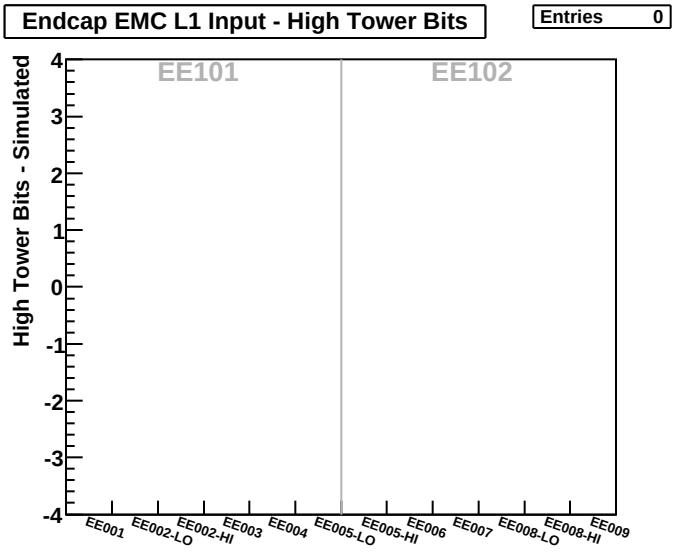

Endcap EMC L1 Input - Low Eta Sum
Entries 318108
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

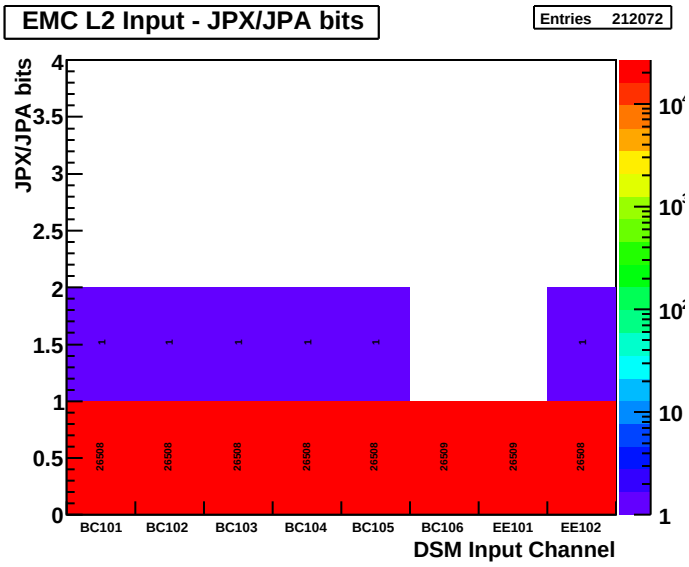

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

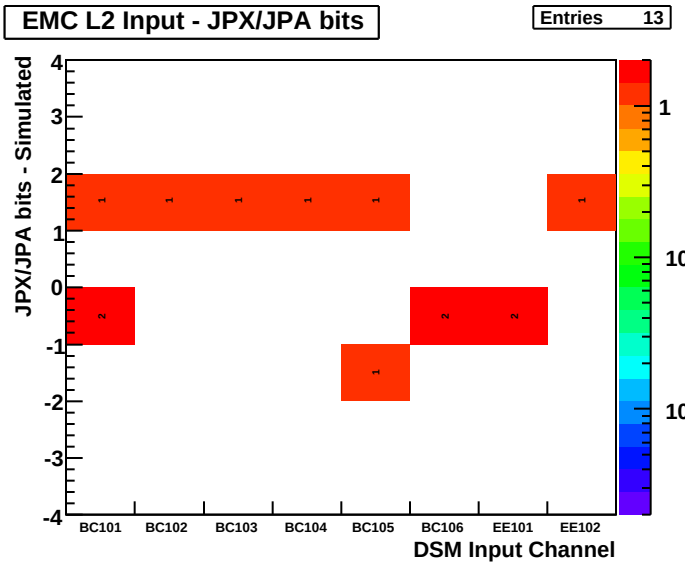

Endcap EMC L1 Input - High Eta Sum
Entries 318108
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

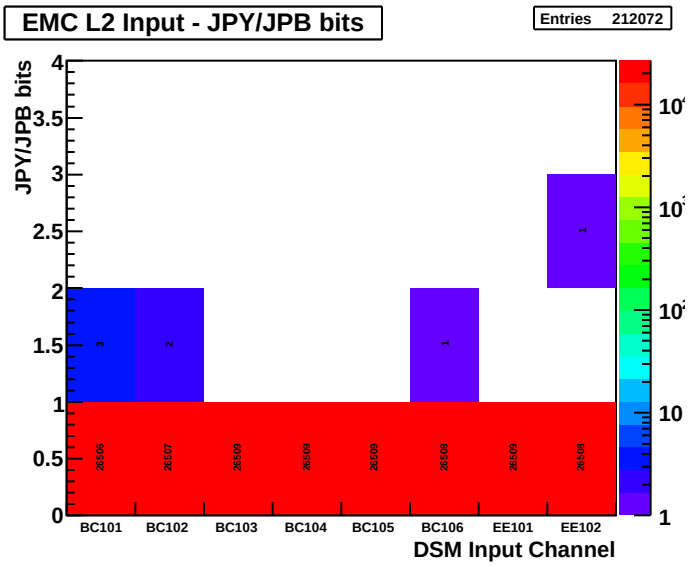

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

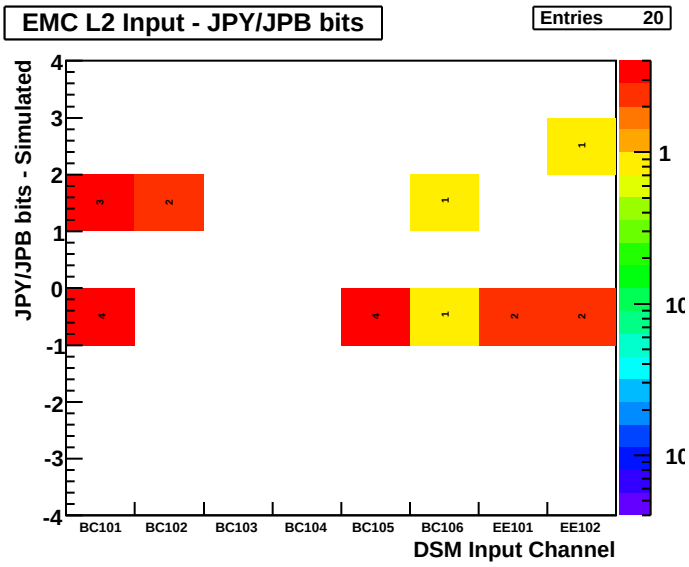

Endcap EMC L1 Input - High Tower Bits
Entries 318108
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

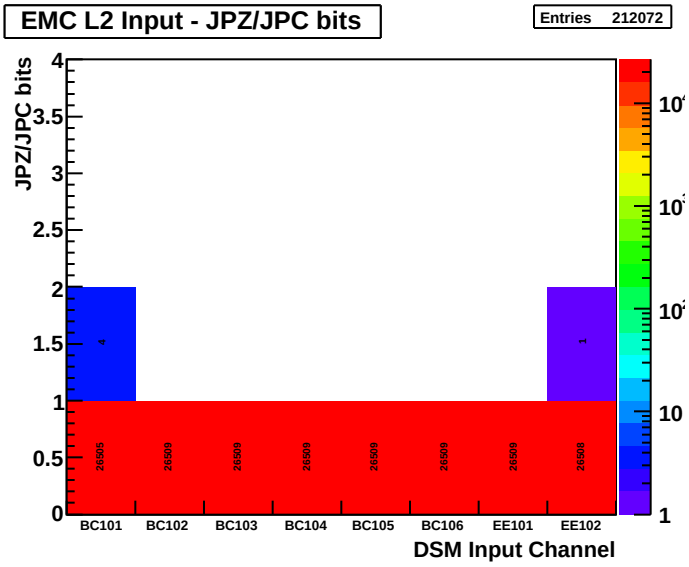

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

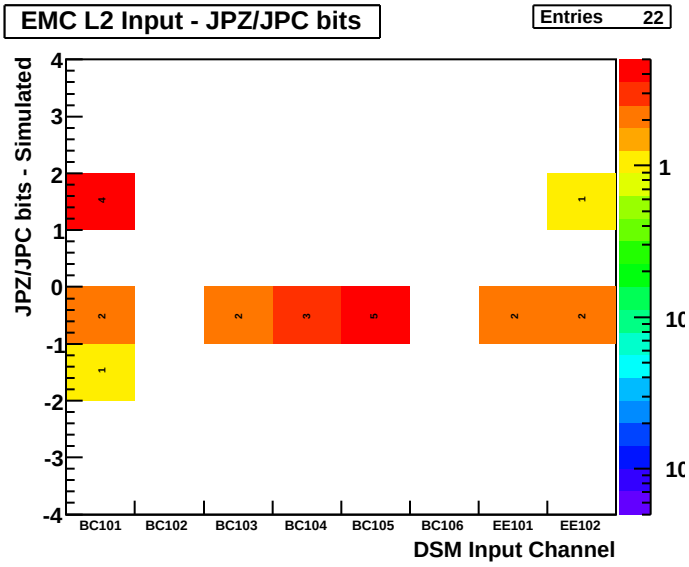

EMC L2 Input - JPX/JPA bits
Entries 212072
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

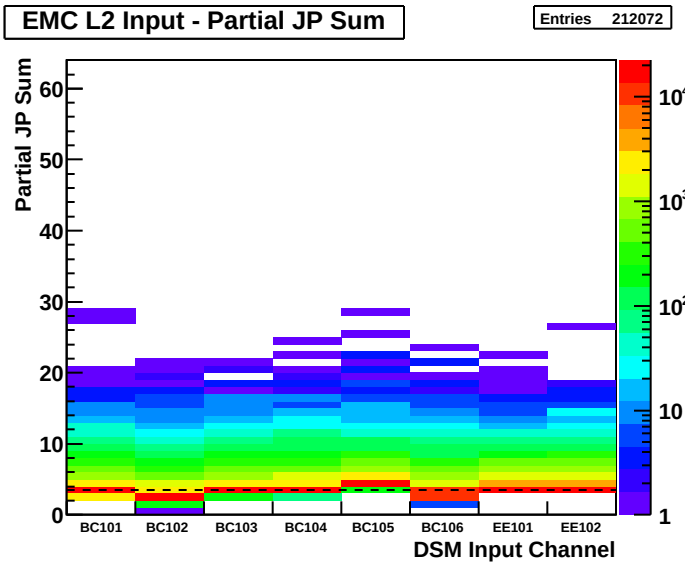

EMC L2 Input - JPX/JPA bits
Entries 13
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

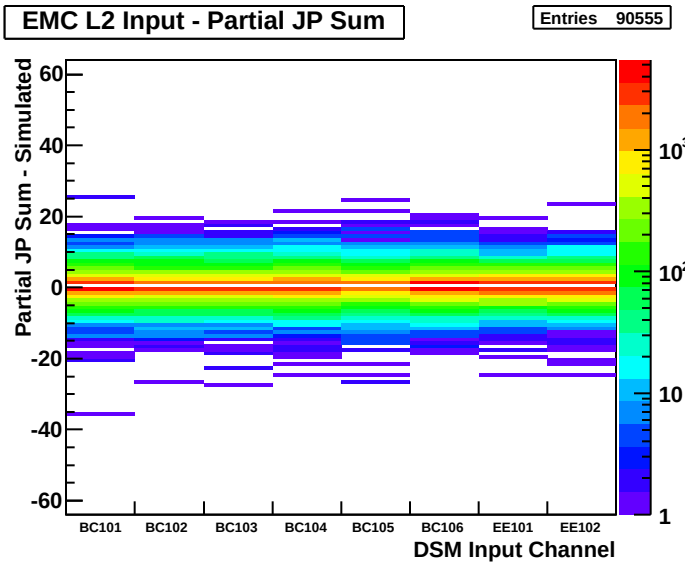

EMC L2 Input - JPY/JPB bits
Entries 212072
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

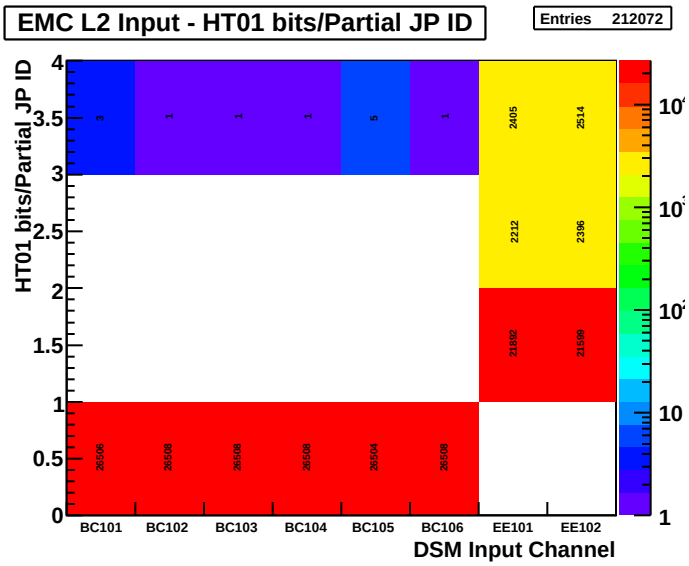

EMC L2 Input - JPY/JPB bits
Entries 20
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

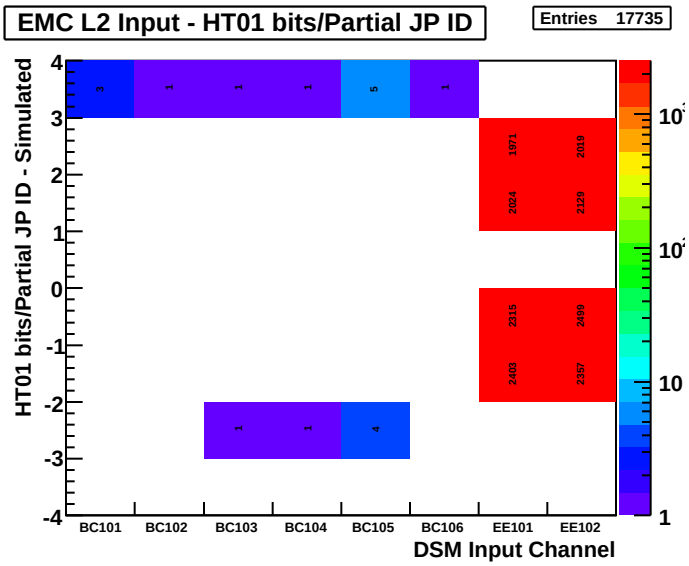

EMC L2 Input - JPZ/JPC bits
Entries 212072
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

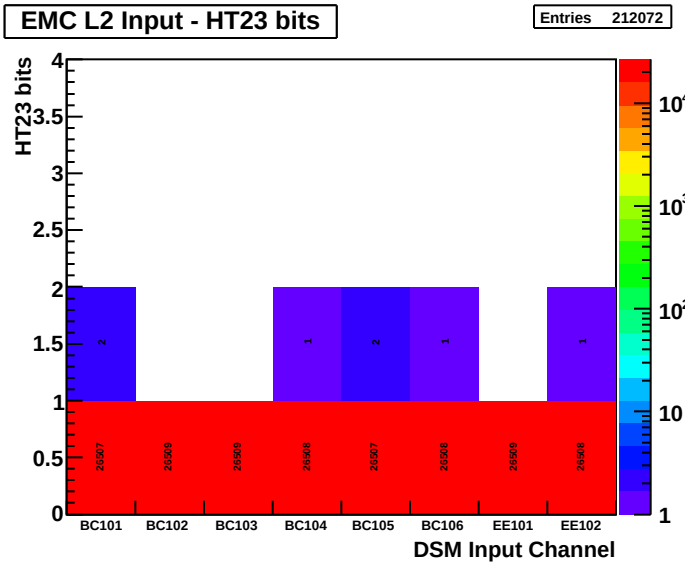

EMC L2 Input - JPZ/JPC bits
Entries 22
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

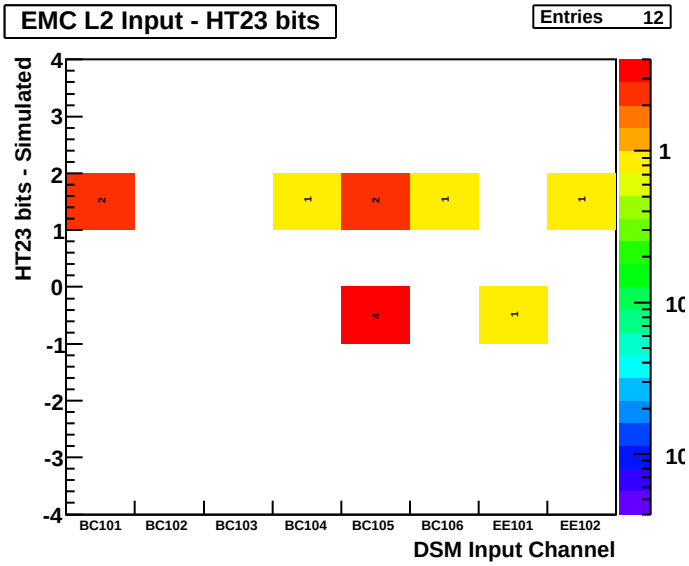

EMC L2 Input - Partial JP Sum
Entries 212072
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

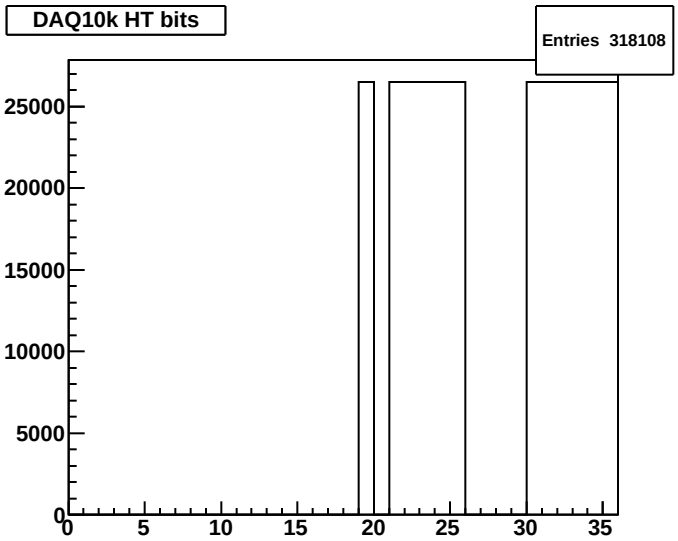

EMC L2 Input - Partial JP Sum
Entries 90555
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

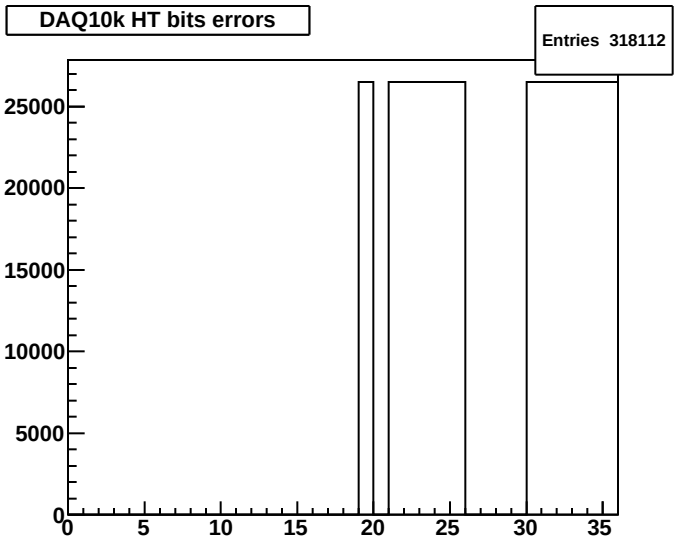

EMC L2 Input - HT01 bits/Partial JP ID
Entries 212072
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

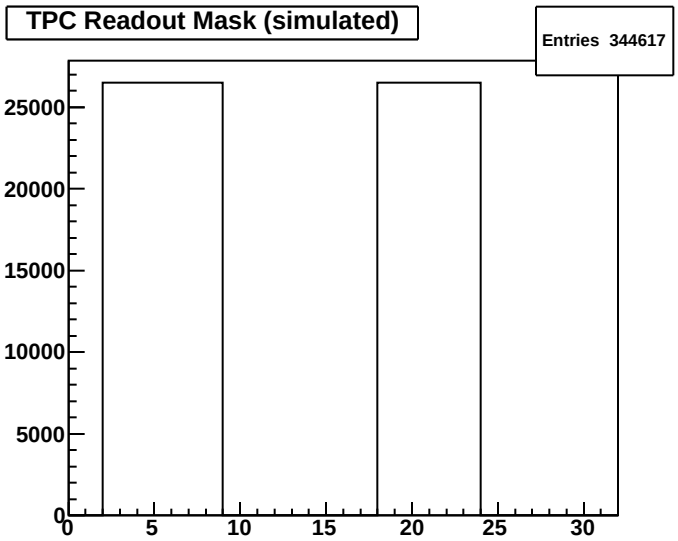

EMC L2 Input - HT01 bits/Partial JP ID
Entries 17735
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

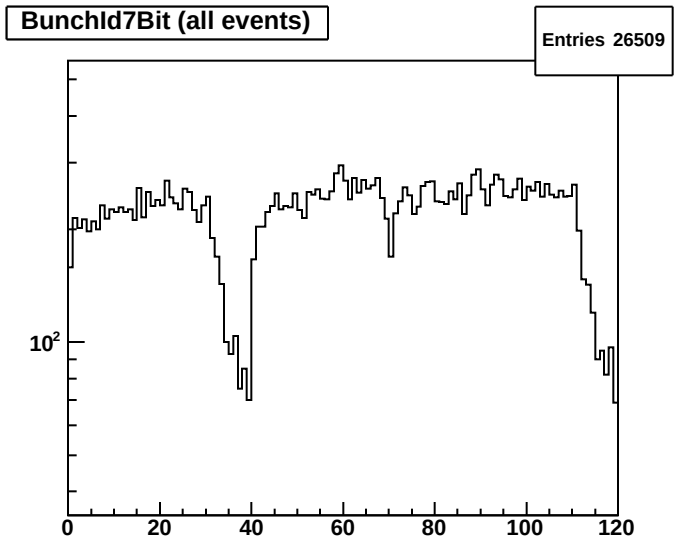

EMC L2 Input - HT23 bits
Entries 212072
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

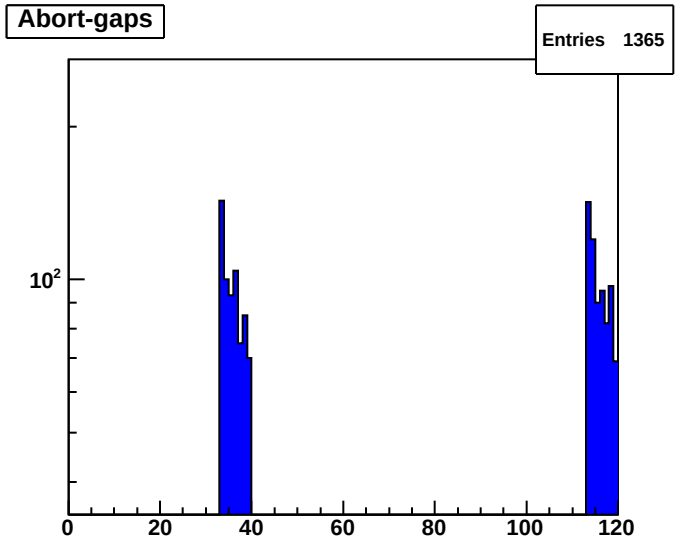

EMC L2 Input - HT23 bits
Entries 12
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

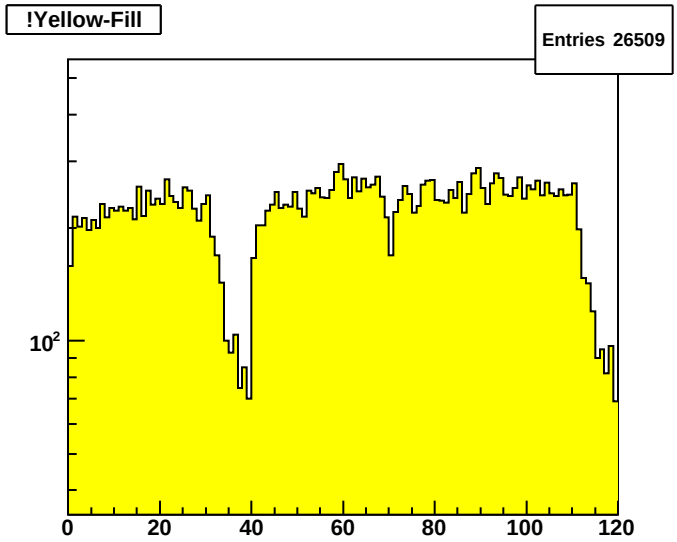

DAQ10k HT bits
Entries 318108
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

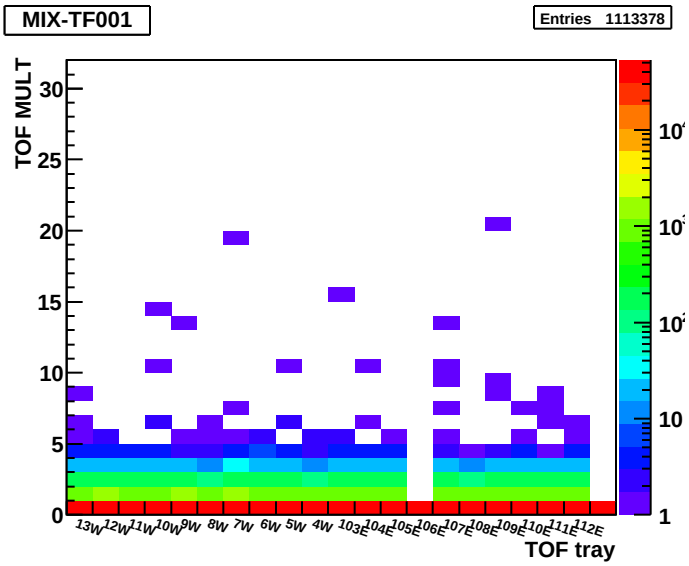

DAQ10k HT bits errors
Entries 318112
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

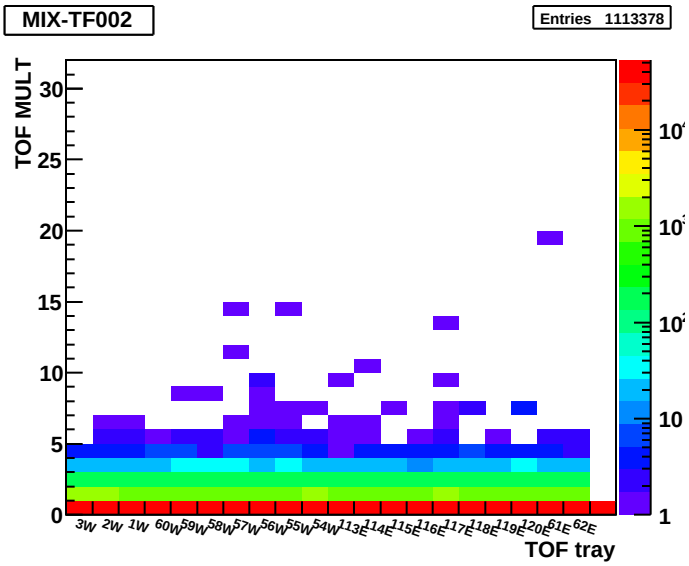

TPC Readout Mask (simulated)
Entries 344617
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

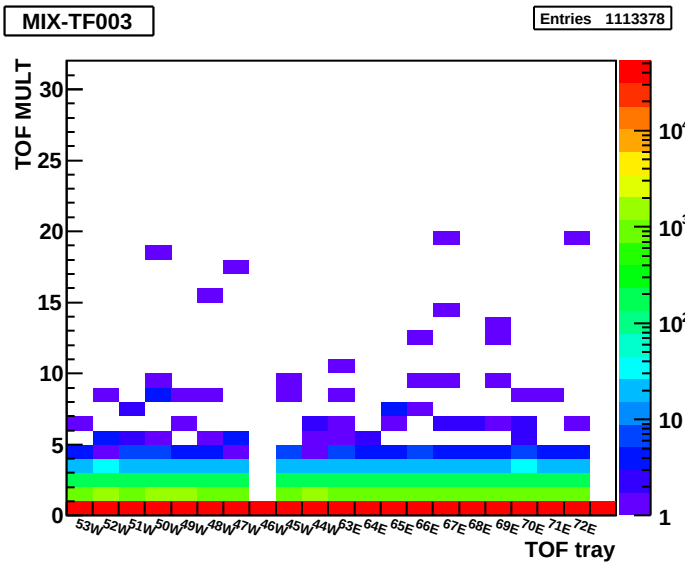

BunchId7Bit (all events)
Entries 26509
10^2
0 20 40 60 80 100 120

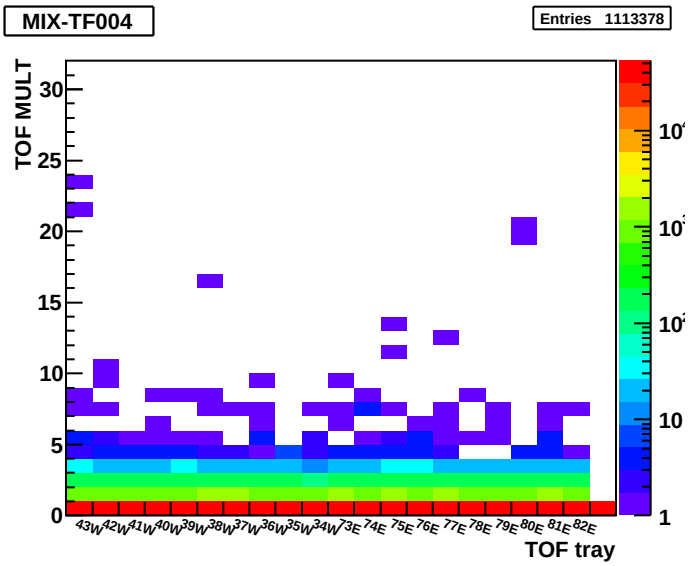

Abort-gaps
Entries 1365
10^2
0 20 40 60 80 100 120

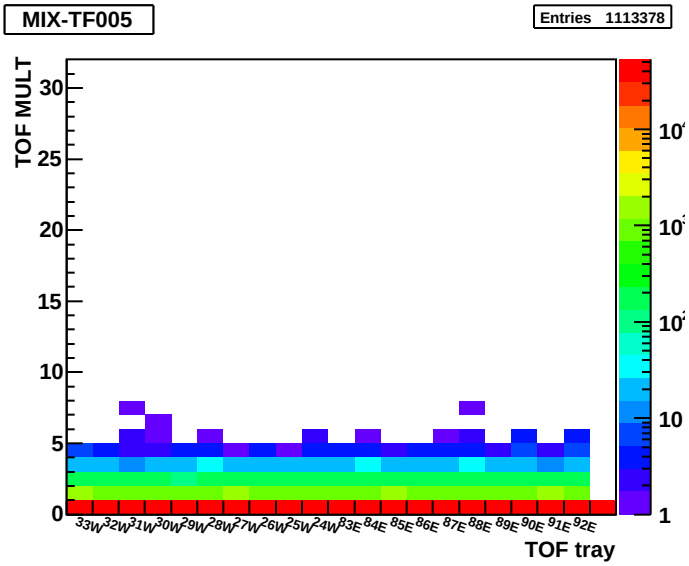

!Yellow-Fill
Entries 26509
10^2
0 20 40 60 80 100 120

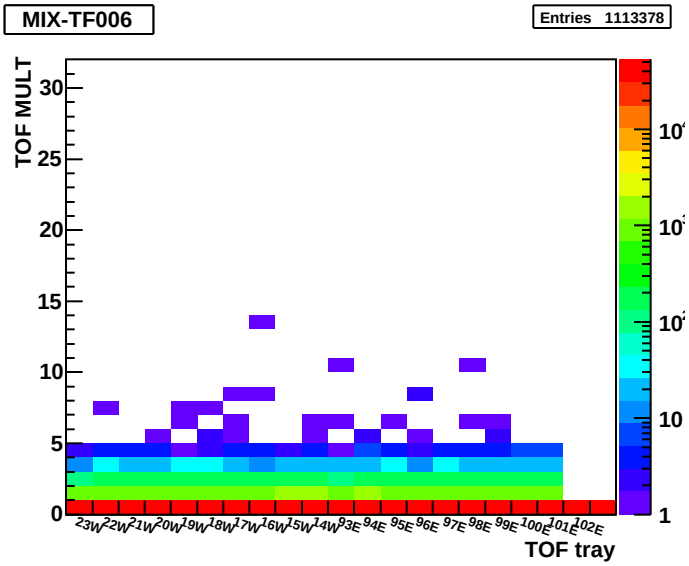

MIX-TF001
Entries 1113378
TOF MULT
TOF tray

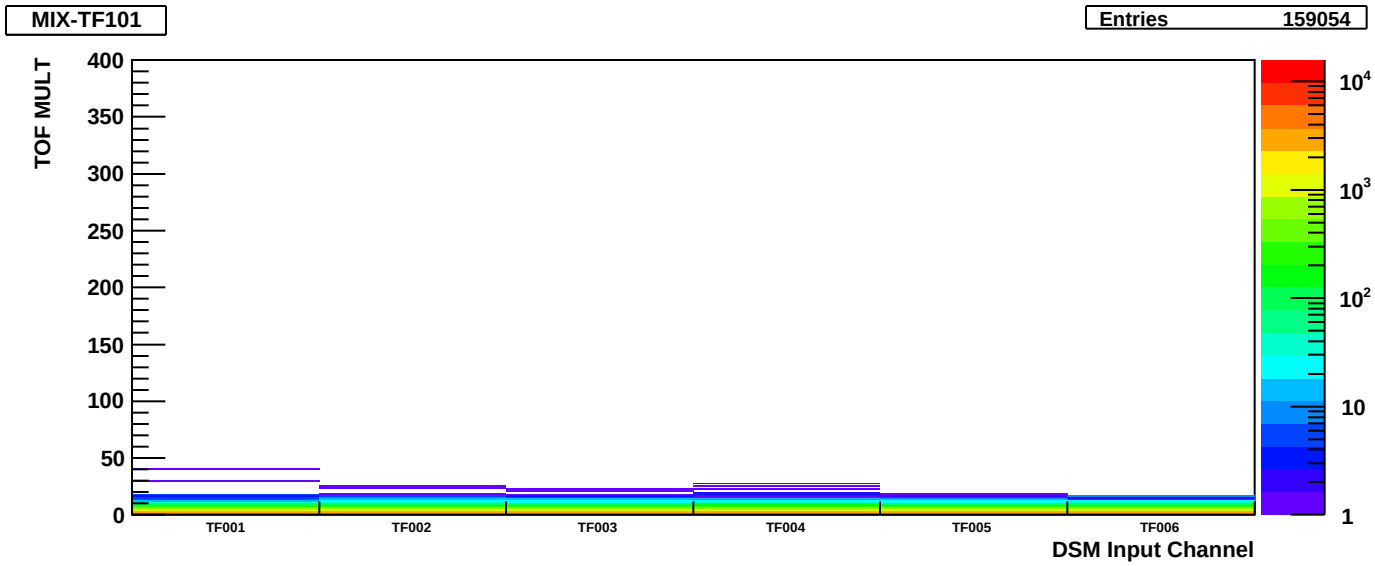

MIX-TF002
Entries 1113378
TOF MULT
TOF tray

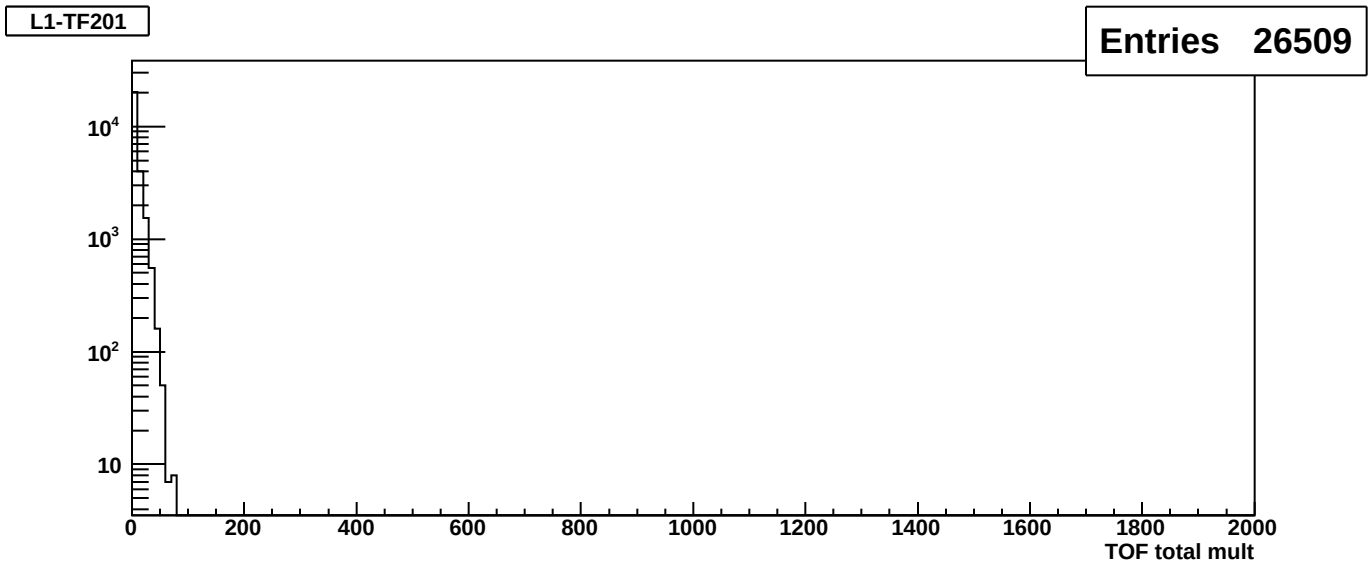

MIX-TF003
Entries 1113378
TOF MULT
TOF tray

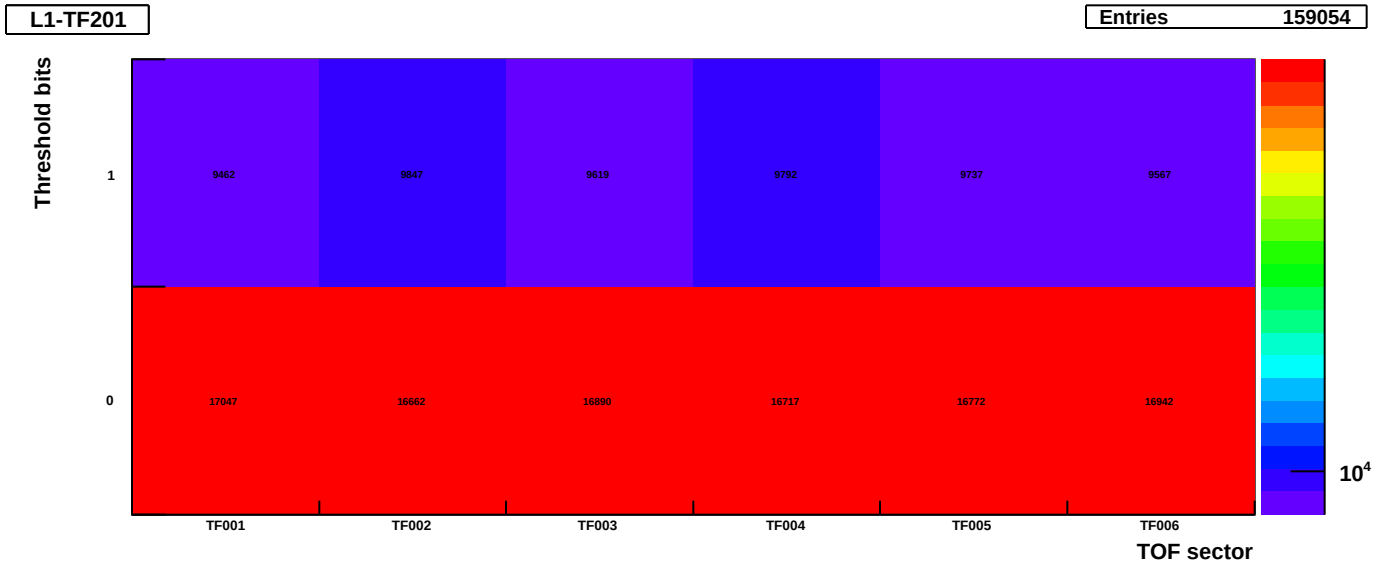

MIX-TF004
Entries 1113378
TOF MULT
TOF tray

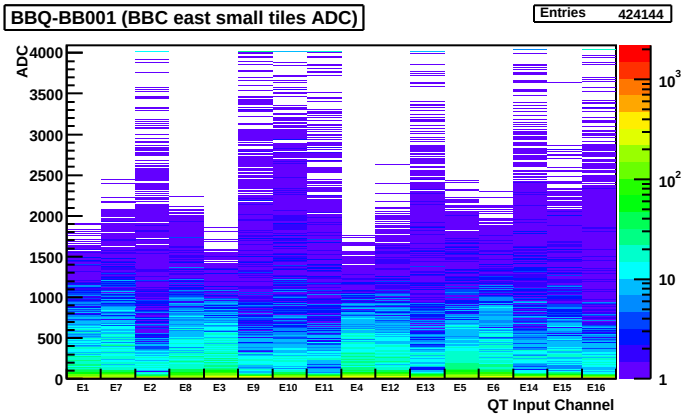

MIX-TF005
Entries 1113378
TOF MULT
TOF tray

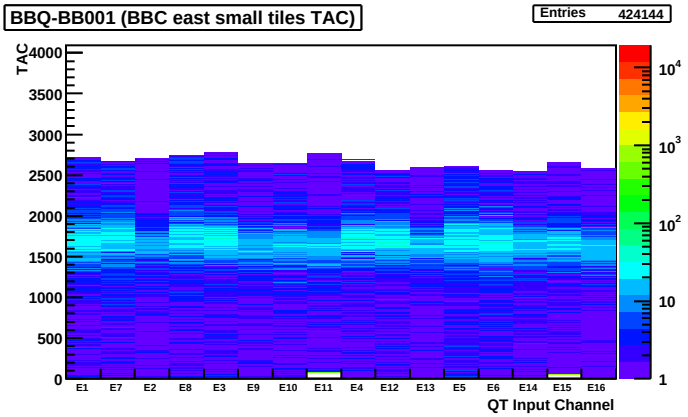

MIX-TF006
Entries 1113378
TOF MULT
TOF tray

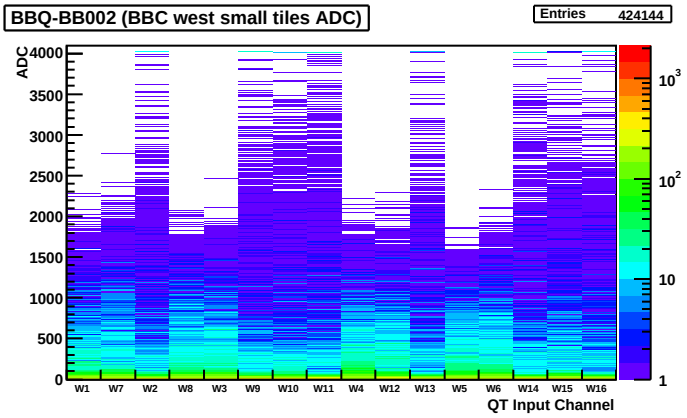

MIX-TF101
Entries 159054
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

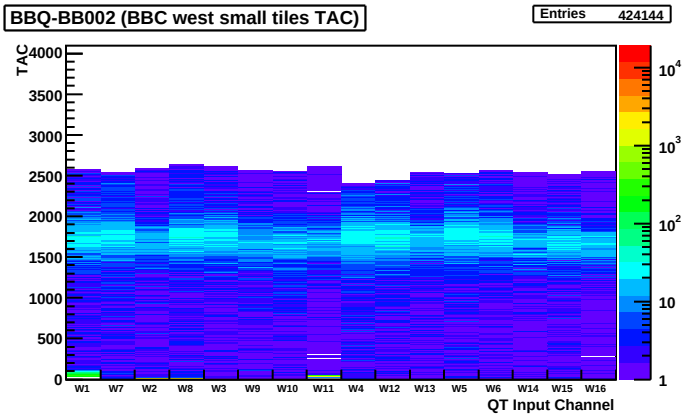

L1-TF201
Entries 26509
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

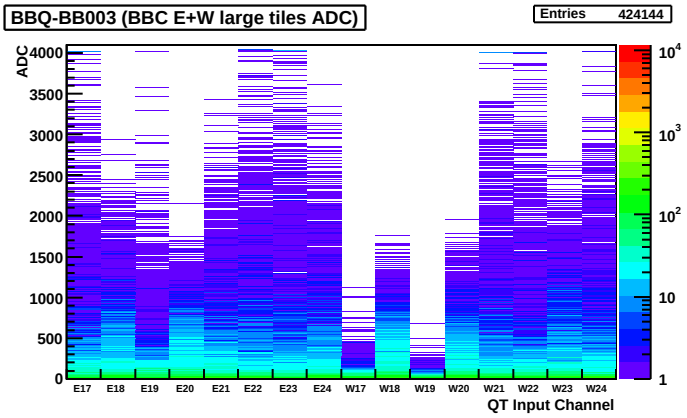

L1-TF201
Entries 159054
Threshold bits
1
0
9462
9847
9619
9792
9737
9567
17047
16662
16890
16717
16772
16942
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

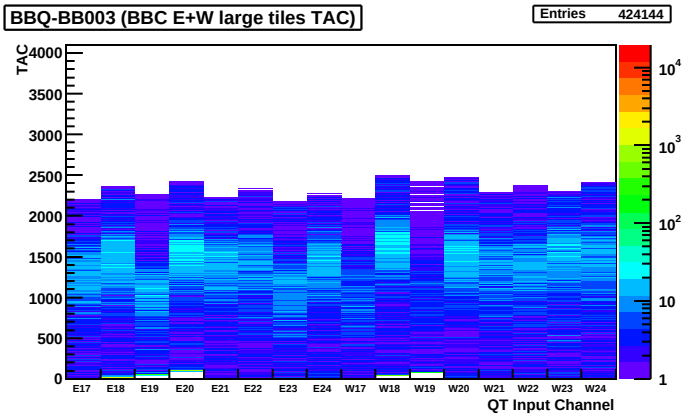

BBQ-BB001 (BBC east small tiles ADC)
Entries 424144
ADC
QT Input Channel

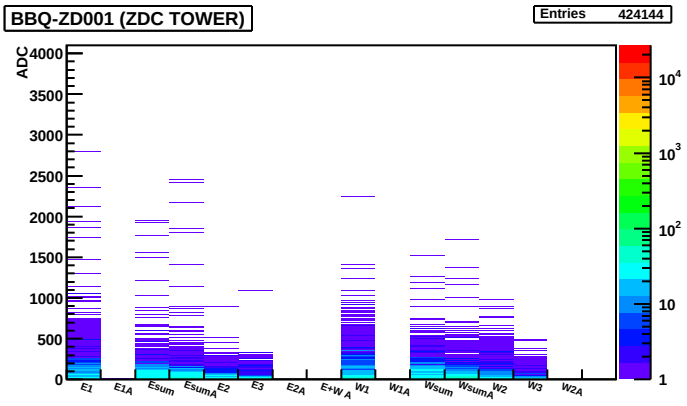

BBQ-BB001 (BBC east small tiles TAC)
Entries 424144
TAC
QT Input Channel

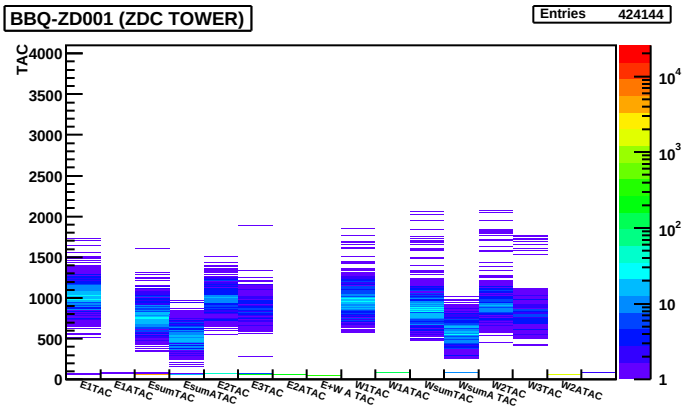

BBQ-BB002 (BBC west small tiles ADC)
Entries 424144
ADC
QT Input Channel

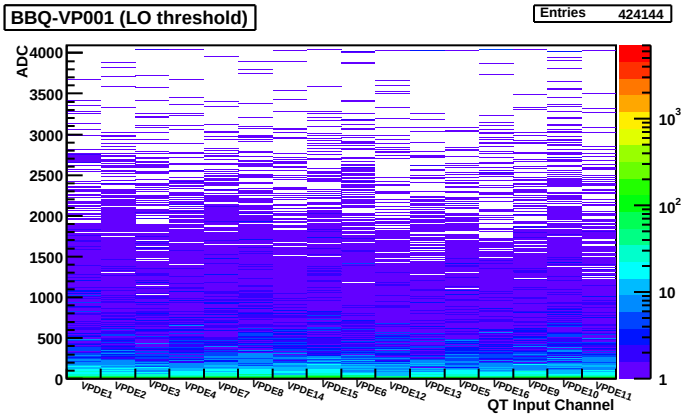

BBQ-BB002 (BBC west small tiles TAC)
Entries 424144
TAC
QT Input Channel

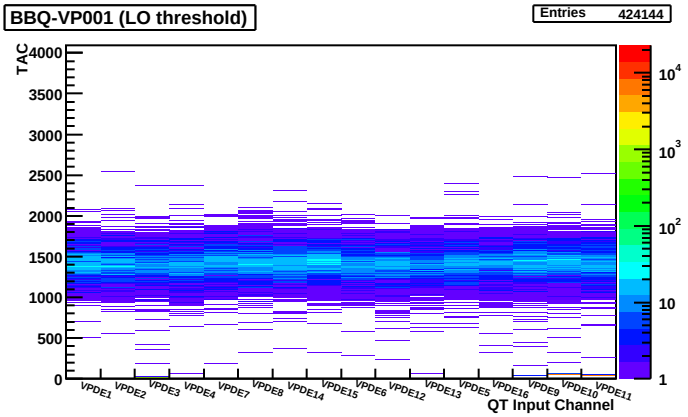

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 424144
ADC
QT Input Channel

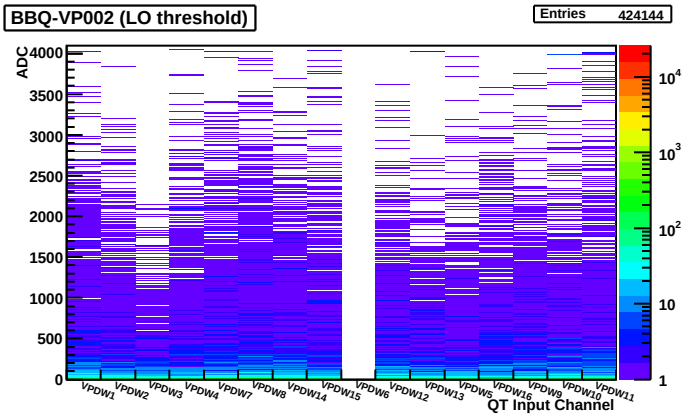

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 424144
TAC
QT Input Channel

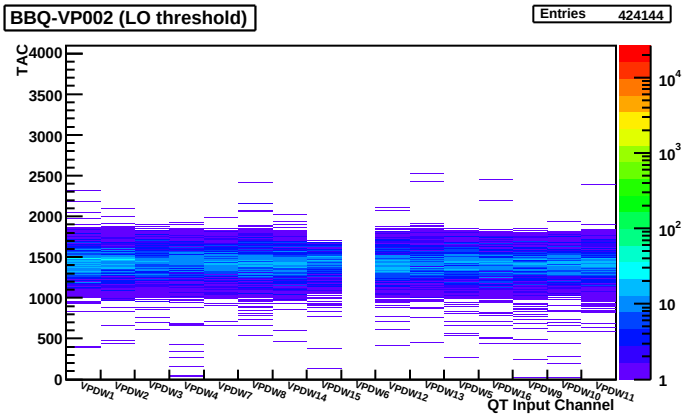

BBQ-ZD001 (ZDC TOWER)
Entries 424144
ADC

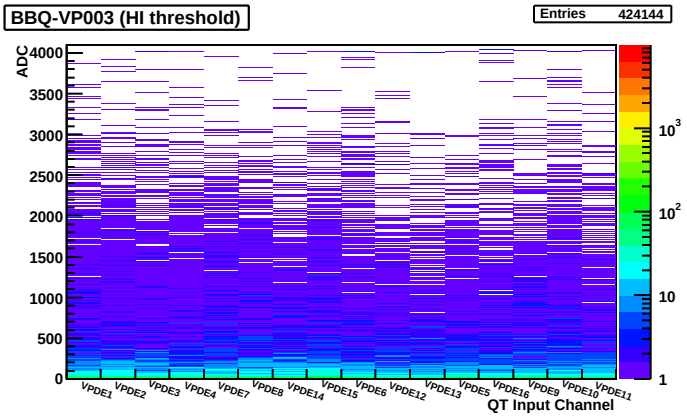

BBQ-ZD001 (ZDC TOWER)
Entries 424144
TAC

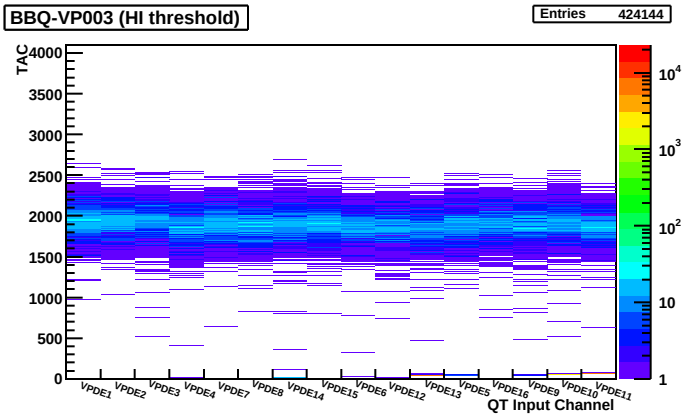

BBQ-VP001 (LO threshold)
Entries 424144
ADC
QT Input Channel

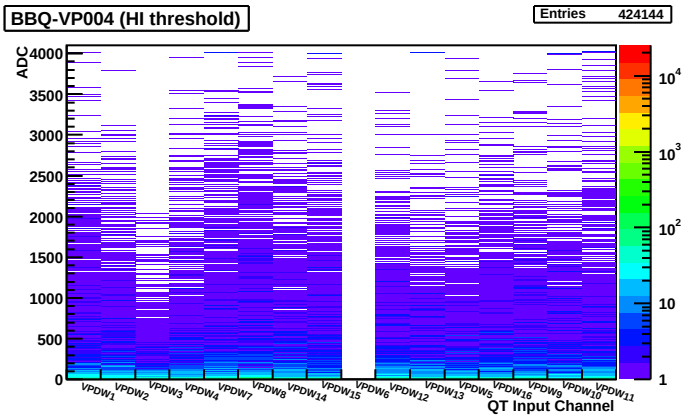

BBQ-VP001 (LO threshold)
Entries 424144
TAC
QT Input Channel

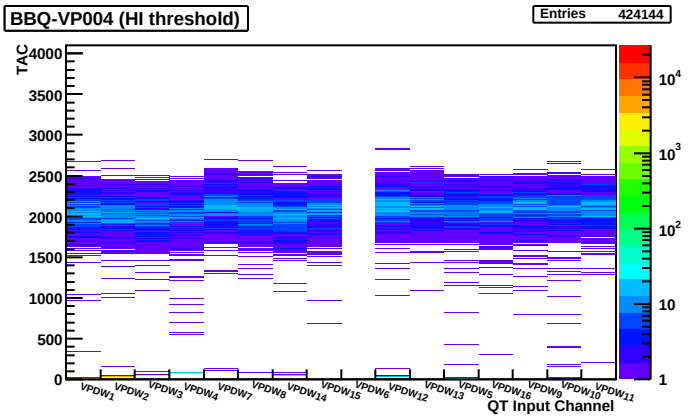

BBQ-VP002 (LO threshold)
Entries 424144
ADC
QT Input Channel

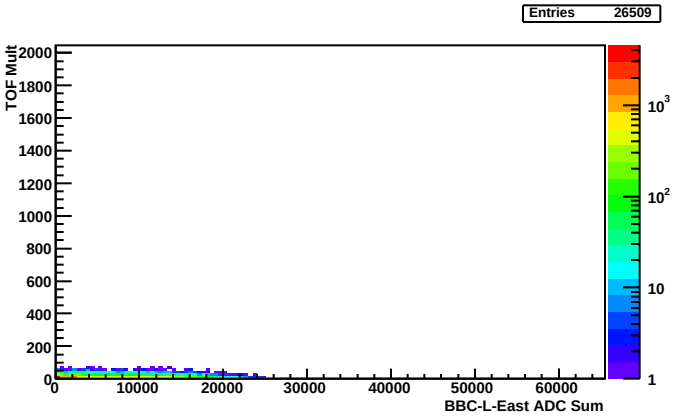

BBQ-VP002 (LO threshold)
Entries 424144
TAC
QT Input Channel

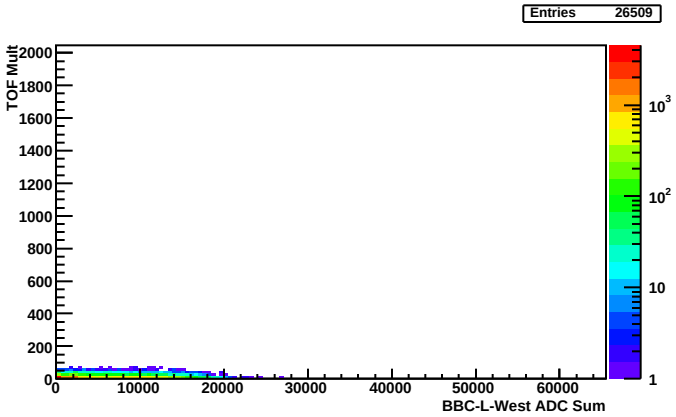

BBQ-VP003 (HI threshold)
Entries 424144
ADC
QT Input Channel

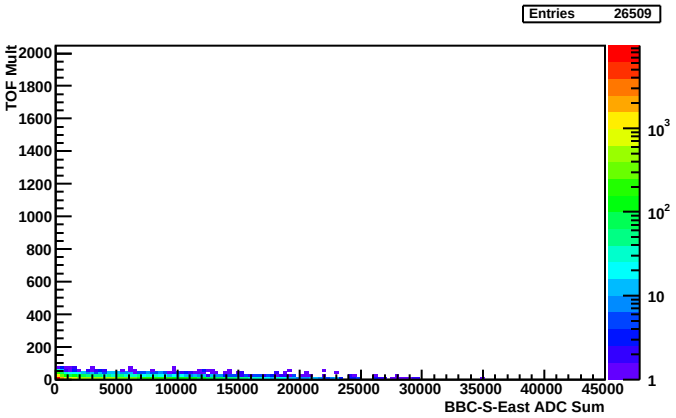

BBQ-VP003 (HI threshold)
Entries 424144
TAC
QT Input Channel

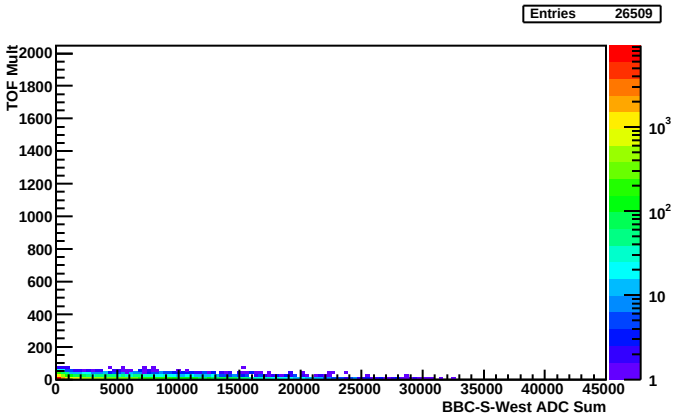

BBQ-VP004 (HI threshold)
Entries 424144
ADC
QT Input Channel

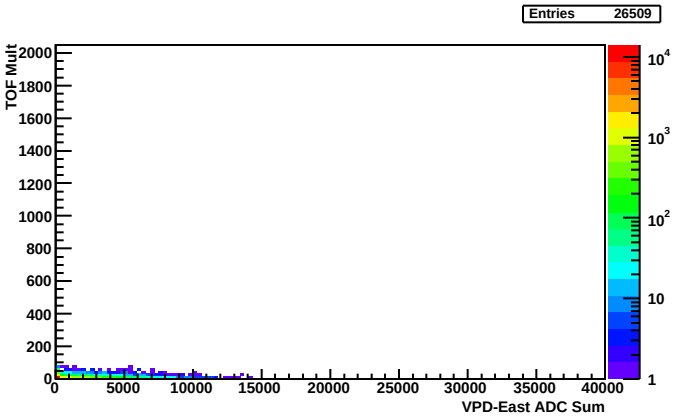

BBQ-VP004 (HI threshold)
Entries 424144
TAC
QT Input Channel

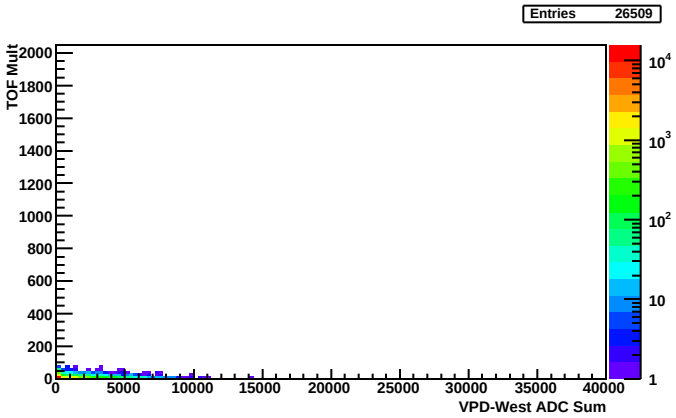

Entries 26509
TOF Mult
BBC-L-East ADC Sum

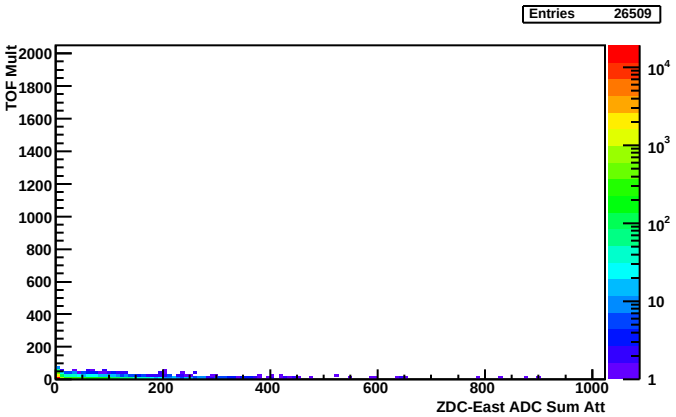

Entries 26509
TOF Mult
BBC-L-West ADC Sum

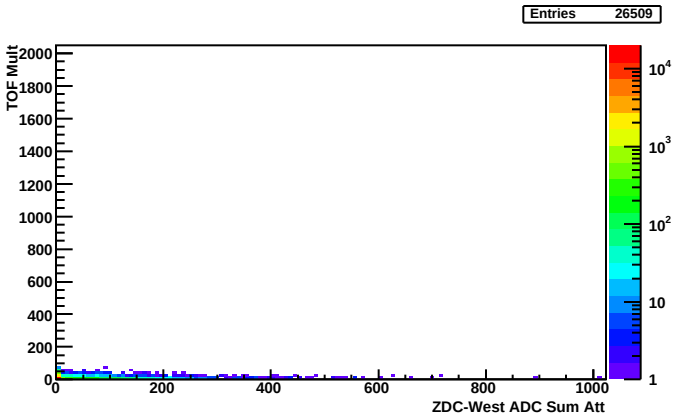

Entries 26509
TOF Mult
BBC-S-East ADC Sum

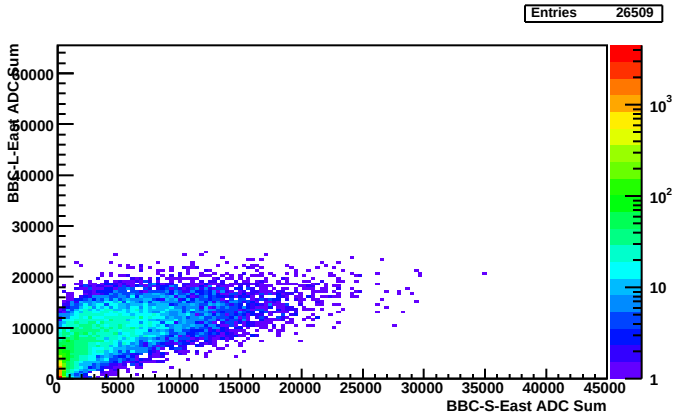

Entries 26509
TOF Mult
BBC-S-West ADC Sum

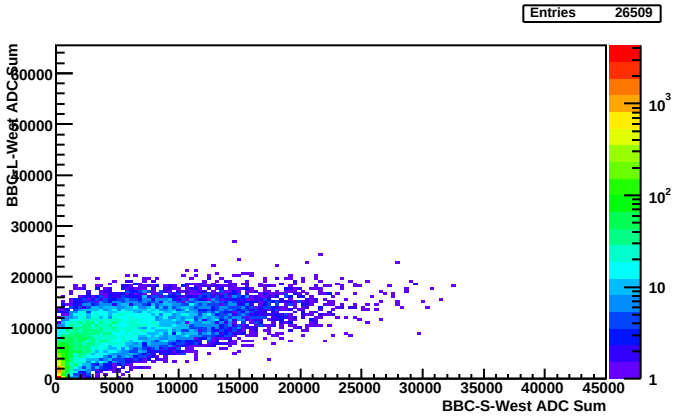

Entries 26509
TOF Mult
VPD-East ADC Sum

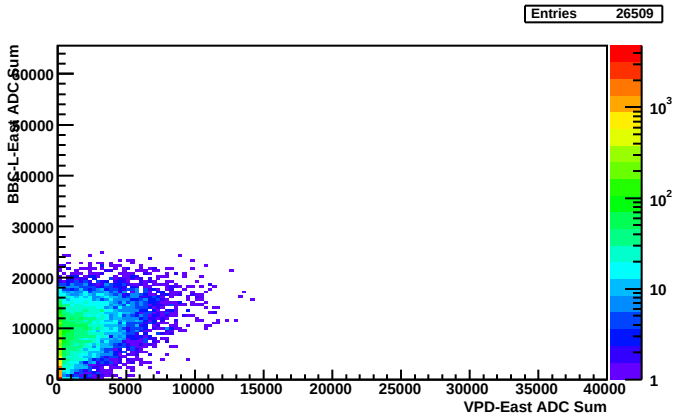

Entries 26509
TOF Mult
VPD-West ADC Sum

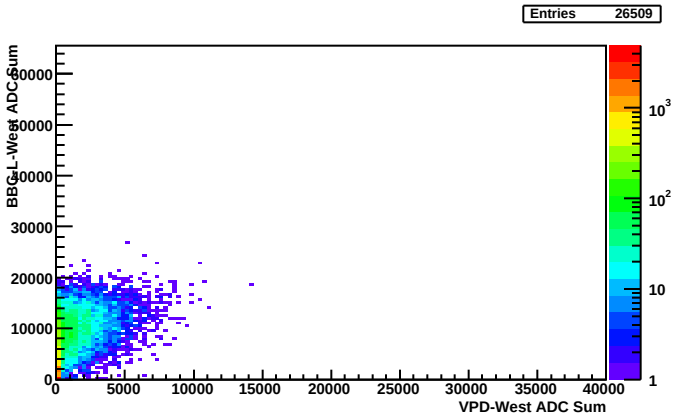

Entries 26509
TOF Mult
ZDC-East ADC Sum Att

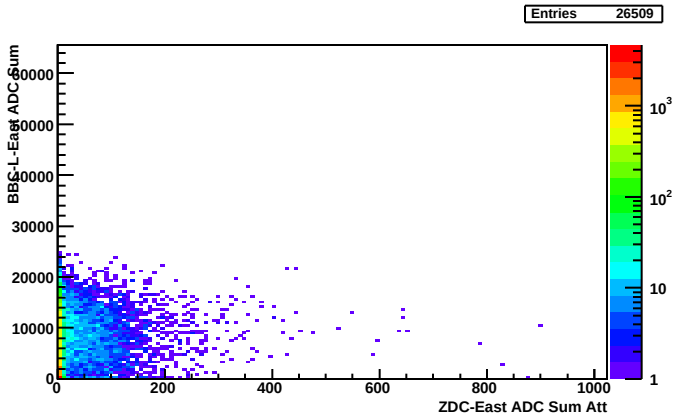

Entries 26509
TOF Mult
ZDC-West ADC Sum Att

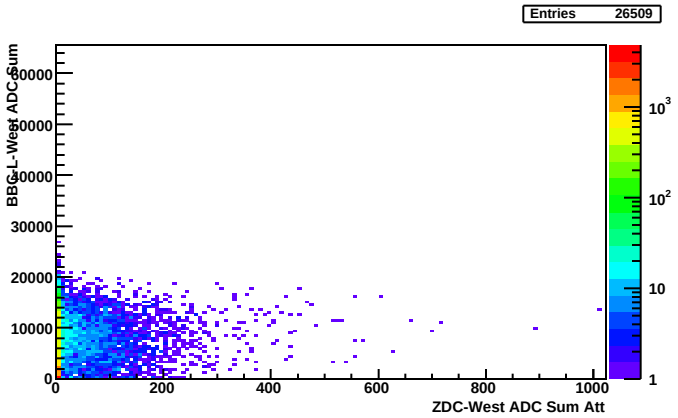

Entries 26509
BBC-L-East ADC Sum
BBC-S-East ADC Sum

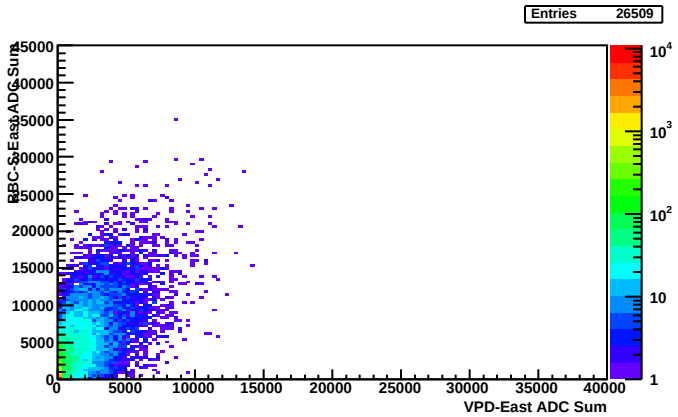

Entries 26509
BBC-L-West ADC Sum
BBC-S-West ADC Sum

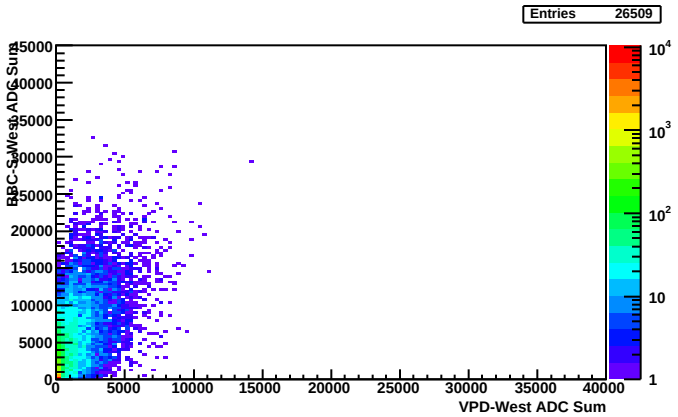

Entries 26509
BBC-L-East ADC Sum
VPD-East ADC Sum

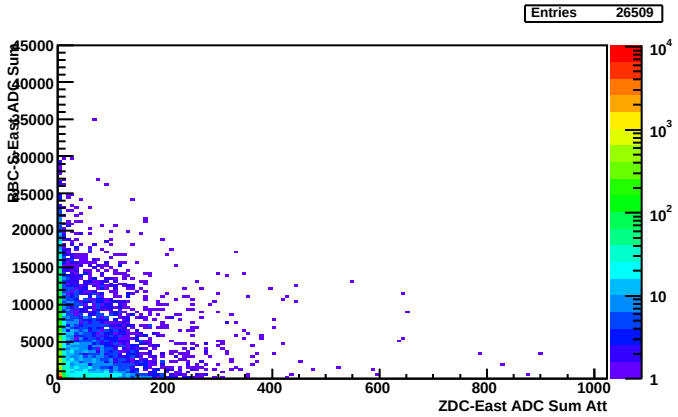

Entries 26509
BBC-L-West ADC Sum
VPD-West ADC Sum

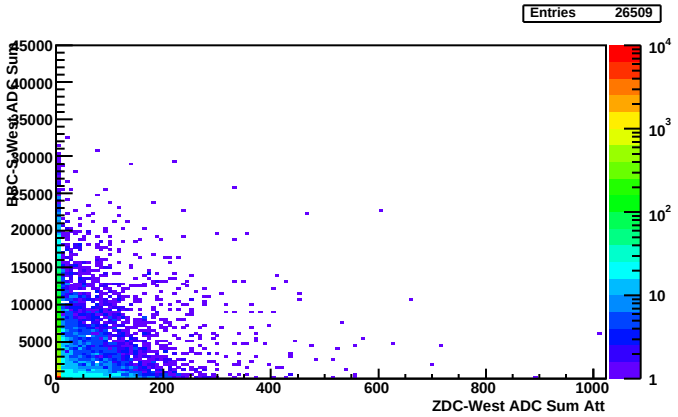

Entries 26509
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

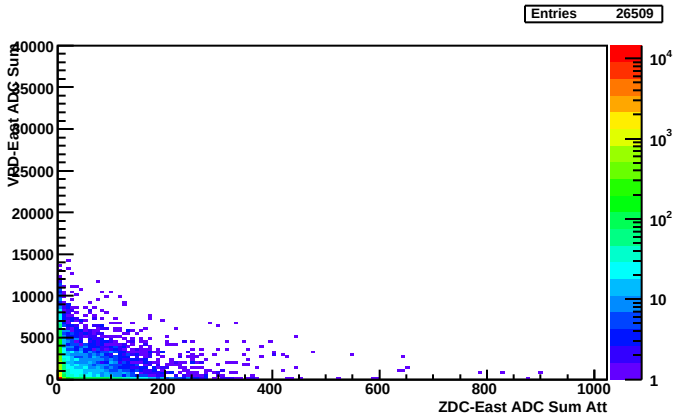

Entries 26509
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

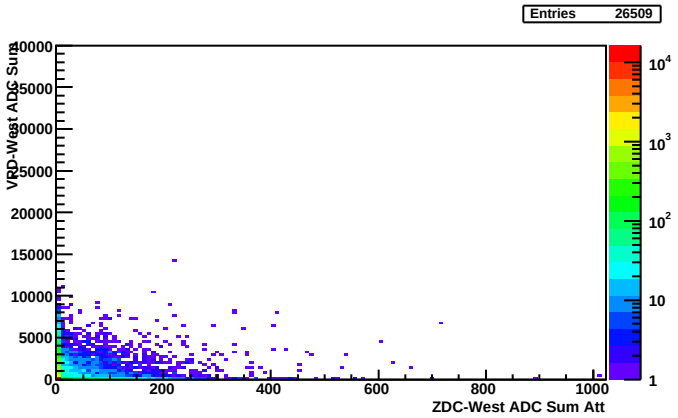

Entries 26509
BBC-S-East ADC Sum
VPD-East ADC Sum

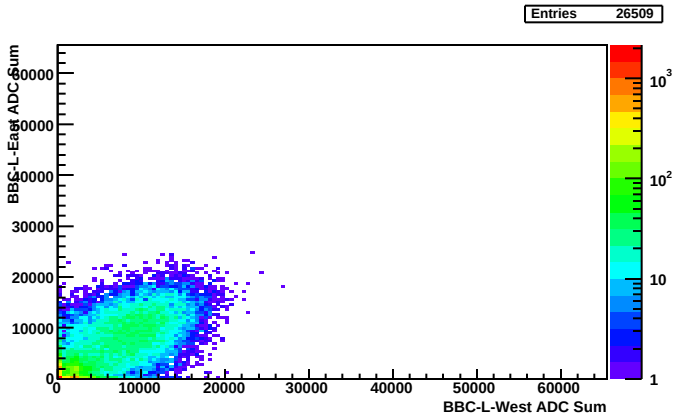

Entries 26509
BBC-S-West ADC Sum
VPD-West ADC Sum

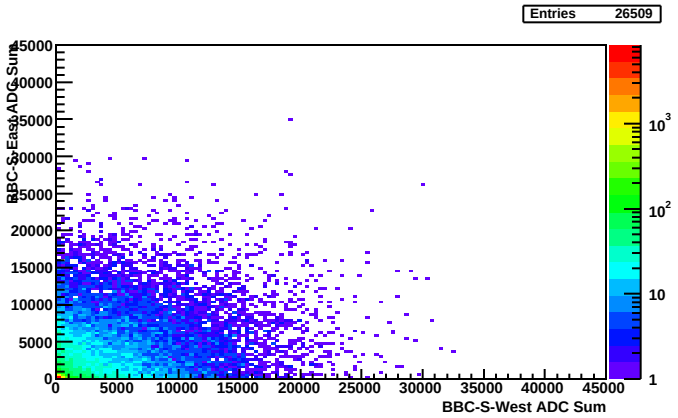

Entries 26509
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

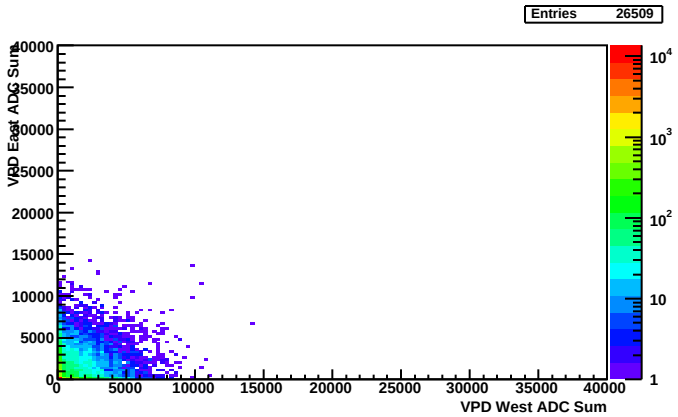

Entries 26509
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

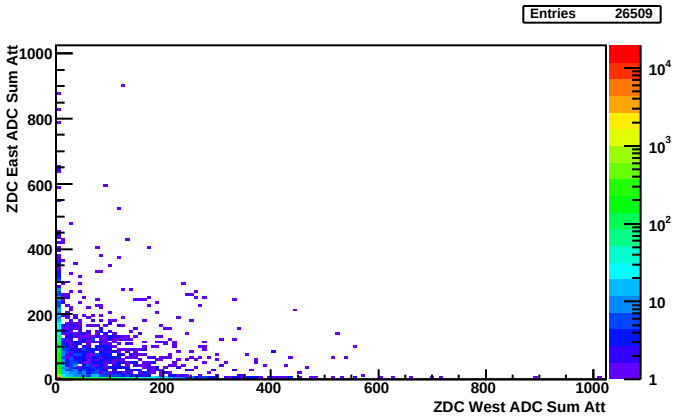

Entries 26509
VPD-East ADC Sum
ZDC-East ADC Sum Att

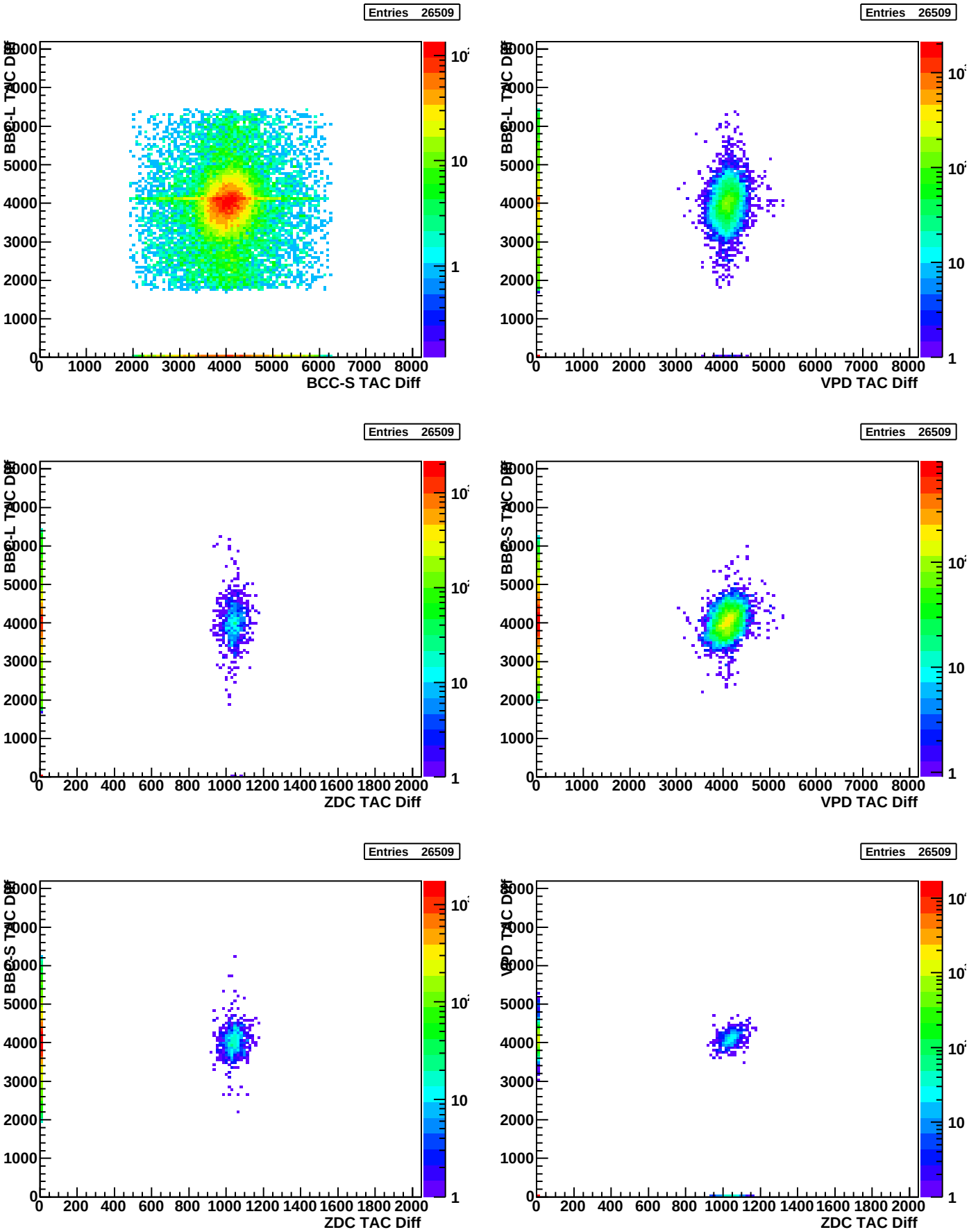

Entries 26509
VPD-West ADC Sum
ZDC-West ADC Sum Att

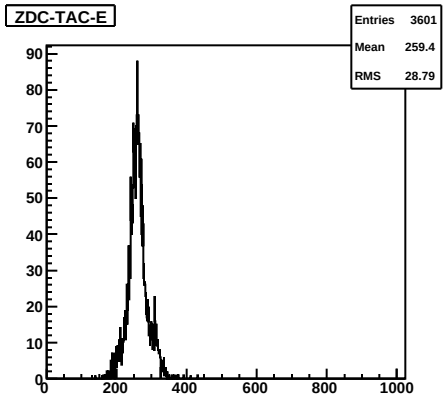

Entries 26509
BBC-L-East ADC Sum
BBC-L-West ADC Sum

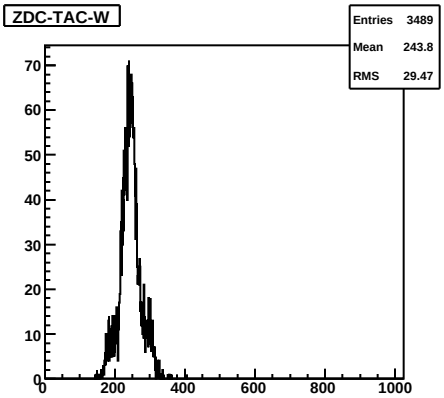

Entries 26509
BBC-S-East ADC Sum
BBC-S-West ADC Sum

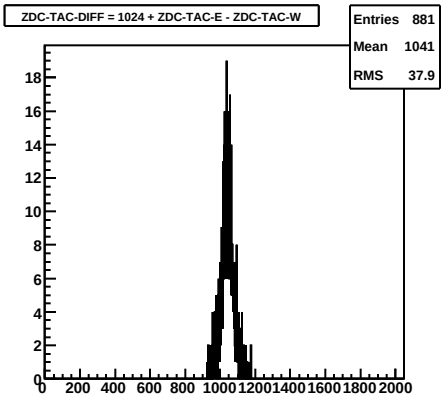

Entries 26509
VPD East ADC Sum
VPD West ADC Sum

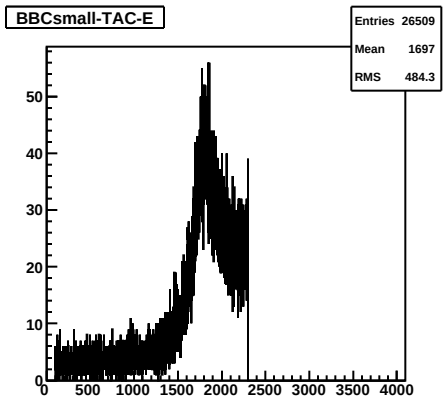

Entries 26509
ZDC East ADC Sum Att
ZDC West ADC Sum Att

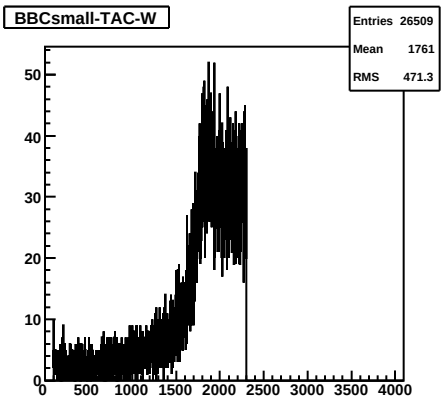

Entries 26509
BBC-L TAC Diff
BCC-S TAC Diff
Entries 26509
BBC-L TAC Diff
VPD TAC Diff
Entries 26509
BBC-L TAC Diff
ZDC TAC Diff
Entries 26509
BBC-S TAC Diff
VPD TAC Diff
Entries 26509
BBC-S TAC Diff
ZDC TAC Diff
Entries 26509
VPD TAC Diff
ZDC TAC Diff

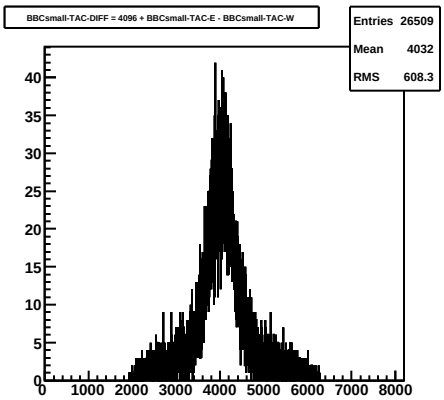

ZDC-TAC-E
Entries 3601
Mean 259.4
RMS 28.79

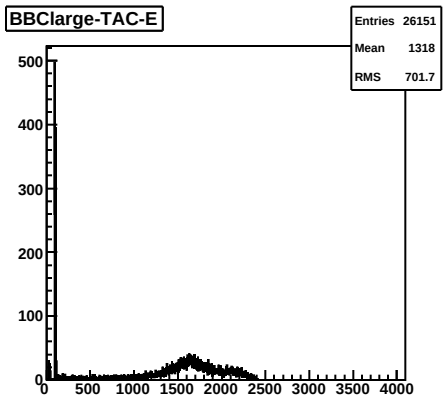

ZDC-TAC-W
Entries 3489
Mean 243.8
RMS 29.47

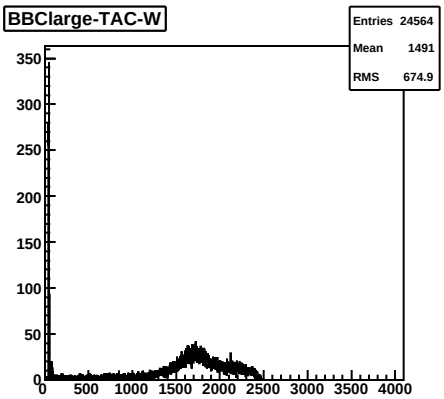

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 881
Mean 1041
RMS 37.9

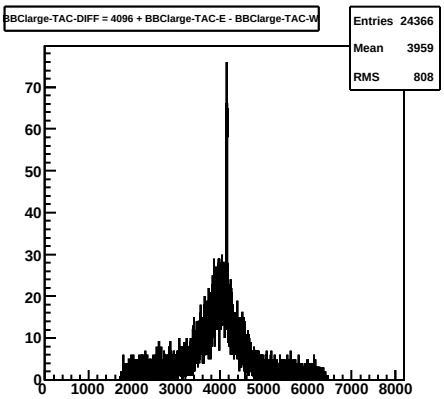

BBCsmall-TAC-E
Entries 26509
Mean 1697
RMS 484.3

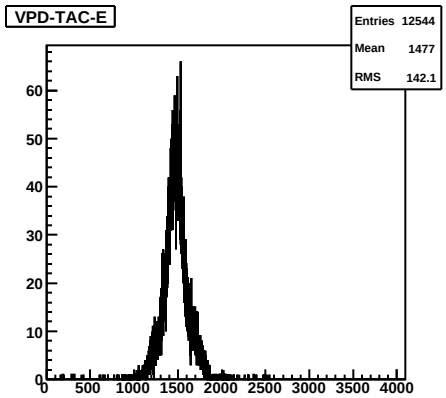

BBCsmall-TAC-W
Entries 26509
Mean 1761
RMS 471.3

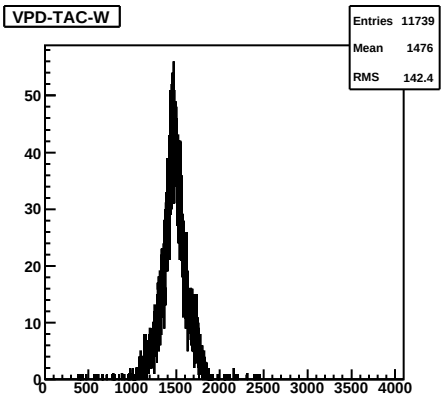

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 26509
Mean 4032
RMS 608.3

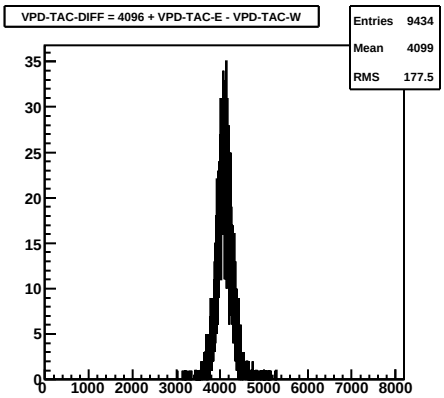

BBClarge-TAC-E
Entries 26151
Mean 1318
RMS 701.7

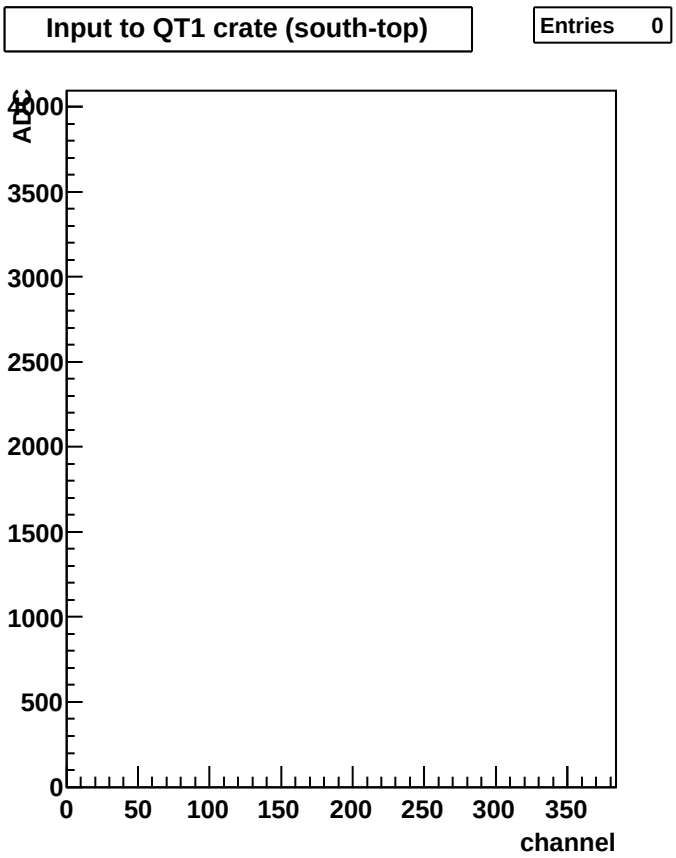

BBClarge-TAC-W
Entries 24564
Mean 1491
RMS 674.9

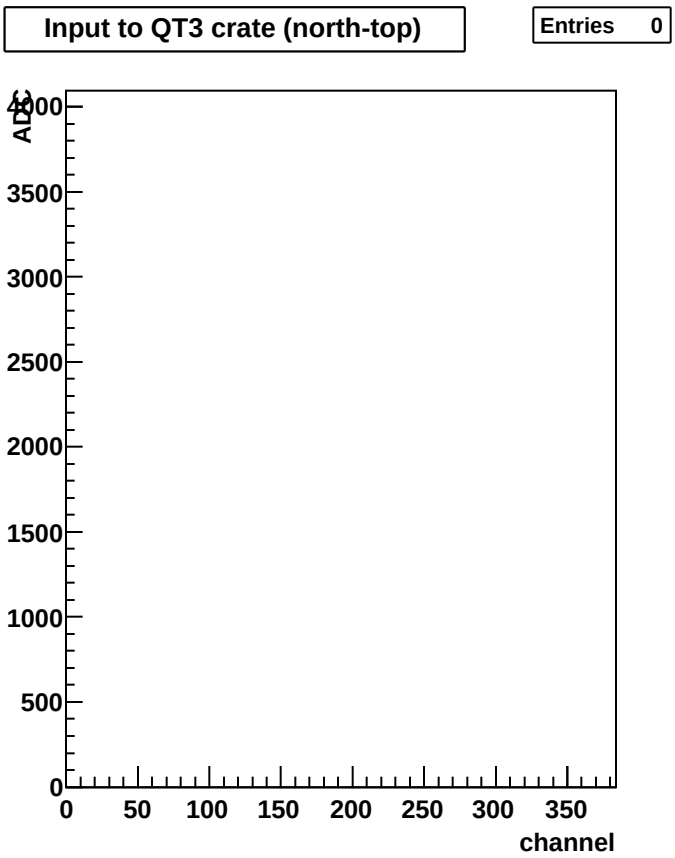

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 24366
Mean 3959
RMS 808

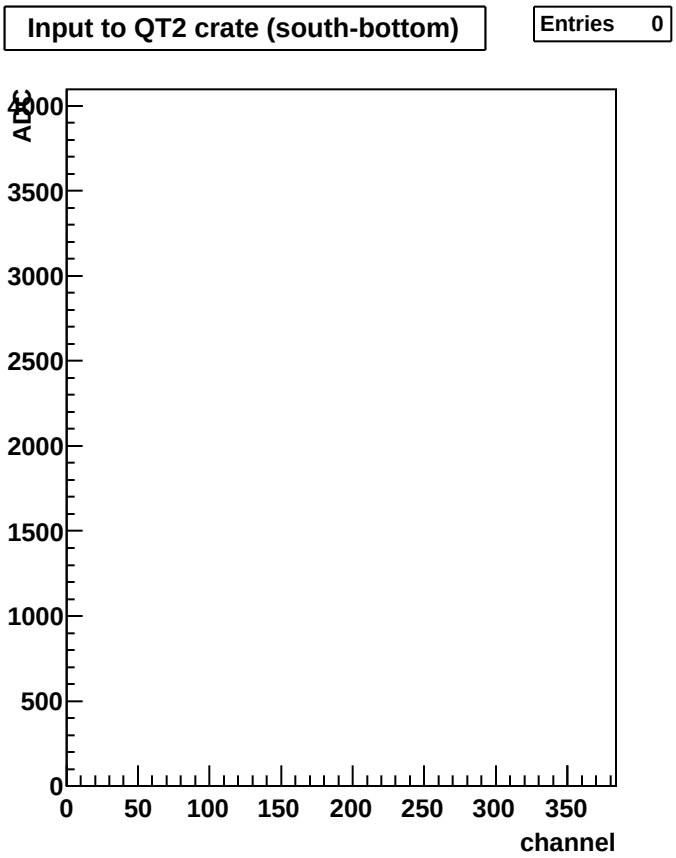

VPD-TAC-E
Entries 12544
Mean 1477
RMS 142.1

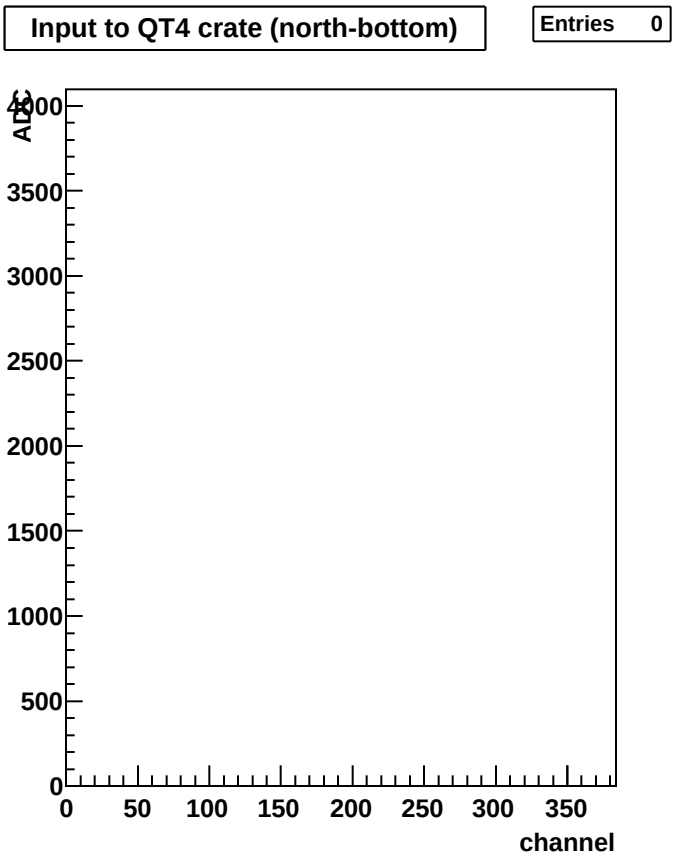

VPD-TAC-W
Entries 11739
Mean 1476
RMS 142.4

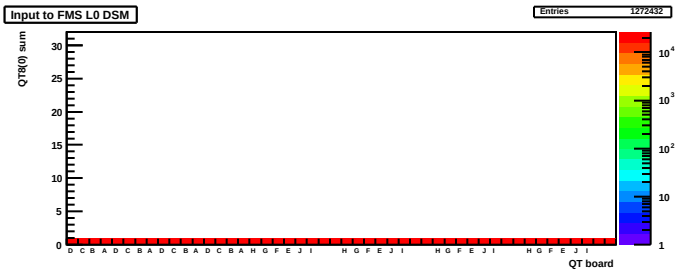

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 9434
Mean 4099
RMS 177.5

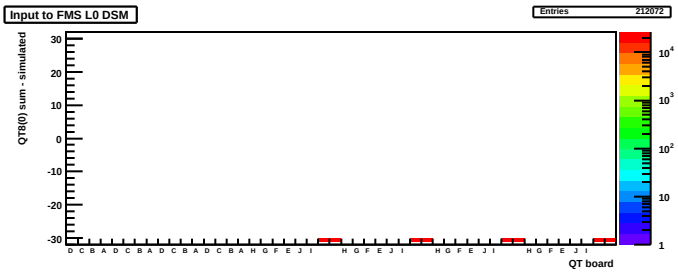

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

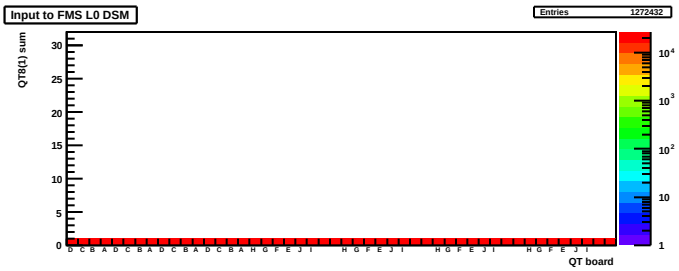

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

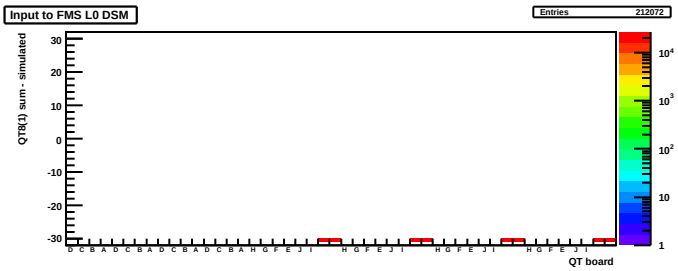

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

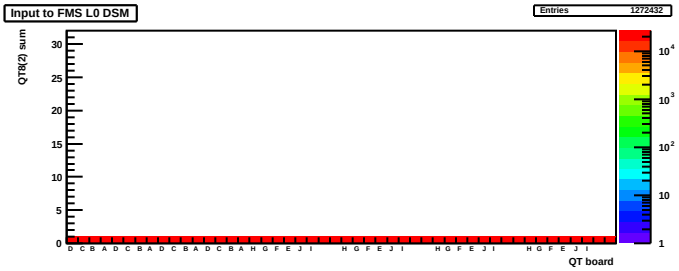

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

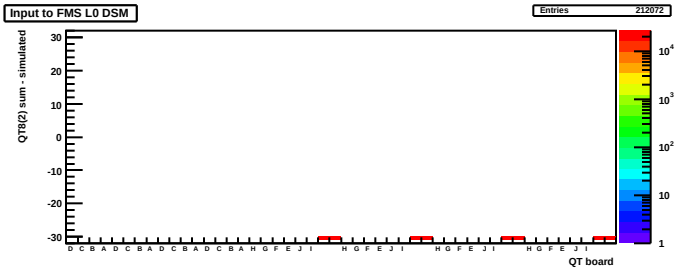

Input to FMS L0 DSM
Entries 1272432
QT8(0) sum
QT board

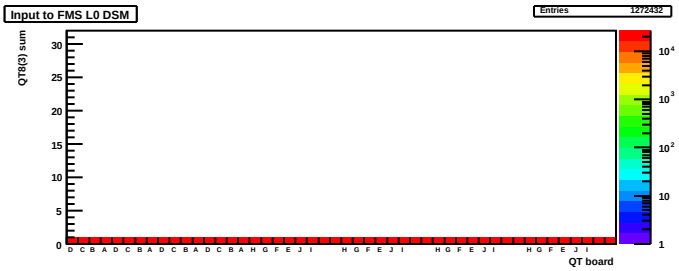

Input to FMS L0 DSM
Entries 212072
QT8(0) sum - simulated
QT board

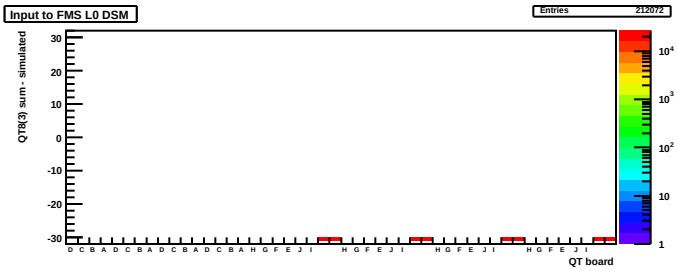

Input to FMS L0 DSM
Entries 1272432
QT8(1) sum
QT board

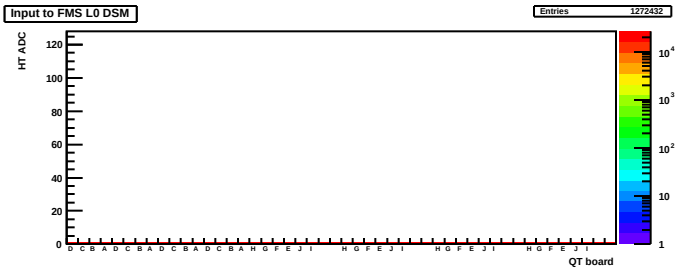

Input to FMS L0 DSM
Entries 212072
QT8(1) sum - simulated
QT board

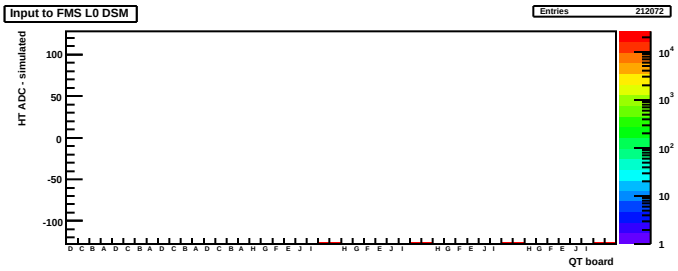

Input to FMS L0 DSM
Entries 1272432
QT8(2) sum
QT board

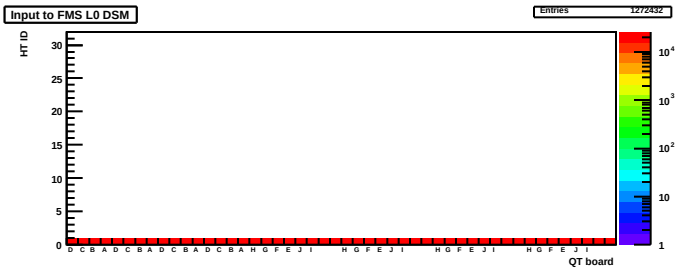

Input to FMS L0 DSM
Entries 212072
QT8(2) sum - simulated
QT board

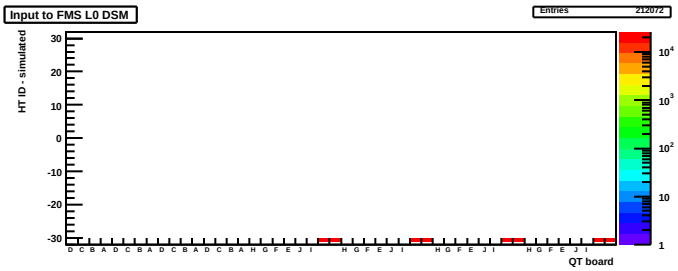

Input to FMS L0 DSM
Entries 1272432
QT8(3) sum
QT board

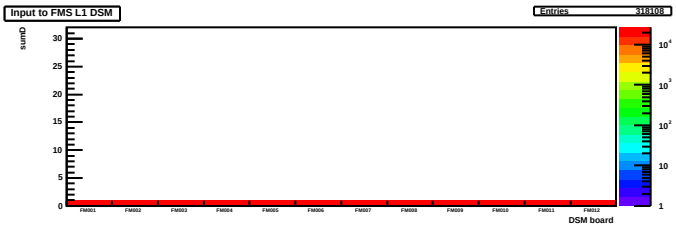

Input to FMS L0 DSM
Entries 212072
QT8(3) sum - simulated
QT board

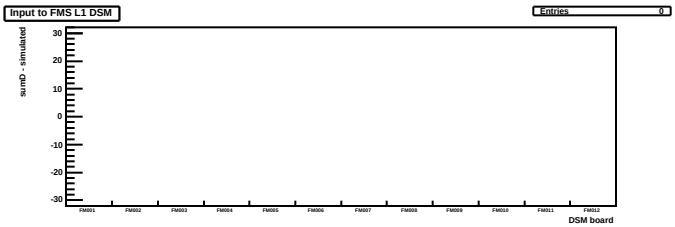

Input to FMS L0 DSM
Entries 1272432
HT ADC
QT board

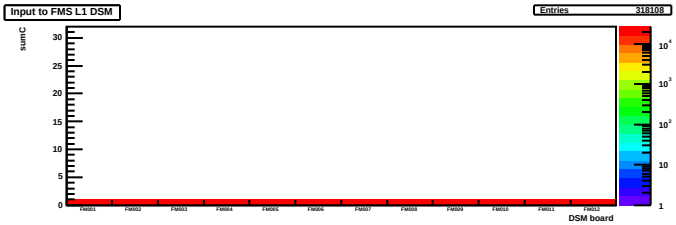

Input to FMS L0 DSM
Entries 212072
HT ADC - simulated
QT board

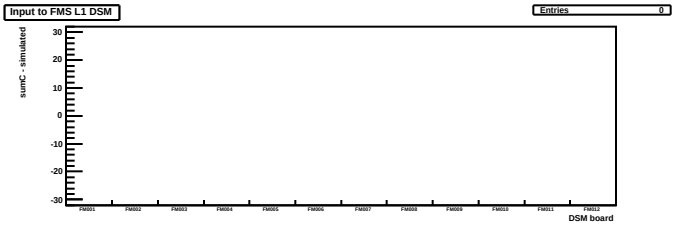

Input to FMS L0 DSM
Entries 1272432
HT ID
QT board

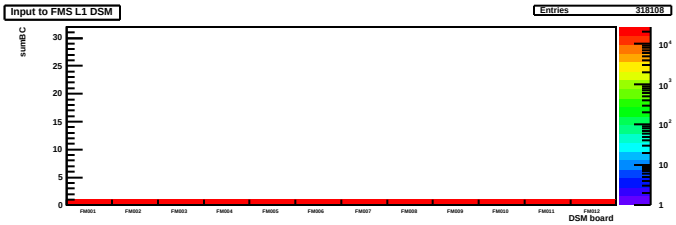

Input to FMS L0 DSM
Entries 212072
HT ID - simulated
QT board

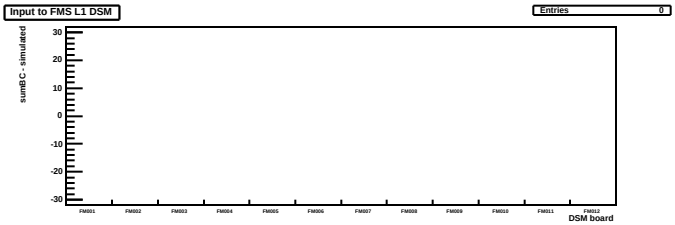

Input to FMS L1 DSM
Entries 318108
sumD
DSM board

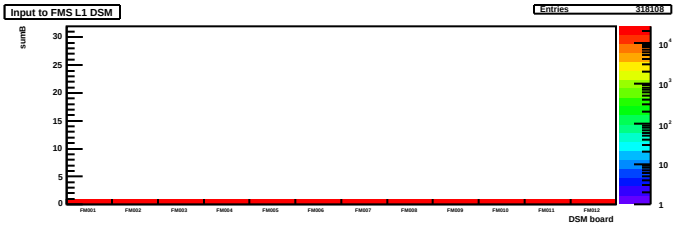

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

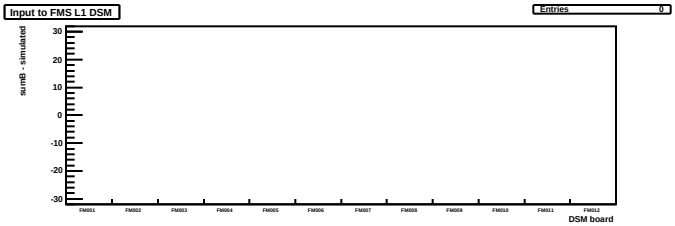

Input to FMS L1 DSM
Entries 318108
sumC
DSM board

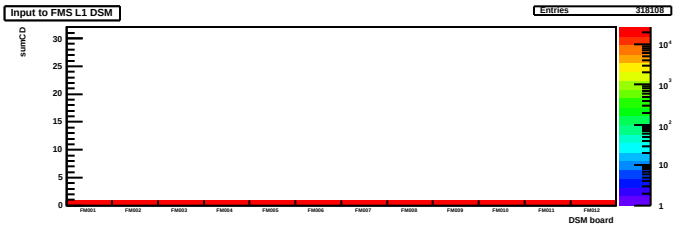

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

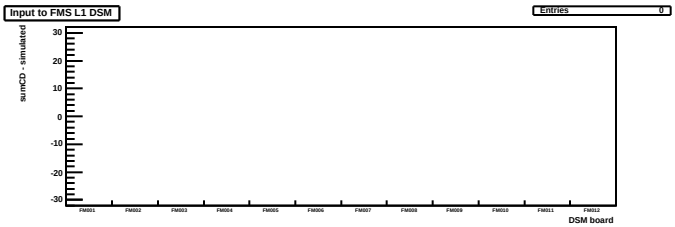

Input to FMS L1 DSM
Entries 318108
sumBC
DSM board

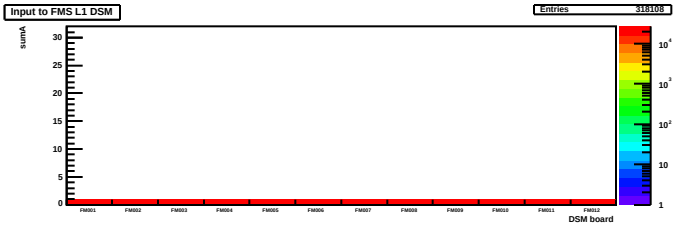

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

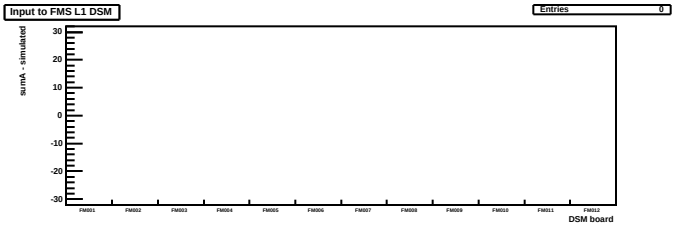

Input to FMS L1 DSM
Entries 318108
sumB
DSM board

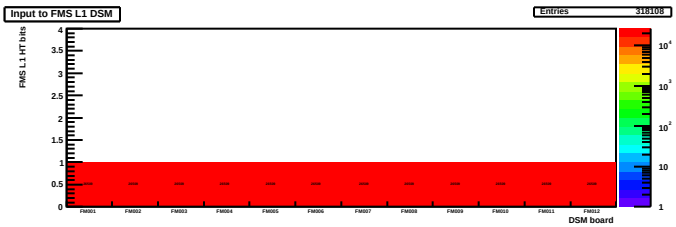

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

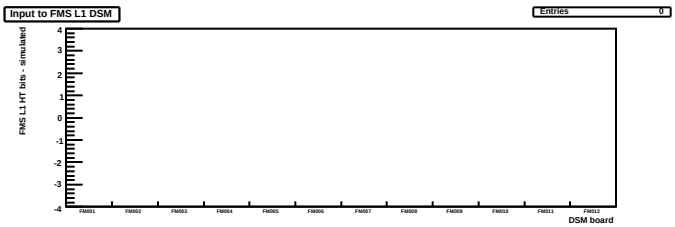

Input to FMS L1 DSM
Entries 318108
sumCD
DSM board

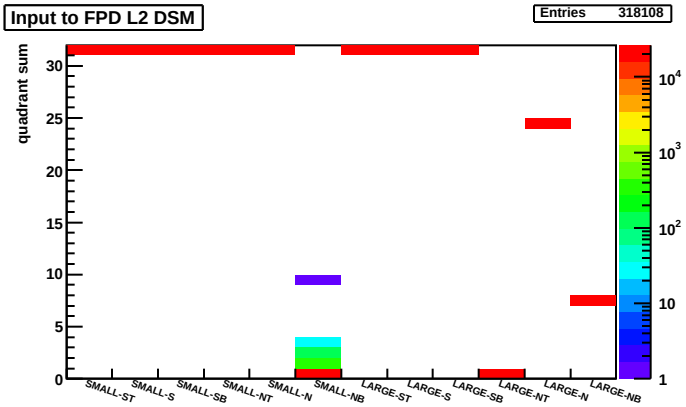

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

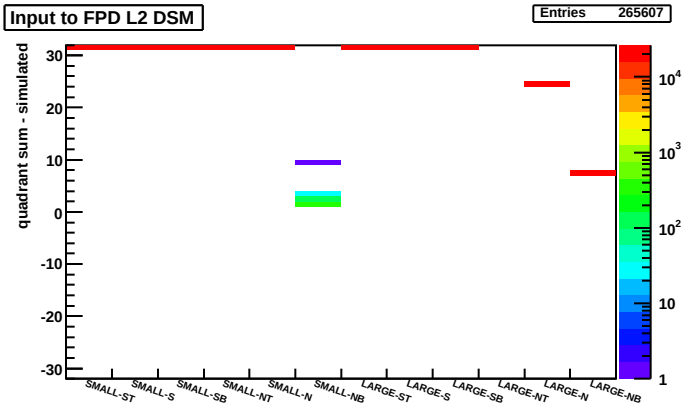

Input to FMS L1 DSM
Entries 318108
sumA
DSM board

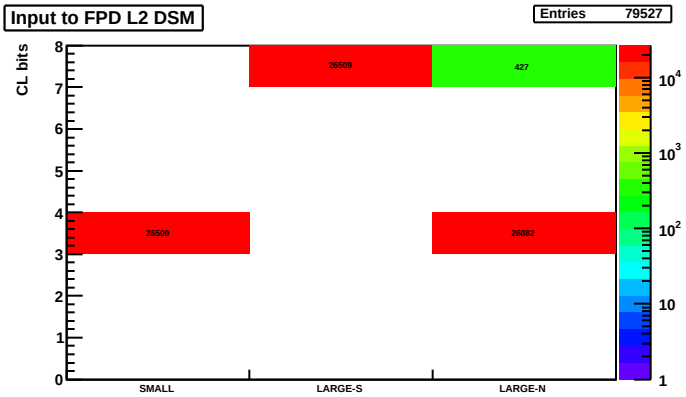

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

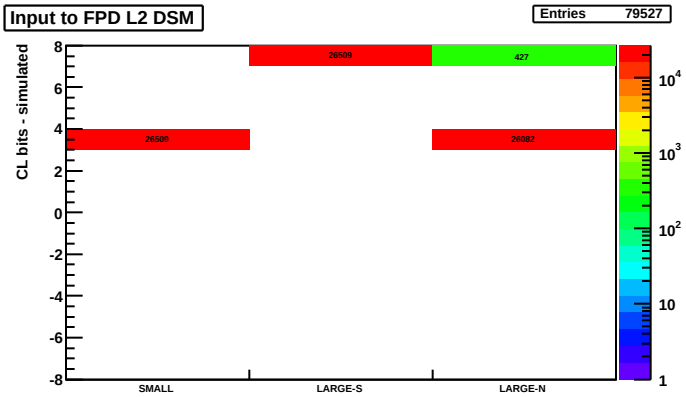

Input to FMS L1 DSM
Entries 318108
FMS L1 HT bits
DSM board

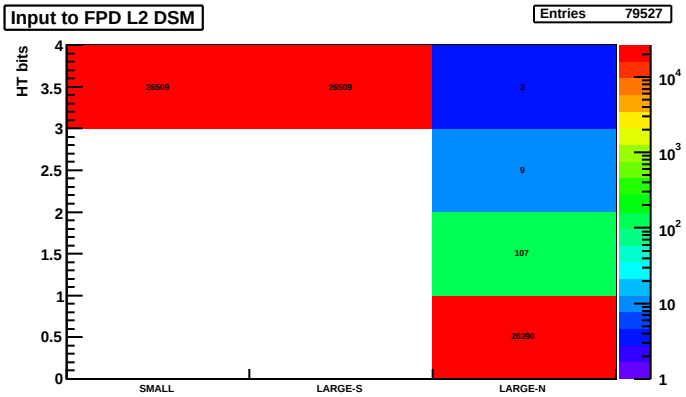

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

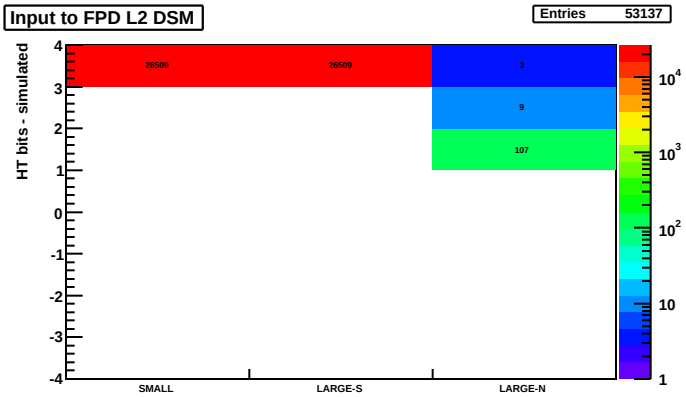

Input to FPD L2 DSM
Entries 318108
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

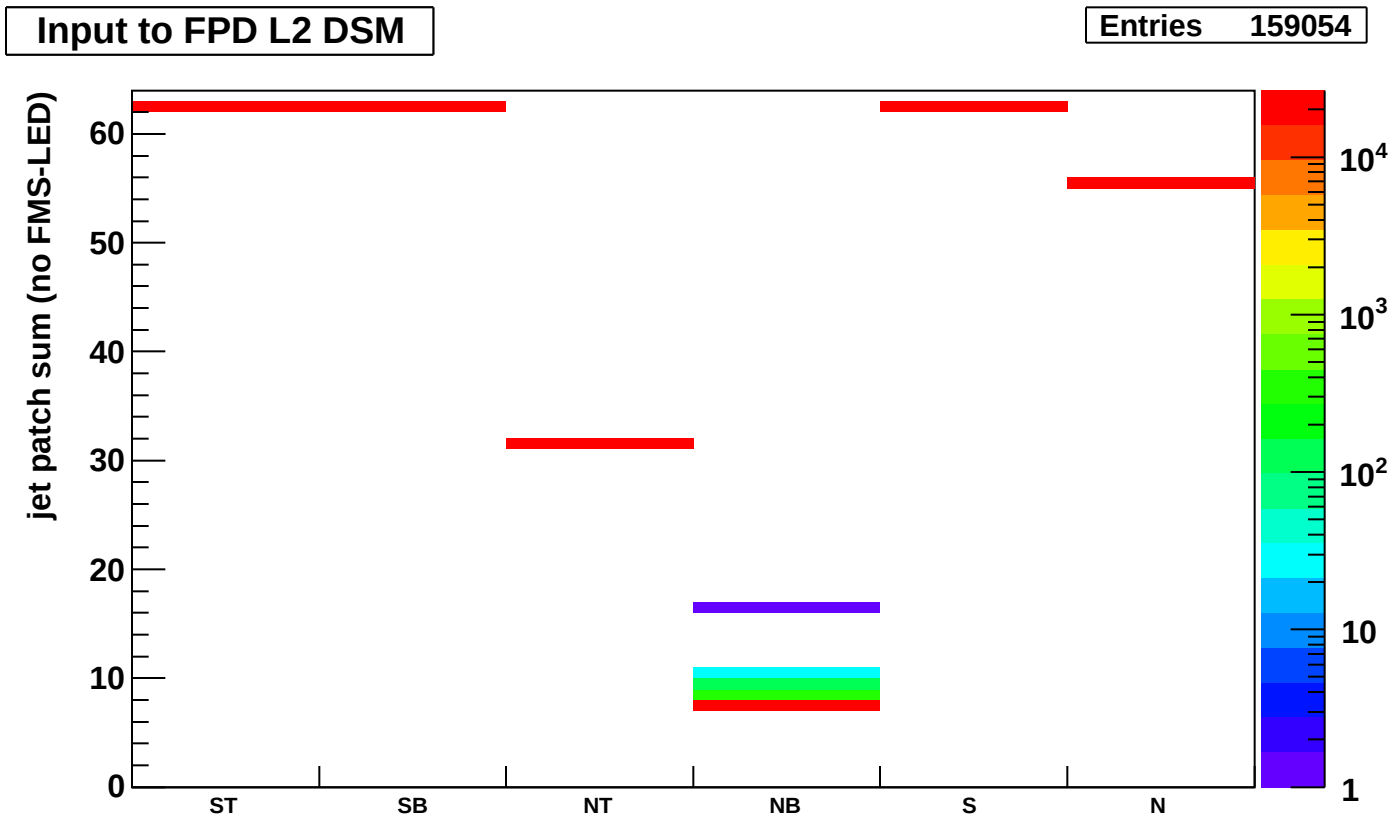

Input to FPD L2 DSM
Entries 265607
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

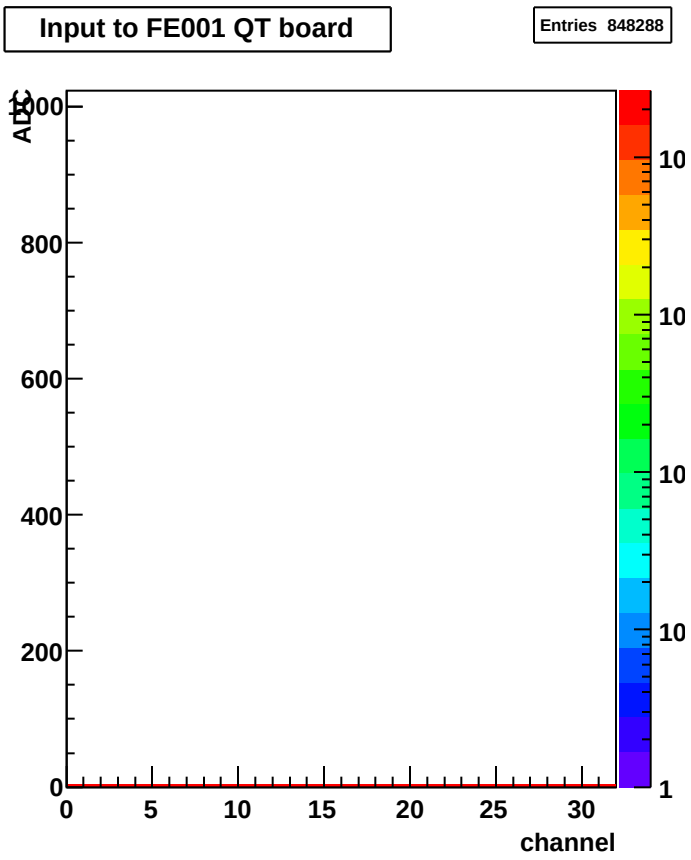

Input to FPD L2 DSM
Entries 79527
CL bits
26509
427
26509
26082
SMALL
LARGE-S
LARGE-N

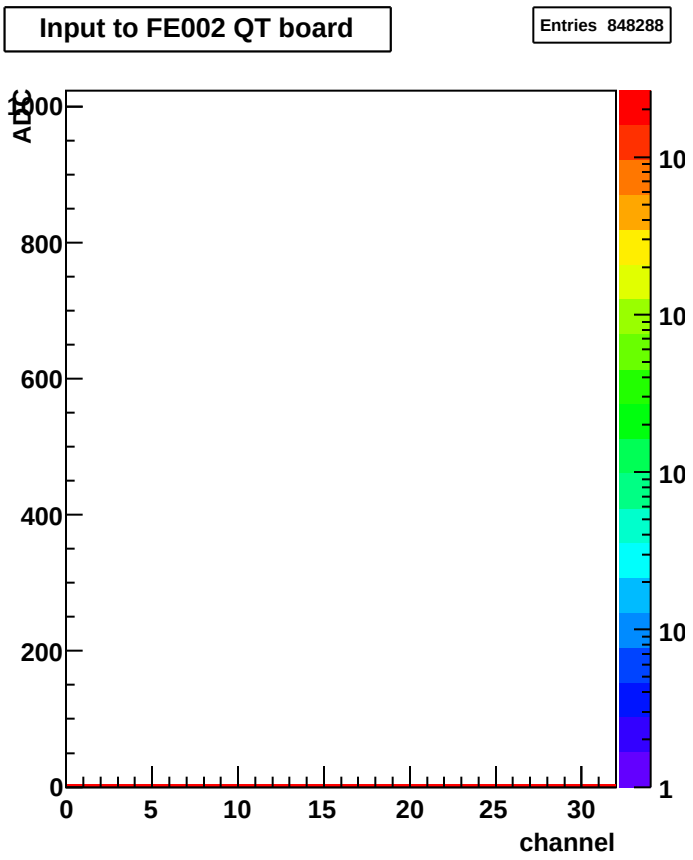

Input to FPD L2 DSM
Entries 79527
CL bits - simulated
26509
427
26509
26082
SMALL
LARGE-S
LARGE-N

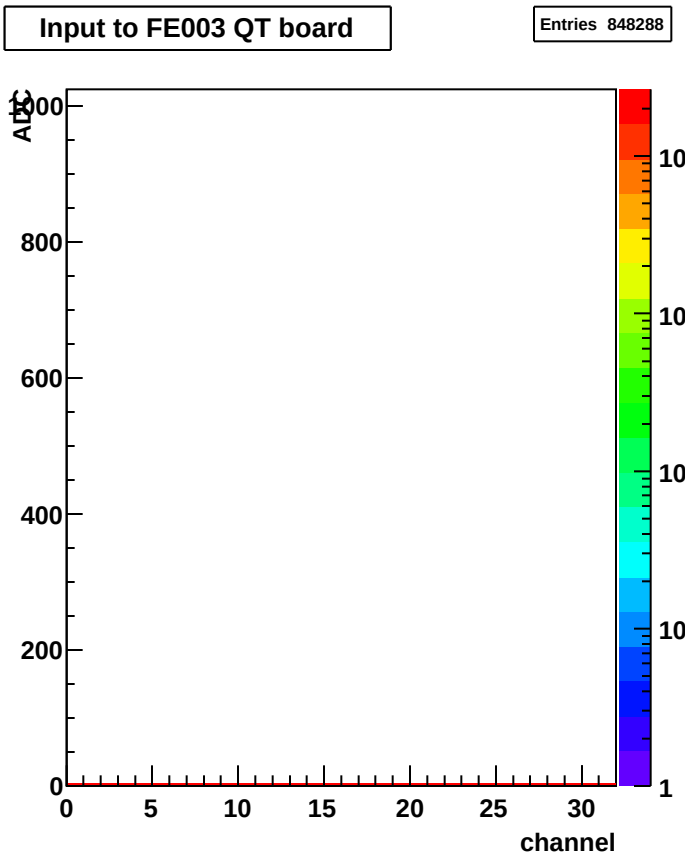

Input to FPD L2 DSM
Entries 79527
HT bits
26509
26509
3
9
107
26390
SMALL
LARGE-S
LARGE-N

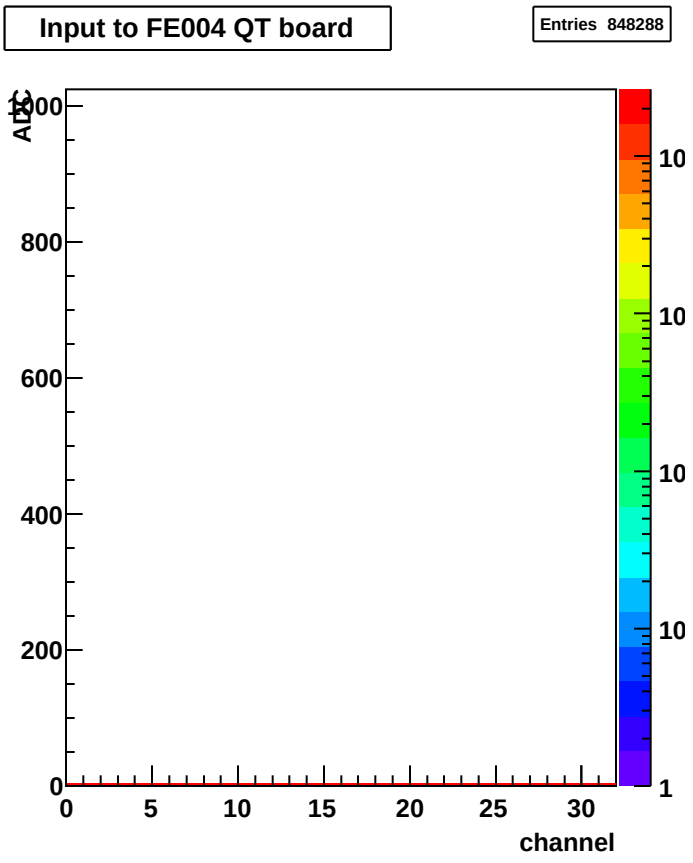

Input to FPD L2 DSM
Entries 53137
HT bits - simulated
26509
26509
3
9
107
SMALL
LARGE-S
LARGE-N

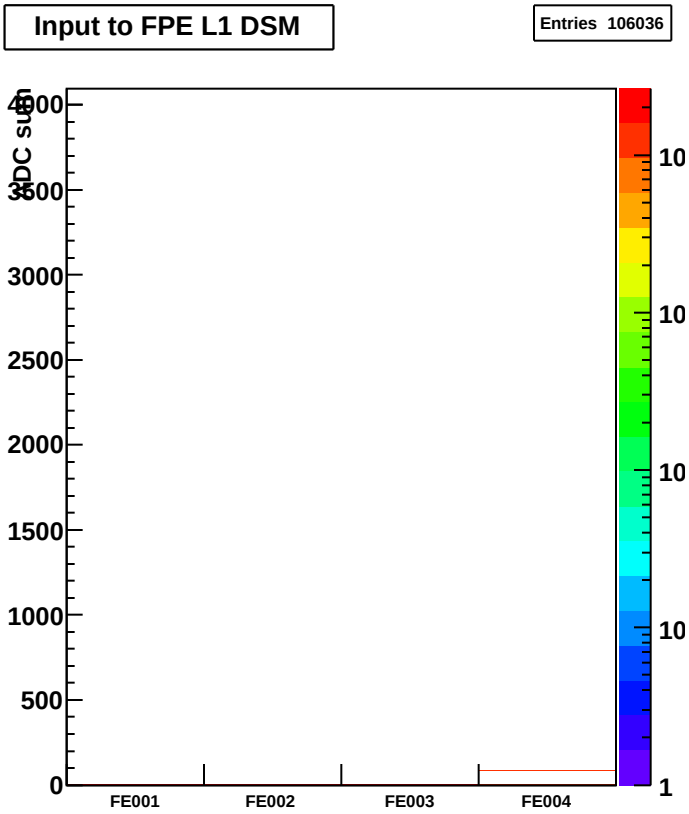

Input to FPD L2 DSM
Entries 159054
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

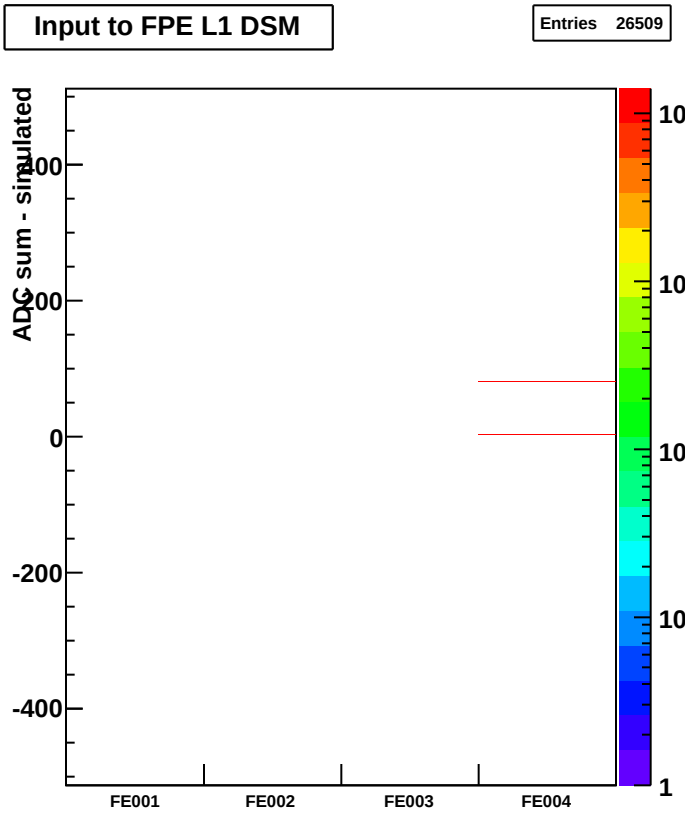

Input to FE001 QT board
Entries 848288
ADC
channel

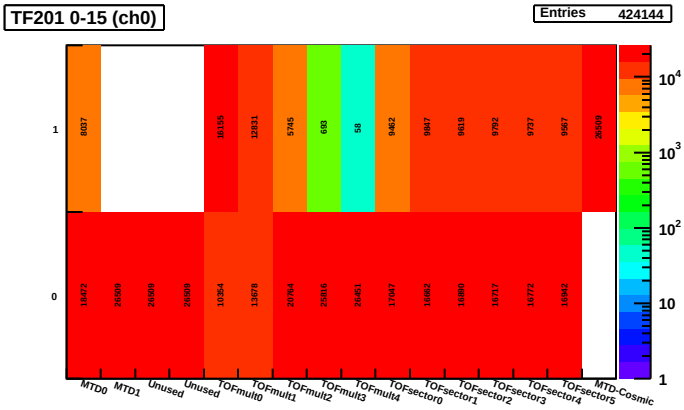

Input to FE002 QT board
Entries 848288
ADC
channel

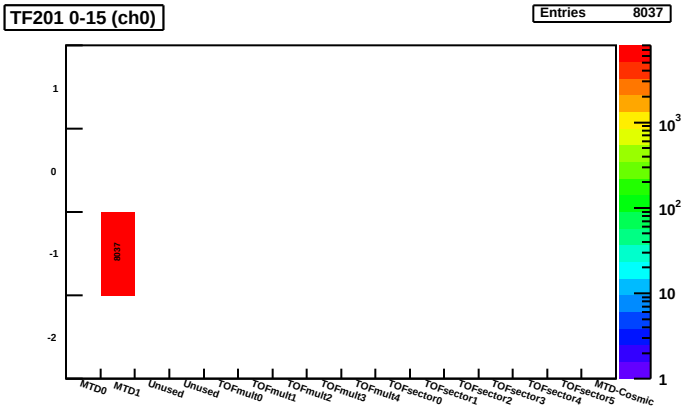

Input to FE003 QT board
Entries 848288
ADC
channel

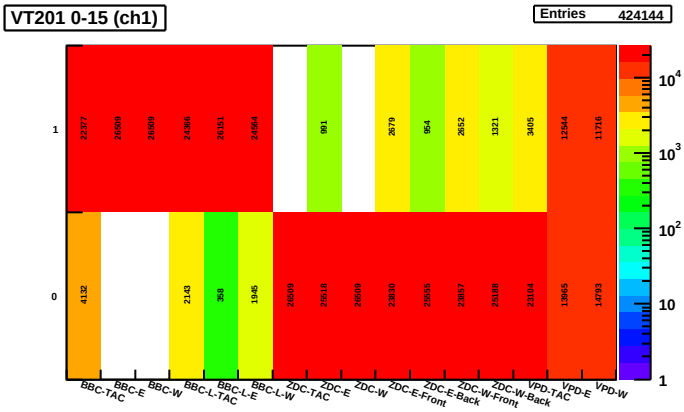

Input to FE004 QT board
Entries 848288
ADC
channel

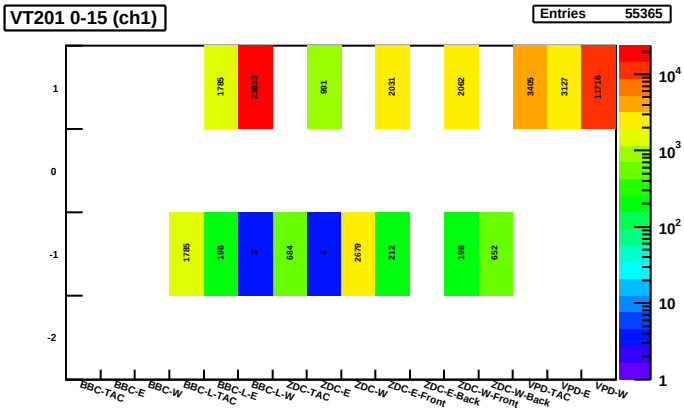

Input to FPE L1 DSM
Entries 106036
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 26509
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 424144
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 8037
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 424144
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 55365
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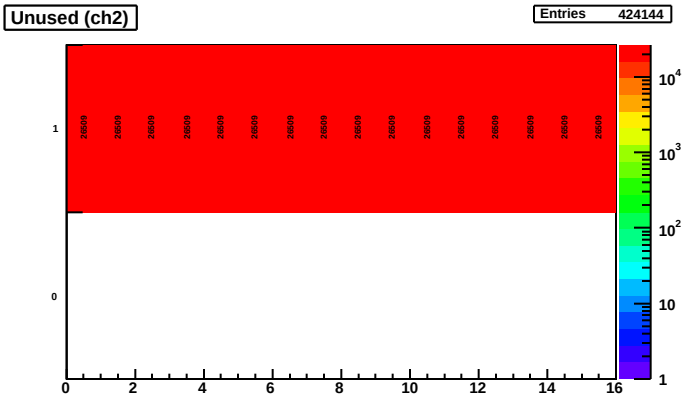
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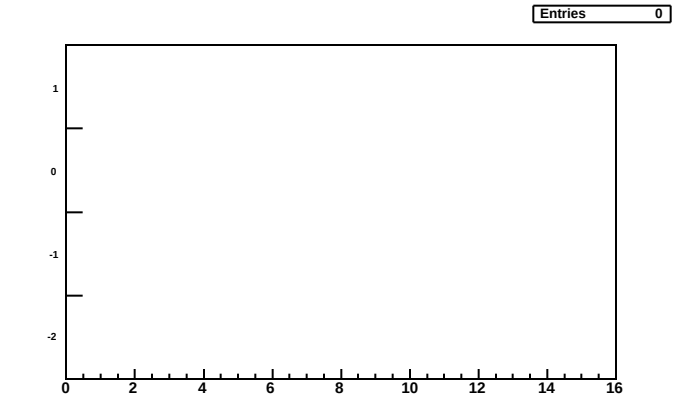
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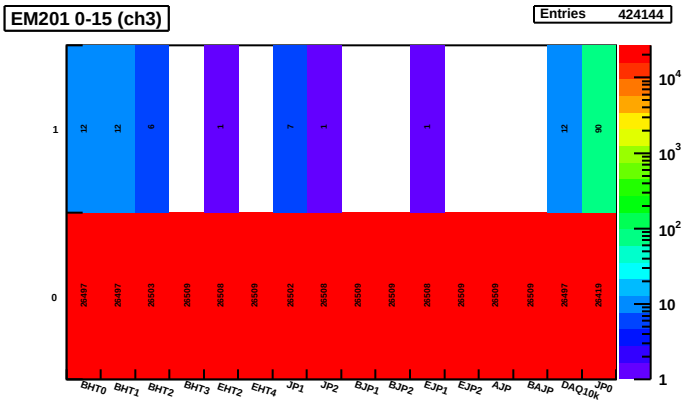
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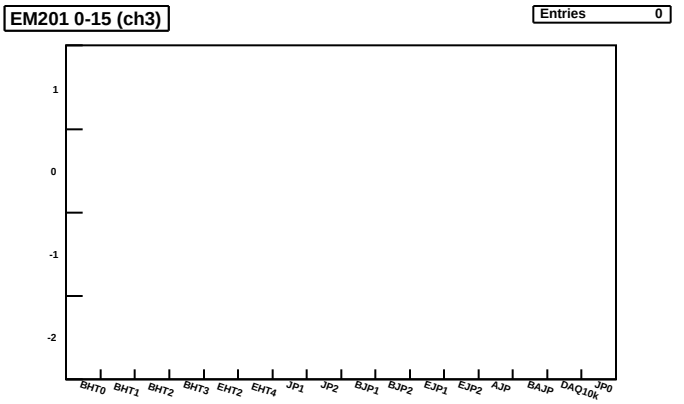
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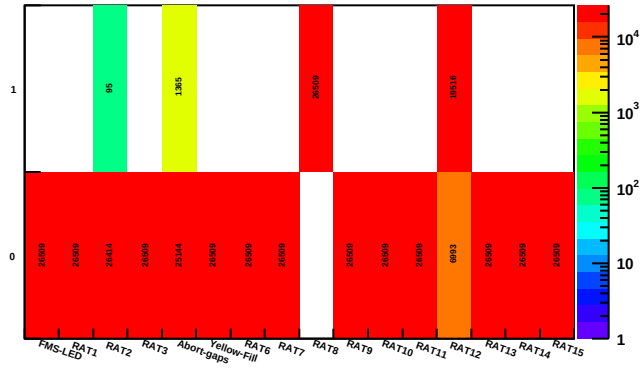
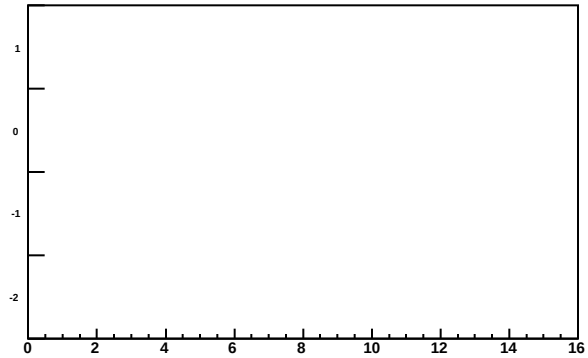
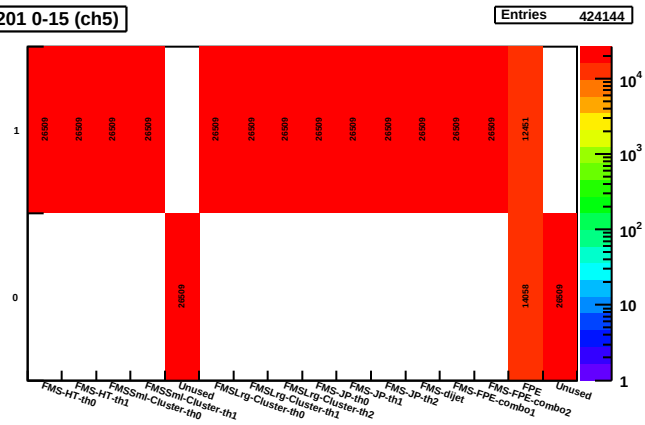
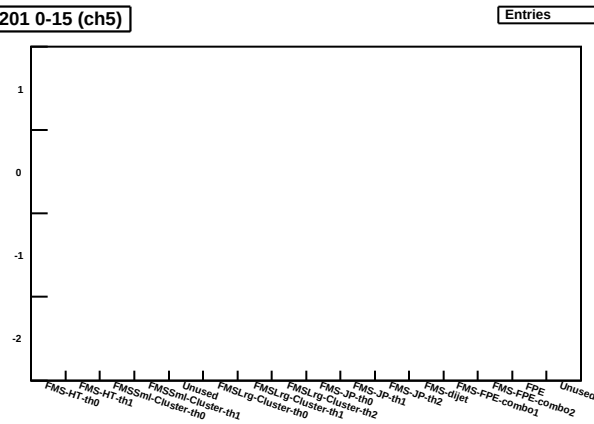
RAT board (ch4)



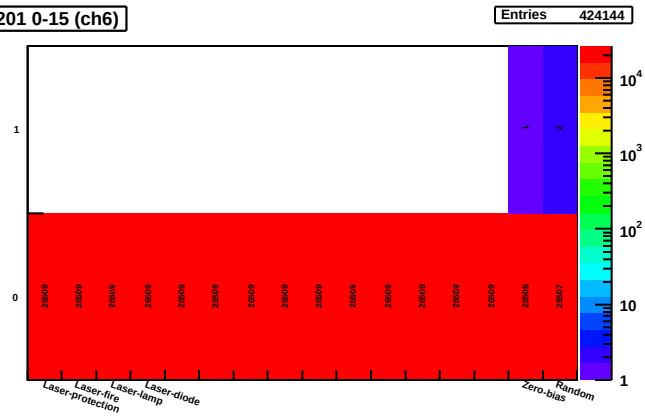


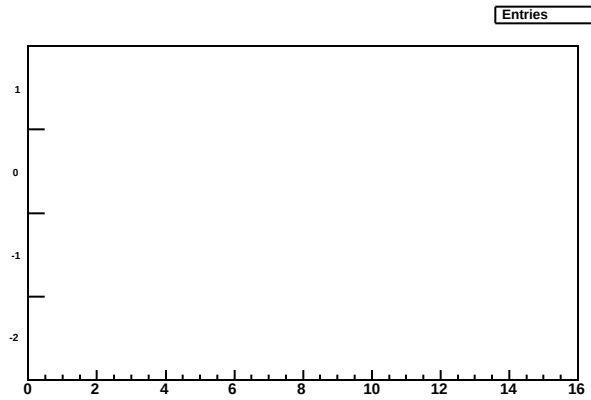
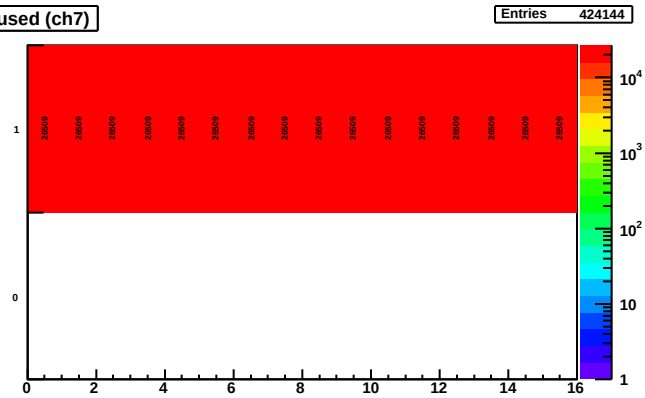
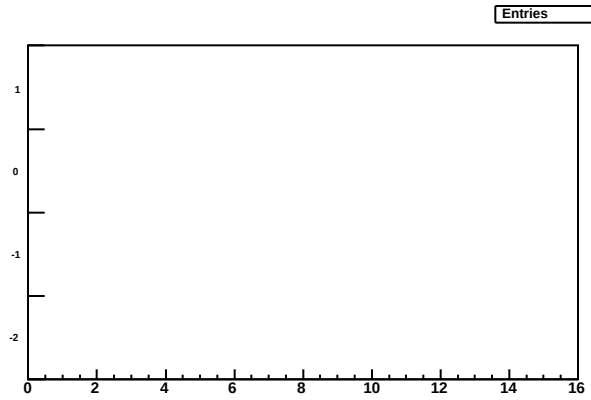
FP201 0-15 (ch5)





ST201 0-15 (ch6)





Unused (ch7)