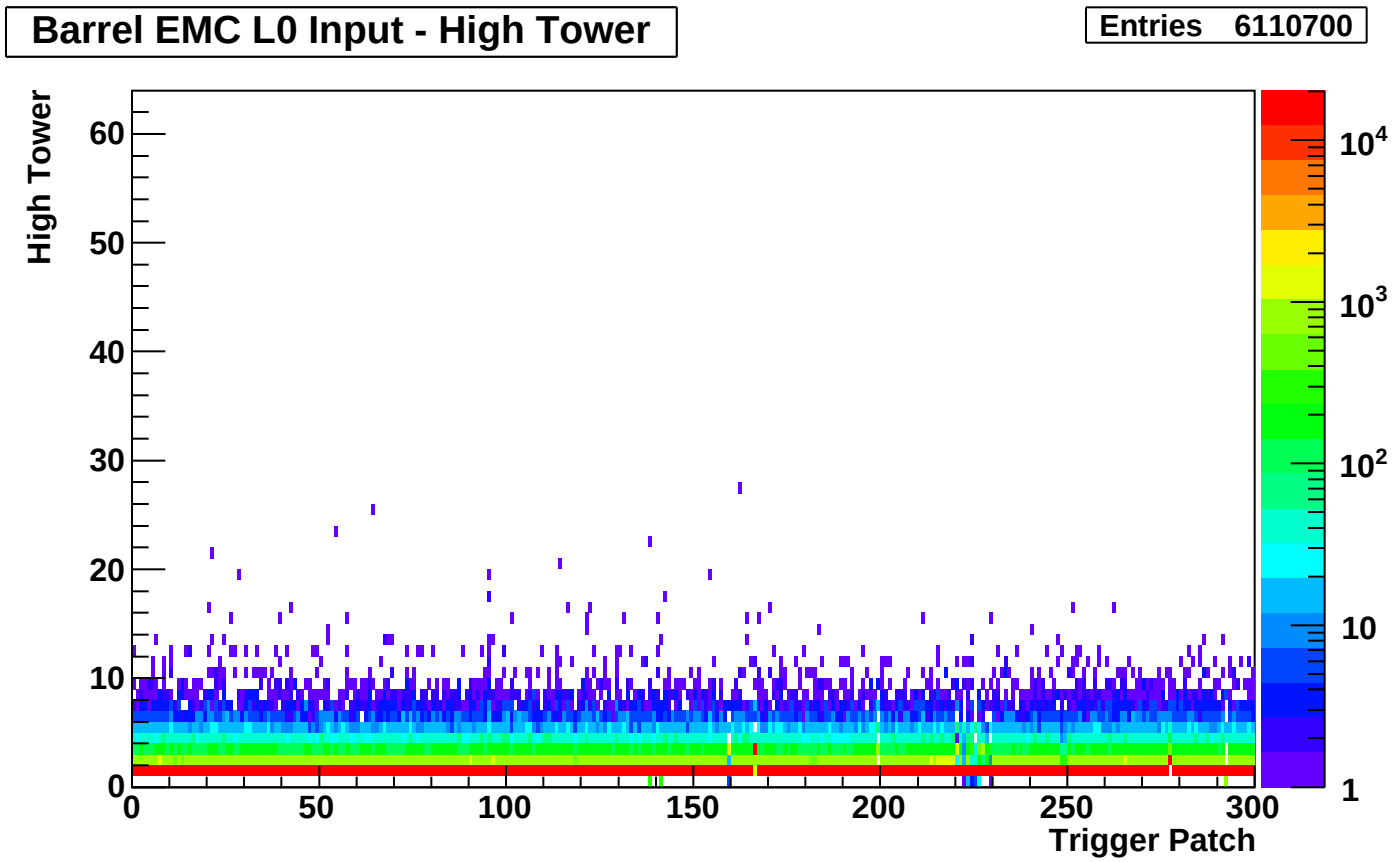
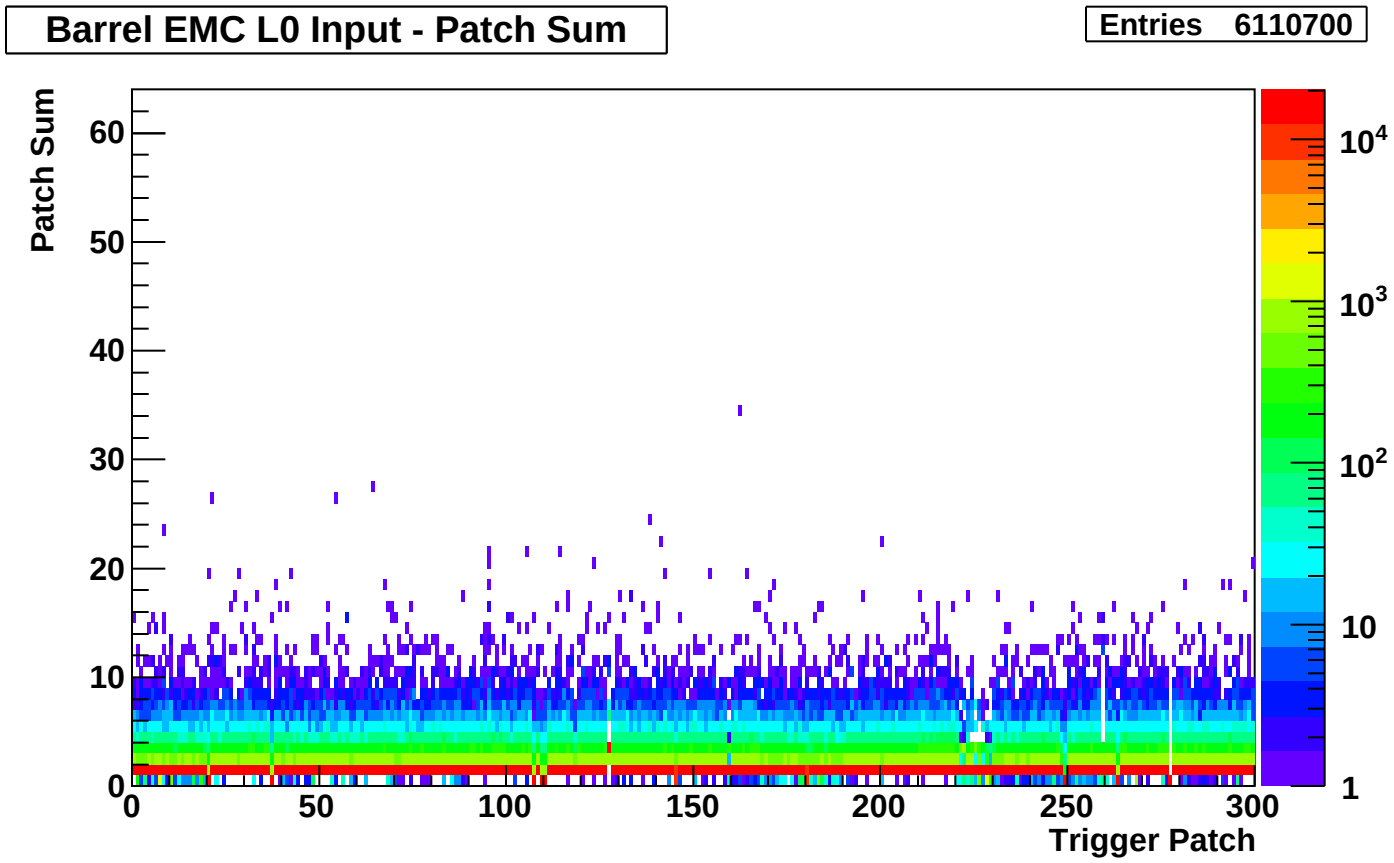
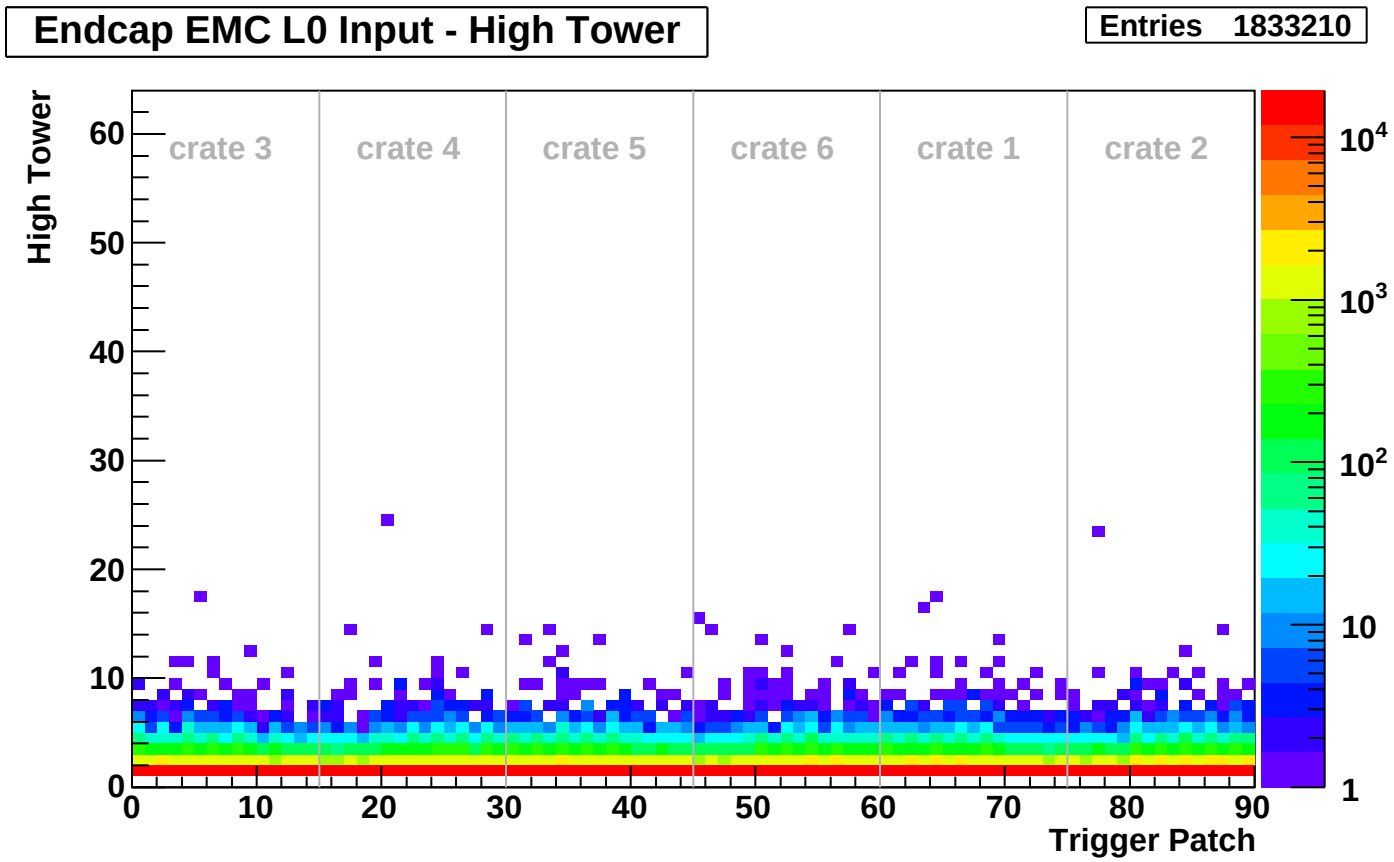
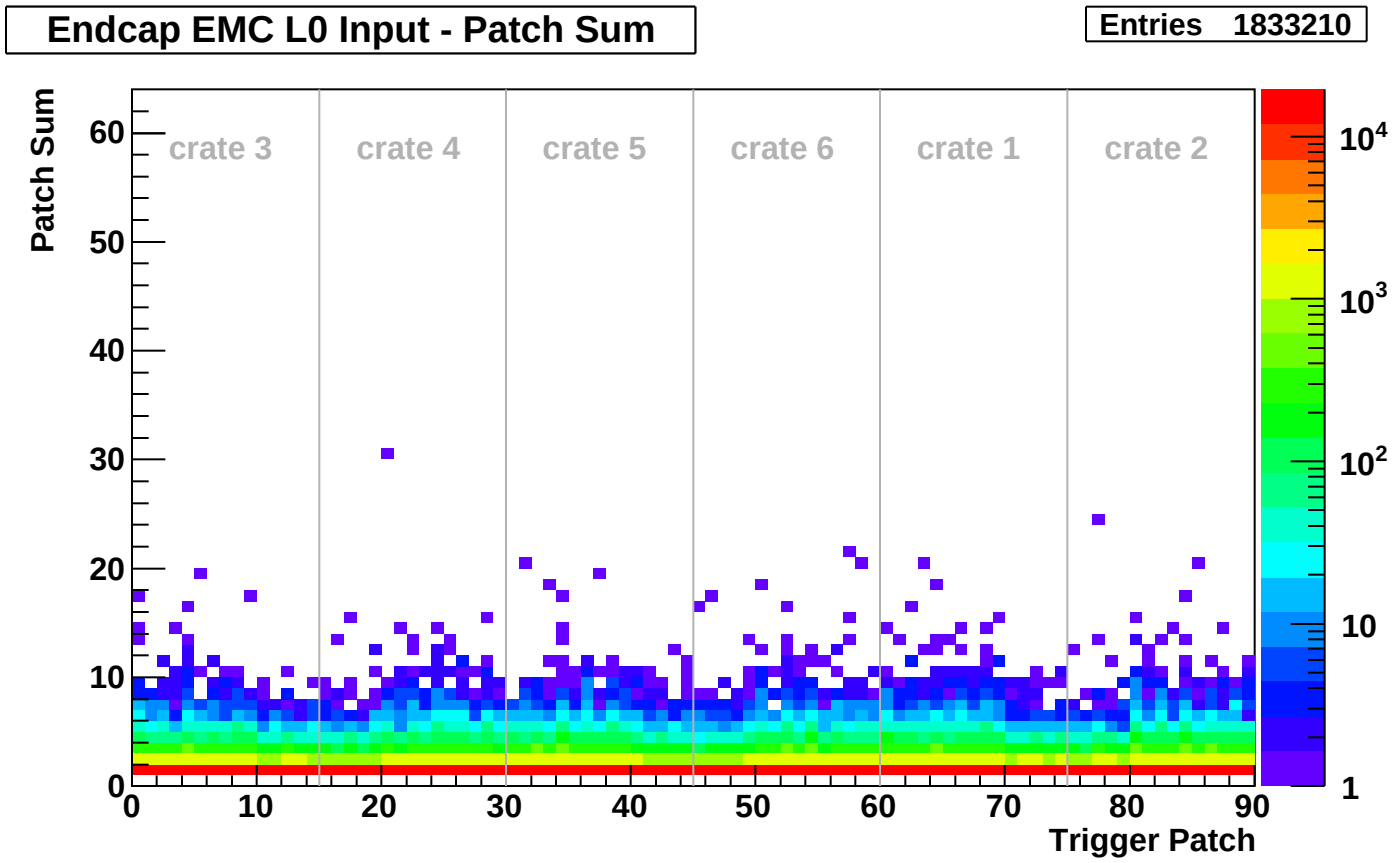
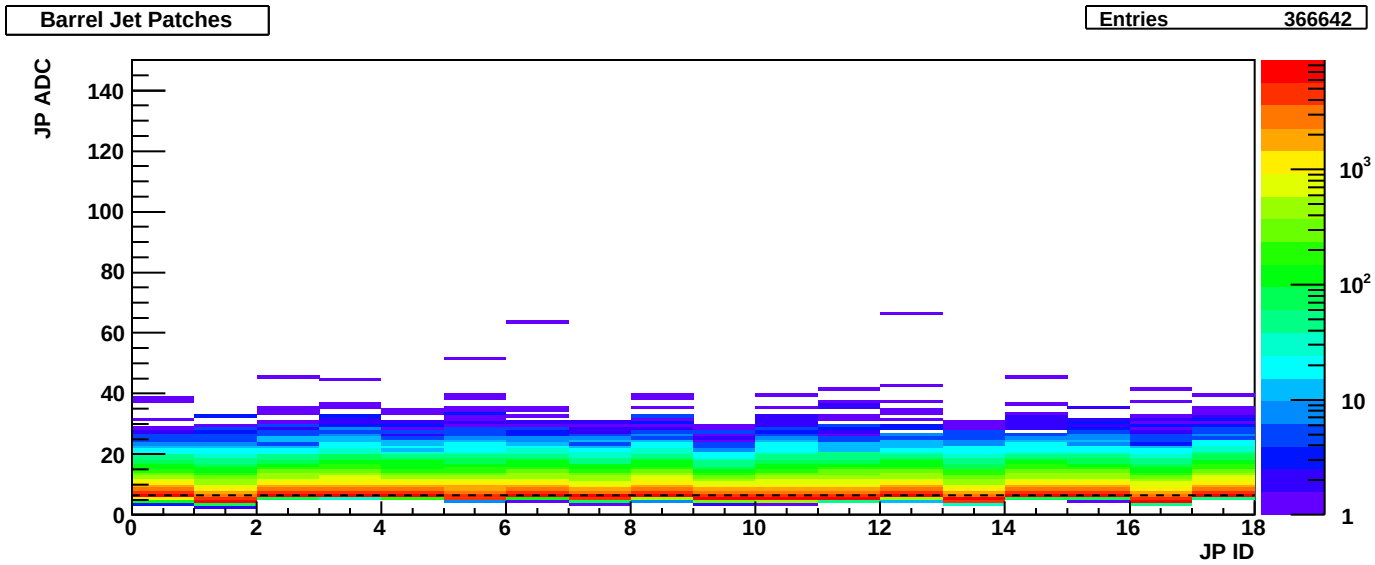
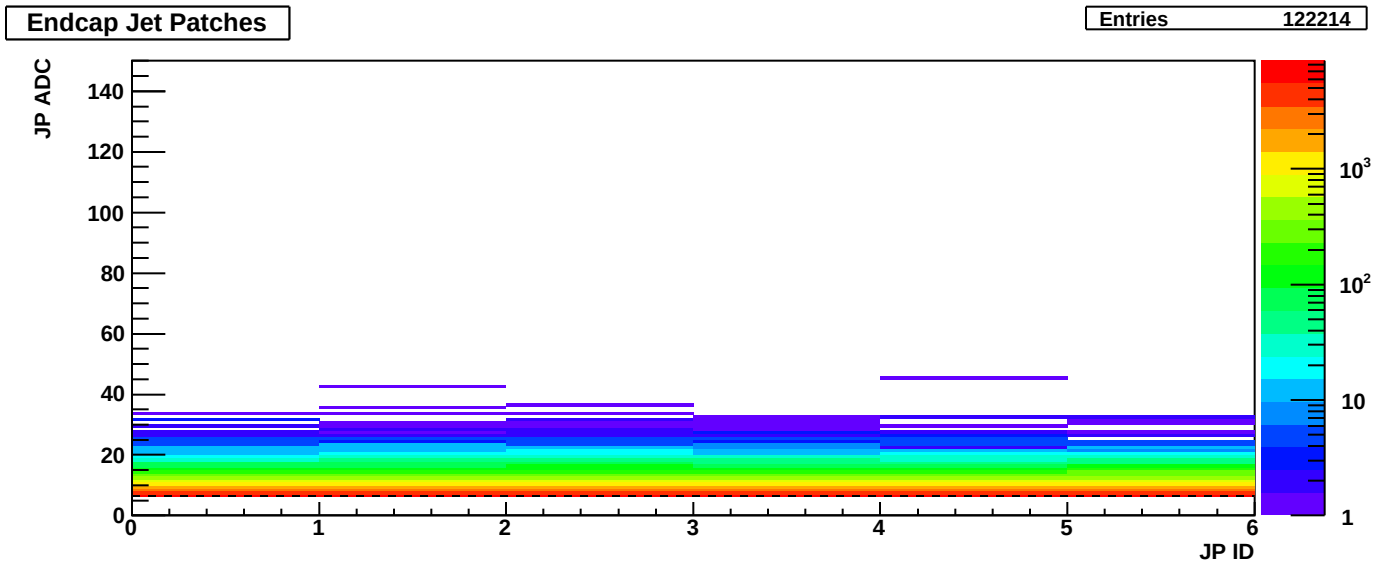

Barrel EMC L0 Input - High Tower
Entries 6110700
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

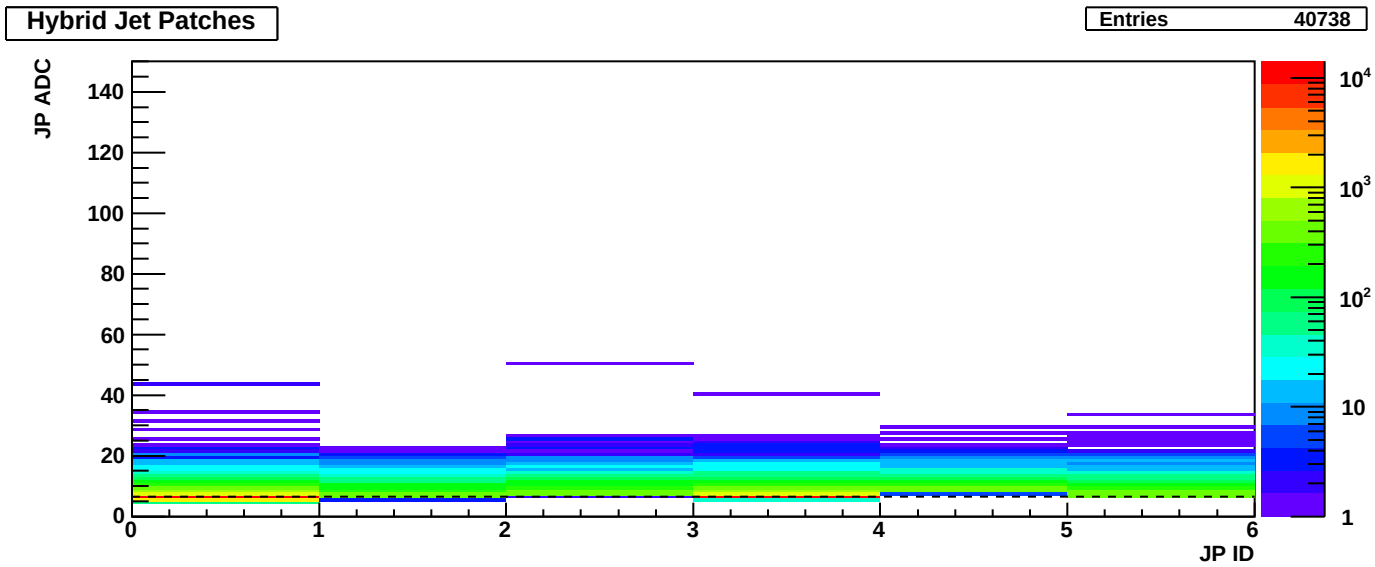

Barrel EMC L0 Input - Patch Sum
Entries 6110700
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

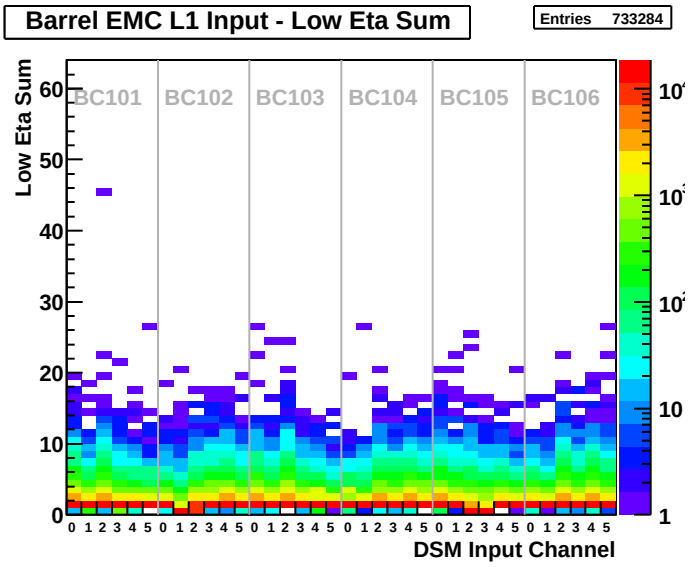

Endcap EMC L0 Input - High Tower
Entries 1833210
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

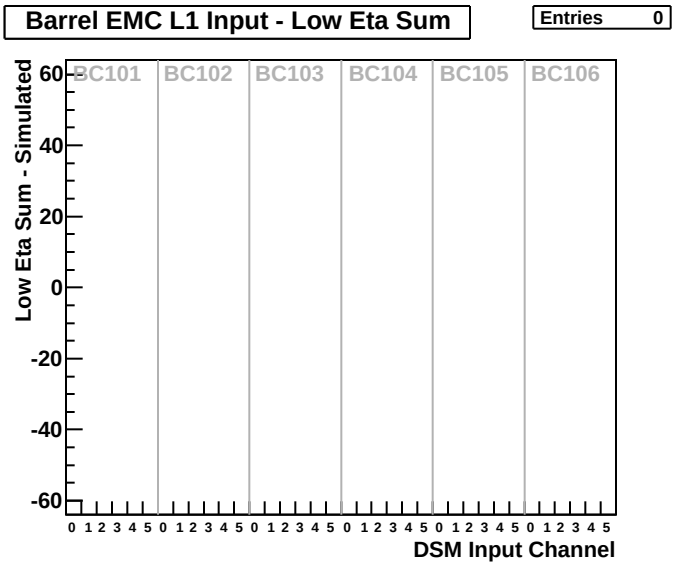

Endcap EMC L0 Input - Patch Sum
Entries 1833210
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

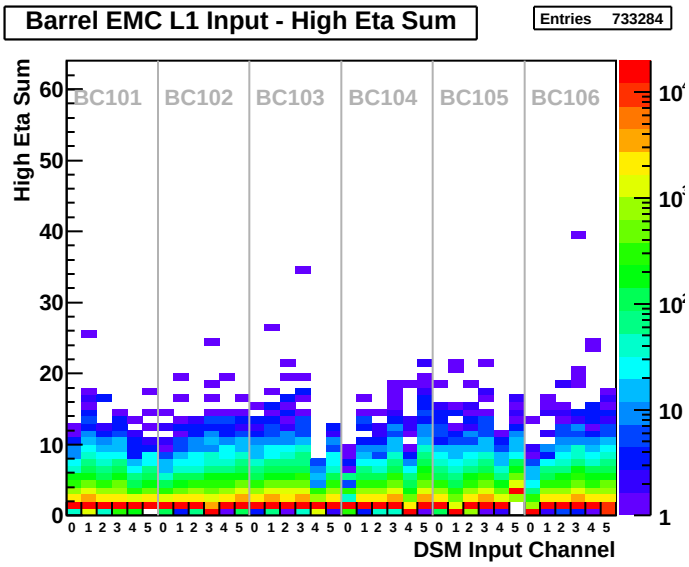

Barrel Jet Patches
Entries 366642
JP ADC
JP ID

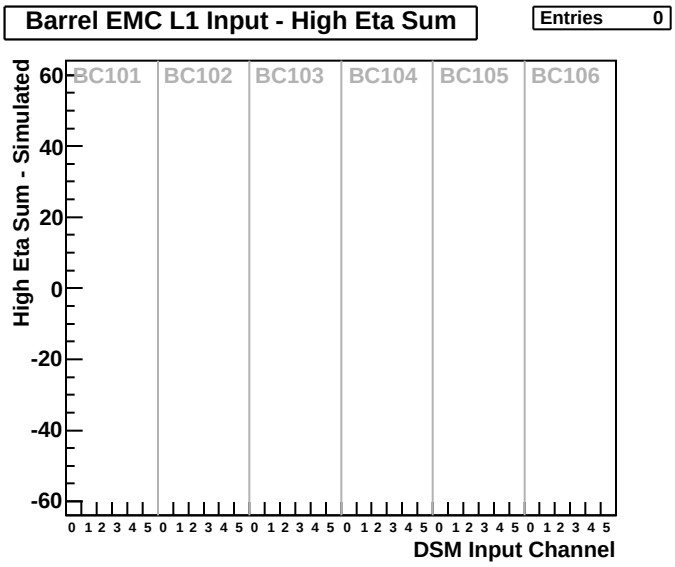

Endcap Jet Patches
Entries 122214
JP ADC
JP ID

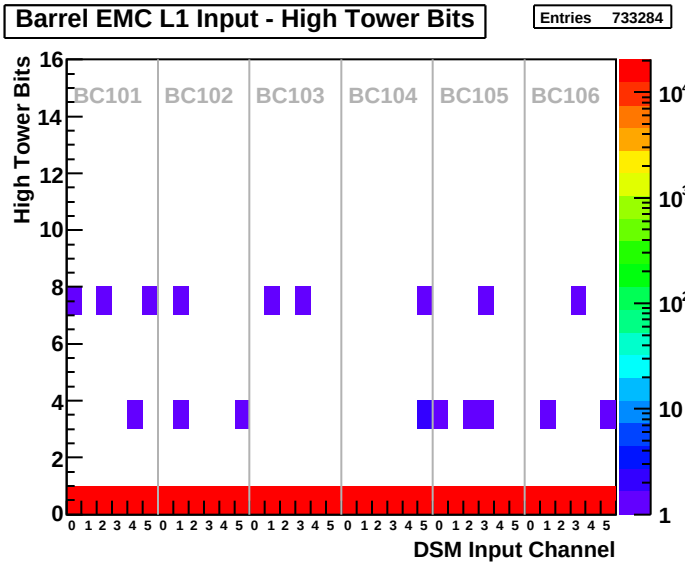

Hybrid Jet Patches
Entries 40738
JP ADC
JP ID

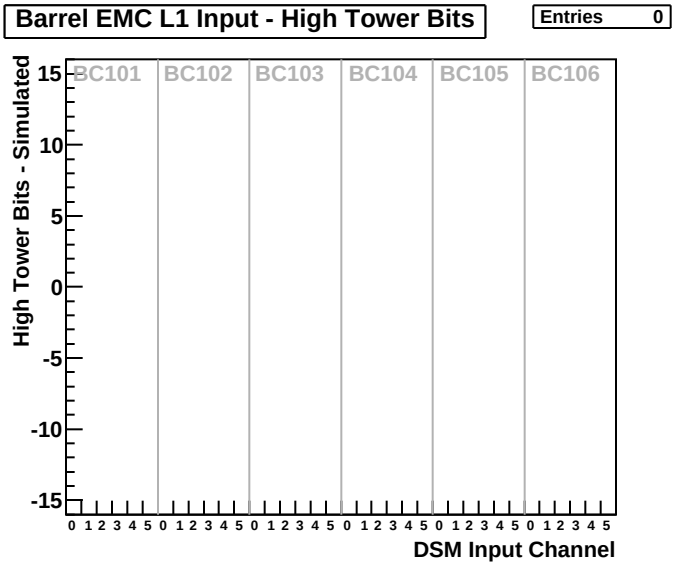

Barrel EMC L1 Input - Low Eta Sum
Entries 733284
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

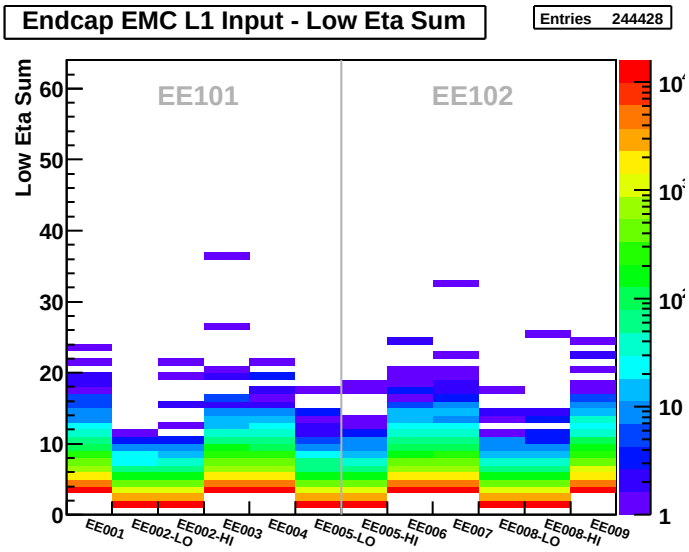

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

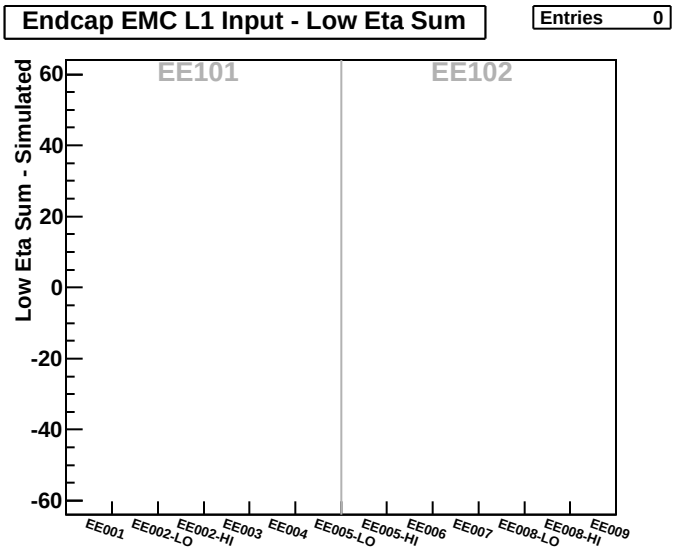

Barrel EMC L1 Input - High Eta Sum
Entries 733284
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

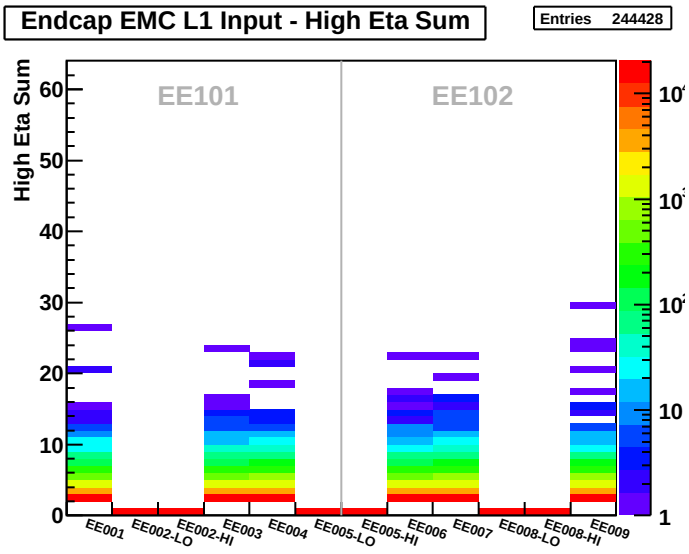

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

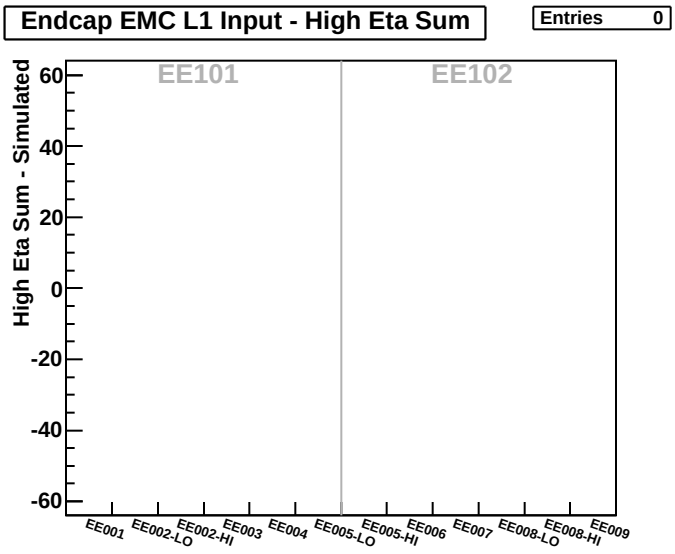

Barrel EMC L1 Input - High Tower Bits
Entries 733284
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

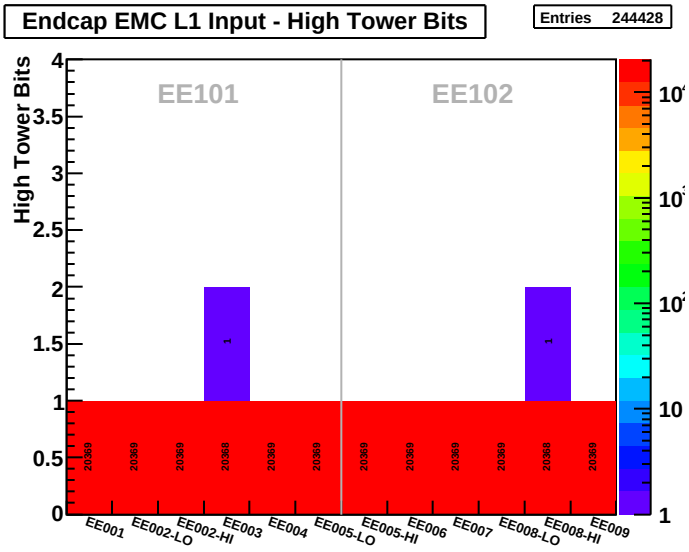

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

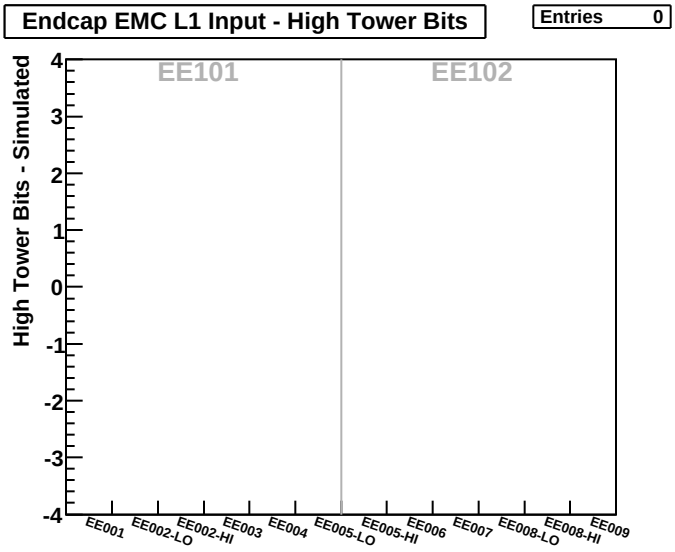

Endcap EMC L1 Input - Low Eta Sum
Entries 244428
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

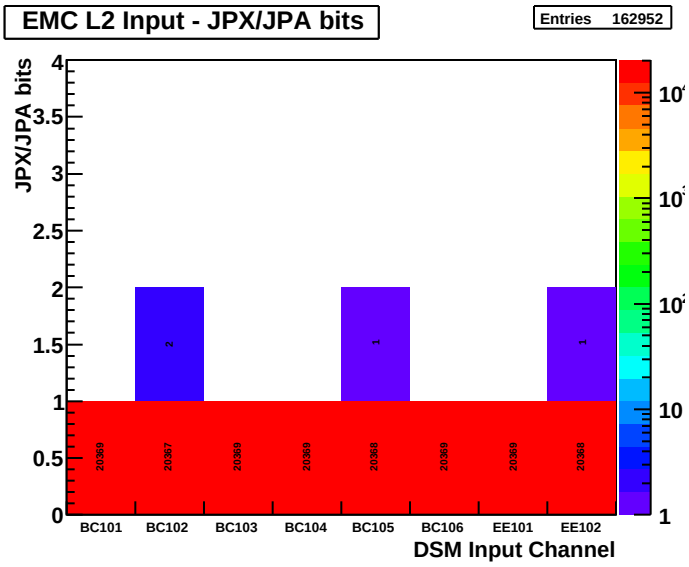

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

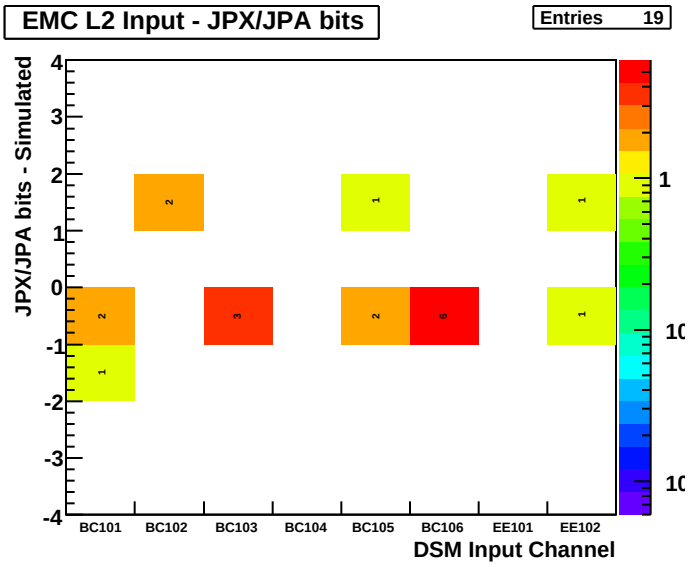

Endcap EMC L1 Input - High Eta Sum
Entries 244428
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

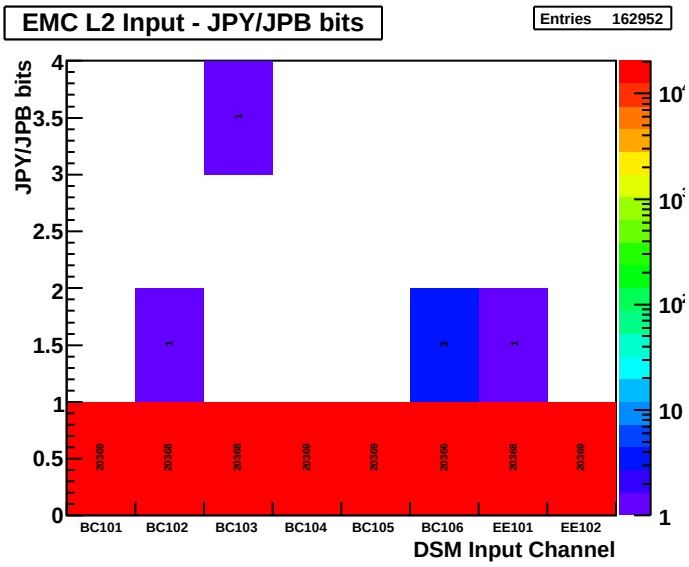

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

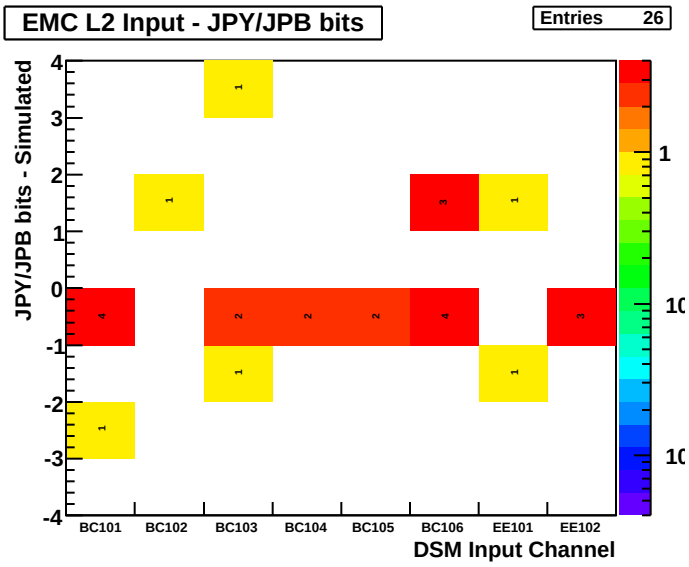

Endcap EMC L1 Input - High Tower Bits
Entries 244428
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

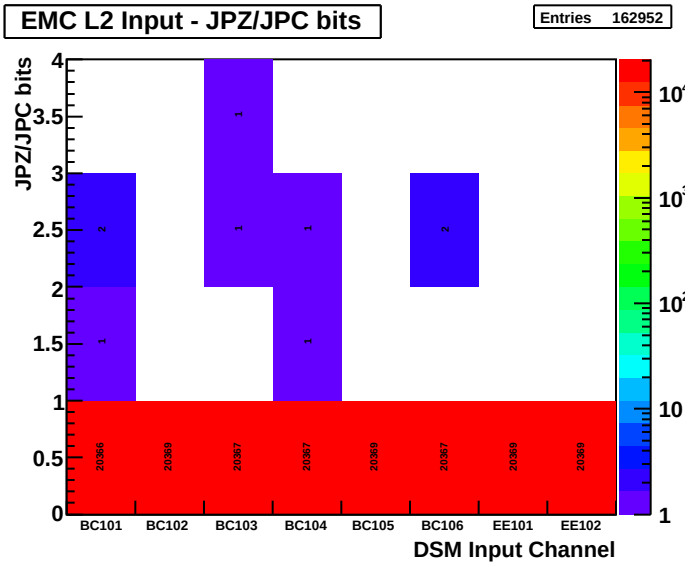

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

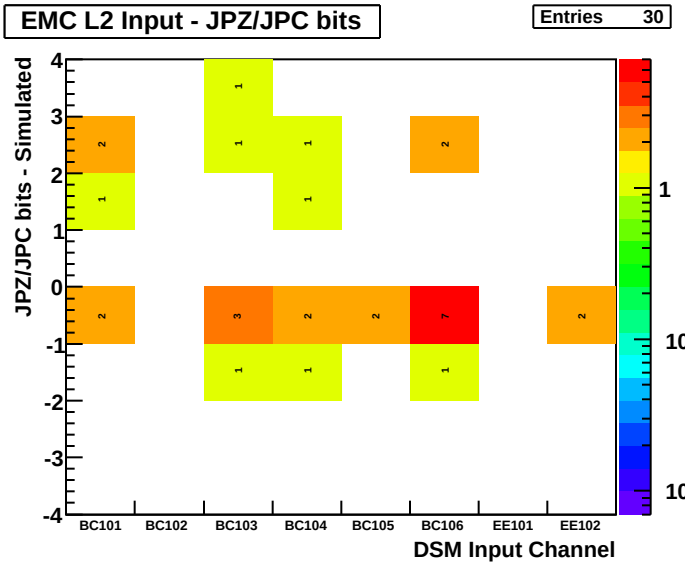

EMC L2 Input - JPX/JPA bits
Entries 162952
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

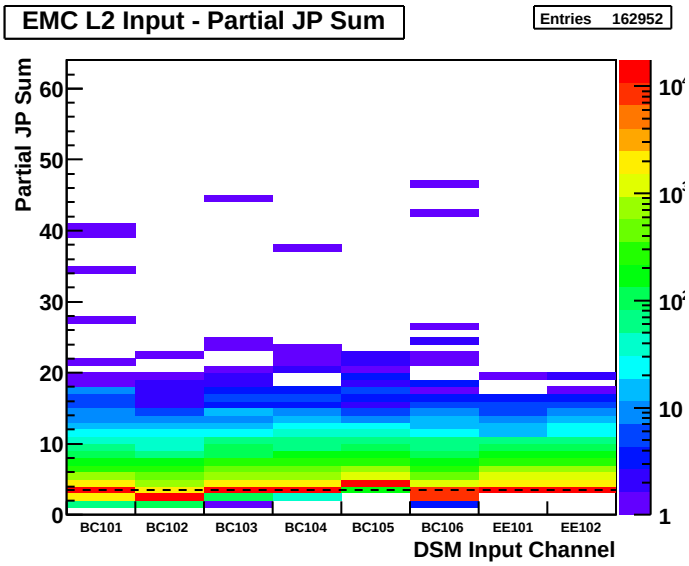

EMC L2 Input - JPX/JPA bits
Entries 19
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

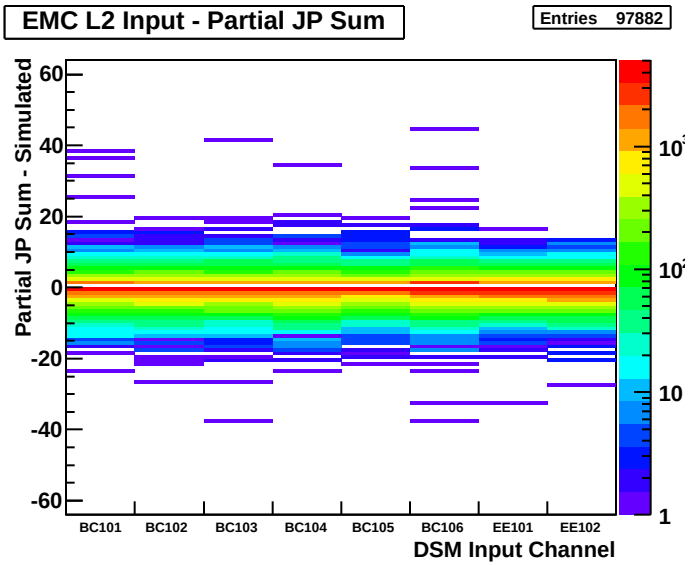

EMC L2 Input - JPY/JPB bits
Entries 162952
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

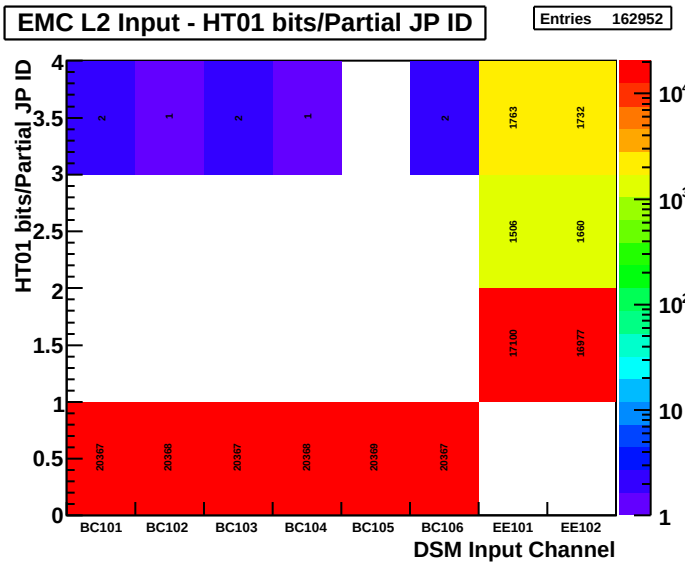

EMC L2 Input - JPY/JPB bits
Entries 26
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

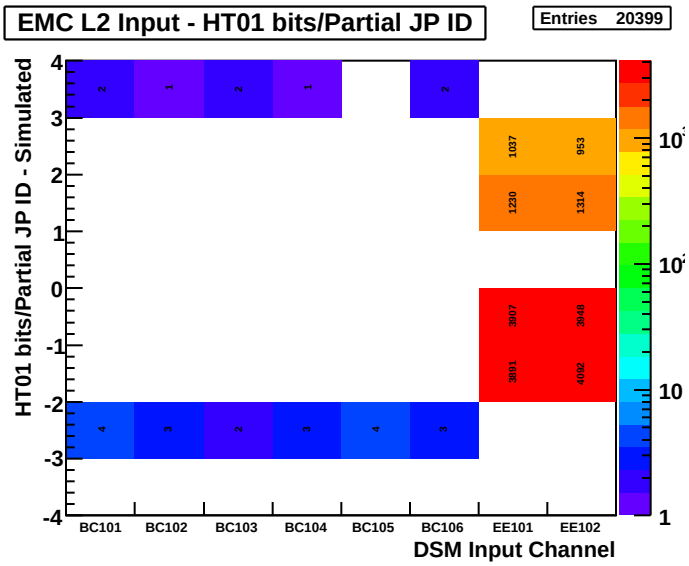

EMC L2 Input - JPZ/JPC bits
Entries 162952
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

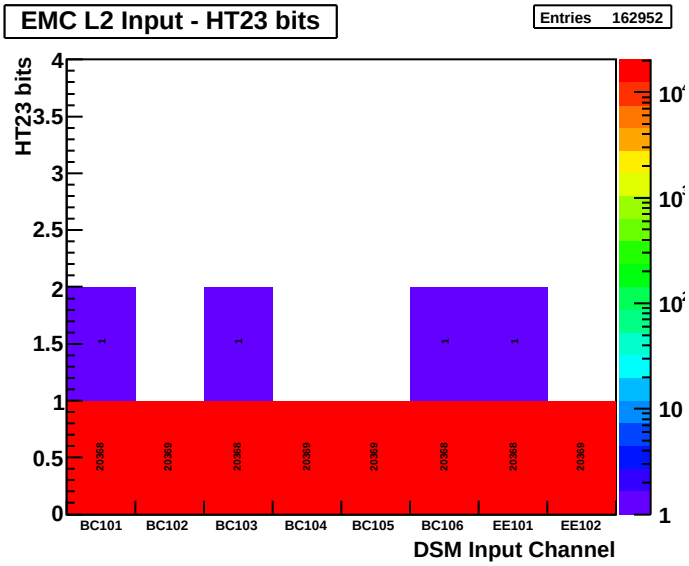

EMC L2 Input - JPZ/JPC bits
Entries 30
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

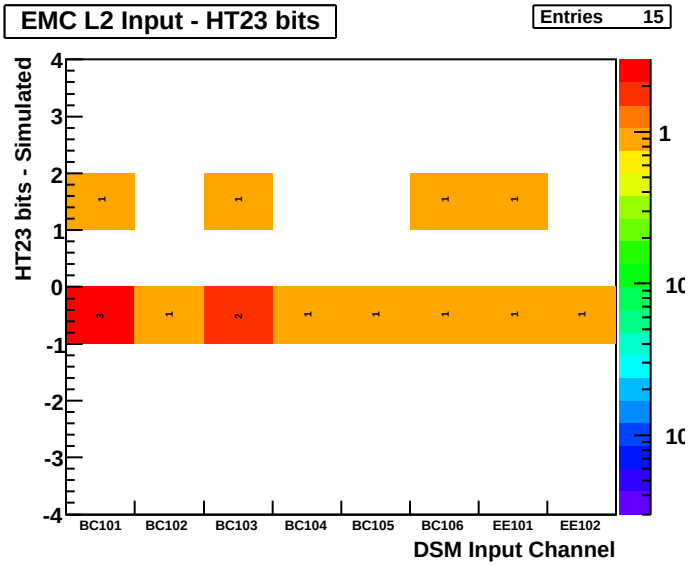

EMC L2 Input - Partial JP Sum
Entries 162952
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

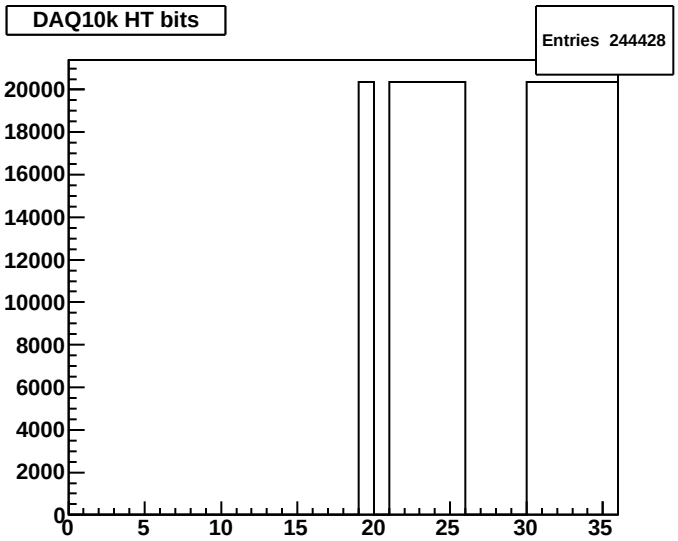

EMC L2 Input - Partial JP Sum
Entries 97882
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

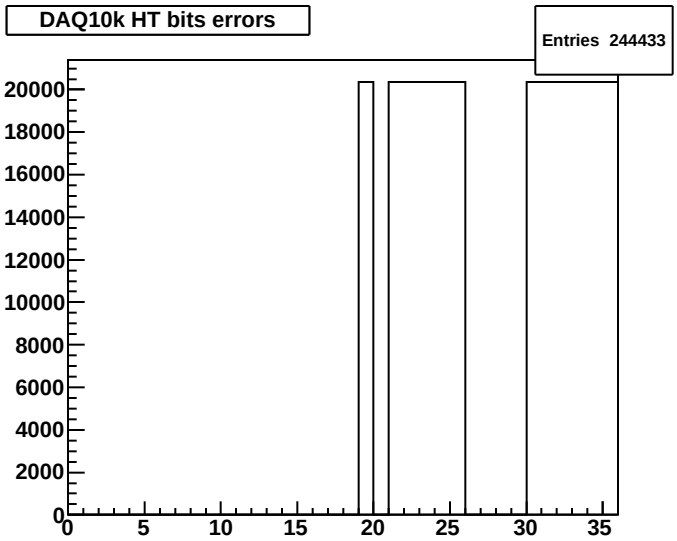

EMC L2 Input - HT01 bits/Partial JP ID
Entries 162952
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

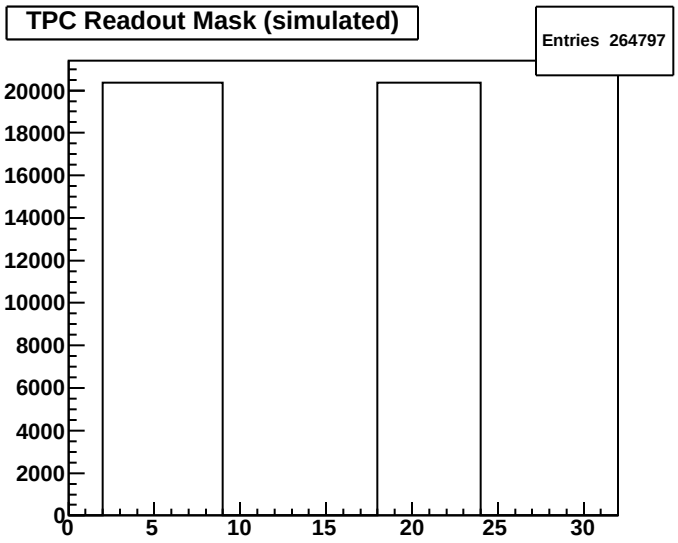

EMC L2 Input - HT01 bits/Partial JP ID
Entries 20399
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

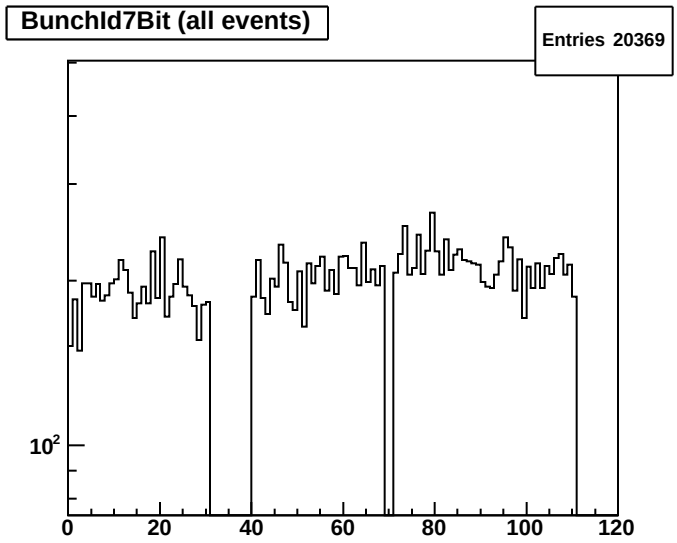

EMC L2 Input - HT23 bits
Entries 162952
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

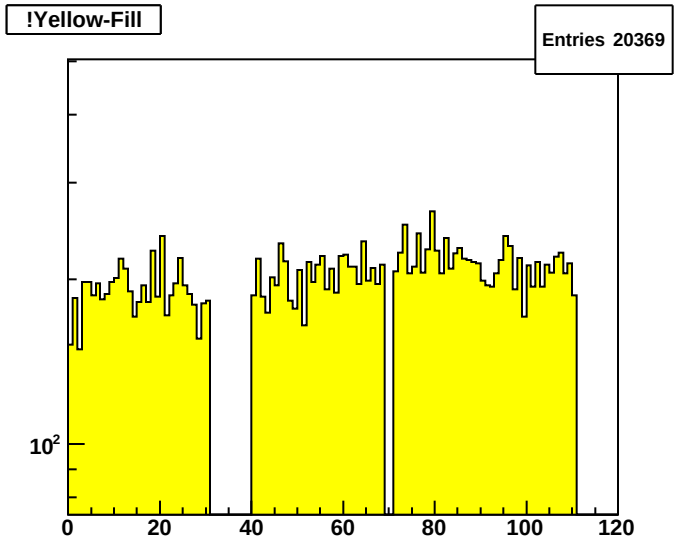

EMC L2 Input - HT23 bits
Entries 15
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

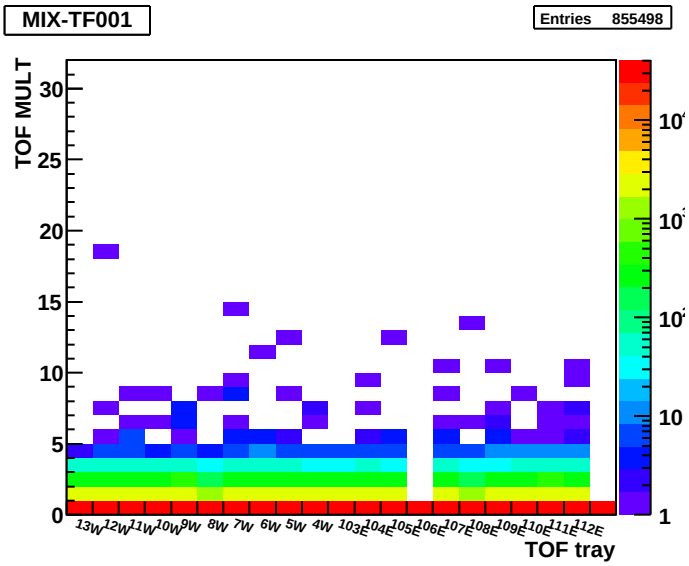

DAQ10k HT bits
Entries 244428
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35

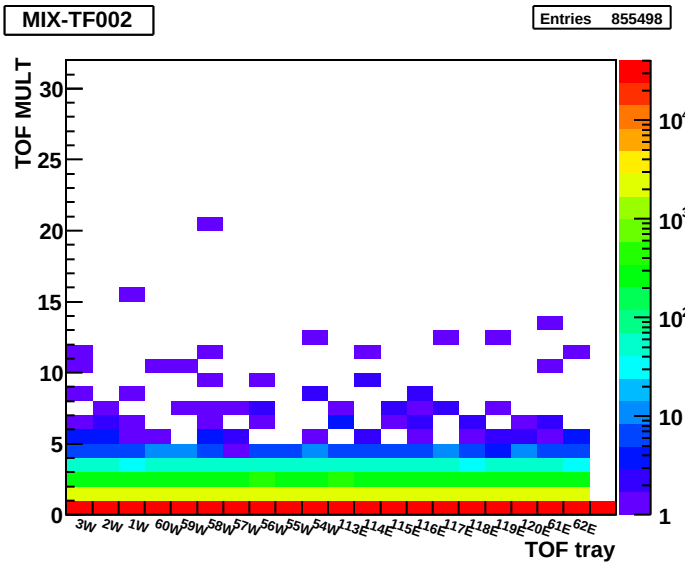

DAQ10k HT bits errors
Entries 244433
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35

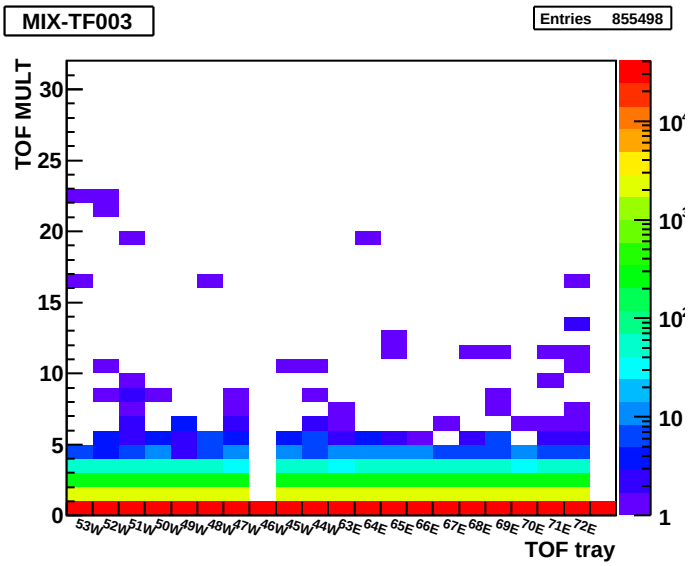

TPC Readout Mask (simulated)
Entries 264797
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30

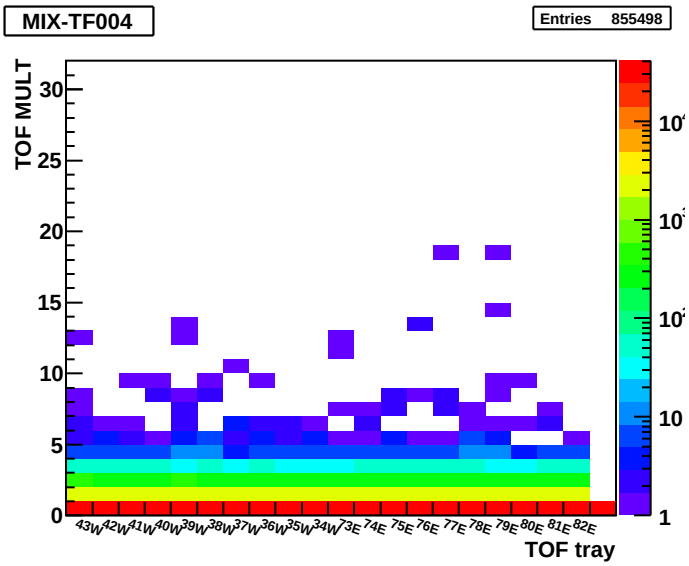

BunchId7Bit (all events)
Entries 20369
10^2
0
20
40
60
80
100
120

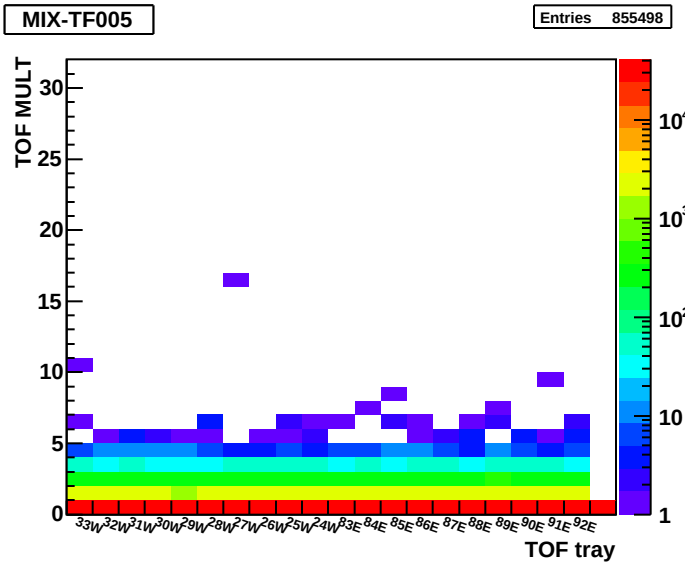

!Yellow-Fill
Entries 20369
10^2
0
20
40
60
80
100
120

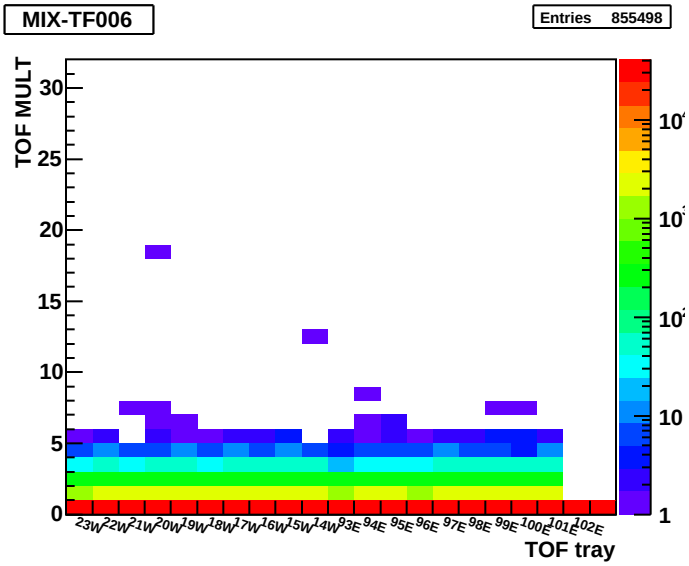

MIX-TF001
Entries 855498
TOF MULT
TOF tray

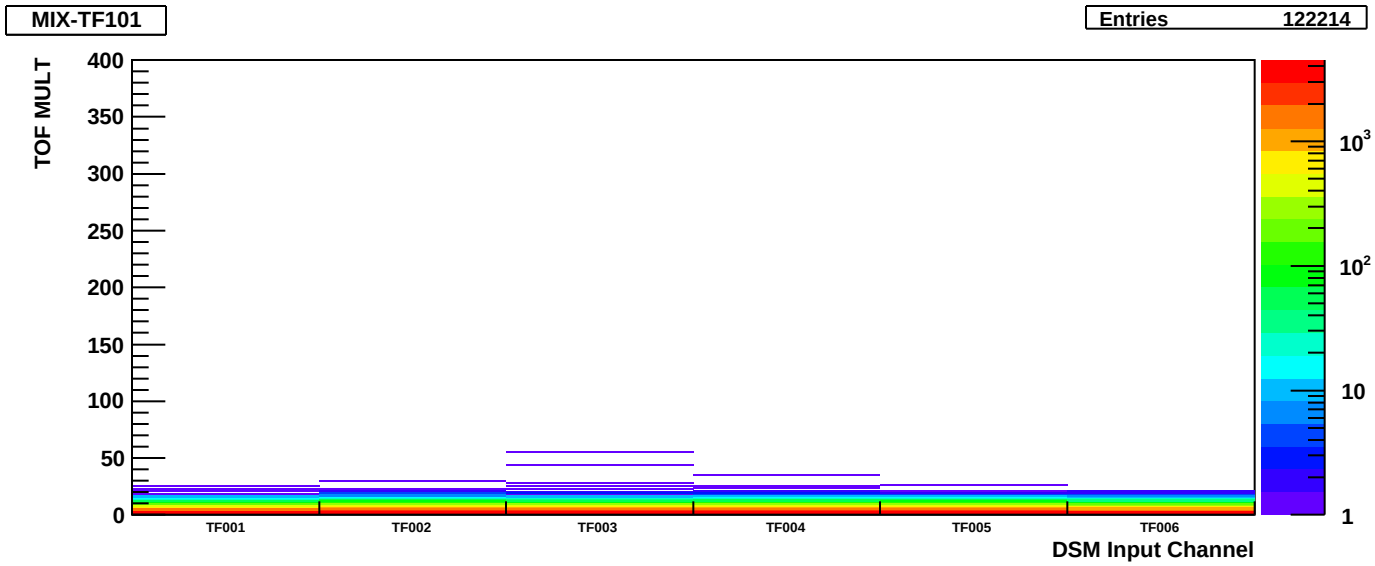

MIX-TF002
Entries 855498
TOF MULT
TOF tray

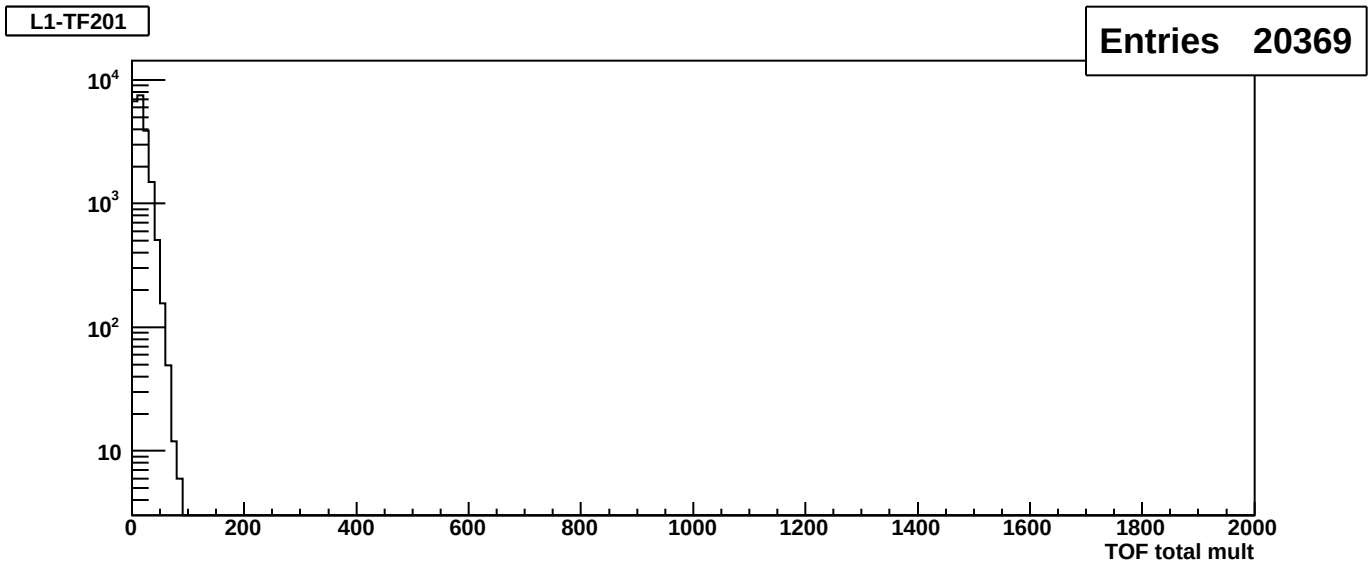

MIX-TF003
Entries 855498
TOF MULT
TOF tray

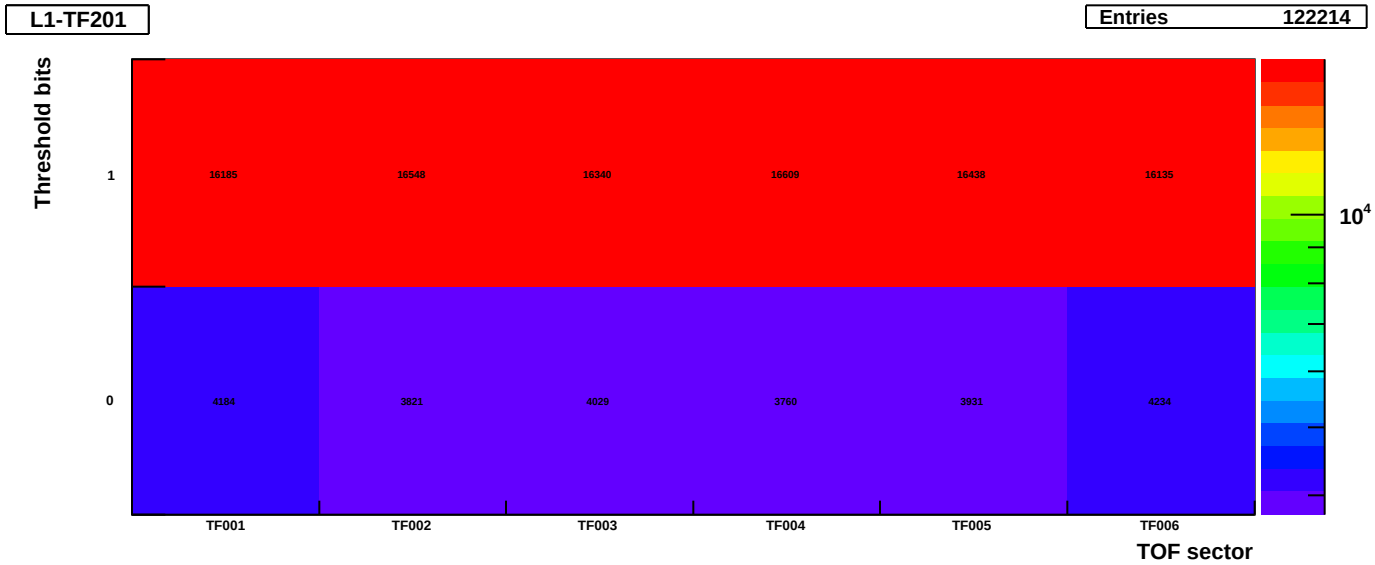

MIX-TF004
Entries 855498
TOF MULT
TOF tray

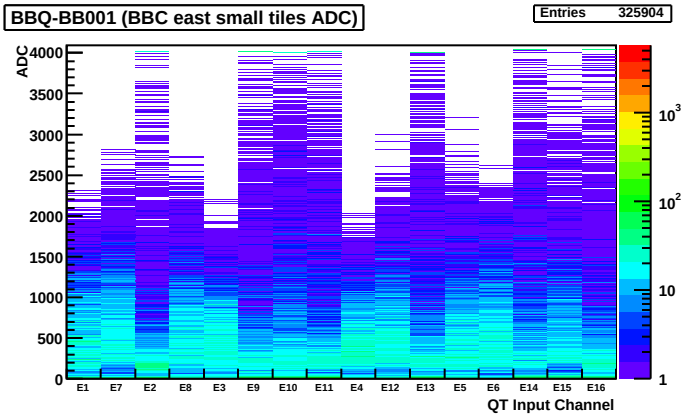

MIX-TF005
Entries 855498
TOF MULT
TOF tray

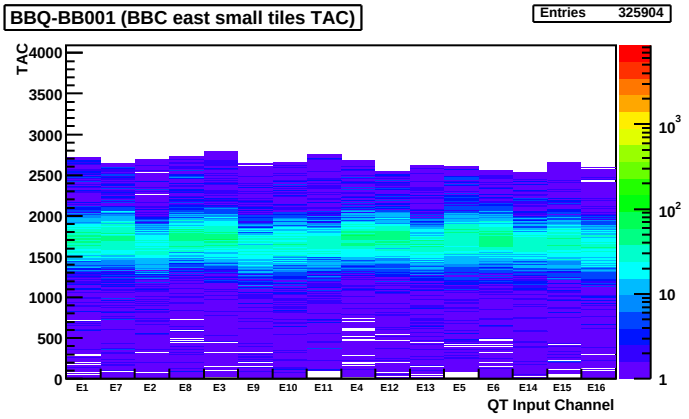

MIX-TF006
Entries 855498
TOF MULT
TOF tray

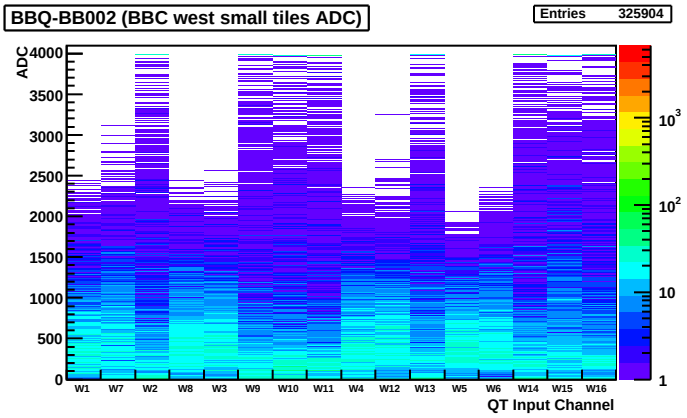

MIX-TF101
Entries 122214
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

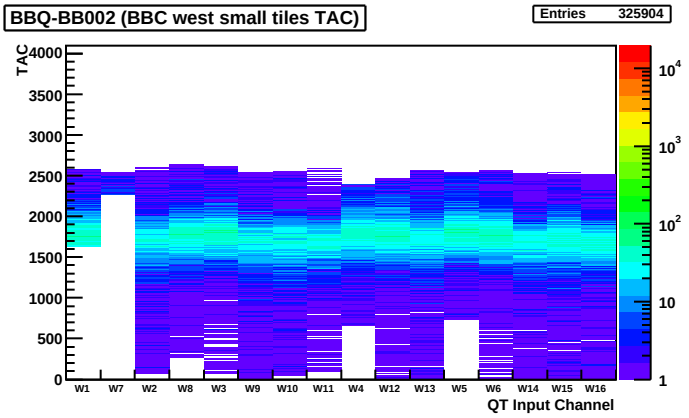

L1-TF201
Entries 20369
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

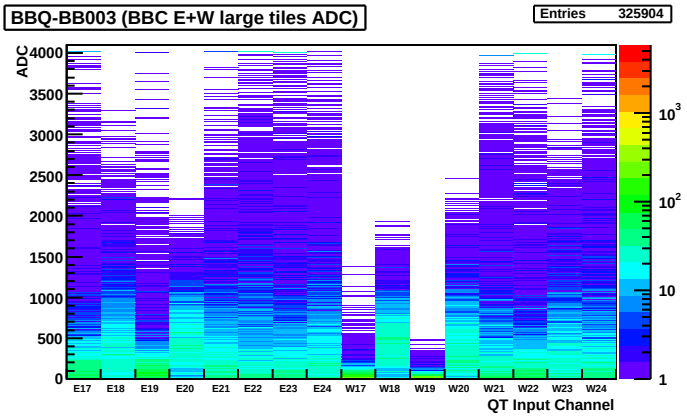

L1-TF201
Entries 122214
Threshold bits
1
0
16185
16548
16340
16609
16438
16135
4184
3821
4029
3760
3931
4234
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

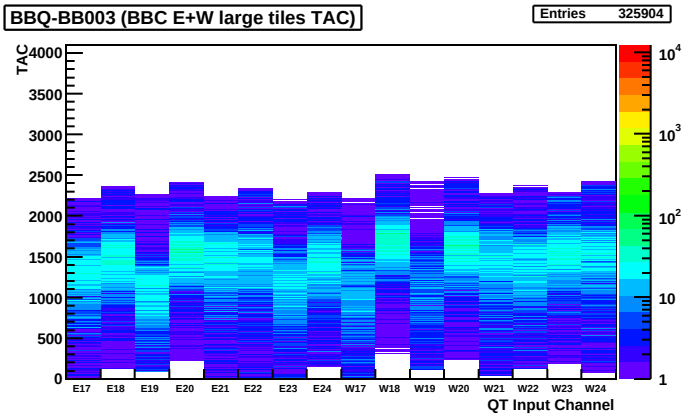

BBQ-BB001 (BBC east small tiles ADC)
Entries 325904
ADC
QT Input Channel

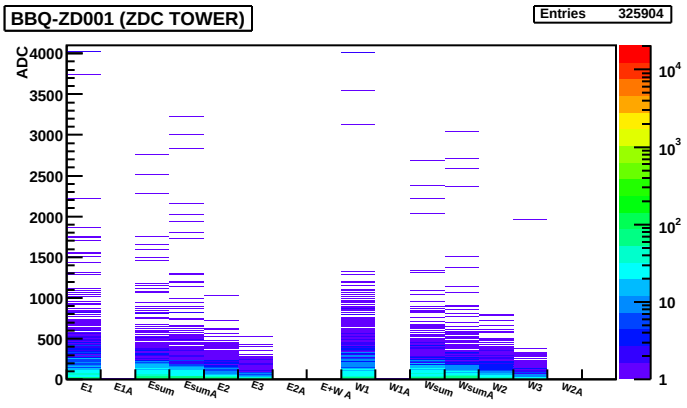

BBQ-BB001 (BBC east small tiles TAC)
Entries 325904
TAC
QT Input Channel

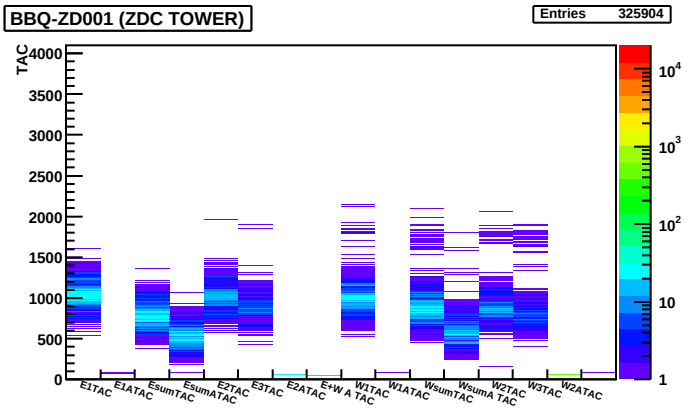

BBQ-BB002 (BBC west small tiles ADC)
Entries 325904
ADC
QT Input Channel

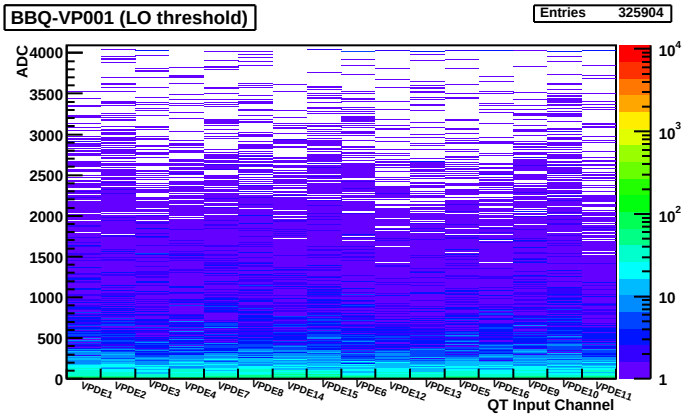

BBQ-BB002 (BBC west small tiles TAC)
Entries 325904
TAC
QT Input Channel

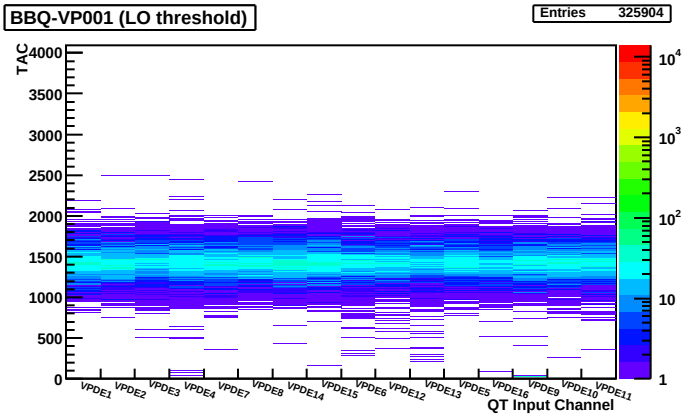

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 325904
ADC
QT Input Channel

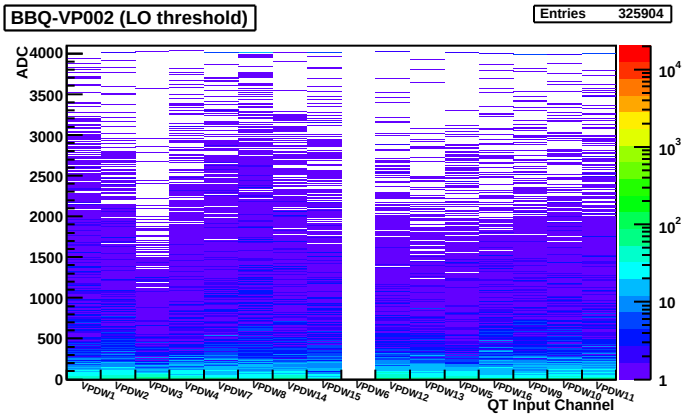

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 325904
TAC
QT Input Channel

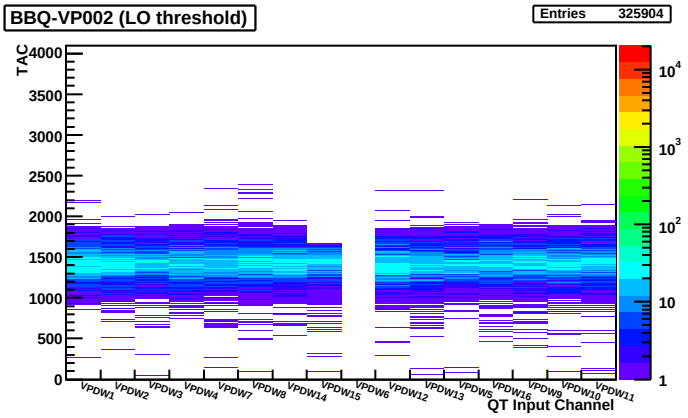

BBQ-ZD001 (ZDC TOWER)
Entries 325904
ADC

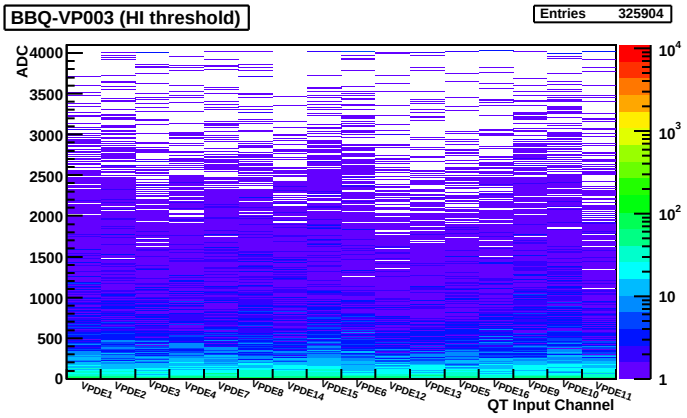

BBQ-ZD001 (ZDC TOWER)
Entries 325904
TAC

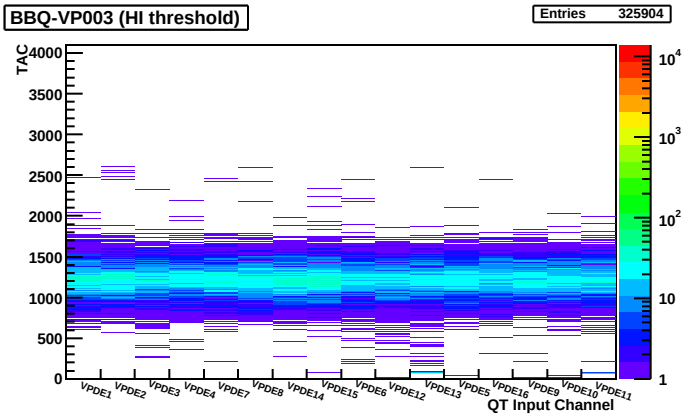

BBQ-VP001 (LO threshold)
Entries 325904
ADC
QT Input Channel

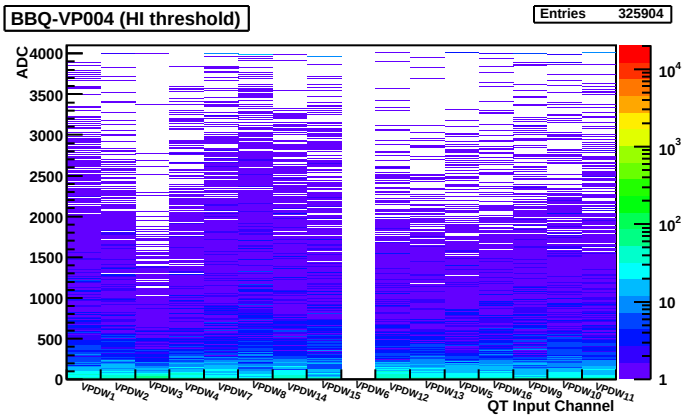

BBQ-VP001 (LO threshold)
Entries 325904
TAC
QT Input Channel

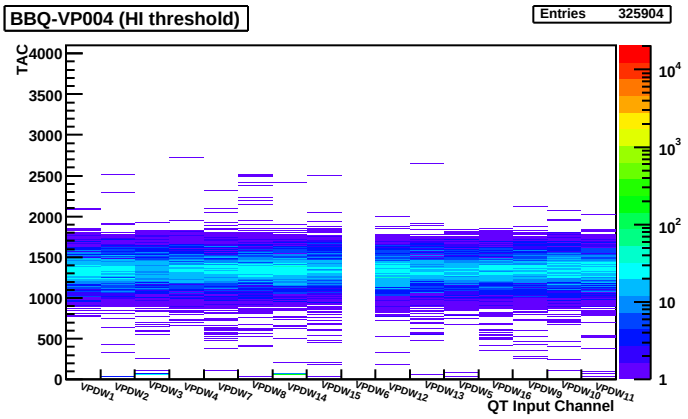

BBQ-VP002 (LO threshold)
Entries 325904
ADC
QT Input Channel

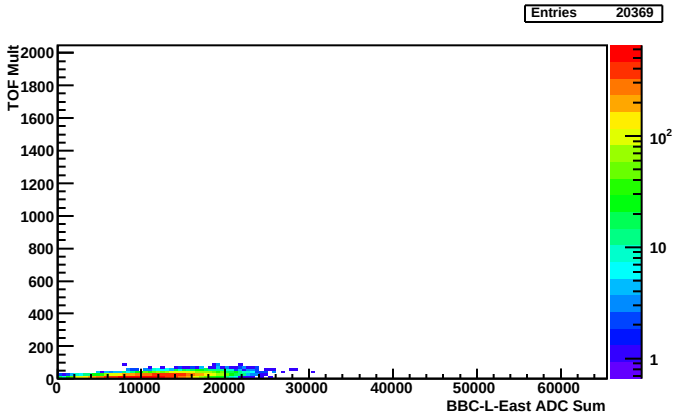

BBQ-VP002 (LO threshold)
Entries 325904
TAC
QT Input Channel

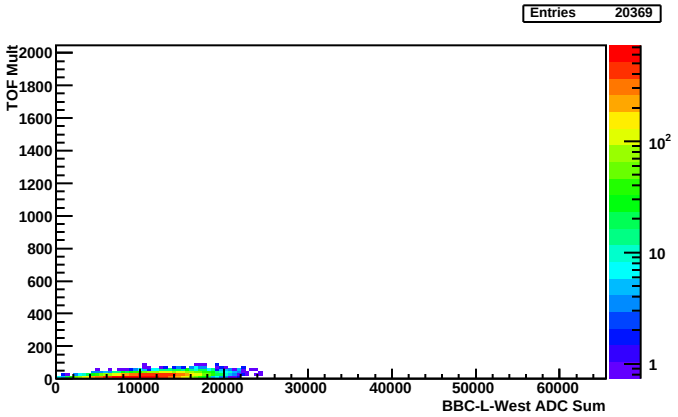

BBQ-VP003 (HI threshold)
Entries 325904
ADC
QT Input Channel

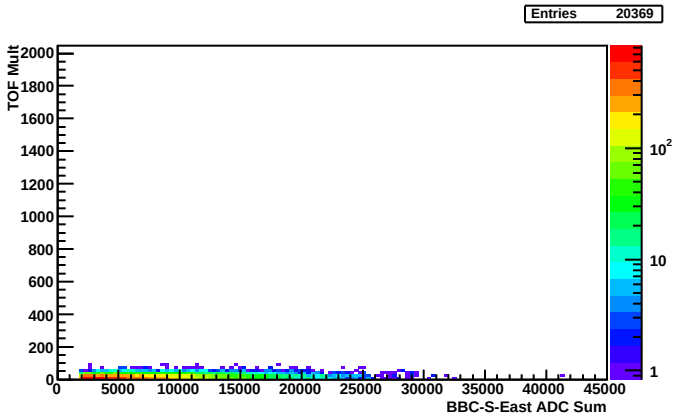

BBQ-VP003 (HI threshold)
Entries 325904
TAC
QT Input Channel

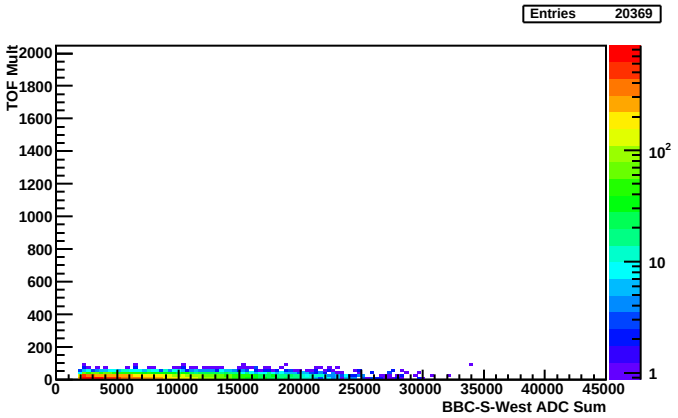

BBQ-VP004 (HI threshold)
Entries 325904
ADC
QT Input Channel

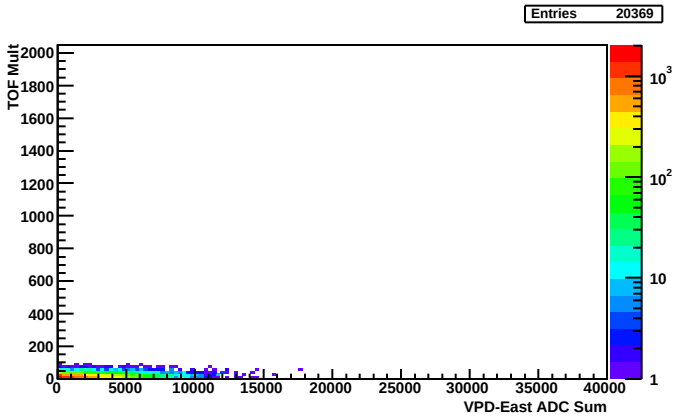

BBQ-VP004 (HI threshold)
Entries 325904
TAC
QT Input Channel

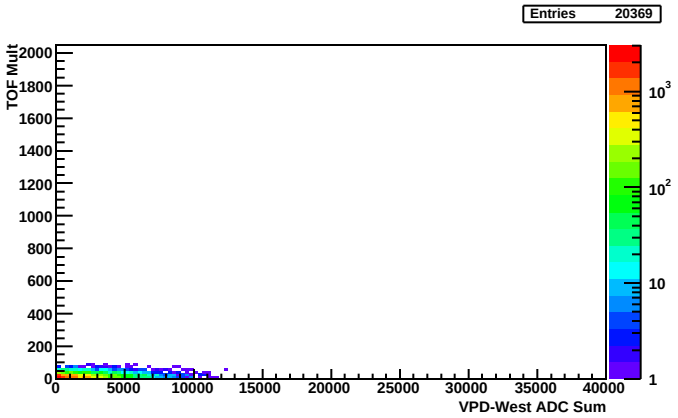

Entries 20369
TOF Mult
BBC-L-East ADC Sum

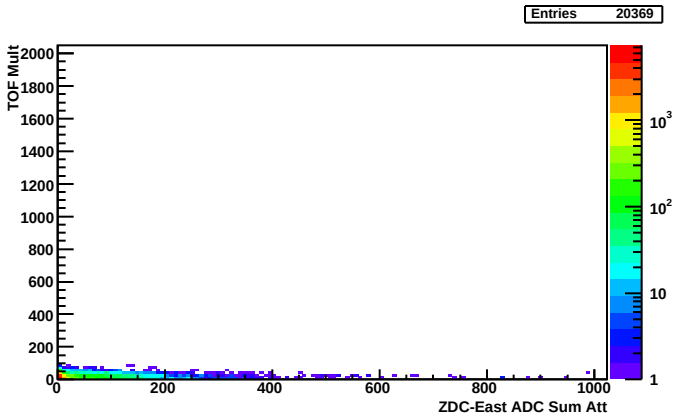

Entries 20369
TOF Mult
BBC-L-West ADC Sum

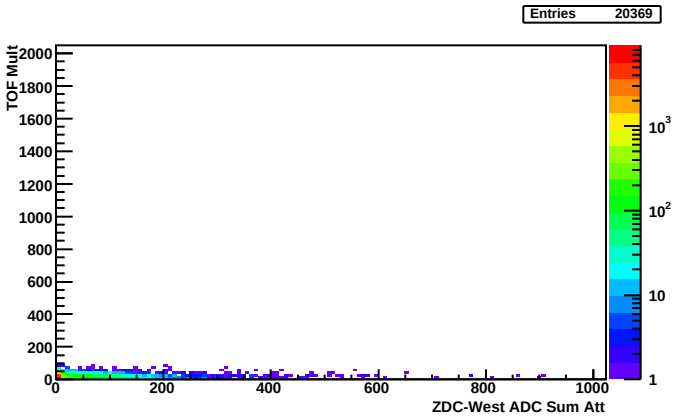

Entries 20369
TOF Mult
BBC-S-East ADC Sum

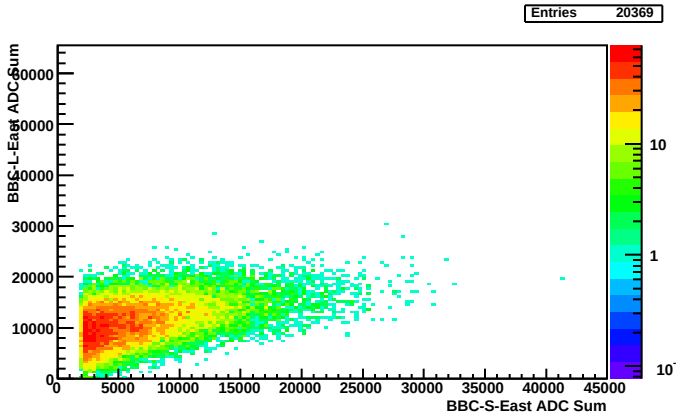

Entries 20369
TOF Mult
BBC-S-West ADC Sum

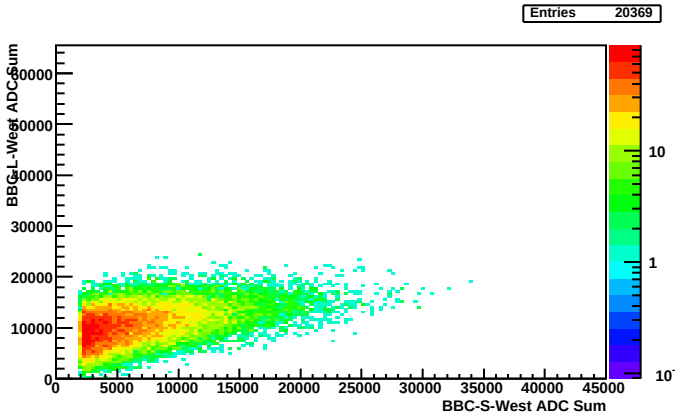

Entries 20369
TOF Mult
VPD-East ADC Sum

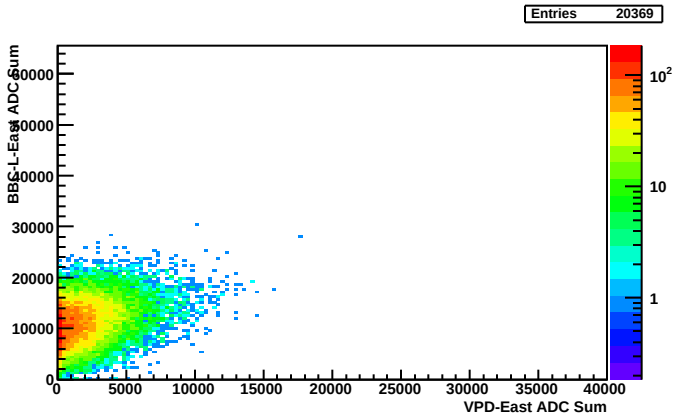

Entries 20369
TOF Mult
VPD-West ADC Sum

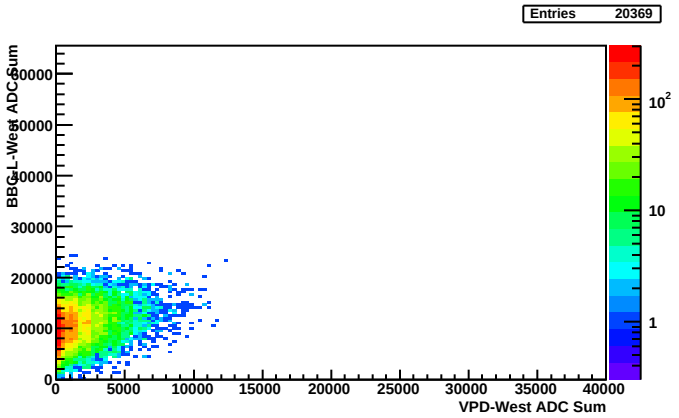

Entries 20369
TOF Mult
ZDC-East ADC Sum Att

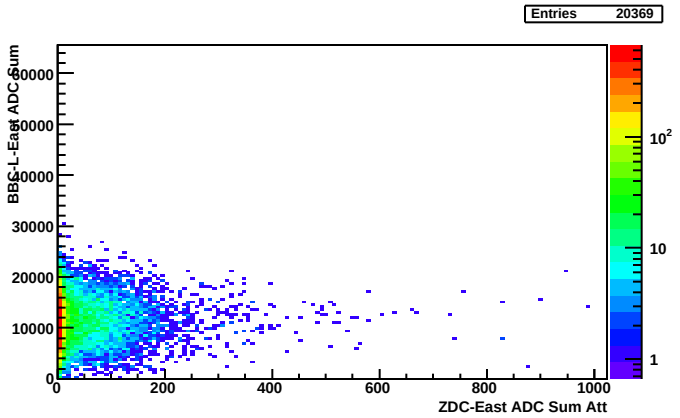

Entries 20369
TOF Mult
ZDC-West ADC Sum Att

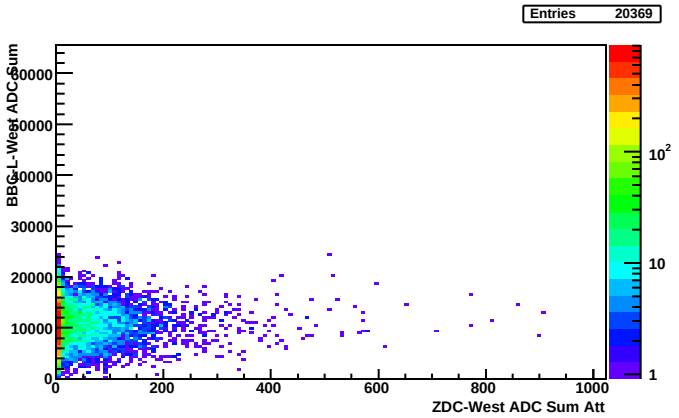

Entries 20369
BBC-L-East ADC Sum
BBC-S-East ADC Sum

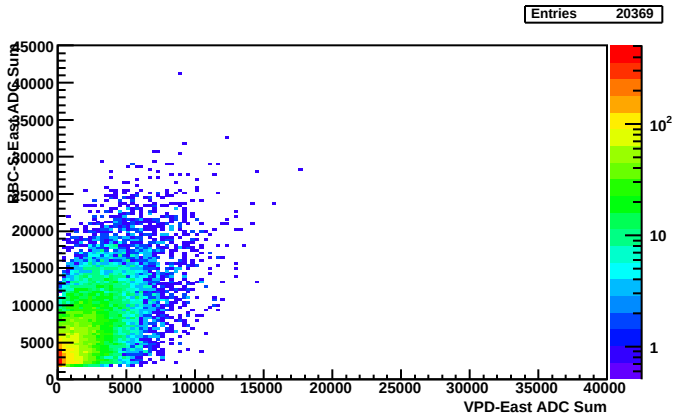

Entries 20369
BBC-L-West ADC Sum
BBC-S-West ADC Sum

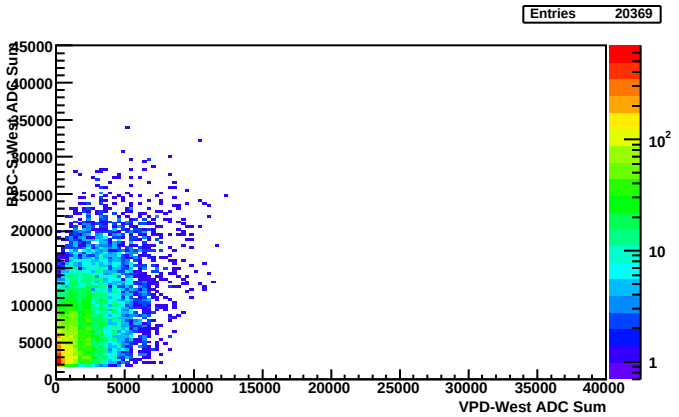

Entries 20369
BBC-L-East ADC Sum
VPD-East ADC Sum

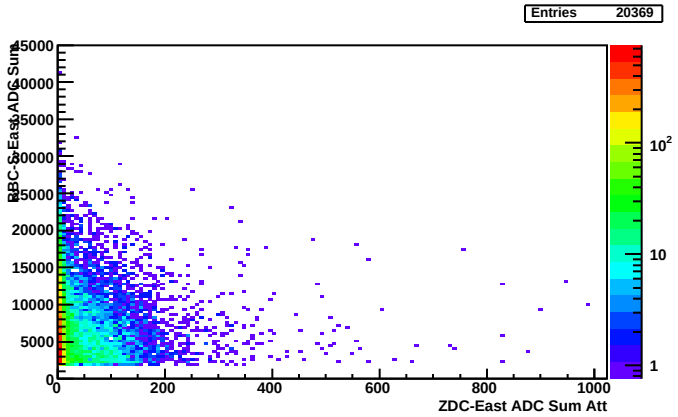

Entries 20369
BBC-L-West ADC Sum
VPD-West ADC Sum

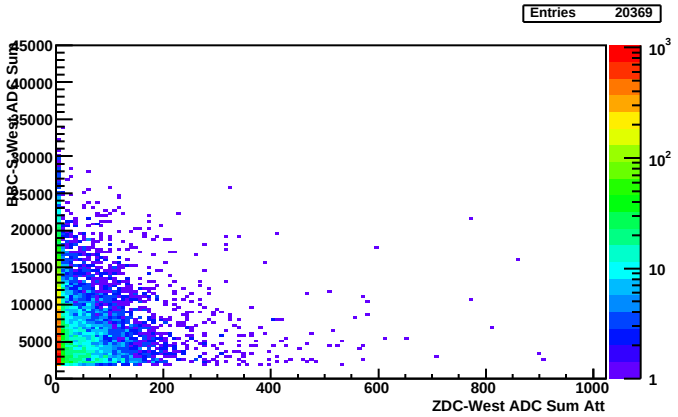

Entries 20369
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

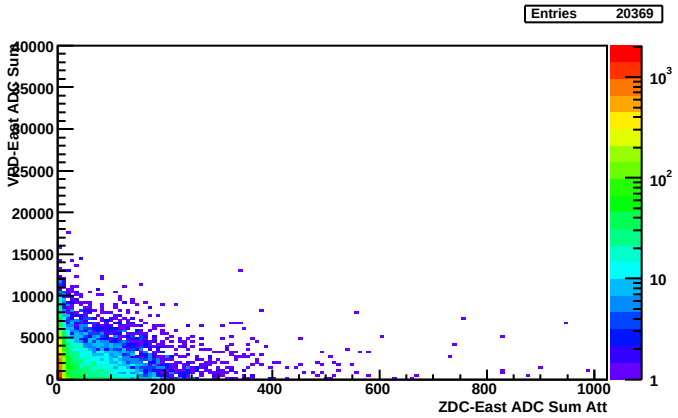

Entries 20369
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

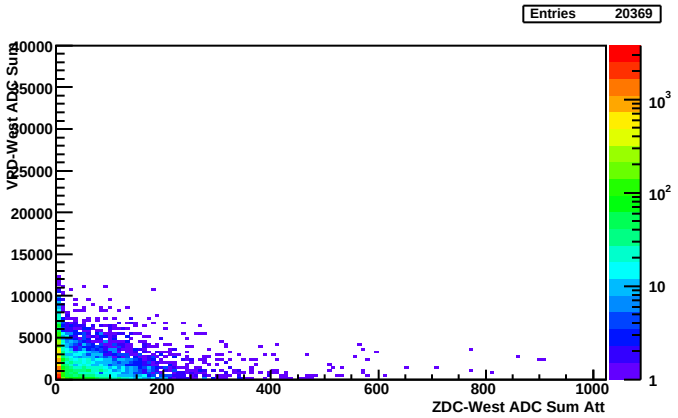

Entries 20369
BBC-S-East ADC Sum
VPD-East ADC Sum

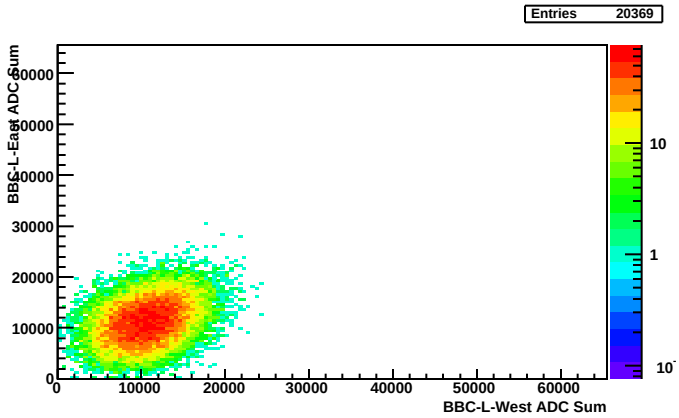

Entries 20369
BBC-S-West ADC Sum
VPD-West ADC Sum

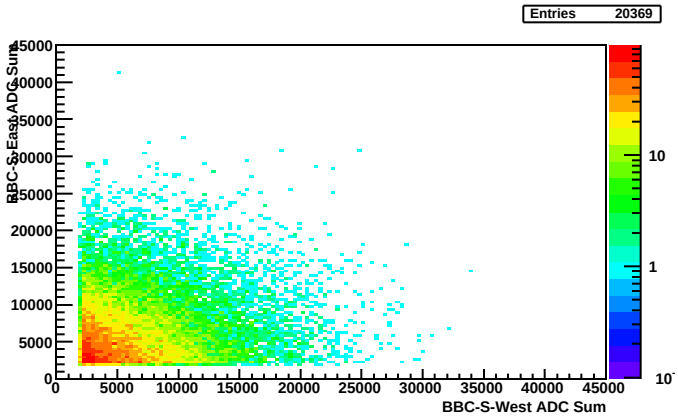

Entries 20369
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

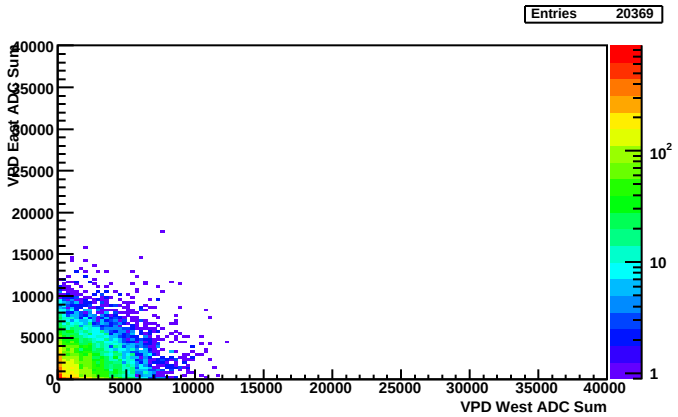

Entries 20369
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

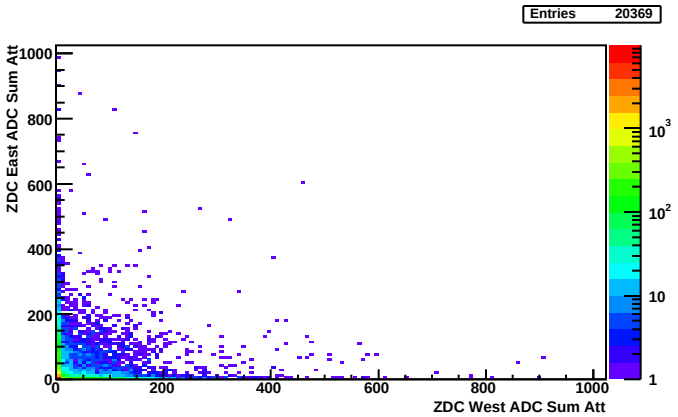

Entries 20369
VPD-East ADC Sum
ZDC-East ADC Sum Att

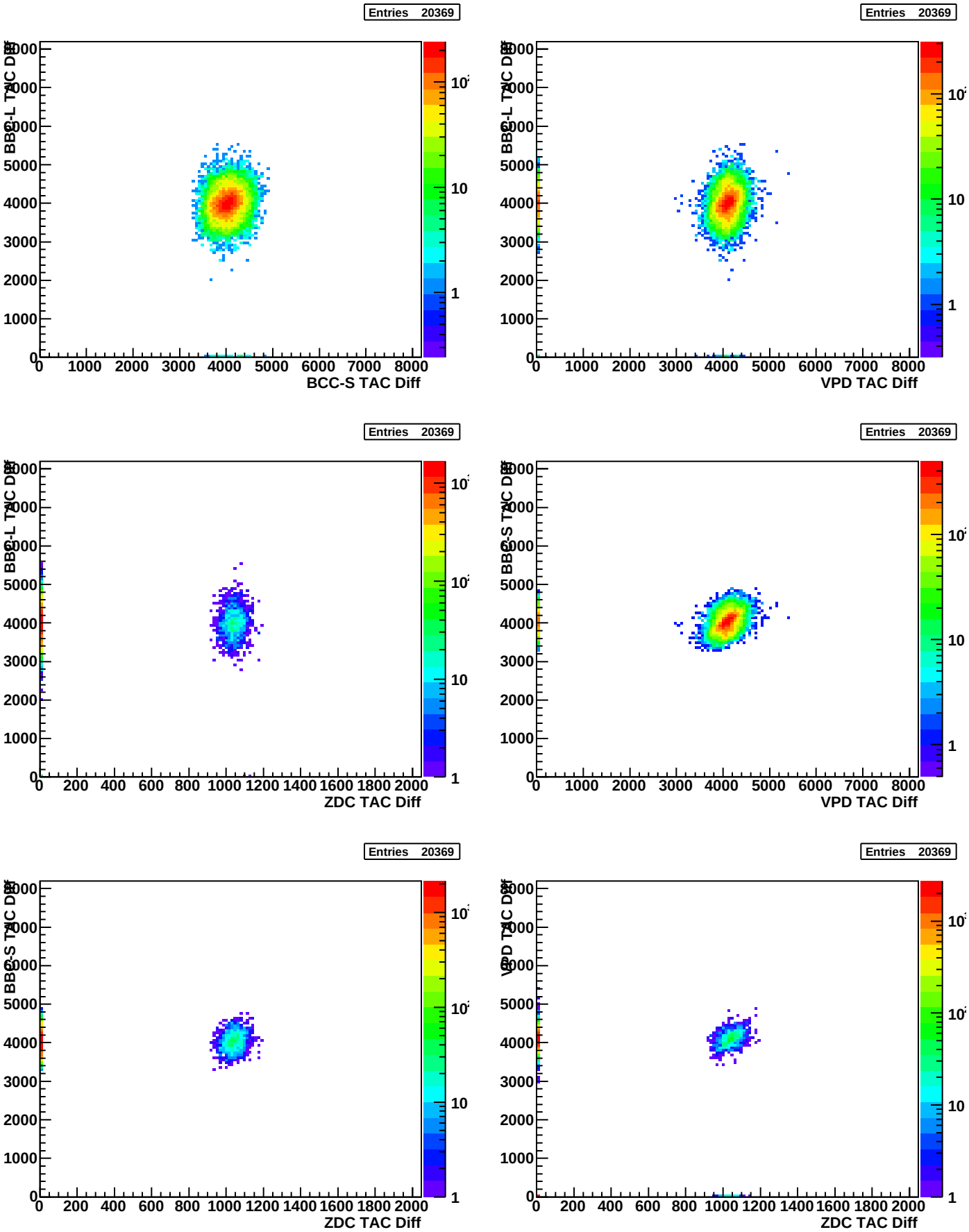

Entries 20369
VPD-West ADC Sum
ZDC-West ADC Sum Att

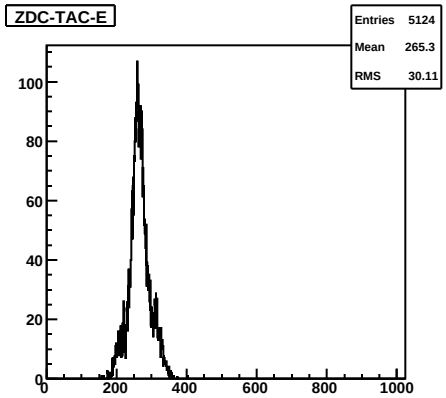

Entries 20369
BBC-L-East ADC Sum
BBC-L-West ADC Sum

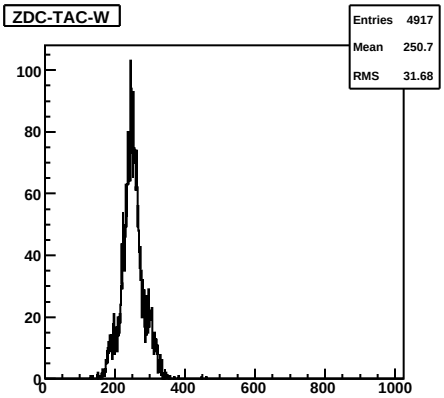

Entries 20369
BBC-S-East ADC Sum
BBC-S-West ADC Sum

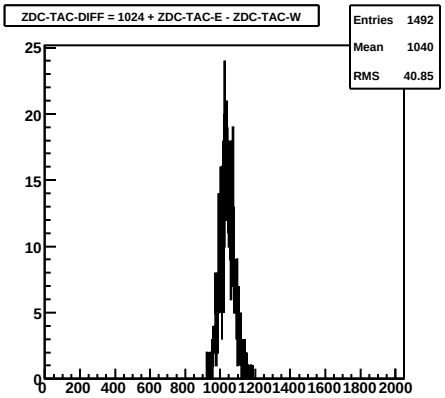

Entries 20369
VPD East ADC Sum
VPD West ADC Sum

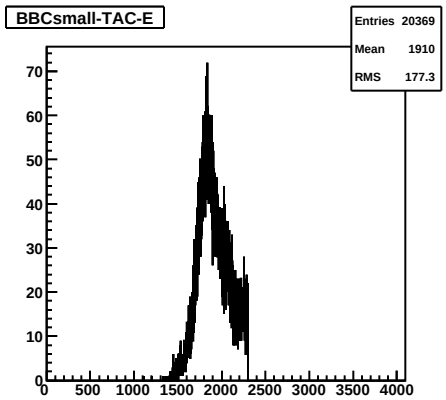

Entries 20369
ZDC East ADC Sum Att
ZDC West ADC Sum Att

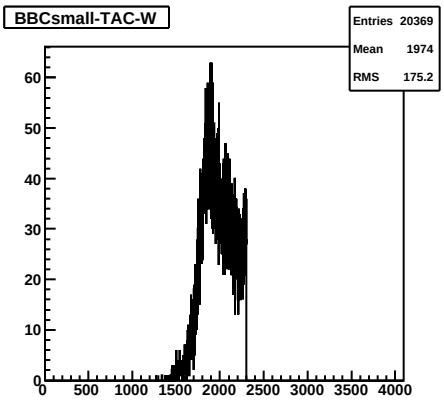

Entries 20369
BBC-L TAC Diff
BCC-S TAC Diff
Entries 20369
BBC-L TAC Diff
VPD TAC Diff
Entries 20369
BBC-L TAC Diff
ZDC TAC Diff
Entries 20369
BBC-S TAC Diff
VPD TAC Diff
Entries 20369
BBC-S TAC Diff
ZDC TAC Diff
Entries 20369
VPD TAC Diff
ZDC TAC Diff

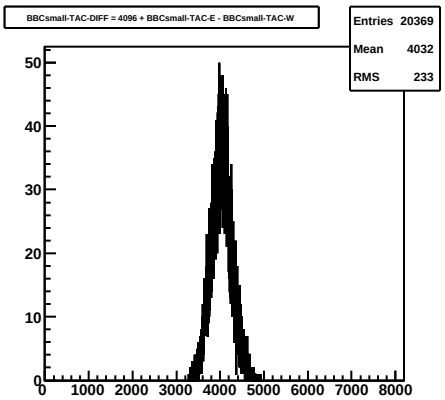

ZDC-TAC-E
Entries 5124
Mean 265.3
RMS 30.11

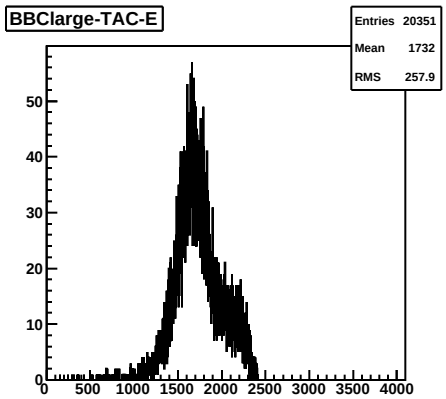

ZDC-TAC-W
Entries 4917
Mean 250.7
RMS 31.68

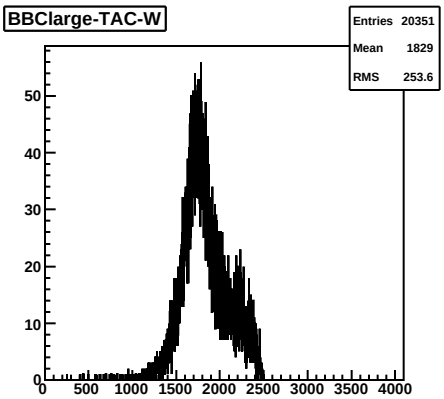

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1492
Mean 1040
RMS 40.85

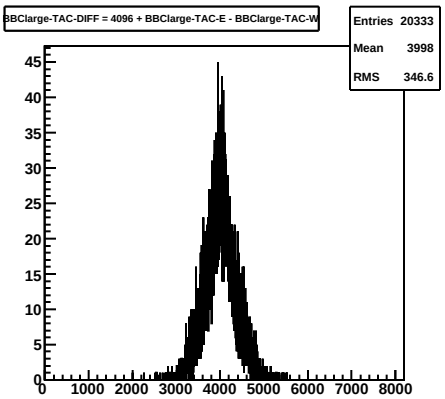

BBCsmall-TAC-E
Entries 20369
Mean 1910
RMS 177.3

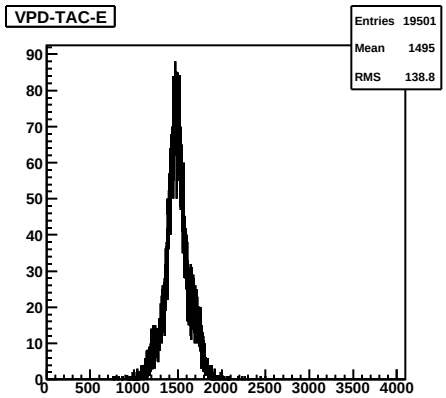

BBCsmall-TAC-W
Entries 20369
Mean 1974
RMS 175.2

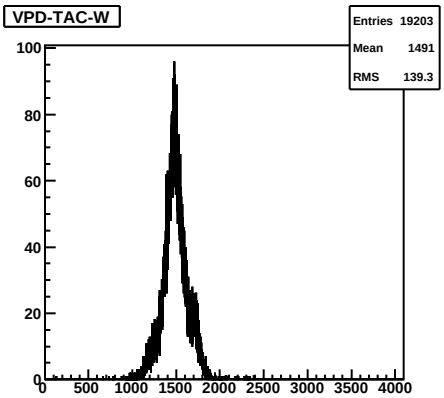

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 20369
Mean 4032
RMS 233

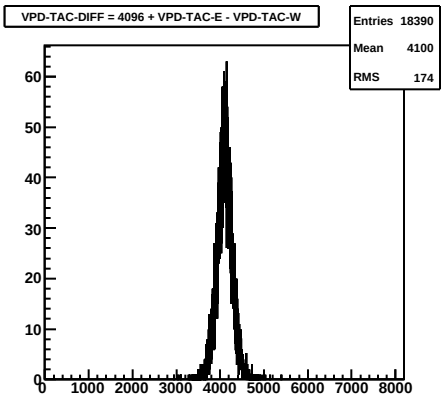

BBClarge-TAC-E
Entries 20351
Mean 1732
RMS 257.9

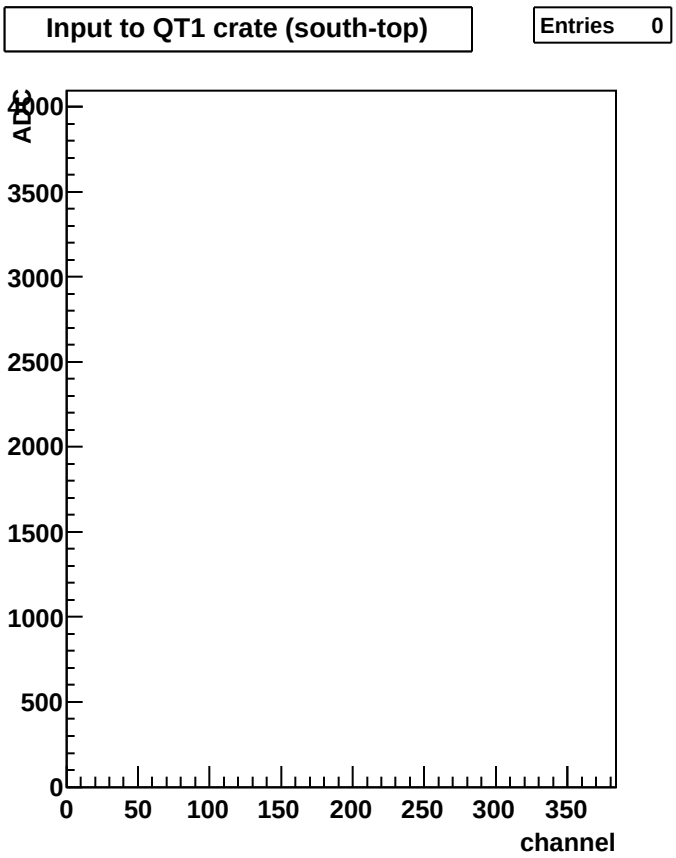

BBClarge-TAC-W
Entries 20351
Mean 1829
RMS 253.6

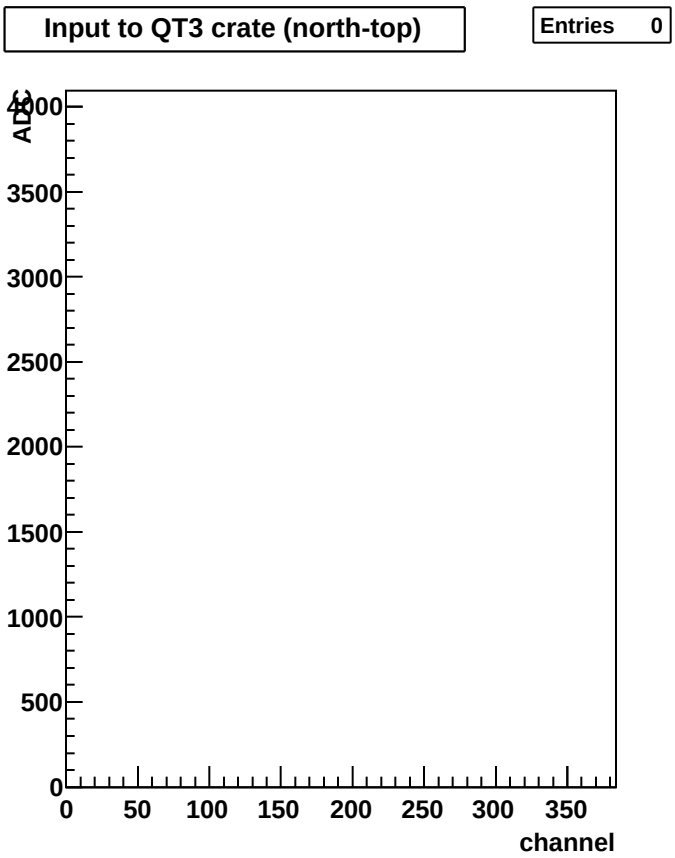

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 20333
Mean 3998
RMS 346.6

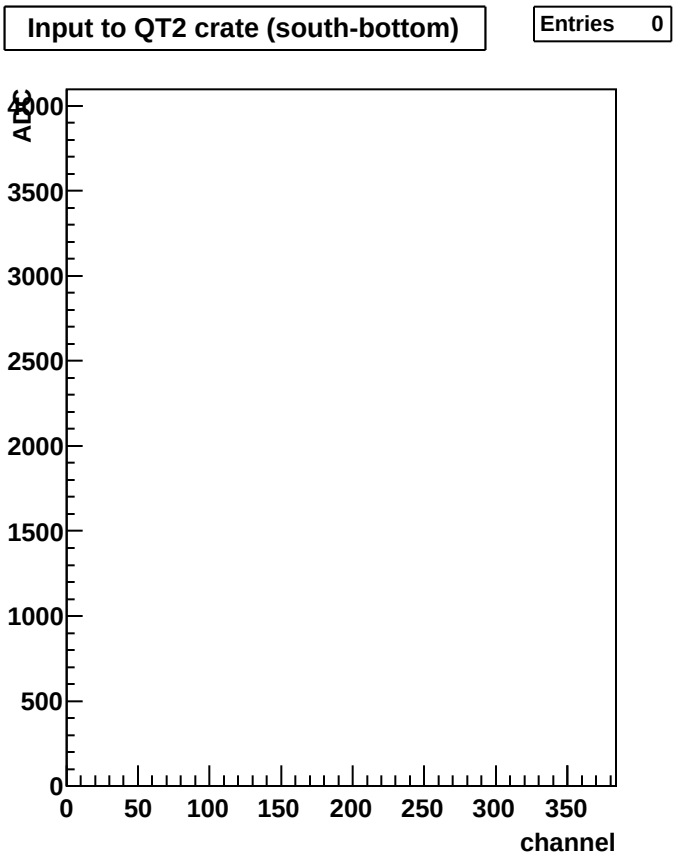

VPD-TAC-E
Entries 19501
Mean 1495
RMS 138.8

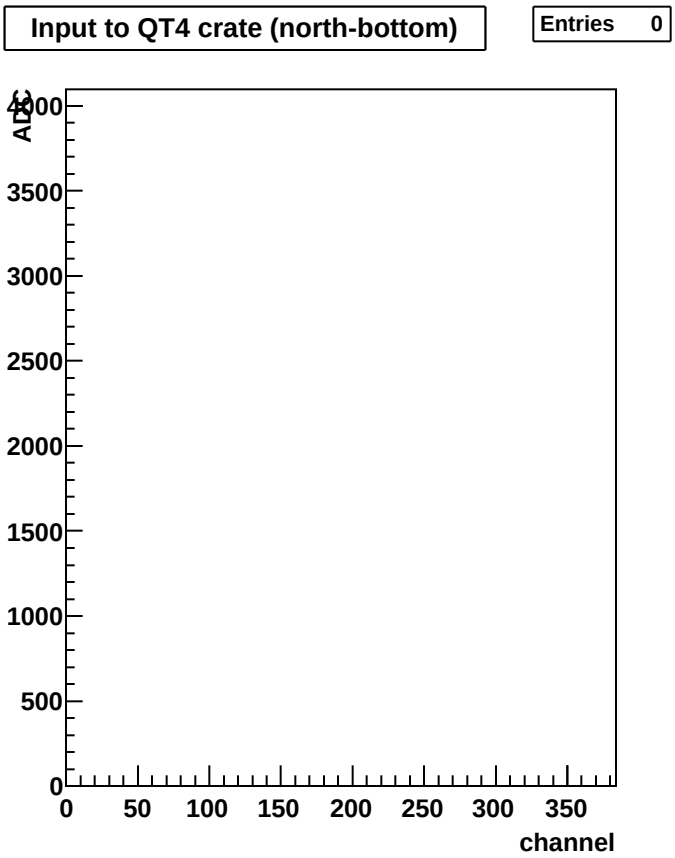

VPD-TAC-W
Entries 19203
Mean 1491
RMS 139.3

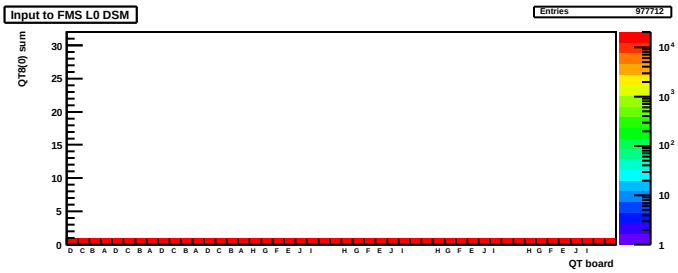

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 18390
Mean 4100
RMS 174

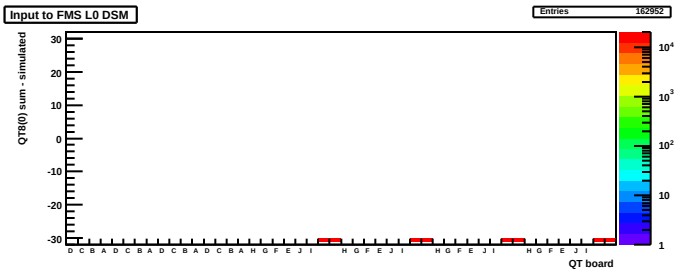

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

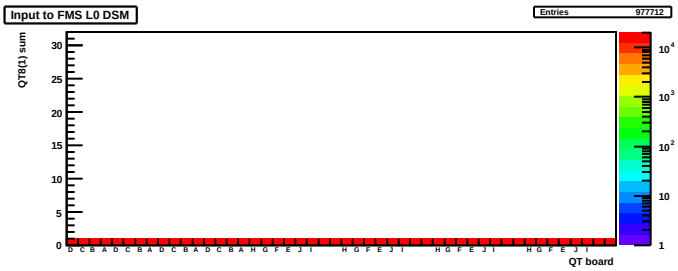

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

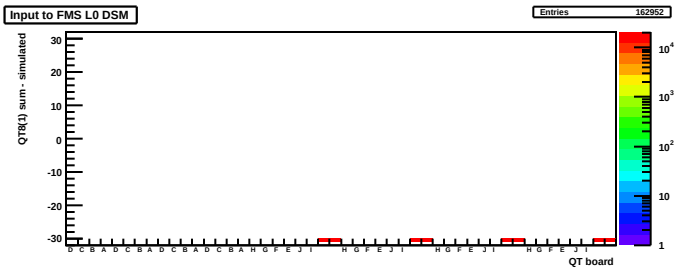

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

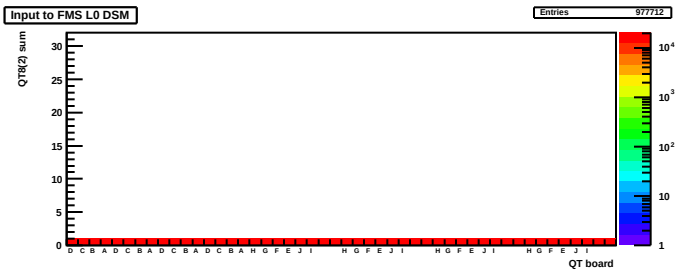

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

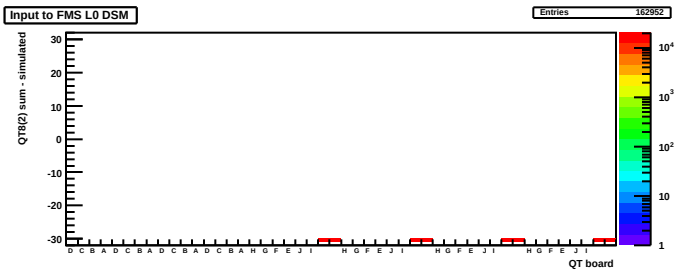

Input to FMS L0 DSM
Entries 977712
QT8(0) sum
QT board

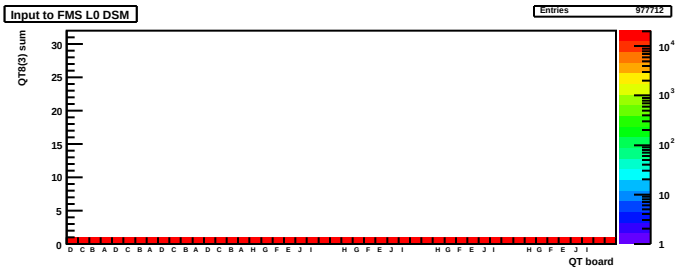

Input to FMS L0 DSM
Entries 162952
QT8(0) sum - simulated
QT board

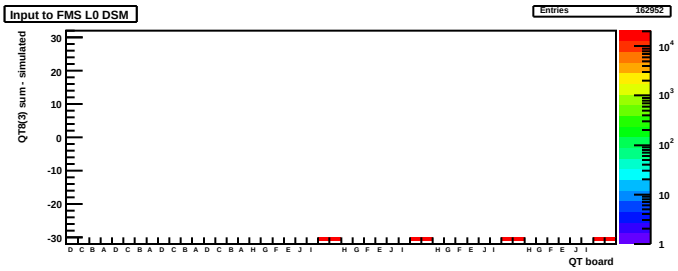

Input to FMS L0 DSM
Entries 977712
QT8(1) sum
QT board

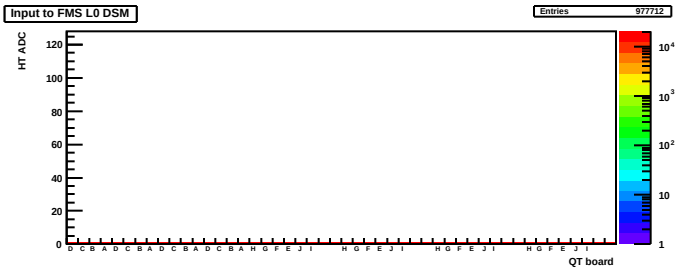

Input to FMS L0 DSM
Entries 162952
QT8(1) sum - simulated
QT board

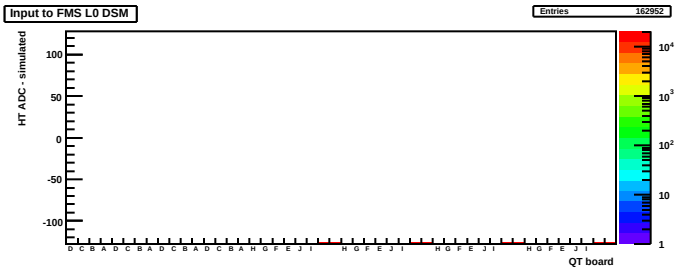

Input to FMS L0 DSM
Entries 977712
QT8(2) sum
QT board

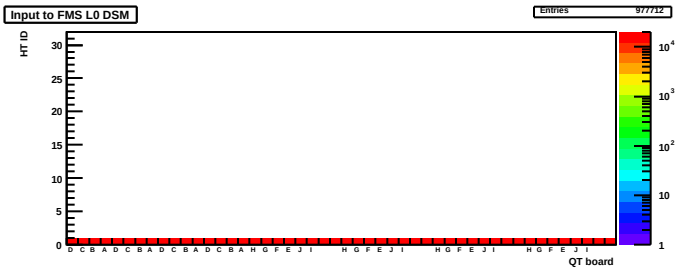

Input to FMS L0 DSM
Entries 162952
QT8(2) sum - simulated
QT board

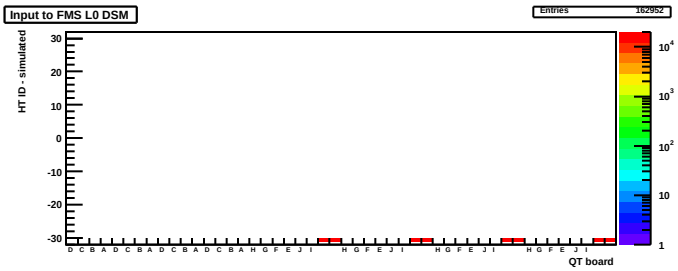

Input to FMS L0 DSM
Entries 977712
QT8(3) sum
QT board

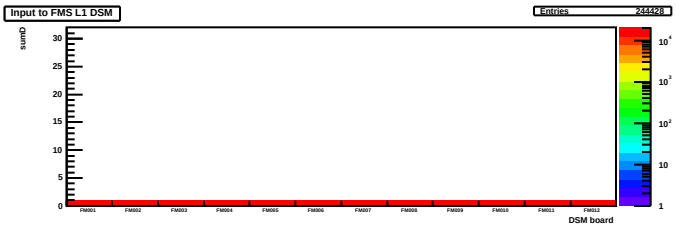

Input to FMS L0 DSM
Entries 162952
QT8(3) sum - simulated
QT board

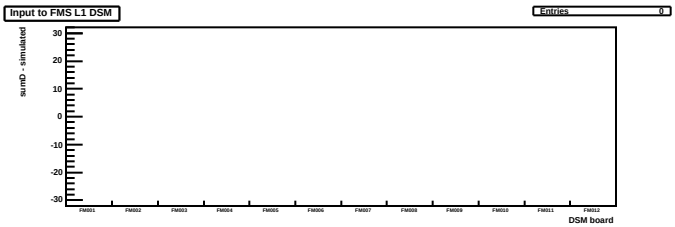

Input to FMS L0 DSM
Entries 977712
HT ADC
QT board

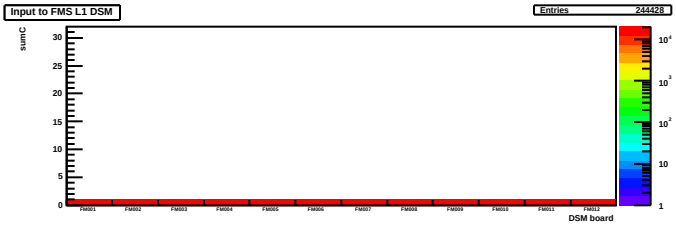

Input to FMS L0 DSM
Entries 162952
HT ADC - simulated
QT board

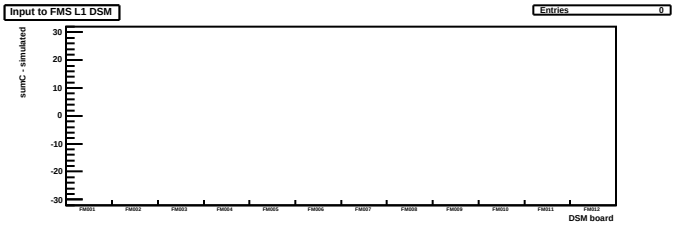

Input to FMS L0 DSM
Entries 977712
HT ID
QT board

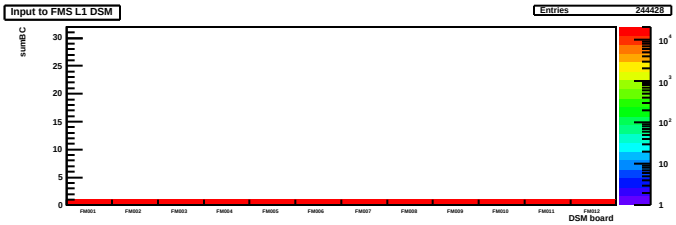

Input to FMS L0 DSM
Entries 162952
HT ID - simulated
QT board

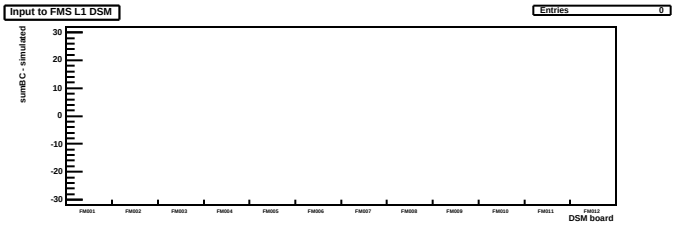

Input to FMS L1 DSM
Entries 244428
sumD
DSM board

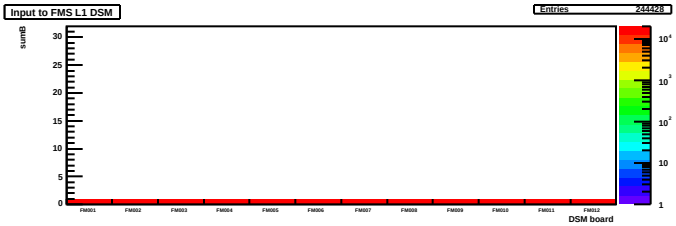

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

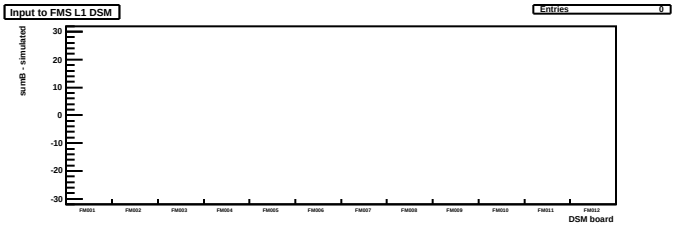

Input to FMS L1 DSM
Entries 244428
sumC
DSM board

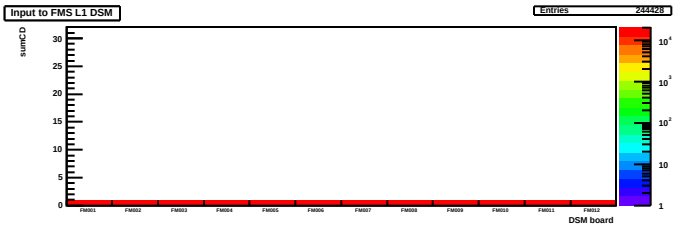

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

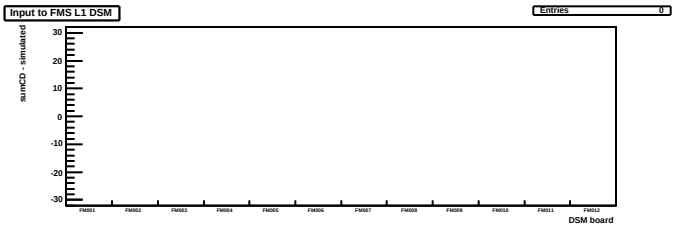

Input to FMS L1 DSM
Entries 244428
sumBC
DSM board

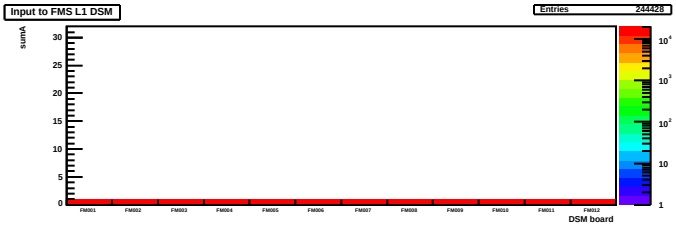

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

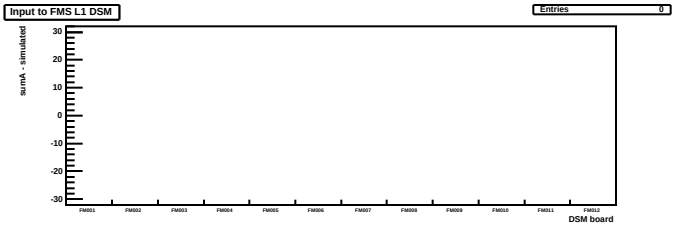

Input to FMS L1 DSM
Entries 244428
sumB
DSM board

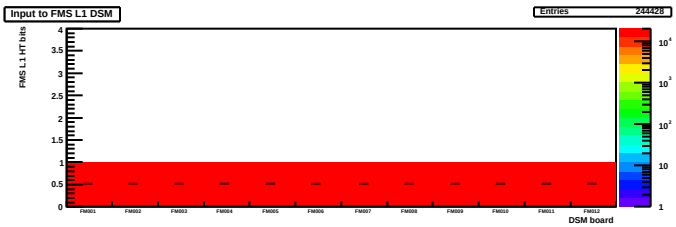

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

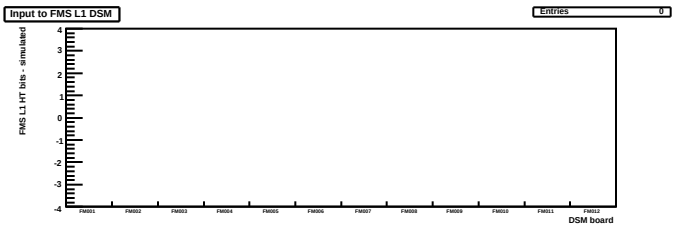

Input to FMS L1 DSM
Entries 244428
sumCD
DSM board

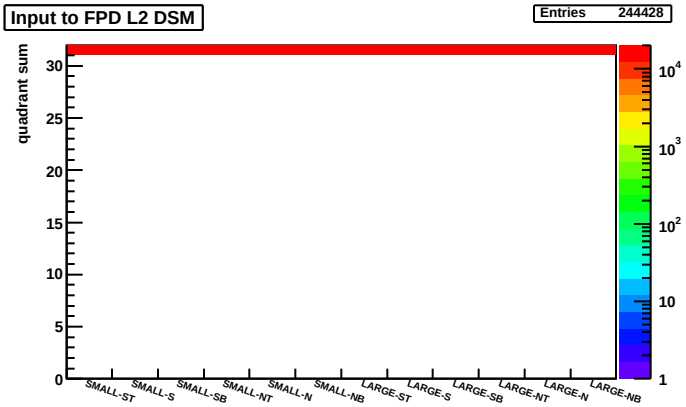

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

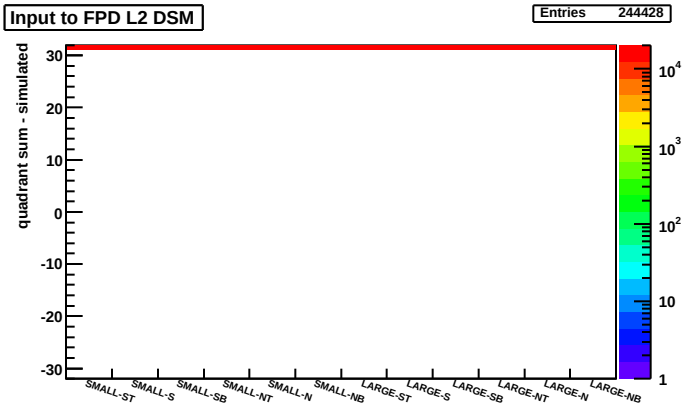

Input to FMS L1 DSM
Entries 244428
sumA
DSM board

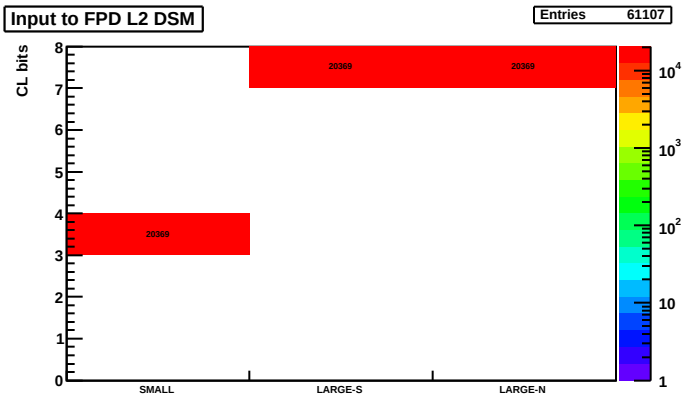

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

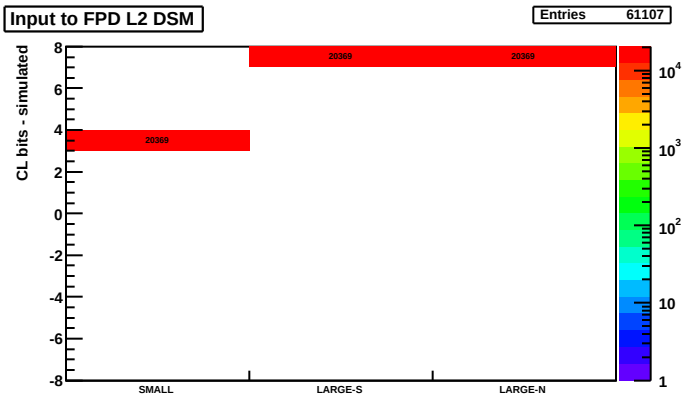

Input to FMS L1 DSM
Entries 244428
FMS L1 HT bits
DSM board

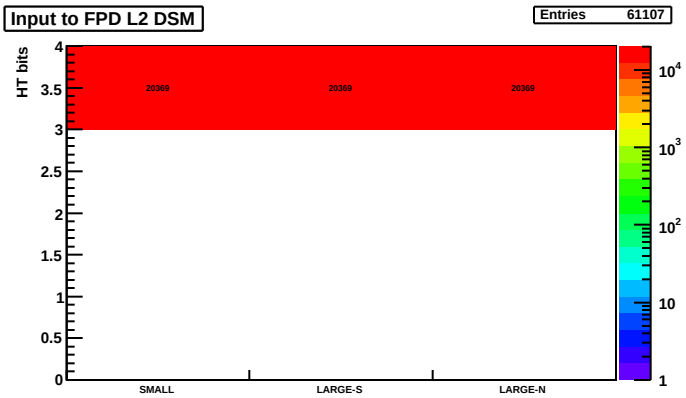

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

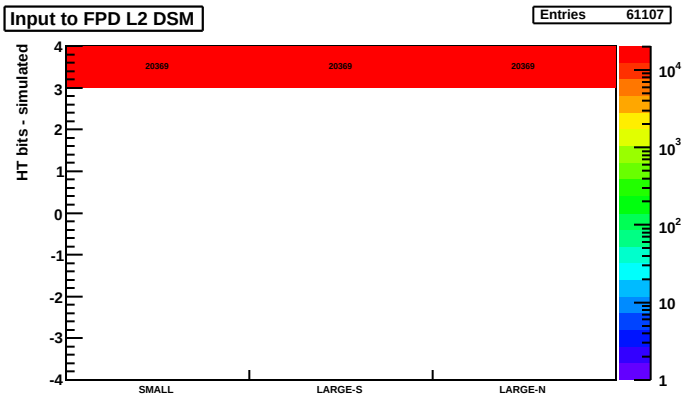

Input to FPD L2 DSM
Entries 244428
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

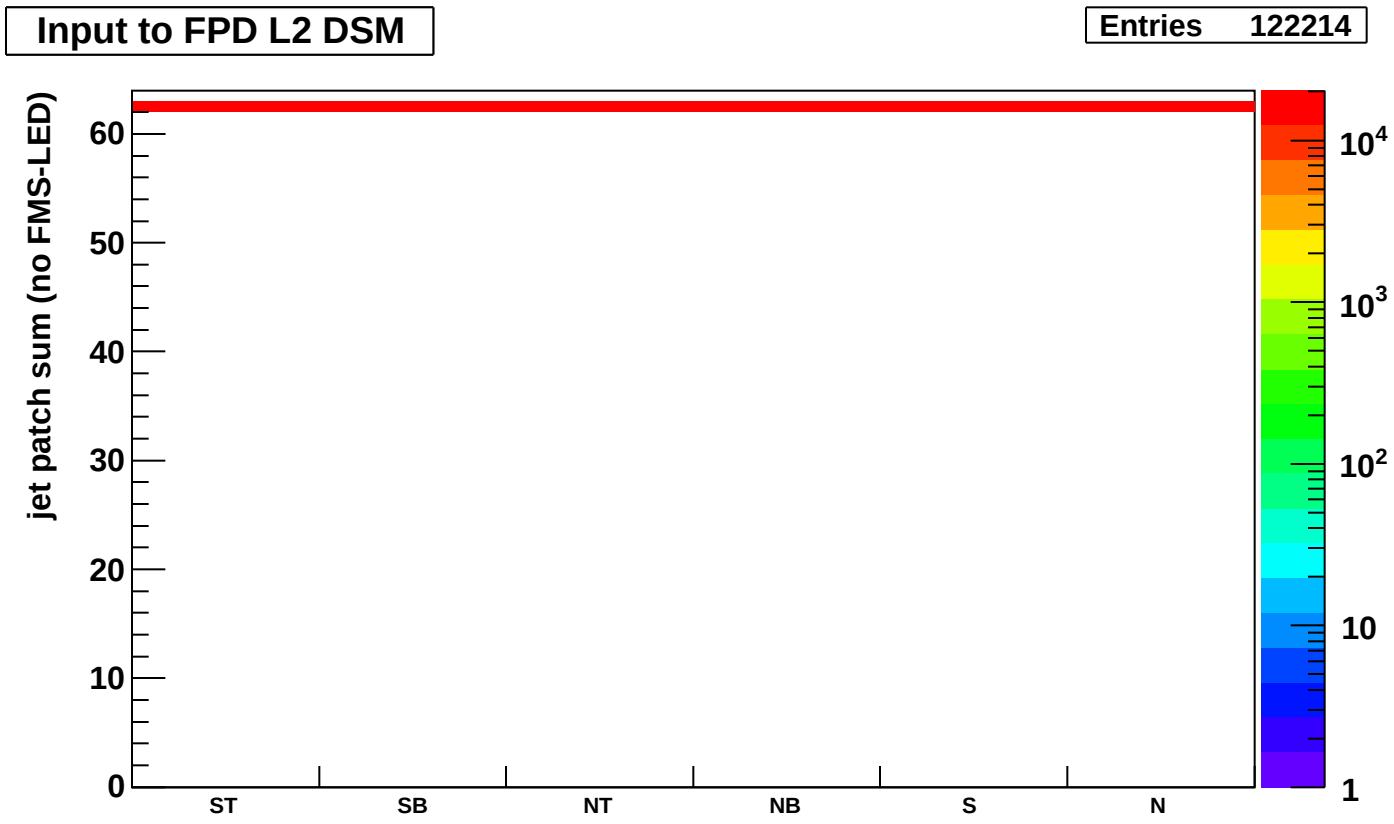

Input to FPD L2 DSM
Entries 244428
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

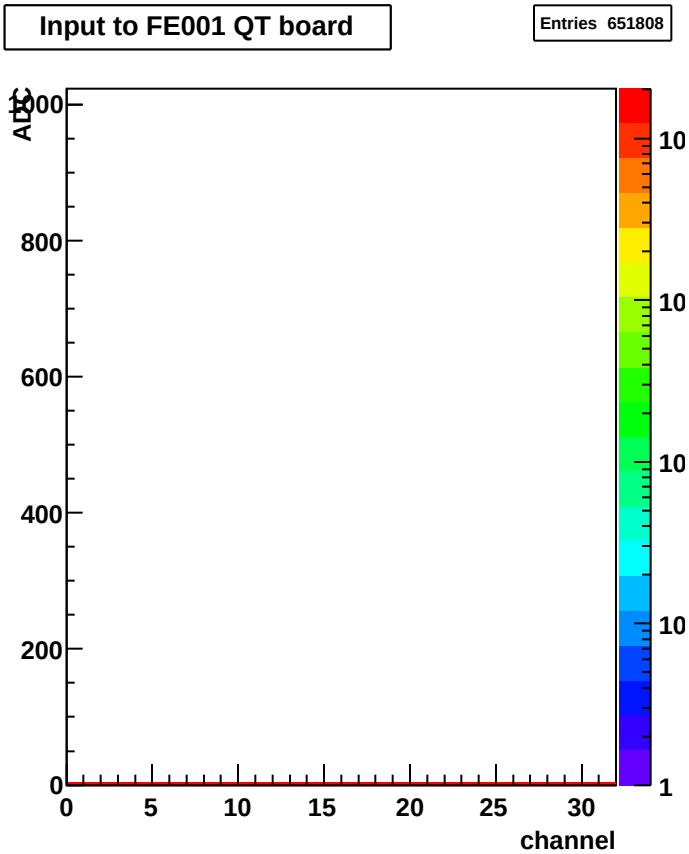

Input to FPD L2 DSM
Entries 61107
CL bits
20369
20369
20369
SMALL
LARGE-S
LARGE-N

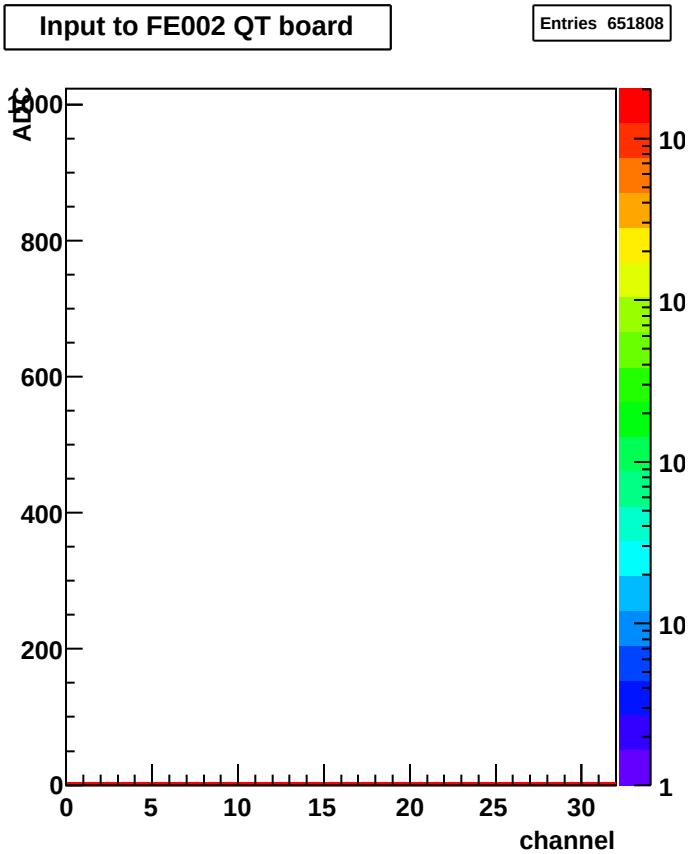

Input to FPD L2 DSM
Entries 61107
CL bits - simulated
20369
20369
20369
SMALL
LARGE-S
LARGE-N

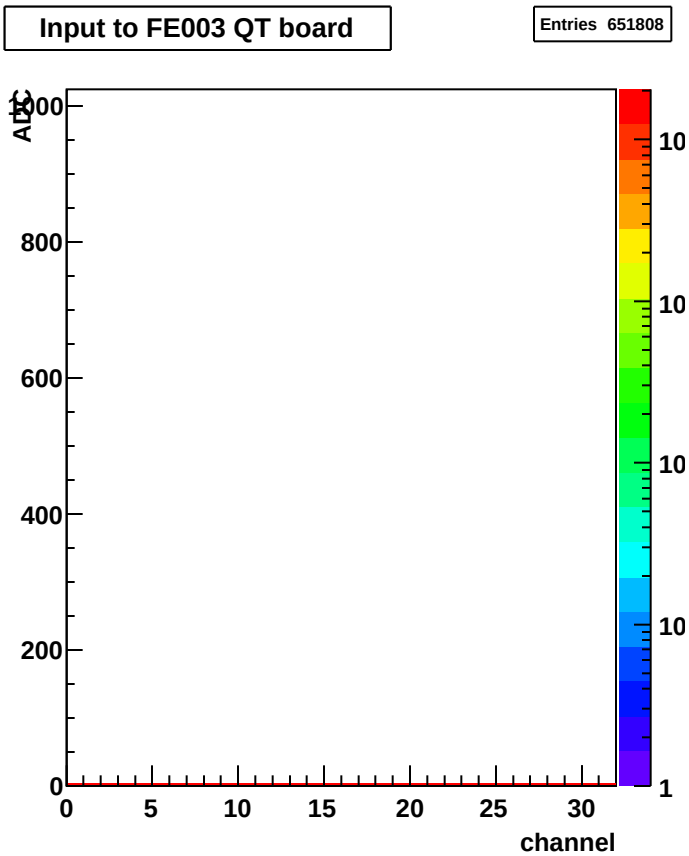

Input to FPD L2 DSM
Entries 61107
HT bits
20369
20369
20369
SMALL
LARGE-S
LARGE-N

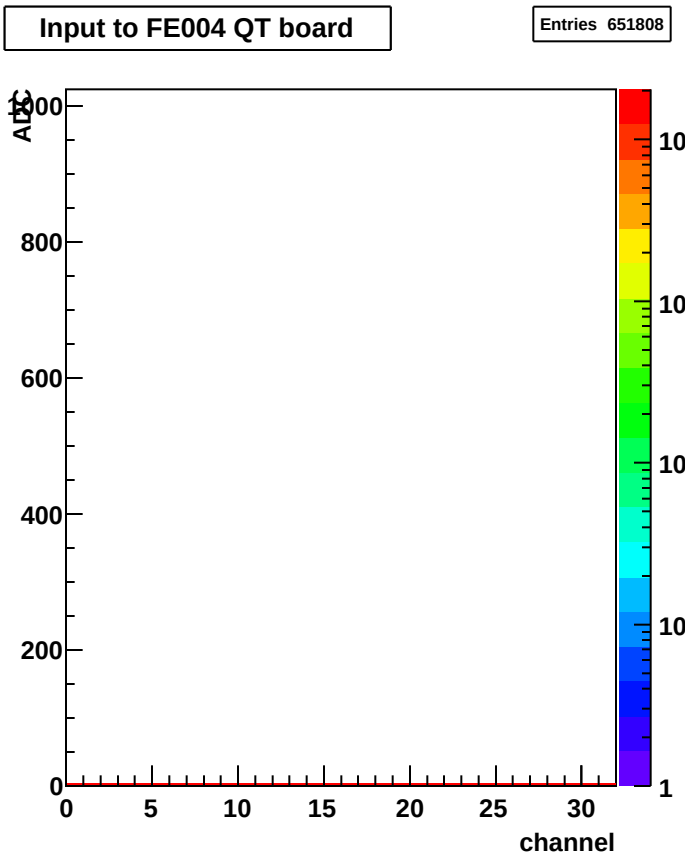

Input to FPD L2 DSM
Entries 61107
HT bits - simulated
20369
20369
20369
SMALL
LARGE-S
LARGE-N

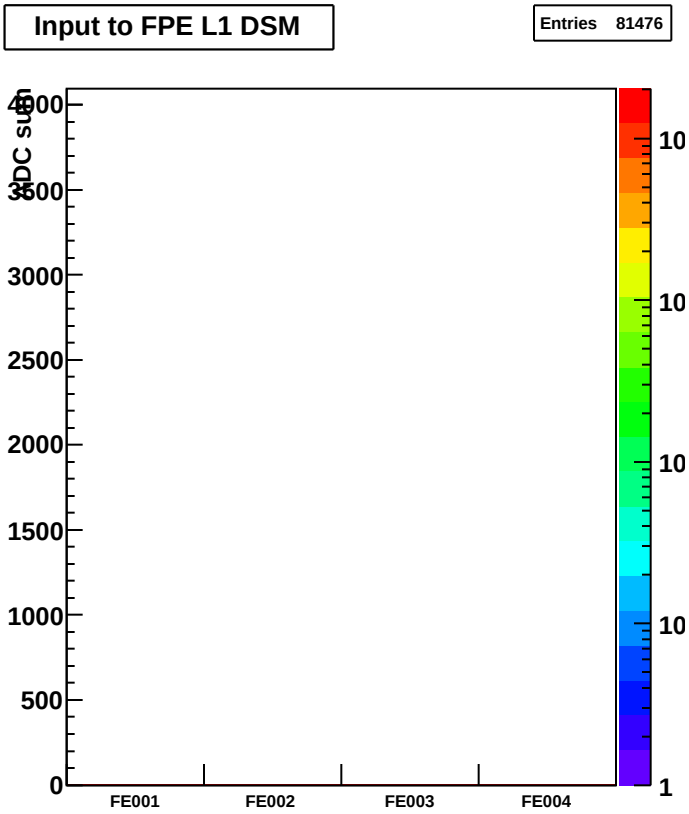

Input to FPD L2 DSM
Entries 122214
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

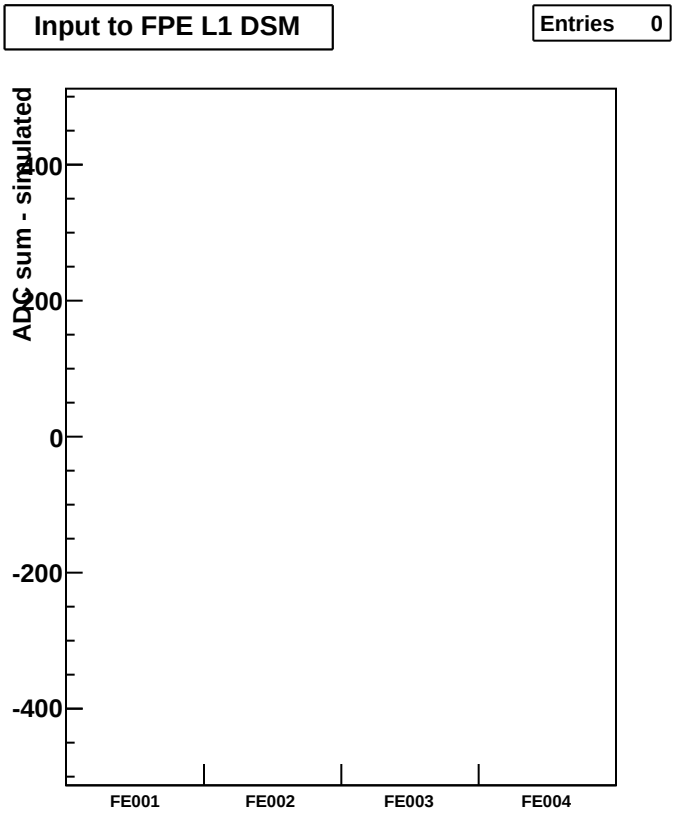

Input to FE001 QT board
Entries 651808
ADC
channel


Input to FE002 QT board
Entries 651808
ADC
channel

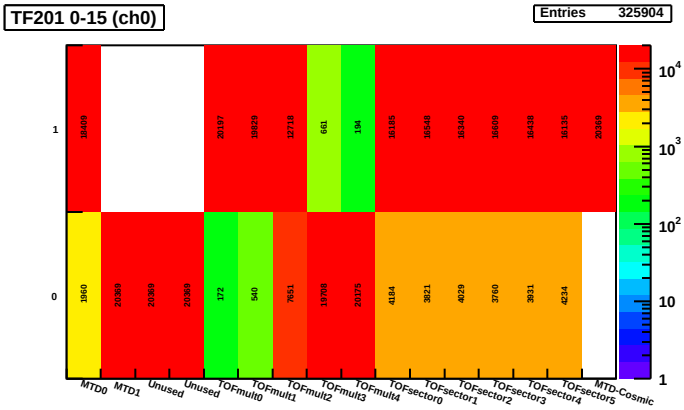

Input to FE003 QT board
Entries 651808
ADC
channel


Input to FE004 QT board
Entries 651808
ADC
channel

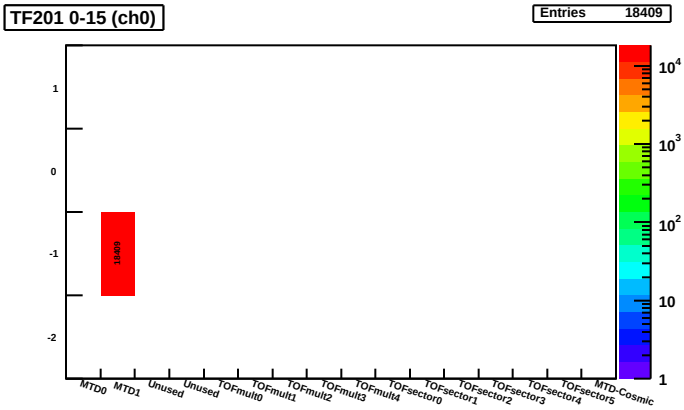

Input to FPE L1 DSM
Entries 81476
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


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

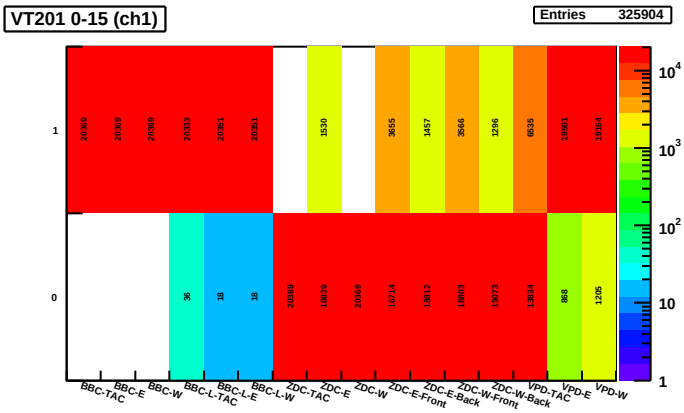
TF201 0-15 (ch0)



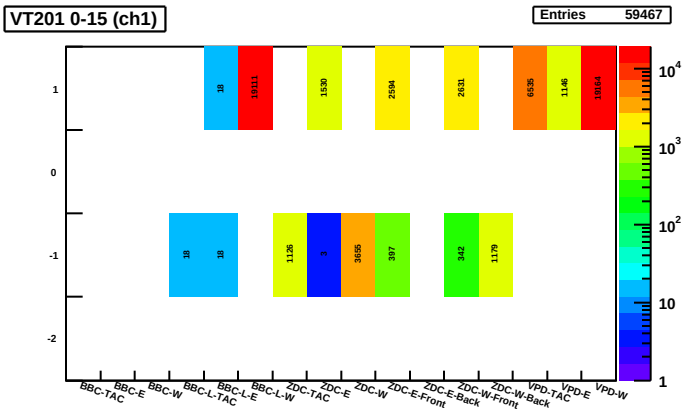
TF201 0-15 (ch0)



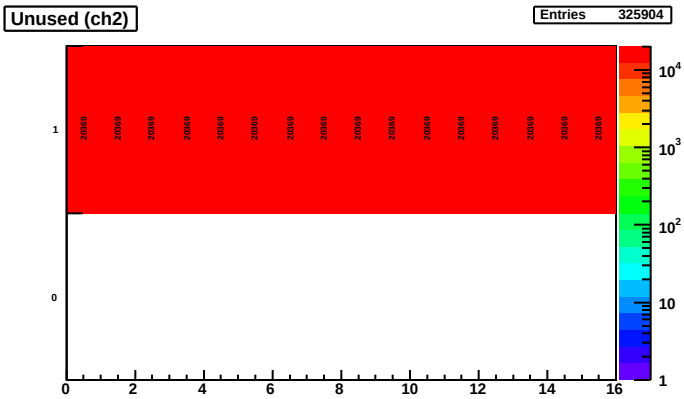
VT201 0-15 (ch1)

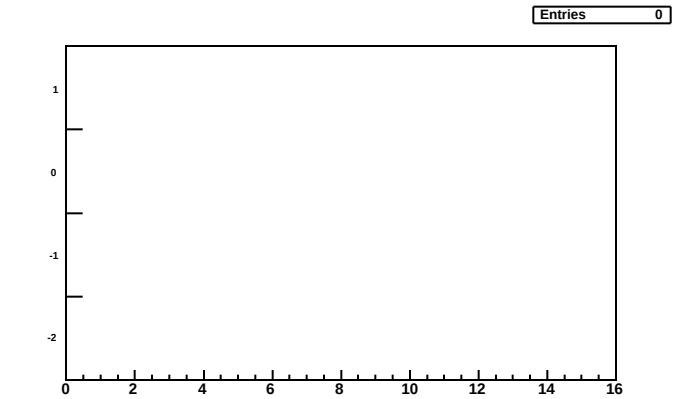


VT201 0-15 (ch1)

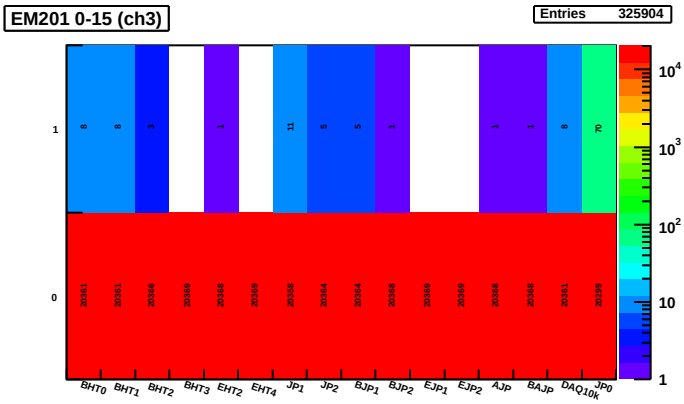


Unused (ch2)





EM201 0-15 (ch3)



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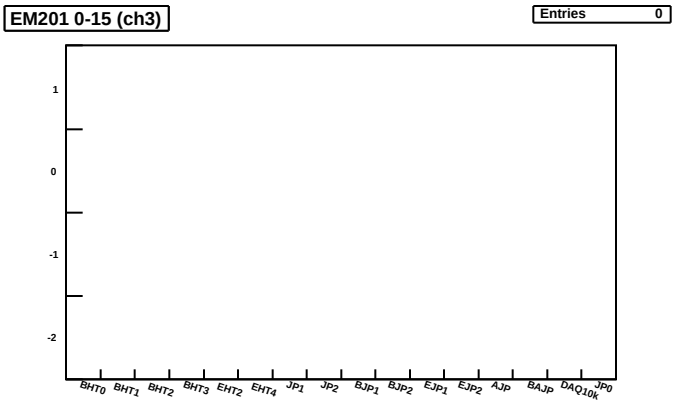
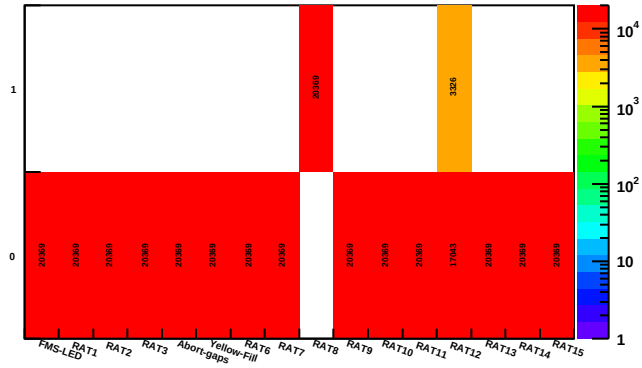
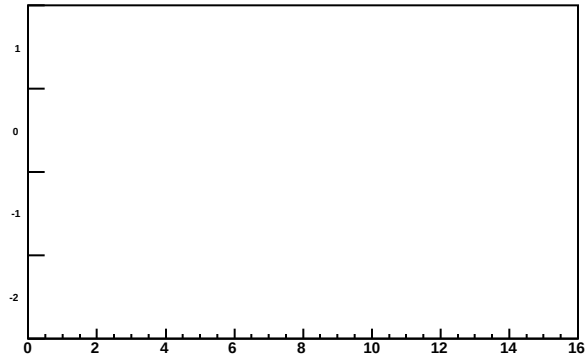
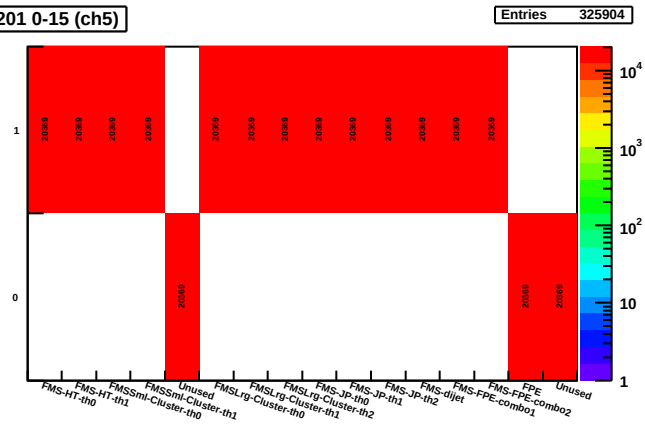


RAT board (ch4)





FP201 0-15 (ch5)



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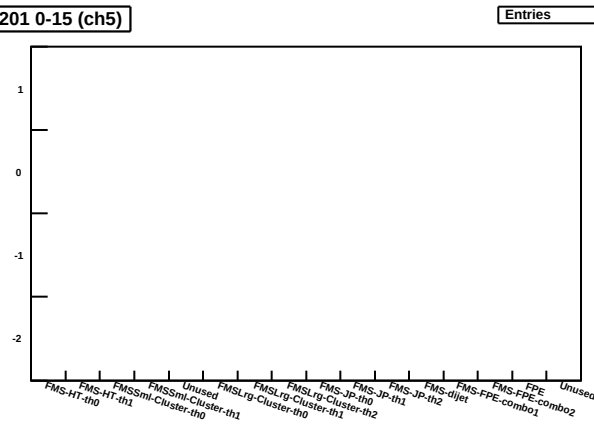

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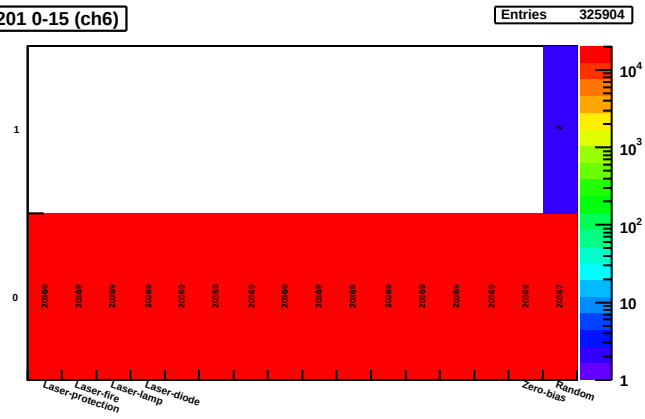

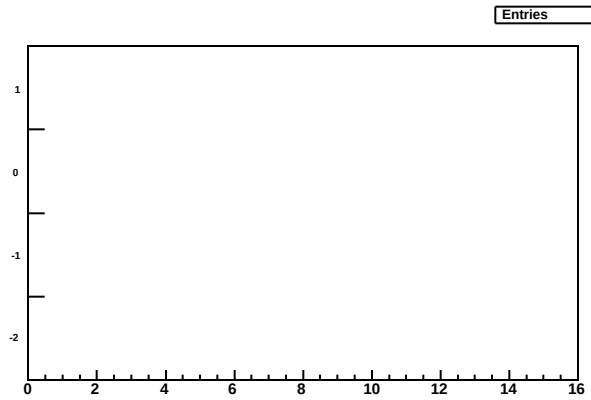
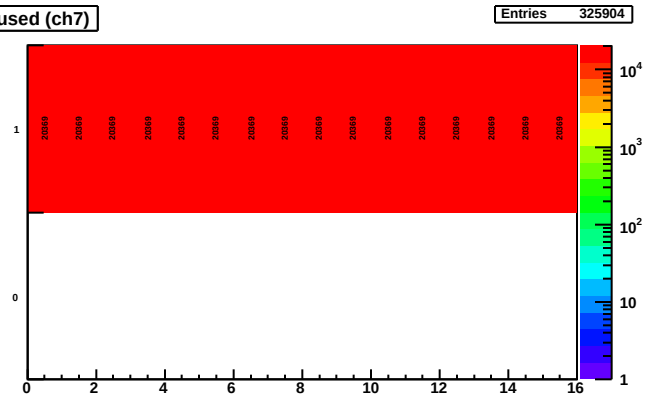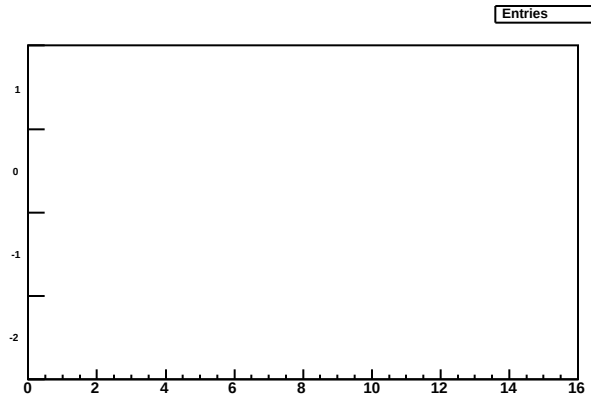
Unused (ch7)