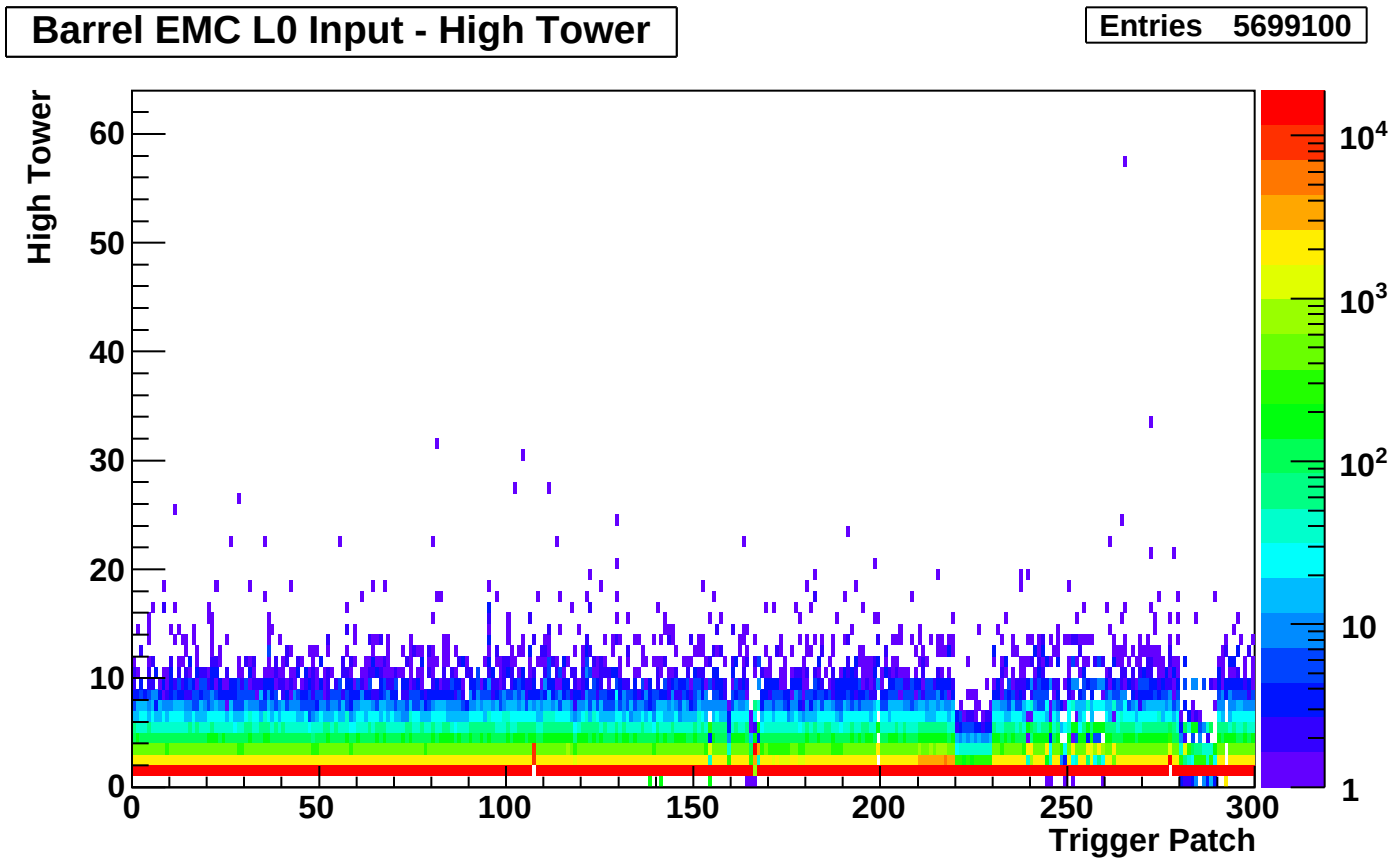
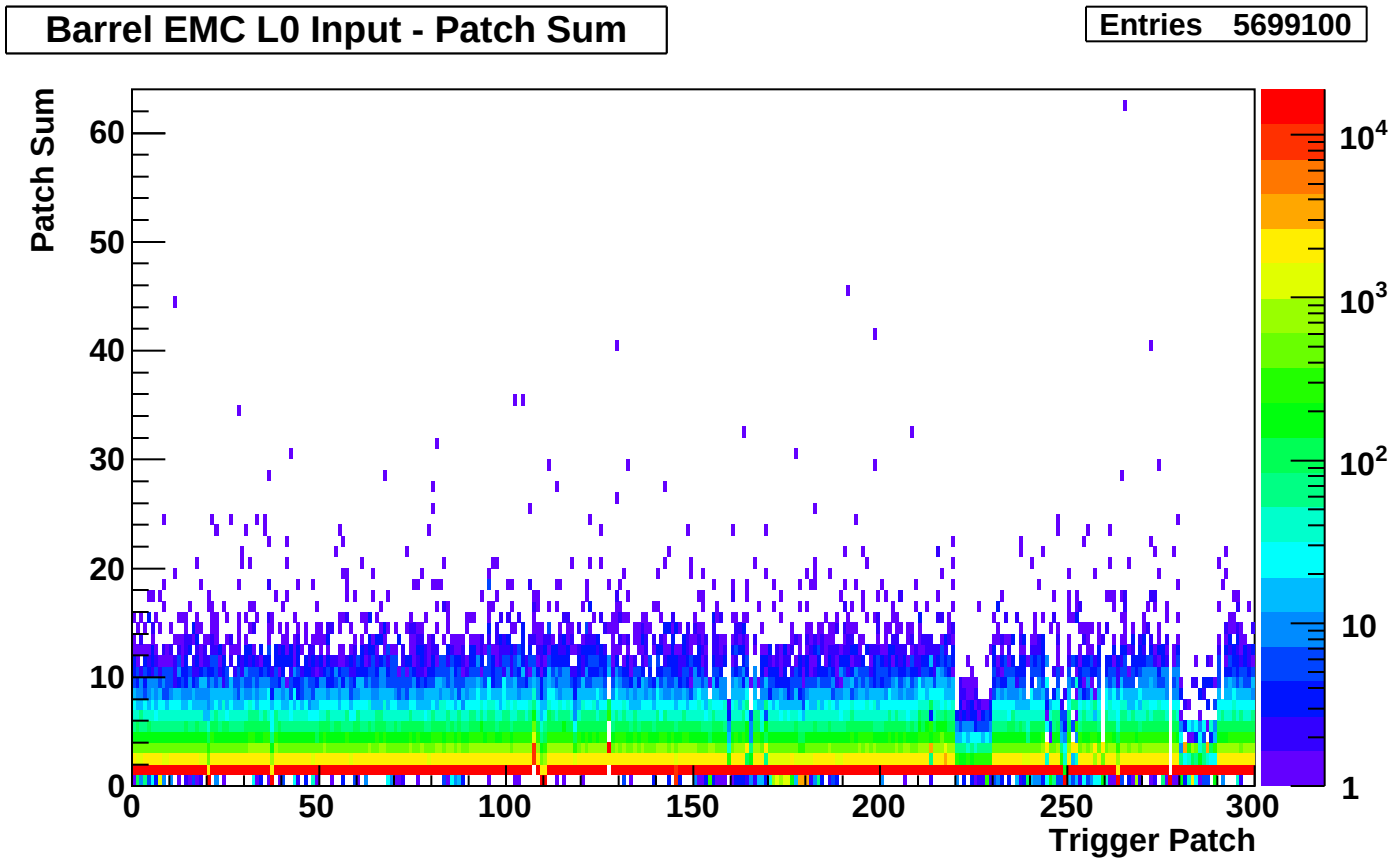
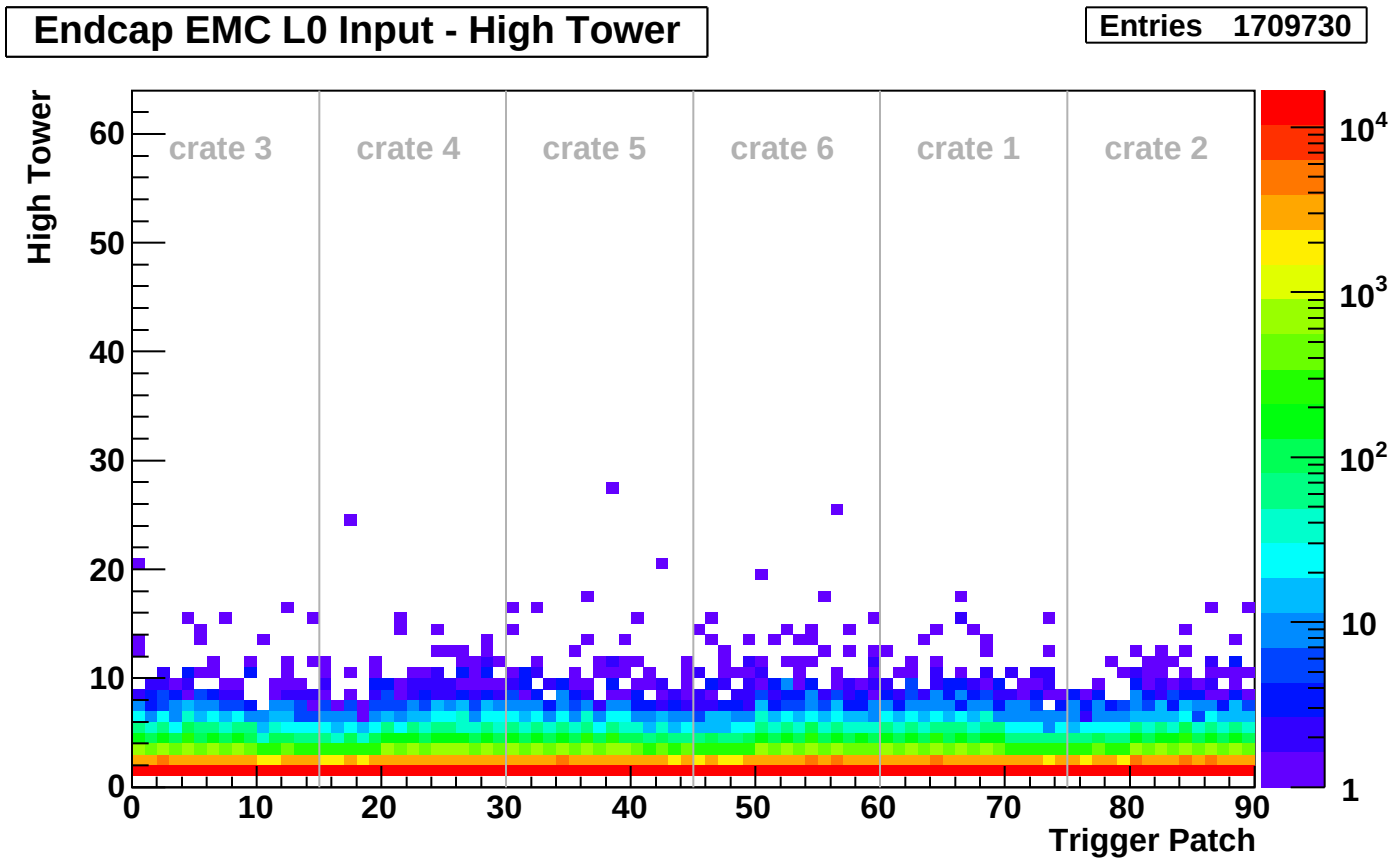
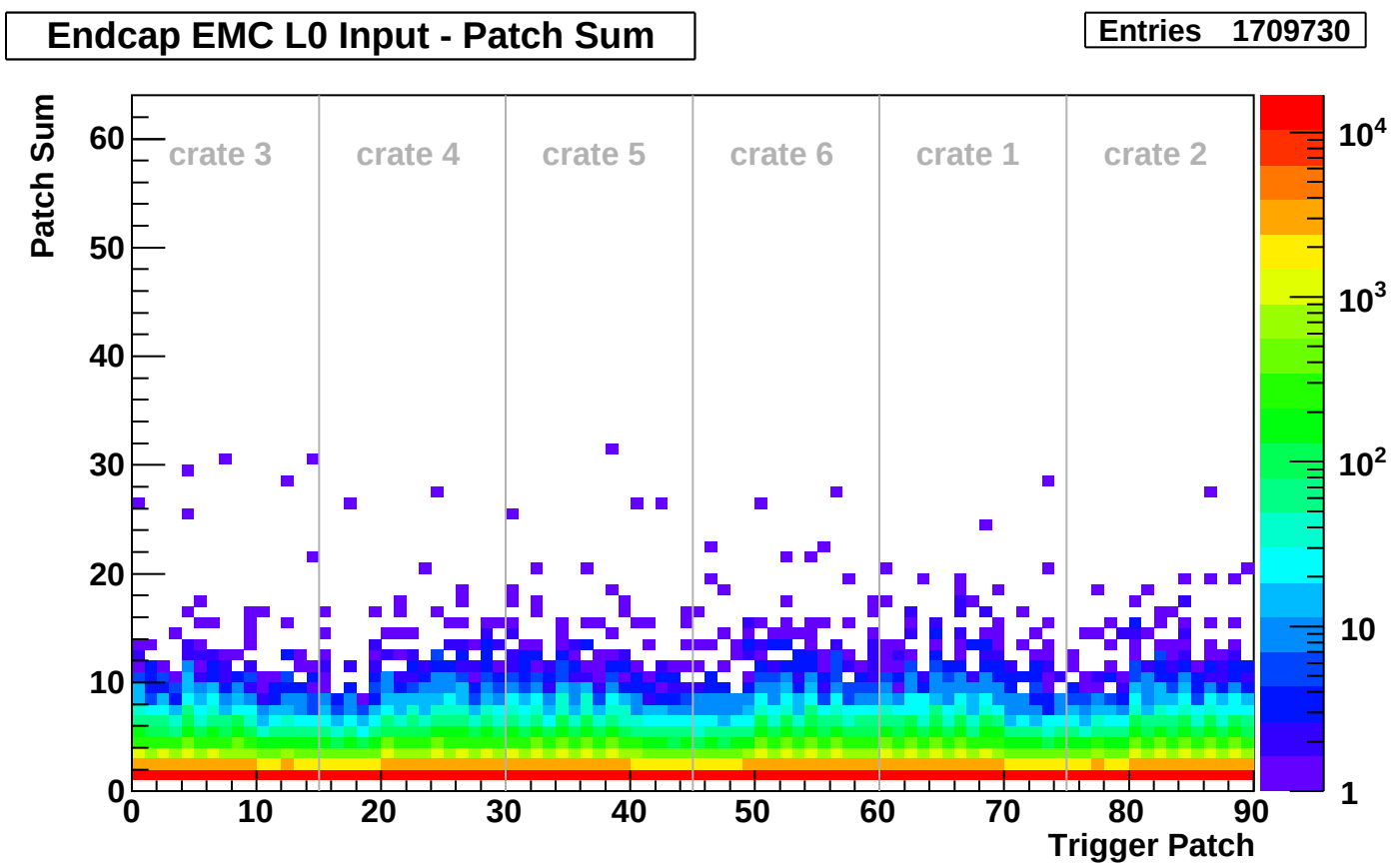
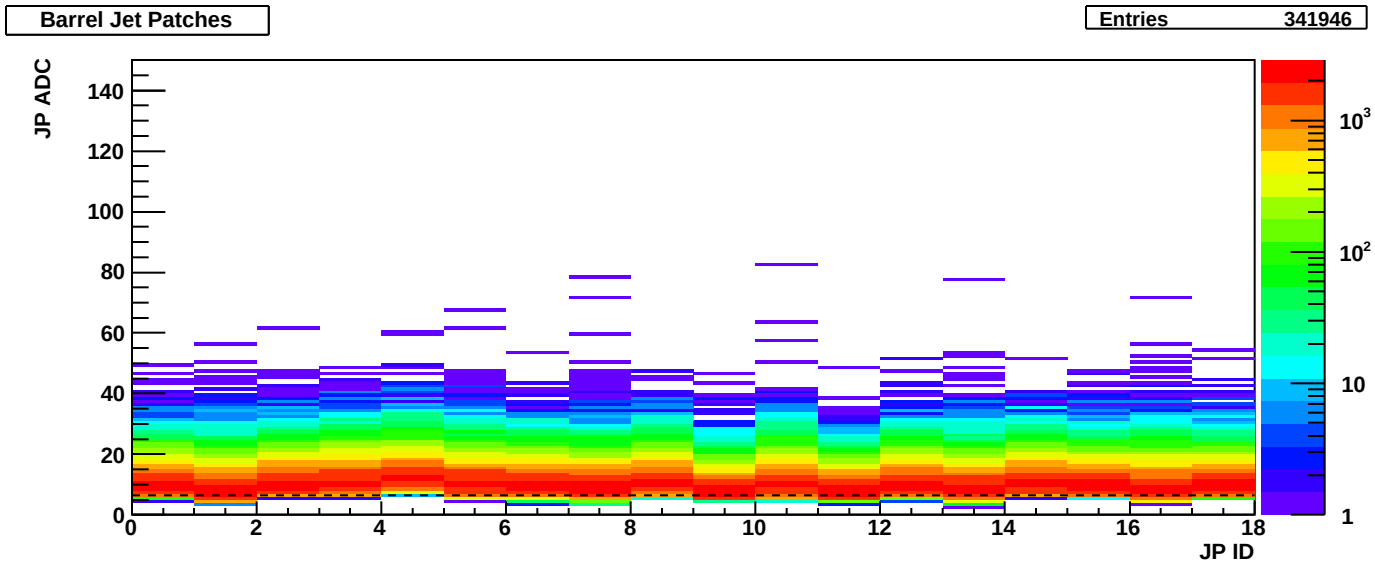
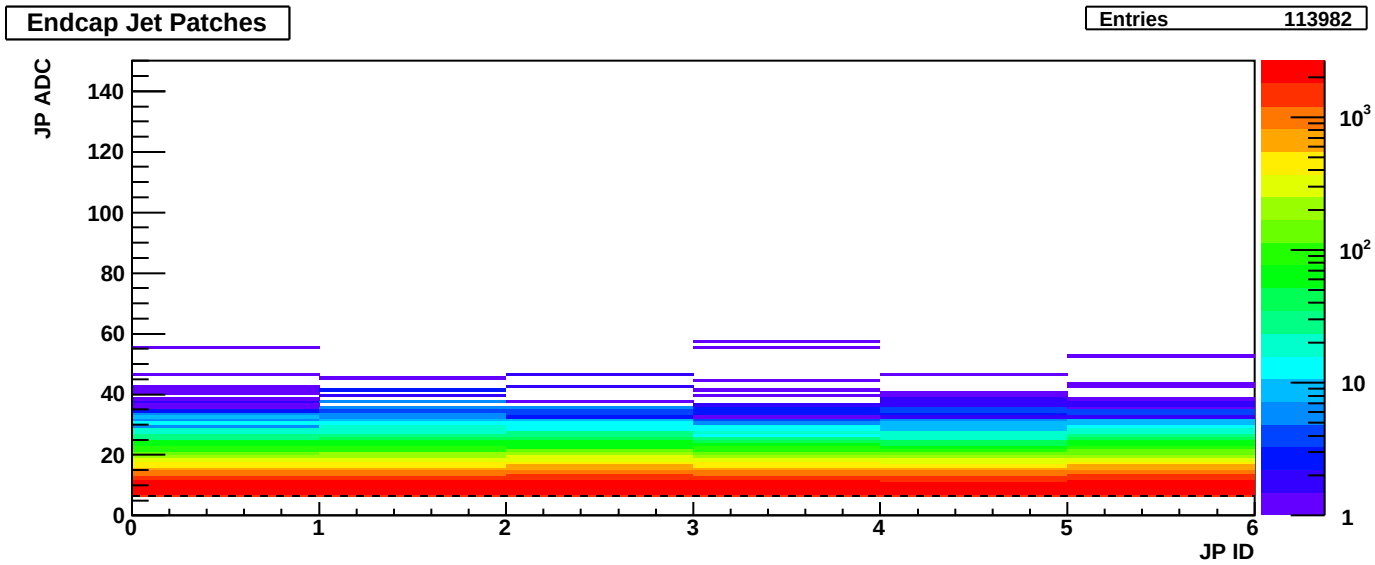

Barrel EMC L0 Input - High Tower
Entries 5699100
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

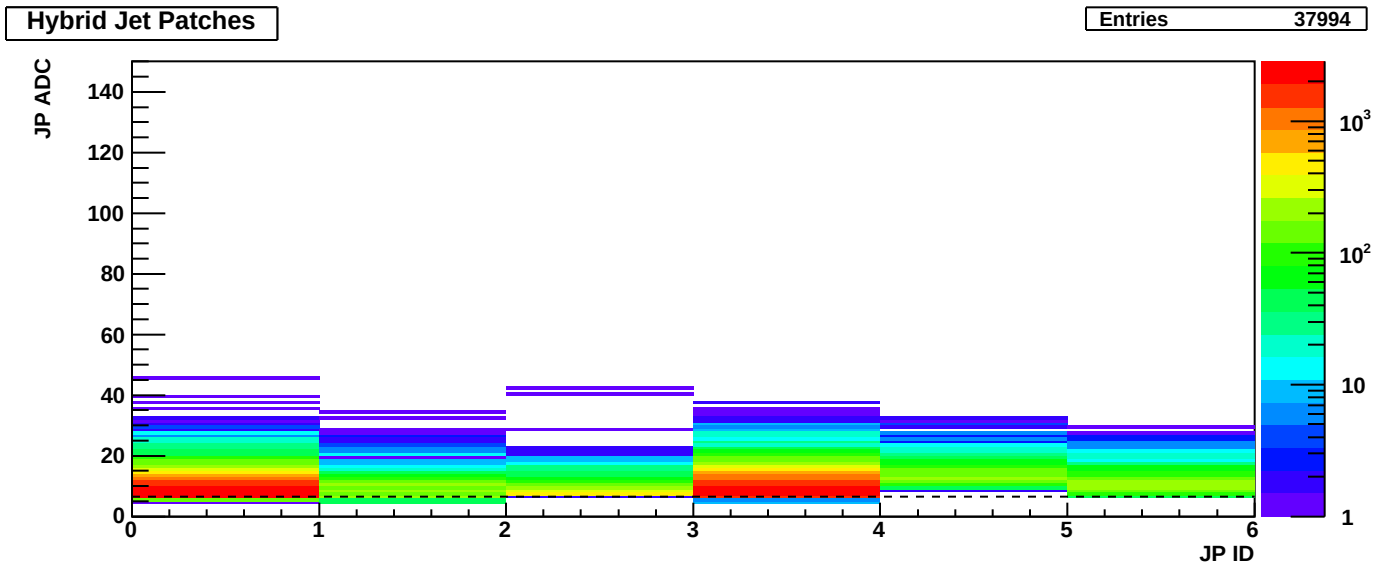

Barrel EMC L0 Input - Patch Sum
Entries 5699100
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

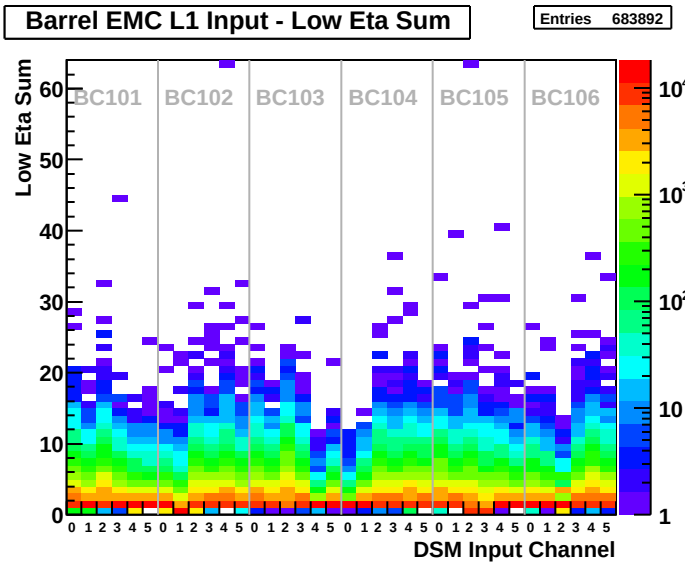

Endcap EMC L0 Input - High Tower
Entries 1709730
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

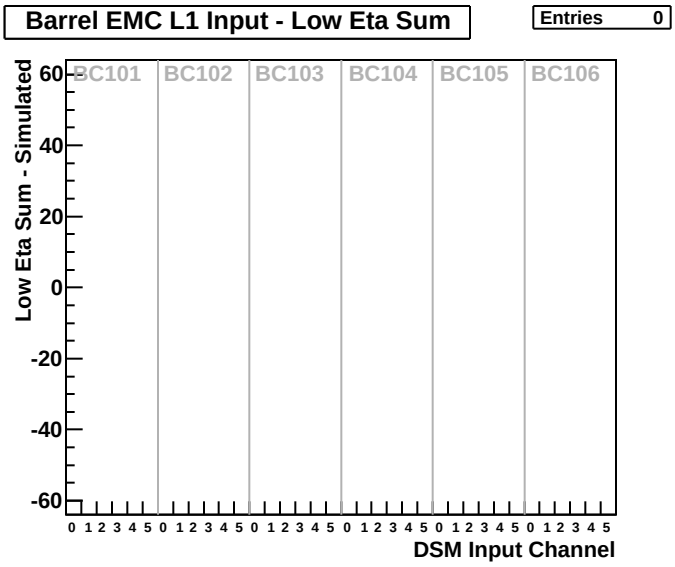

Endcap EMC L0 Input - Patch Sum
Entries 1709730
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

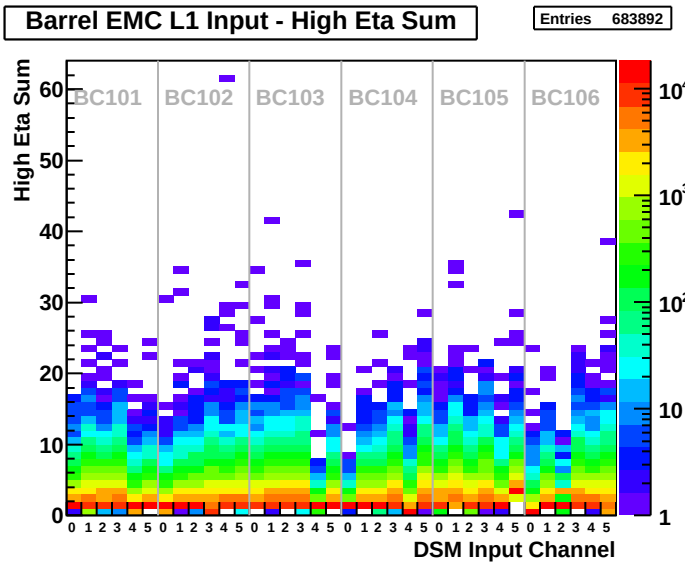

Barrel Jet Patches
Entries 341946
JP ADC
JP ID

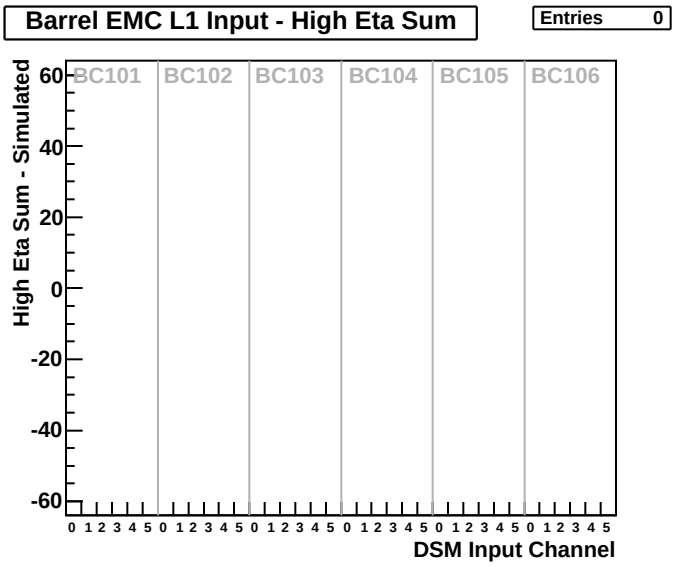

Endcap Jet Patches
Entries 113982
JP ADC
JP ID

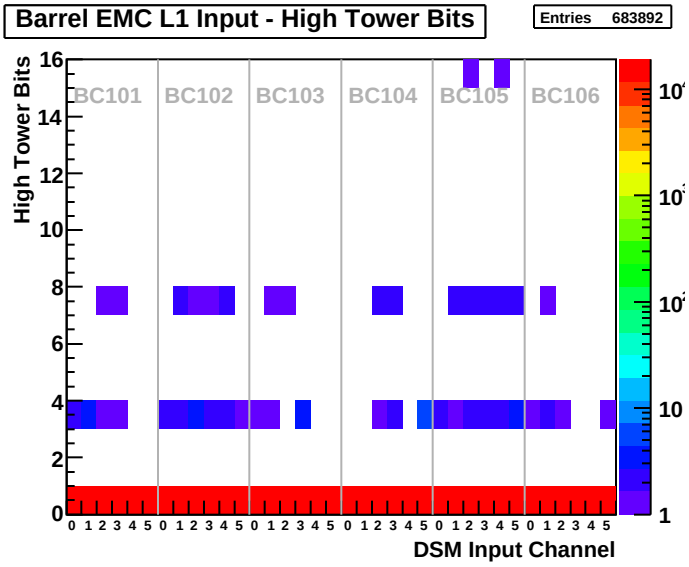

Hybrid Jet Patches
Entries 37994
JP ADC
JP ID

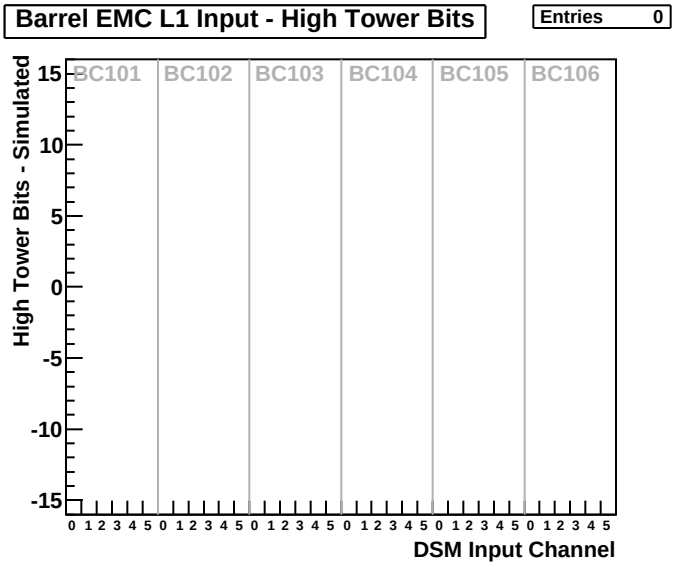

Barrel EMC L1 Input - Low Eta Sum
Entries 683892
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

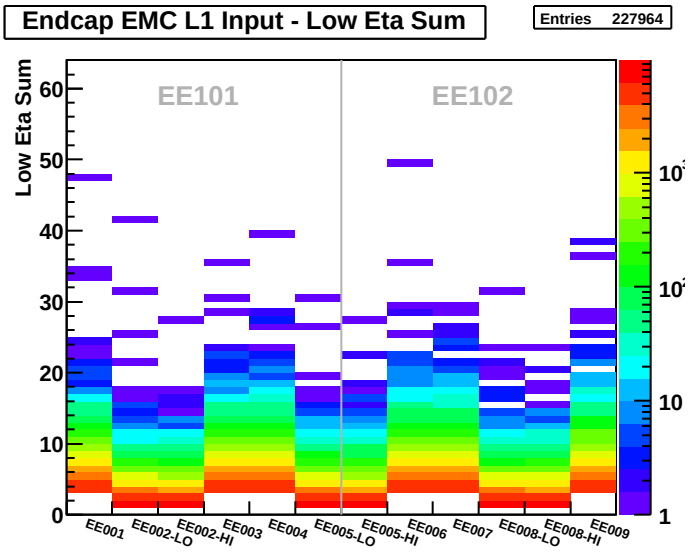

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

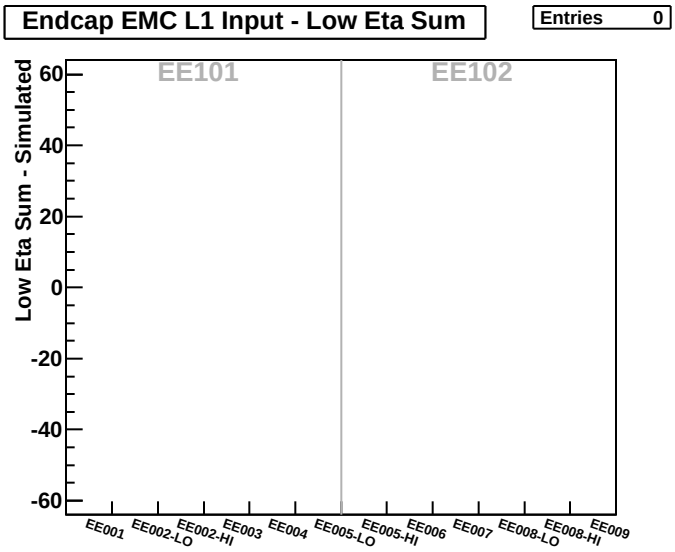

Barrel EMC L1 Input - High Eta Sum
Entries 683892
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

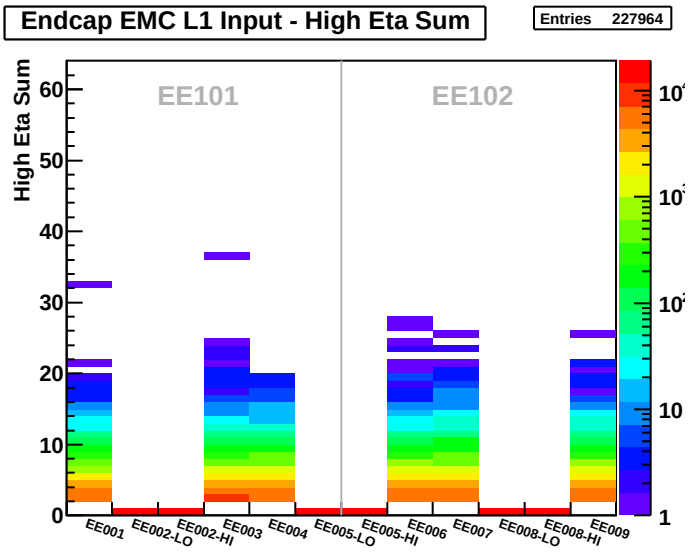

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

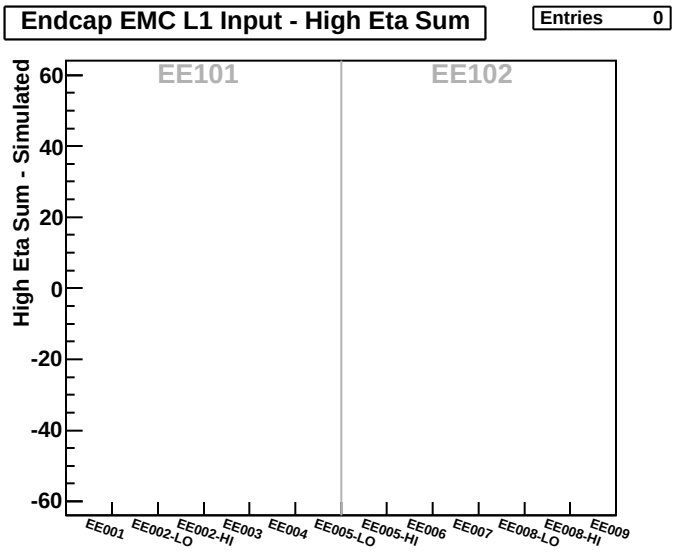

Barrel EMC L1 Input - High Tower Bits
Entries 683892
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

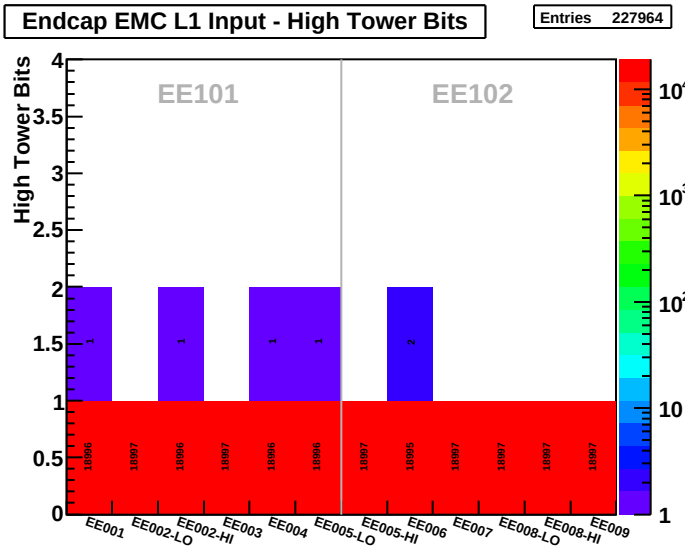

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

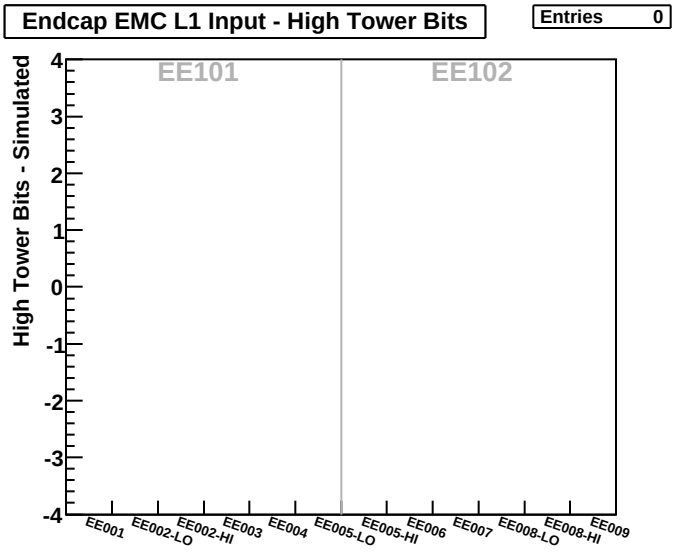

Endcap EMC L1 Input - Low Eta Sum
Entries 227964
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

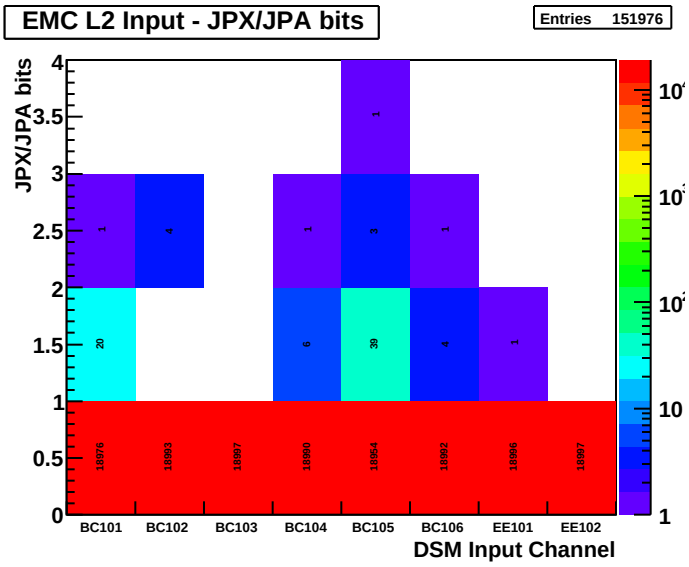

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

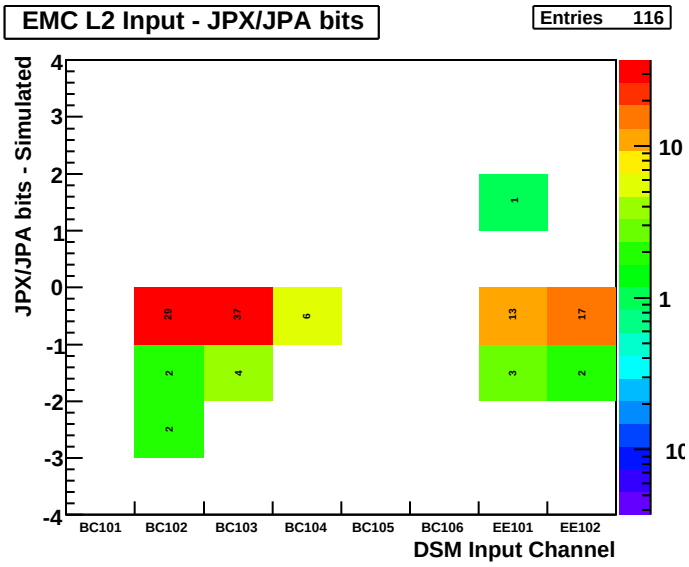

Endcap EMC L1 Input - High Eta Sum
Entries 227964
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

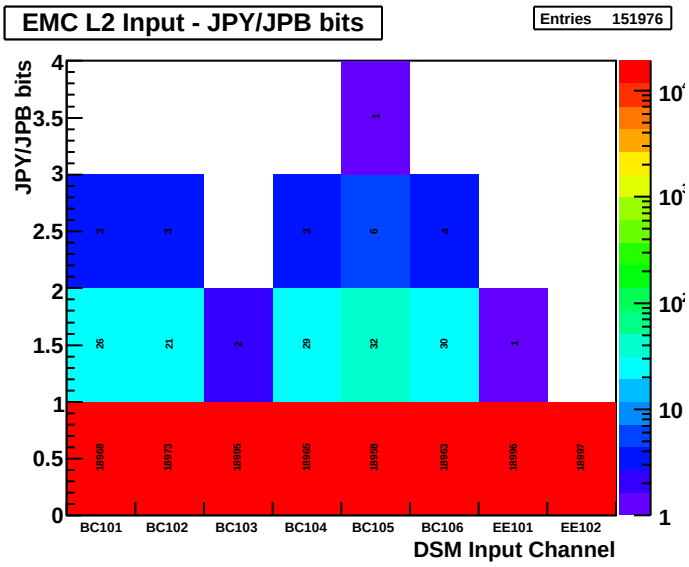

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

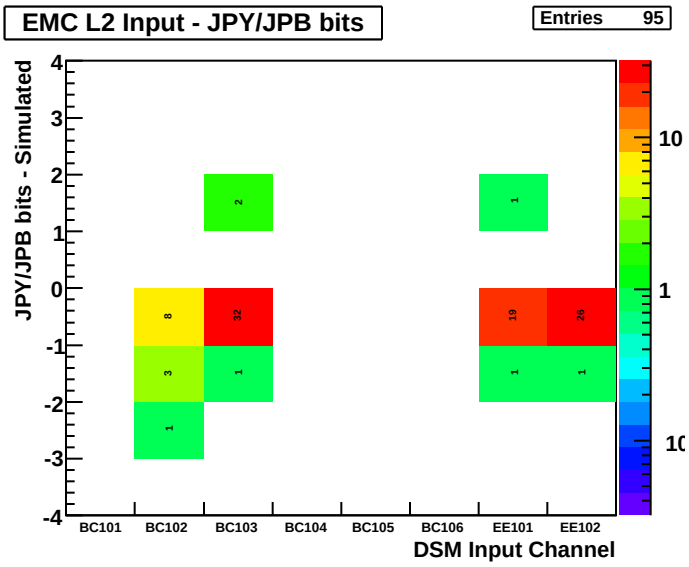

Endcap EMC L1 Input - High Tower Bits
Entries 227964
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

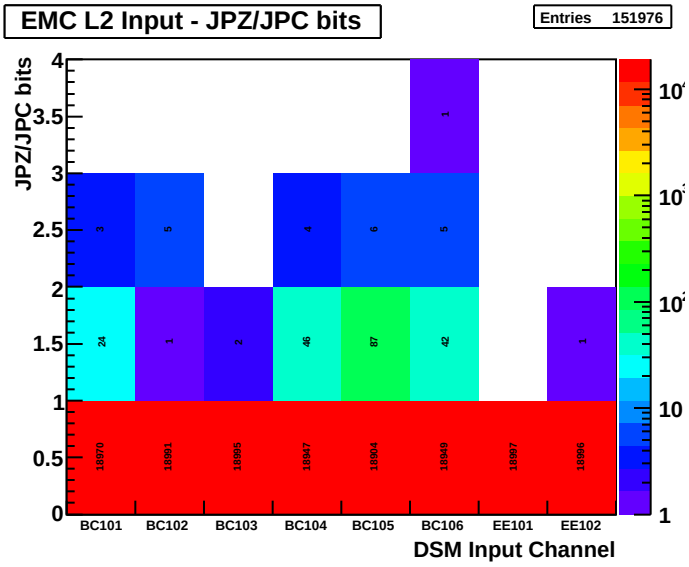

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

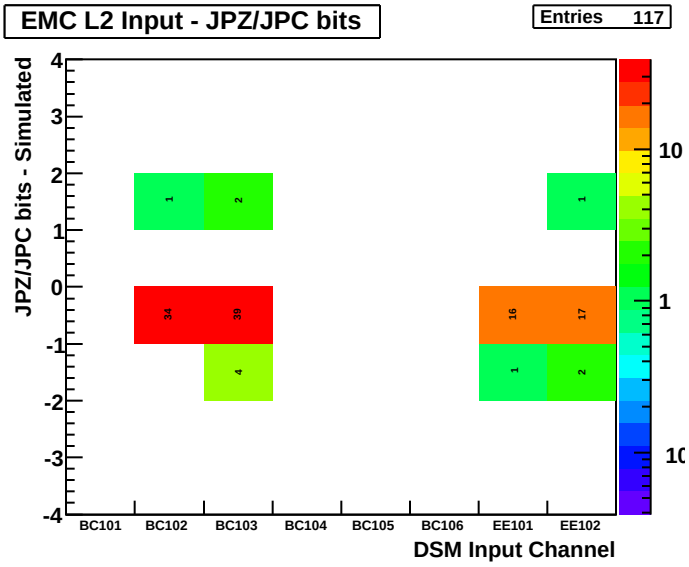

EMC L2 Input - JPX/JPA bits
Entries 151976
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

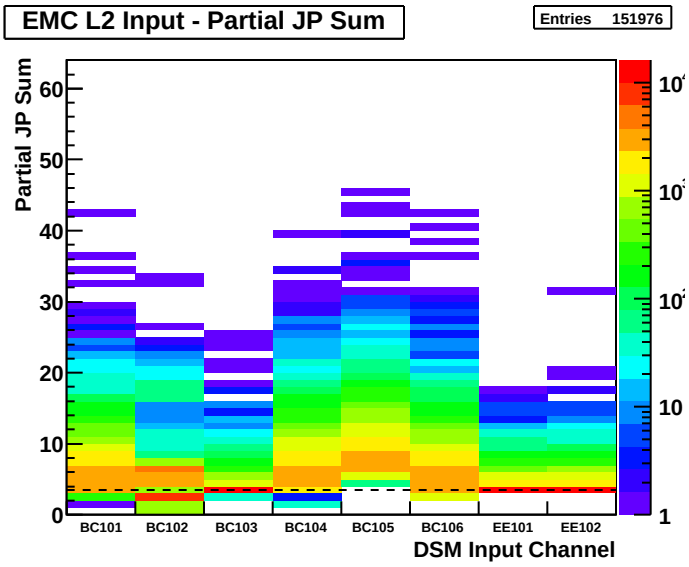

EMC L2 Input - JPX/JPA bits
Entries 116
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

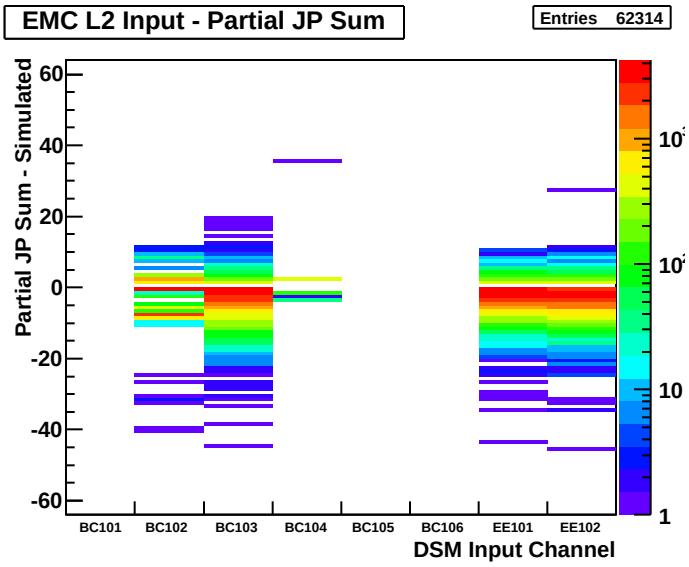

EMC L2 Input - JPY/JPB bits
Entries 151976
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

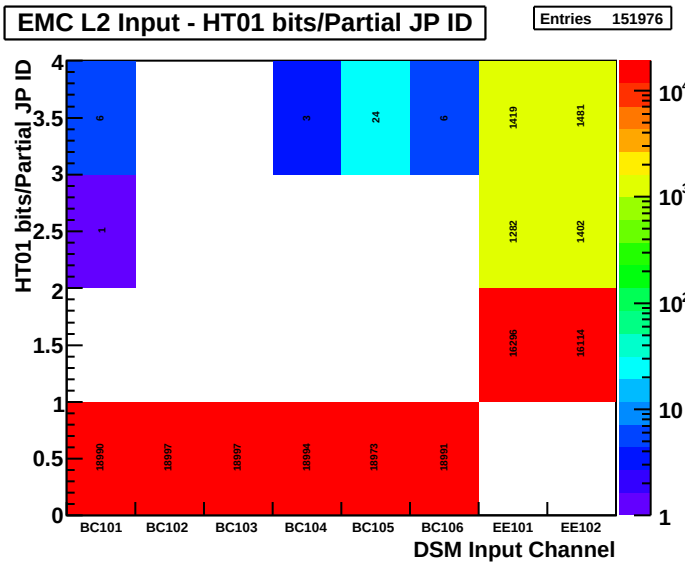

EMC L2 Input - JPY/JPB bits
Entries 95
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

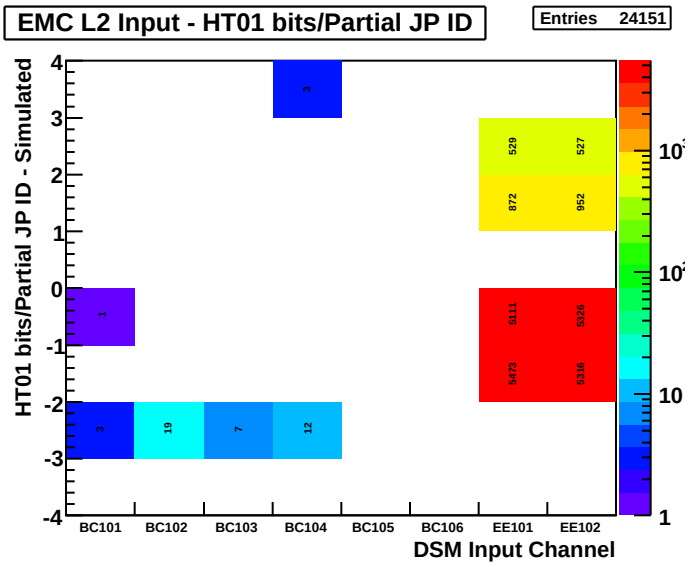

EMC L2 Input - JPZ/JPC bits
Entries 151976
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

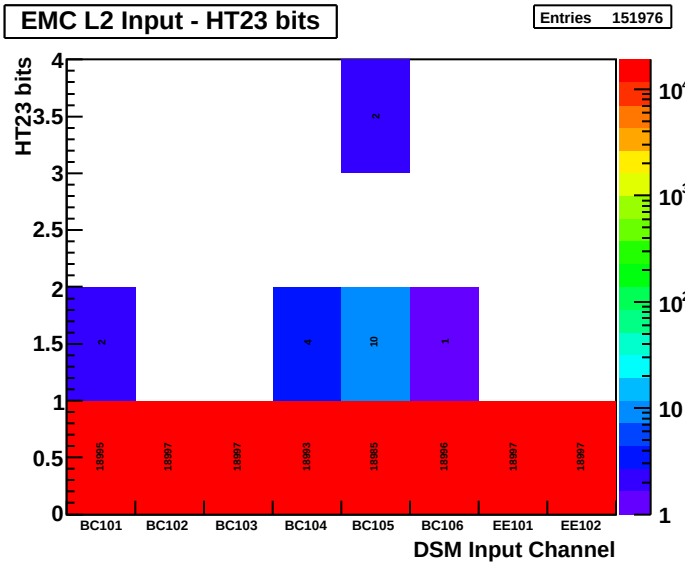

EMC L2 Input - JPZ/JPC bits
Entries 117
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

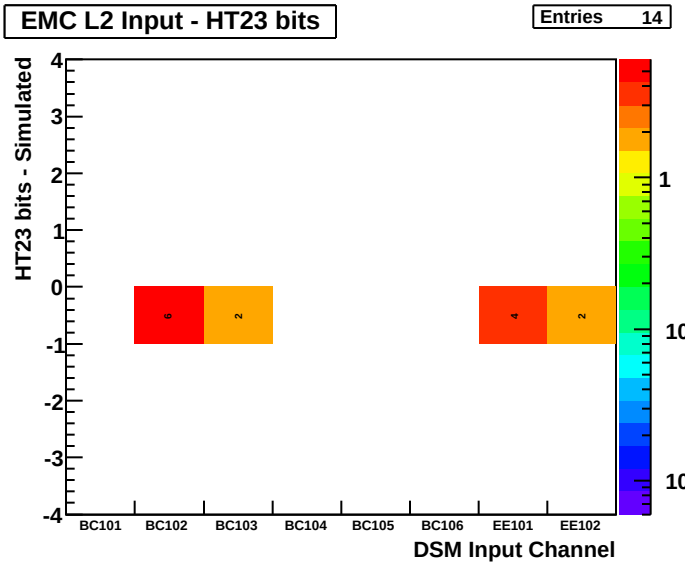

EMC L2 Input - Partial JP Sum
Entries 151976
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

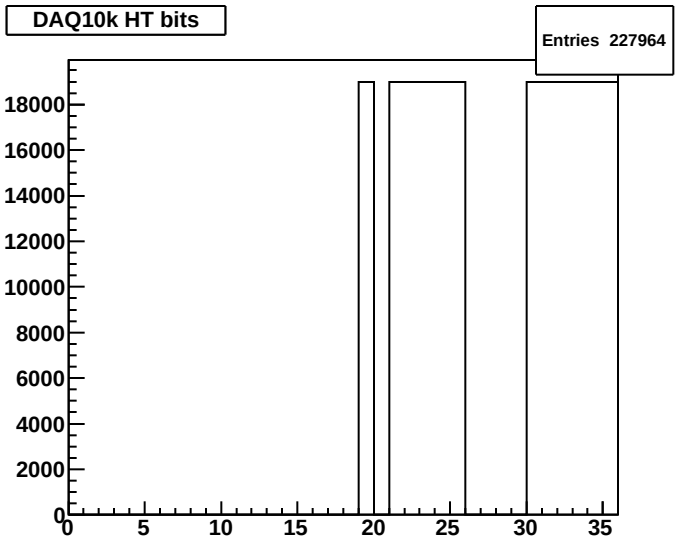

EMC L2 Input - Partial JP Sum
Entries 62314
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

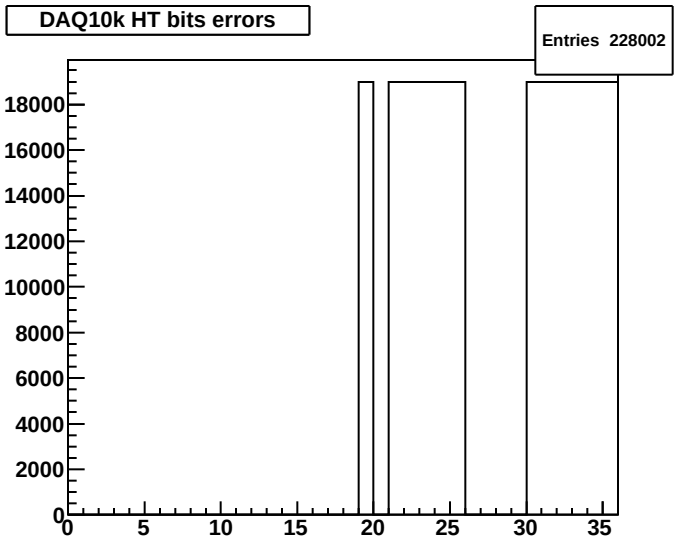

EMC L2 Input - HT01 bits/Partial JP ID
Entries 151976
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

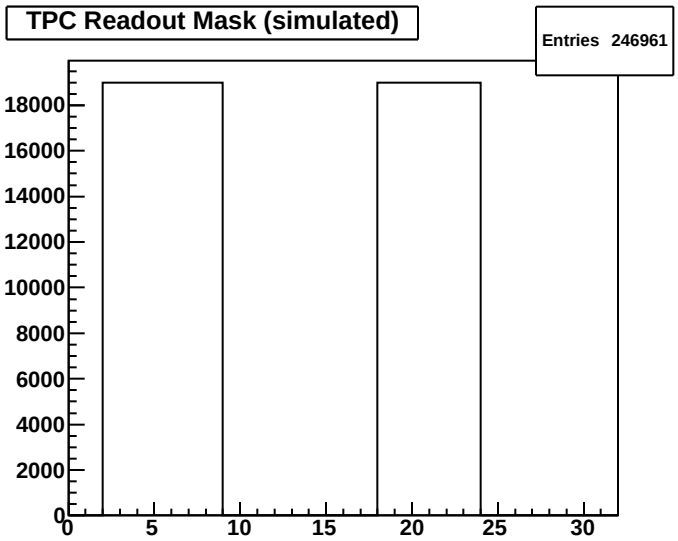

EMC L2 Input - HT01 bits/Partial JP ID
Entries 24151
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

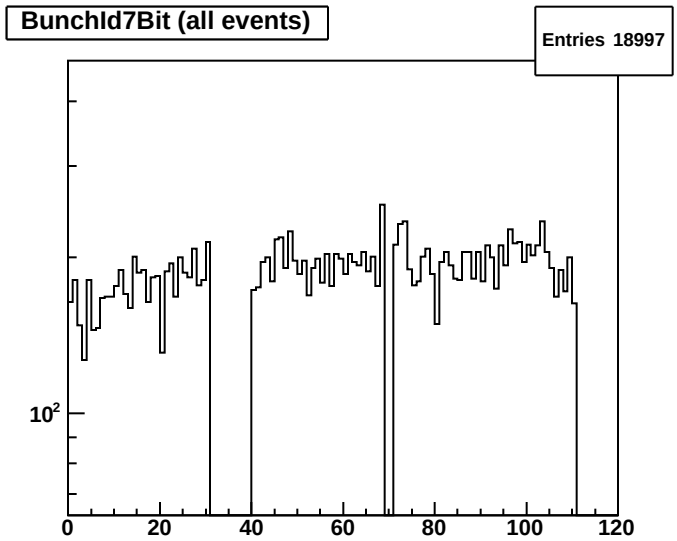

EMC L2 Input - HT23 bits
Entries 151976
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

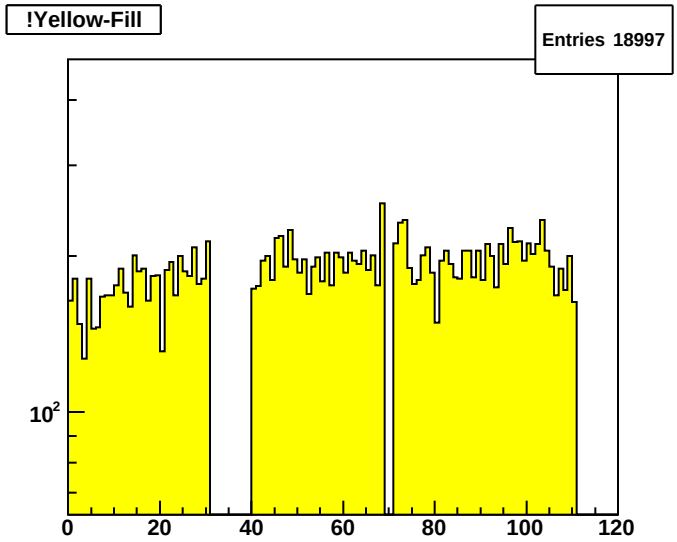

EMC L2 Input - HT23 bits
Entries 14
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

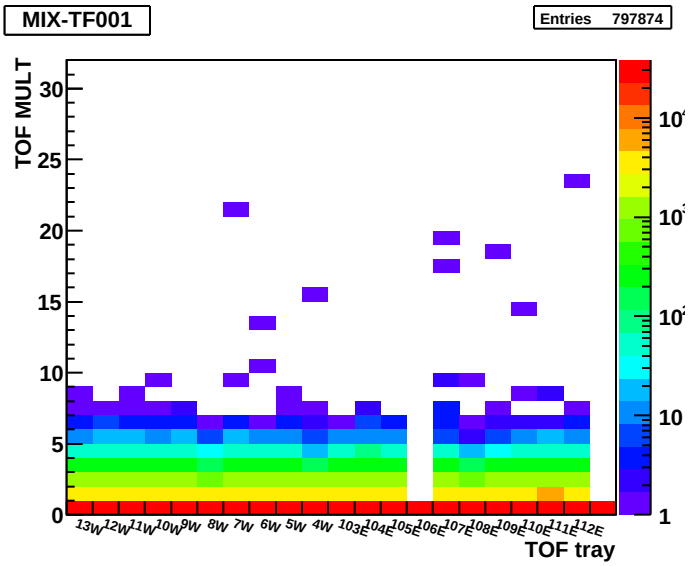

DAQ10k HT bits
Entries 227964
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

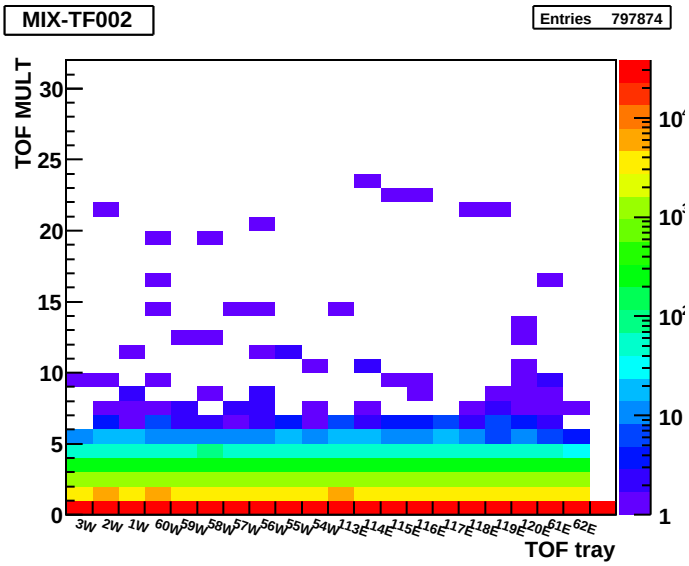

DAQ10k HT bits errors
Entries 228002
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

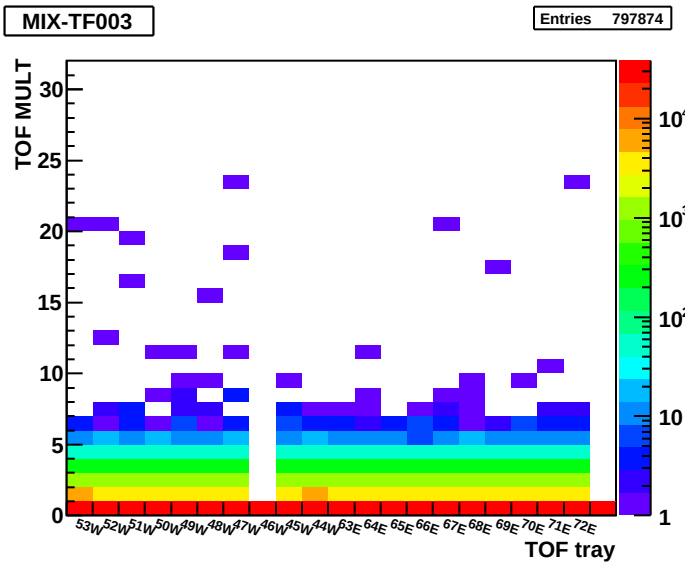

TPC Readout Mask (simulated)
Entries 246961
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

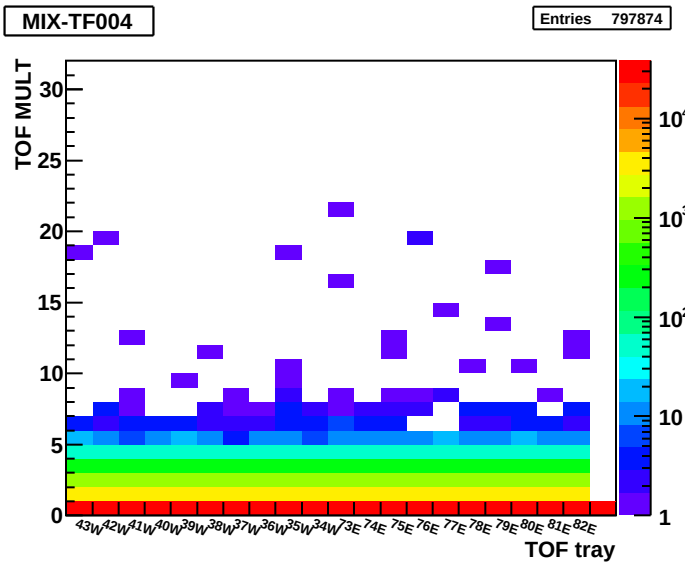

BunchId7Bit (all events)
Entries 18997
10^2
0 20 40 60 80 100 120

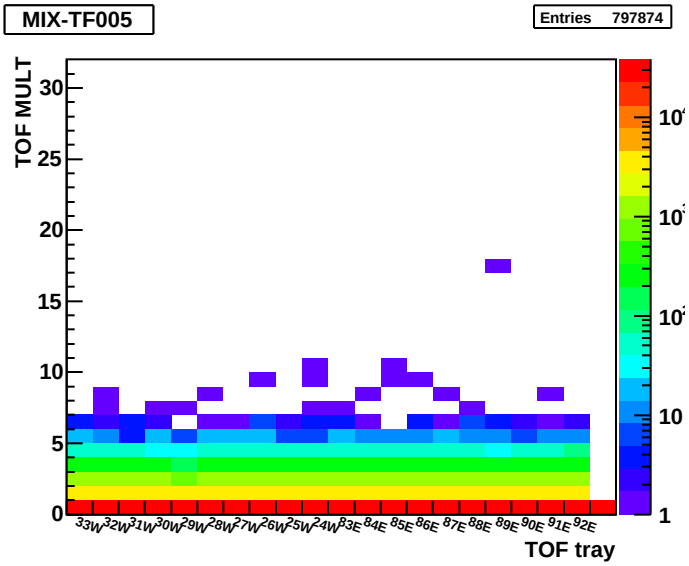

!Yellow-Fill
Entries 18997
10^2
0 20 40 60 80 100 120

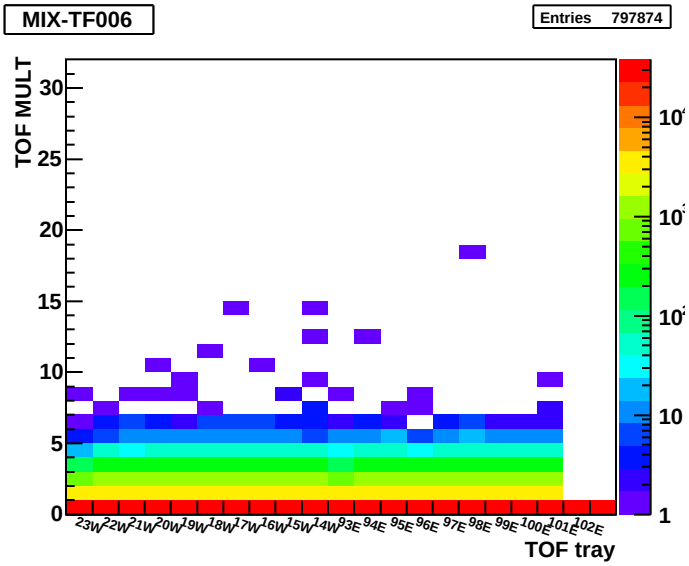

MIX-TF001
Entries 797874
TOF MULT
TOF tray

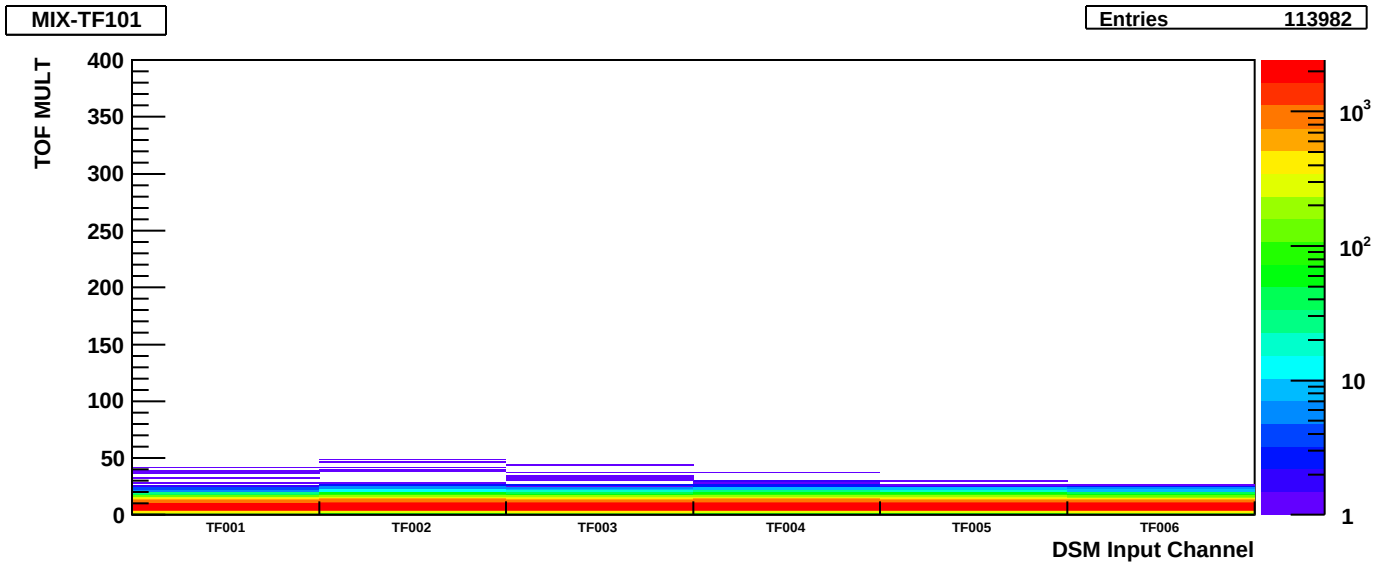

MIX-TF002
Entries 797874
TOF MULT
TOF tray

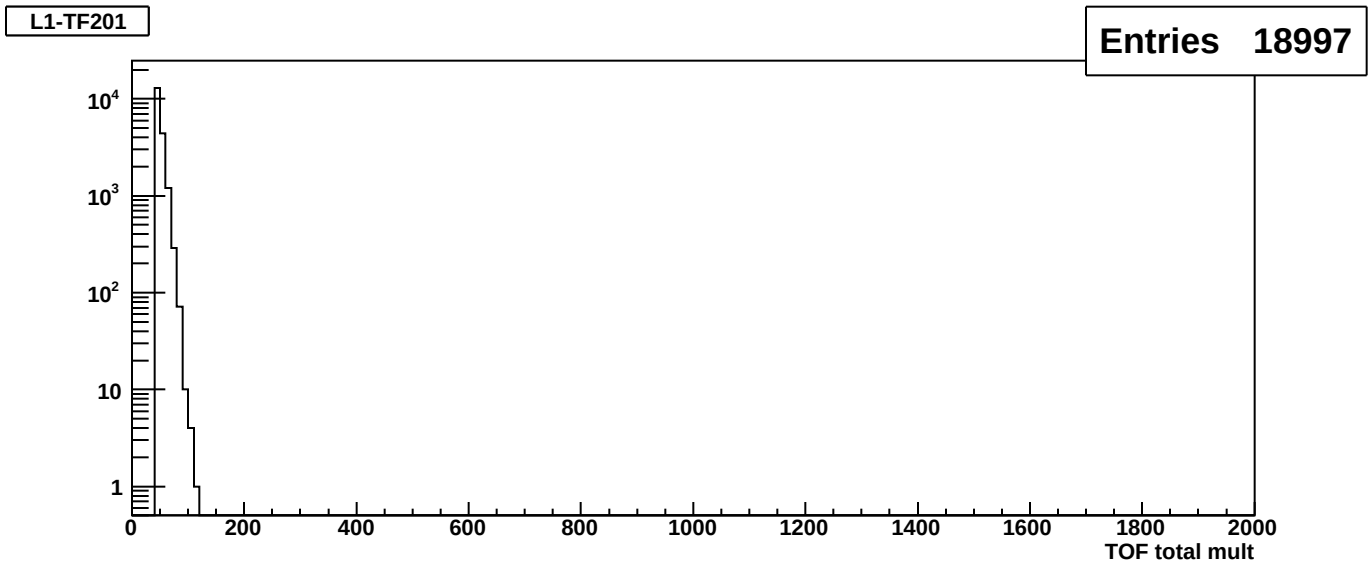

MIX-TF003
Entries 797874
TOF MULT
TOF tray

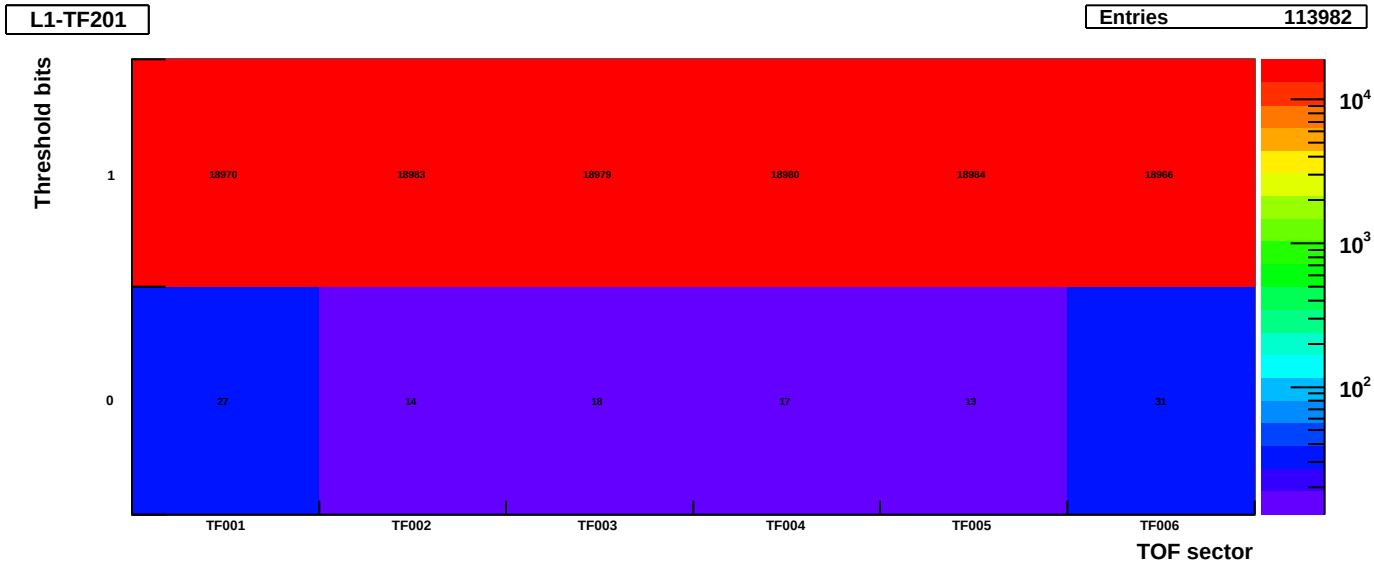

MIX-TF004
Entries 797874
TOF MULT
TOF tray

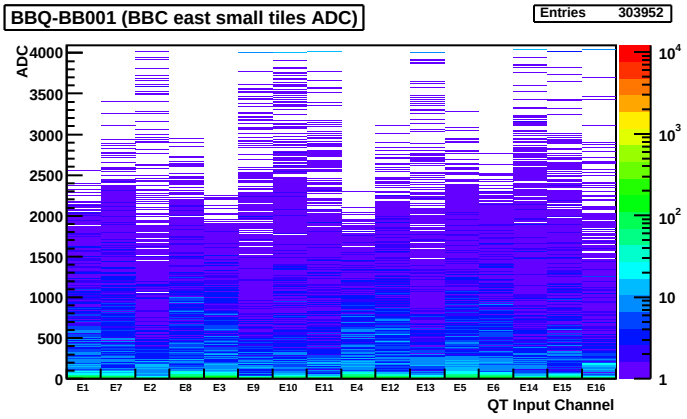

MIX-TF005
Entries 797874
TOF MULT
TOF tray

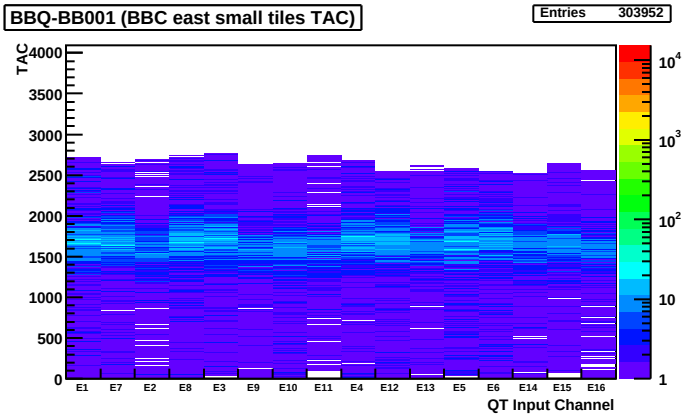

MIX-TF006
Entries 797874
TOF MULT
TOF tray

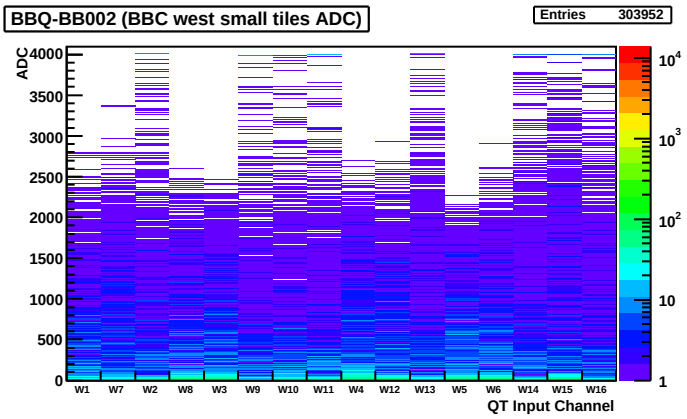

MIX-TF101
Entries 113982
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

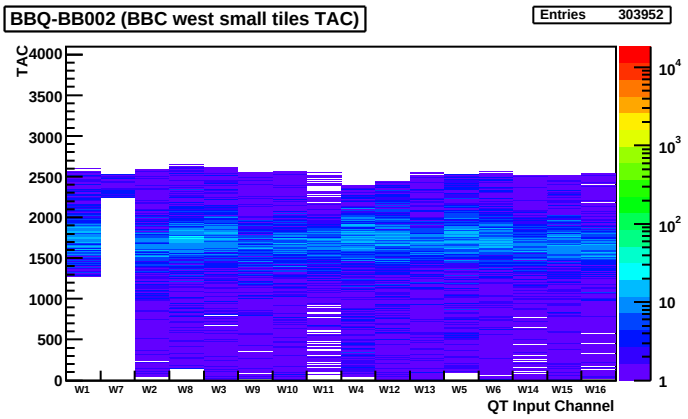

L1-TF201
Entries 18997
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

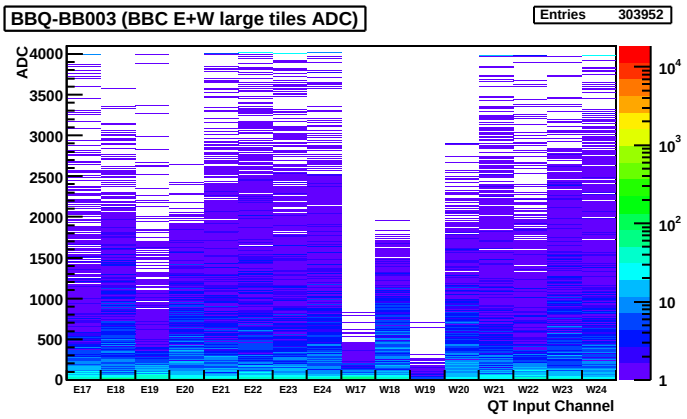

L1-TF201
Entries 113982
Threshold bits
1
0
18970
18983
18979
18980
18984
18966
27
14
18
17
13
31
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3
10^2

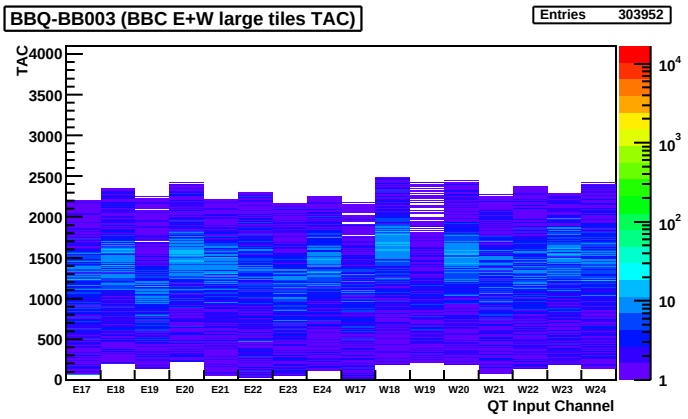

BBQ-BB001 (BBC east small tiles ADC)
Entries 303952
ADC
QT Input Channel

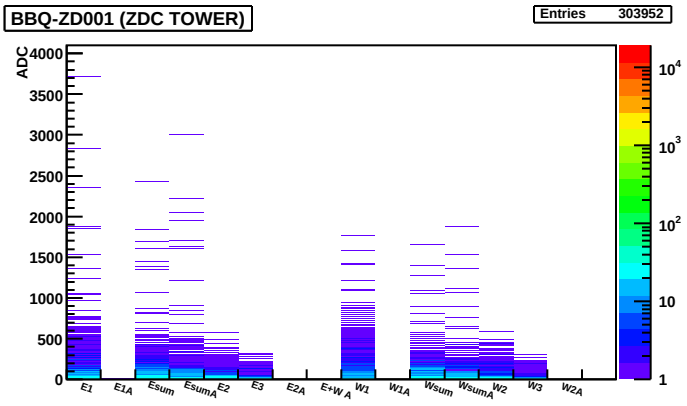

BBQ-BB001 (BBC east small tiles TAC)
Entries 303952
TAC
QT Input Channel

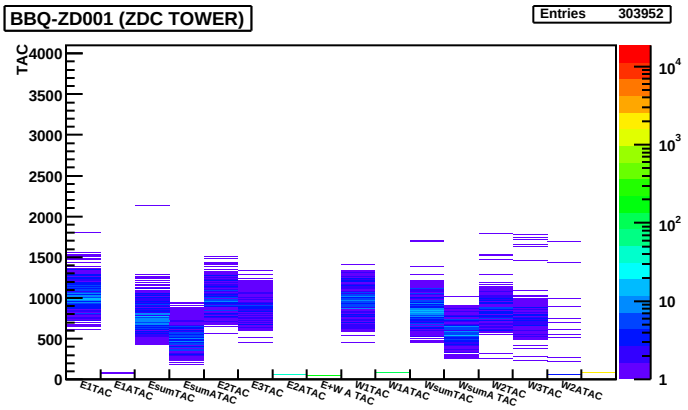

BBQ-BB002 (BBC west small tiles ADC)
Entries 303952
ADC
QT Input Channel

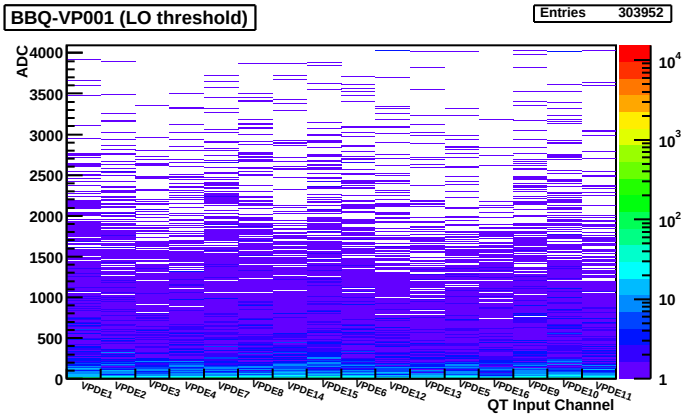

BBQ-BB002 (BBC west small tiles TAC)
Entries 303952
TAC
QT Input Channel

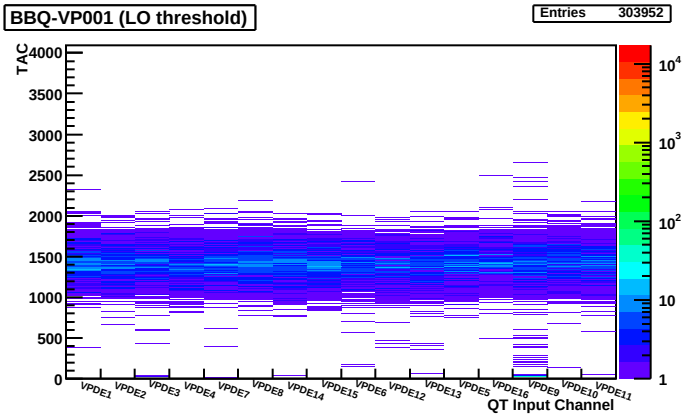

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 303952
ADC
QT Input Channel

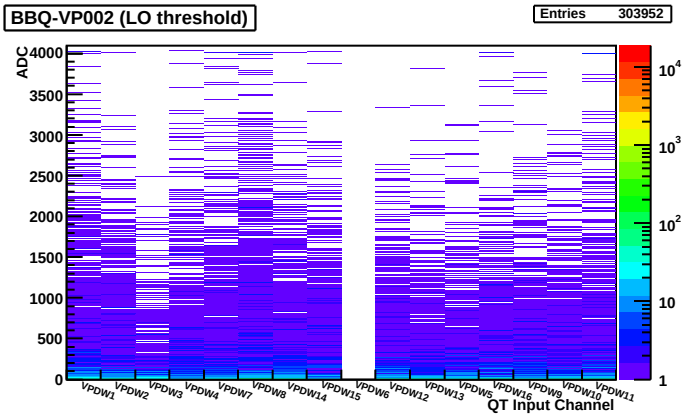

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 303952
TAC
QT Input Channel

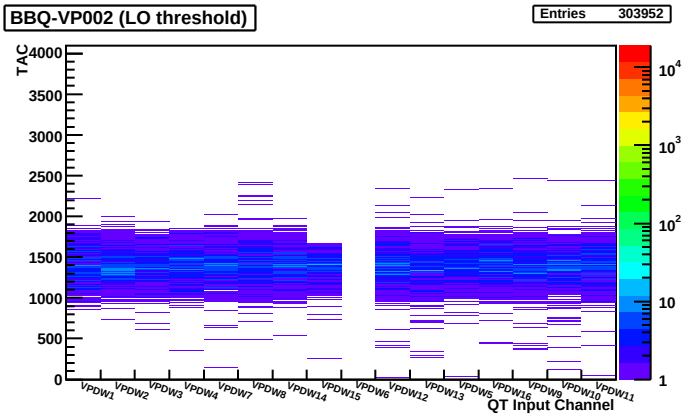

BBQ-ZD001 (ZDC TOWER)
Entries 303952
ADC

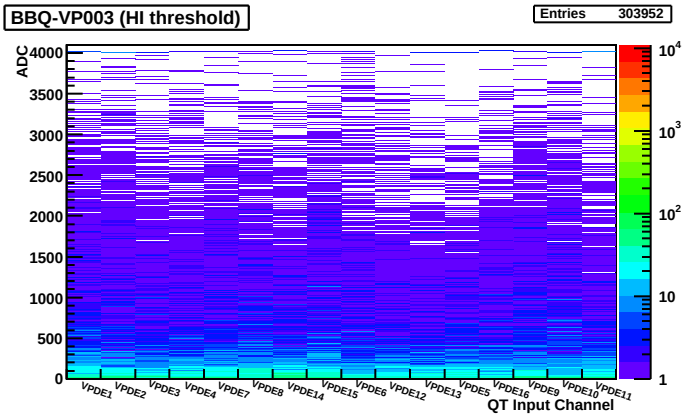

BBQ-ZD001 (ZDC TOWER)
Entries 303952
TAC

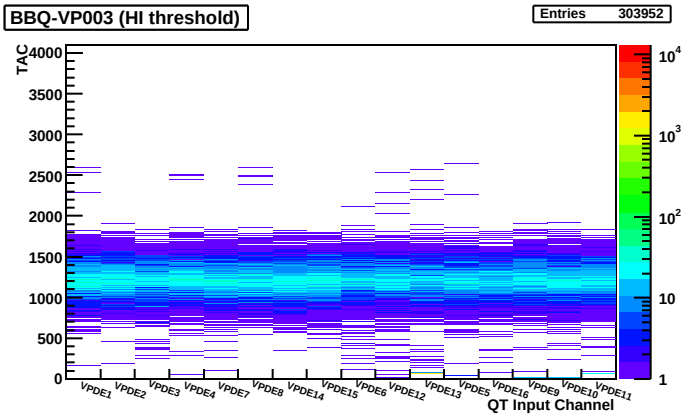

BBQ-VP001 (LO threshold)
Entries 303952
ADC
QT Input Channel

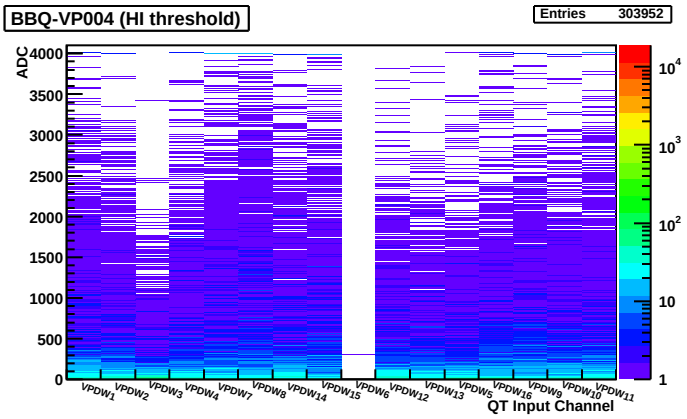

BBQ-VP001 (LO threshold)
Entries 303952
TAC
QT Input Channel

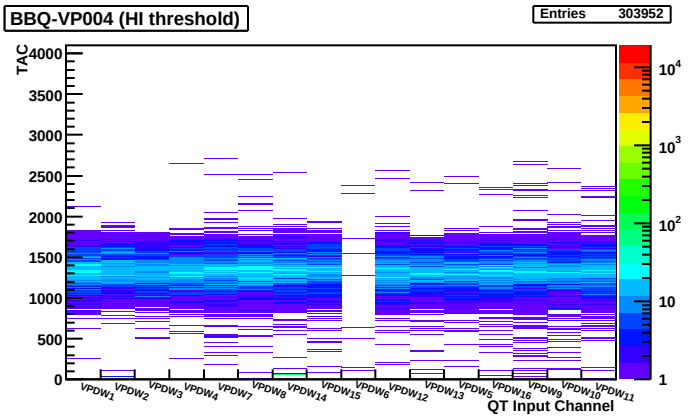

BBQ-VP002 (LO threshold)
Entries 303952
ADC
QT Input Channel

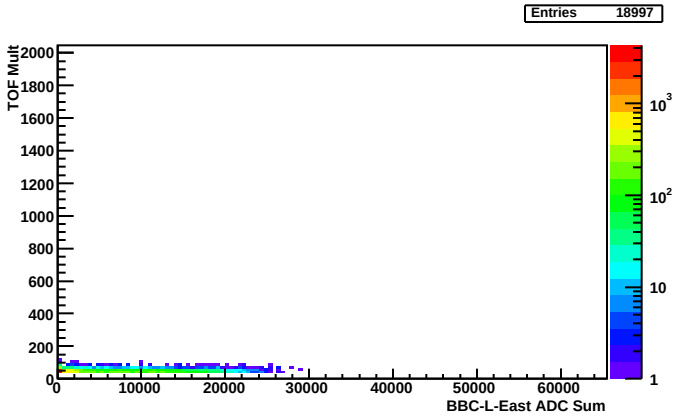

BBQ-VP002 (LO threshold)
Entries 303952
TAC
QT Input Channel

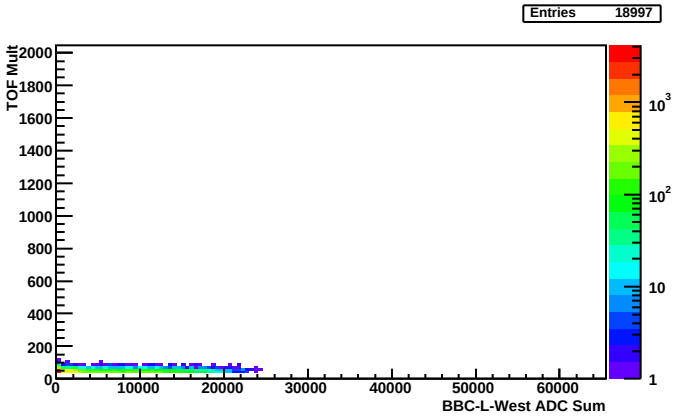

BBQ-VP003 (HI threshold)
Entries 303952
ADC
QT Input Channel

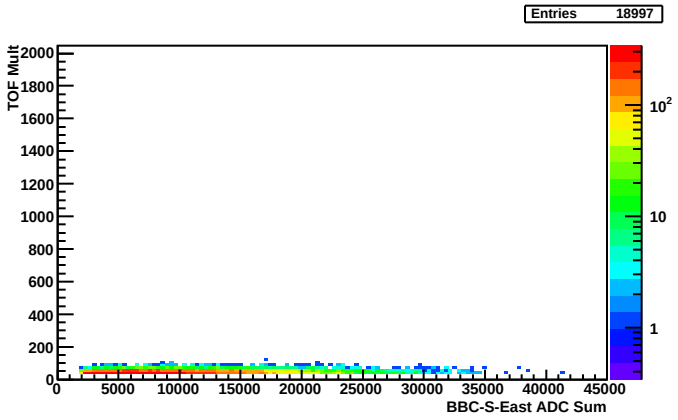

BBQ-VP003 (HI threshold)
Entries 303952
TAC
QT Input Channel

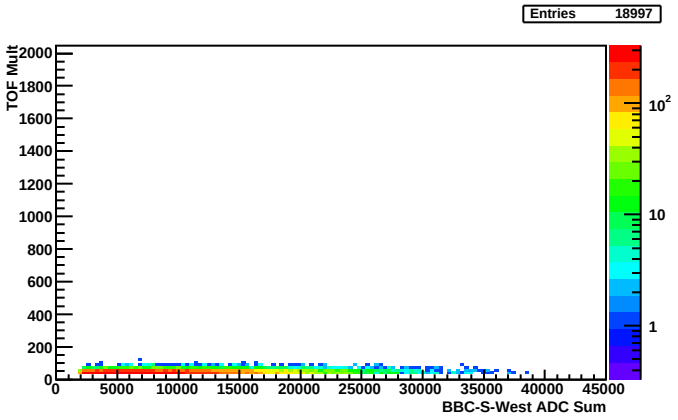

BBQ-VP004 (HI threshold)
Entries 303952
ADC
QT Input Channel

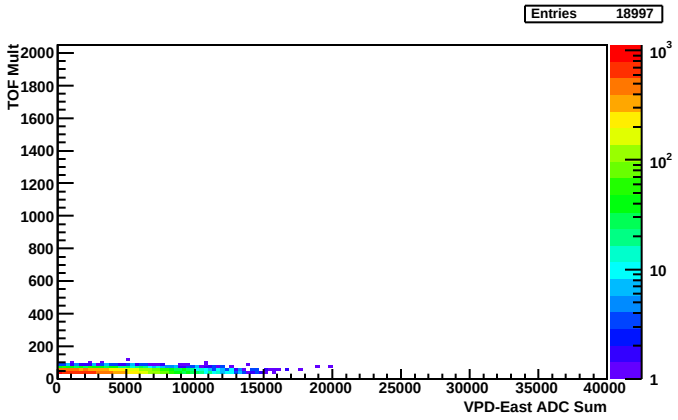

BBQ-VP004 (HI threshold)
Entries 303952
TAC
QT Input Channel

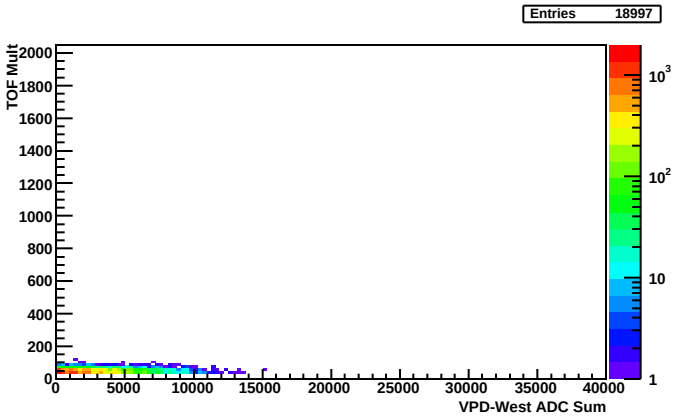

Entries 18997
TOF Mult
BBC-L-East ADC Sum

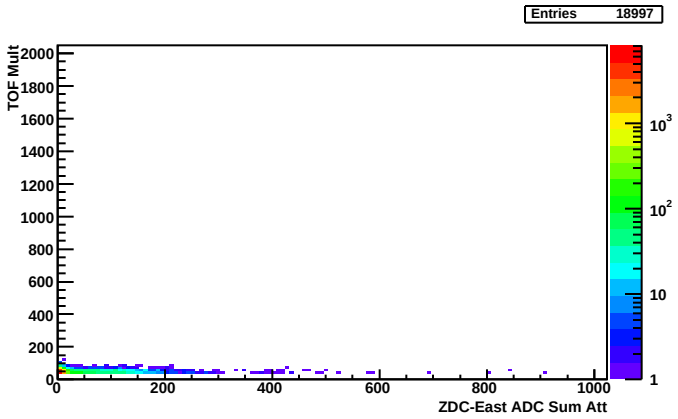

Entries 18997
TOF Mult
BBC-L-West ADC Sum

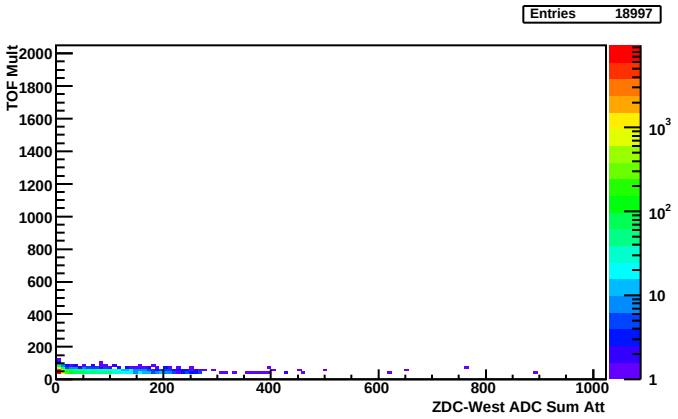

Entries 18997
TOF Mult
BBC-S-East ADC Sum

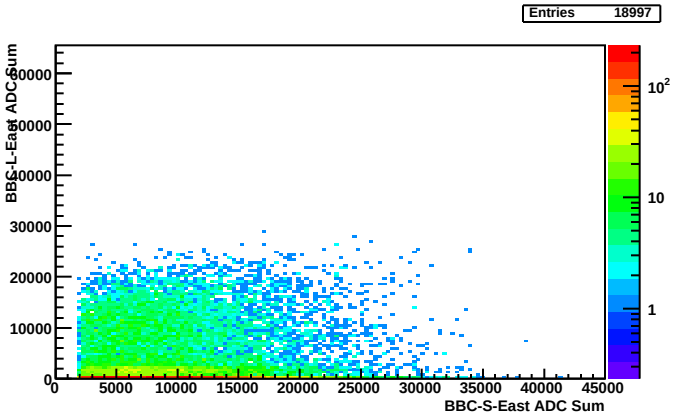

Entries 18997
TOF Mult
BBC-S-West ADC Sum

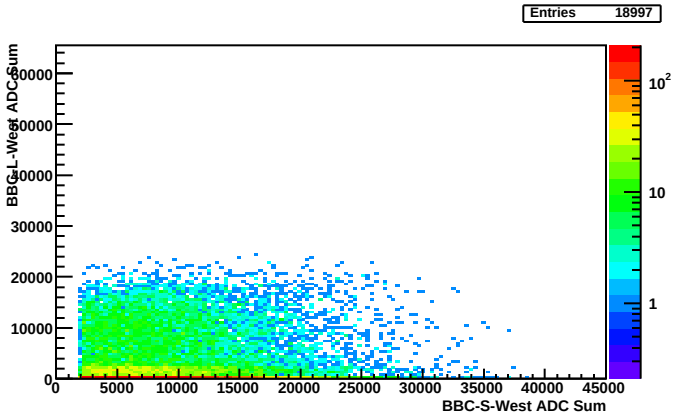

Entries 18997
TOF Mult
VPD-East ADC Sum

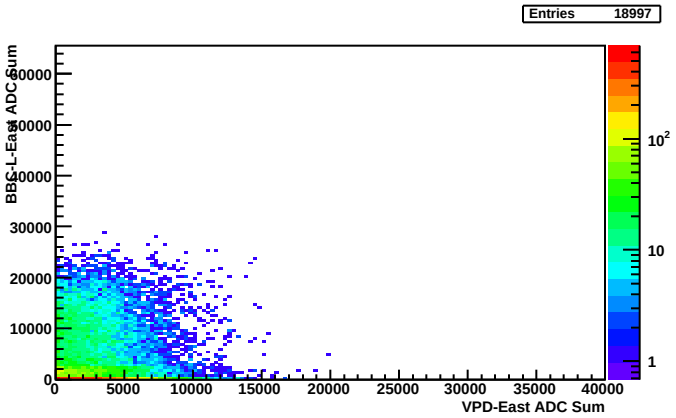

Entries 18997
TOF Mult
VPD-West ADC Sum

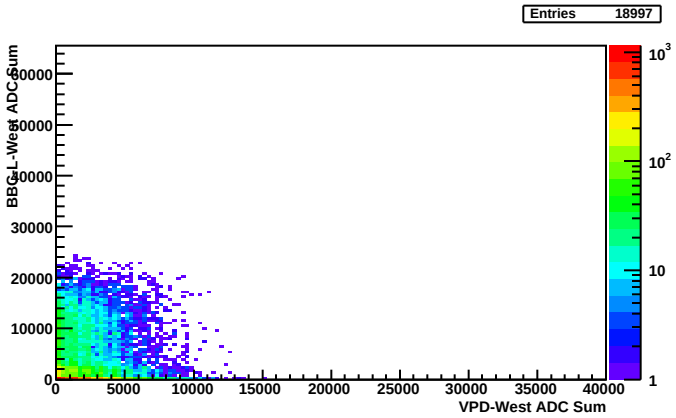

Entries 18997
TOF Mult
ZDC-East ADC Sum Att

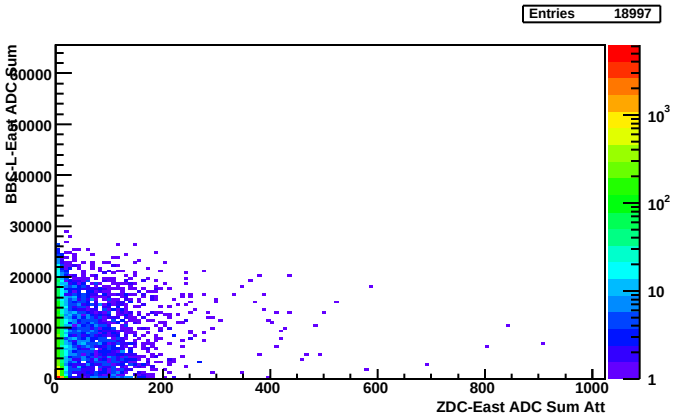

Entries 18997
TOF Mult
ZDC-West ADC Sum Att


Entries 18997
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 18997
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 18997
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 18997
BBC-L-West ADC Sum
VPD-West ADC Sum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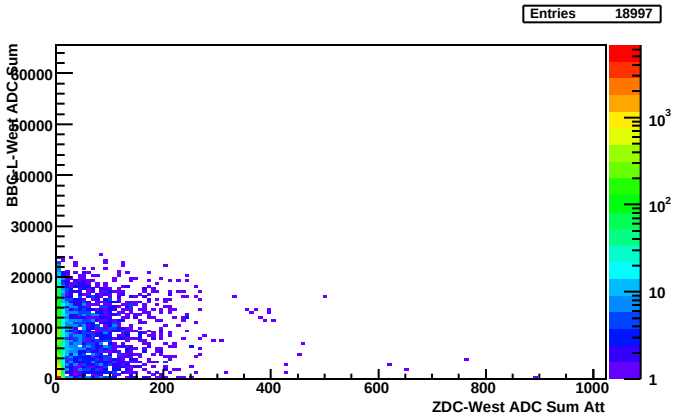
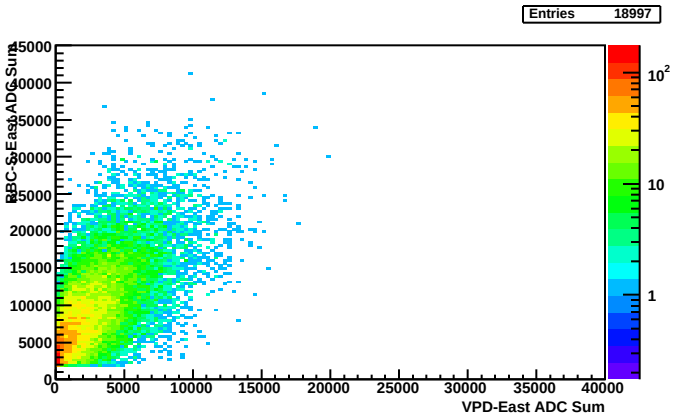
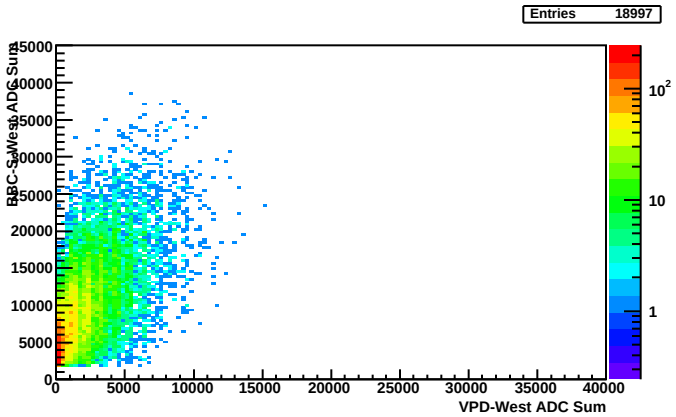
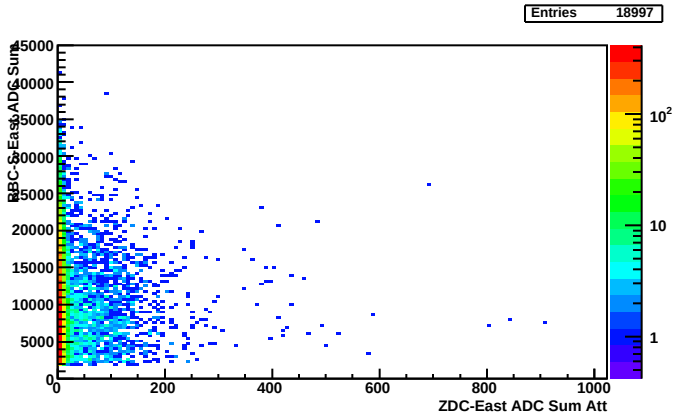
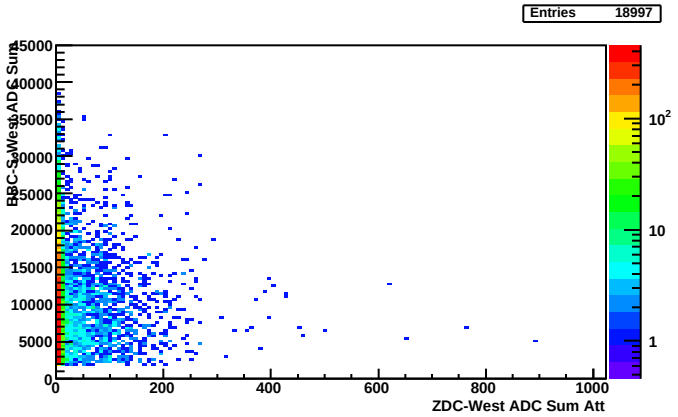
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

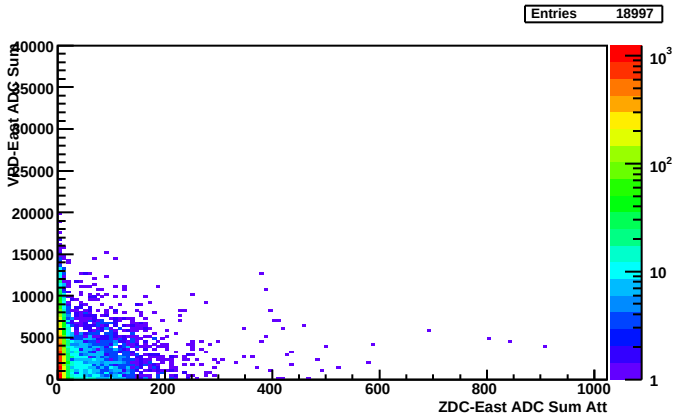

Entries 18997
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

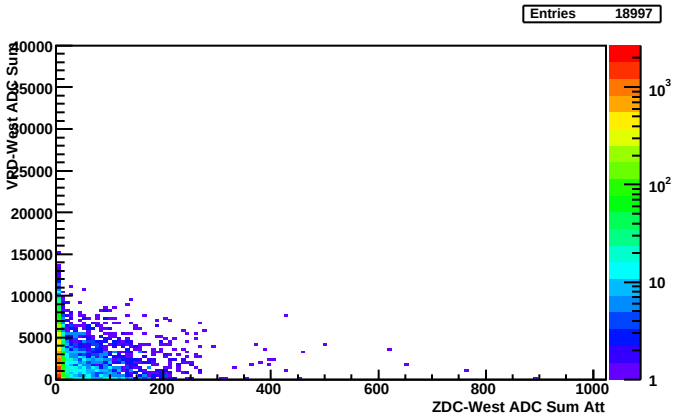

Entries 18997
BBC-S-East ADC Sum
VPD-East ADC Sum

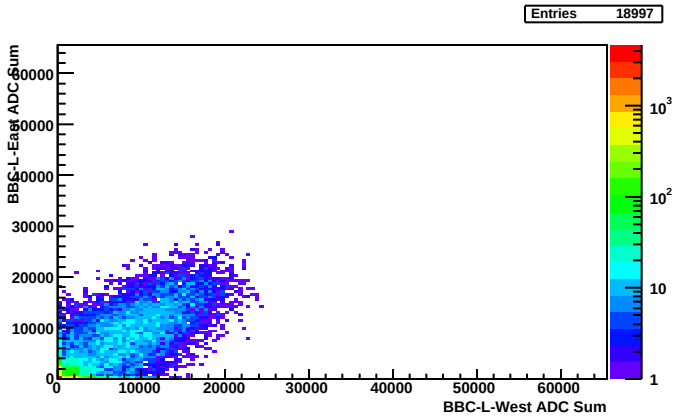

Entries 18997
BBC-S-West ADC Sum
VPD-West ADC Sum

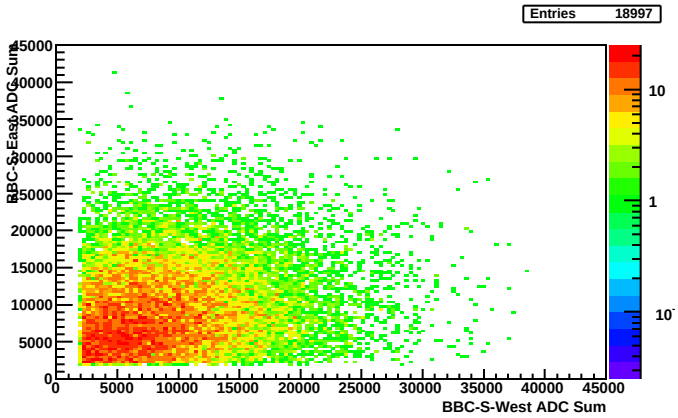

Entries 18997
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

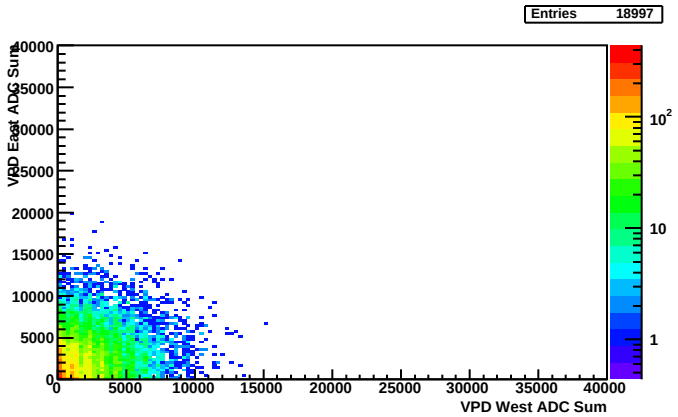

Entries 18997
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

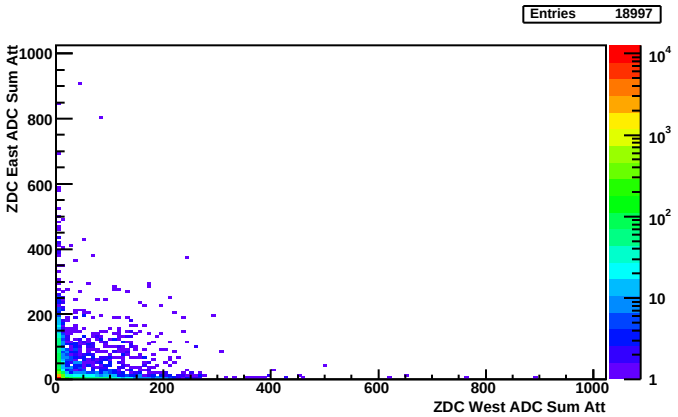

Entries 18997
VPD-East ADC Sum
ZDC-East ADC Sum Att

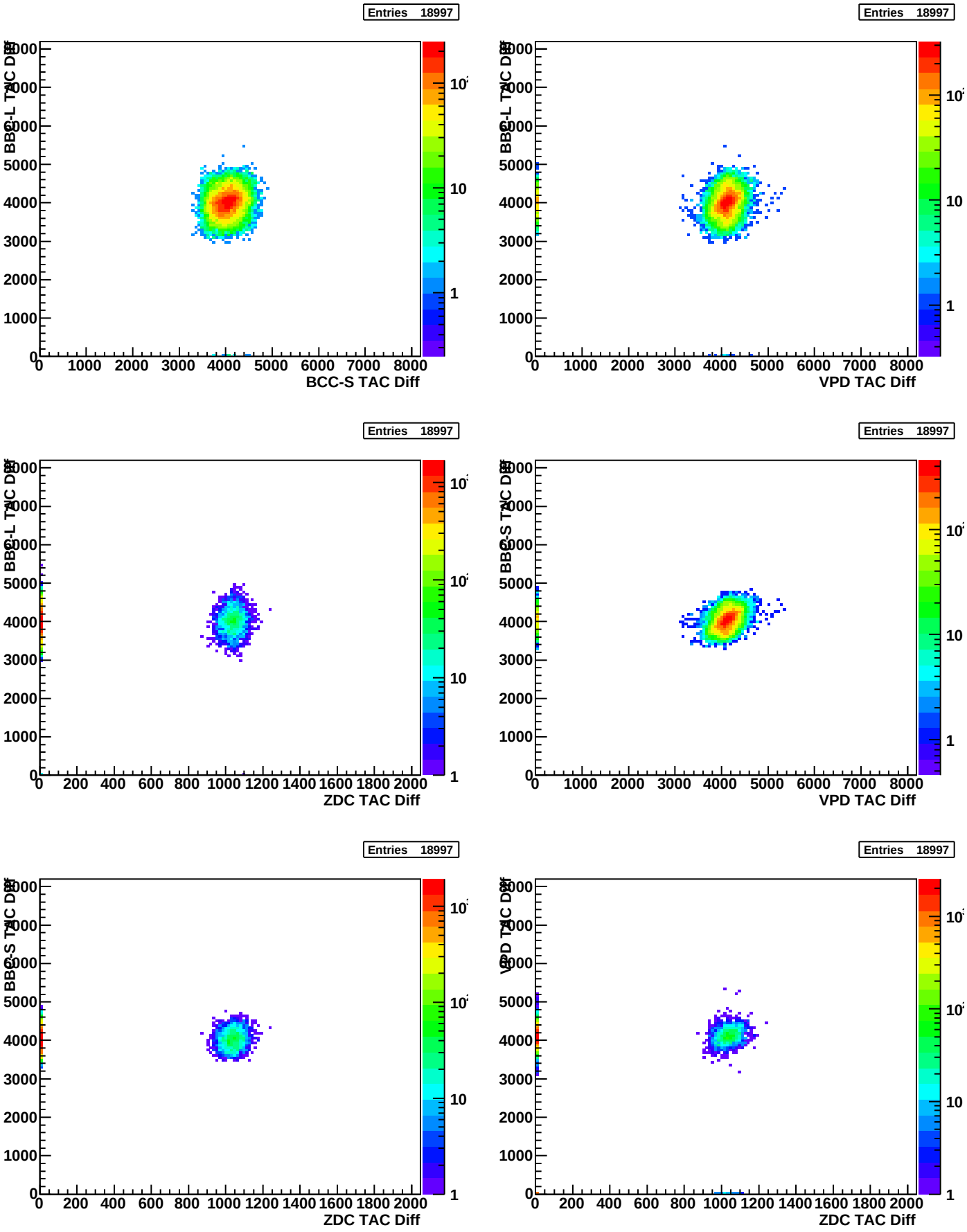

Entries 18997
VPD-West ADC Sum
ZDC-West ADC Sum Att

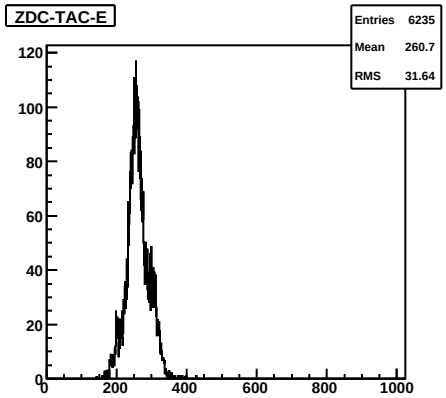

Entries 18997
BBC-L-East ADC Sum
BBC-L-West ADC Sum

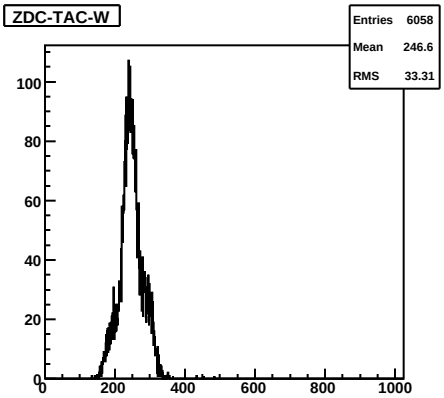

Entries 18997
BBC-S-East ADC Sum
BBC-S-West ADC Sum

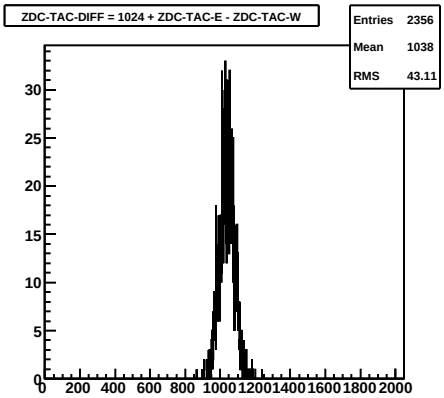

Entries 18997
VPD East ADC Sum
VPD West ADC Sum

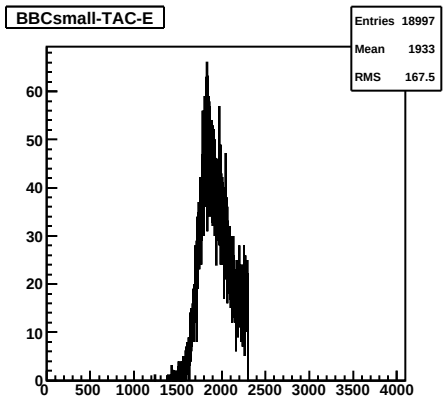

Entries 18997
ZDC East ADC Sum Att
ZDC West ADC Sum Att

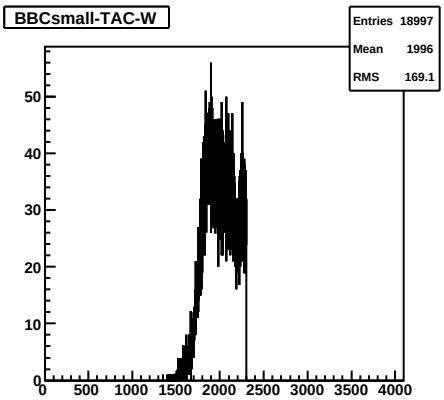

Entries 18997
BBC-L TAC Diff
BCC-S TAC Diff
Entries 18997
BBC-L TAC Diff
VPD TAC Diff
Entries 18997
BBC-L TAC Diff
ZDC TAC Diff
Entries 18997
BBC-S TAC Diff
VPD TAC Diff
Entries 18997
BBC-S TAC Diff
ZDC TAC Diff
Entries 18997
VPD TAC Diff
ZDC TAC Diff

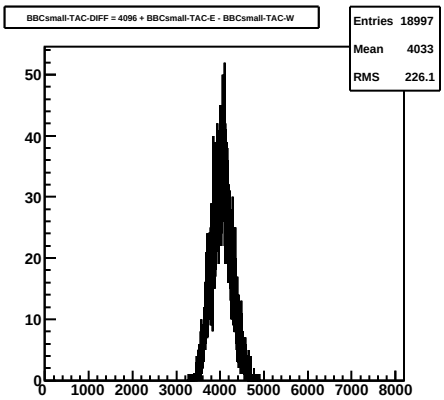

ZDC-TAC-E
Entries 6235
Mean 260.7
RMS 31.64

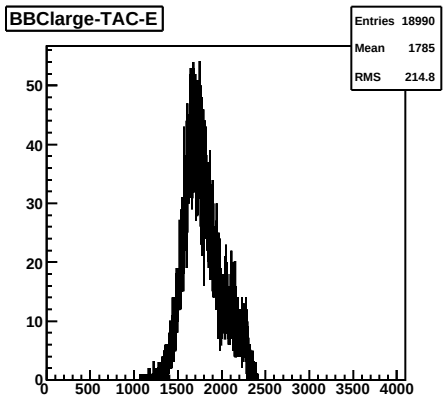

ZDC-TAC-W
Entries 6058
Mean 246.6
RMS 33.31

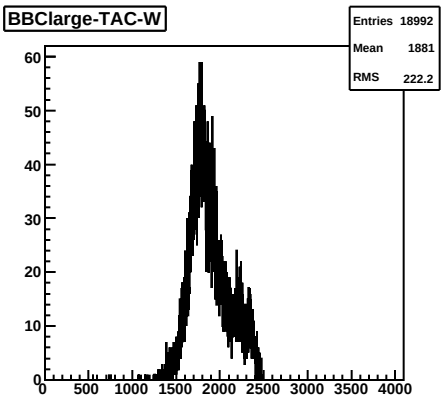

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2356
Mean 1038
RMS 43.11

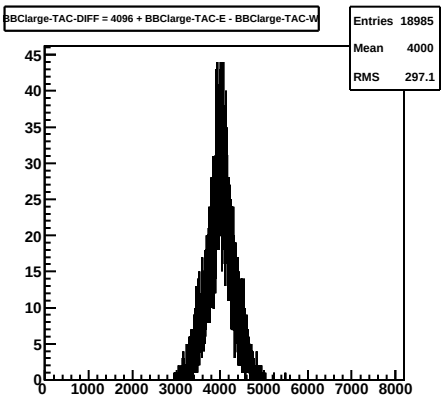

BBCsmall-TAC-E
Entries 18997
Mean 1933
RMS 167.5

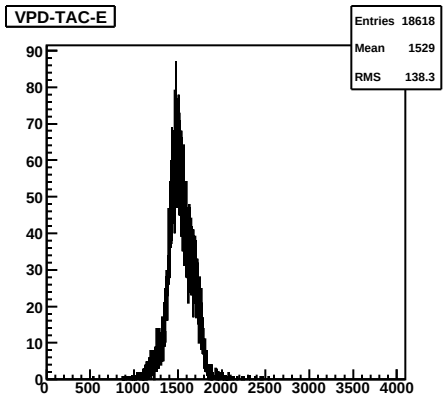

BBCsmall-TAC-W
Entries 18997
Mean 1996
RMS 169.1

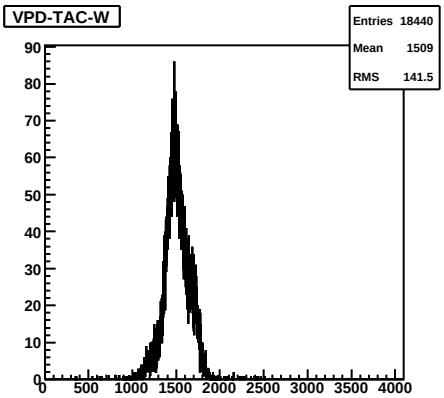

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 18997
Mean 4033
RMS 226.1

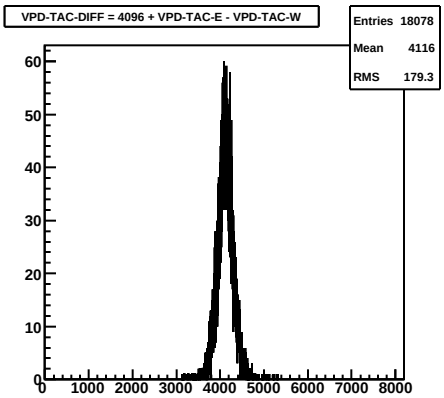

BBClarge-TAC-E
Entries 18990
Mean 1785
RMS 214.8

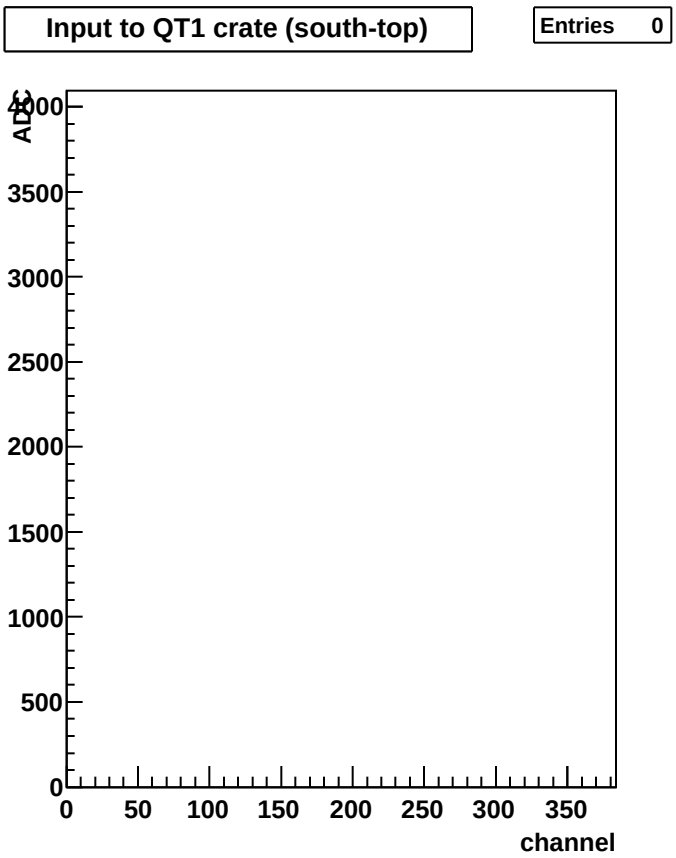

BBClarge-TAC-W
Entries 18992
Mean 1881
RMS 222.2

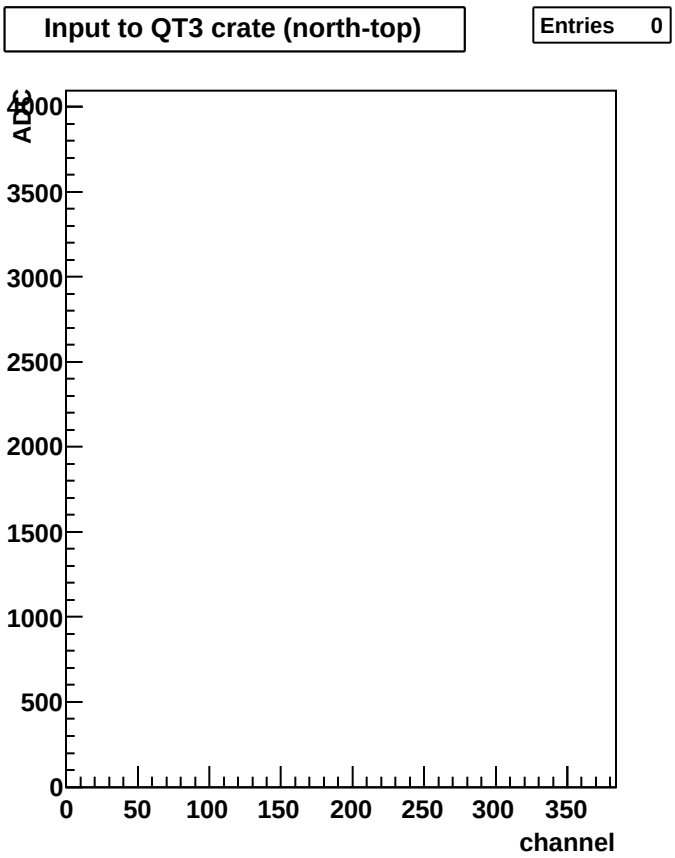

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 18985
Mean 4000
RMS 297.1

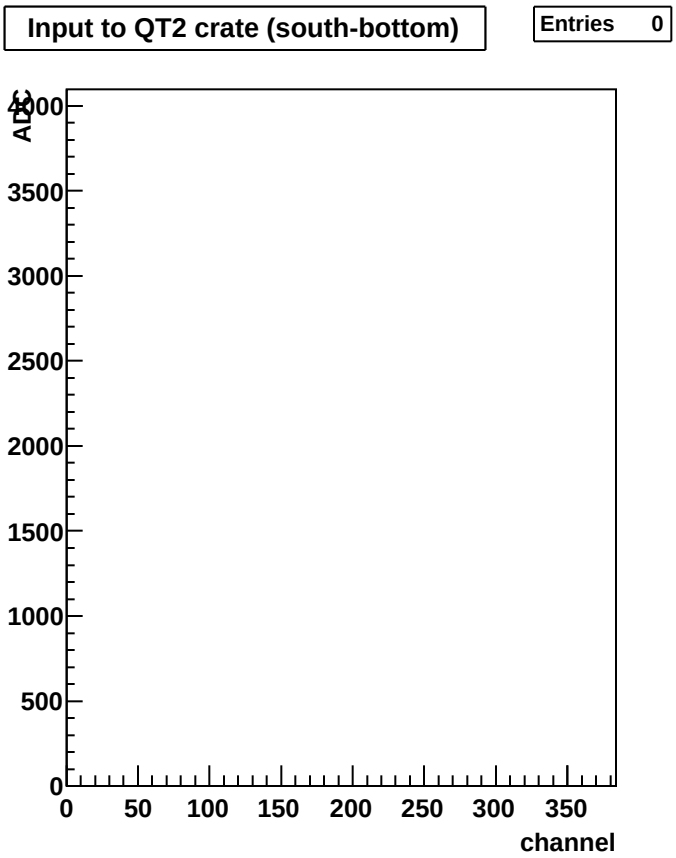

VPD-TAC-E
Entries 18618
Mean 1529
RMS 138.3

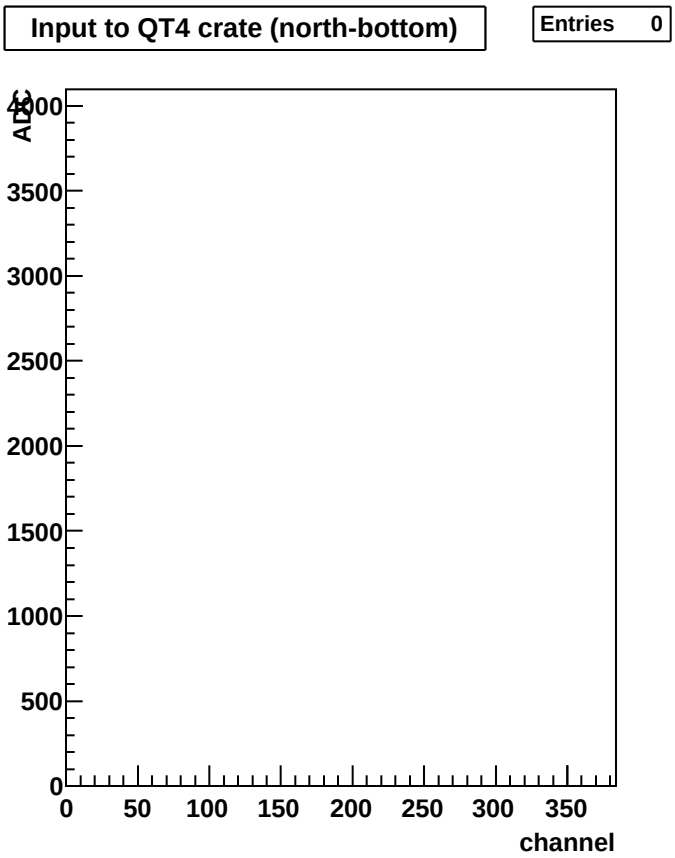

VPD-TAC-W
Entries 18440
Mean 1509
RMS 141.5

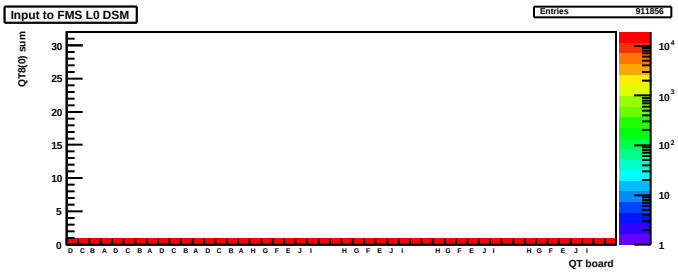

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 18078
Mean 4116
RMS 179.3

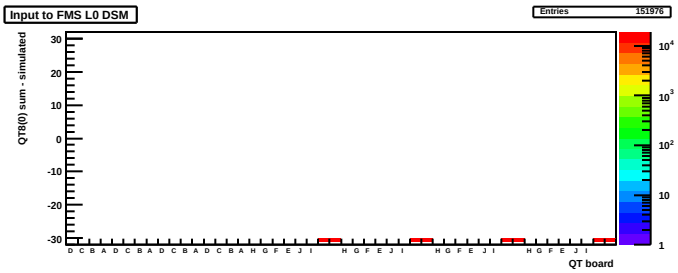

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

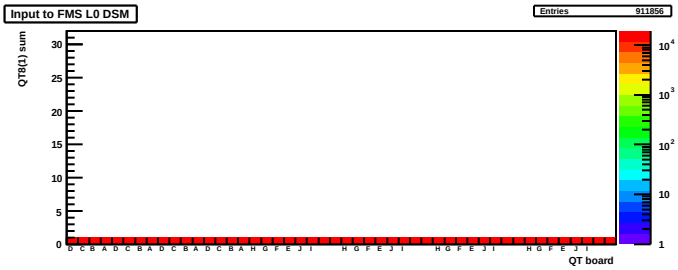

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

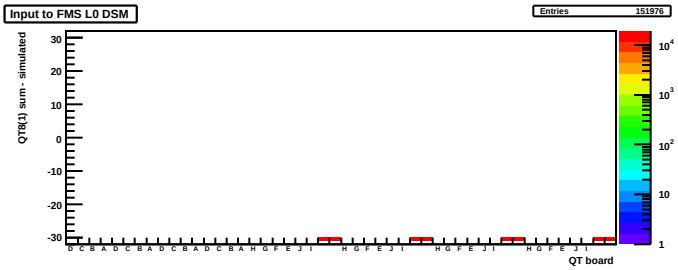

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

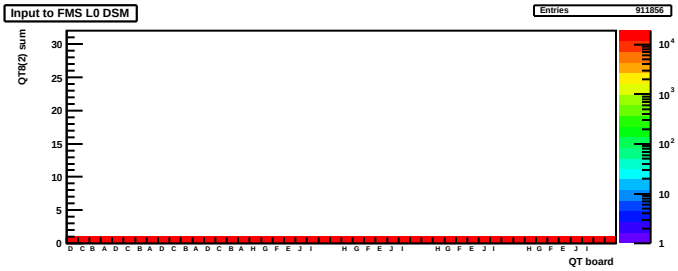

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

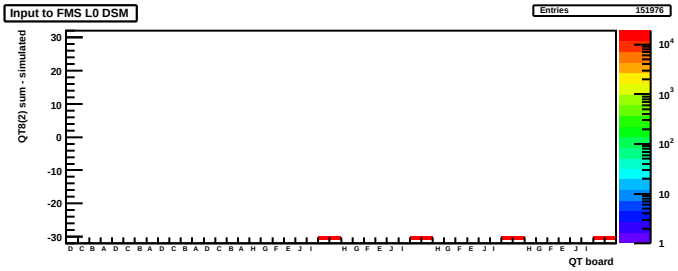

Input to FMS L0 DSM
Entries 911856
QT8(0) sum
QT board

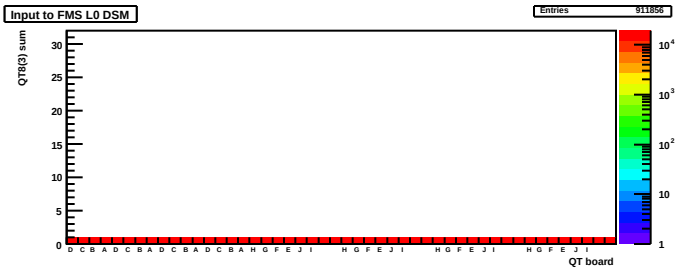

Input to FMS L0 DSM
Entries 151976
QT8(0) sum - simulated
QT board

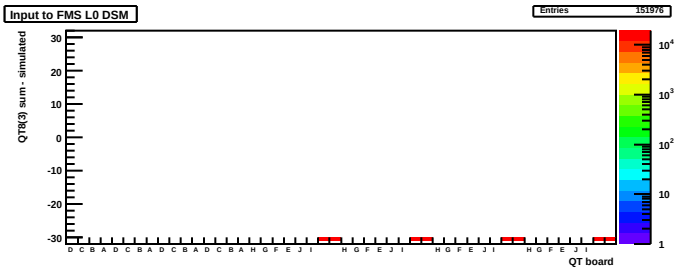

Input to FMS L0 DSM
Entries 911856
QT8(1) sum
QT board

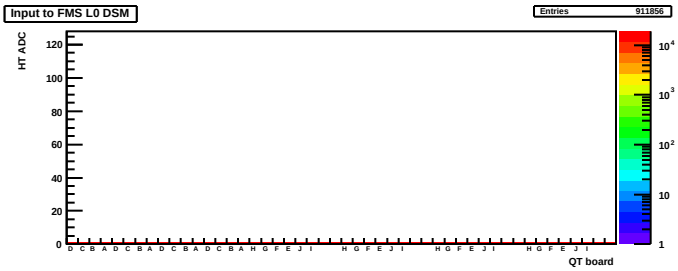

Input to FMS L0 DSM
Entries 151976
QT8(1) sum - simulated
QT board

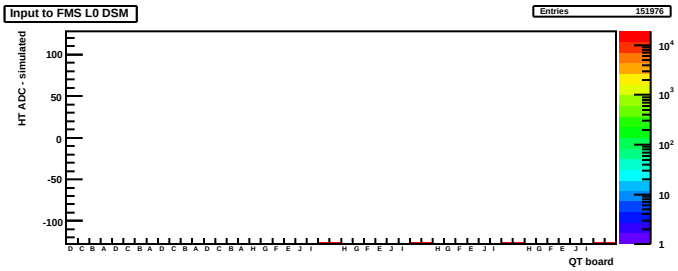

Input to FMS L0 DSM
Entries 911856
QT8(2) sum
QT board

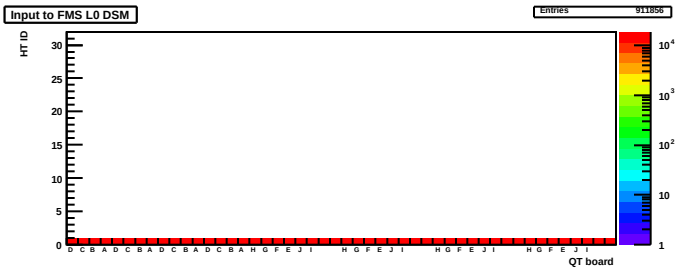

Input to FMS L0 DSM
Entries 151976
QT8(2) sum - simulated
QT board

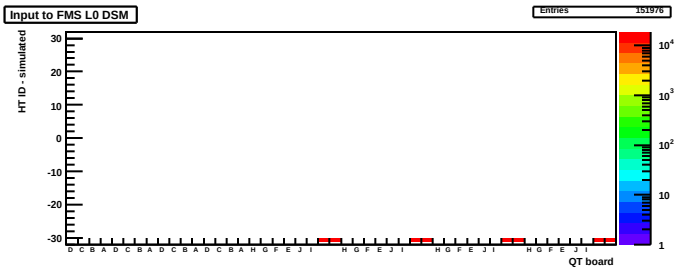

Input to FMS L0 DSM
Entries 911856
QT8(3) sum
QT board

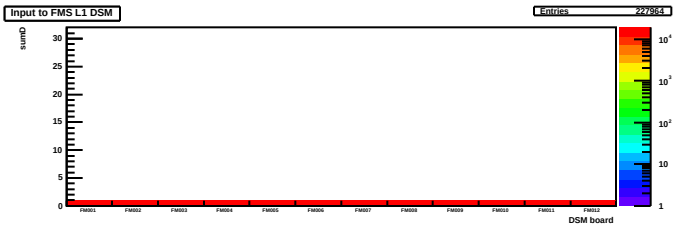

Input to FMS L0 DSM
Entries 151976
QT8(3) sum - simulated
QT board

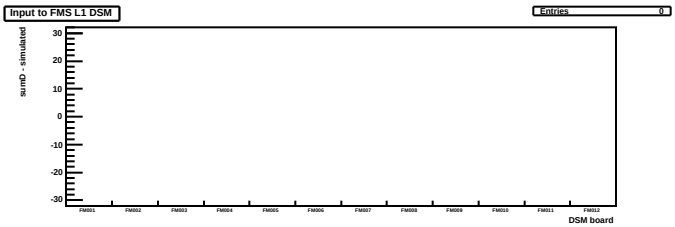

Input to FMS L0 DSM
Entries 911856
HT ADC
QT board

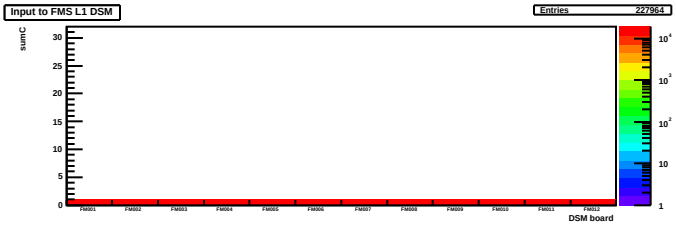

Input to FMS L0 DSM
Entries 151976
HT ADC - simulated
QT board

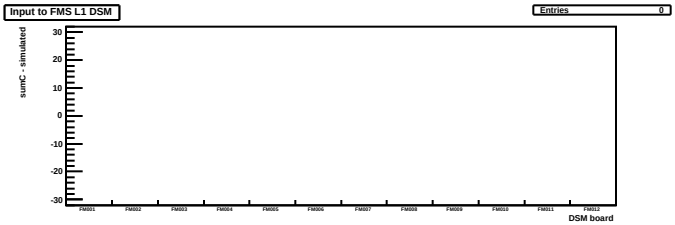

Input to FMS L0 DSM
Entries 911856
HT ID
QT board

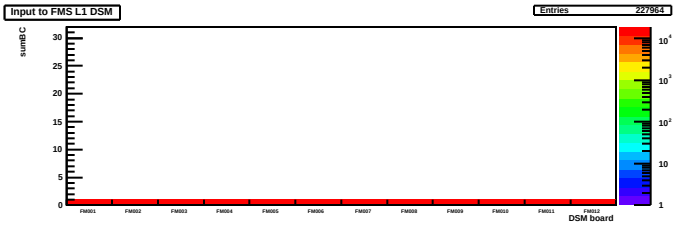

Input to FMS L0 DSM
Entries 151976
HT ID - simulated
QT board

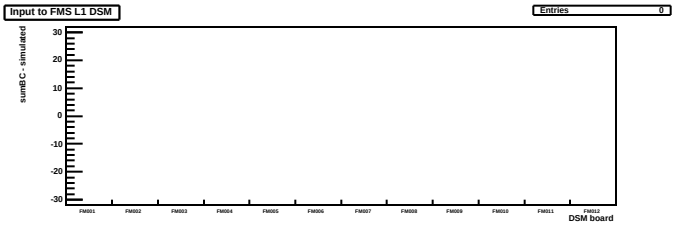

Input to FMS L1 DSM
Entries 227964
sumD
DSM board

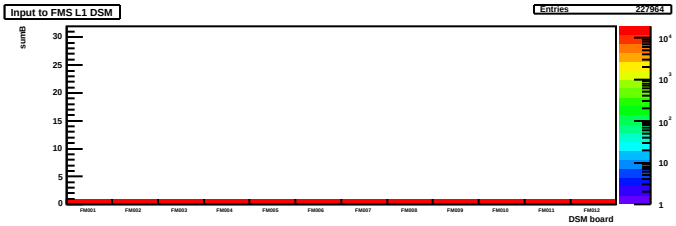

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

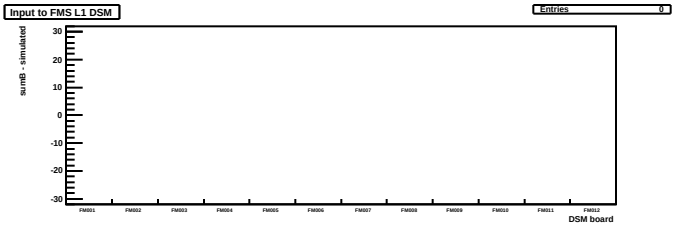

Input to FMS L1 DSM
Entries 227964
sumC
DSM board

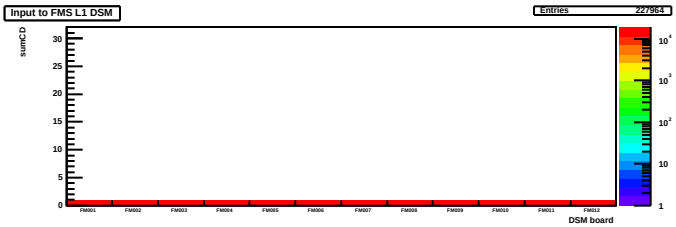

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

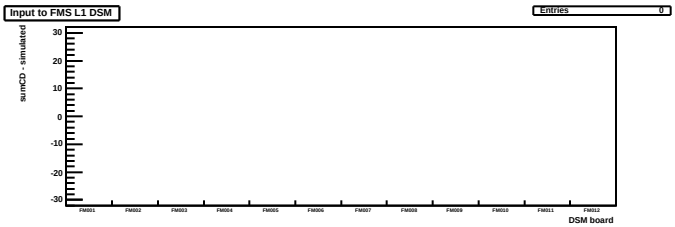

Input to FMS L1 DSM
Entries 227964
sumBC
DSM board

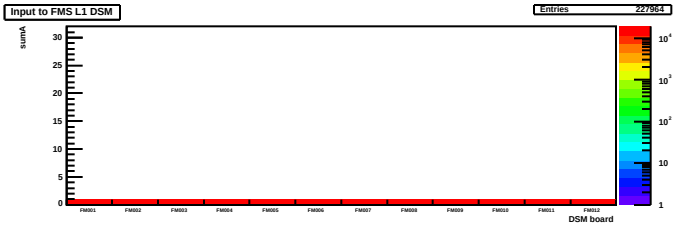

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

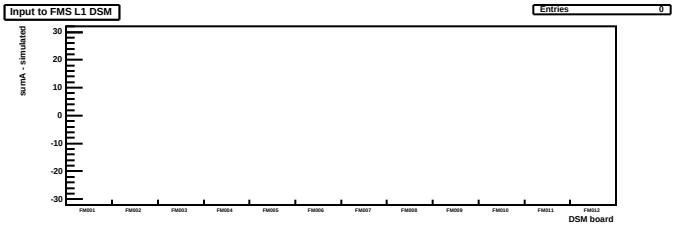

Input to FMS L1 DSM
Entries 227964
sumB
DSM board

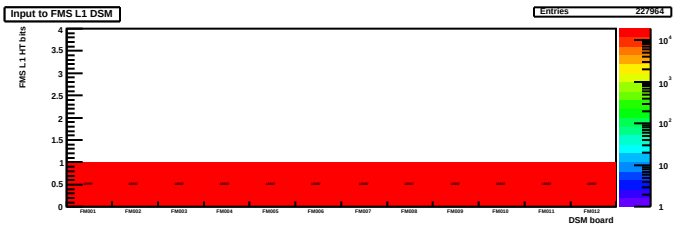

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

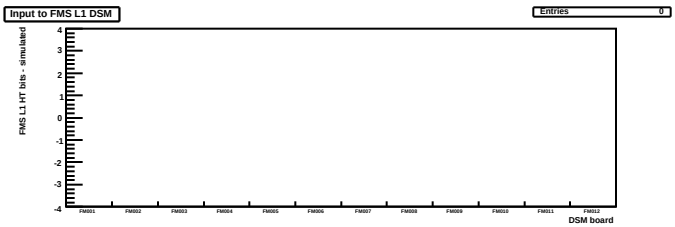

Input to FMS L1 DSM
Entries 227964
sumCD
DSM board

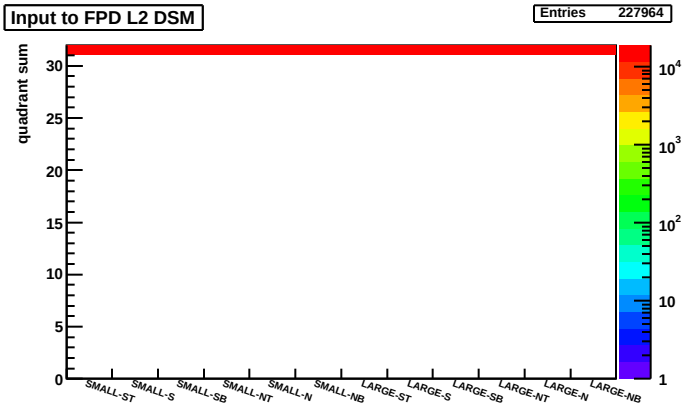

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

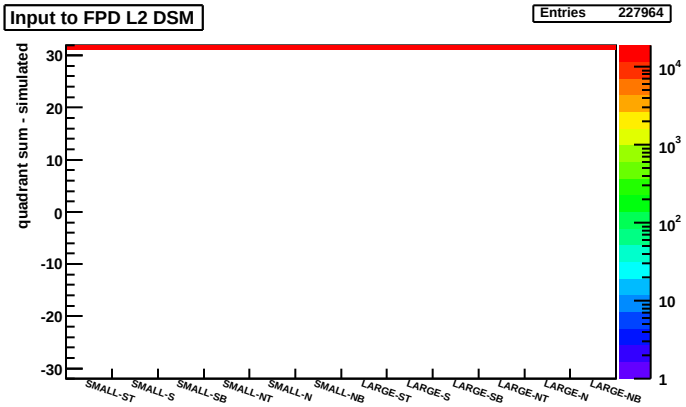

Input to FMS L1 DSM
Entries 227964
sumA
DSM board

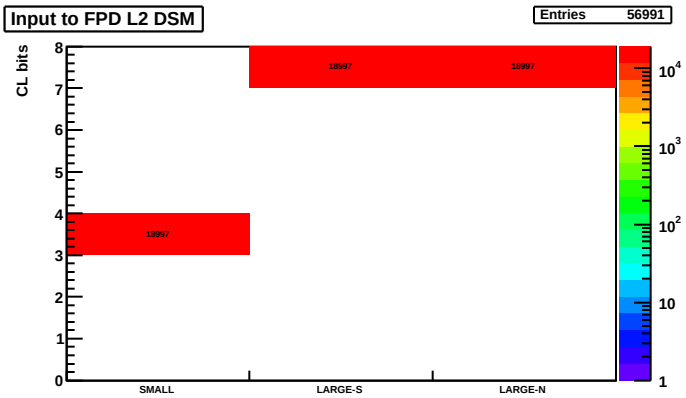

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

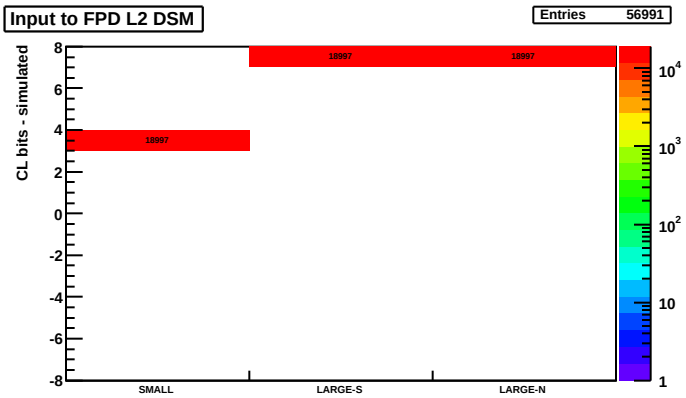

Input to FMS L1 DSM
Entries 227964
FMS L1 HT bits
DSM board

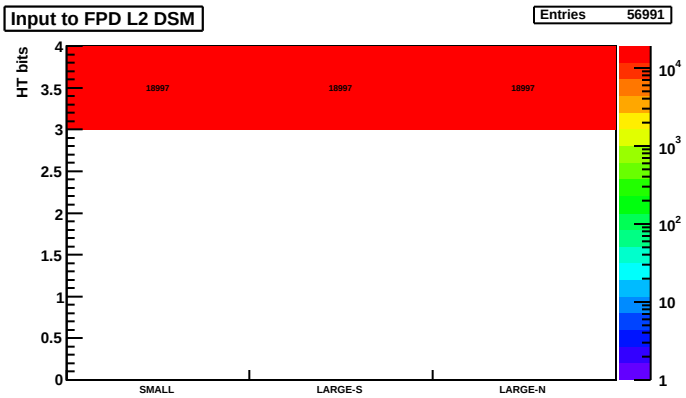

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

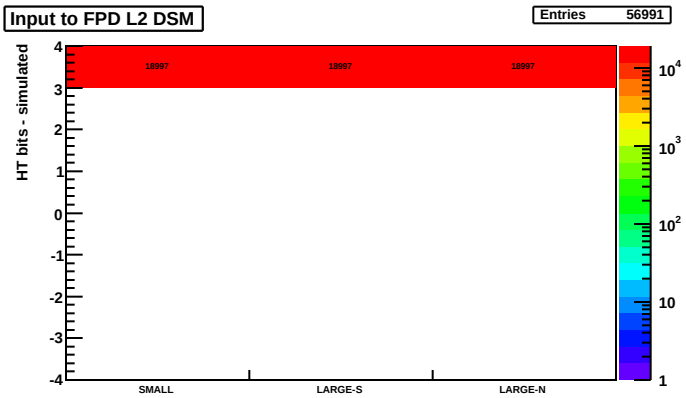

Input to FPD L2 DSM
Entries 227964
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

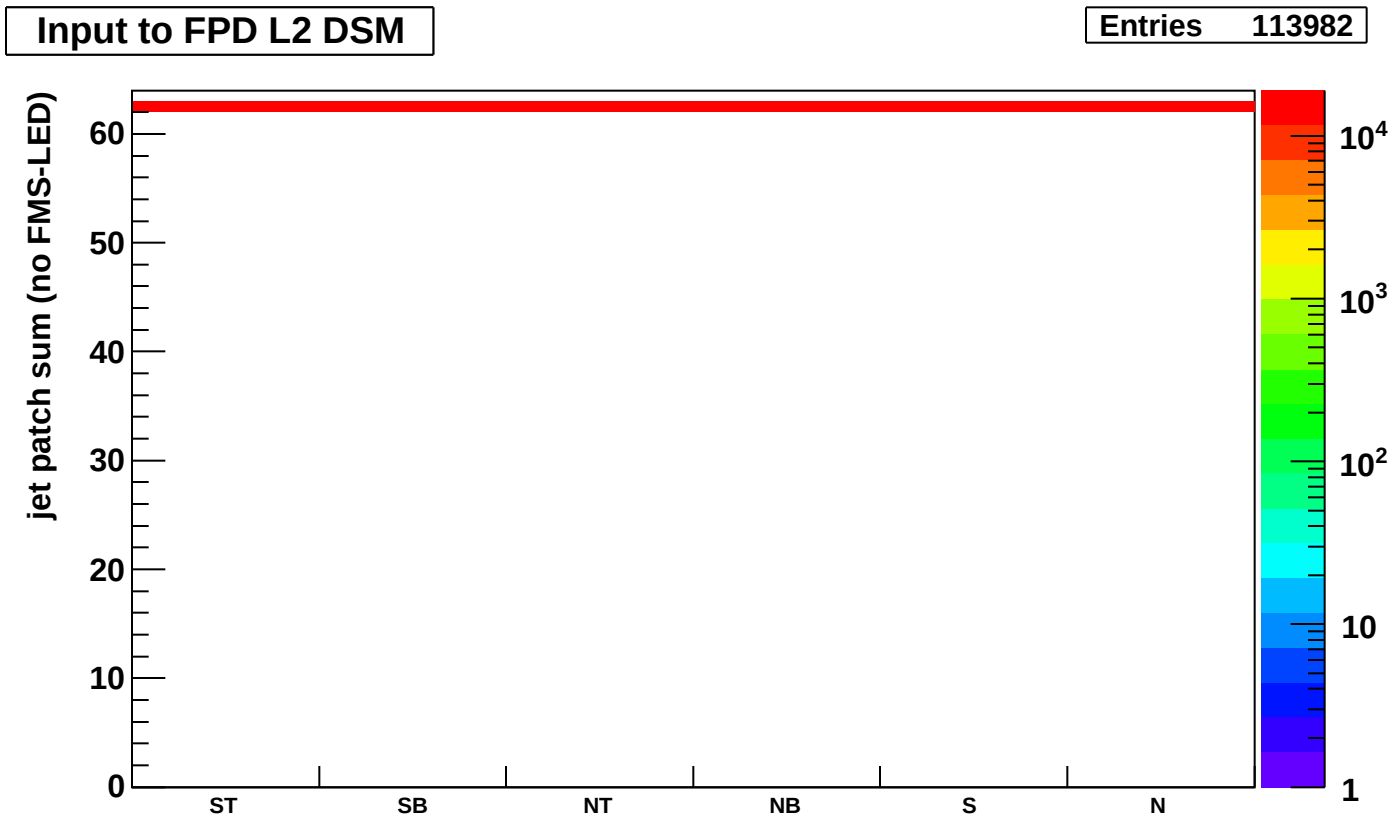

Input to FPD L2 DSM
Entries 227964
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

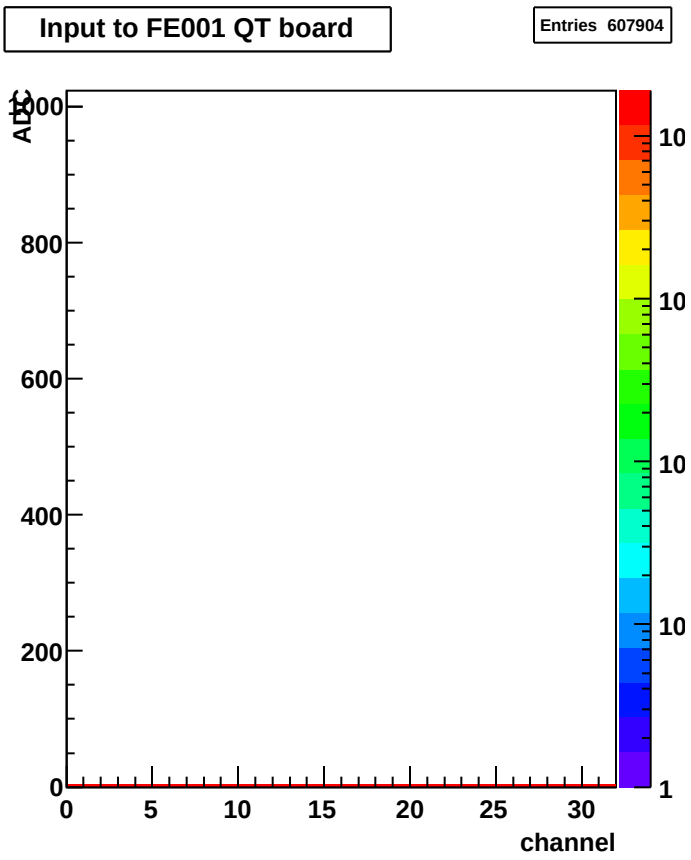

Input to FPD L2 DSM
Entries 56991
CL bits
18997
18997
18997
SMALL
LARGE-S
LARGE-N

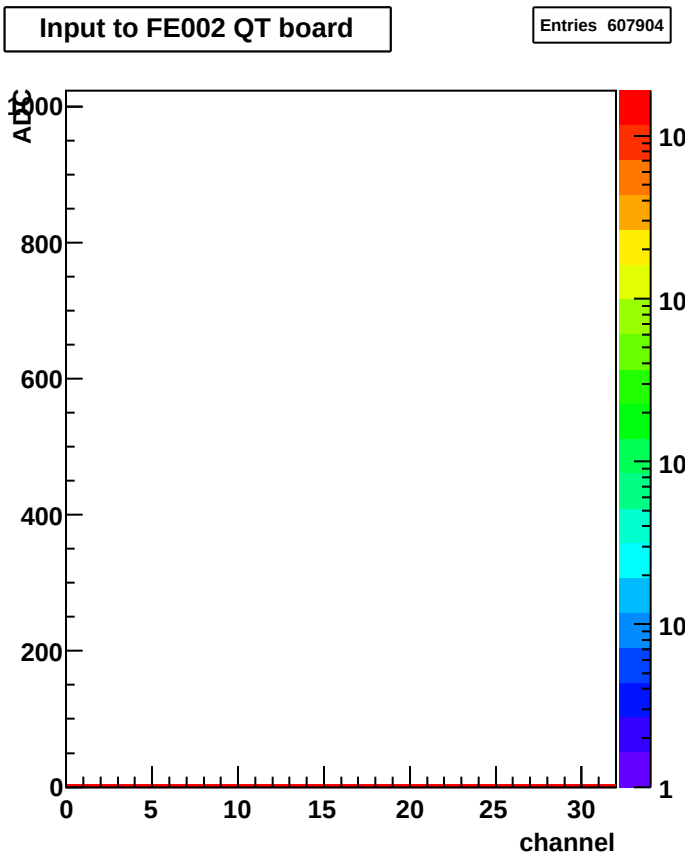

Input to FPD L2 DSM
Entries 56991
CL bits - simulated
18997
18997
18997
SMALL
LARGE-S
LARGE-N

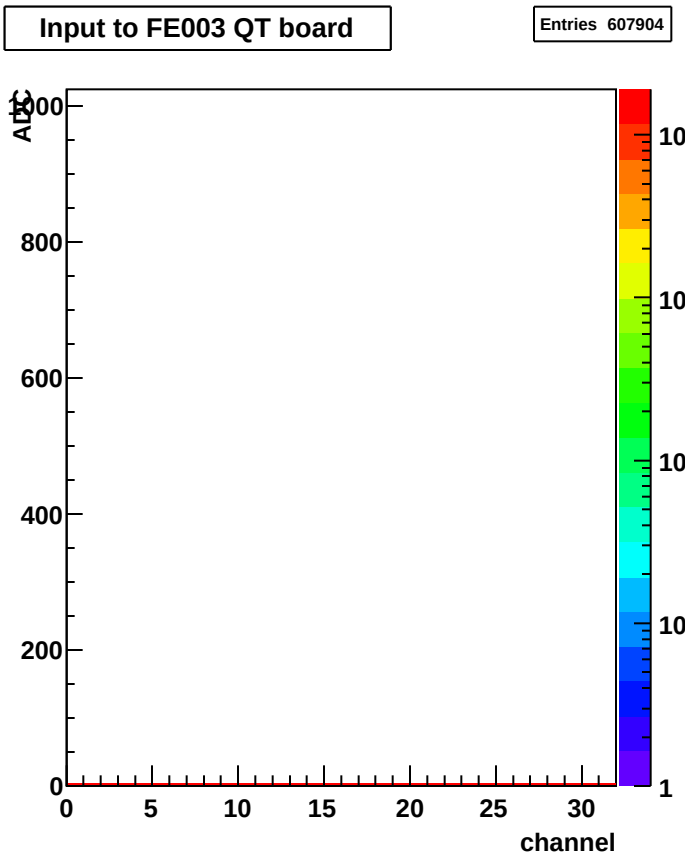

Input to FPD L2 DSM
Entries 56991
HT bits
18997
18997
18997
SMALL
LARGE-S
LARGE-N

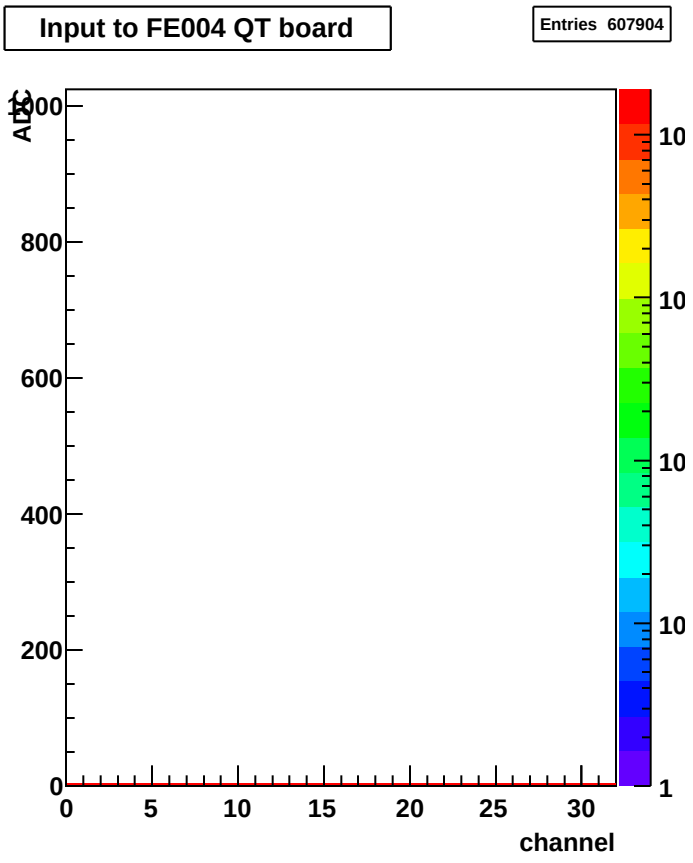

Input to FPD L2 DSM
Entries 56991
HT bits - simulated
18997
18997
18997
SMALL
LARGE-S
LARGE-N

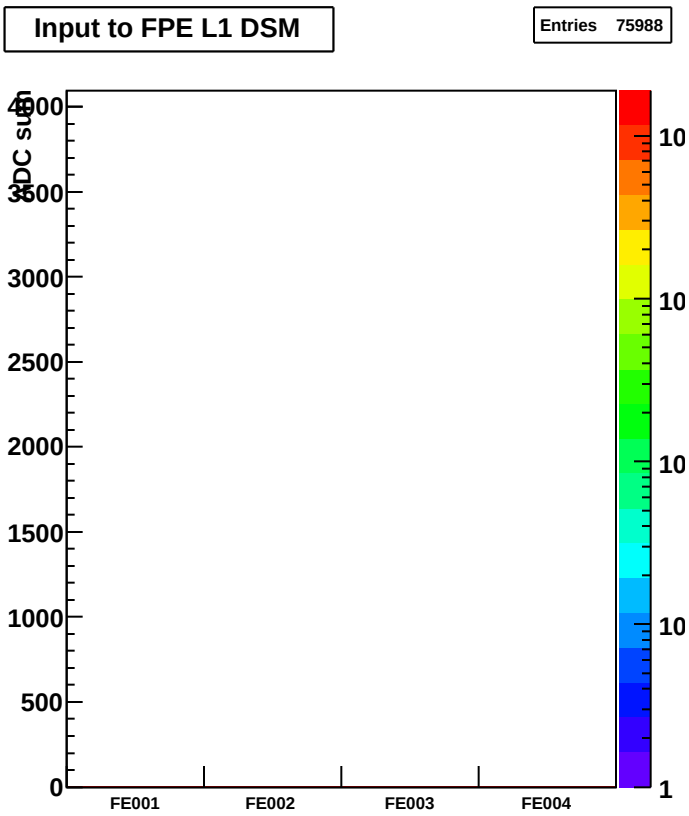

Input to FPD L2 DSM
Entries 113982
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

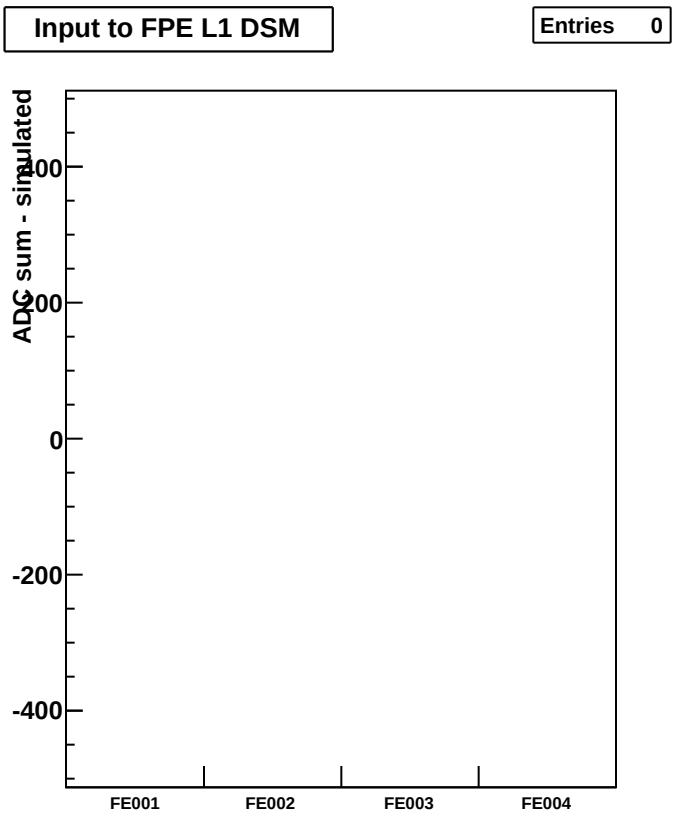

Input to FE001 QT board
Entries 607904
ADC
channel


Input to FE002 QT board
Entries 607904
ADC
channel

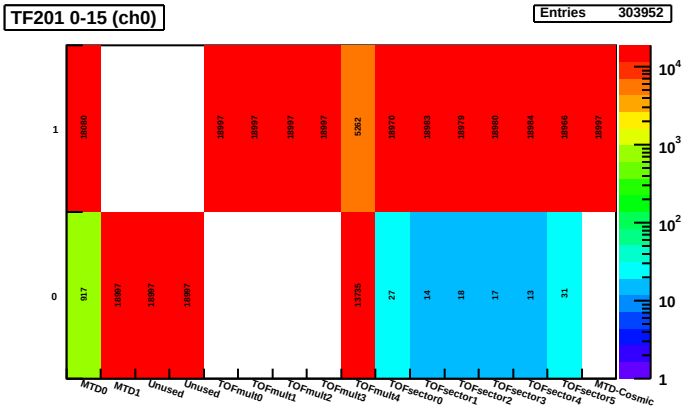

Input to FE003 QT board
Entries 607904
ADC
channel


Input to FE004 QT board
Entries 607904
ADC
channel

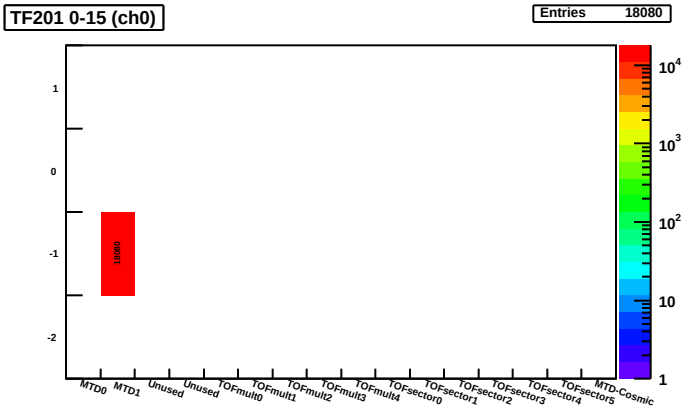

Input to FPE L1 DSM
Entries 75988
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


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

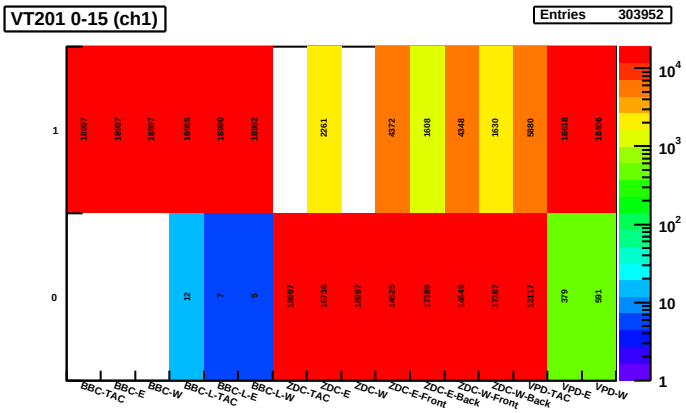
TF201 0-15 (ch0)



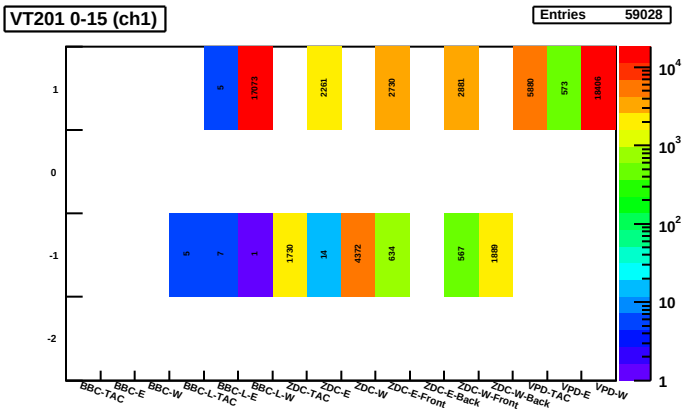
TF201 0-15 (ch0)



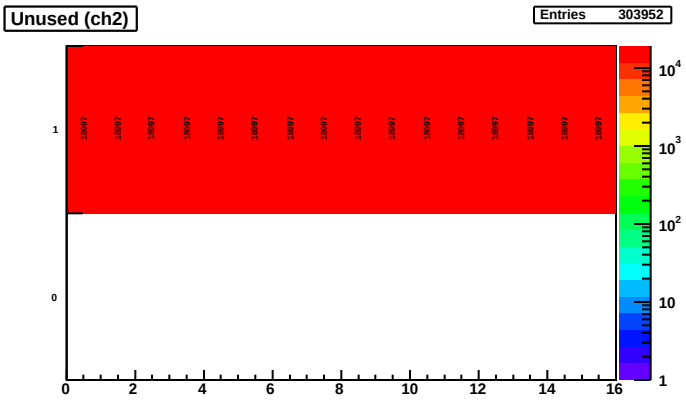
VT201 0-15 (ch1)

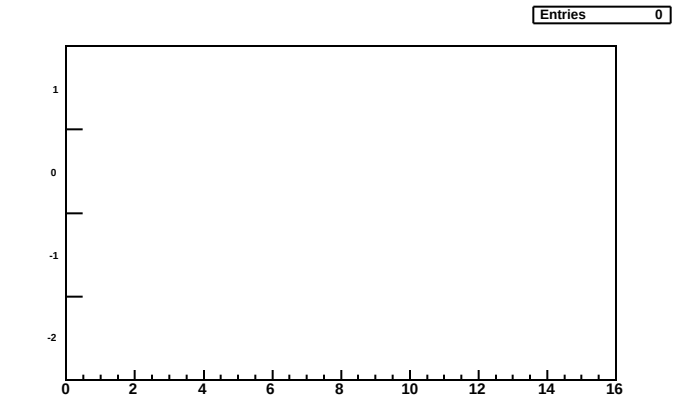


VT201 0-15 (ch1)

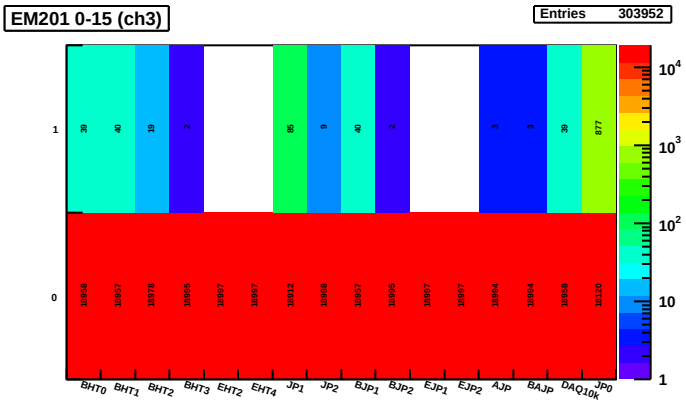


Unused (ch2)





EM201 0-15 (ch3)



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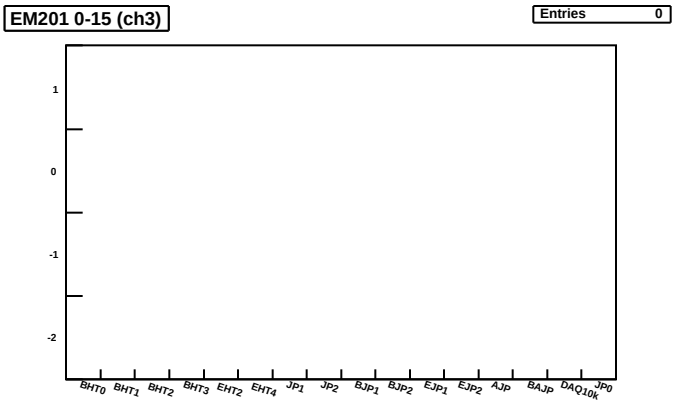
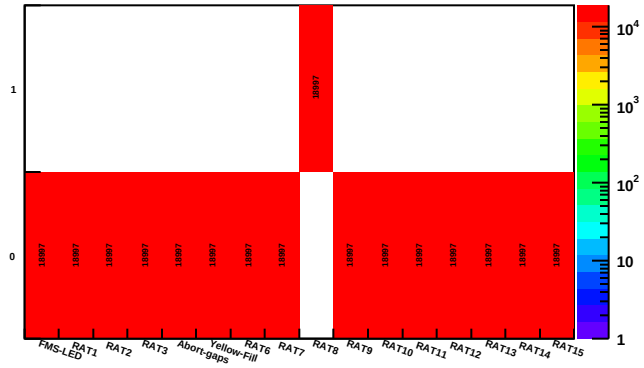
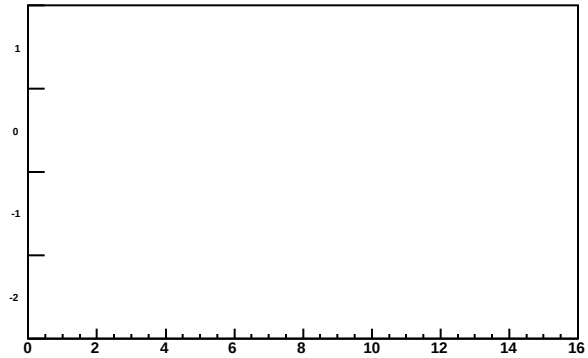


RAT board (ch4)





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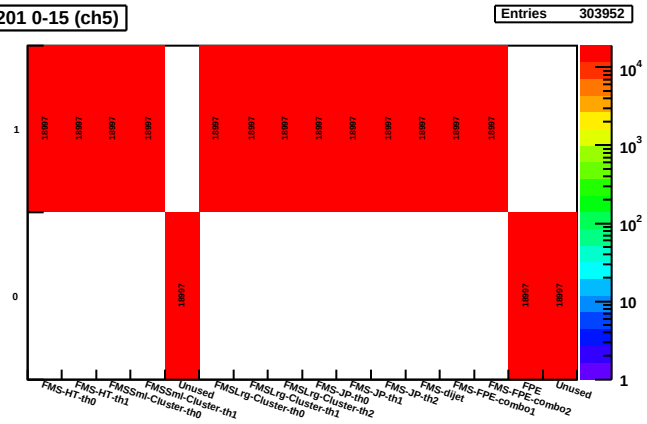

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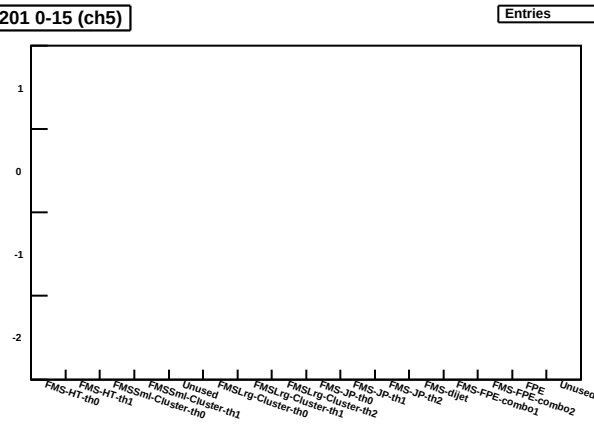

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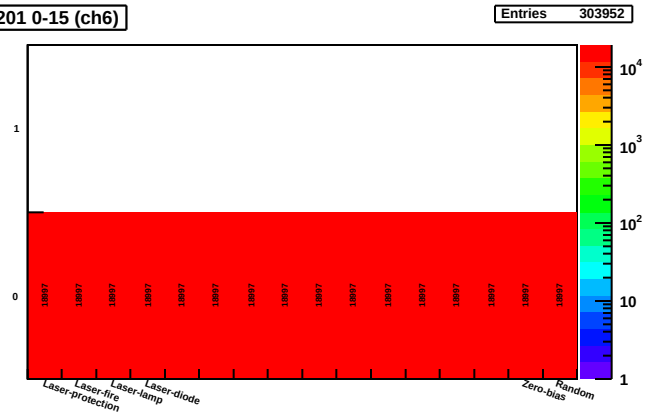

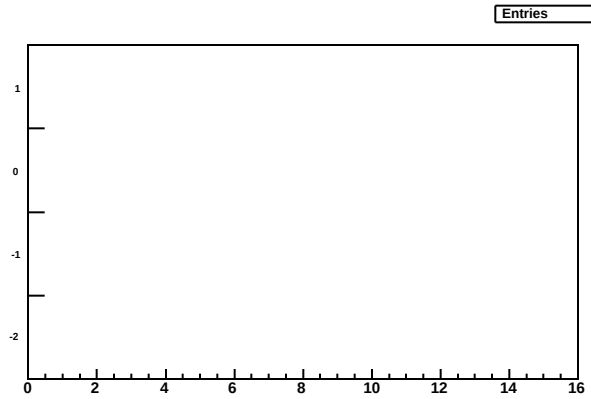
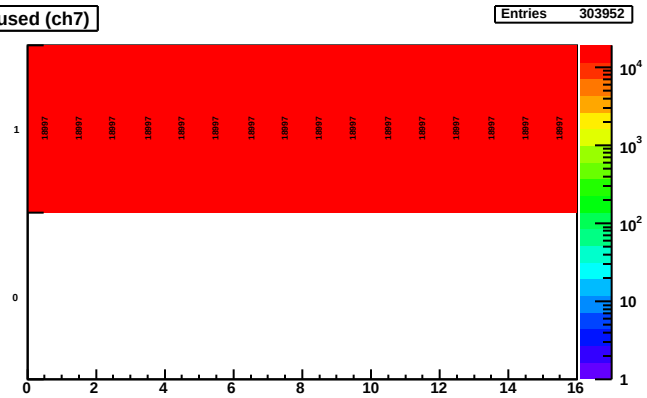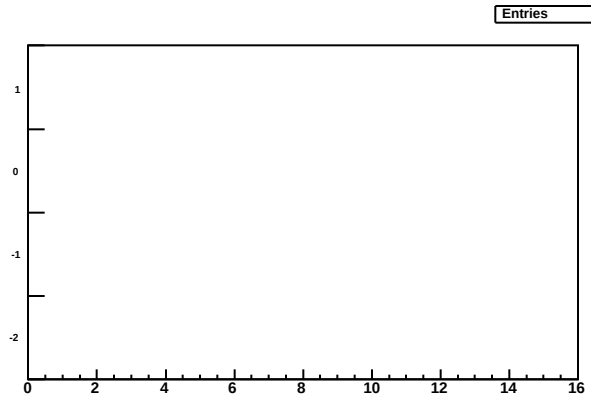
Unused (ch7)