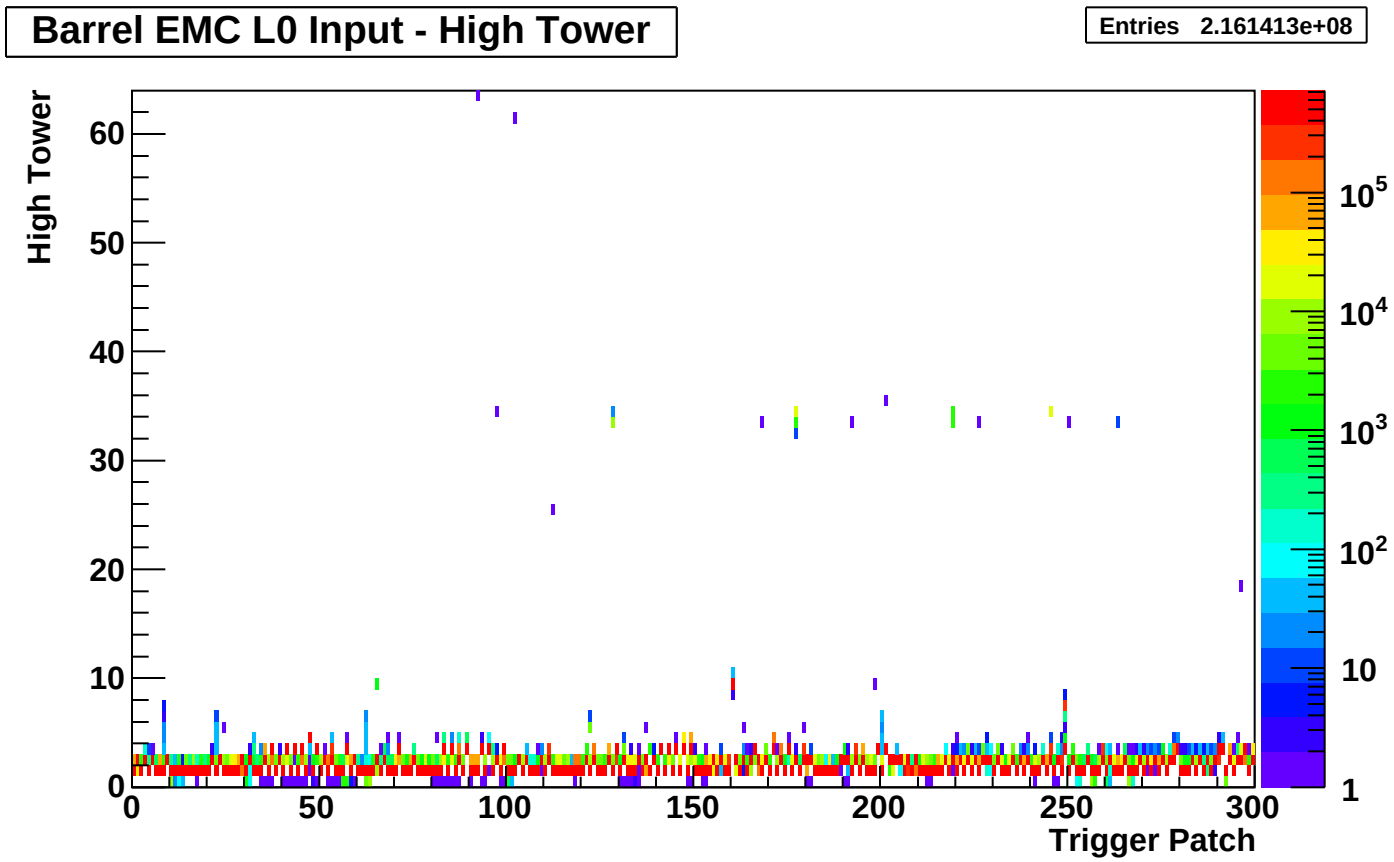
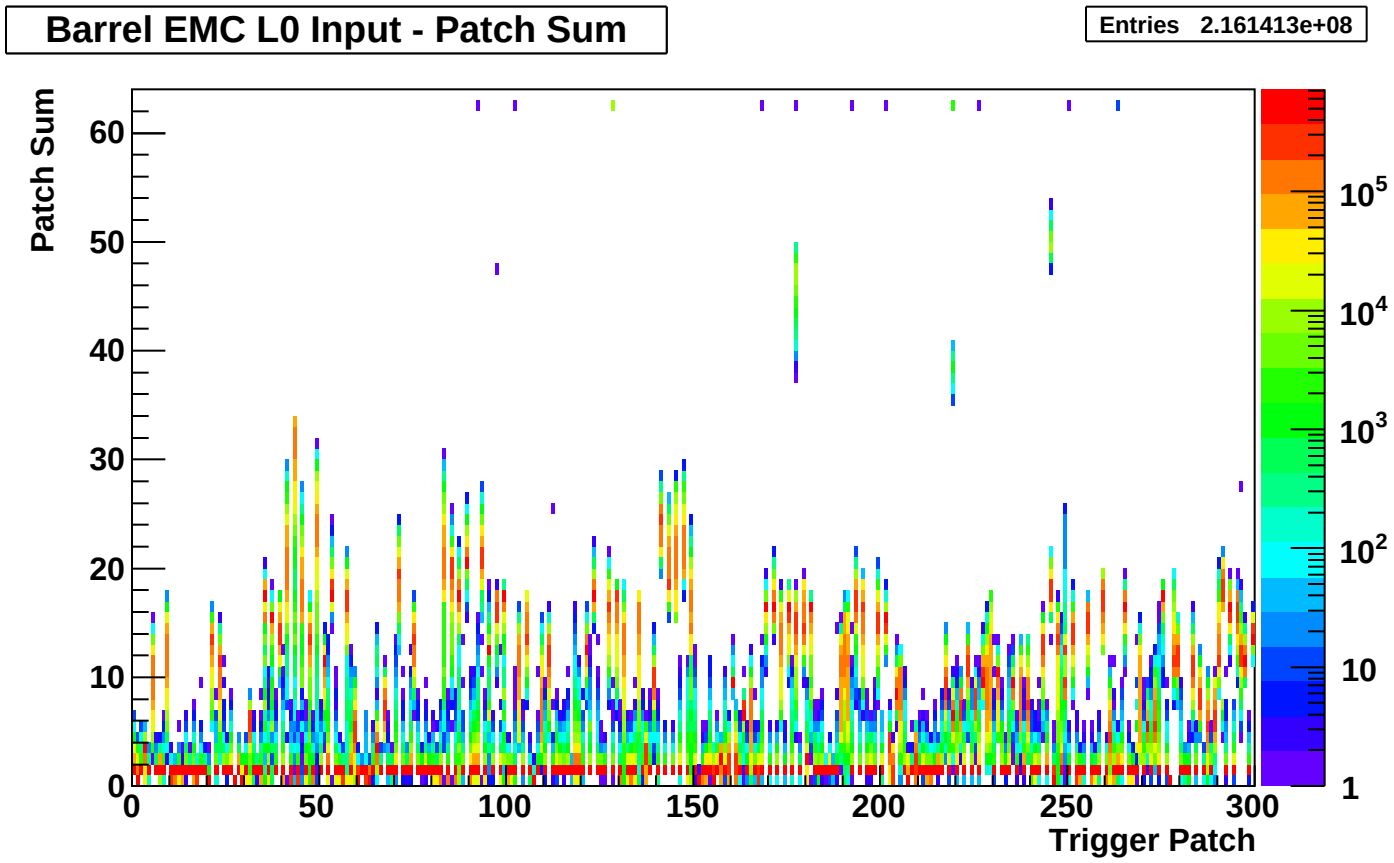
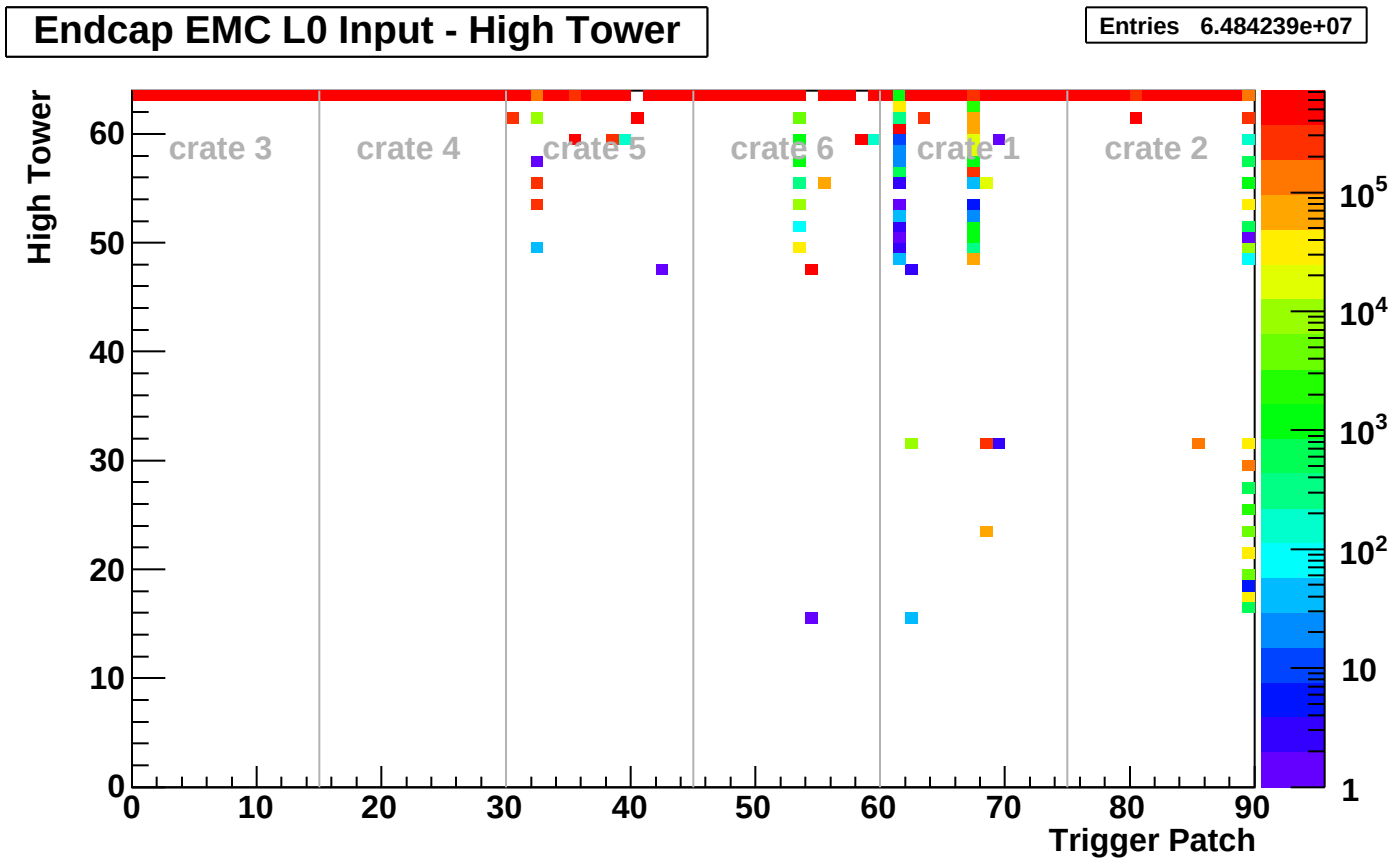
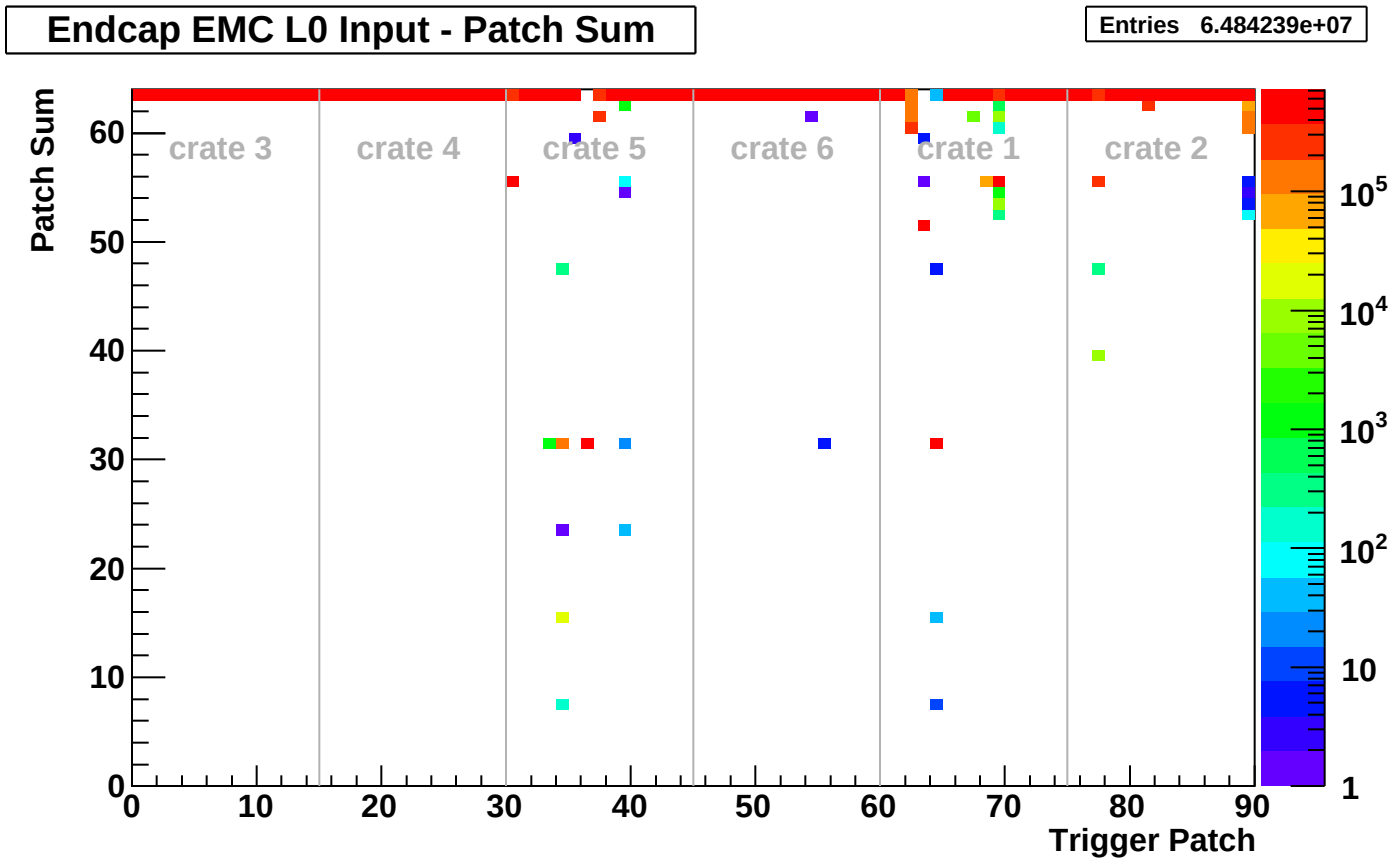
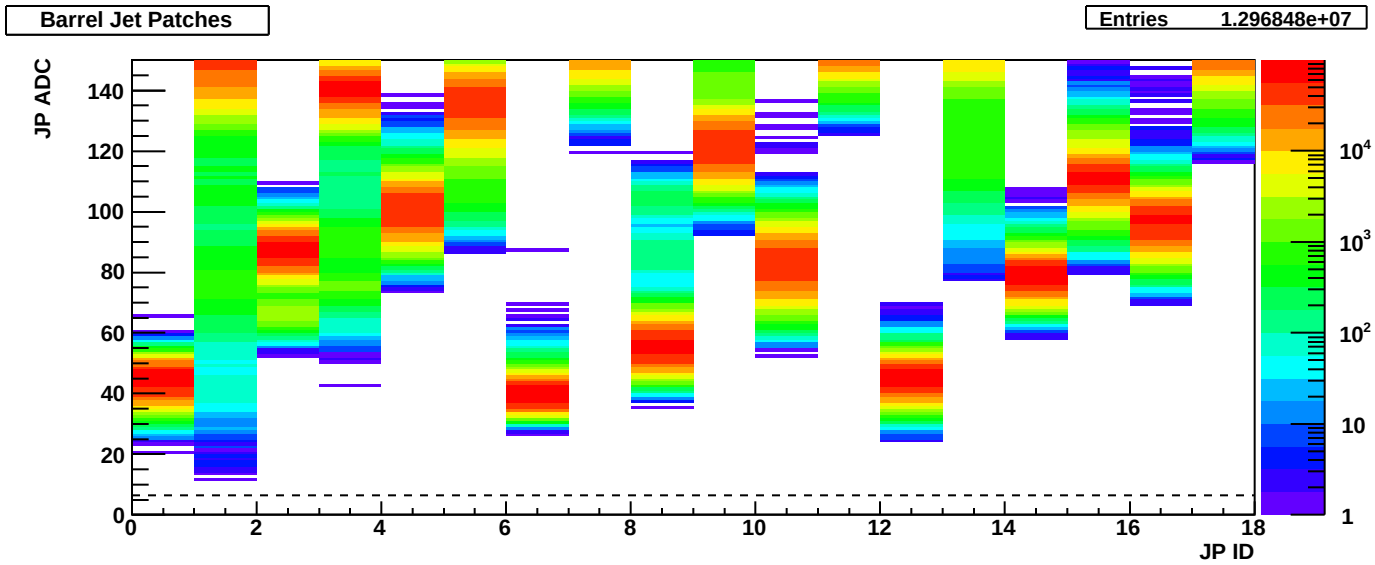
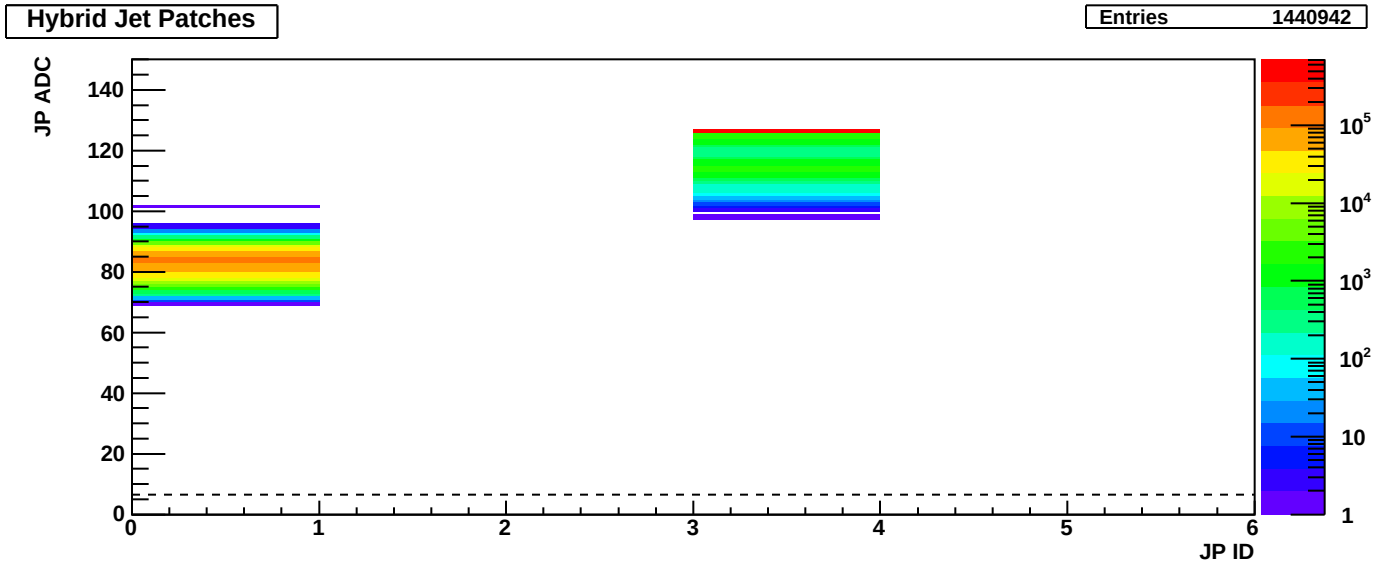

Barrel EMC L0 Input - High Tower
Entries 2.161413e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

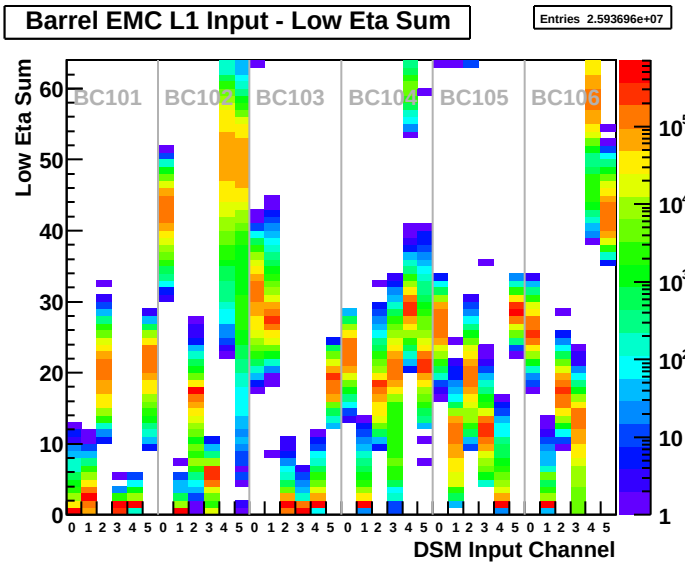

Barrel EMC L0 Input - Patch Sum
Entries 2.161413e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

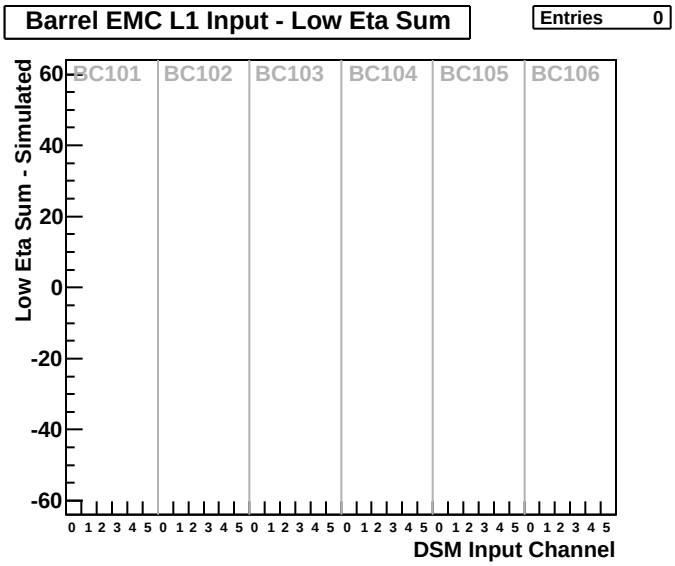

Endcap EMC L0 Input - High Tower
Entries 6.484239e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

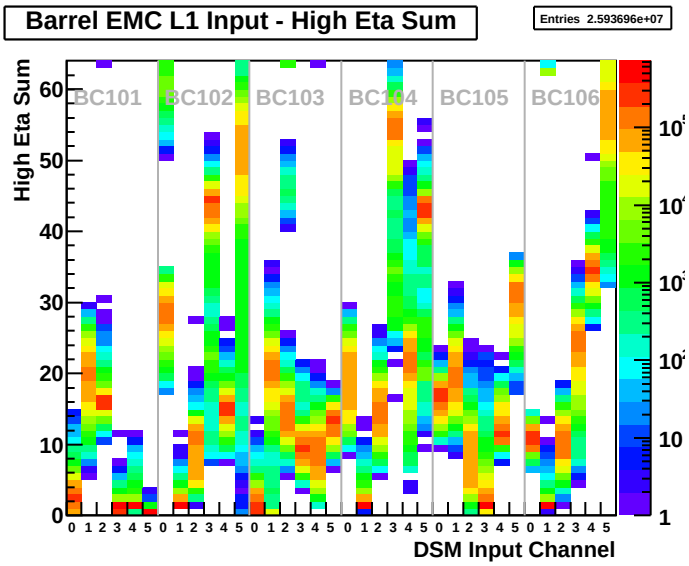

Endcap EMC L0 Input - Patch Sum
Entries 6.484239e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

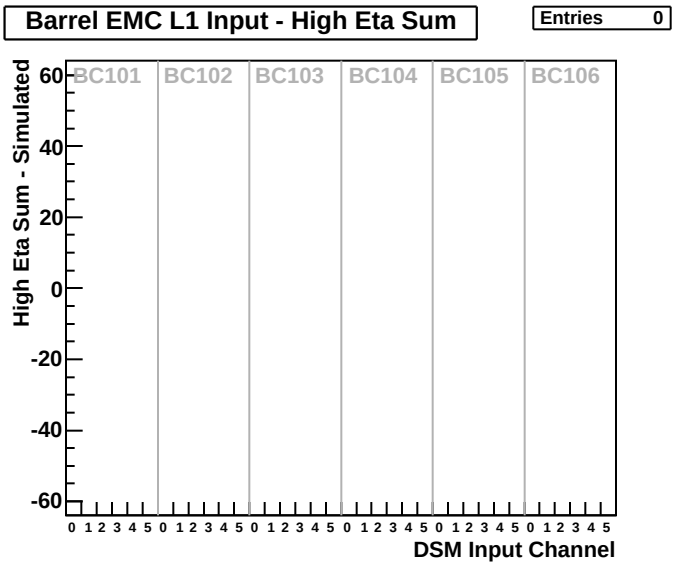

Barrel Jet Patches
Entries 1.296848e+07
JP ADC
JP ID

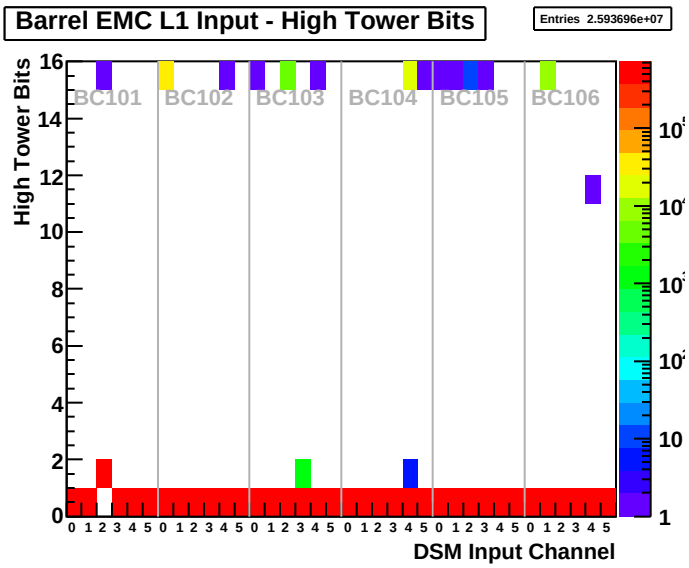

Hybrid Jet Patches
Entries 1440942
JP ADC
JP ID

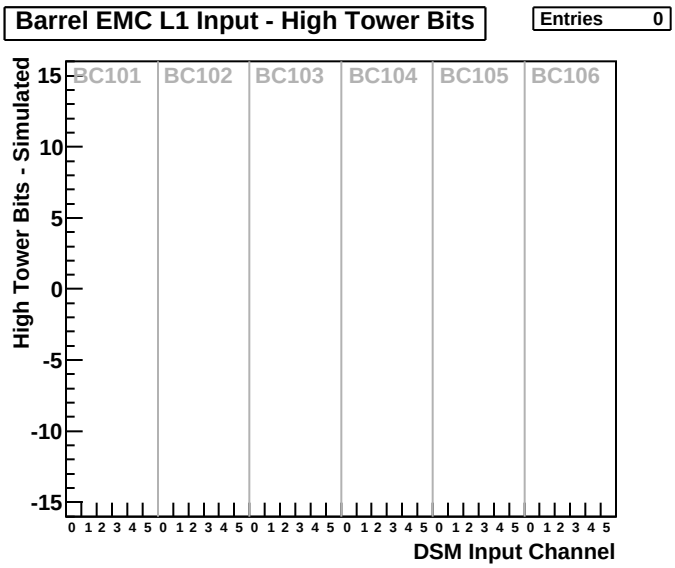

Barrel EMC L1 Input - Low Eta Sum
Entries 2.593696e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

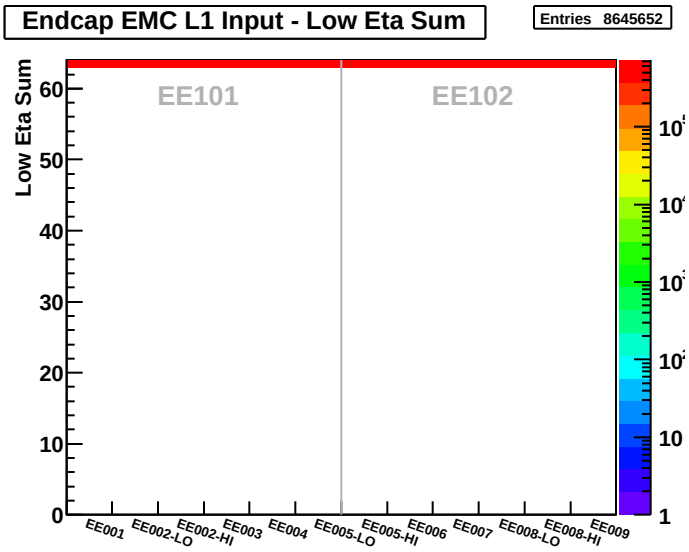

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

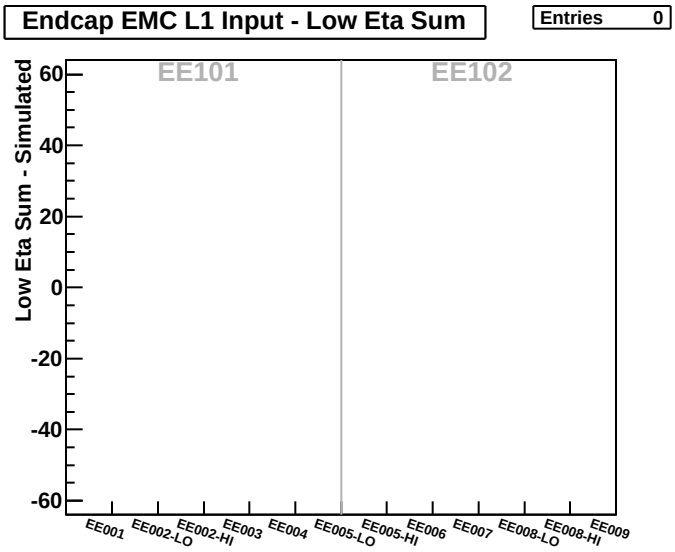

Barrel EMC L1 Input - High Eta Sum
Entries 2.593696e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

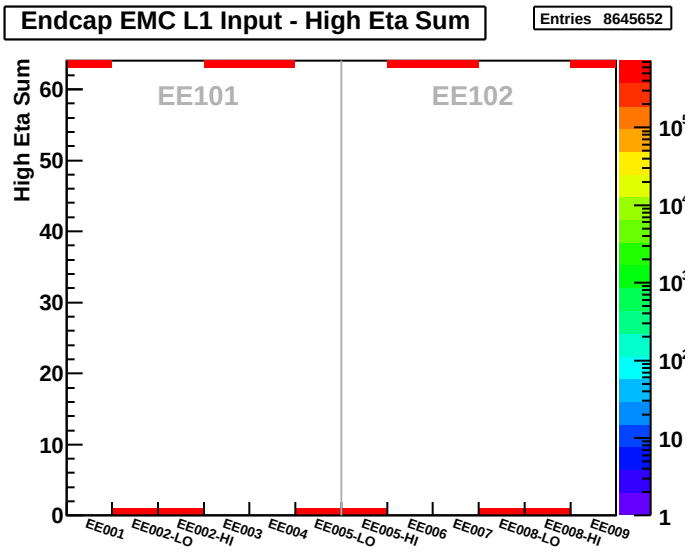

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

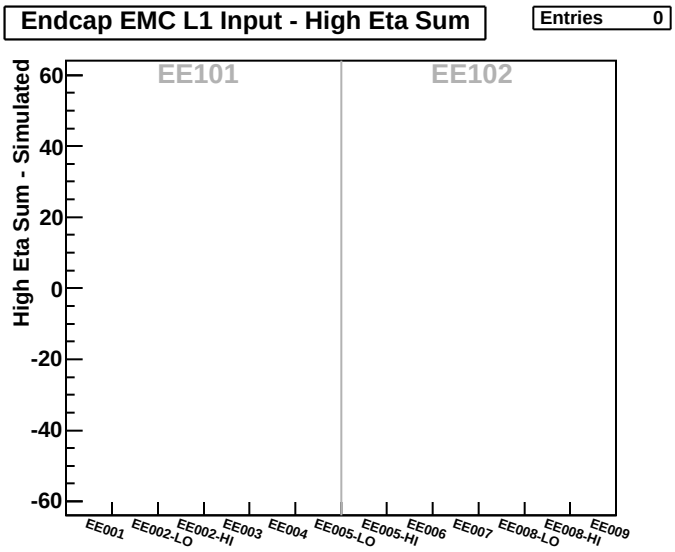

Barrel EMC L1 Input - High Tower Bits
Entries 2.593696e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

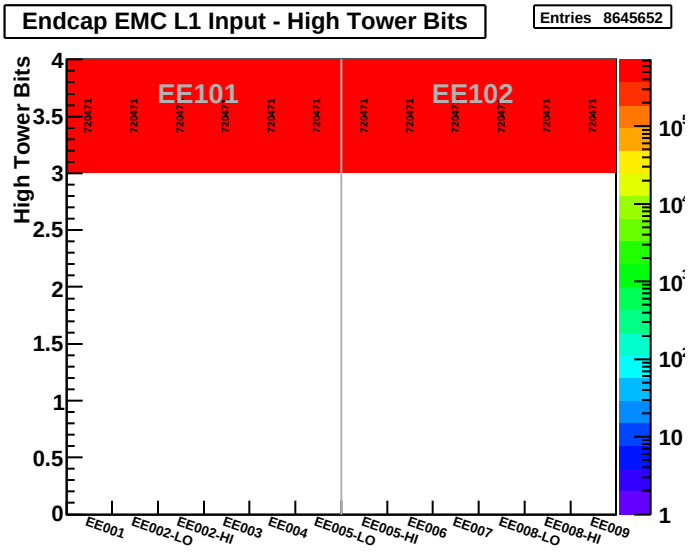

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

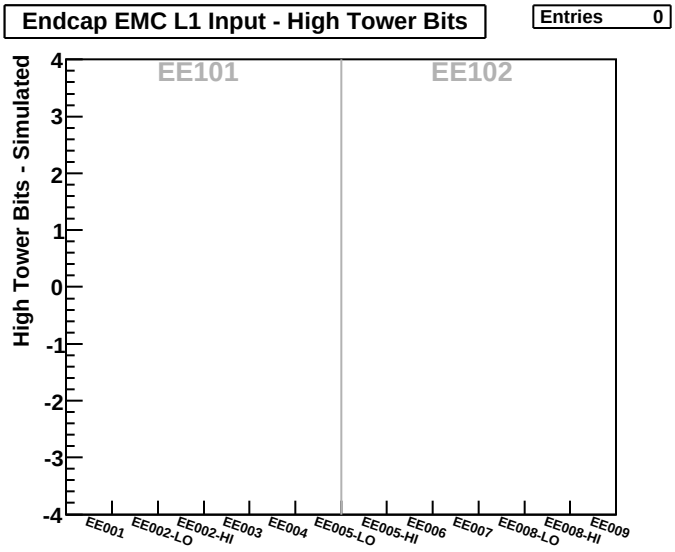

Endcap EMC L1 Input - Low Eta Sum
Entries 8645652
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

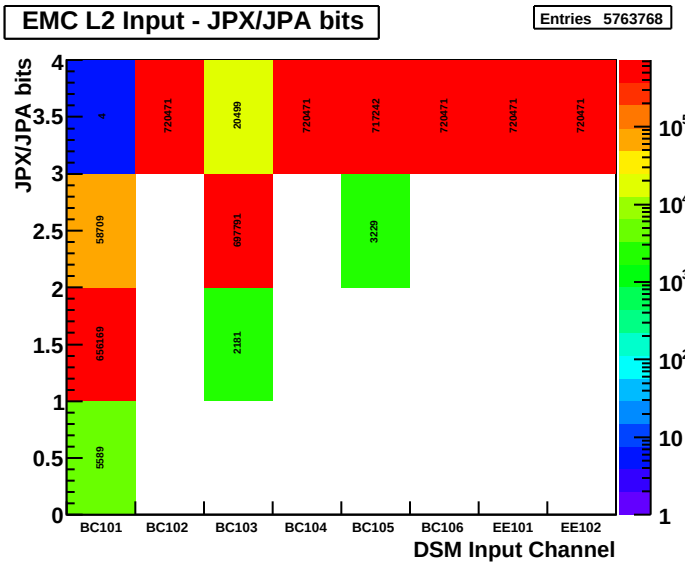

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

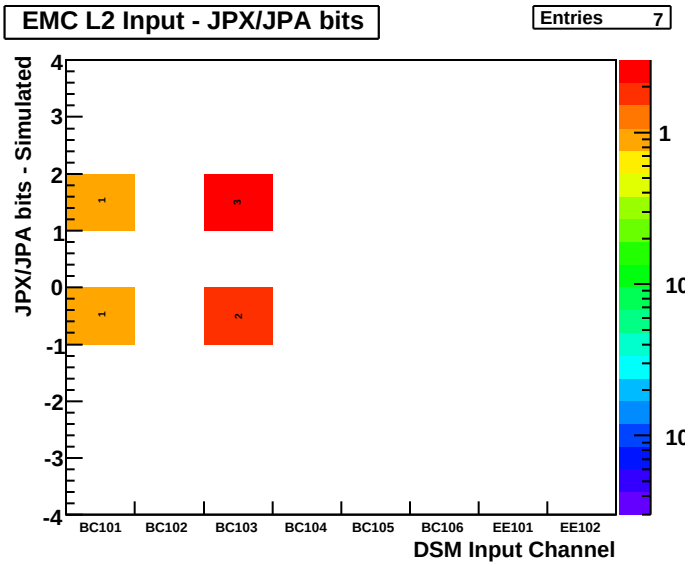

Endcap EMC L1 Input - High Eta Sum
Entries 8645652
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

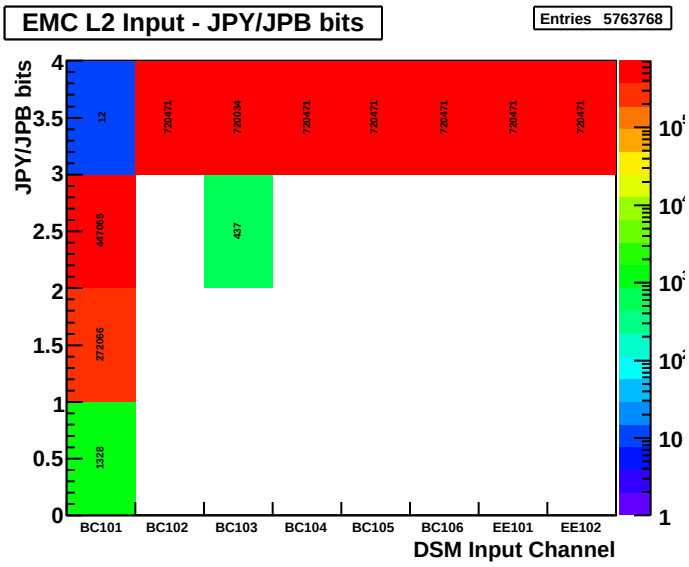

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

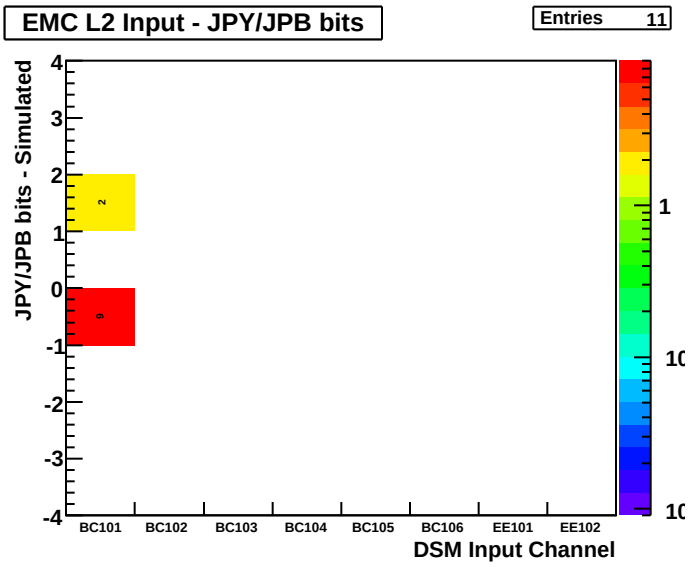

Endcap EMC L1 Input - High Tower Bits
Entries 8645652
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

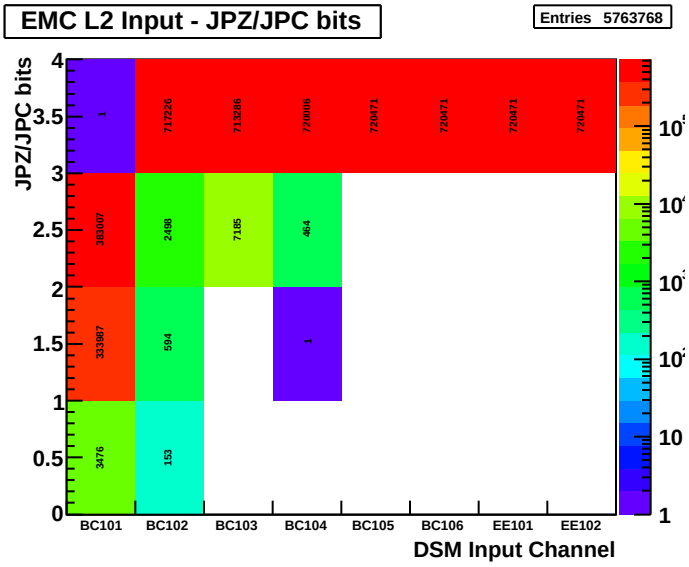

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

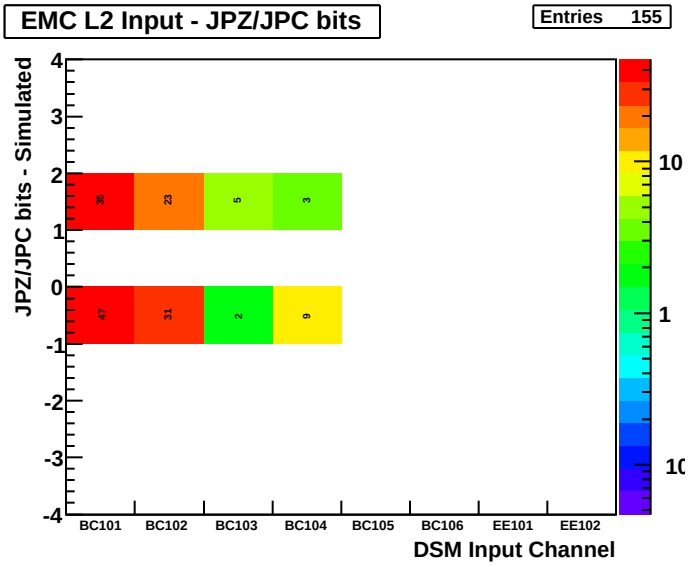

EMC L2 Input - JPX/JPA bits
Entries 5763768
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4 720471 20499 720471 717242 720471 720471 720471
58709 697791 3229
656169 2181
5589

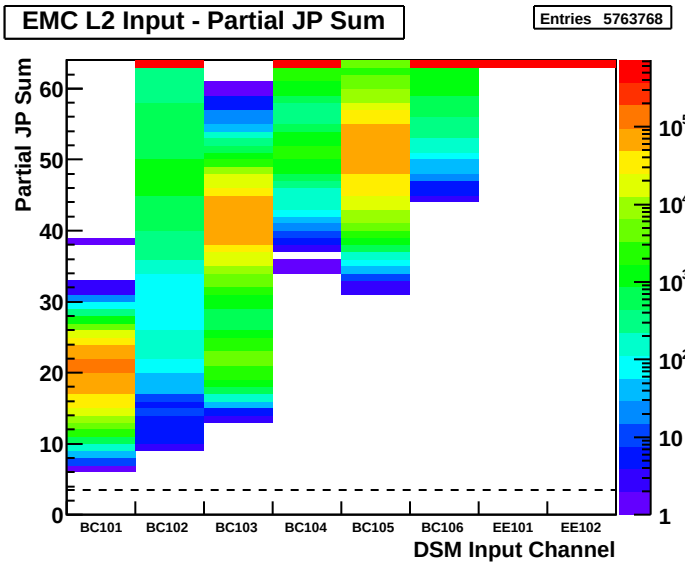

EMC L2 Input - JPX/JPA bits
Entries 7
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 3
1 2

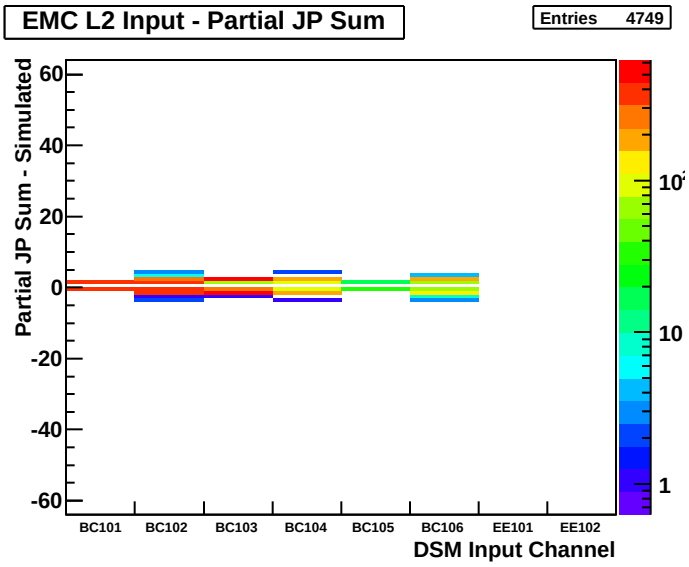

EMC L2 Input - JPY/JPB bits
Entries 5763768
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
12 720471 720034 720471 720471 720471 720471 720471
447065 437
272066
1328

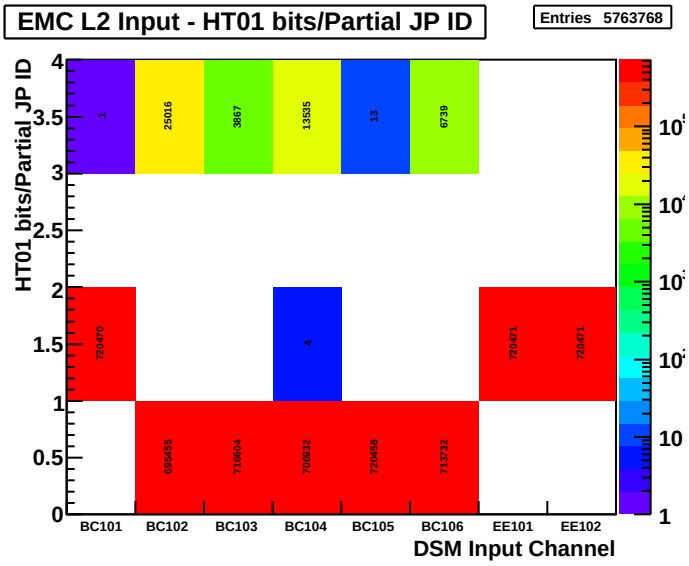

EMC L2 Input - JPY/JPB bits
Entries 11
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2
9

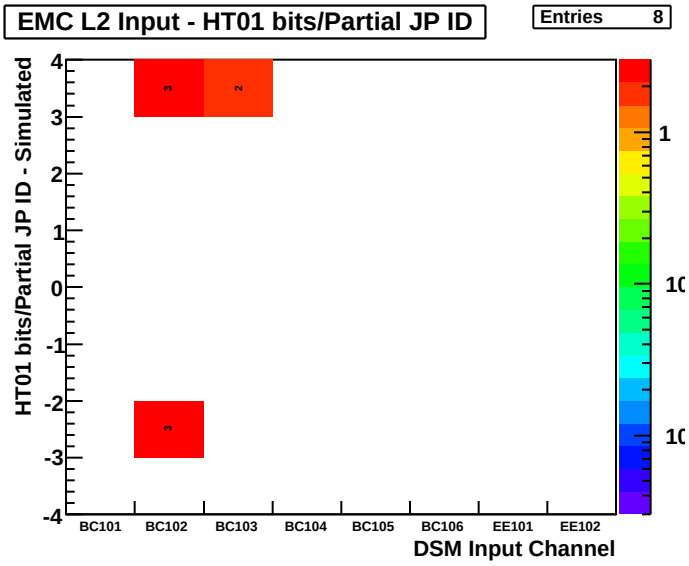

EMC L2 Input - JPZ/JPC bits
Entries 5763768
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 717226 712286 720006 720471 720471 720471 720471
383007 2498 7185 464
333987 594 1
3476 153

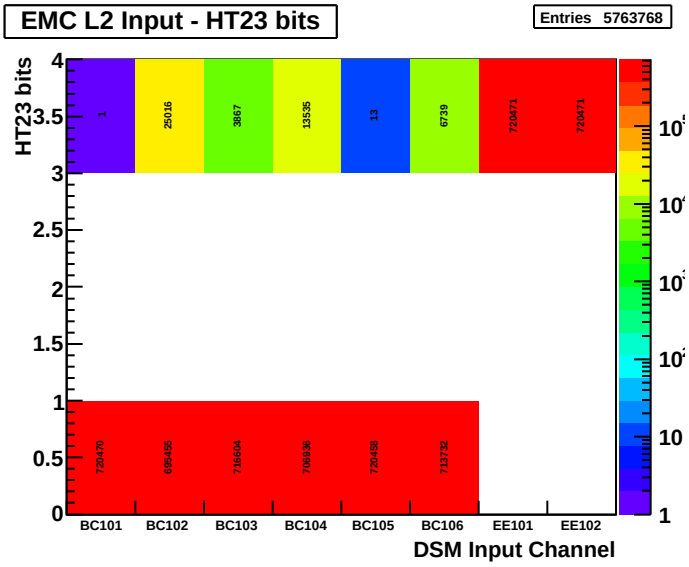

EMC L2 Input - JPZ/JPC bits
Entries 155
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
35 23 5 3
47 31 2 9

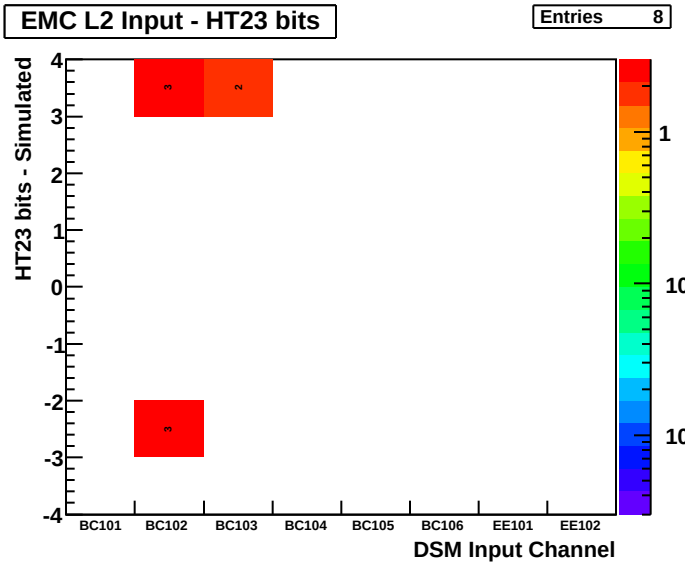

EMC L2 Input - Partial JP Sum
Entries 5763768
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

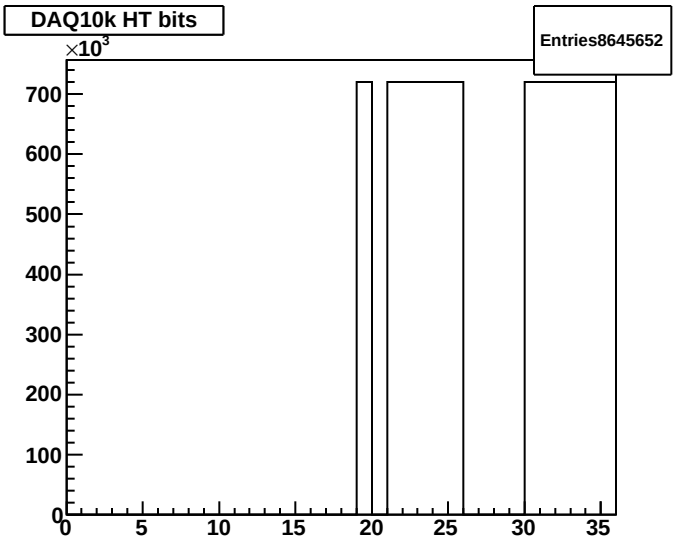

EMC L2 Input - Partial JP Sum
Entries 4749
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

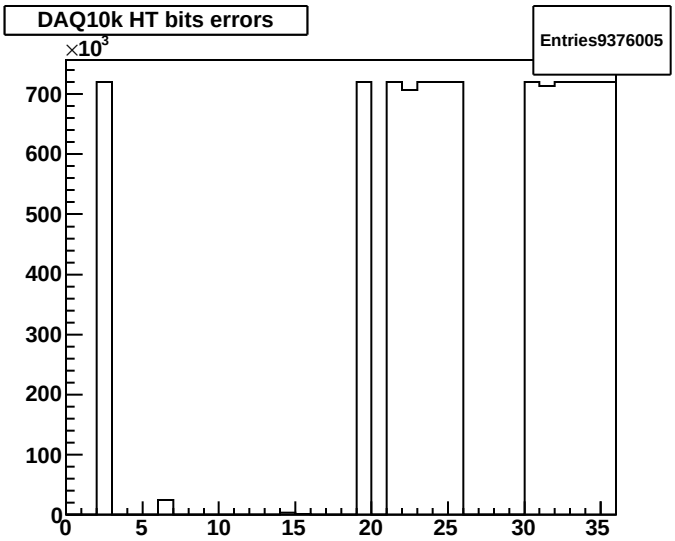

EMC L2 Input - HT01 bits/Partial JP ID
Entries 5763768
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

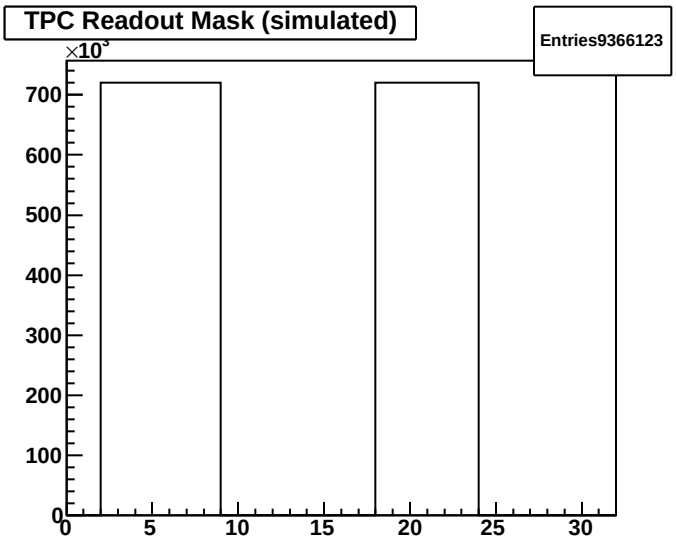

EMC L2 Input - HT01 bits/Partial JP ID
Entries 8
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

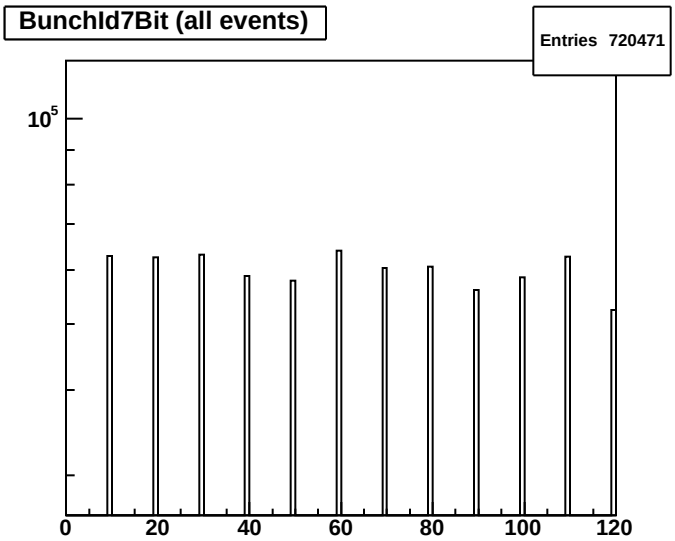

EMC L2 Input - HT23 bits
Entries 5763768
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

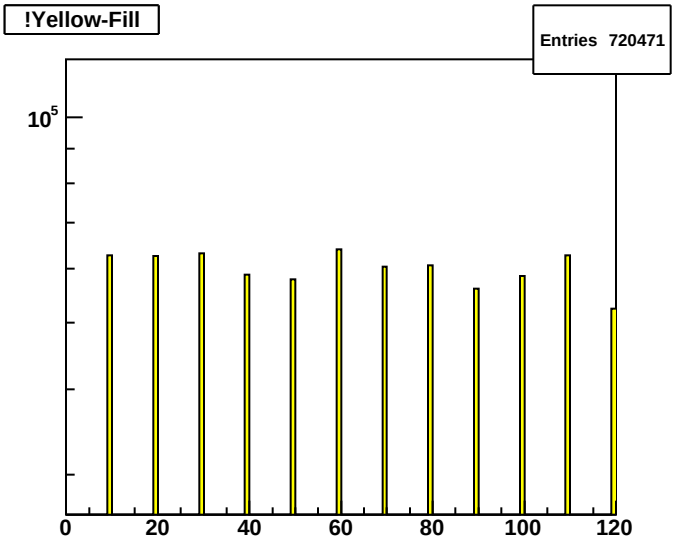

EMC L2 Input - HT23 bits
Entries 8
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

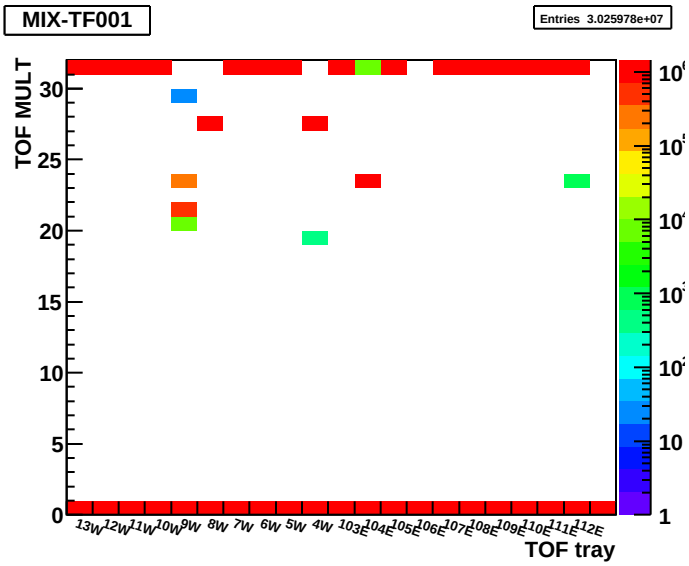

DAQ10k HT bits
Entries8645652
×10^3
700
600
500
400
300
200
100
0
0 5 10 15 20 25 30 35

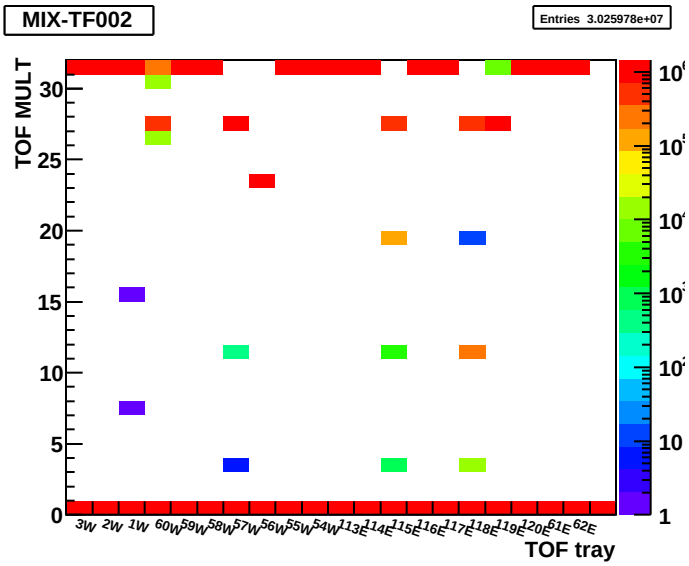

DAQ10k HT bits errors
Entries9376005
×10^3
700
600
500
400
300
200
100
0
0 5 10 15 20 25 30 35

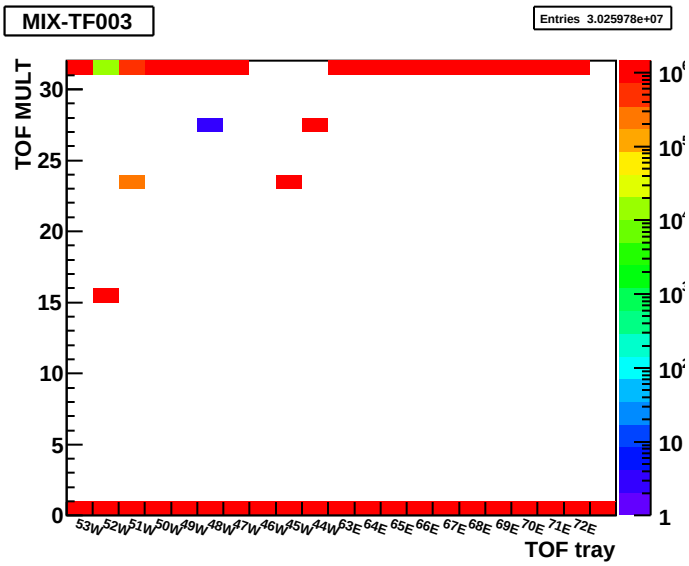

TPC Readout Mask (simulated)
Entries9366123
×10^3
700
600
500
400
300
200
100
0
0 5 10 15 20 25 30

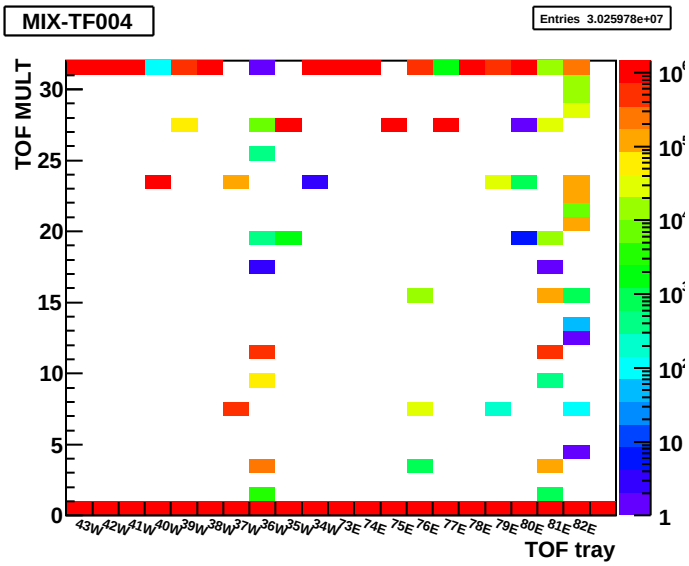

BunchId7Bit (all events)
Entries 720471
10^5
0 20 40 60 80 100 120

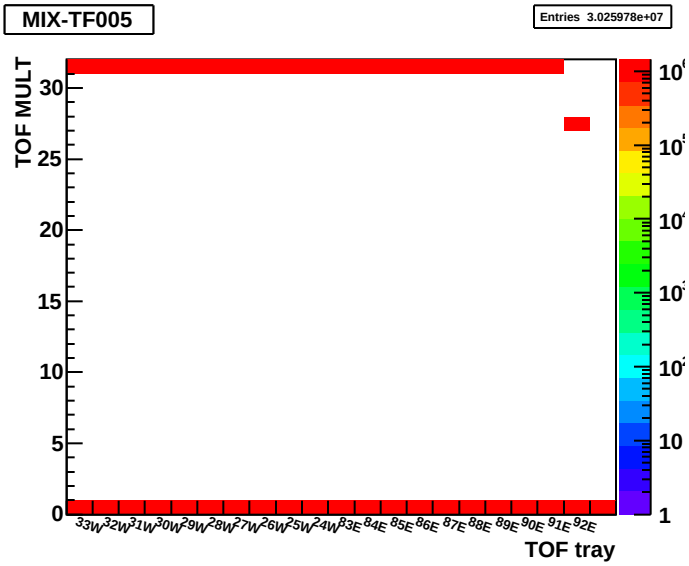

!Yellow-Fill
Entries 720471
10^5
0 20 40 60 80 100 120

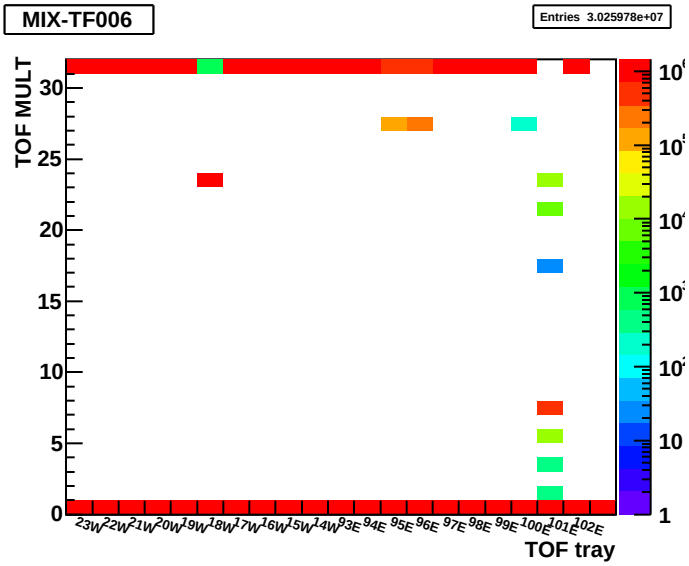

MIX-TF001
Entries 3.025978e+07
TOF MULT
TOF tray

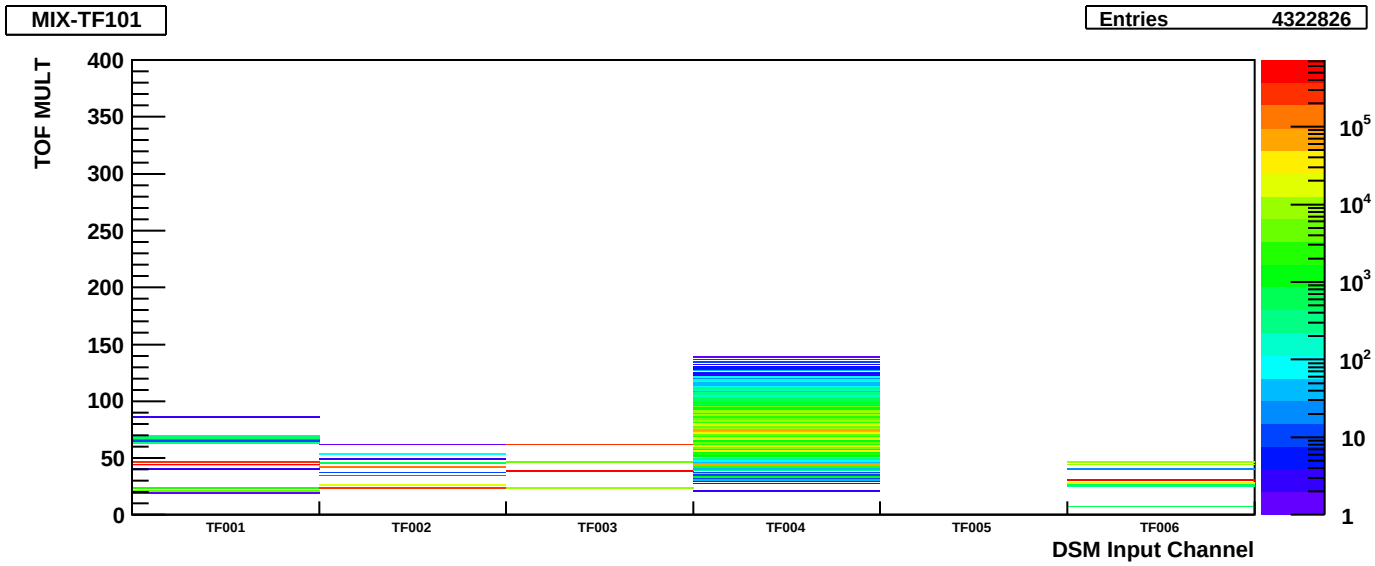

MIX-TF002
Entries 3.025978e+07
TOF MULT
TOF tray

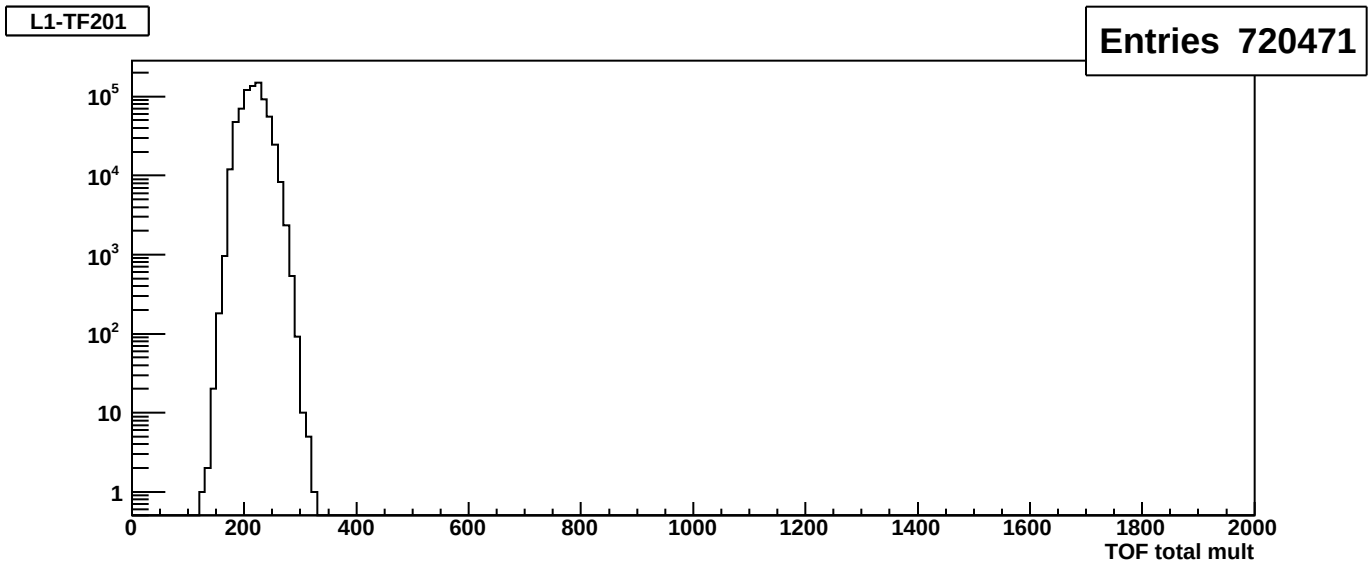

MIX-TF003
Entries 3.025978e+07
TOF MULT
TOF tray

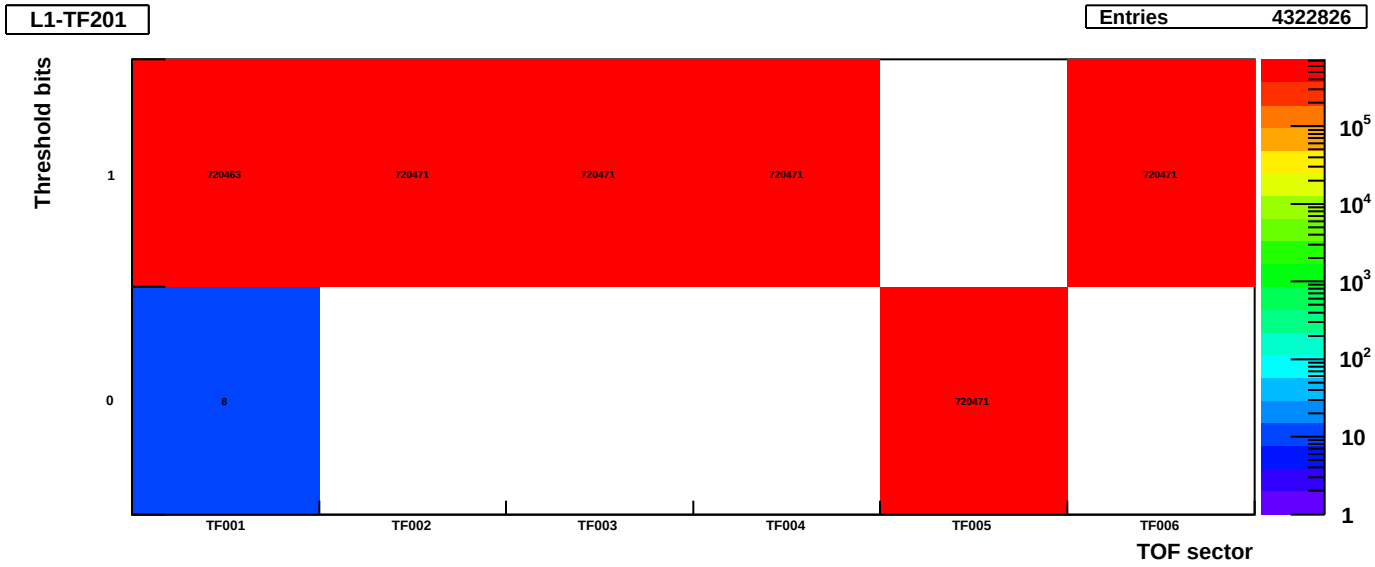

MIX-TF004
Entries 3.025978e+07
TOF MULT
TOF tray


MIX-TF005
Entries 3.025978e+07
TOF MULT
TOF tray

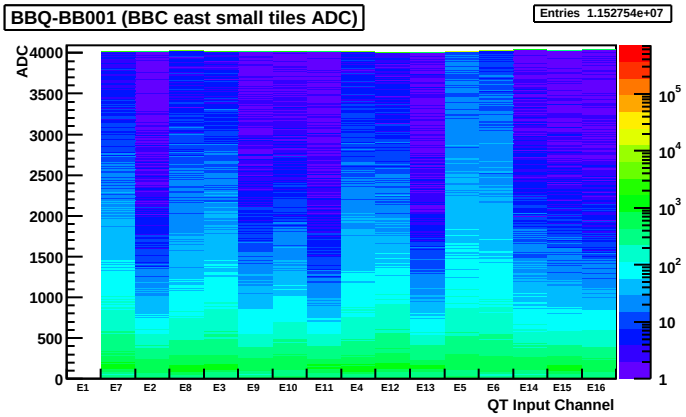

MIX-TF006
Entries 3.025978e+07
TOF MULT
TOF tray


MIX-TF101
Entries 4322826
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
$10^5$
$10^4$
$10^3$
$10^2$
10
1

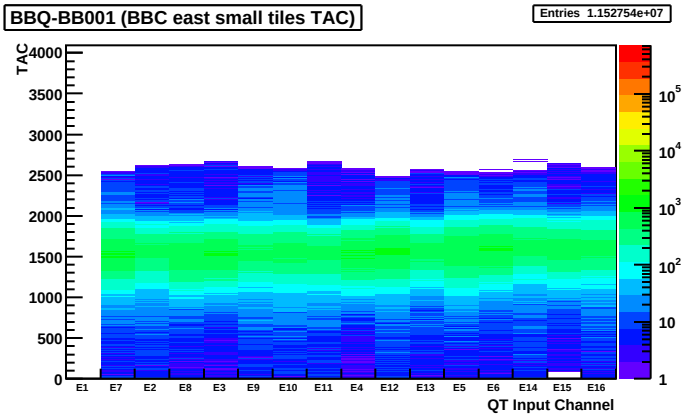

L1-TF201
Entries 720471
$10^5$
$10^4$
$10^3$
$10^2$
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult


L1-TF201
Entries 4322826
Threshold bits
1
0
720463
720471
720471
720471
720471
8
720471
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
$10^5$
$10^4$
$10^3$
$10^2$
10
1

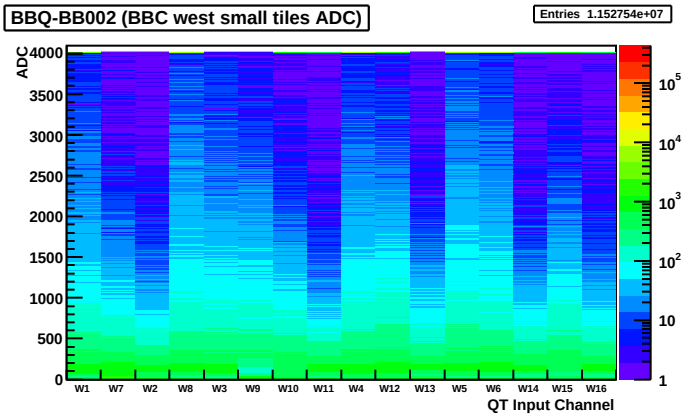
BBQ-BB001 (BBC east small tiles ADC)



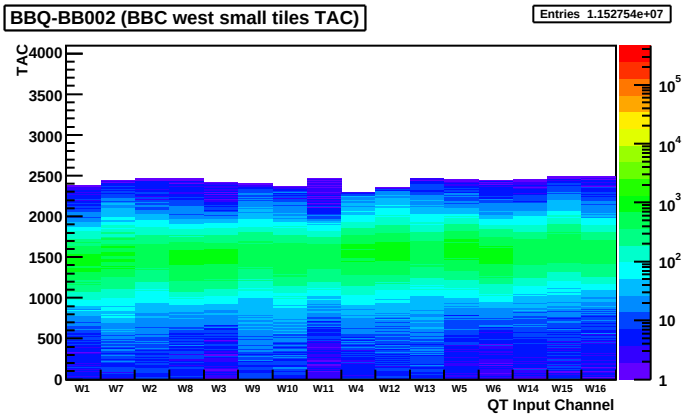

BBQ-BB001 (BBC east small tiles TAC)



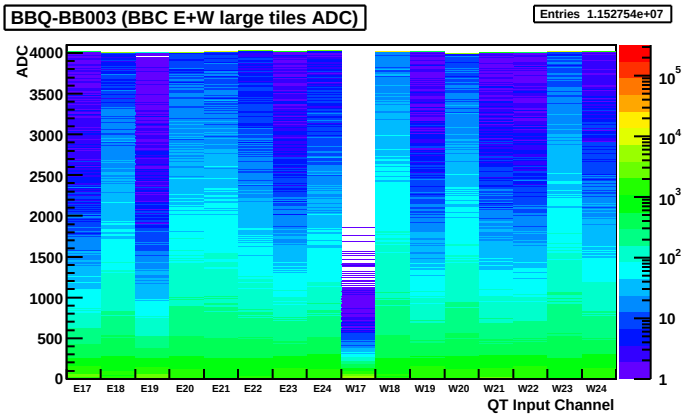

BBQ-BB002 (BBC west small tiles ADC)



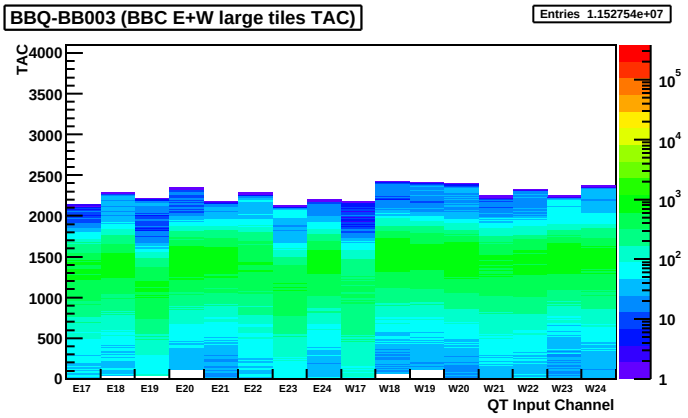

BBQ-BB002 (BBC west small tiles TAC)



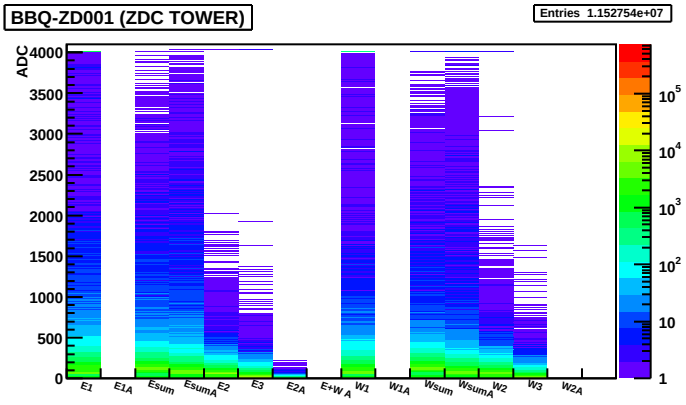

BBQ-BB003 (BBC E+W large tiles ADC)



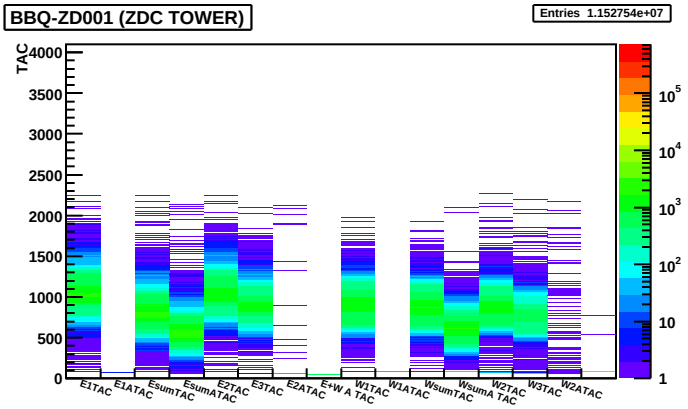

BBQ-BB003 (BBC E+W large tiles TAC)

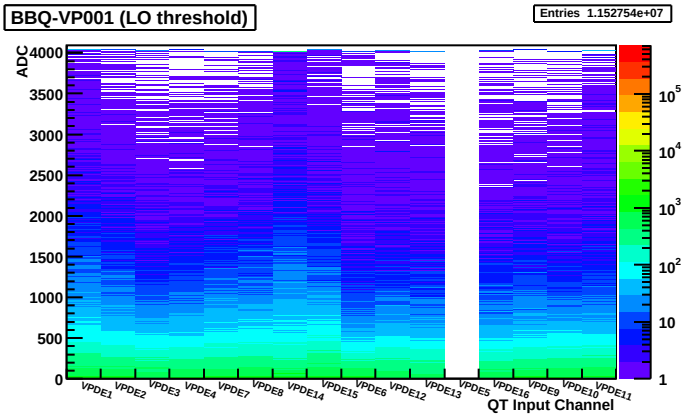


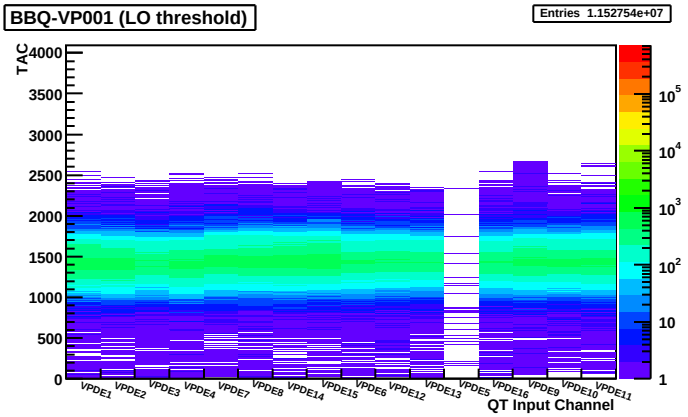

BBQ-ZD001 (ZDC TOWER)

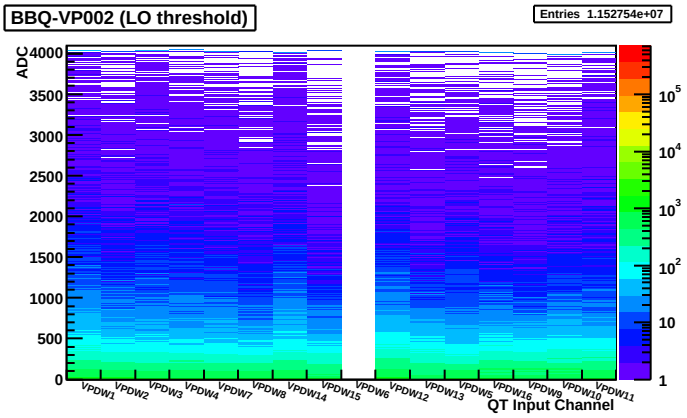


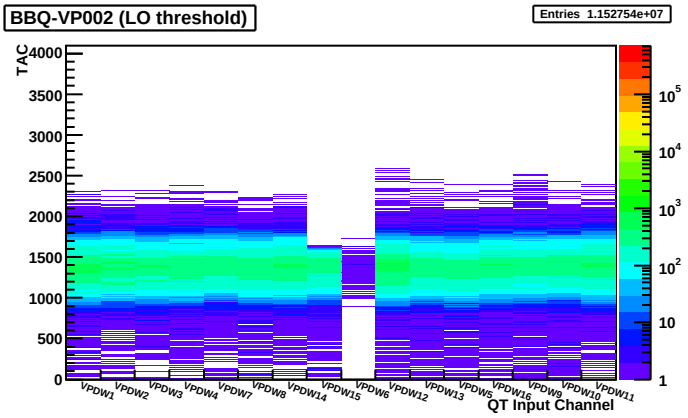

BBQ-ZD001 (ZDC TOWER)

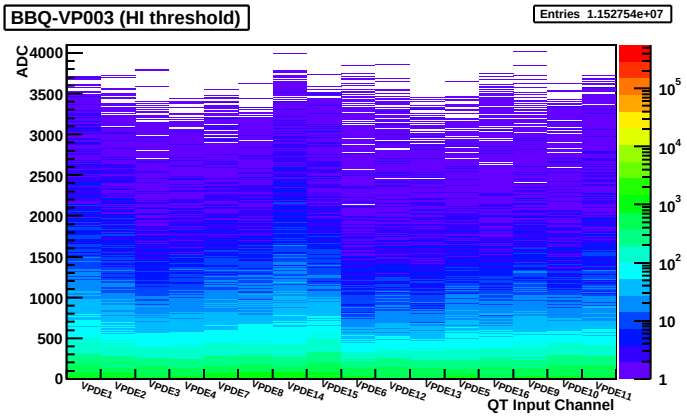


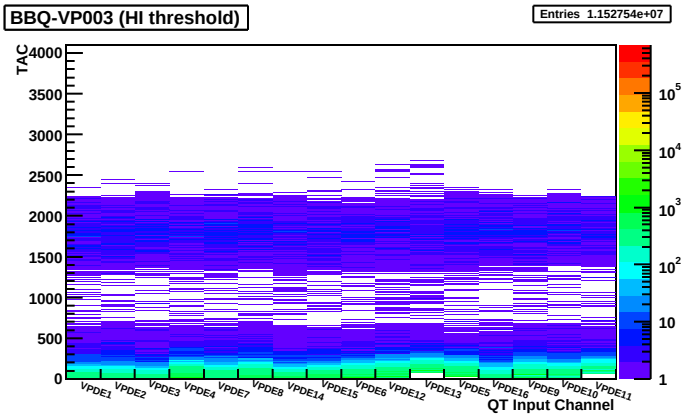

BBQ-VP001 (LO threshold)
Entries 1.152754e+07
ADC
QT Input Channel

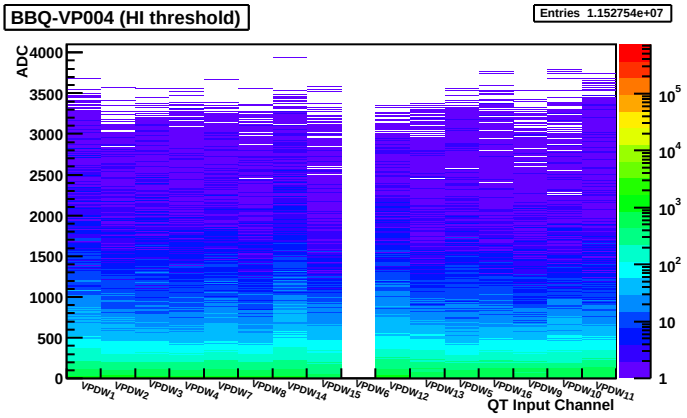

BBQ-VP001 (LO threshold)
Entries 1.152754e+07
TAC
QT Input Channel

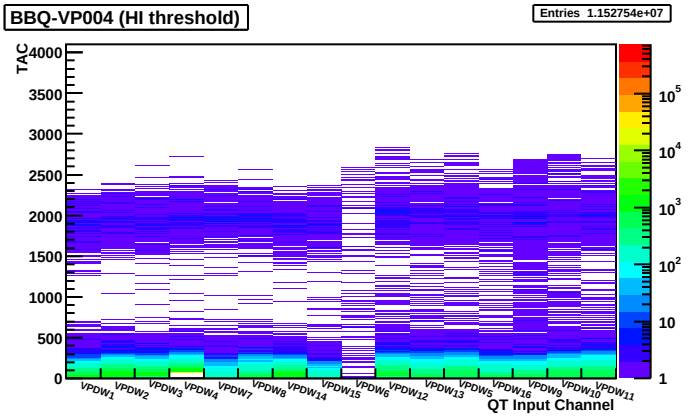

BBQ-VP002 (LO threshold)
Entries 1.152754e+07
ADC
QT Input Channel

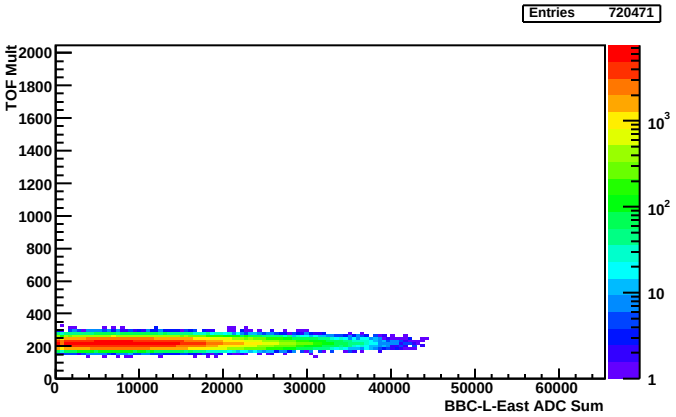

BBQ-VP002 (LO threshold)
Entries 1.152754e+07
TAC
QT Input Channel

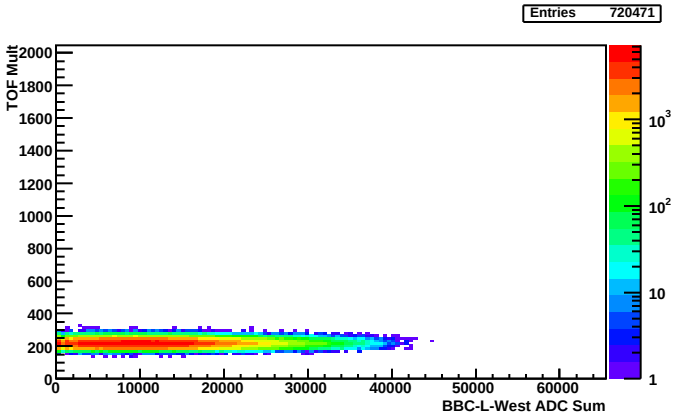

BBQ-VP003 (HI threshold)
Entries 1.152754e+07
ADC
QT Input Channel

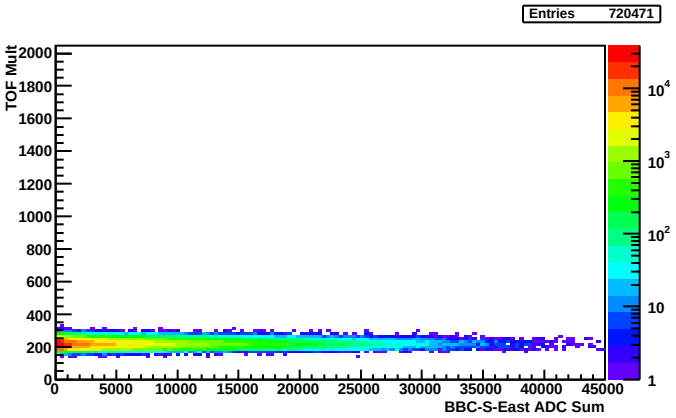

BBQ-VP003 (HI threshold)
Entries 1.152754e+07
TAC
QT Input Channel

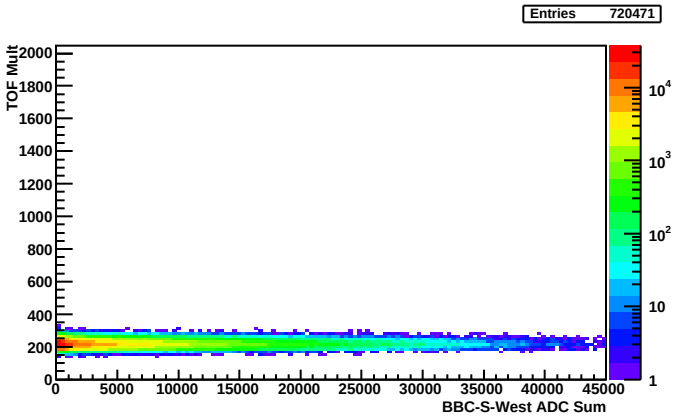

BBQ-VP004 (HI threshold)
Entries 1.152754e+07
ADC
QT Input Channel

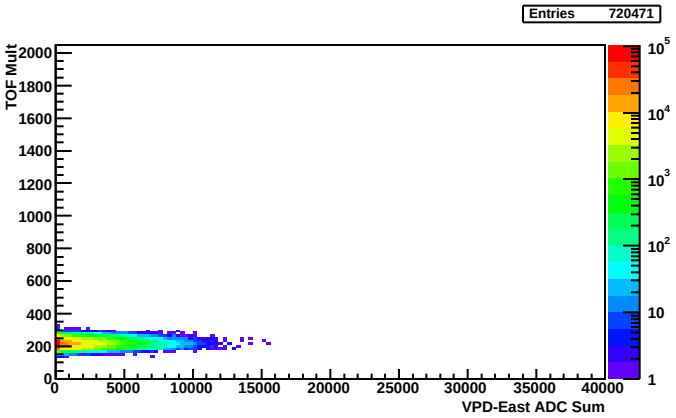

BBQ-VP004 (HI threshold)
Entries 1.152754e+07
TAC
QT Input Channel

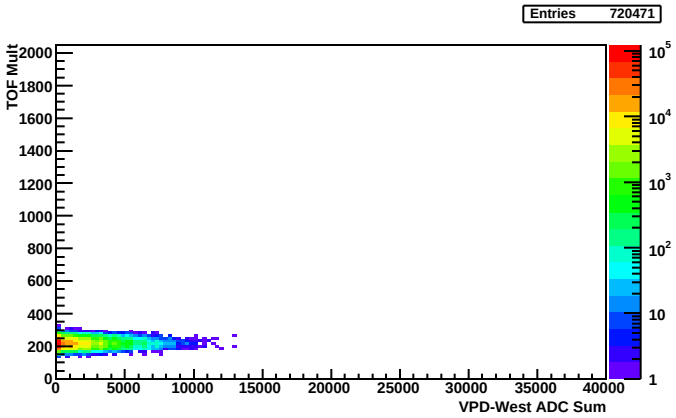

Entries 720471
TOF Mult
BBC-L-East ADC Sum

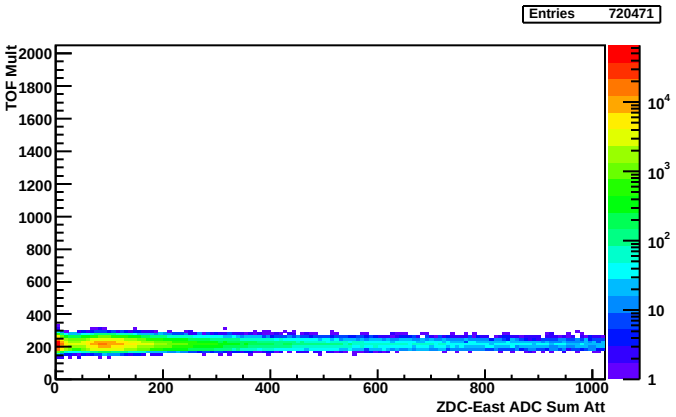

Entries 720471
TOF Mult
BBC-L-West ADC Sum

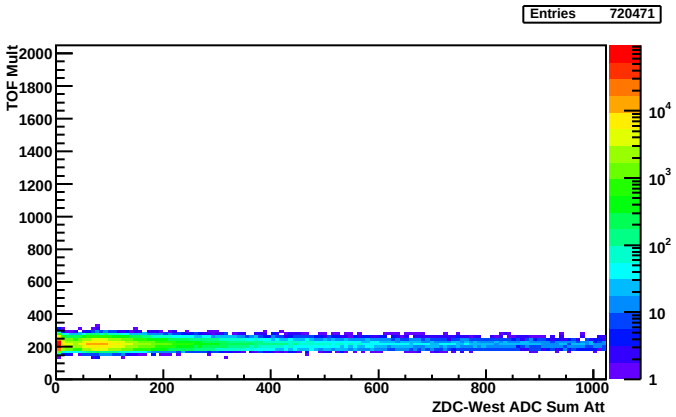

Entries 720471
TOF Mult
BBC-S-East ADC Sum

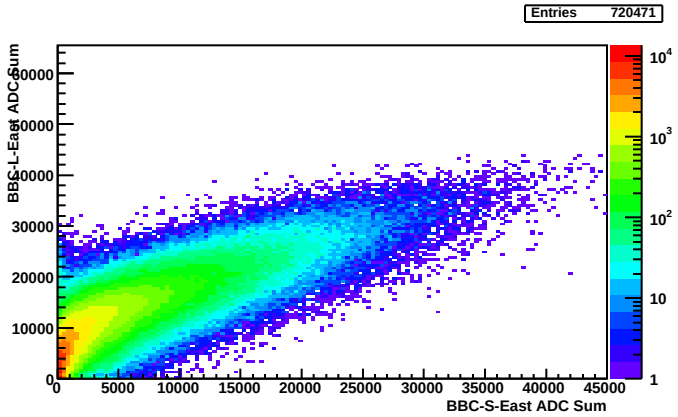

Entries 720471
TOF Mult
BBC-S-West ADC Sum

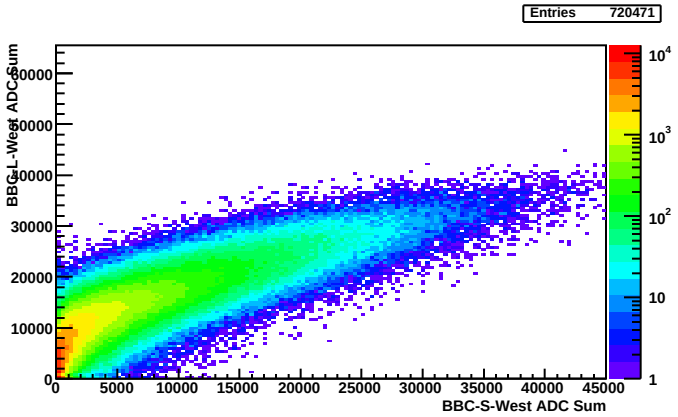

Entries 720471
TOF Mult
VPD-East ADC Sum

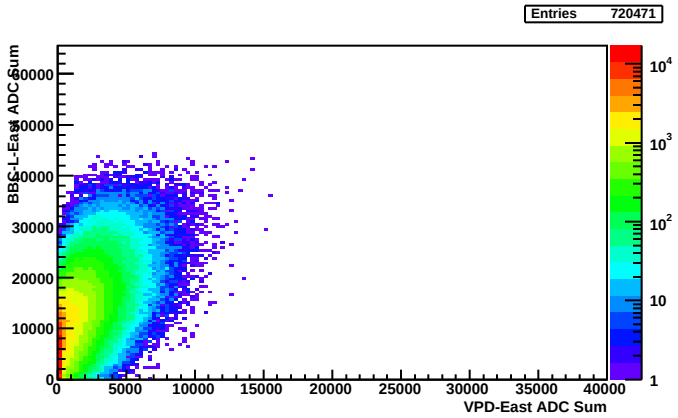

Entries 720471
TOF Mult
VPD-West ADC Sum

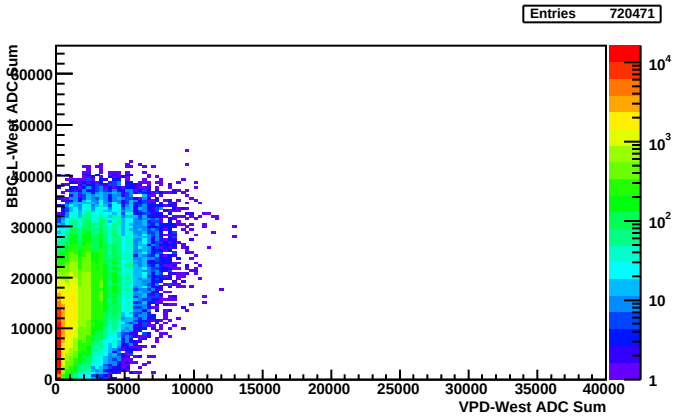

Entries 720471
TOF Mult
ZDC-East ADC Sum Att

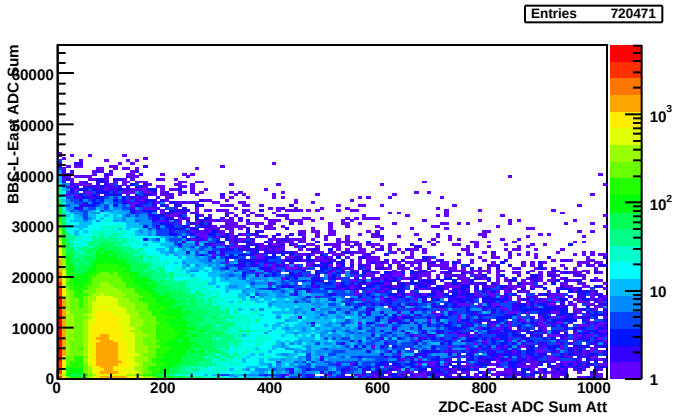

Entries 720471
TOF Mult
ZDC-West ADC Sum Att

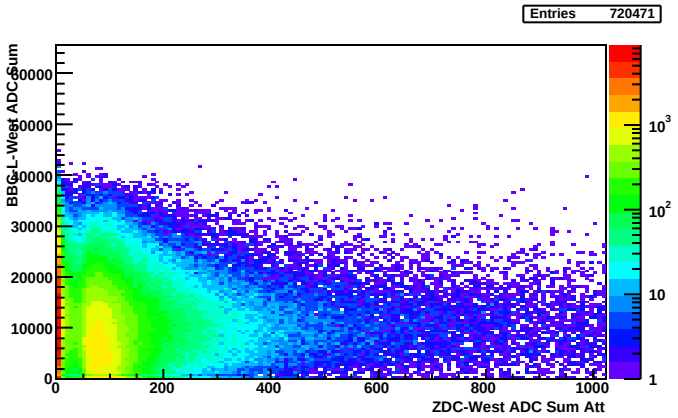

Entries 720471
BBC-L-East ADC Sum
BBC-S-East ADC Sum

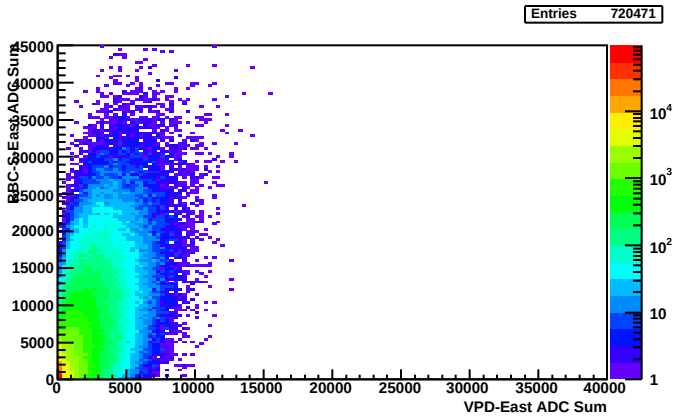

Entries 720471
BBC-L-West ADC Sum
BBC-S-West ADC Sum

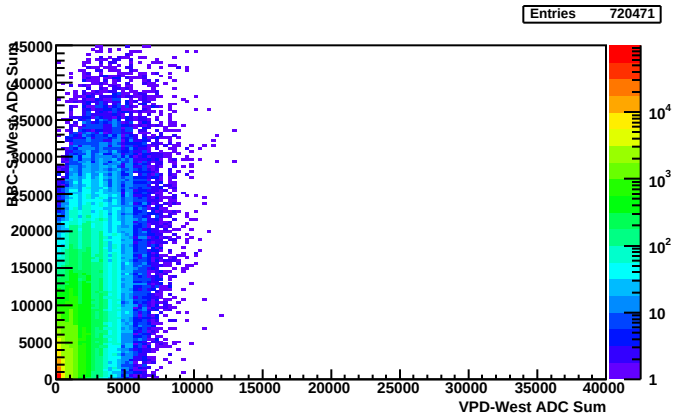

Entries 720471
BBC-L-East ADC Sum
VPD-East ADC Sum

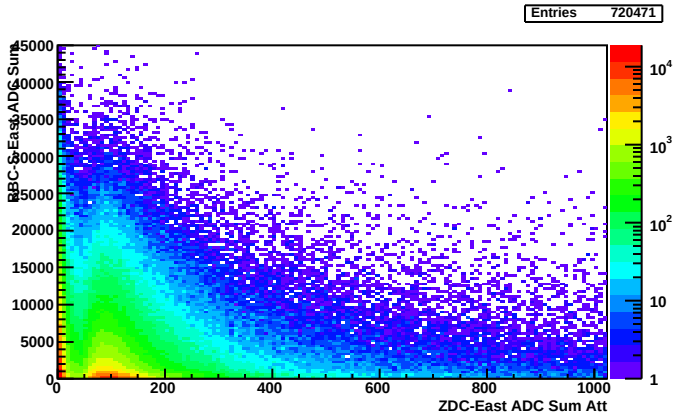

Entries 720471
BBC-L-West ADC Sum
VPD-West ADC Sum

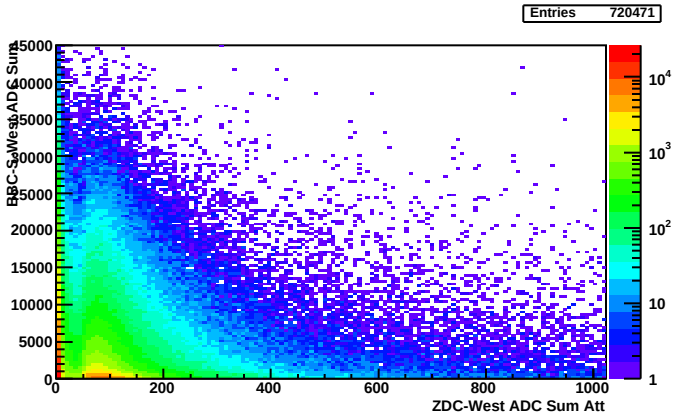

Entries 720471
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

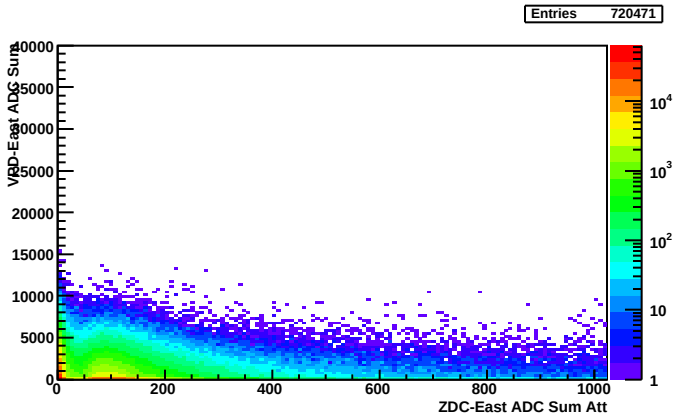

Entries 720471
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

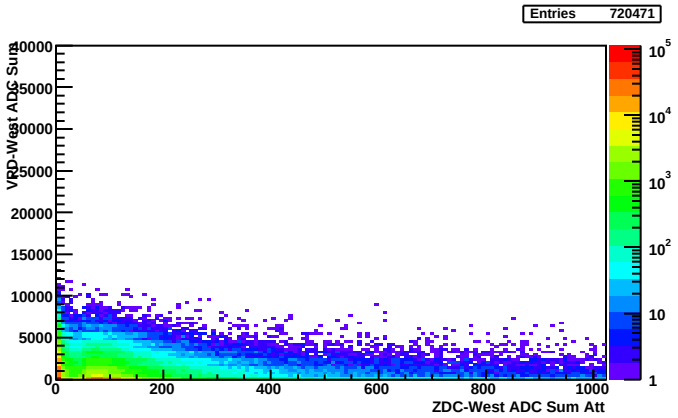

Entries 720471
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 720471
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 720471
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 720471
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 720471
VPD-East ADC Sum
ZDC-East ADC Sum Att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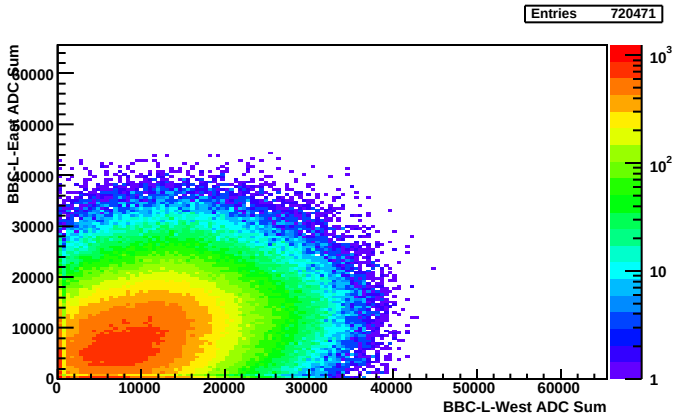
VPD-West ADC Sum
ZDC-West ADC Sum Att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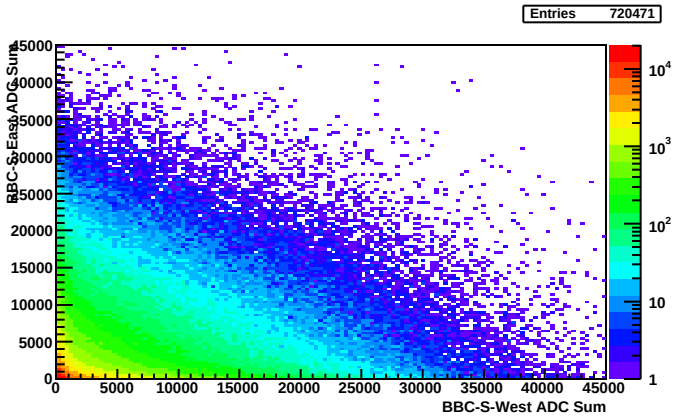
BBC-L-East ADC Sum
BBC-L-West ADC Sum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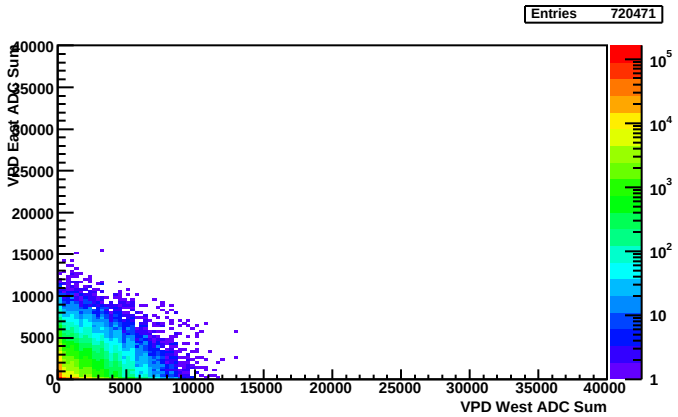
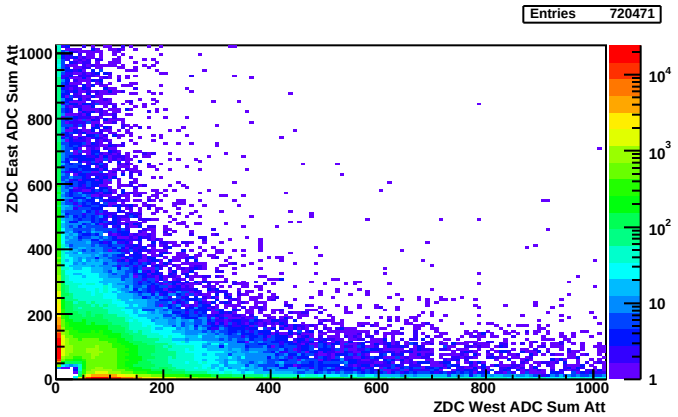
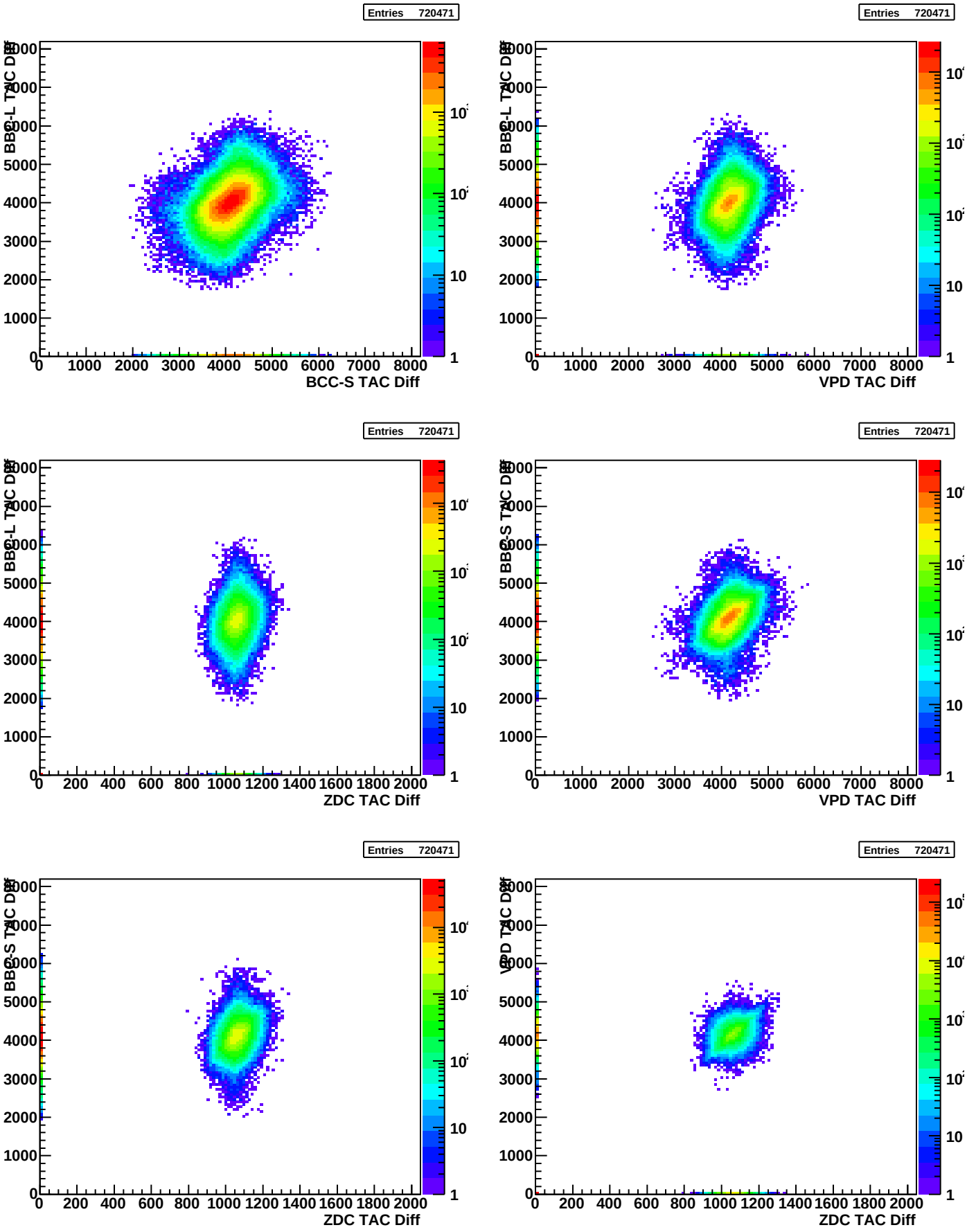
BBC-S-East ADC Sum
BBC-S-West ADC Sum


Entries 720471
VPD East ADC Sum
VPD West ADC Sum


Entries 720471
ZDC East ADC Sum Att
ZDC West ADC Sum Att


Entries 720471
BBC-L TAC Diff
BCC-S TAC Diff
Entries 720471
BBC-L TAC Diff
VPD TAC Diff
Entries 720471
BBC-L TAC Diff
ZDC TAC Diff
Entries 720471
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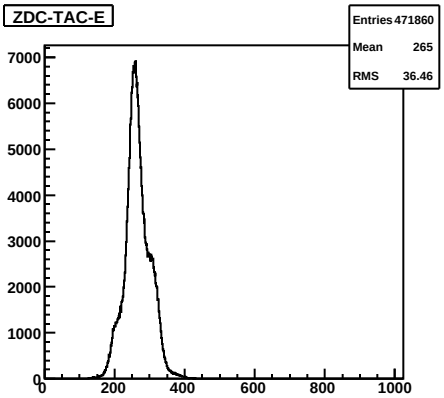
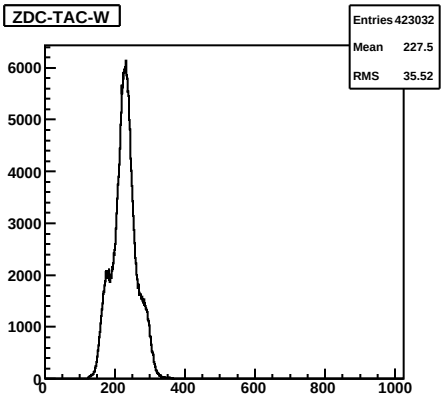
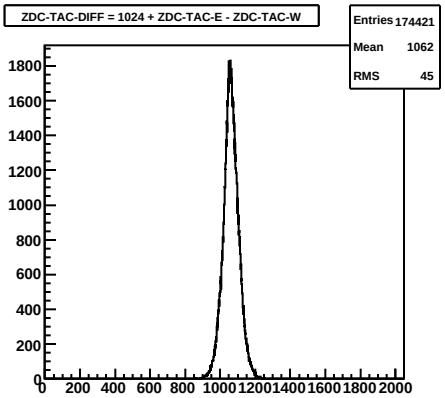
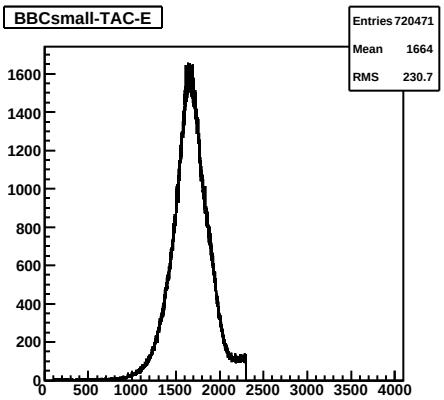
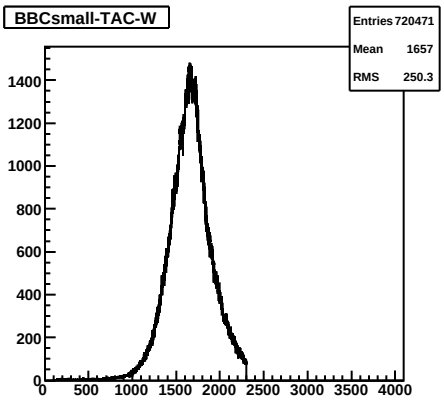
VPD TAC Diff
Entries 720471
BBC-S TAC Diff
ZDC TAC Diff
Entries 720471
VPD TAC Diff
ZDC TAC Diff

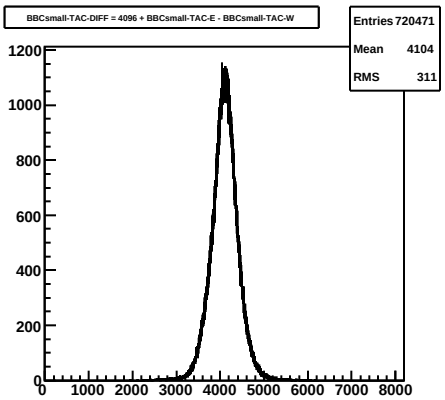

ZDC-TAC-E
Entries 471860
Mean 265
RMS 36.46

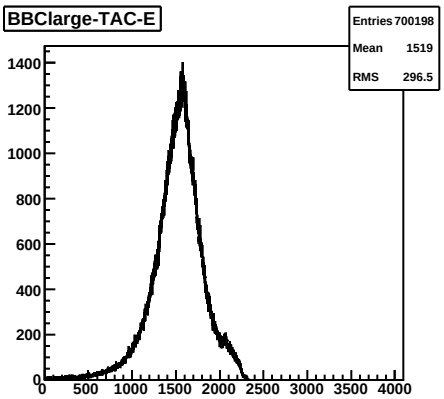

ZDC-TAC-W
Entries 423032
Mean 227.5
RMS 35.52

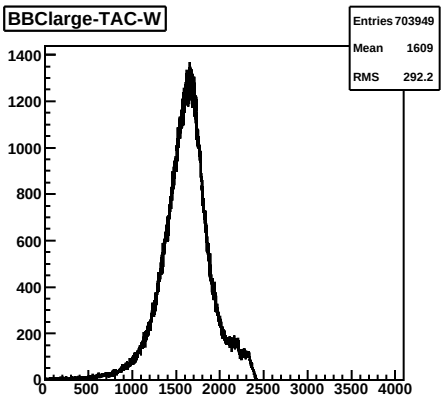

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 174421
Mean 1062
RMS 45

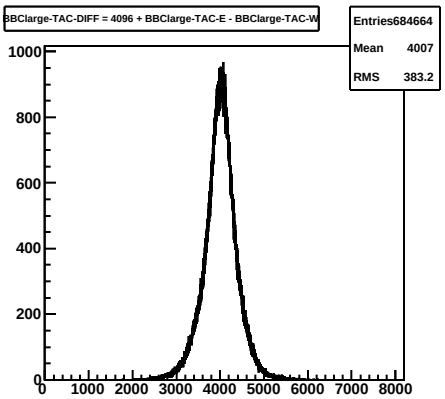

BBCsmall-TAC-E
Entries 720471
Mean 1664
RMS 230.7

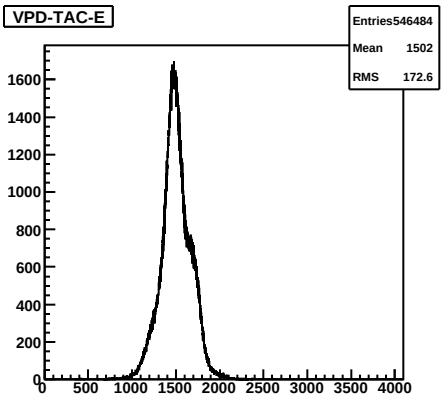

BBCsmall-TAC-W
Entries 720471
Mean 1657
RMS 250.3

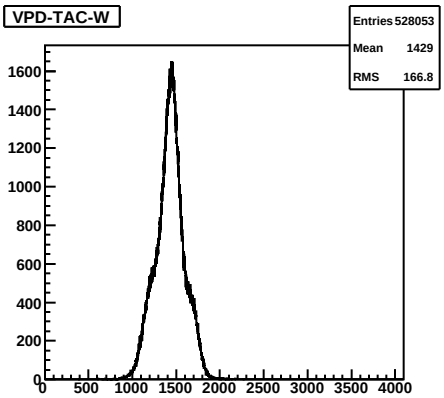

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 720471
Mean 4104
RMS 311

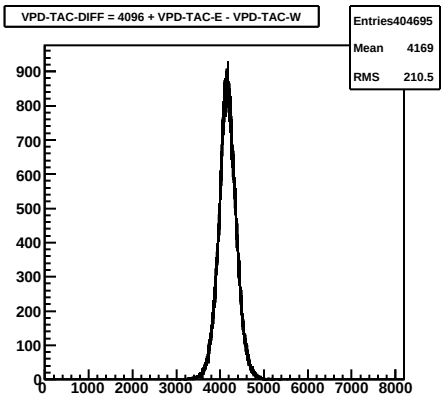

BBClarge-TAC-E
Entries 700198
Mean 1519
RMS 296.5

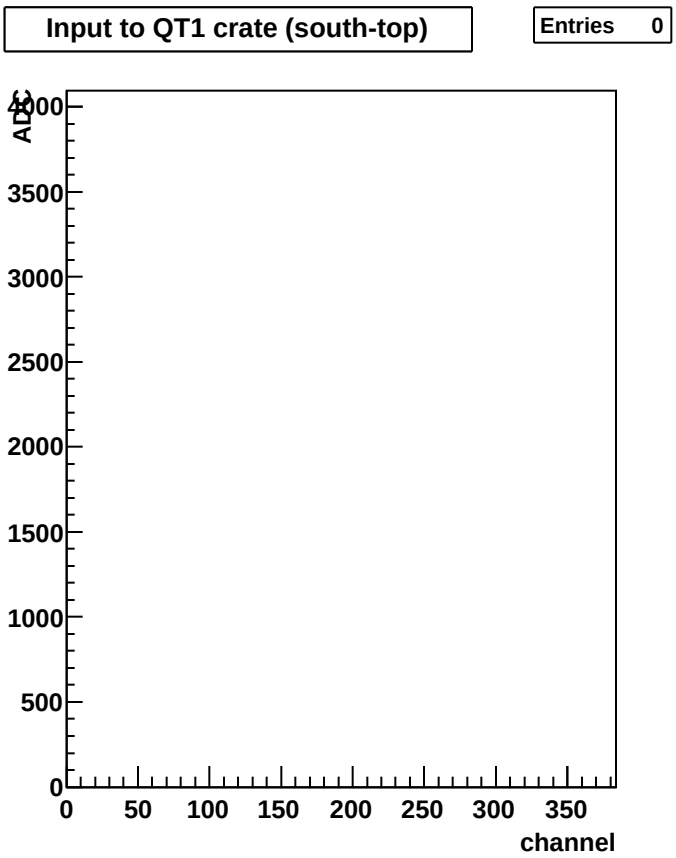

BBClarge-TAC-W
Entries 703949
Mean 1609
RMS 292.2

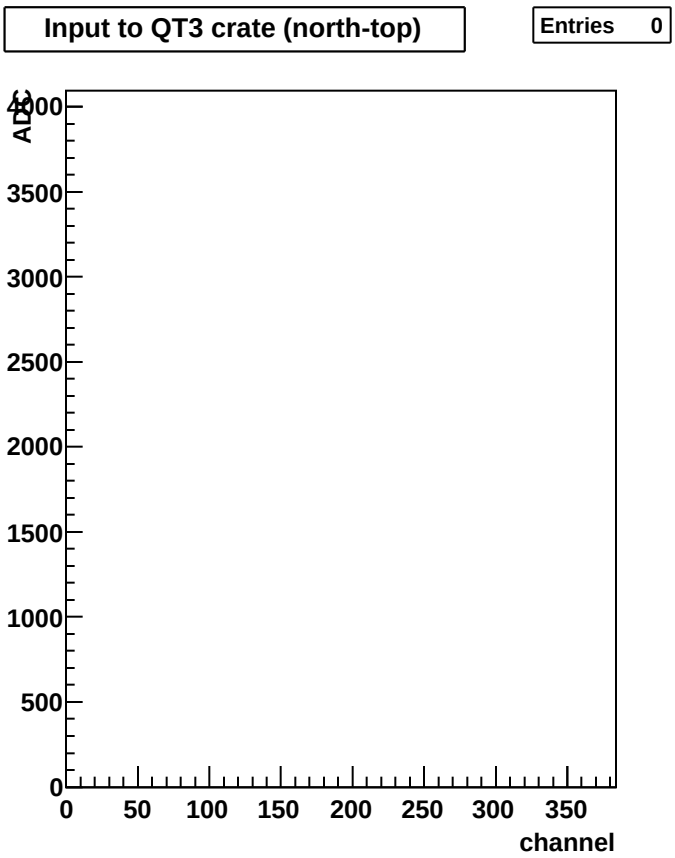

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries684664
Mean 4007
RMS 383.2

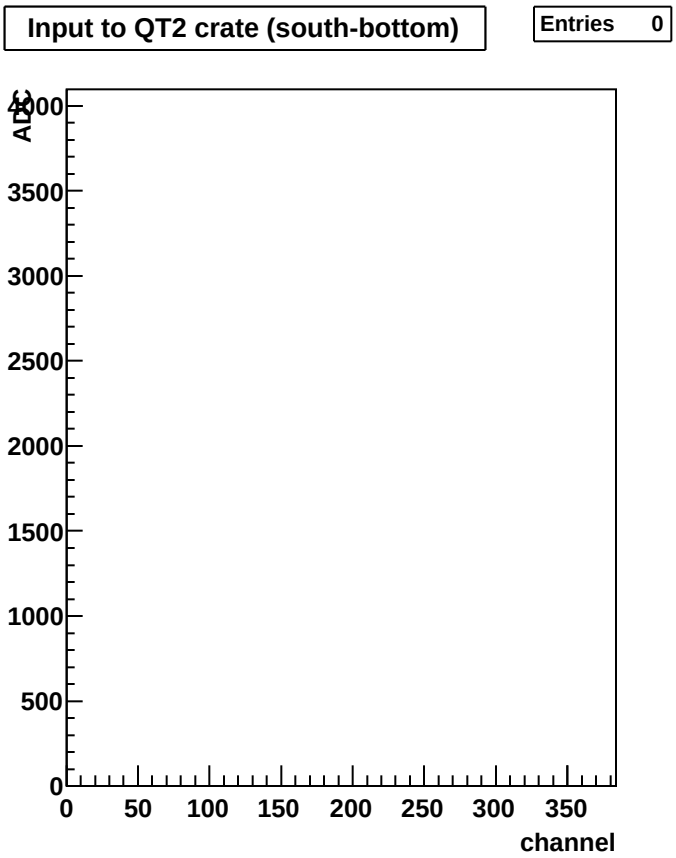

VPD-TAC-E
Entries546484
Mean 1502
RMS 172.6

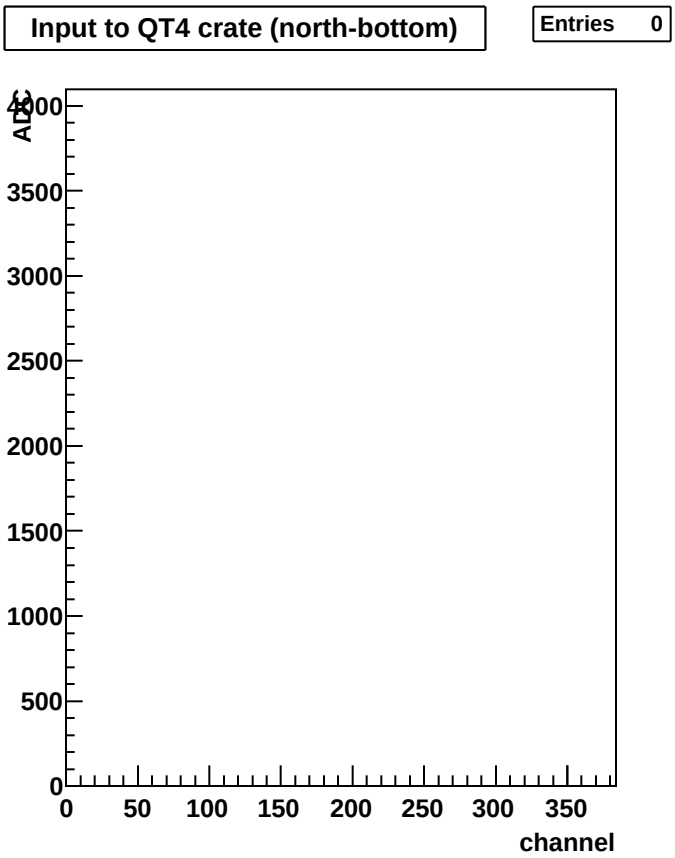

VPD-TAC-W
Entries 528053
Mean 1429
RMS 166.8

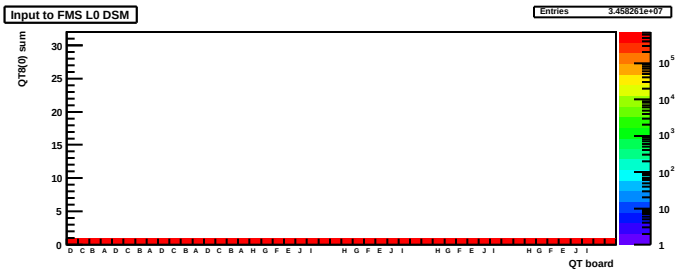

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries404695
Mean 4169
RMS 210.5

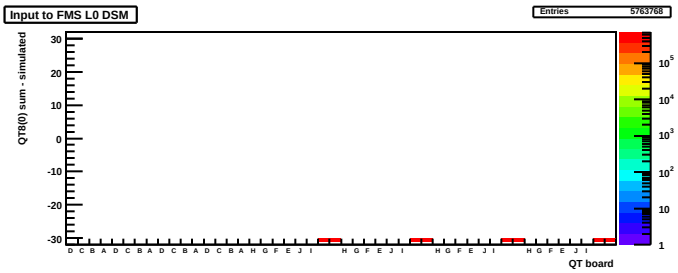

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

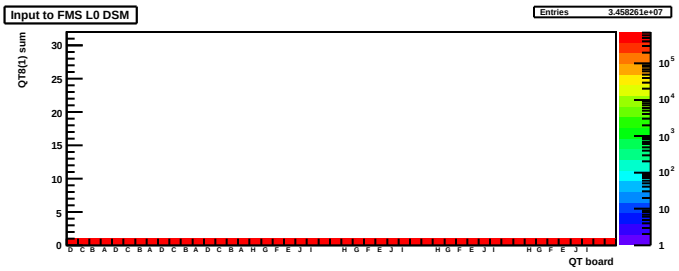

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

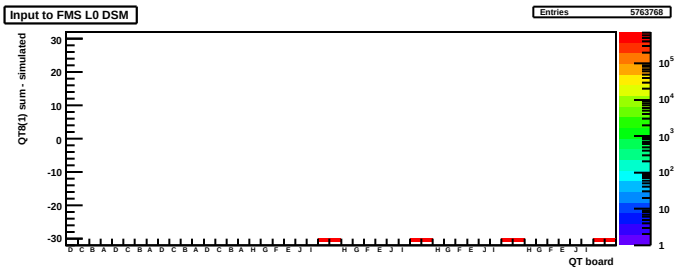

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

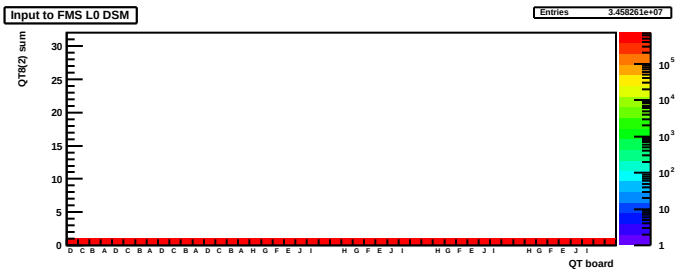

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

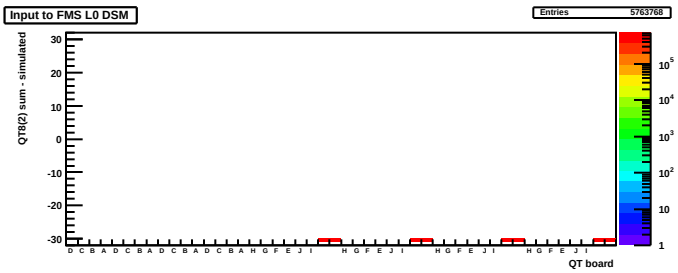

Input to FMS L0 DSM
Entries 3.458261e+07
QT8(0) sum
QT board

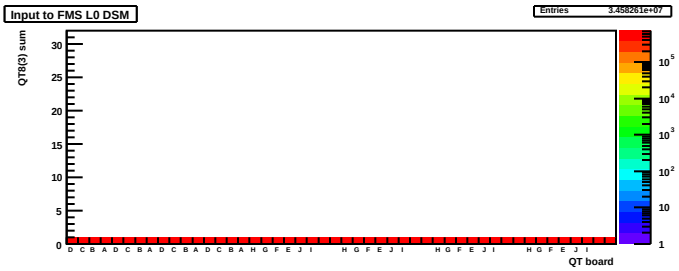

Input to FMS L0 DSM
Entries 5763768
QT8(0) sum - simulated
QT board

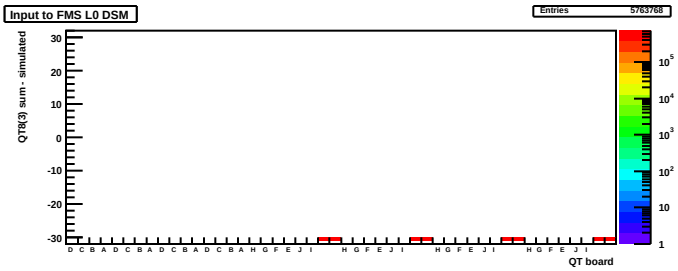

Input to FMS L0 DSM
Entries 3.458261e+07
QT8(1) sum
QT board

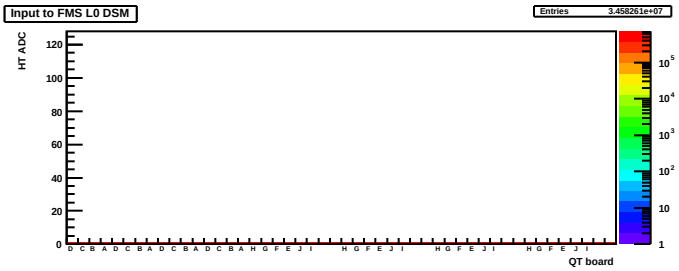

Input to FMS L0 DSM
Entries 5763768
QT8(1) sum - simulated
QT board

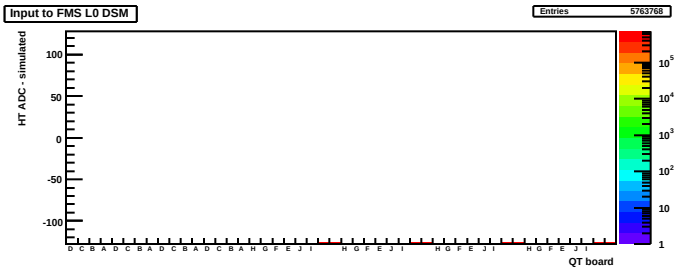

Input to FMS L0 DSM
Entries 3.458261e+07
QT8(2) sum
QT board

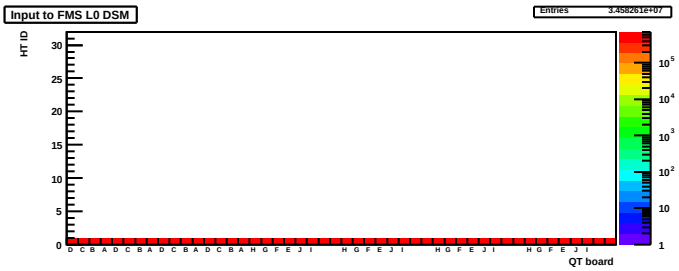

Input to FMS L0 DSM
Entries 5763768
QT8(2) sum - simulated
QT board

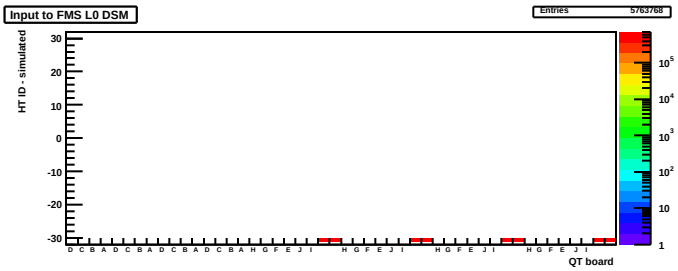

Input to FMS L0 DSM
Entries 3.458261e+07
QT8(3) sum
QT board

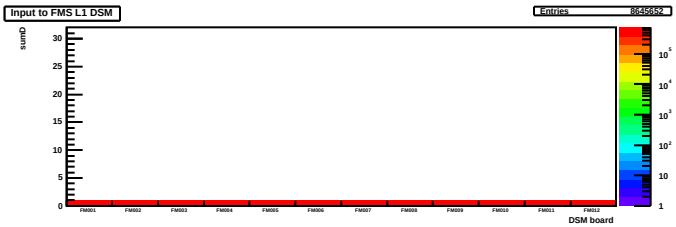

Input to FMS L0 DSM
Entries 5763768
QT8(3) sum - simulated
QT board

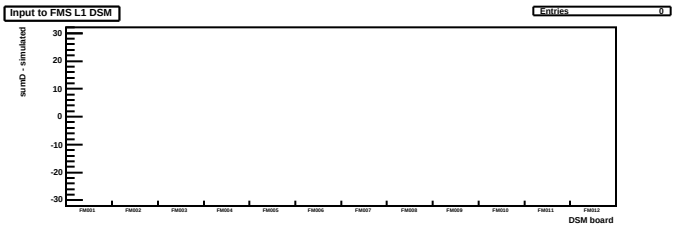

Input to FMS L0 DSM
Entries 3.458261e+07
HT ADC
QT board

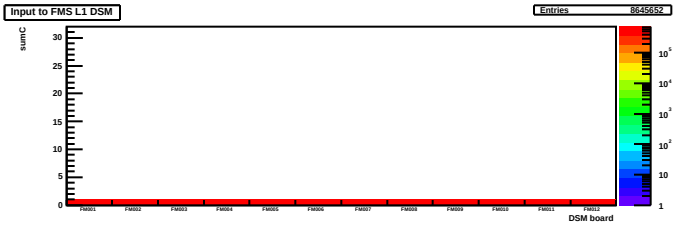

Input to FMS L0 DSM
Entries 5763768
HT ADC - simulated
QT board

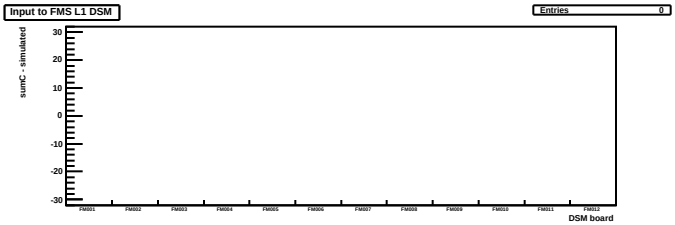

Input to FMS L0 DSM
Entries 3.458261e+07
HT ID
QT board

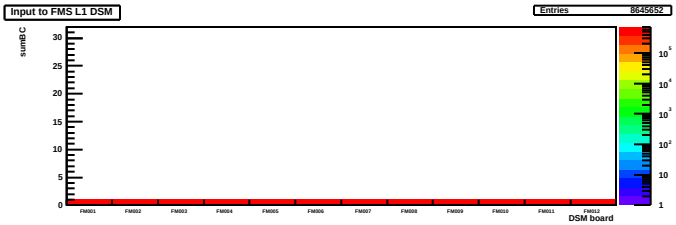

Input to FMS L0 DSM
Entries 5763768
HT ID - simulated
QT board

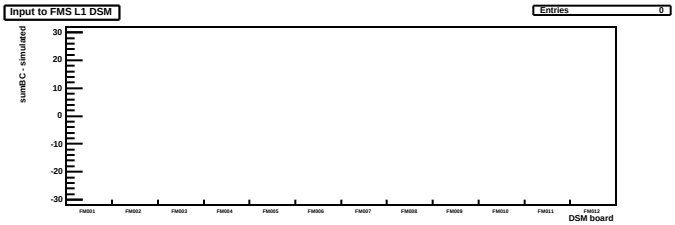

Input to FMS L1 DSM
Entries 8645652
sumD
DSM board

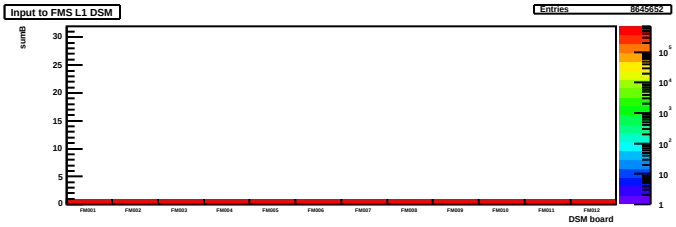

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

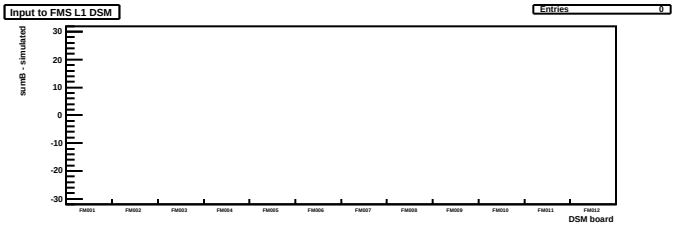

Input to FMS L1 DSM
Entries 8645652
sumC
DSM board

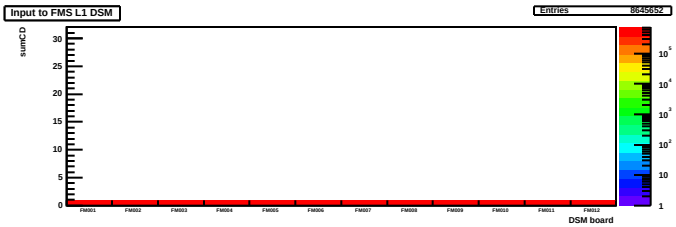

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

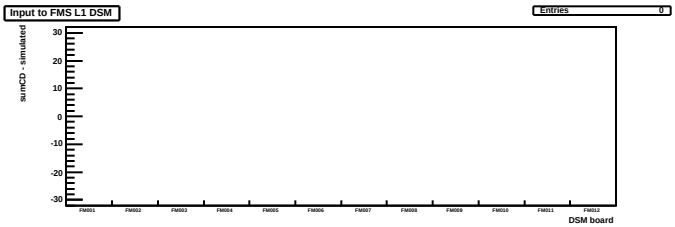

Input to FMS L1 DSM
Entries 8645652
sumBC
DSM board

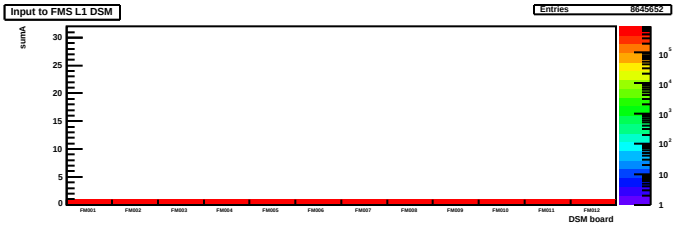

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

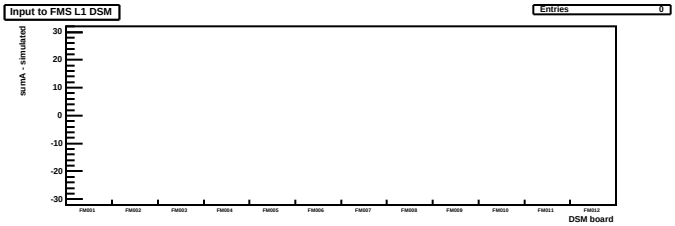

Input to FMS L1 DSM
Entries 8645652
sumB
DSM board

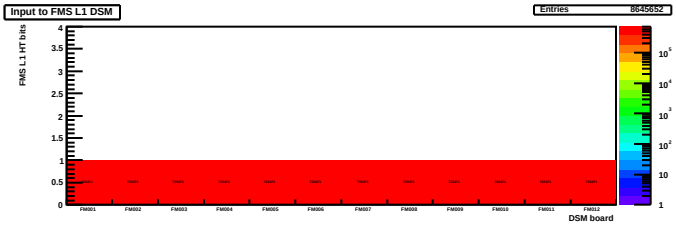

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

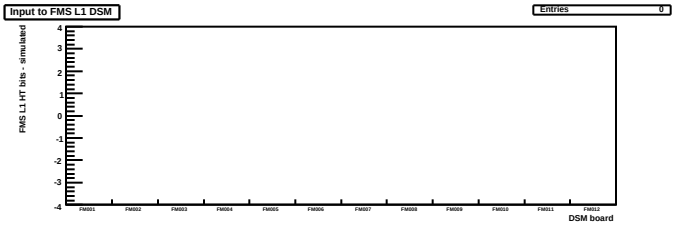

Input to FMS L1 DSM
Entries 8645652
sumCD
DSM board

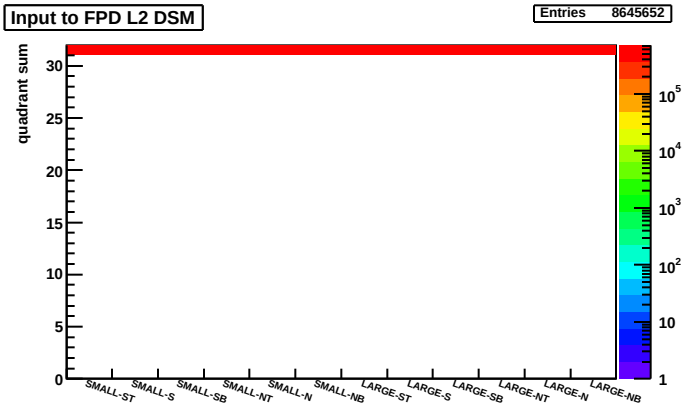

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

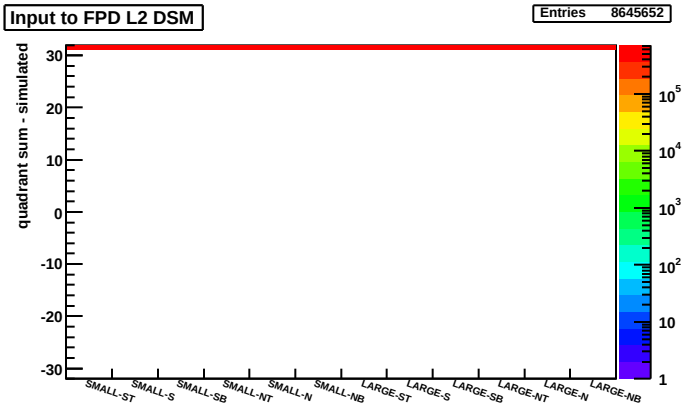

Input to FMS L1 DSM
Entries 8645652
sumA
DSM board

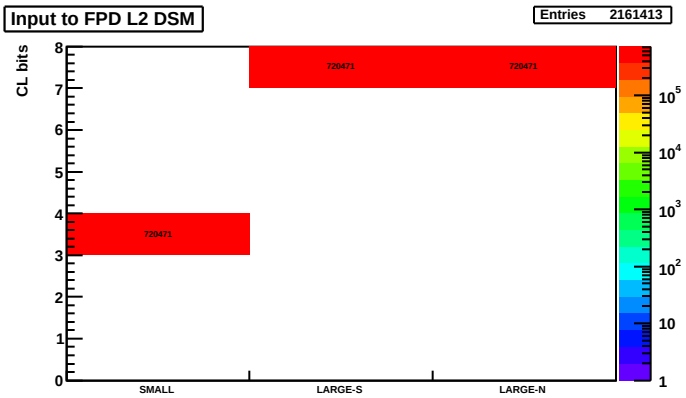

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

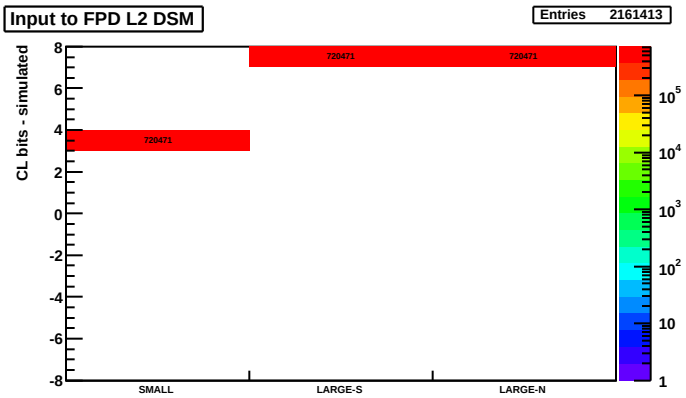

Input to FMS L1 DSM
Entries 8645652
FMS L1 HT bits
DSM board

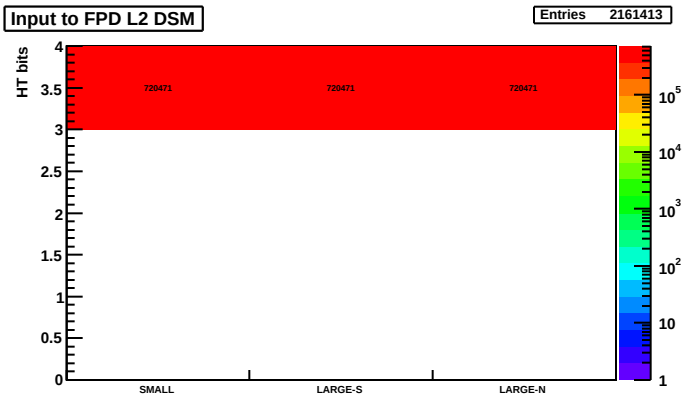

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

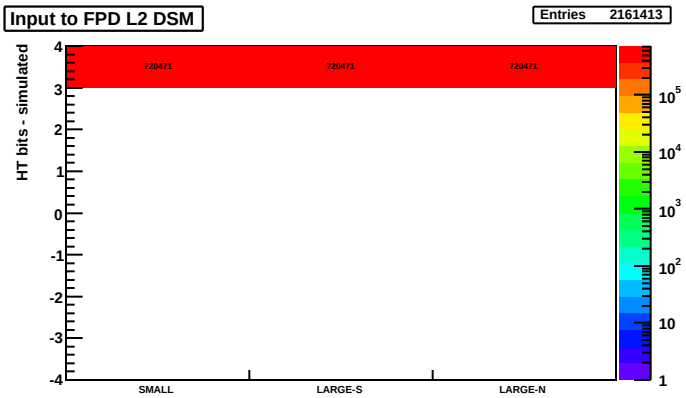

Input to FPD L2 DSM
Entries 8645652
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

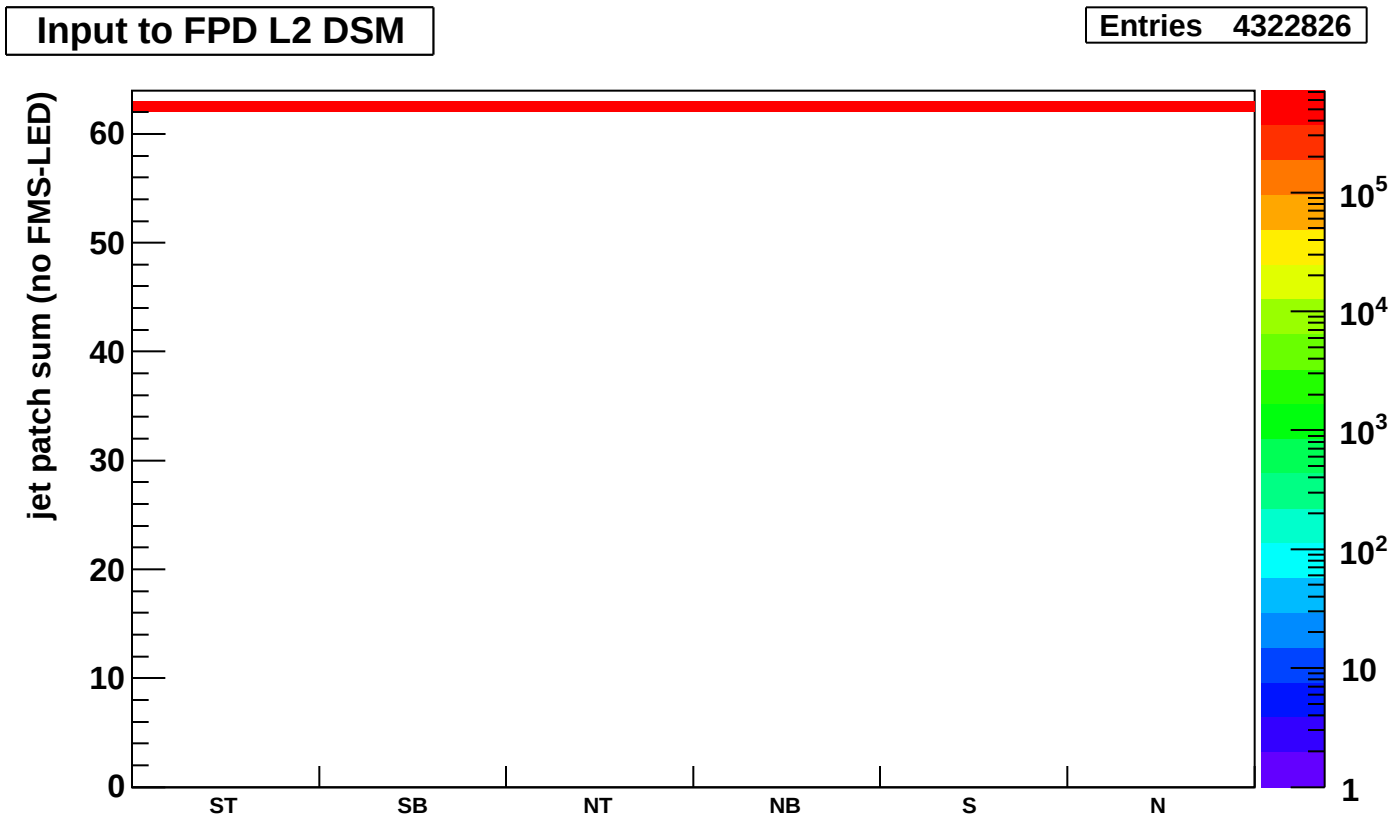

Input to FPD L2 DSM
Entries 8645652
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

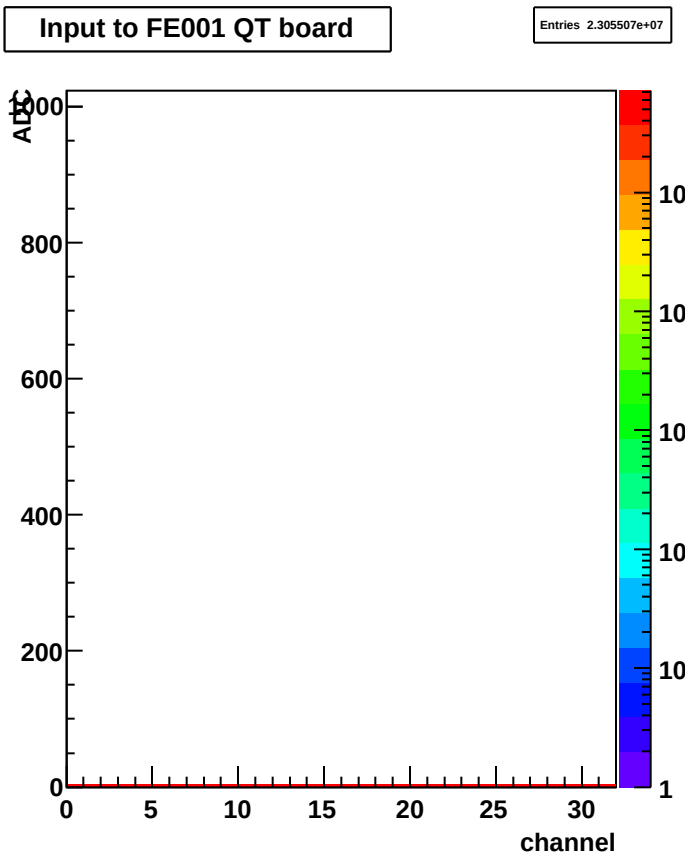

Input to FPD L2 DSM
Entries 2161413
CL bits
720471
720471
720471
SMALL
LARGE-S
LARGE-N

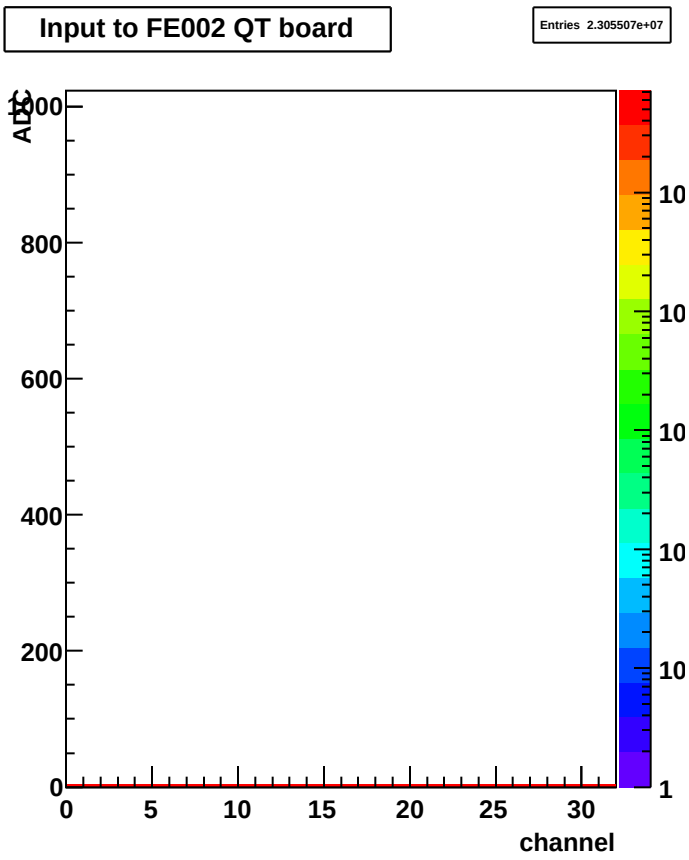

Input to FPD L2 DSM
Entries 2161413
CL bits - simulated
720471
720471
720471
SMALL
LARGE-S
LARGE-N

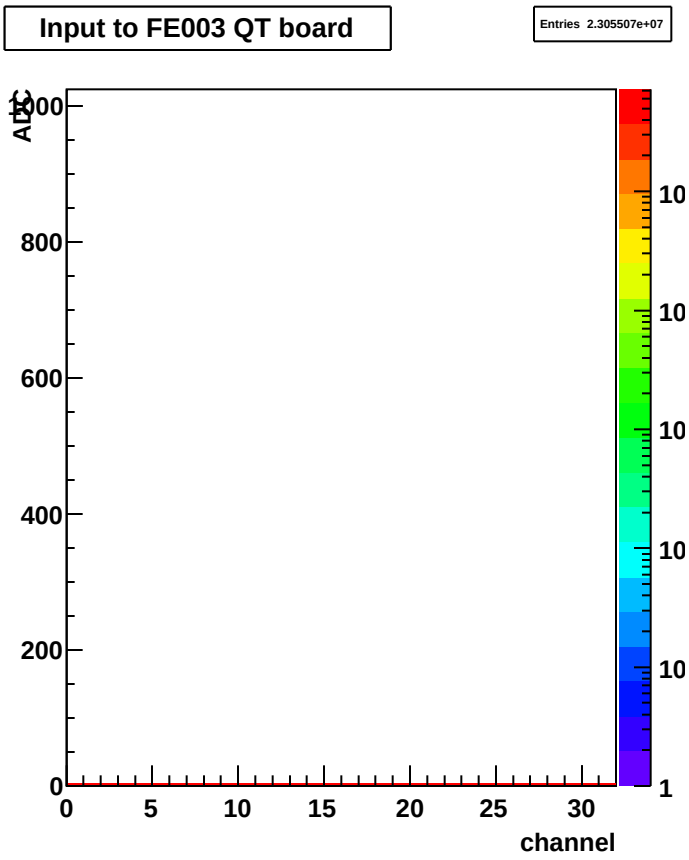

Input to FPD L2 DSM
Entries 2161413
HT bits
720471
720471
720471
SMALL
LARGE-S
LARGE-N

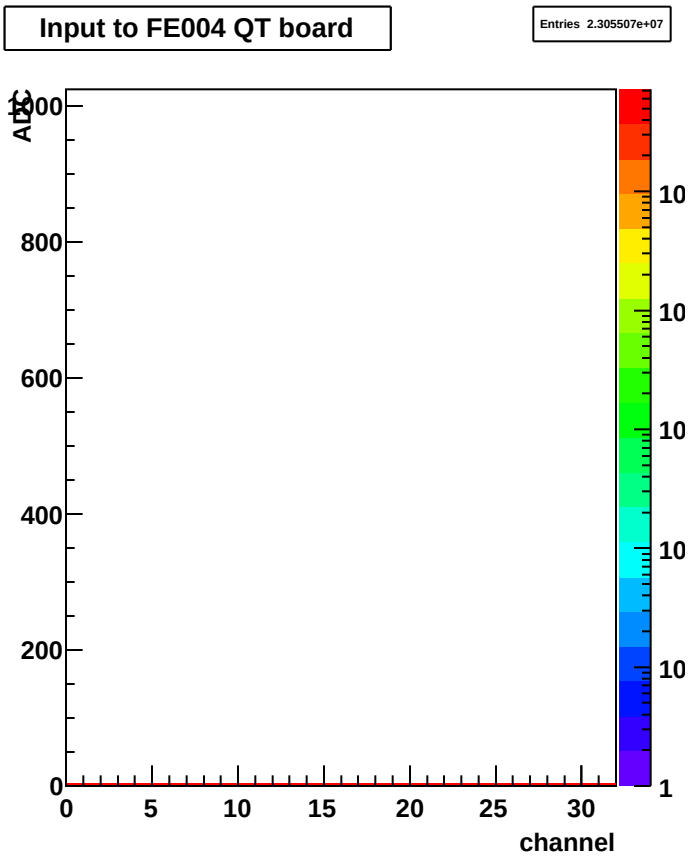

Input to FPD L2 DSM
Entries 2161413
HT bits - simulated
720471
720471
720471
SMALL
LARGE-S
LARGE-N

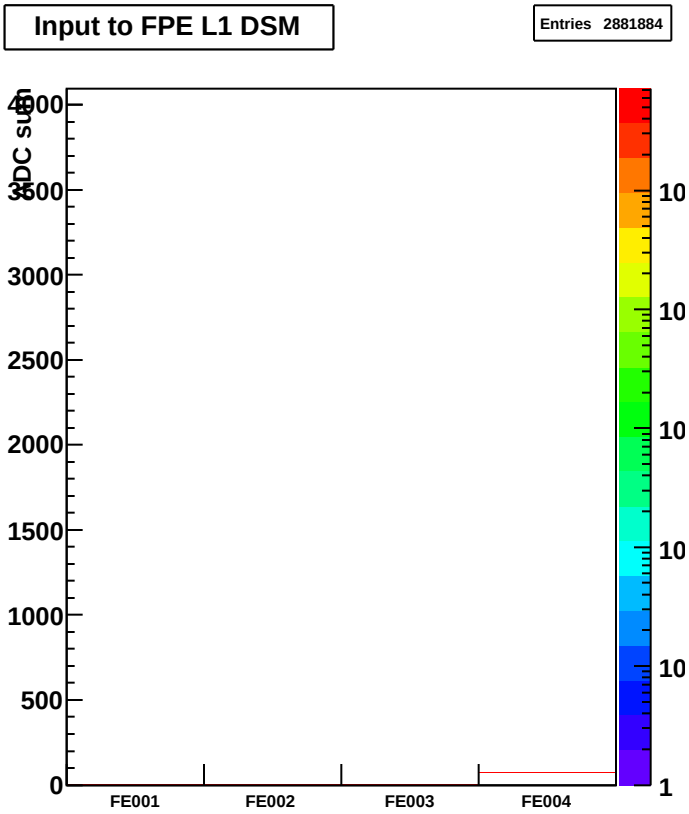

Input to FPD L2 DSM
Entries 4322826
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$
$10^5$

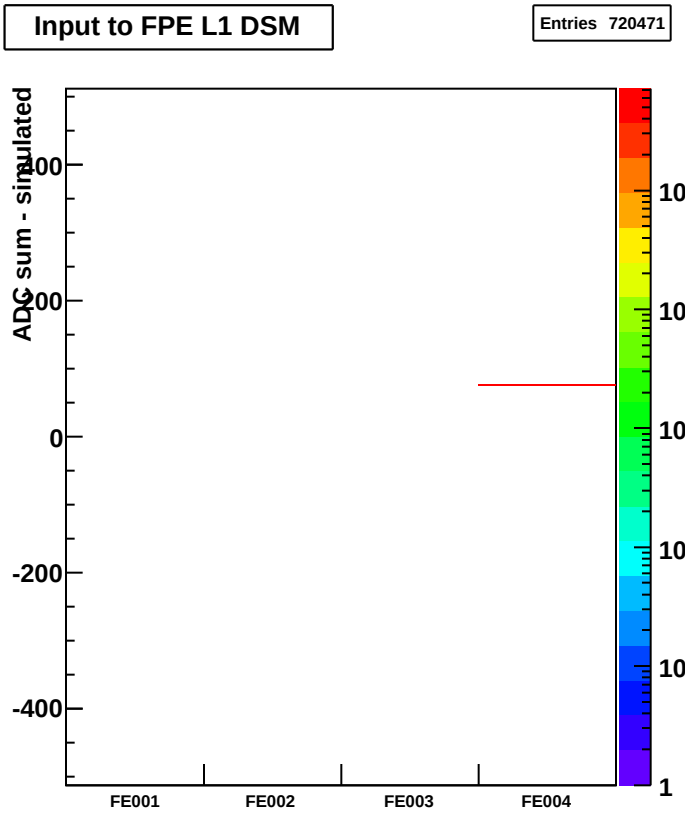

Input to FE001 QT board
Entries 2.305507e+07
ADC
channel


Input to FE002 QT board
Entries 2.305507e+07
ADC
channel

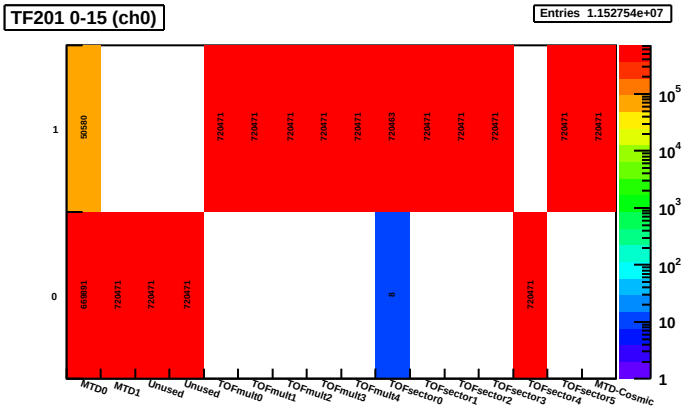

Input to FE003 QT board
Entries 2.305507e+07
ADC
channel


Input to FE004 QT board
Entries 2.305507e+07
ADC
channel

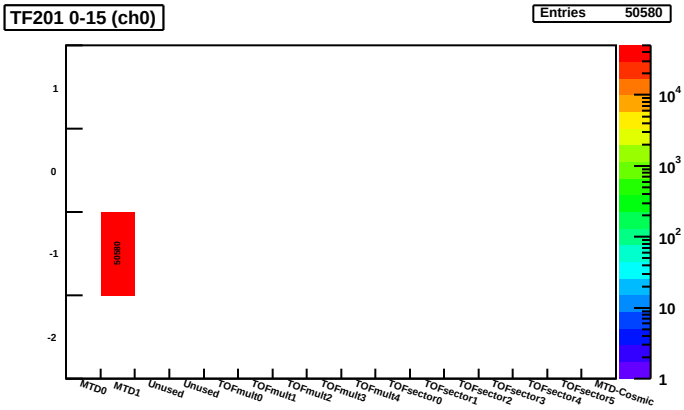

Input to FPE L1 DSM
Entries 2881884
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 720471
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

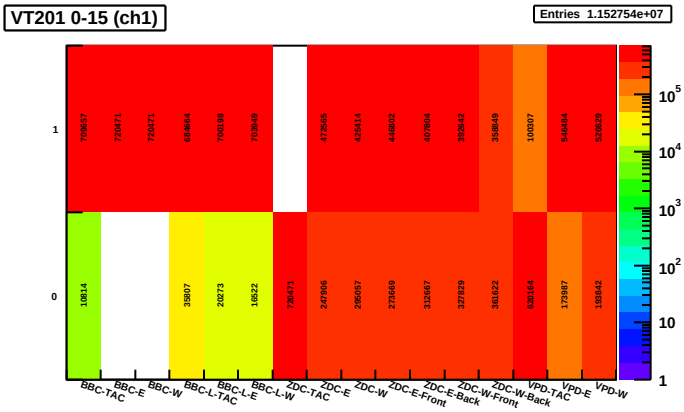
TF201 0-15 (ch0)



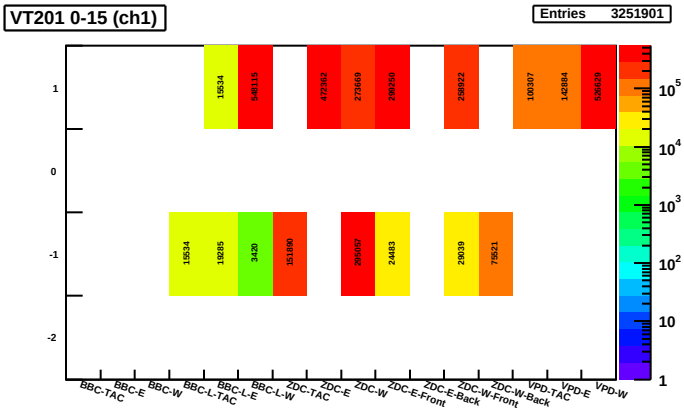

TF201 0-15 (ch0)



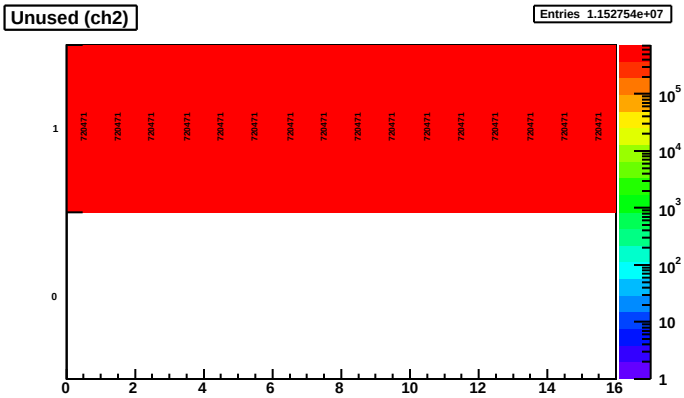

VT201 0-15 (ch1)

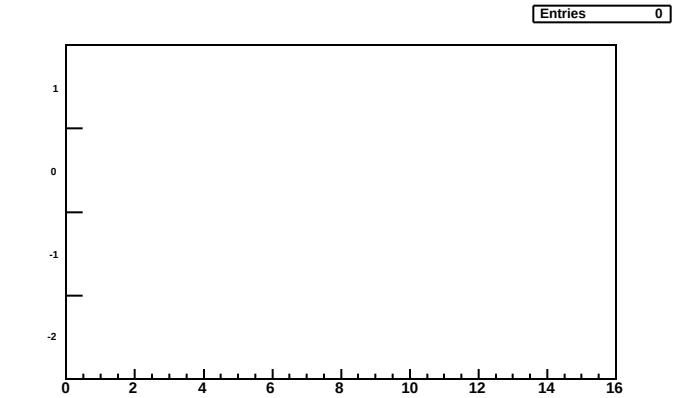



VT201 0-15 (ch1)

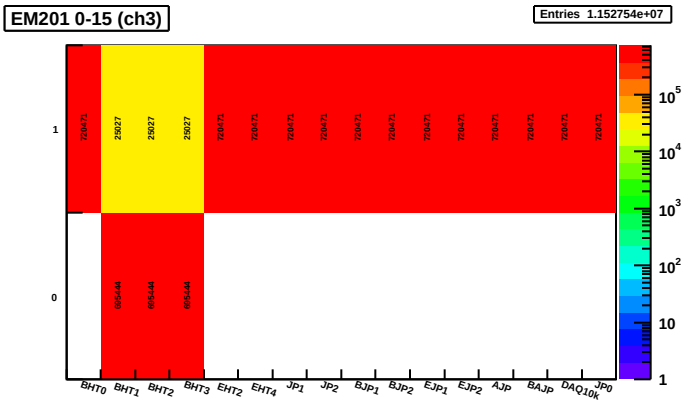



Unused (ch2)




EM201 0-15 (ch3)

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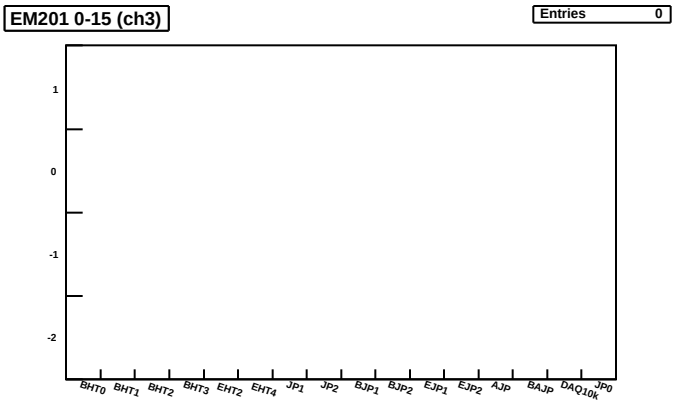
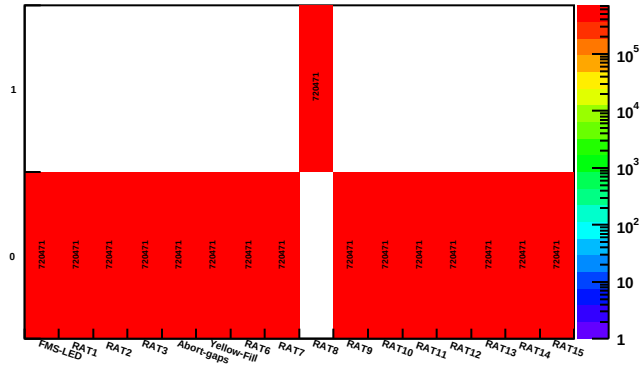
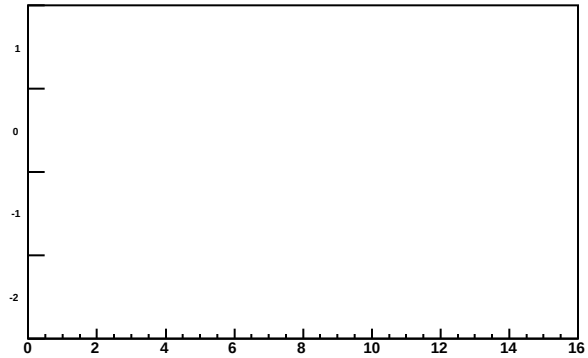
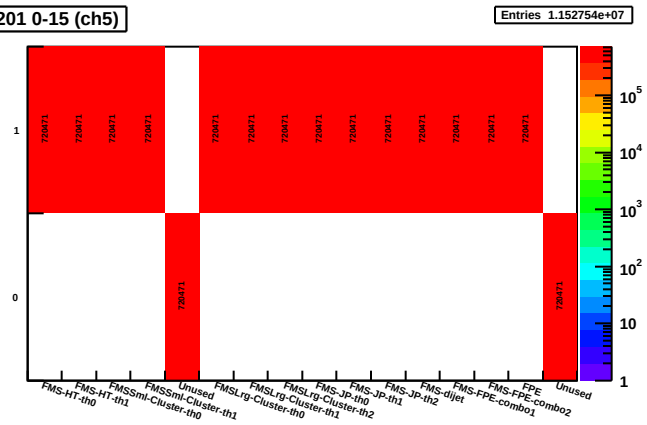


**RAT board (ch4)**

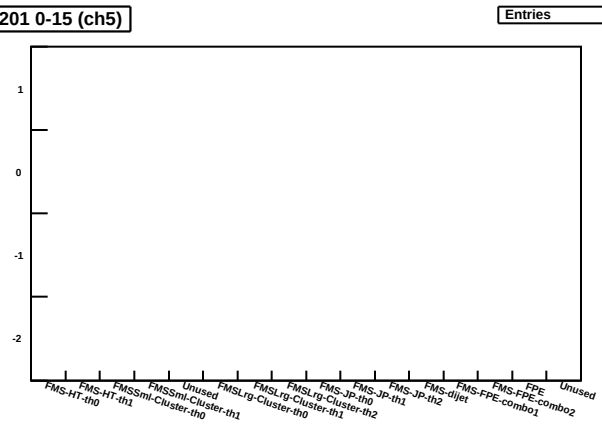


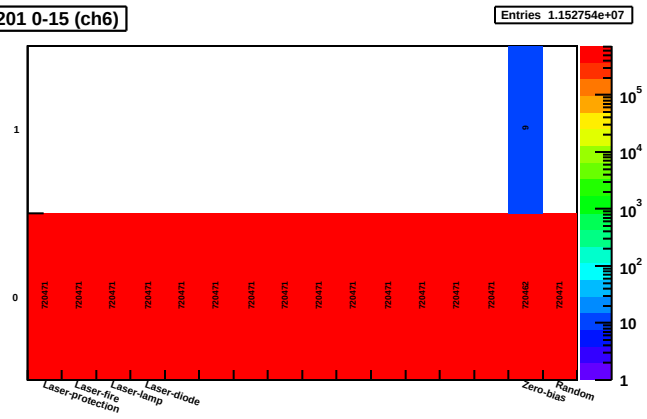

**FP201 0-15 (ch5)**

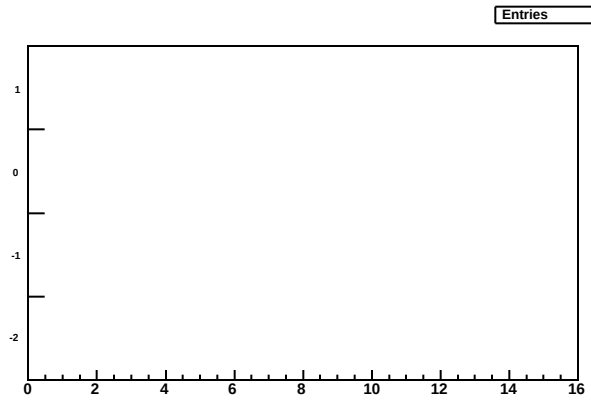


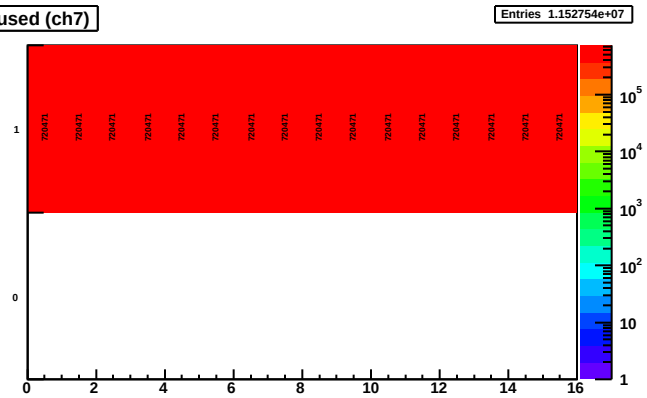
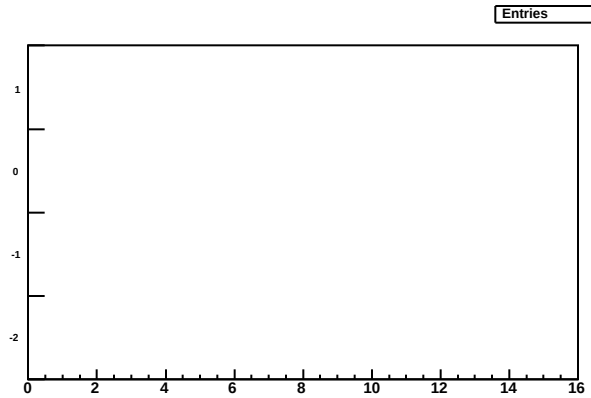

**FP201 0-15 (ch5)**




**ST201 0-15 (ch6)**




**Unused (ch7)**