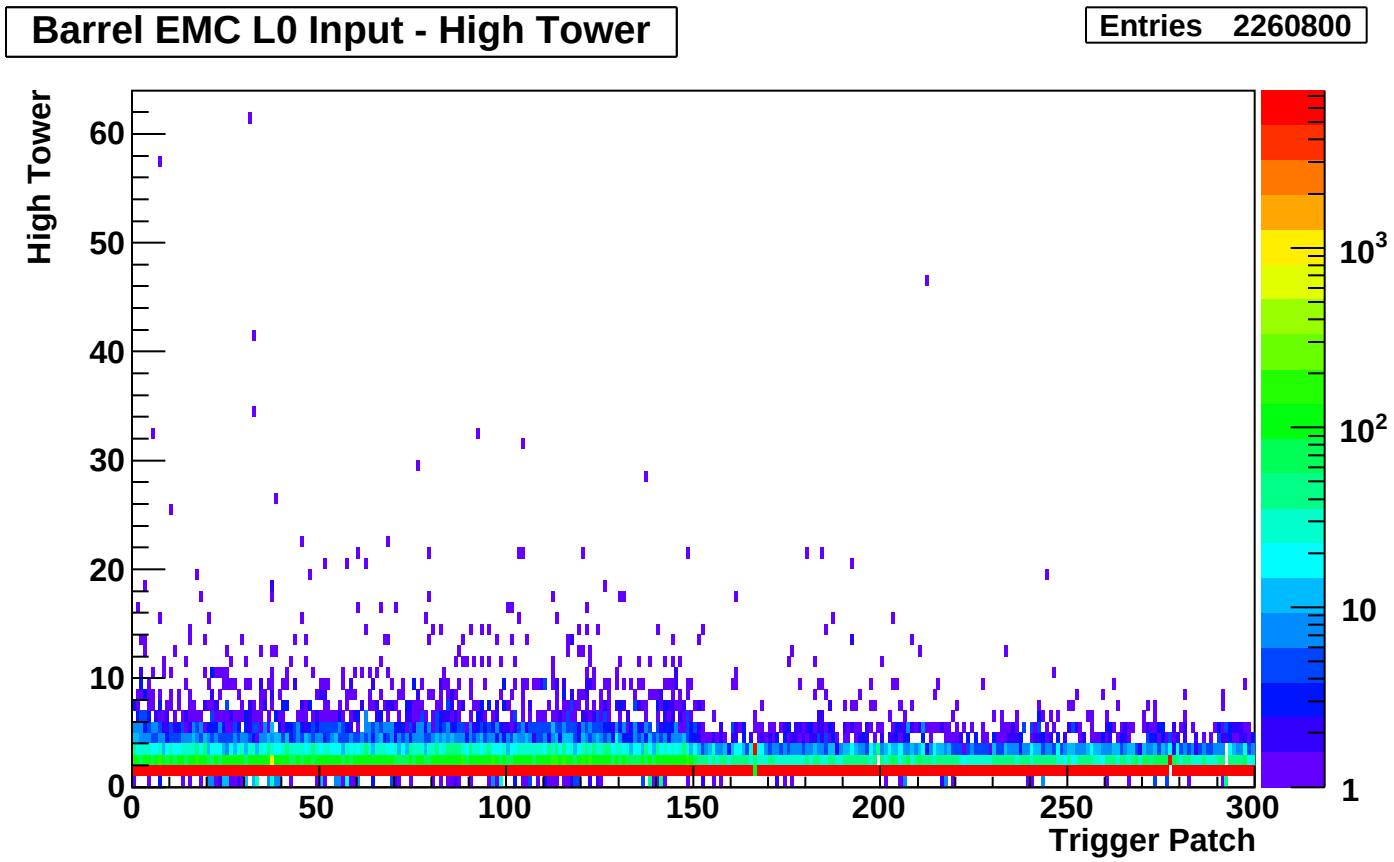
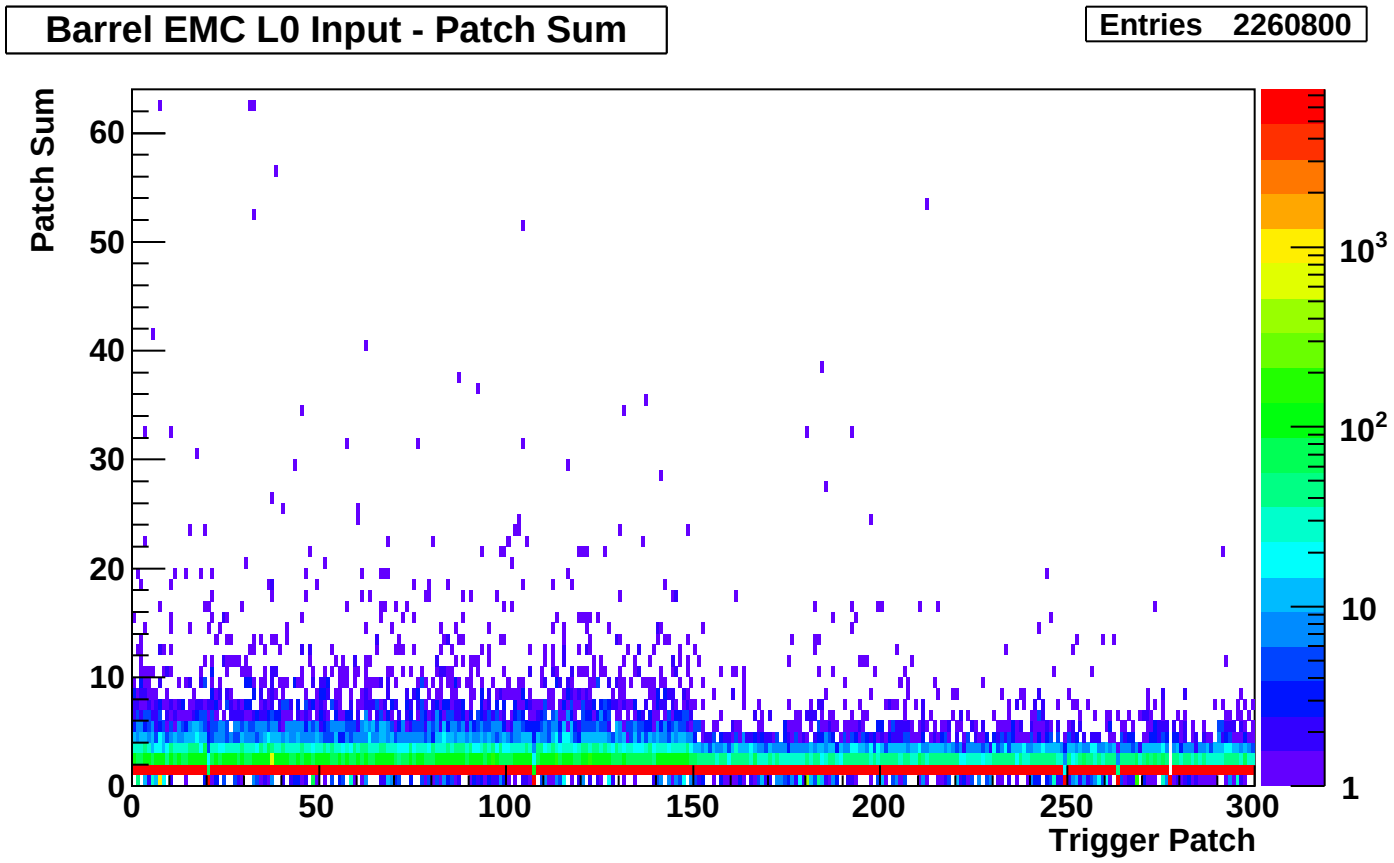
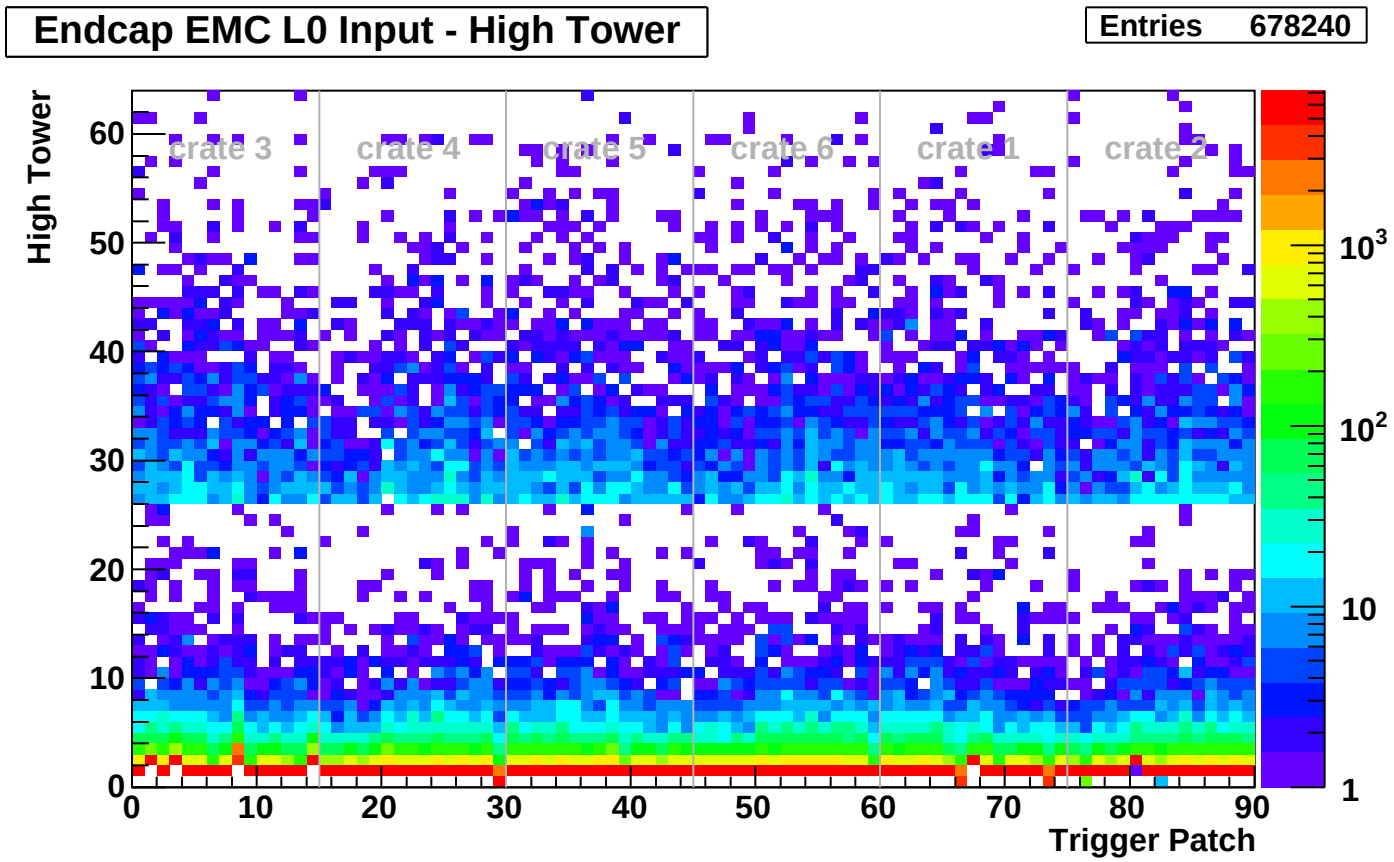
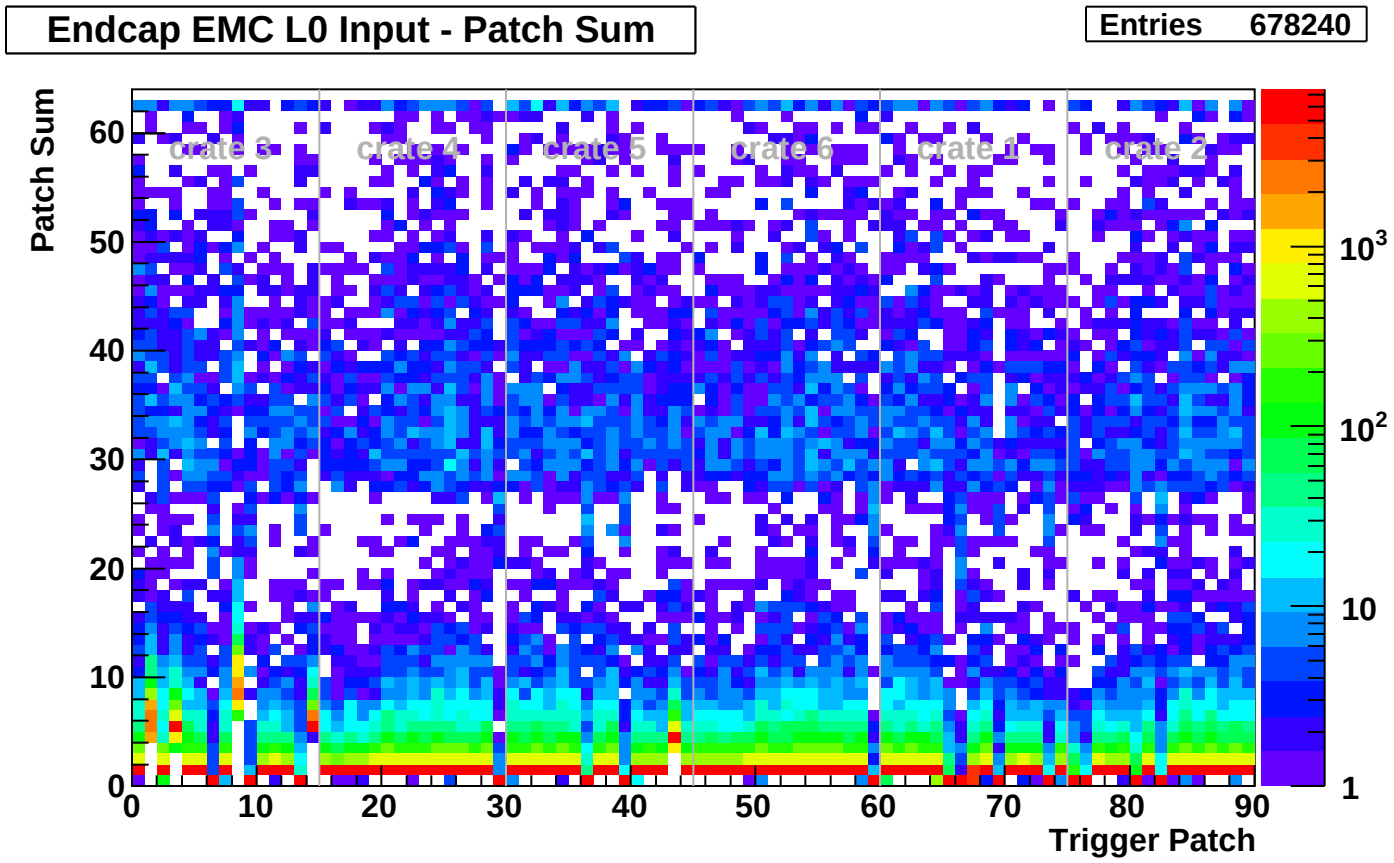
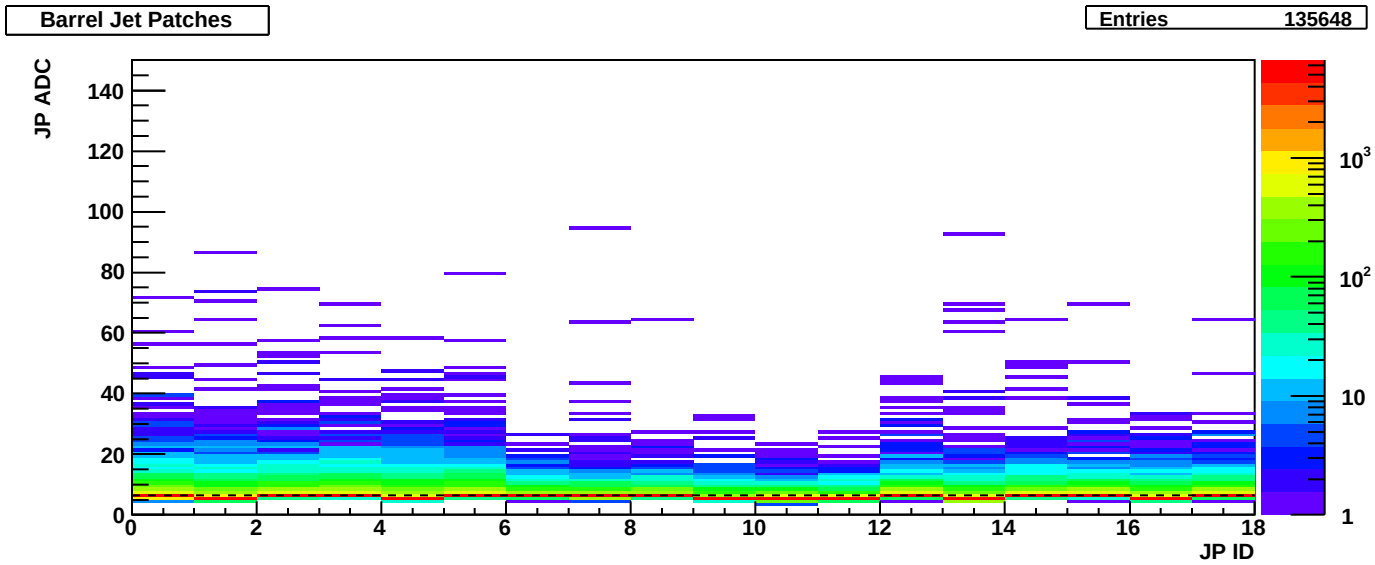
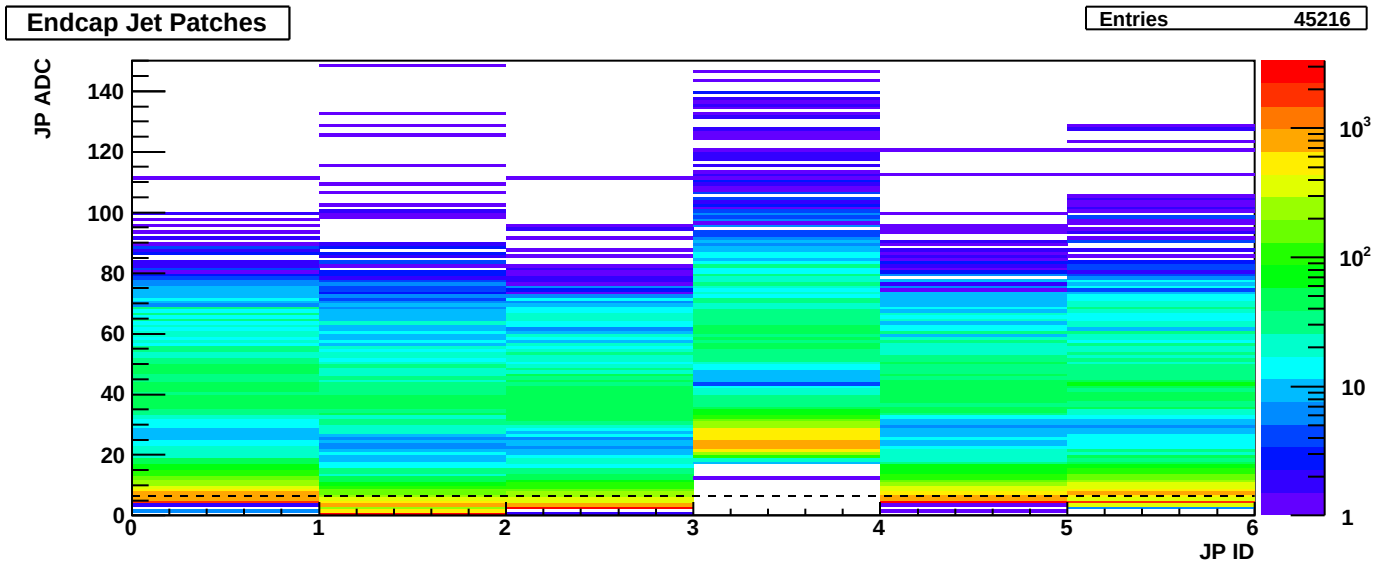

Barrel EMC L0 Input - High Tower
Entries 2260800
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

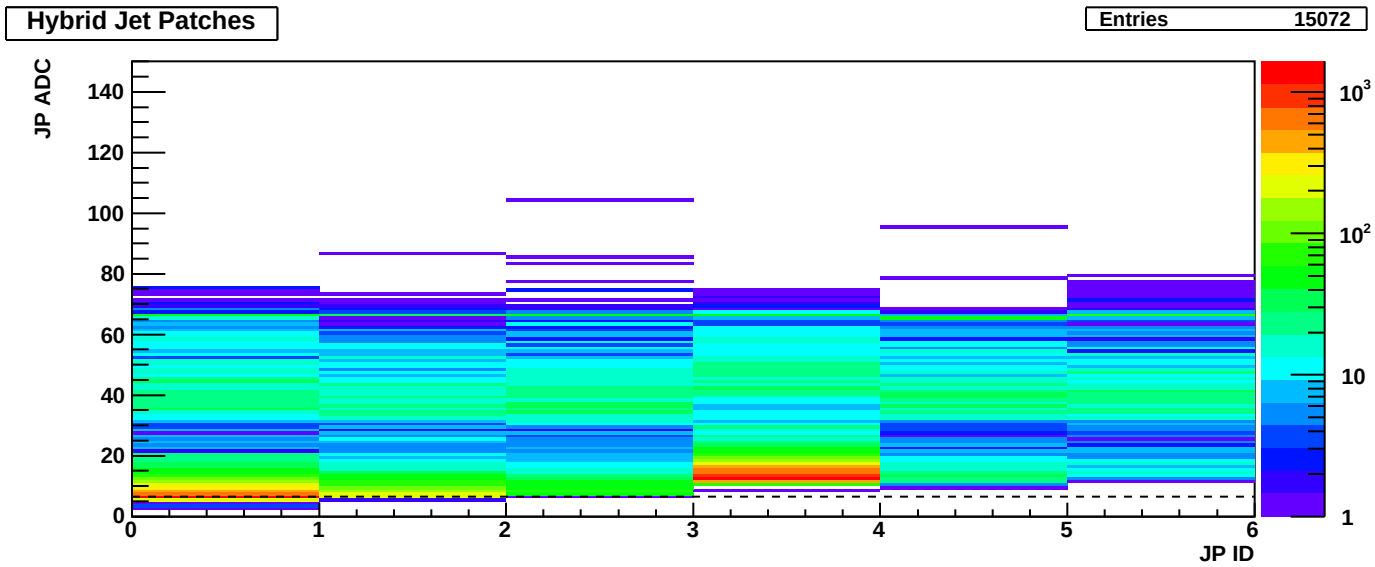

Barrel EMC L0 Input - Patch Sum
Entries 2260800
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

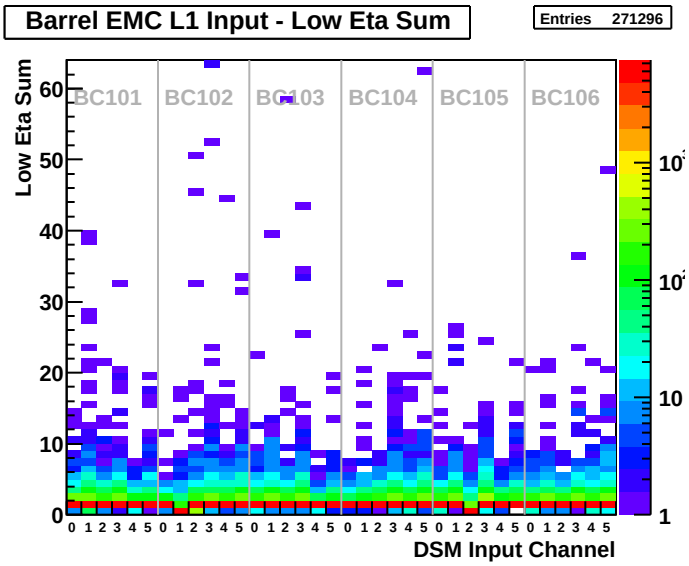

Endcap EMC L0 Input - High Tower
Entries 678240
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

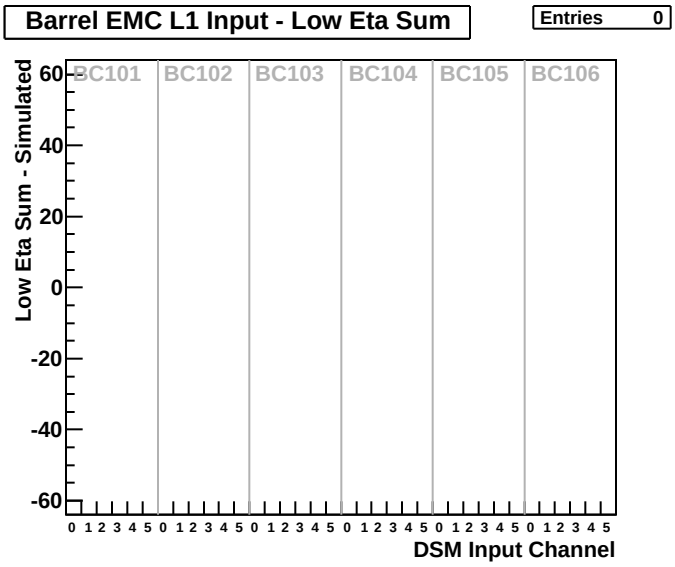

Endcap EMC L0 Input - Patch Sum
Entries 678240
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

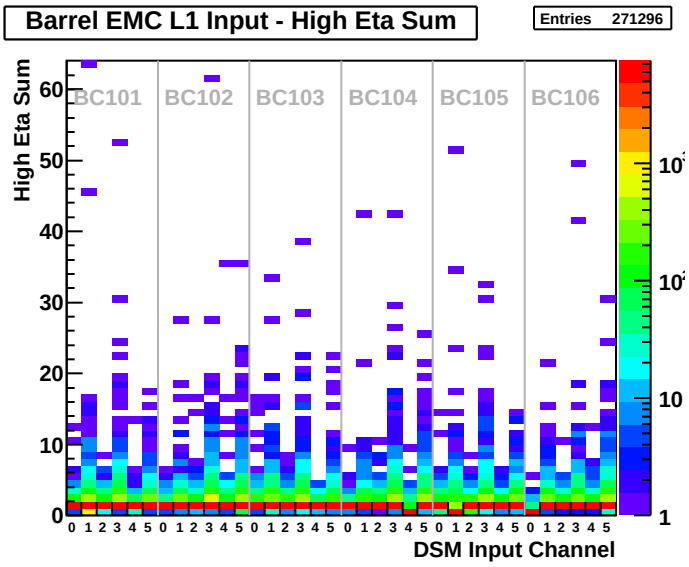

Barrel Jet Patches
Entries 135648
JP ADC
JP ID

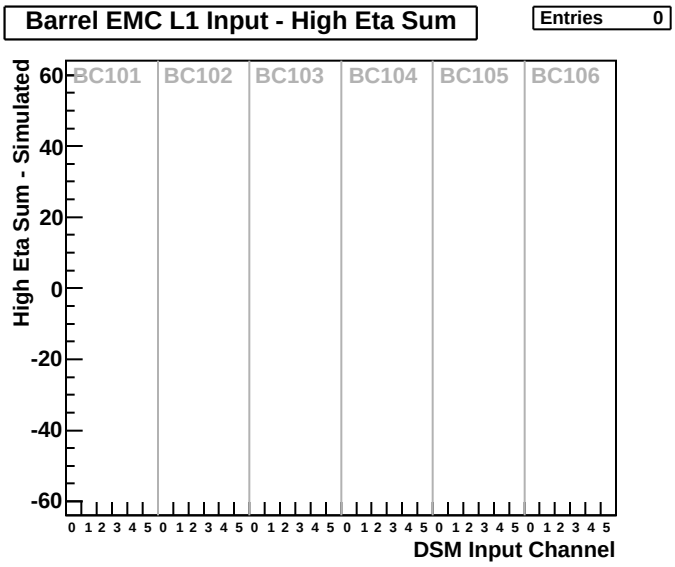

Endcap Jet Patches
Entries 45216
JP ADC
JP ID

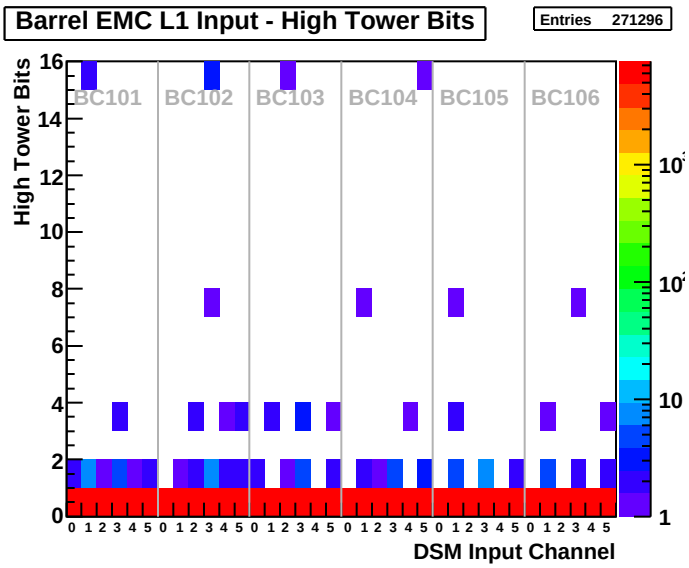

Hybrid Jet Patches
Entries 15072
JP ADC
JP ID

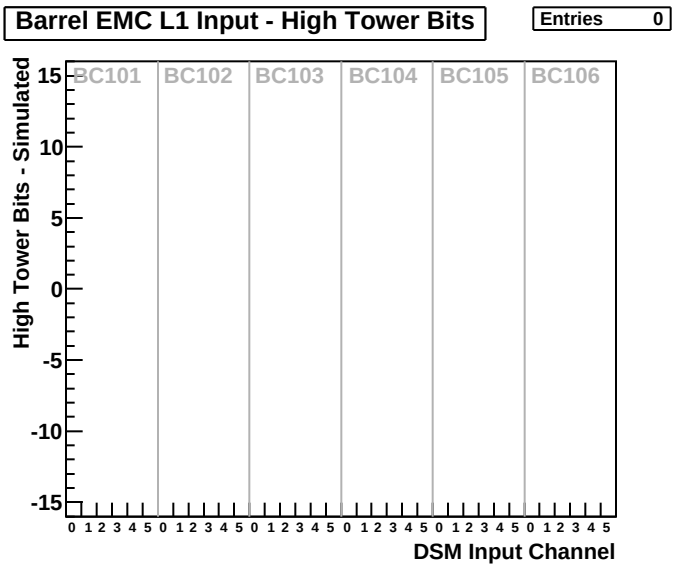

Barrel EMC L1 Input - Low Eta Sum
Entries 271296
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

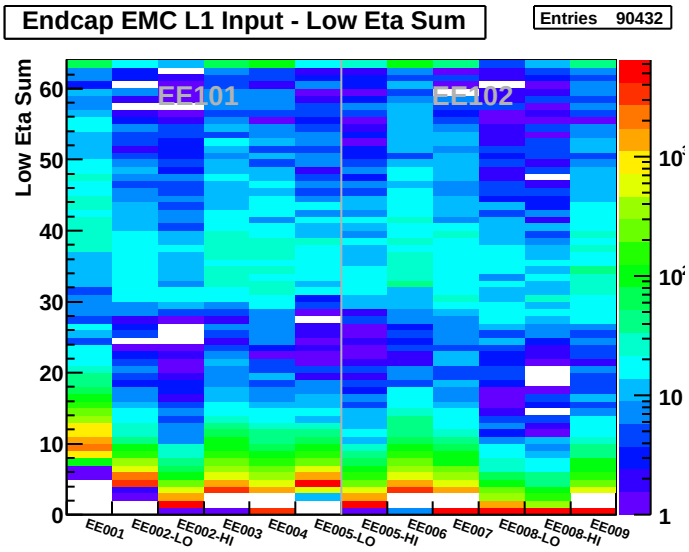

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

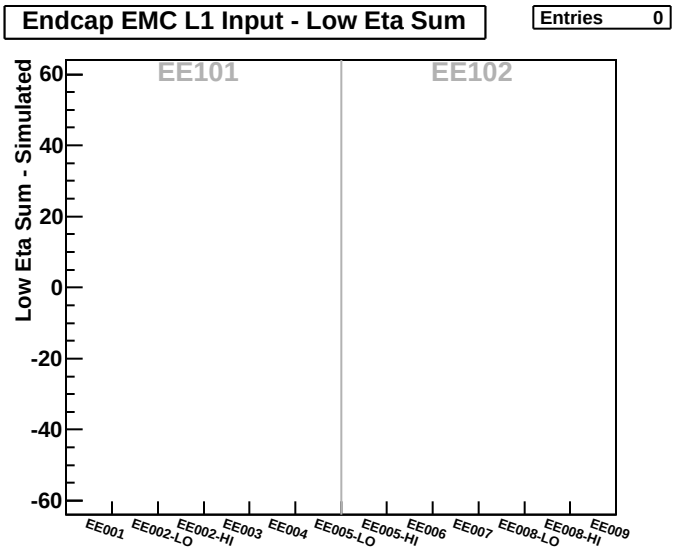

Barrel EMC L1 Input - High Eta Sum
Entries 271296
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

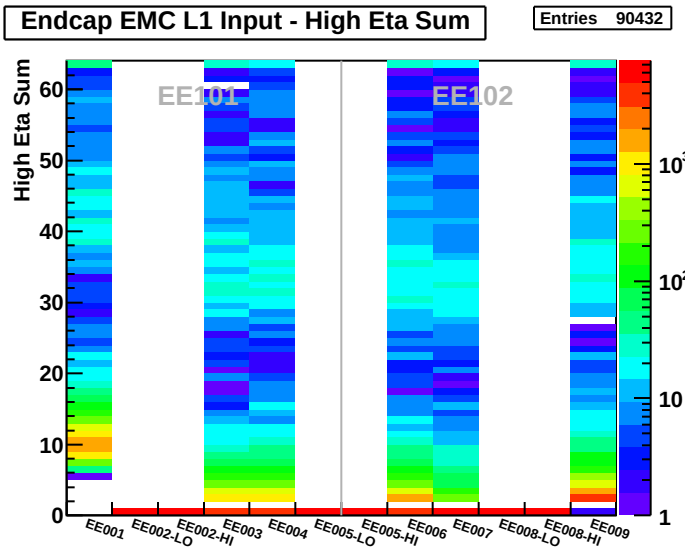

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

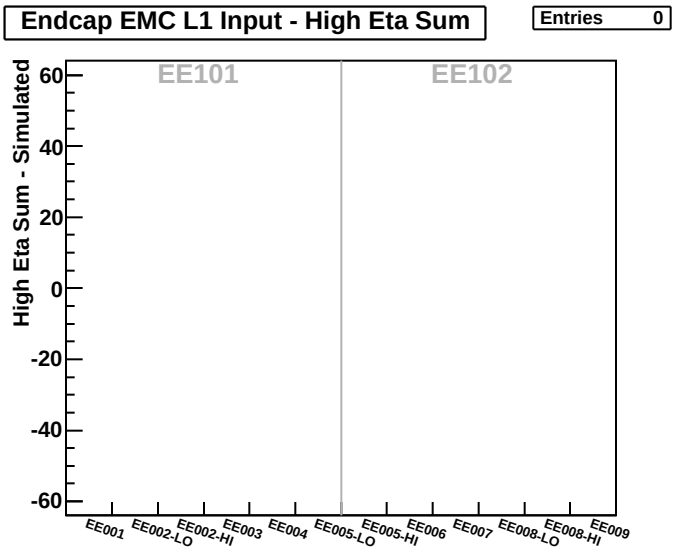

Barrel EMC L1 Input - High Tower Bits
Entries 271296
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

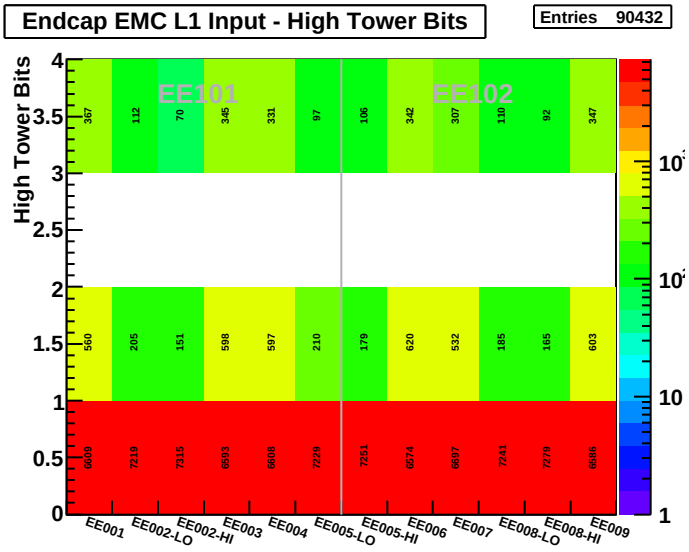

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

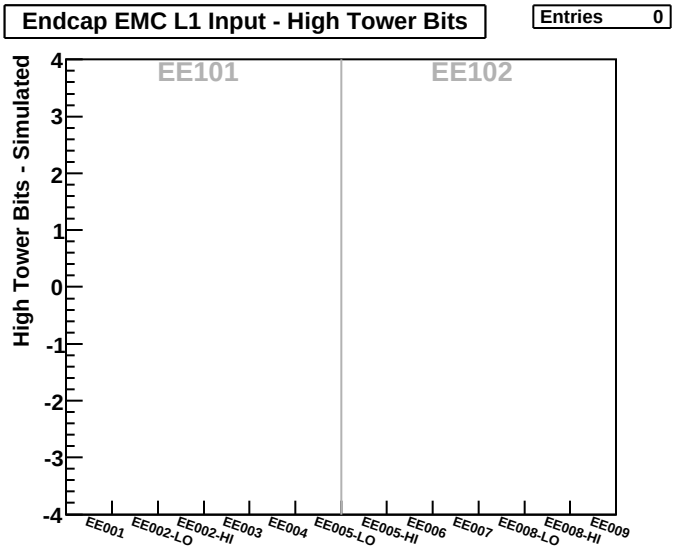

Endcap EMC L1 Input - Low Eta Sum
Entries 90432
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

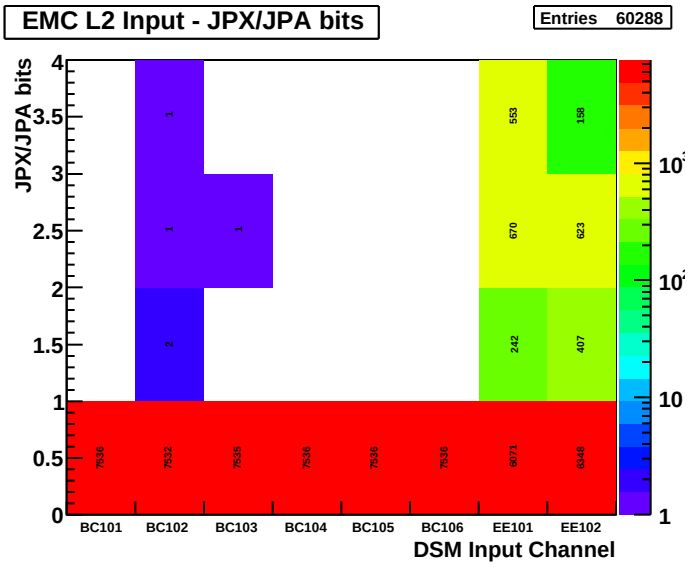

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

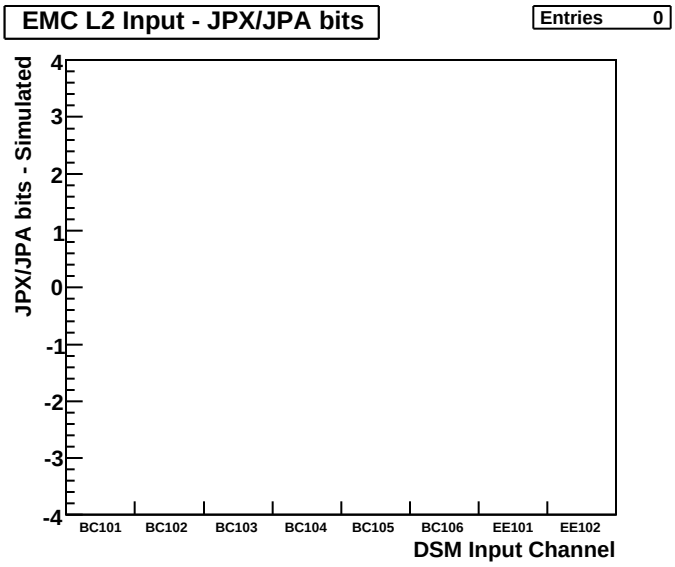

Endcap EMC L1 Input - High Eta Sum
Entries 90432
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

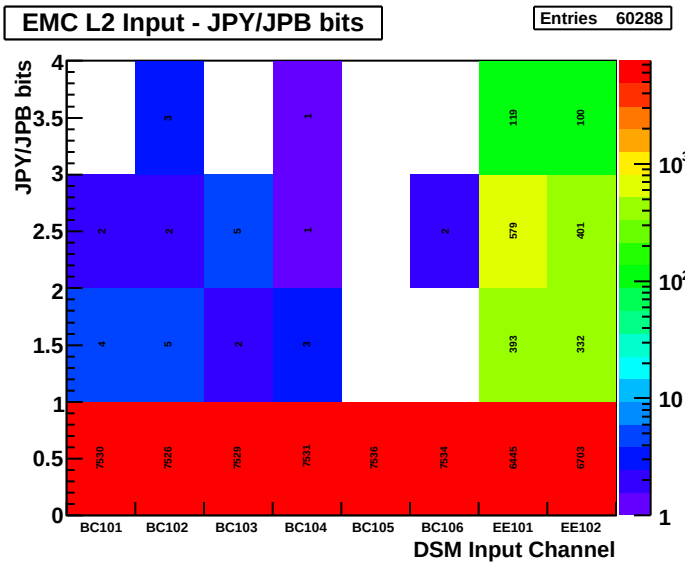

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

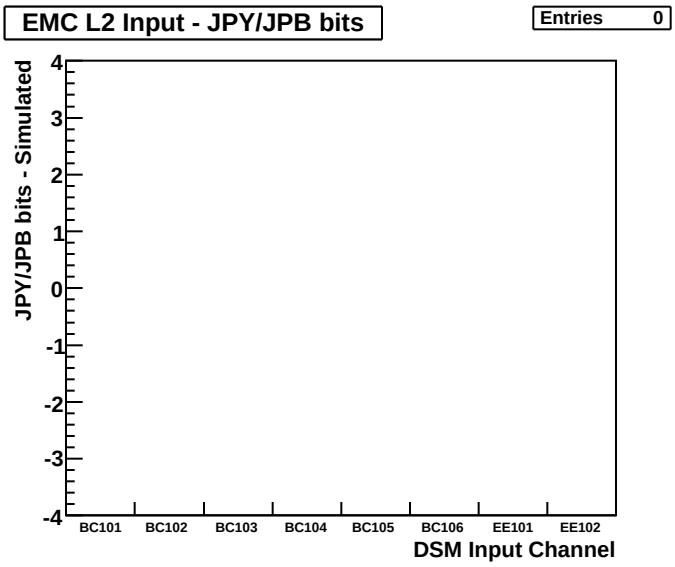

Endcap EMC L1 Input - High Tower Bits
Entries 90432
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

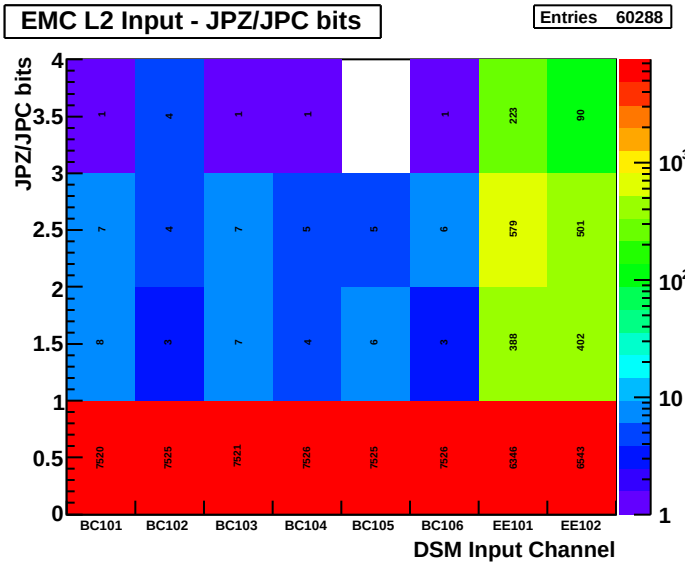

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

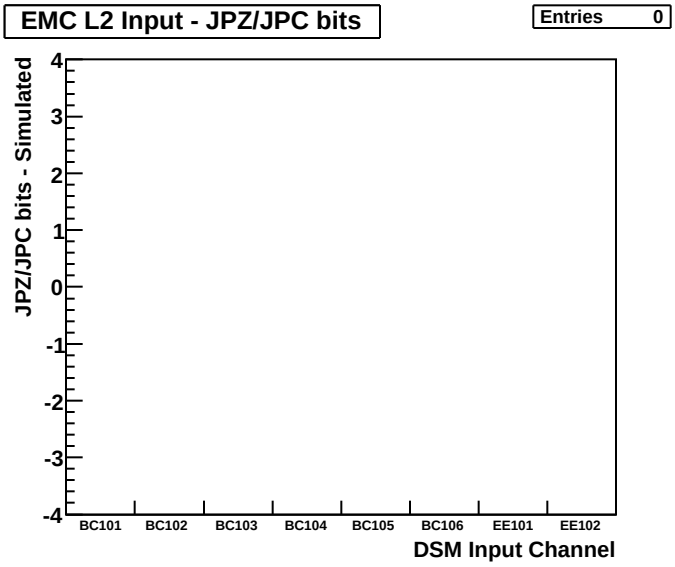

EMC L2 Input - JPX/JPA bits
Entries 60288
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

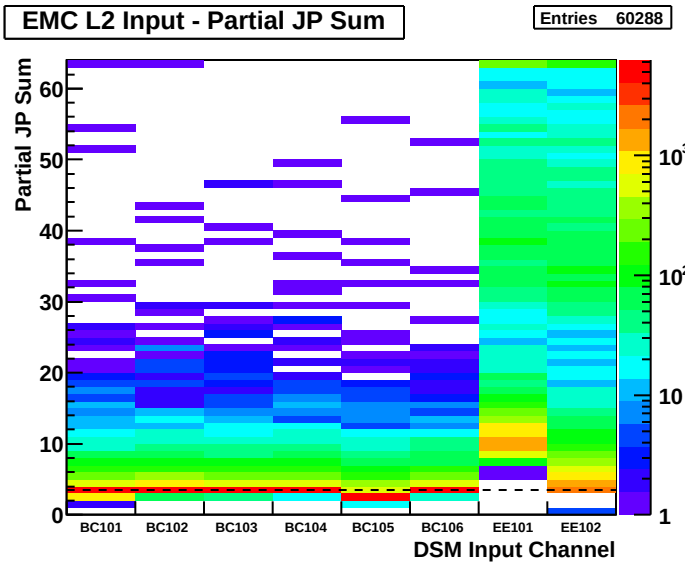

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

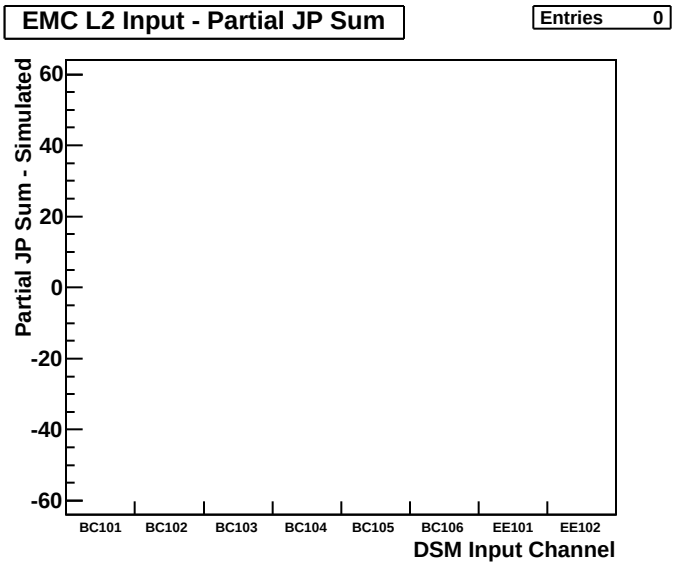

EMC L2 Input - JPY/JPB bits
Entries 60288
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

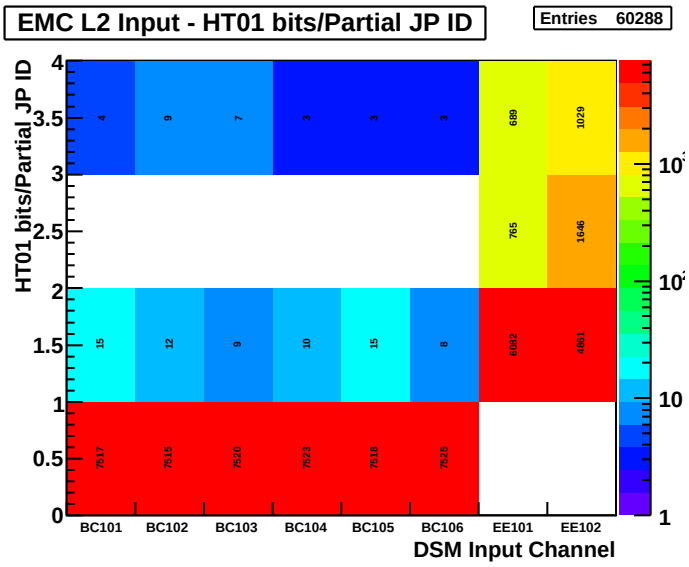

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

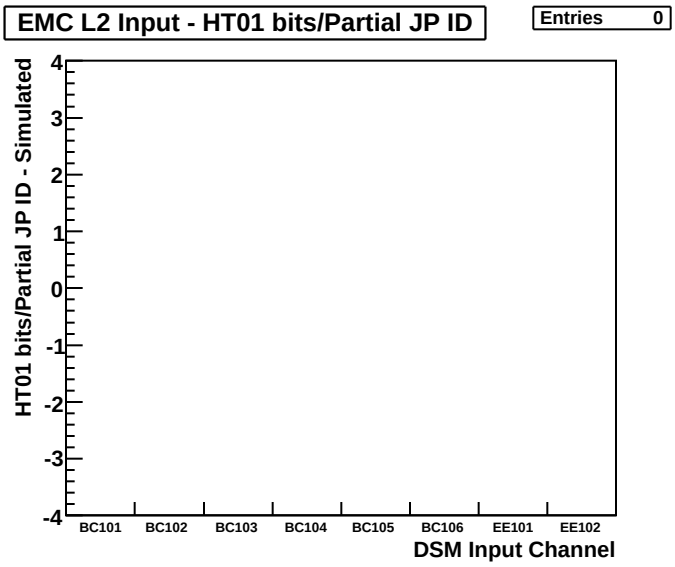

EMC L2 Input - JPZ/JPC bits
Entries 60288
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

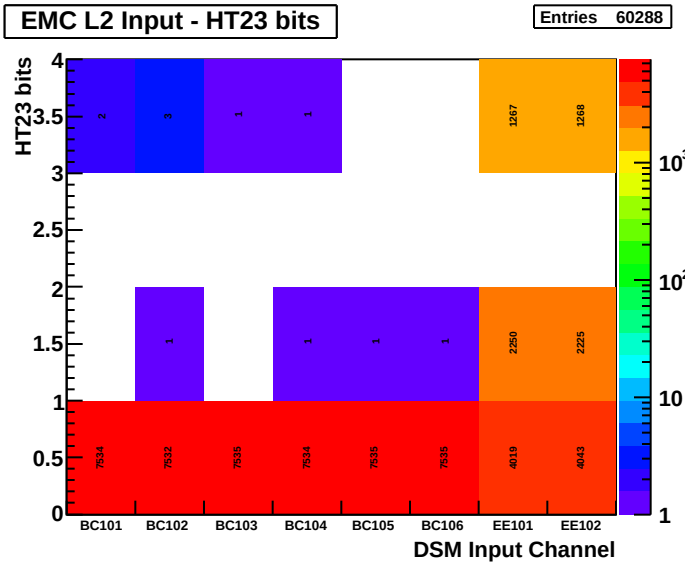

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

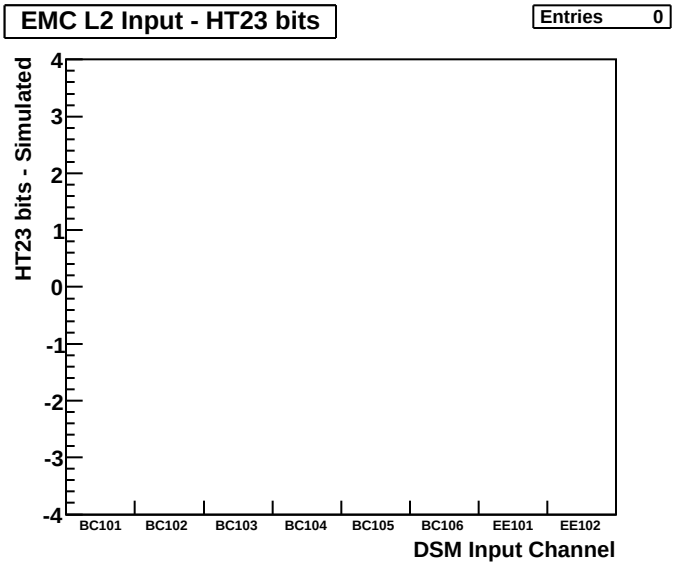

EMC L2 Input - Partial JP Sum
Entries 60288
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

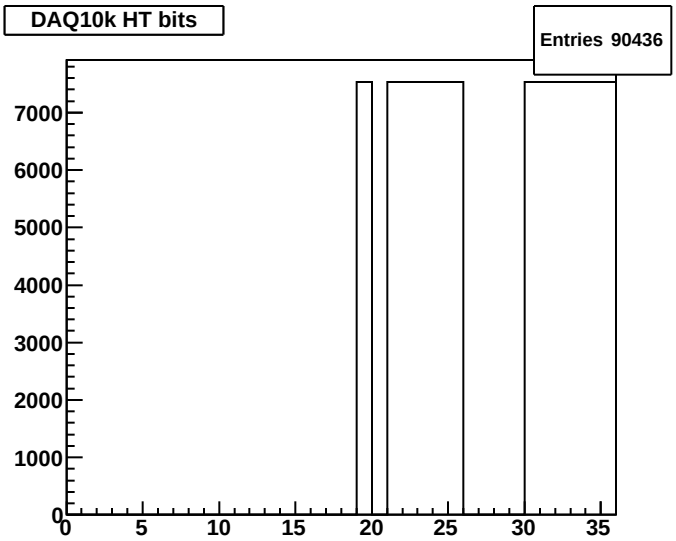

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

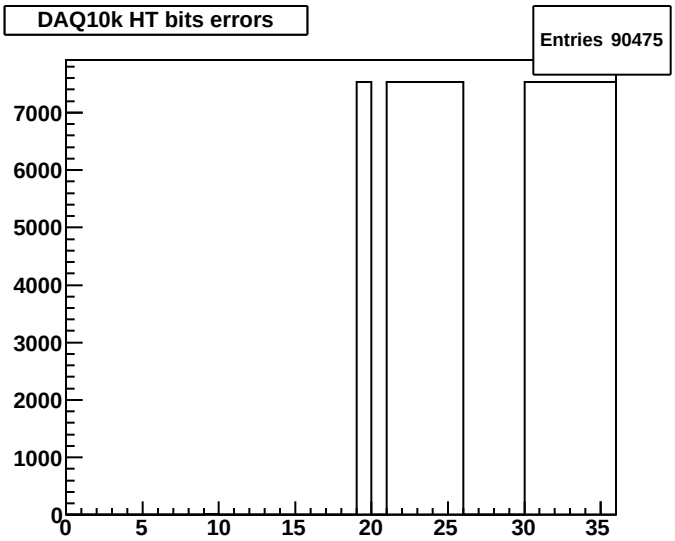

EMC L2 Input - HT01 bits/Partial JP ID
Entries 60288
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

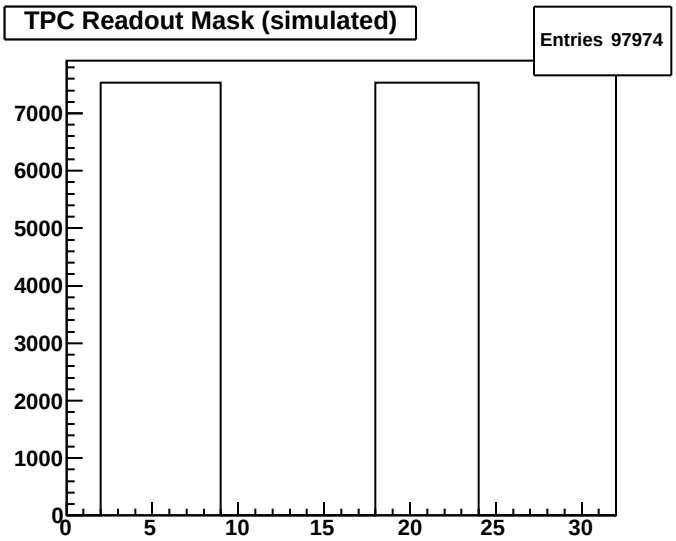

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

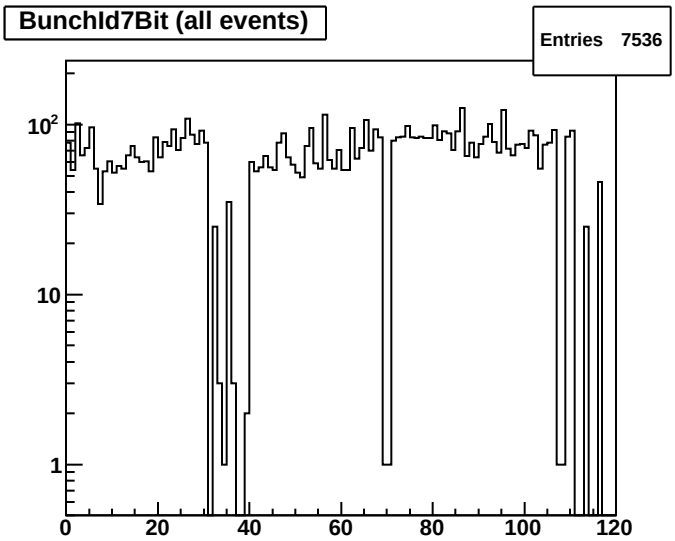

EMC L2 Input - HT23 bits
Entries 60288
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

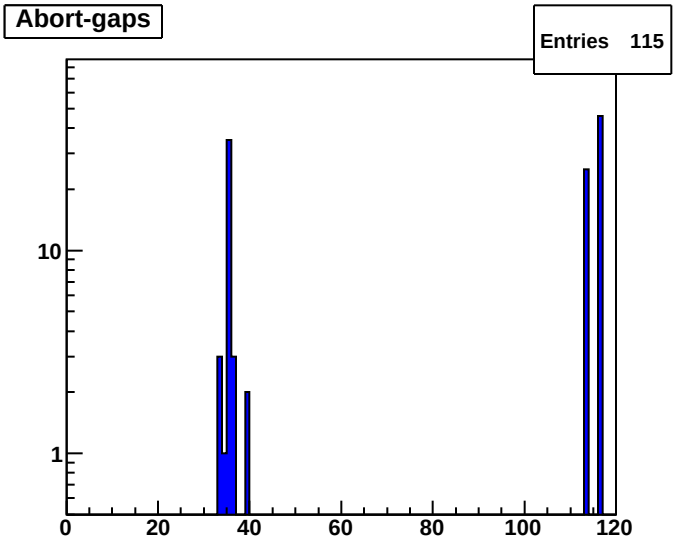

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

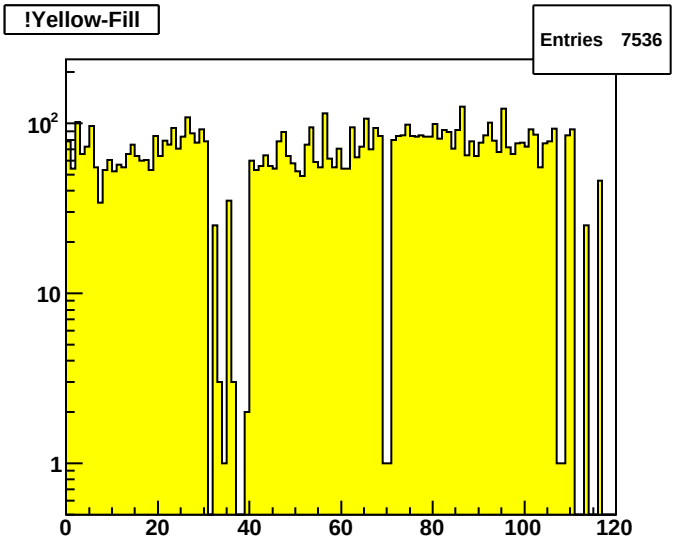

DAQ10k HT bits
Entries 90436
7000
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30 35

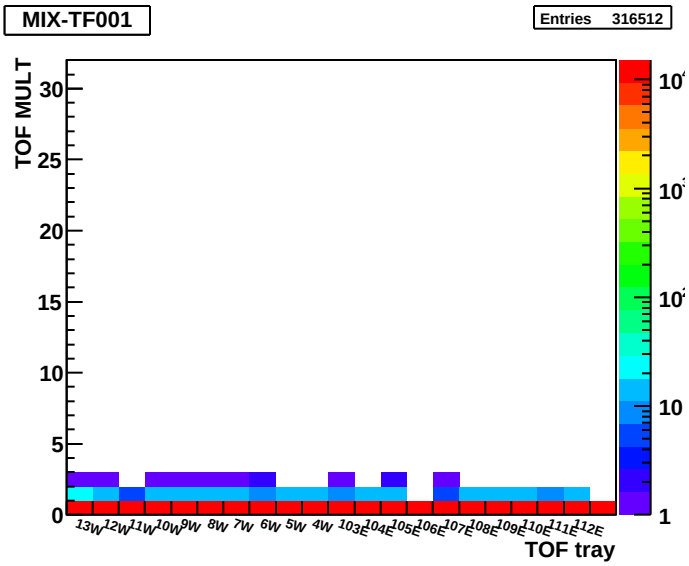

DAQ10k HT bits errors
Entries 90475
7000
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30 35

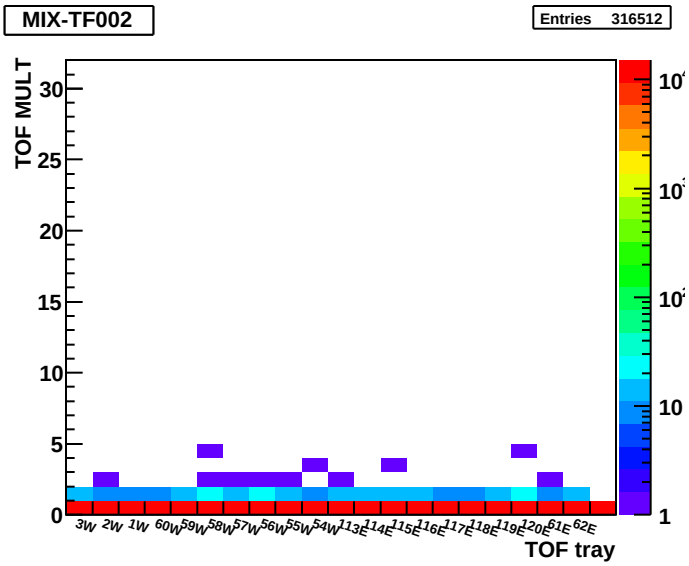

TPC Readout Mask (simulated)
Entries 97974
7000
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30

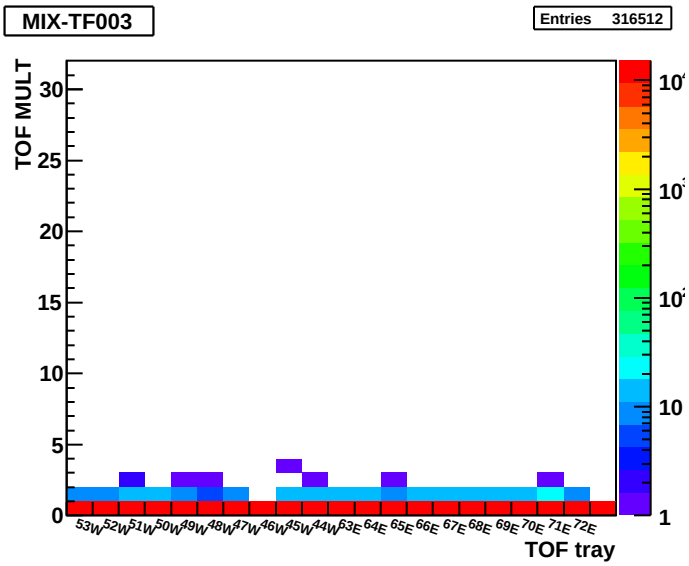

BunchId7Bit (all events)
Entries 7536
10^2
10
1
0 20 40 60 80 100 120

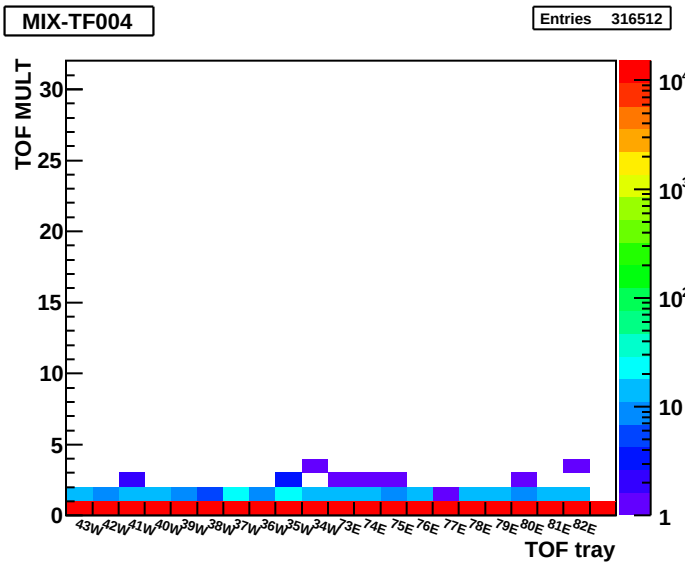

Abort-gaps
Entries 115
10
1
0 20 40 60 80 100 120

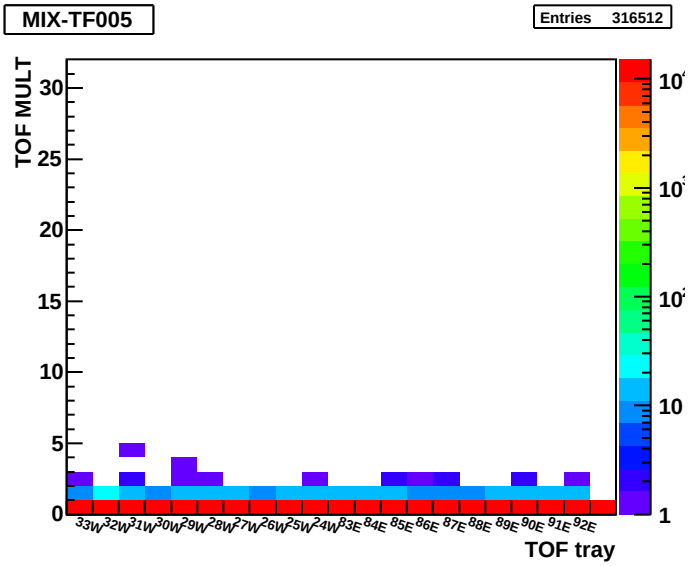

!Yellow-Fill
Entries 7536
10^2
10
1
0 20 40 60 80 100 120

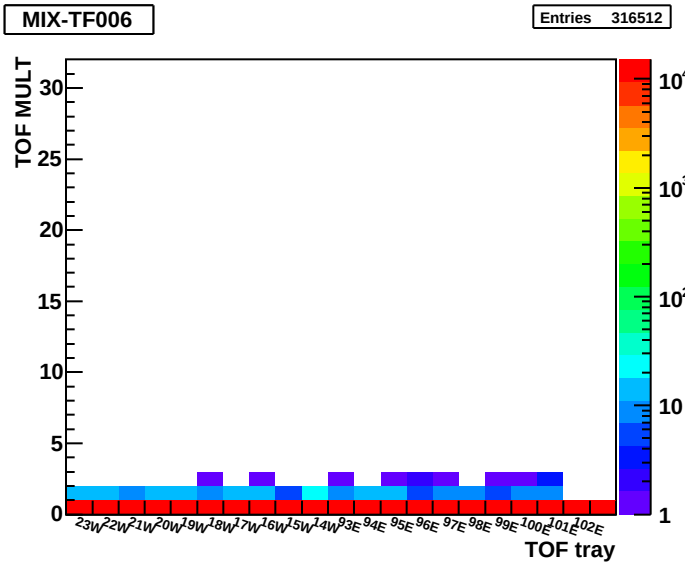

MIX-TF001
Entries 316512
TOF MULT
TOF tray

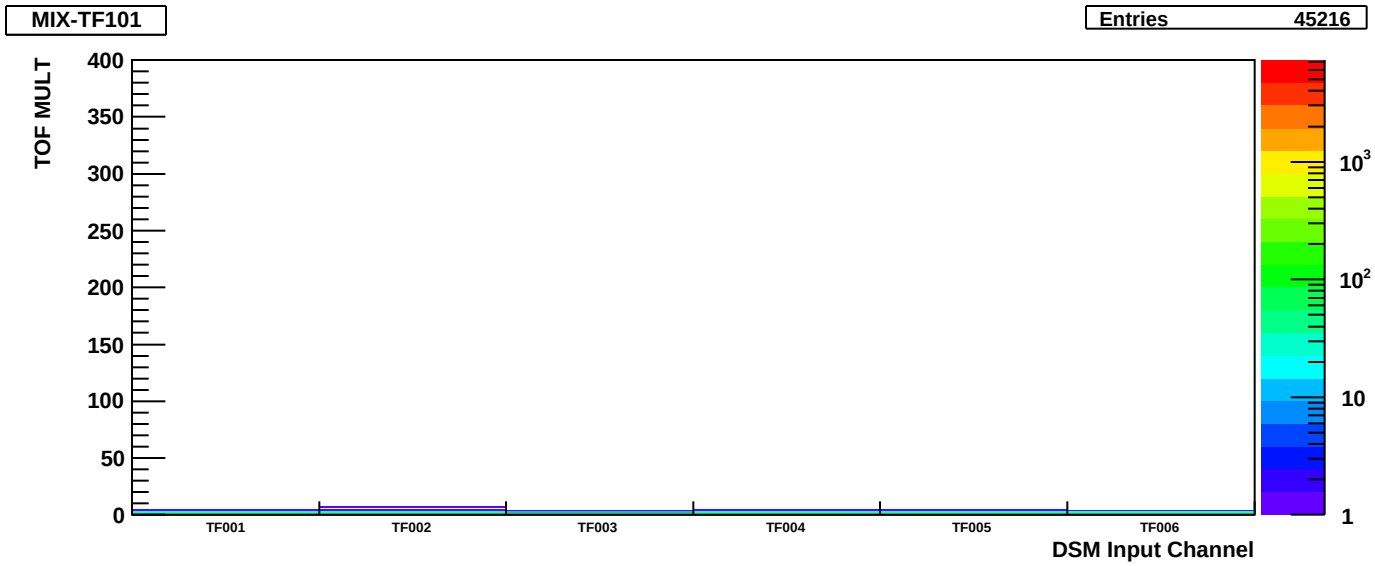

MIX-TF002
Entries 316512
TOF MULT
TOF tray

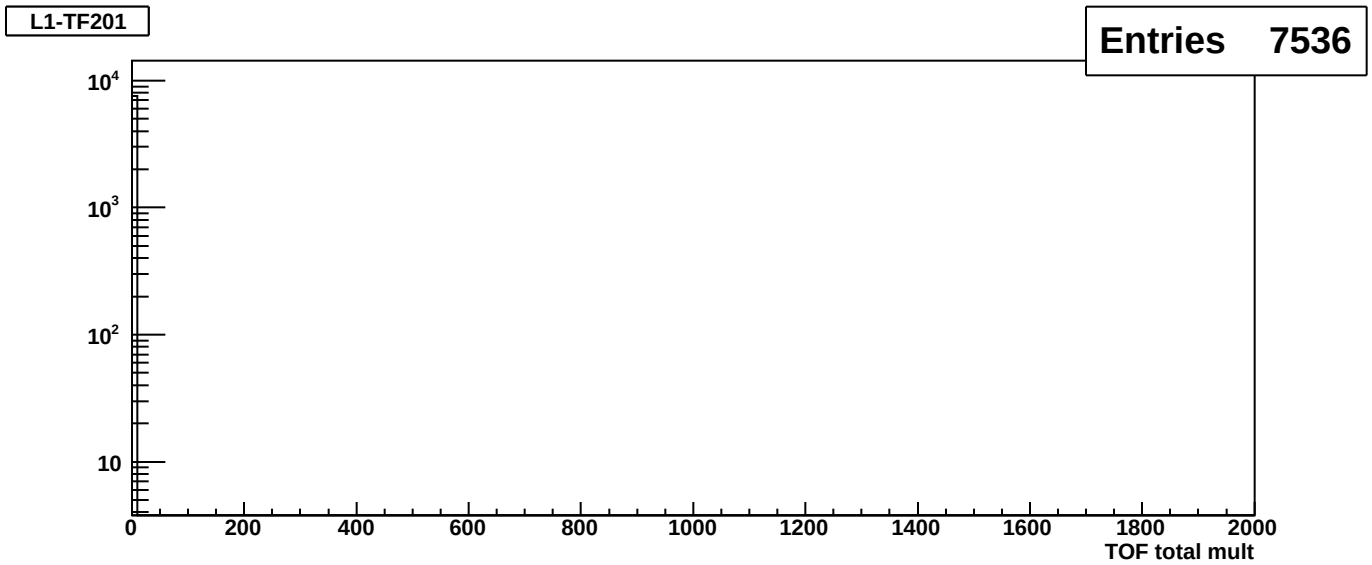

MIX-TF003
Entries 316512
TOF MULT
TOF tray

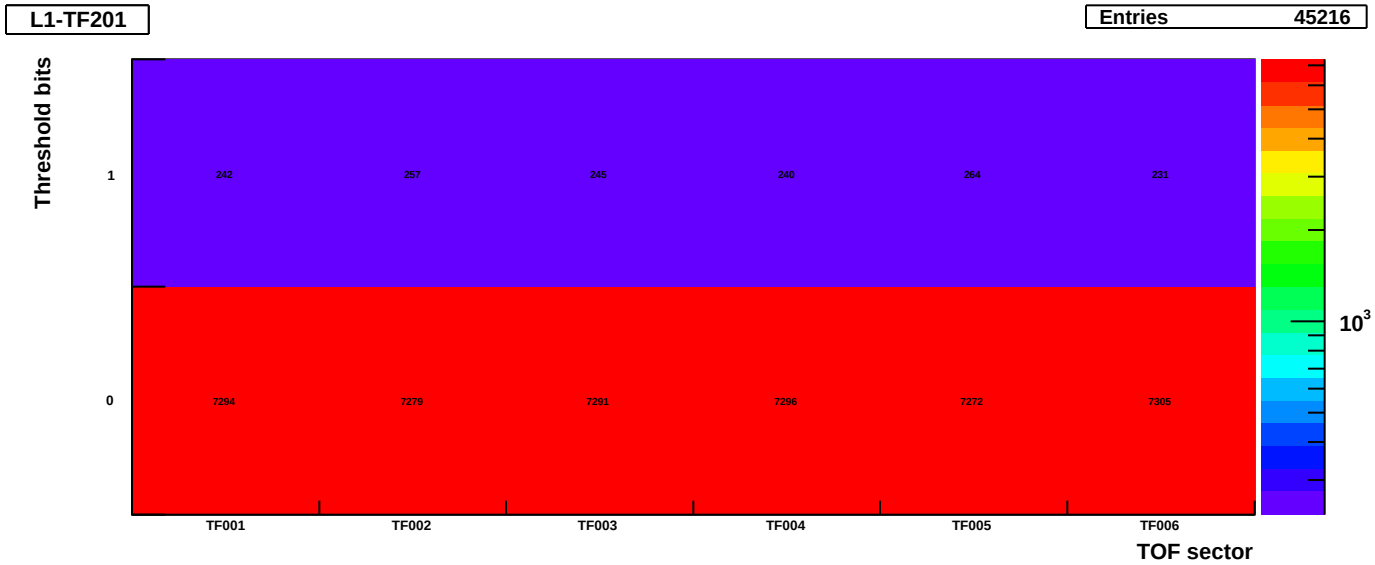

MIX-TF004
Entries 316512
TOF MULT
TOF tray

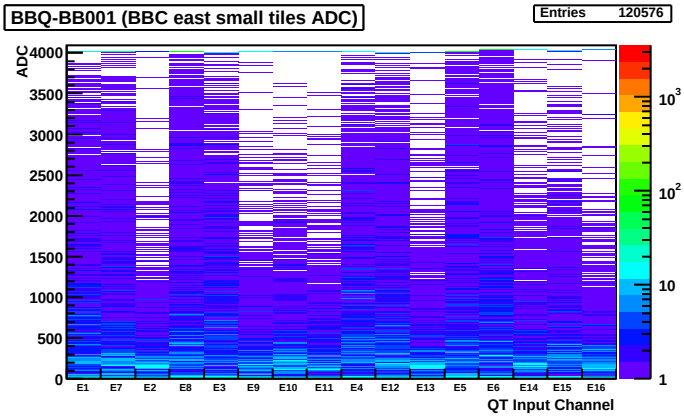

MIX-TF005
Entries 316512
TOF MULT
TOF tray

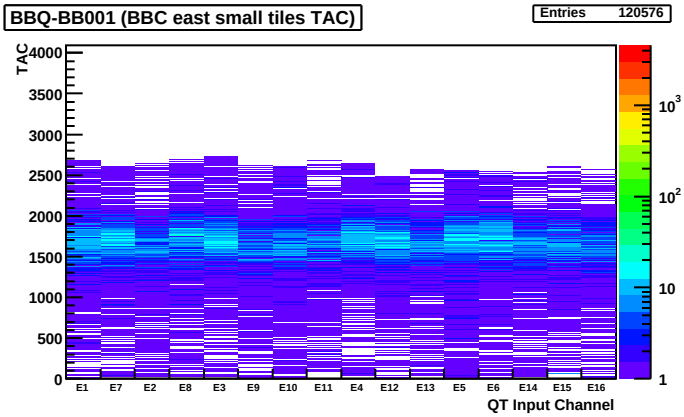

MIX-TF006
Entries 316512
TOF MULT
TOF tray

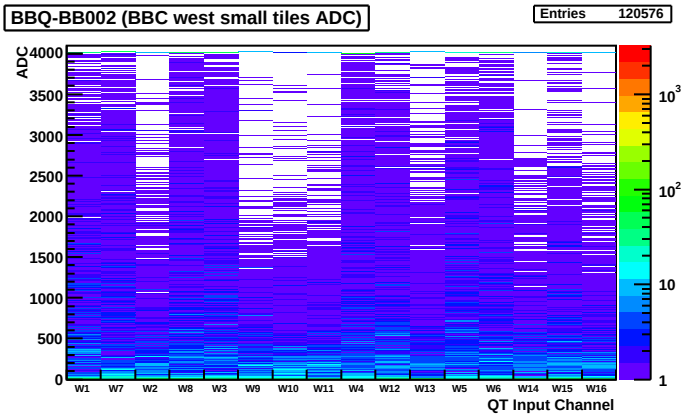

MIX-TF101
Entries 45216
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

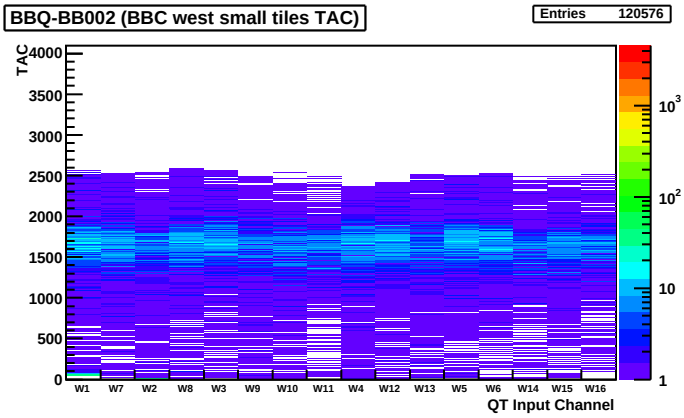

L1-TF201
Entries 7536
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

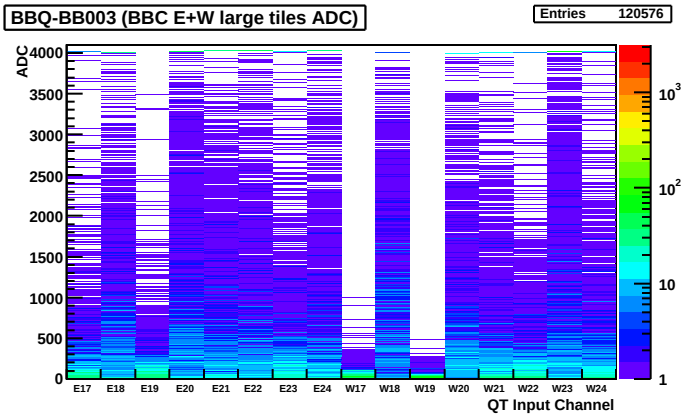

L1-TF201
Entries 45216
Threshold bits
1
0
242
257
245
240
264
231
7294
7279
7291
7296
7272
7305
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3

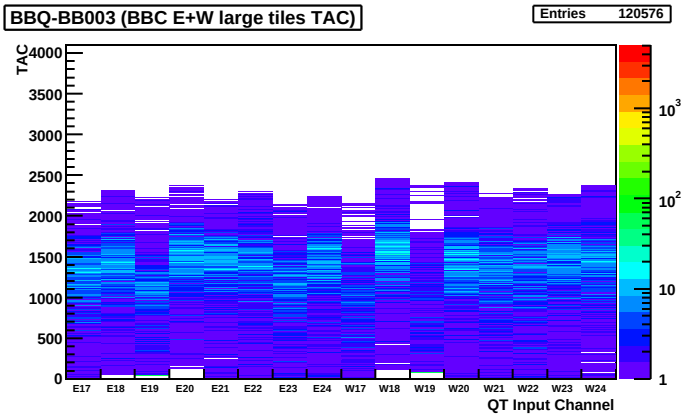

BBQ-BB001 (BBC east small tiles ADC)
Entries 120576
ADC
QT Input Channel

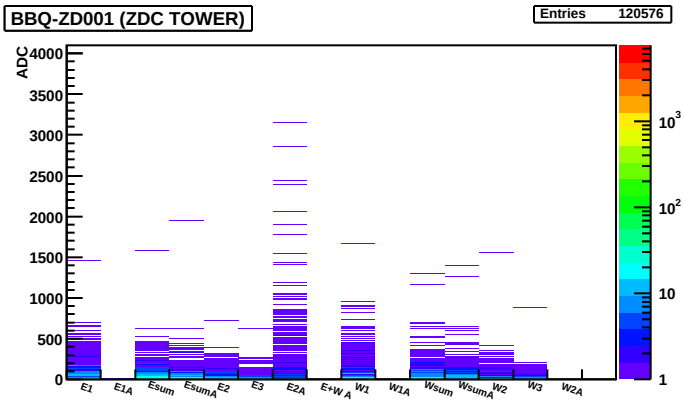

BBQ-BB001 (BBC east small tiles TAC)
Entries 120576
TAC
QT Input Channel

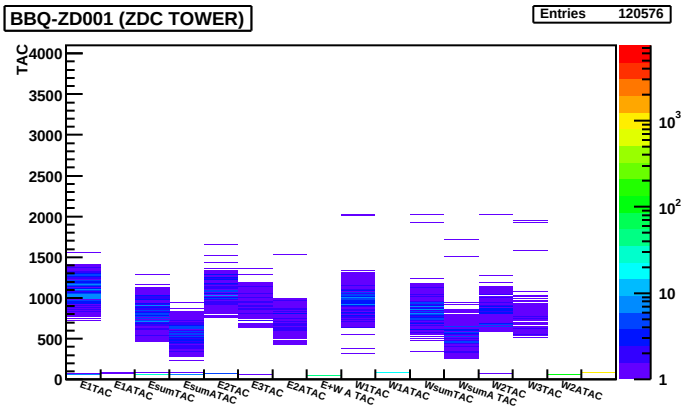

BBQ-BB002 (BBC west small tiles ADC)
Entries 120576
ADC
QT Input Channel

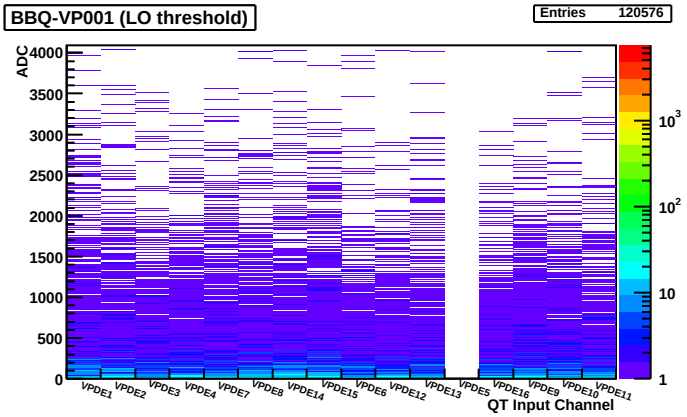

BBQ-BB002 (BBC west small tiles TAC)
Entries 120576
TAC
QT Input Channel

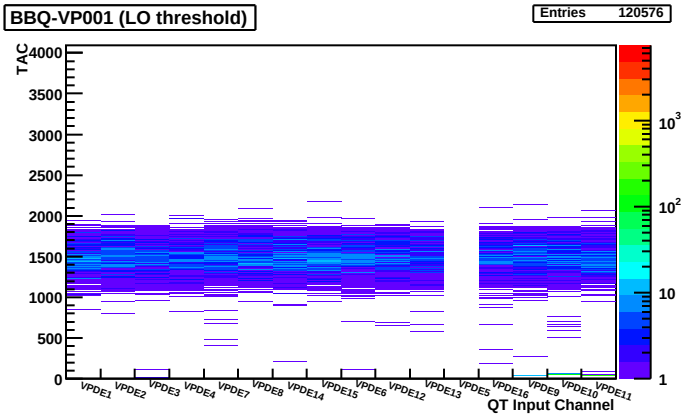

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 120576
ADC
QT Input Channel

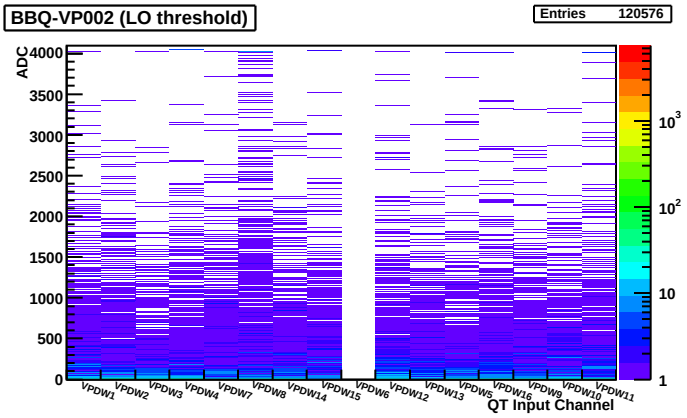

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 120576
TAC
QT Input Channel

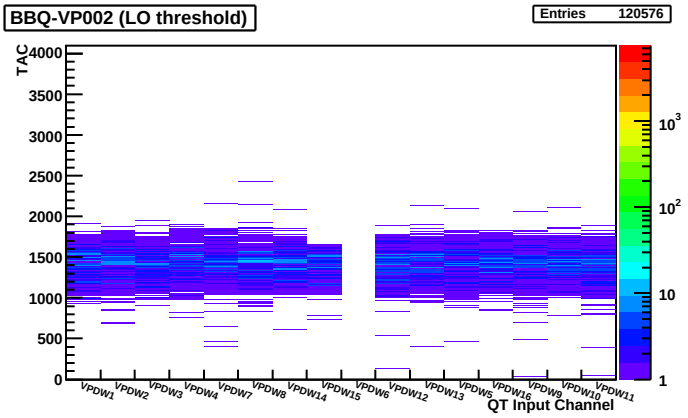

BBQ-ZD001 (ZDC TOWER)
Entries 120576
ADC

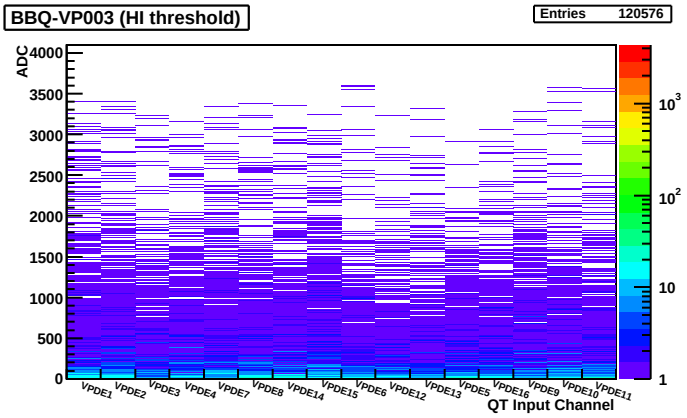

BBQ-ZD001 (ZDC TOWER)
Entries 120576
TAC

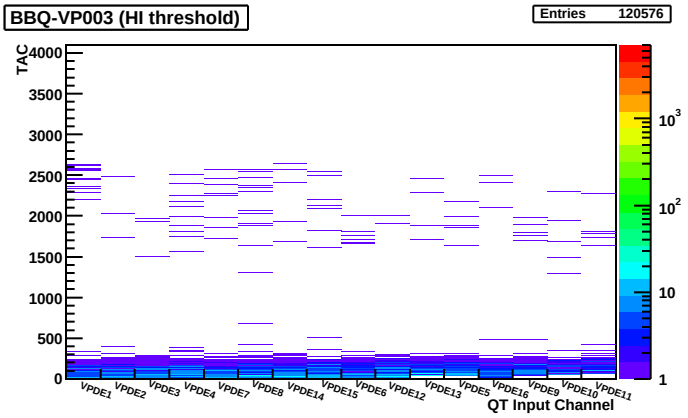

BBQ-VP001 (LO threshold)
Entries 120576
ADC
QT Input Channel

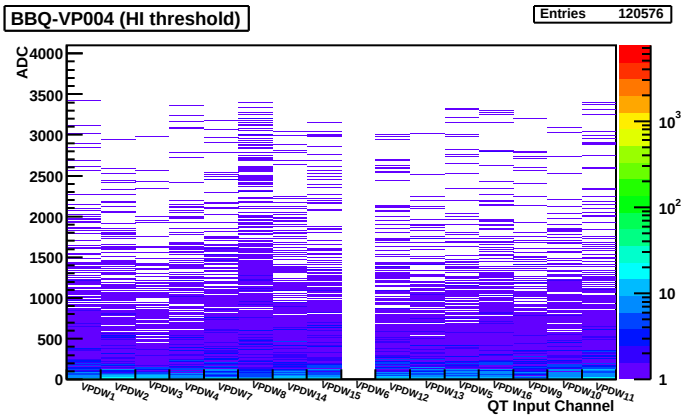

BBQ-VP001 (LO threshold)
Entries 120576
TAC
QT Input Channel

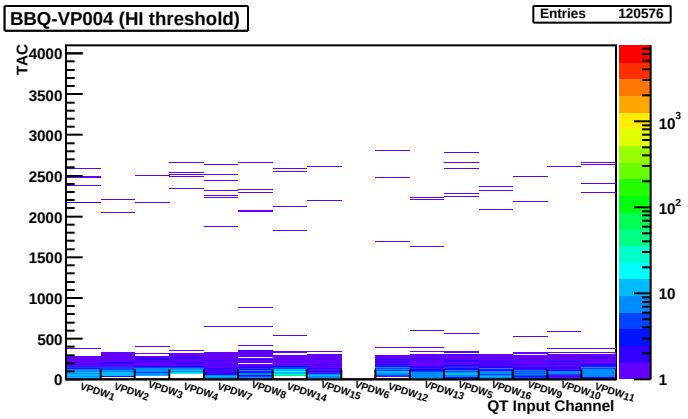

BBQ-VP002 (LO threshold)
Entries 120576
ADC
QT Input Channel

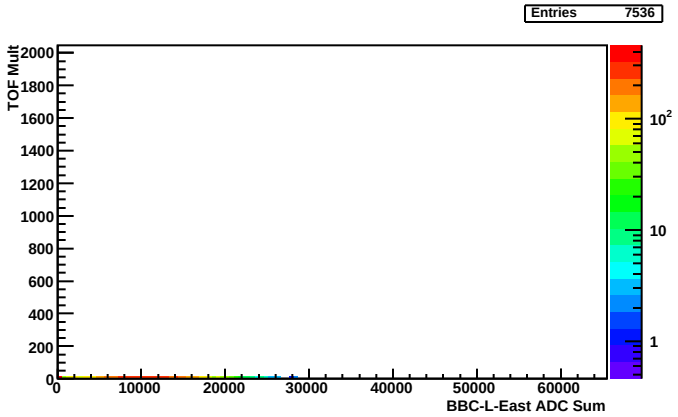

BBQ-VP002 (LO threshold)
Entries 120576
TAC
QT Input Channel

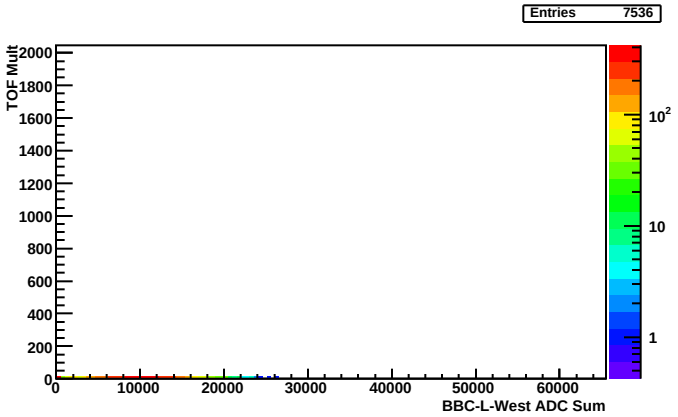

BBQ-VP003 (HI threshold)
Entries 120576
ADC
QT Input Channel

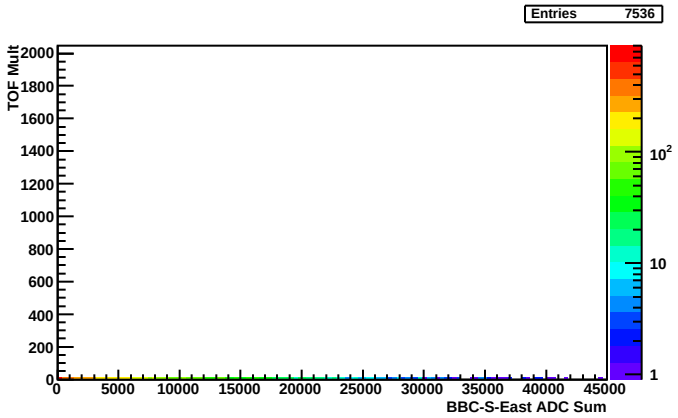

BBQ-VP003 (HI threshold)
Entries 120576
TAC
QT Input Channel

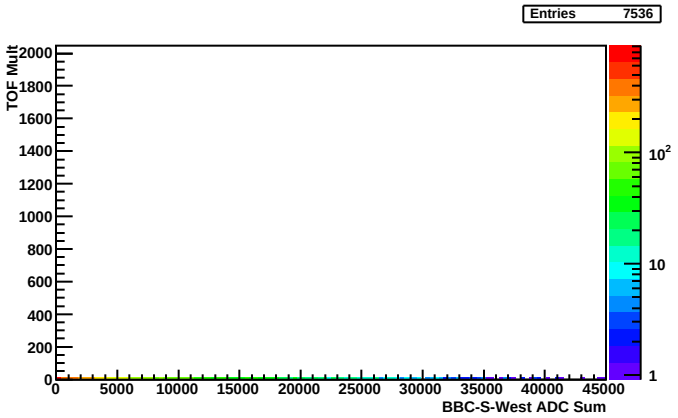

BBQ-VP004 (HI threshold)
Entries 120576
ADC
QT Input Channel

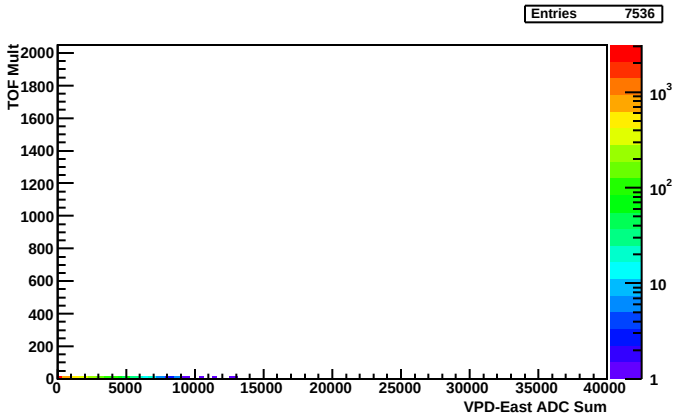

BBQ-VP004 (HI threshold)
Entries 120576
TAC
QT Input Channel

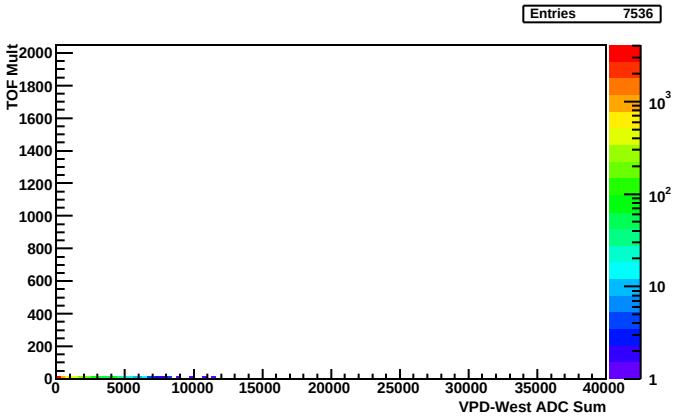

Entries 7536
TOF Mult
BBC-L-East ADC Sum

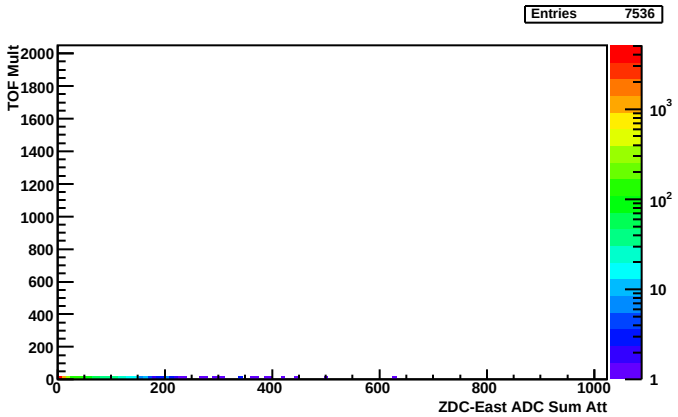

Entries 7536
TOF Mult
BBC-L-West ADC Sum

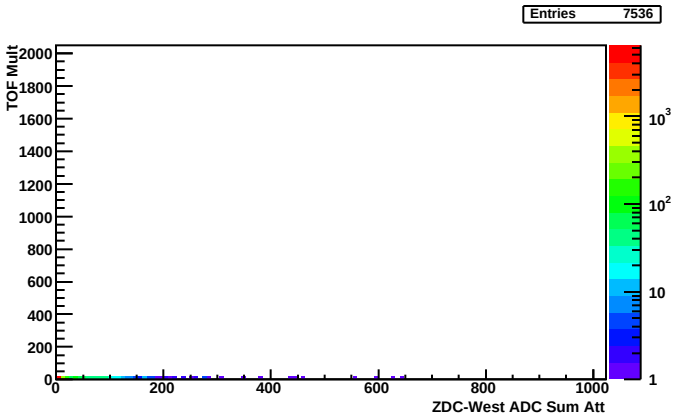

Entries 7536
TOF Mult
BBC-S-East ADC Sum

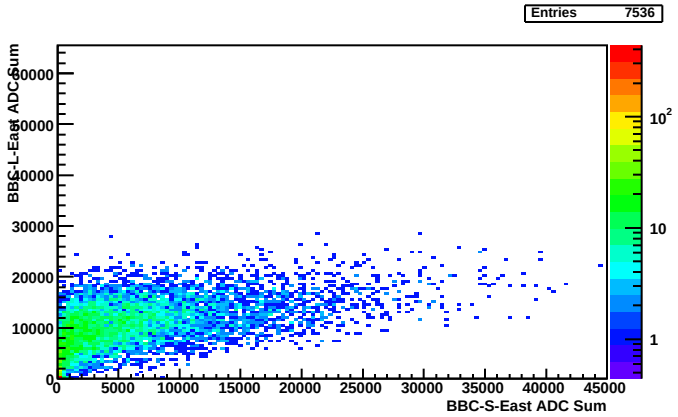

Entries 7536
TOF Mult
BBC-S-West ADC Sum

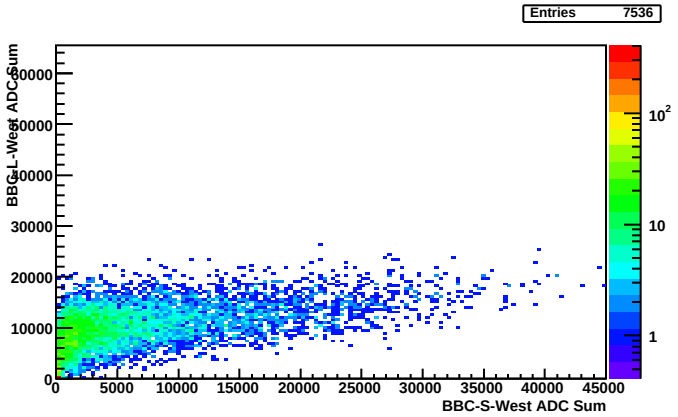

Entries 7536
TOF Mult
VPD-East ADC Sum

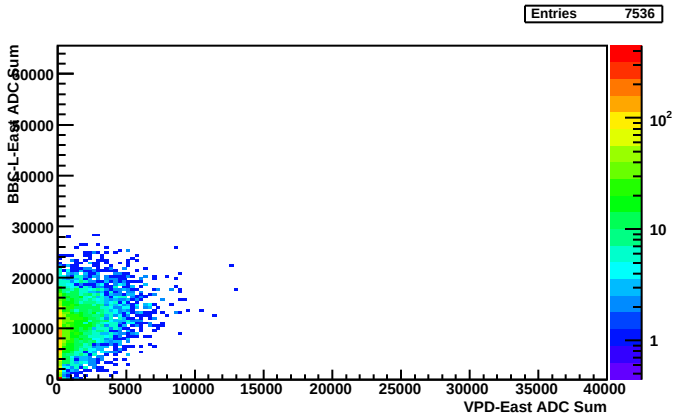

Entries 7536
TOF Mult
VPD-West ADC Sum

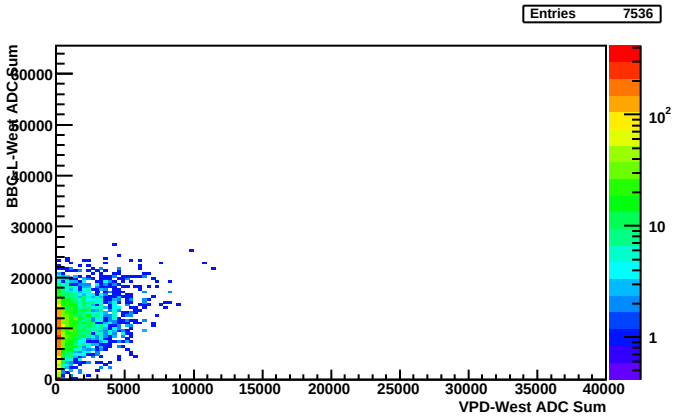

Entries 7536
TOF Mult
ZDC-East ADC Sum Att

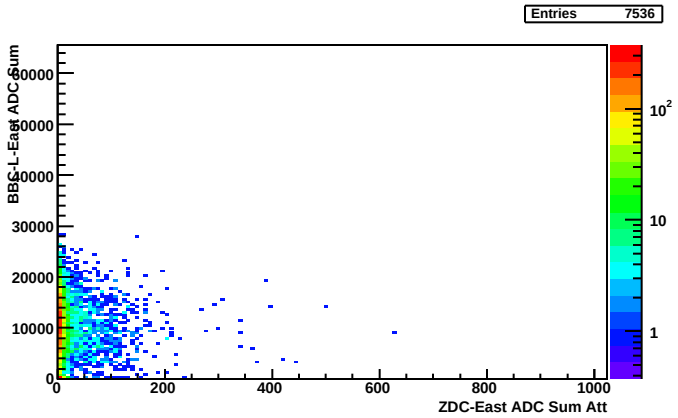

Entries 7536
TOF Mult
ZDC-West ADC Sum Att

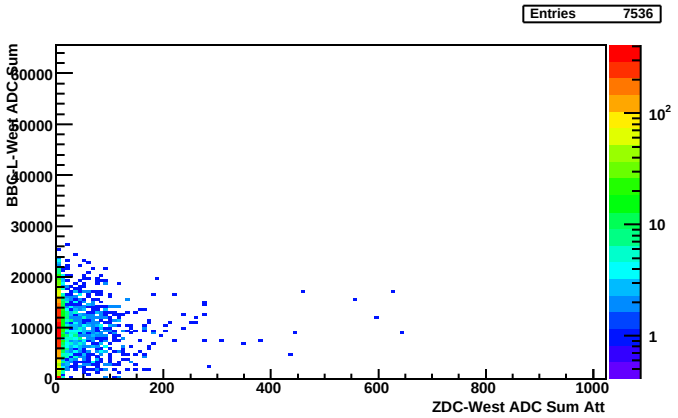

Entries 7536
BBC-L-East ADC Sum
BBC-S-East ADC Sum

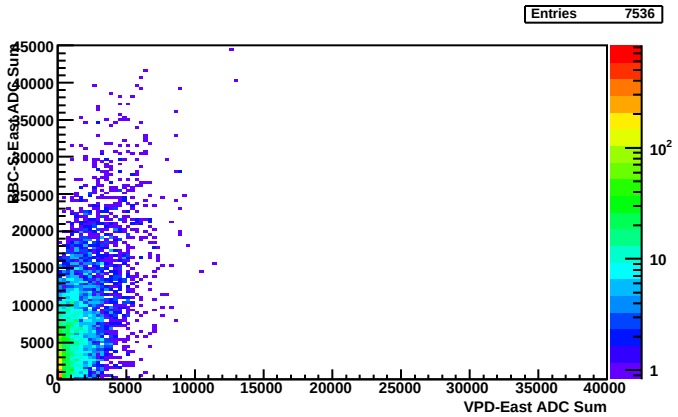

Entries 7536
BBC-L-West ADC Sum
BBC-S-West ADC Sum

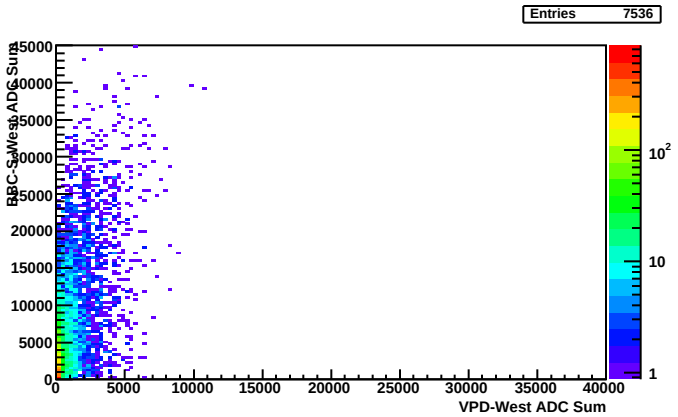

Entries 7536
BBC-L-East ADC Sum
VPD-East ADC Sum

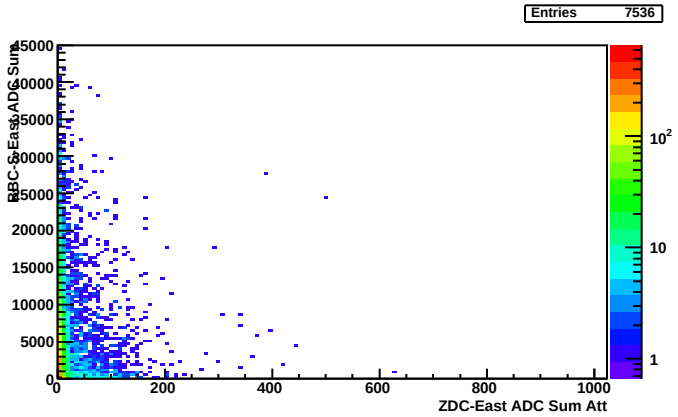

Entries 7536
BBC-L-West ADC Sum
VPD-West ADC Sum

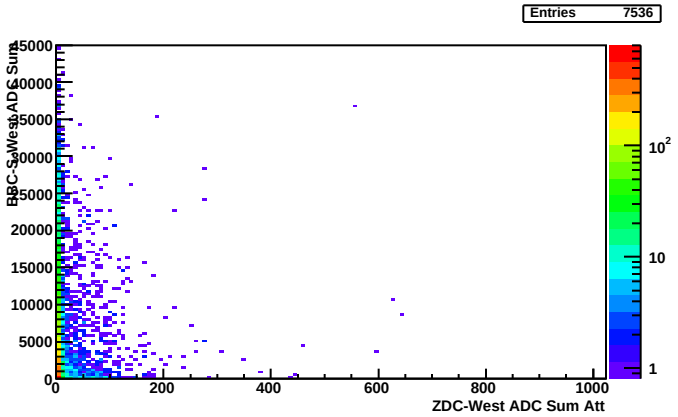

Entries 7536
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

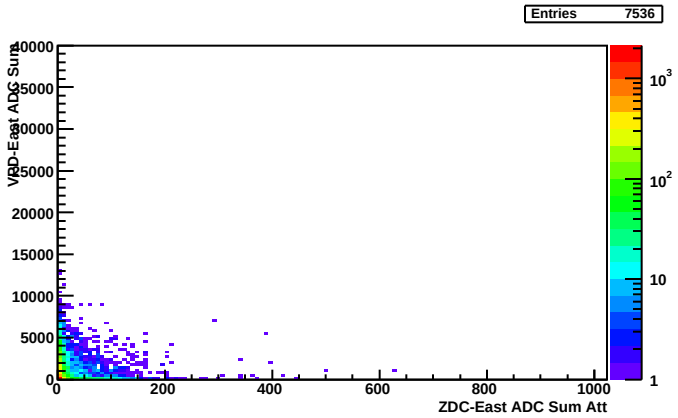

Entries 7536
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

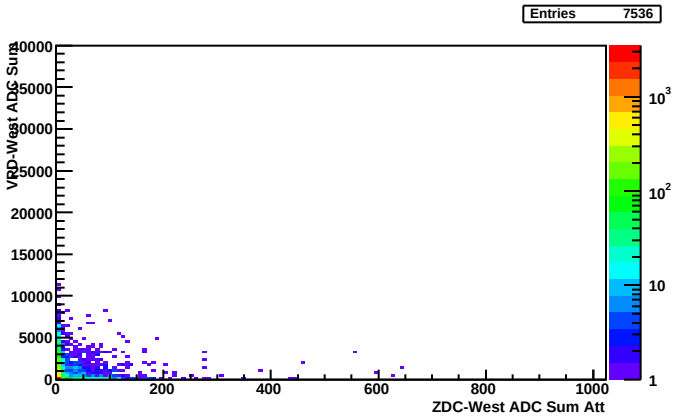

Entries 7536
BBC-S-East ADC Sum
VPD-East ADC Sum

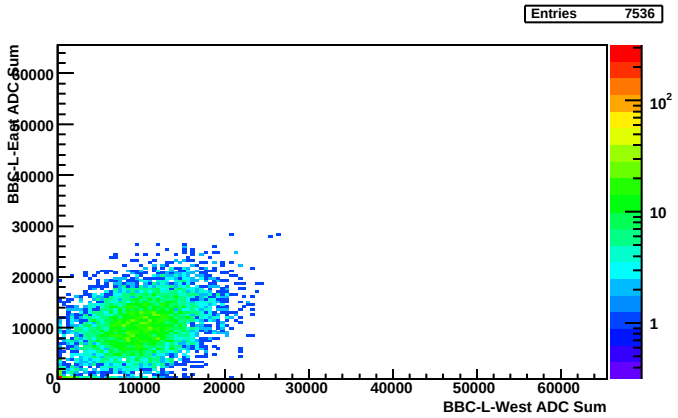

Entries 7536
BBC-S-West ADC Sum
VPD-West ADC Sum

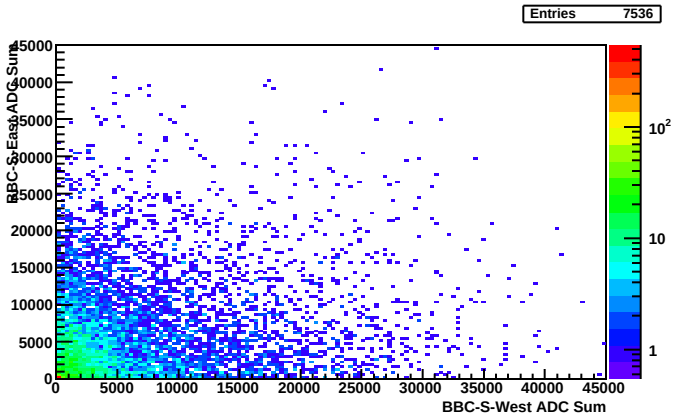

Entries 7536
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

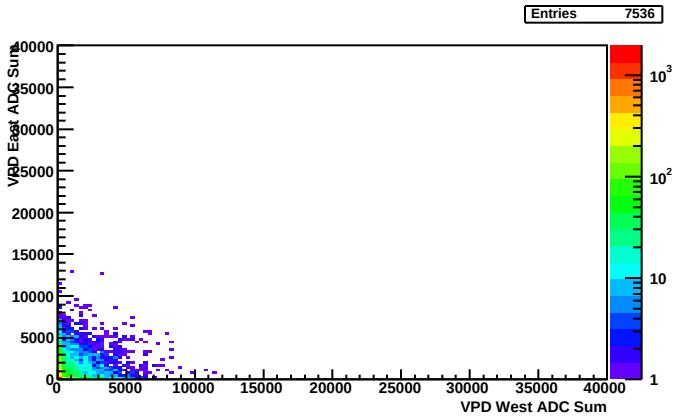

Entries 7536
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

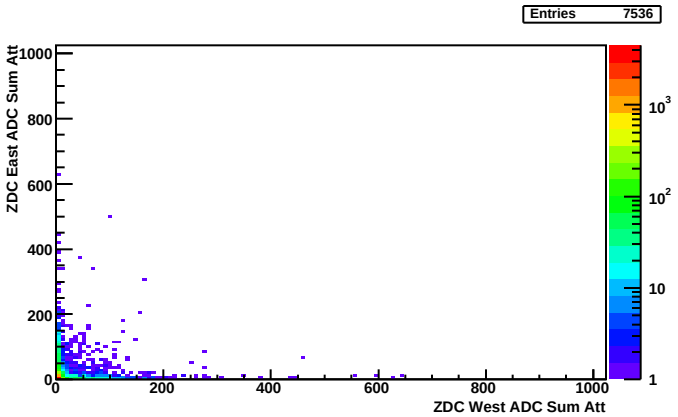

Entries 7536
VPD-East ADC Sum
ZDC-East ADC Sum Att

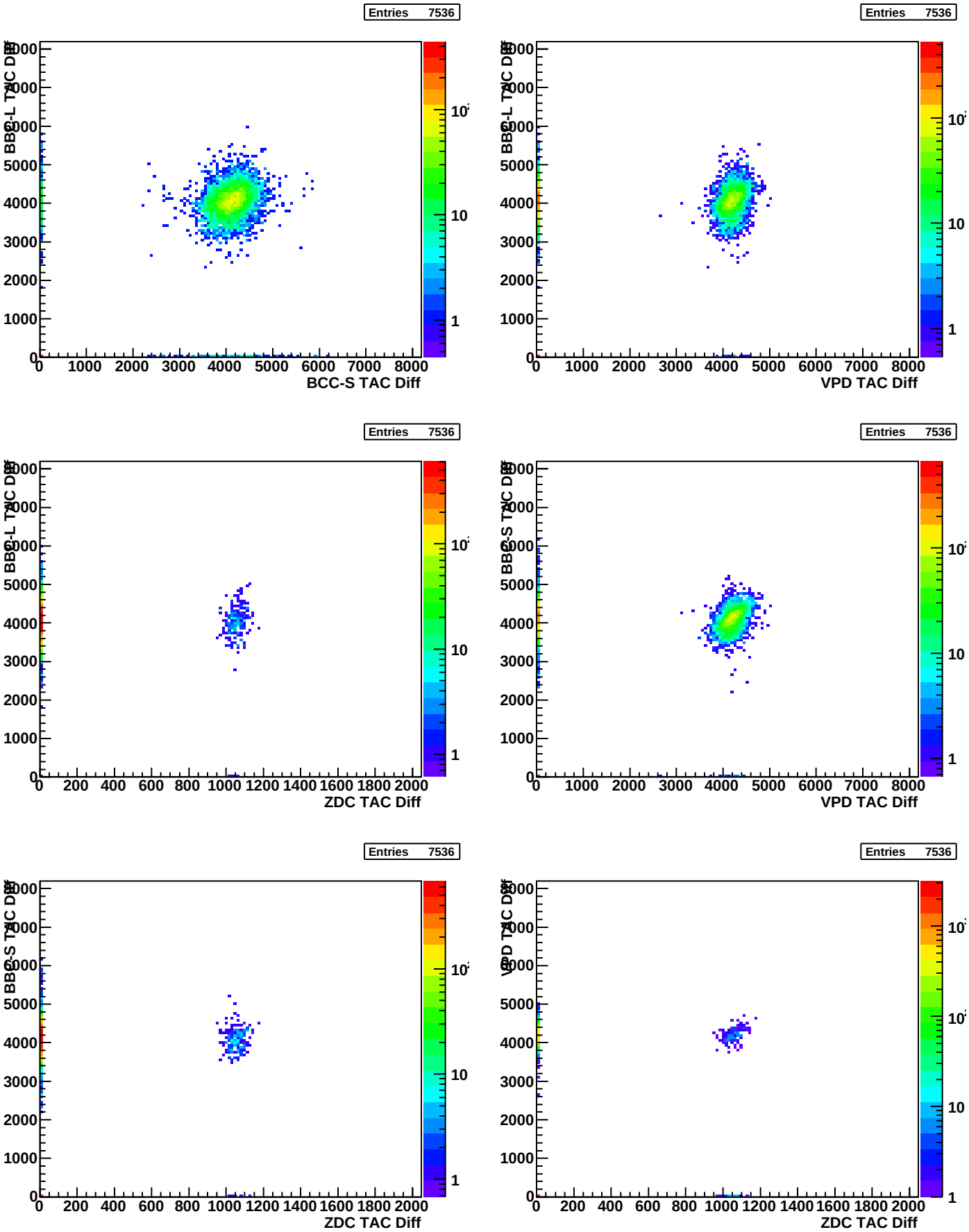

Entries 7536
VPD-West ADC Sum
ZDC-West ADC Sum Att

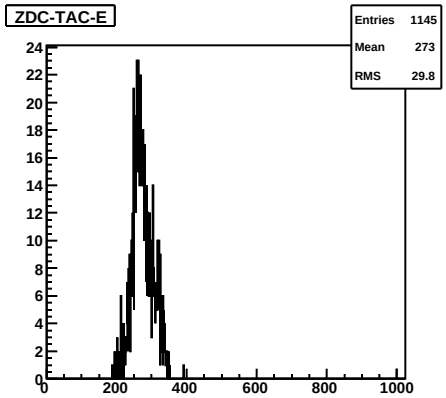

Entries 7536
BBC-L-East ADC Sum
BBC-L-West ADC Sum

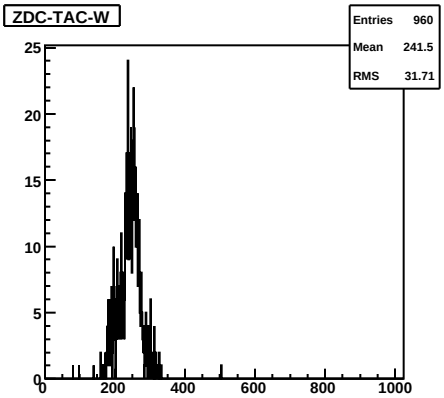

Entries 7536
BBC-S-East ADC Sum
BBC-S-West ADC Sum

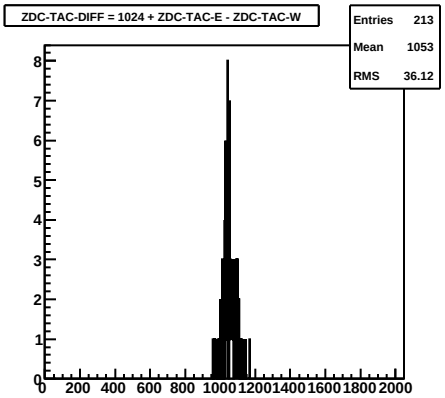

Entries 7536
VPD East ADC Sum
VPD West ADC Sum

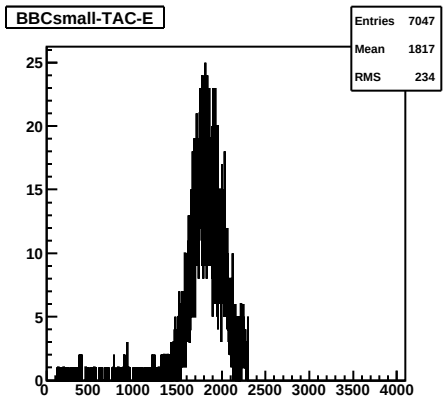

Entries 7536
ZDC East ADC Sum Att
ZDC West ADC Sum Att

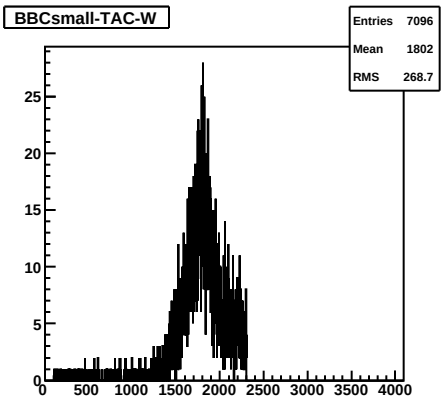

Entries 7536
BBC-L TAC Diff
BCC-S TAC Diff
Entries 7536
BBC-L TAC Diff
VPD TAC Diff
Entries 7536
BBC-L TAC Diff
ZDC TAC Diff
Entries 7536
BBC-S TAC Diff
VPD TAC Diff
Entries 7536
BBC-S TAC Diff
ZDC TAC Diff
Entries 7536
VPD TAC Diff
ZDC TAC Diff

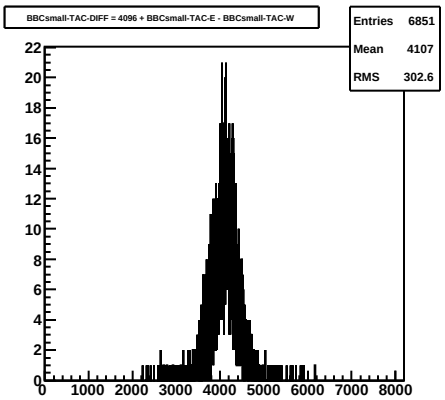

ZDC-TAC-E
Entries 1145
Mean 273
RMS 29.8

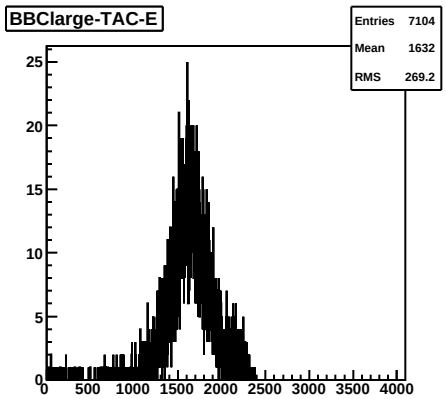

ZDC-TAC-W
Entries 960
Mean 241.5
RMS 31.71

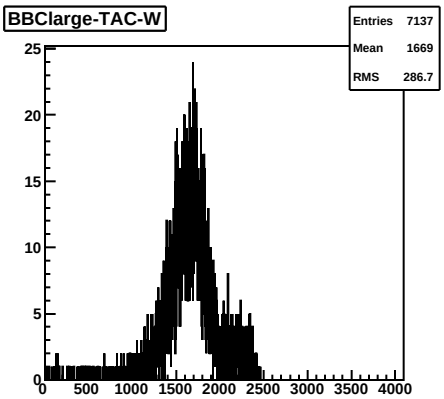

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 213
Mean 1053
RMS 36.12

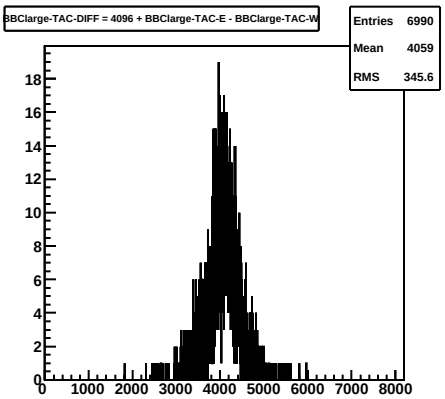

BBCsmall-TAC-E
Entries 7047
Mean 1817
RMS 234

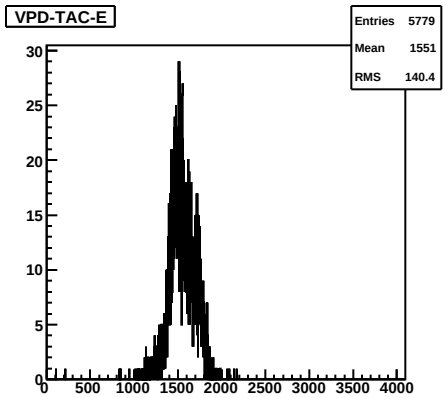

BBCsmall-TAC-W
Entries 7096
Mean 1802
RMS 268.7

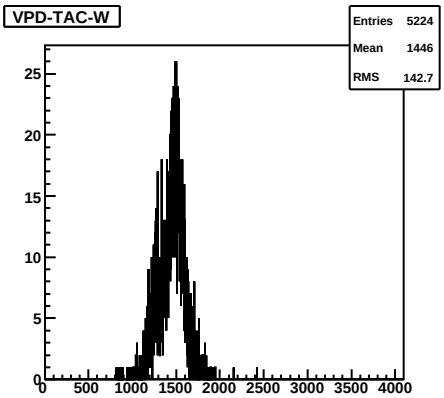

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 6851
Mean 4107
RMS 302.6

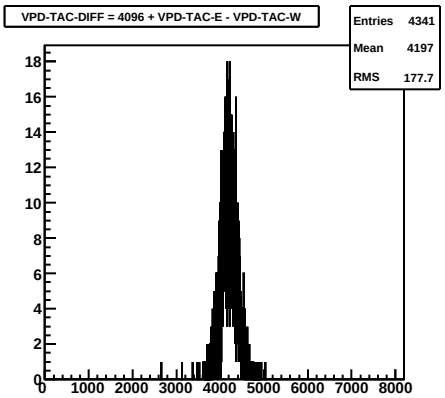

BBClarge-TAC-E
Entries 7104
Mean 1632
RMS 269.2

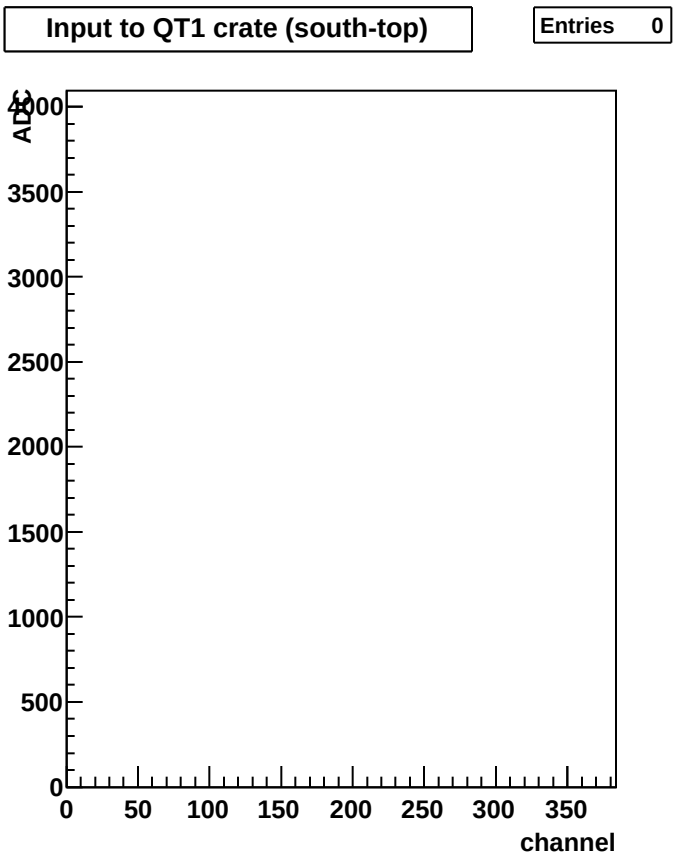

BBClarge-TAC-W
Entries 7137
Mean 1669
RMS 286.7

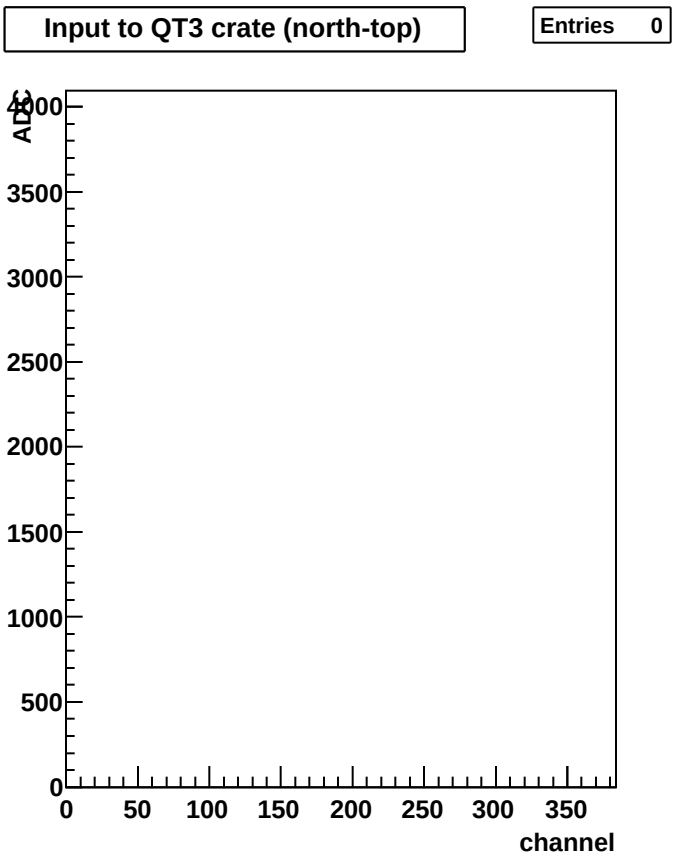

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 6990
Mean 4059
RMS 345.6

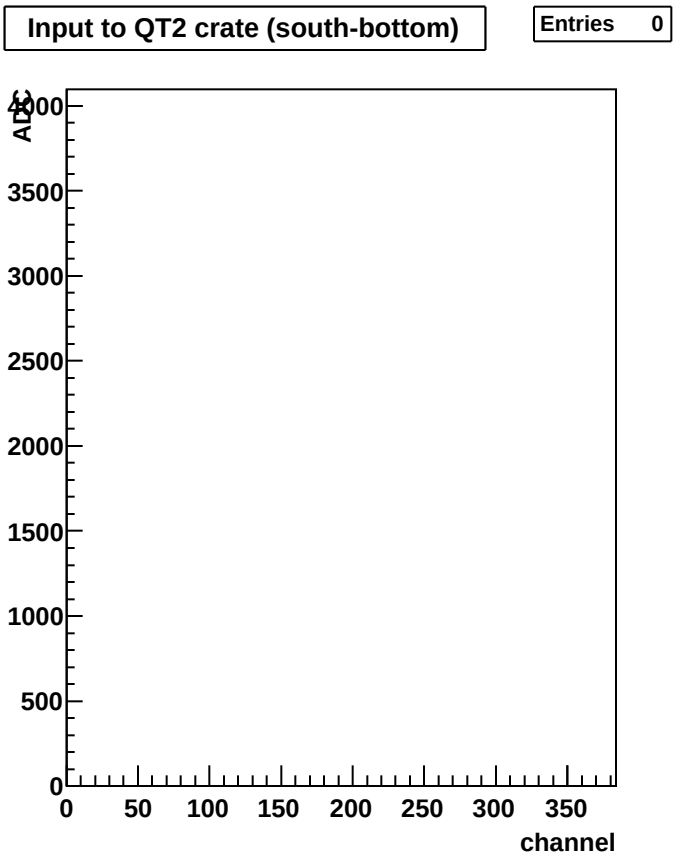

VPD-TAC-E
Entries 5779
Mean 1551
RMS 140.4

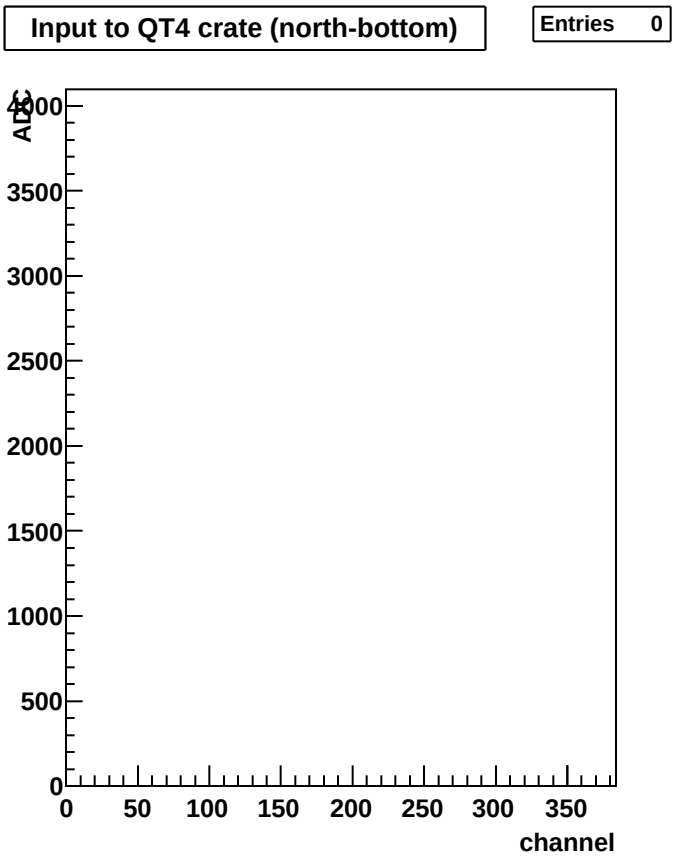

VPD-TAC-W
Entries 5224
Mean 1446
RMS 142.7

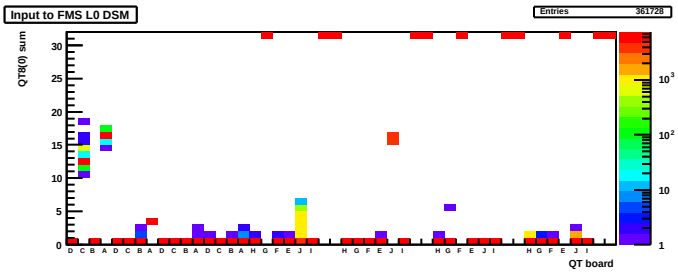

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 4341
Mean 4197
RMS 177.7

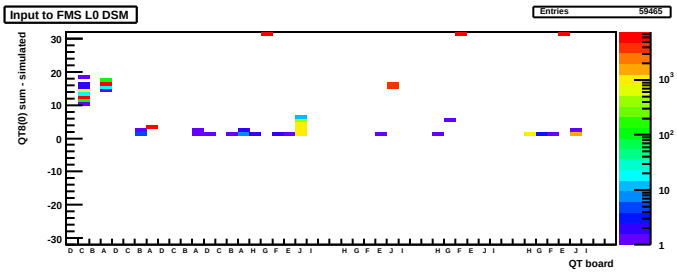

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

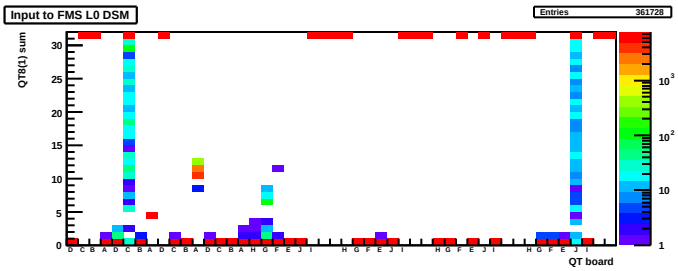

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

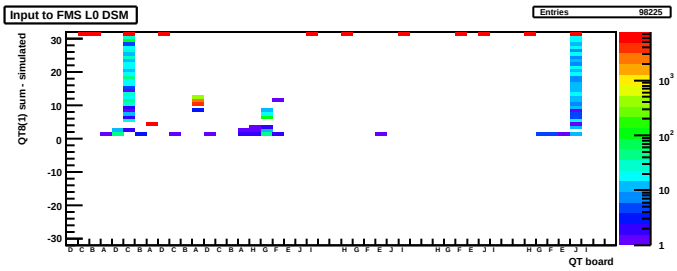

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

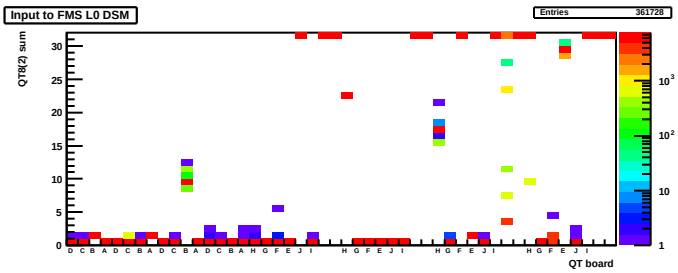

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

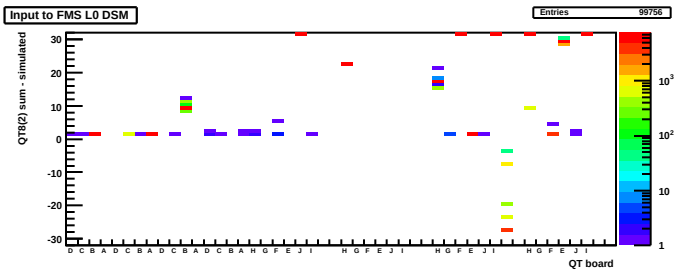

Input to FMS L0 DSM
Entries 361728
QT8(0) sum
QT board

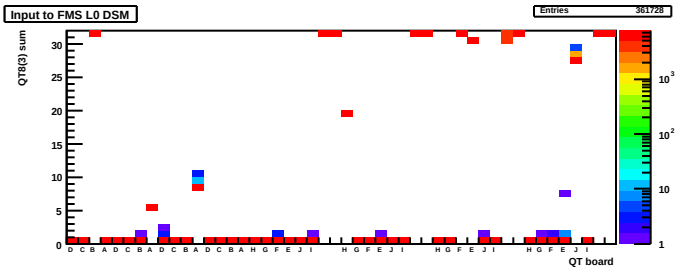

Input to FMS L0 DSM
Entries 59465
QT8(0) sum - simulated
QT board

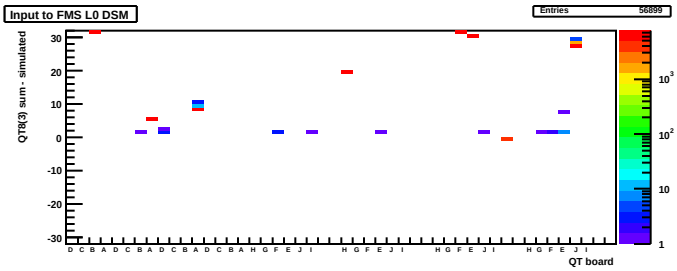

Input to FMS L0 DSM
Entries 361728
QT8(1) sum
QT board

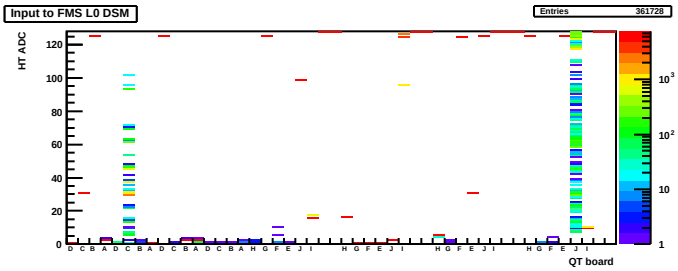

Input to FMS L0 DSM
Entries 98225
QT8(1) sum - simulated
QT board

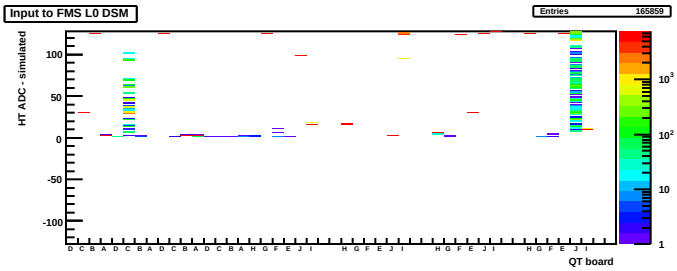

Input to FMS L0 DSM
Entries 361728
QT8(2) sum
QT board

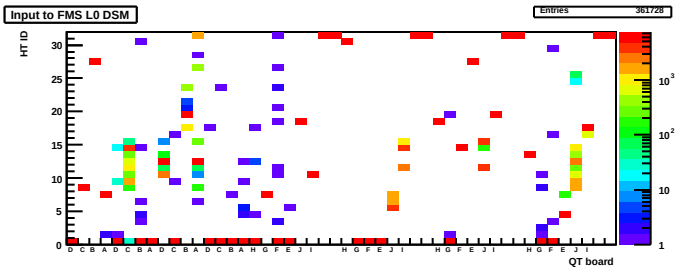

Input to FMS L0 DSM
Entries 99756
QT8(2) sum - simulated
QT board

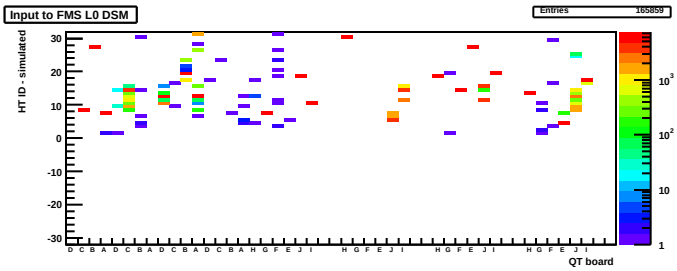

Input to FMS L0 DSM
Entries 361728
QT8(3) sum
QT board

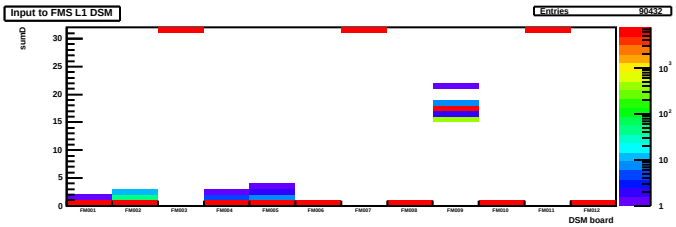

Input to FMS L0 DSM
Entries 56899
QT8(3) sum - simulated
QT board

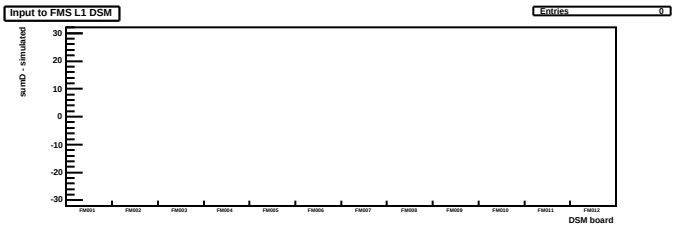

Input to FMS L0 DSM
Entries 361728
HT ADC
QT board

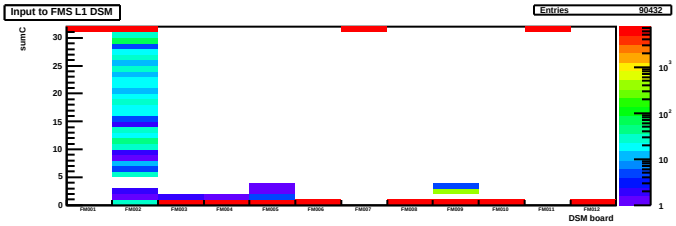

Input to FMS L0 DSM
Entries 165859
HT ADC - simulated
QT board

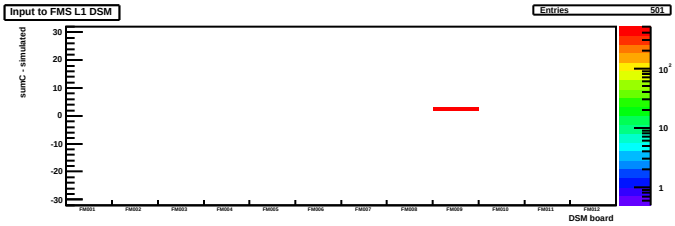

Input to FMS L0 DSM
Entries 361728
HT ID
QT board

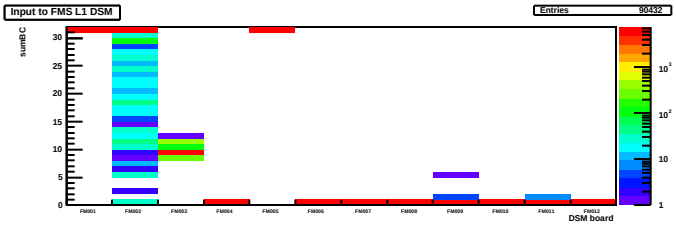

Input to FMS L0 DSM
Entries 165859
HT ID - simulated
QT board

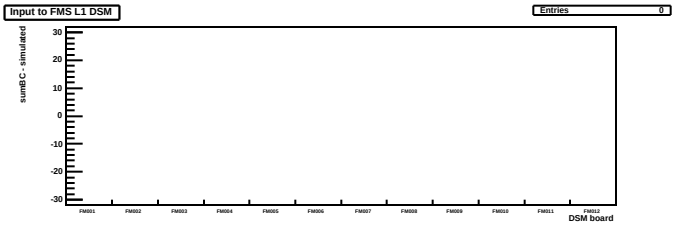

Input to FMS L1 DSM
Entries 90432
sumD
DSM board

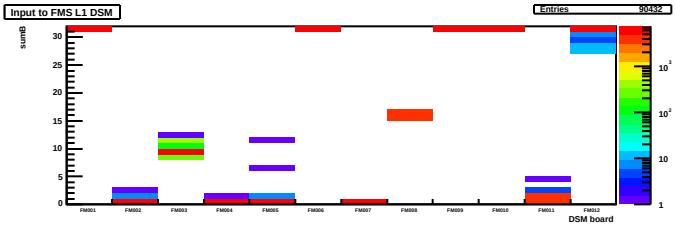

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

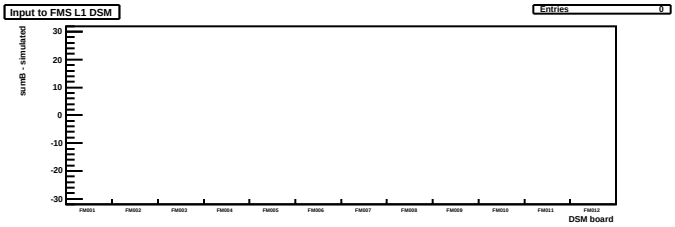

Input to FMS L1 DSM
Entries 90432
sumC
DSM board

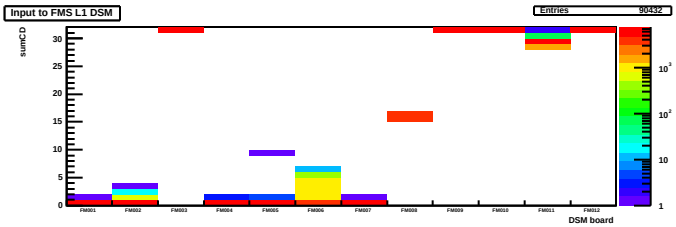

Input to FMS L1 DSM
Entries 501
sumC - simulated
DSM board

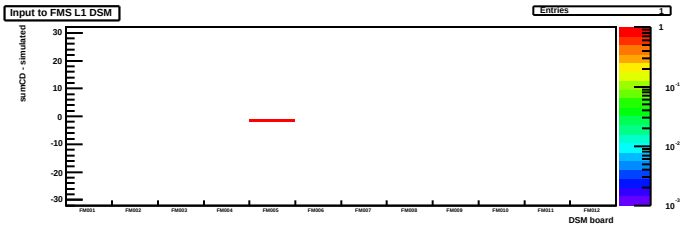

Input to FMS L1 DSM
Entries 90432
sumBC
DSM board

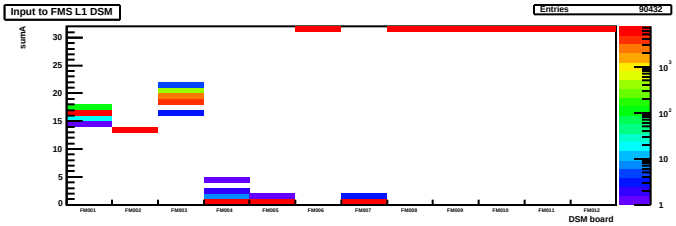

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

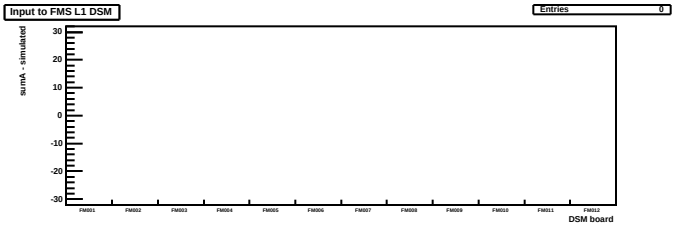

Input to FMS L1 DSM
Entries 90432
sumB
DSM board

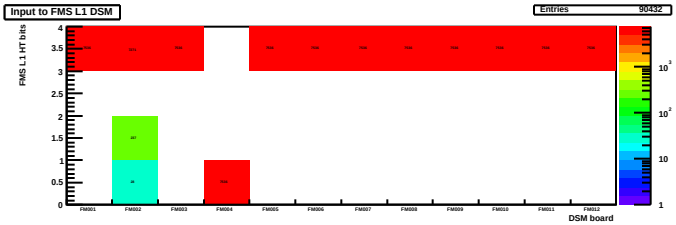

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

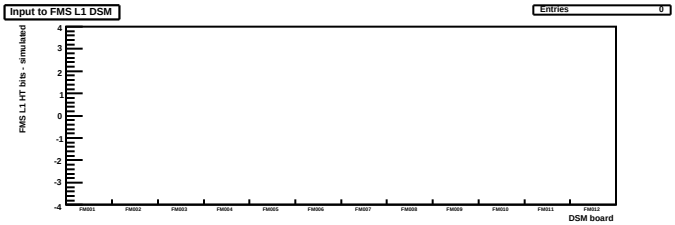

Input to FMS L1 DSM
Entries 90432
sumCD
DSM board

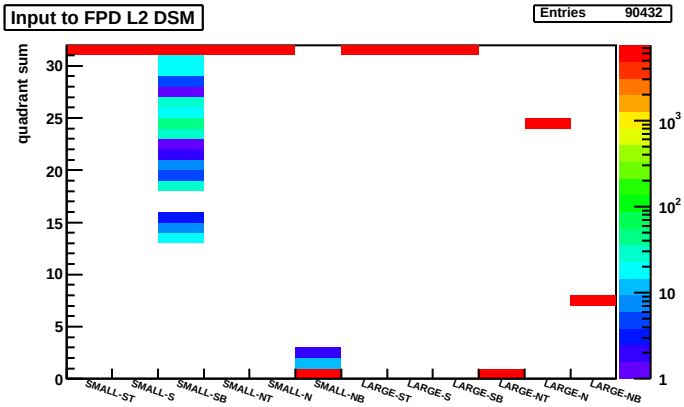

Input to FMS L1 DSM
Entries 1
sumCD - simulated
DSM board

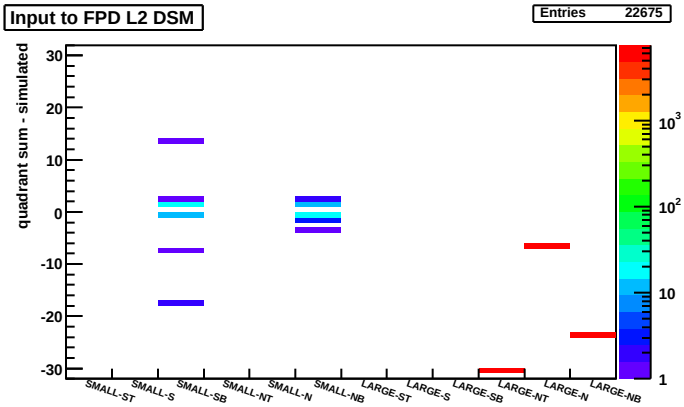

Input to FMS L1 DSM
Entries 90432
sumA
DSM board

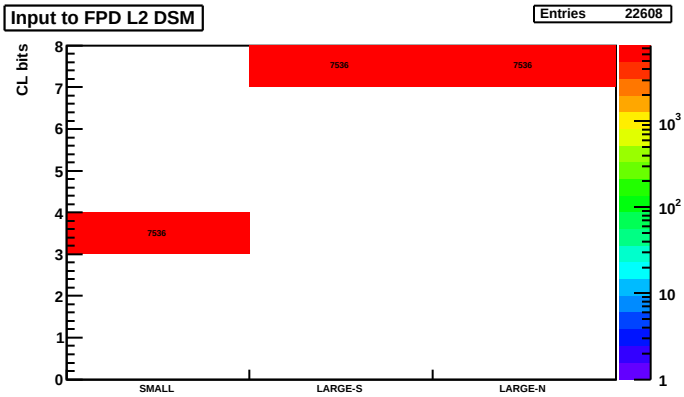

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

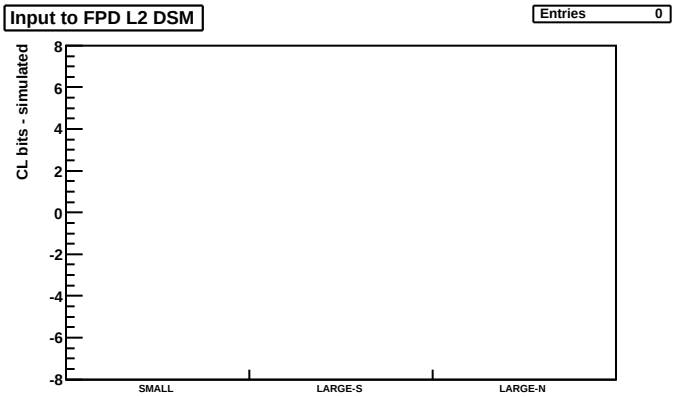

Input to FMS L1 DSM
Entries 90432
FMS L1 HT bits
DSM board

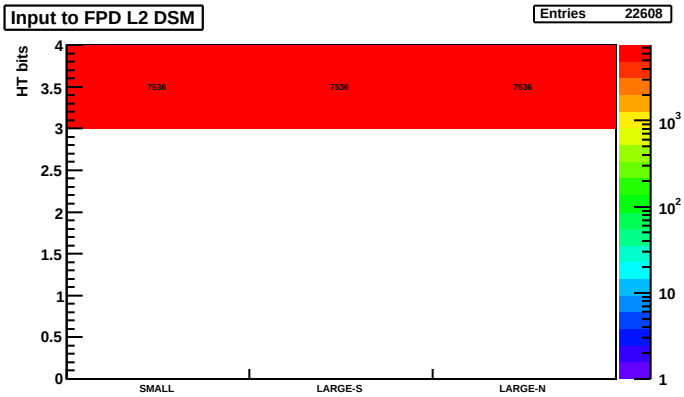

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

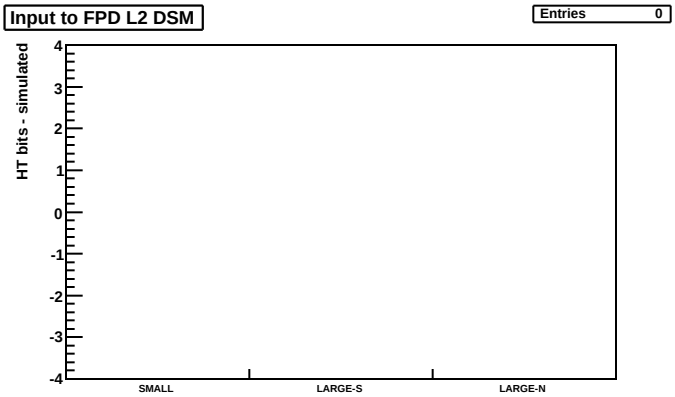

Input to FPD L2 DSM
Entries 90432
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

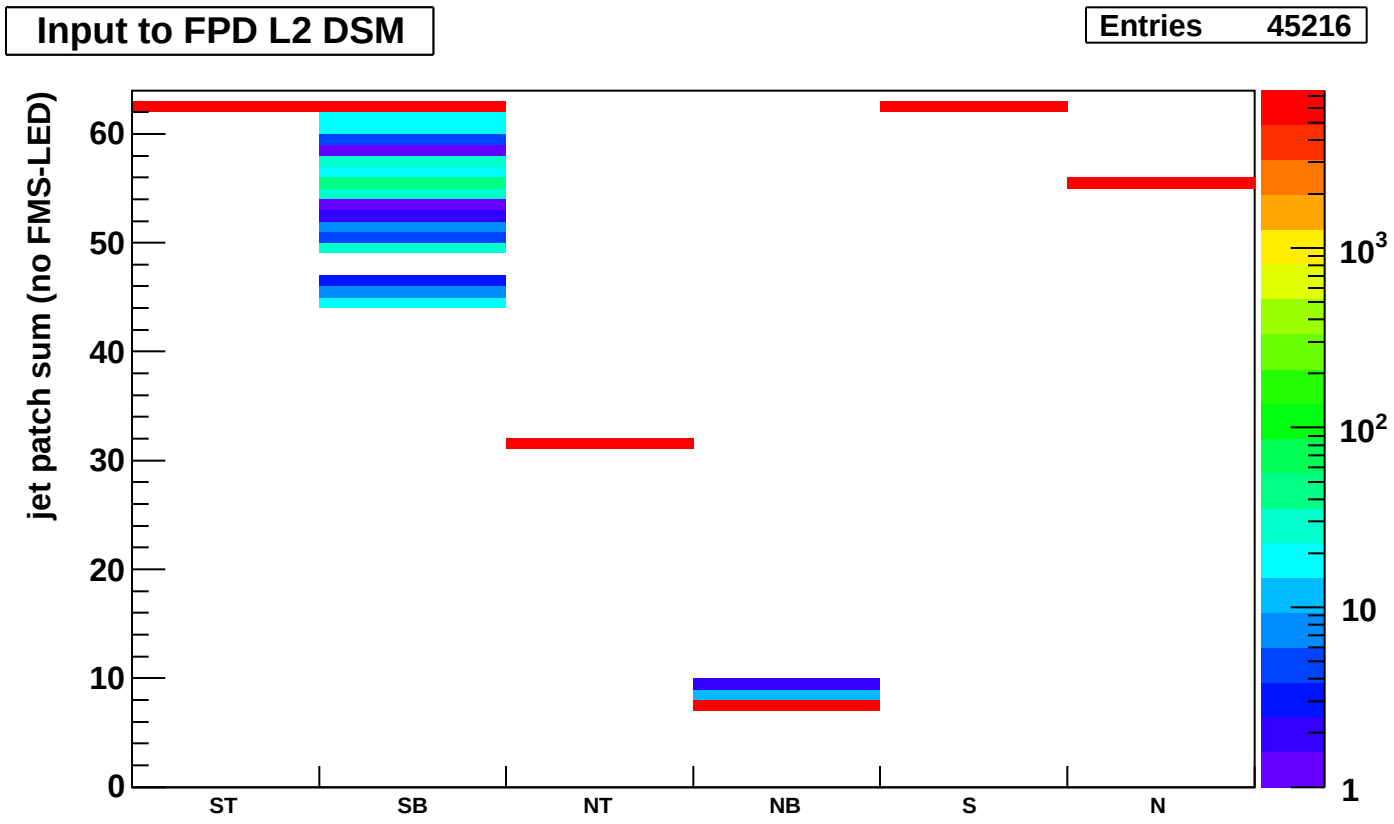

Input to FPD L2 DSM
Entries 22675
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

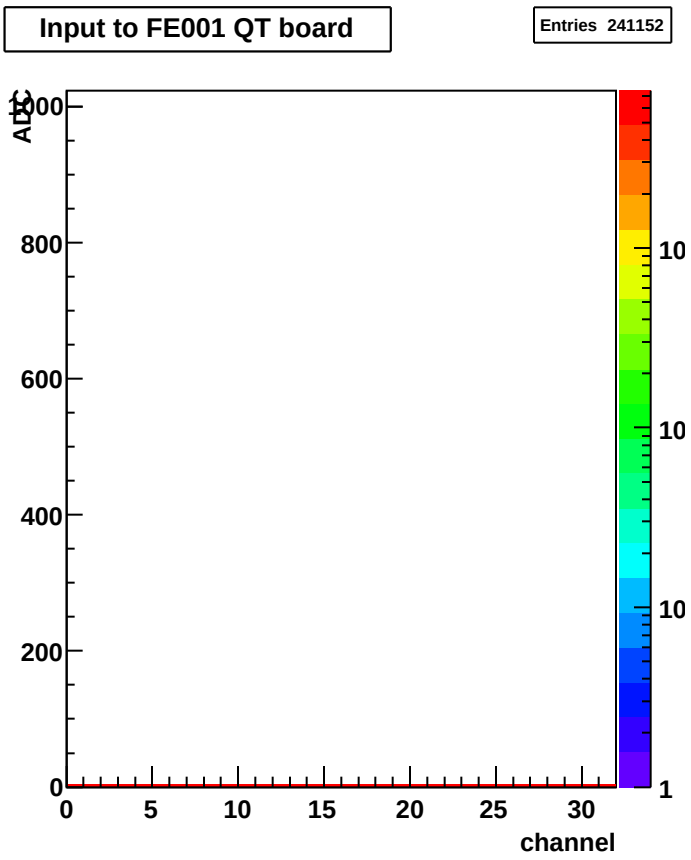

Input to FPD L2 DSM
Entries 22608
CL bits
7536
7536
7536
SMALL
LARGE-S
LARGE-N

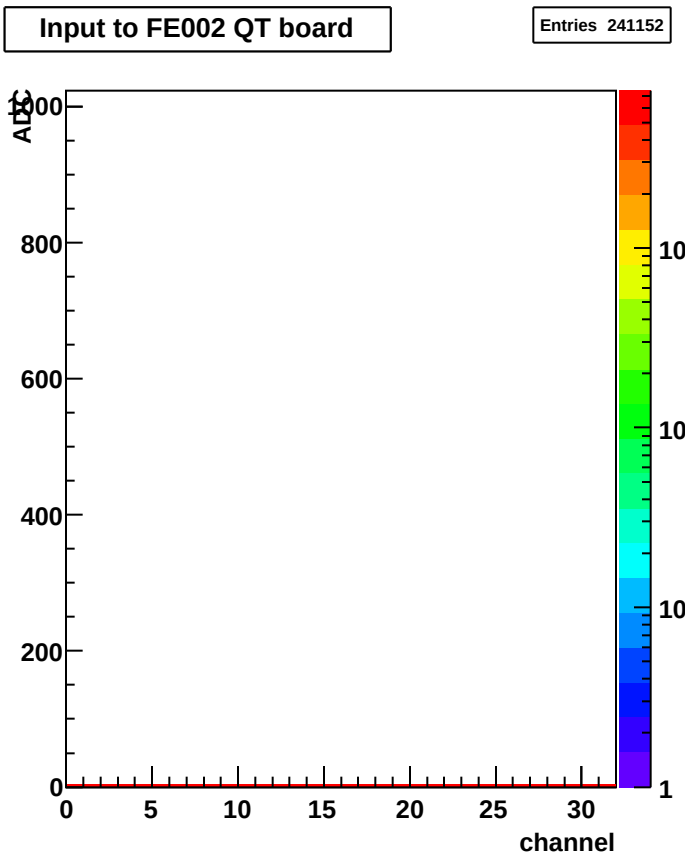

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

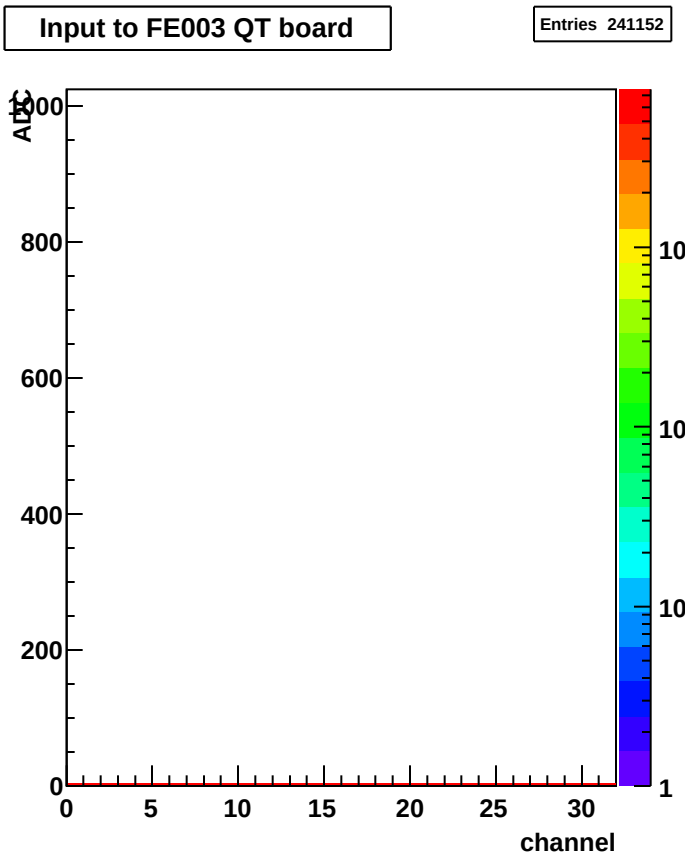

Input to FPD L2 DSM
Entries 22608
HT bits
7536
7536
7536
SMALL
LARGE-S
LARGE-N

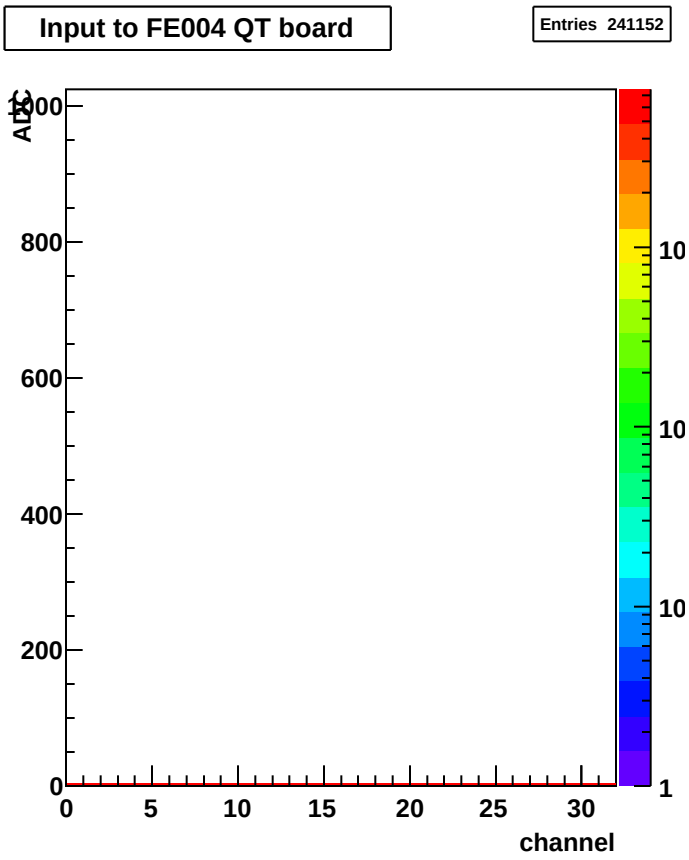

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

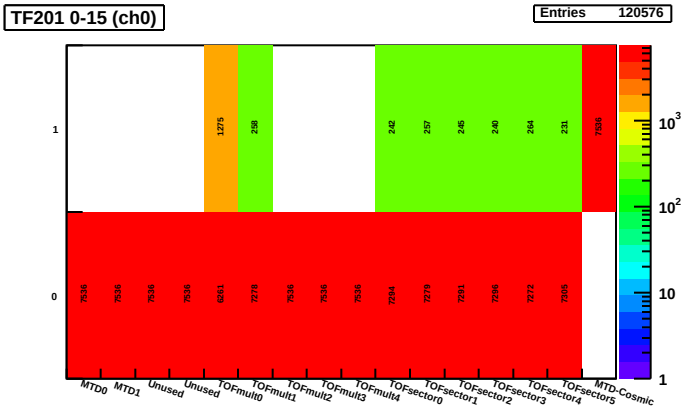

Input to FPD L2 DSM
Entries 45216
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

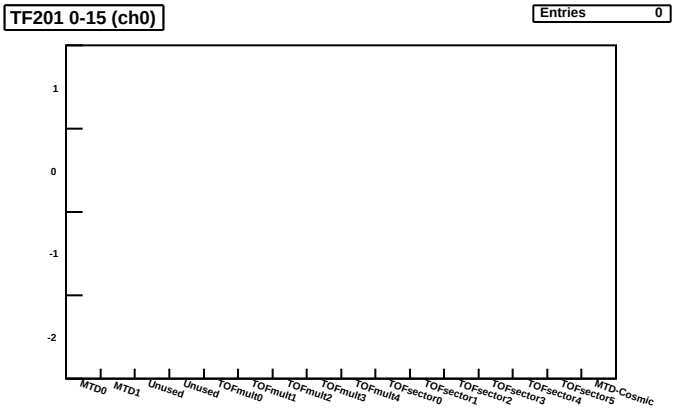

Input to FE001 QT board
Entries 241152
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
10
1

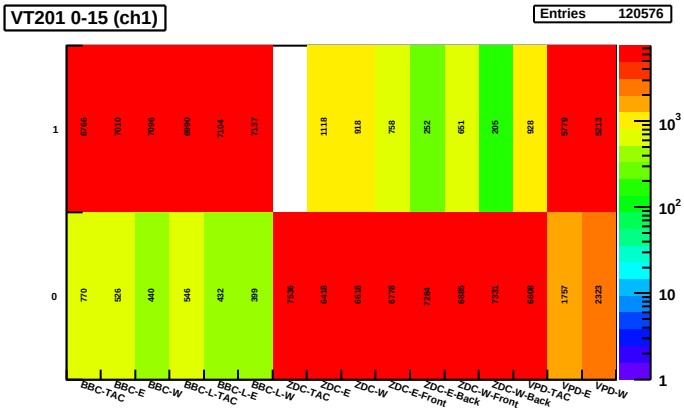

Input to FE002 QT board
Entries 241152
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
10
1

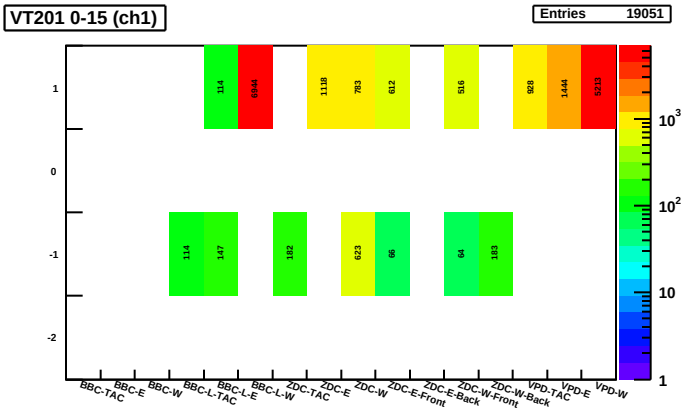

Input to FE003 QT board
Entries 241152
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
10
1

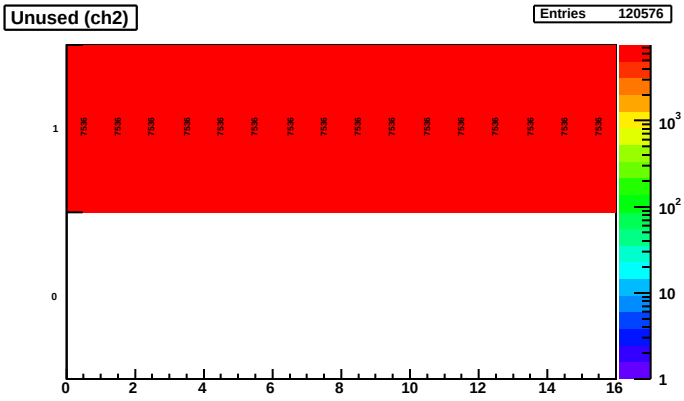

Input to FE004 QT board
Entries 241152
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
10
1

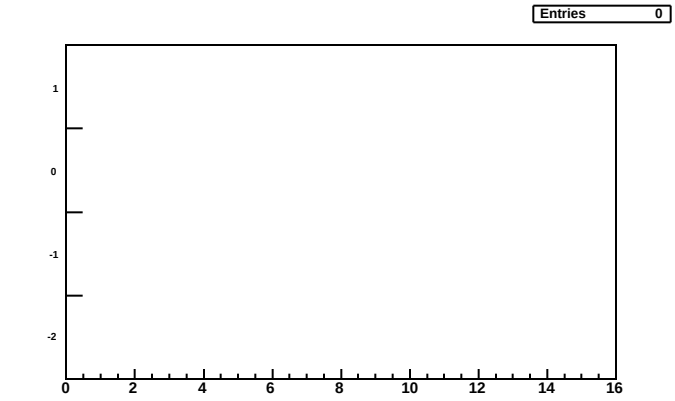

TF201 0-15 (ch0)
Entries 120576
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


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


VT201 0-15 (ch1)
Entries 120576
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 19051
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


Unused (ch2)
Entries 120576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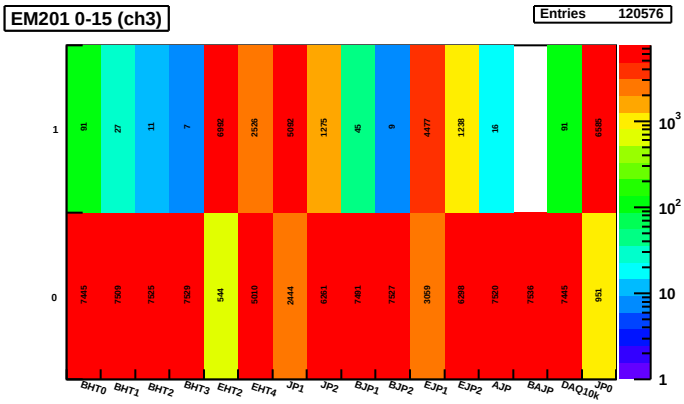
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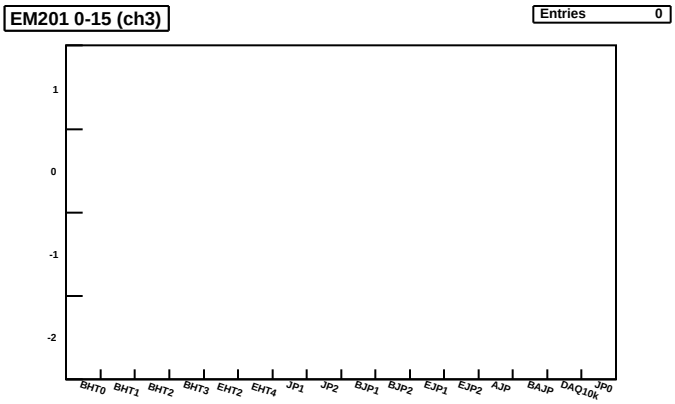
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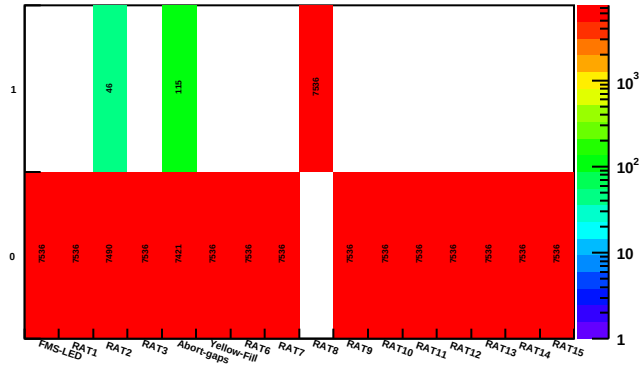
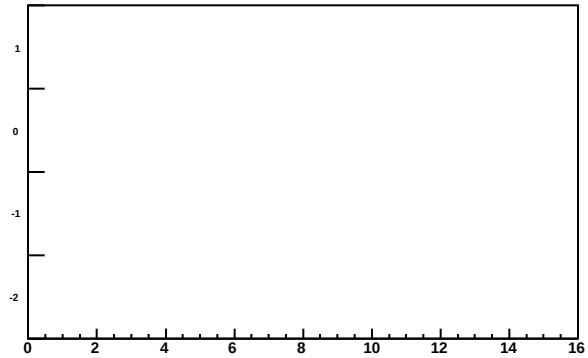
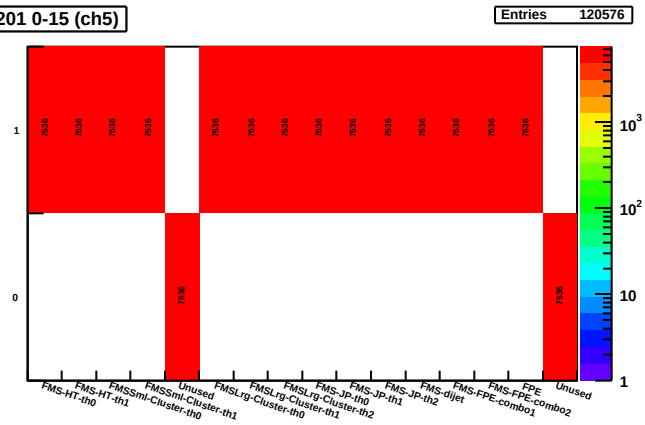
RAT board (ch4)





FP201 0-15 (ch5)



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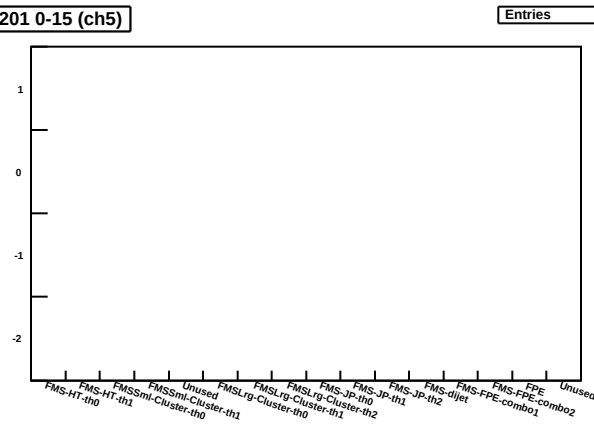

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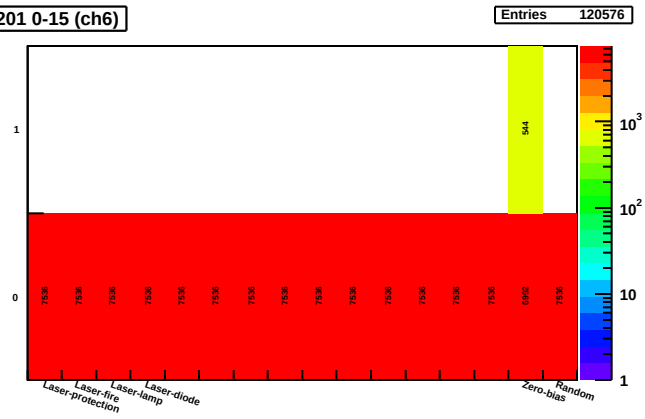

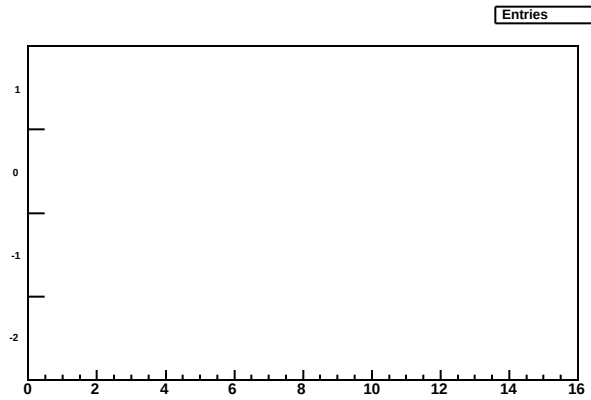
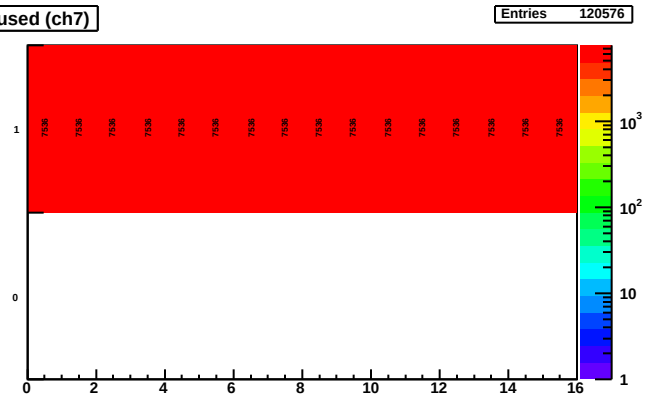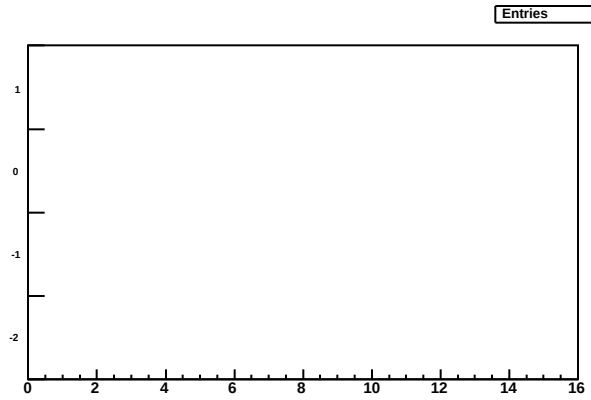
Unused (ch7)