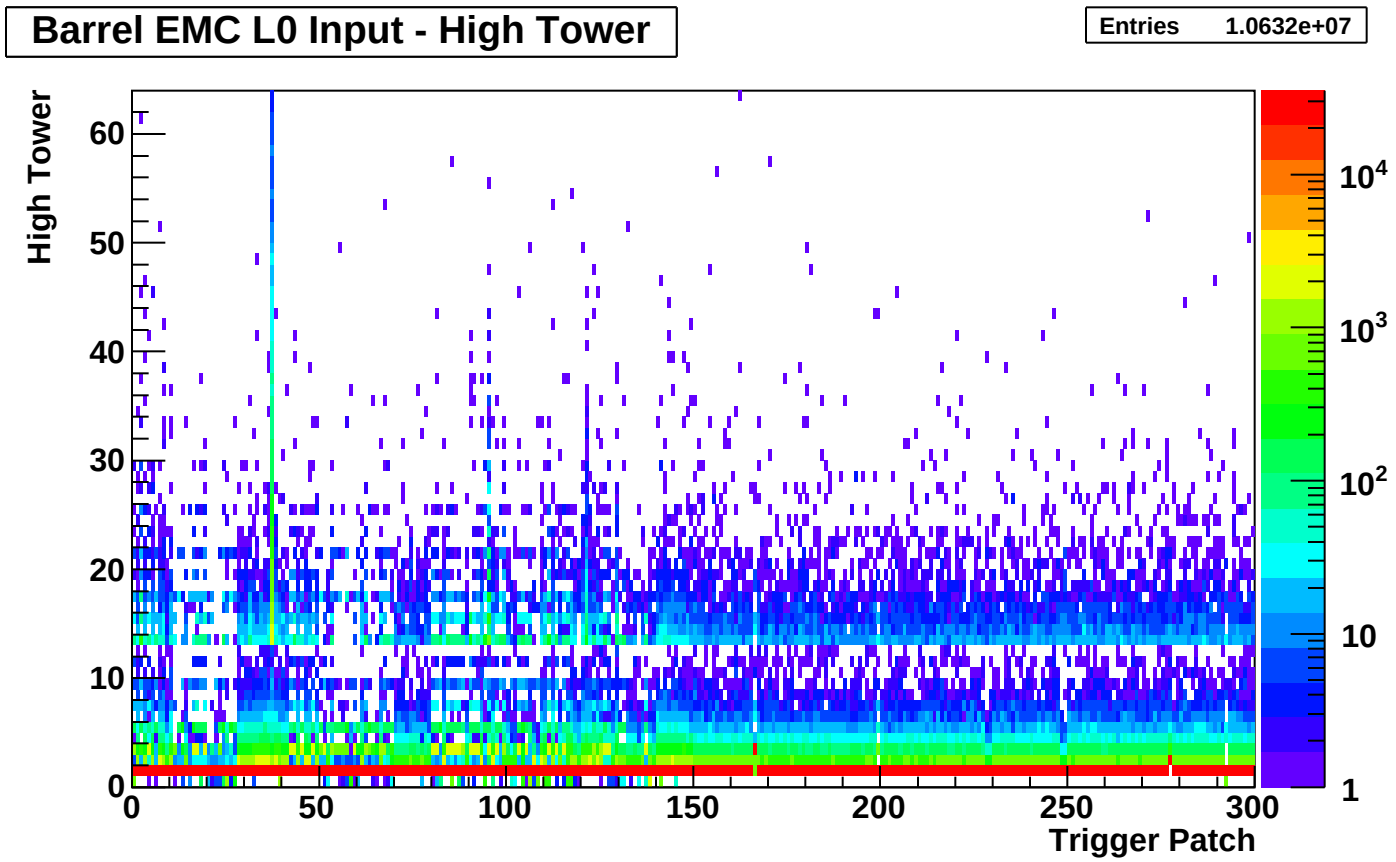
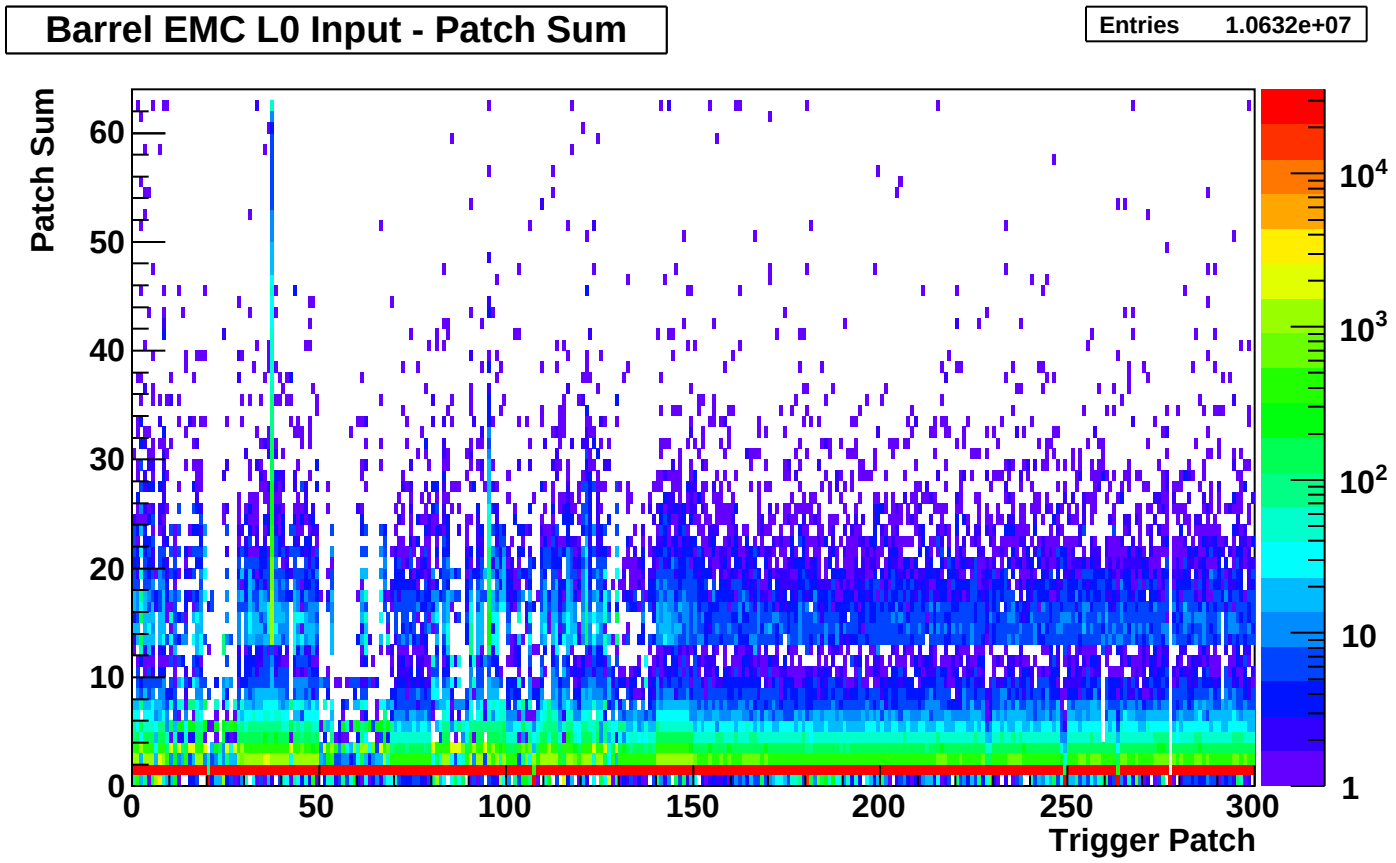
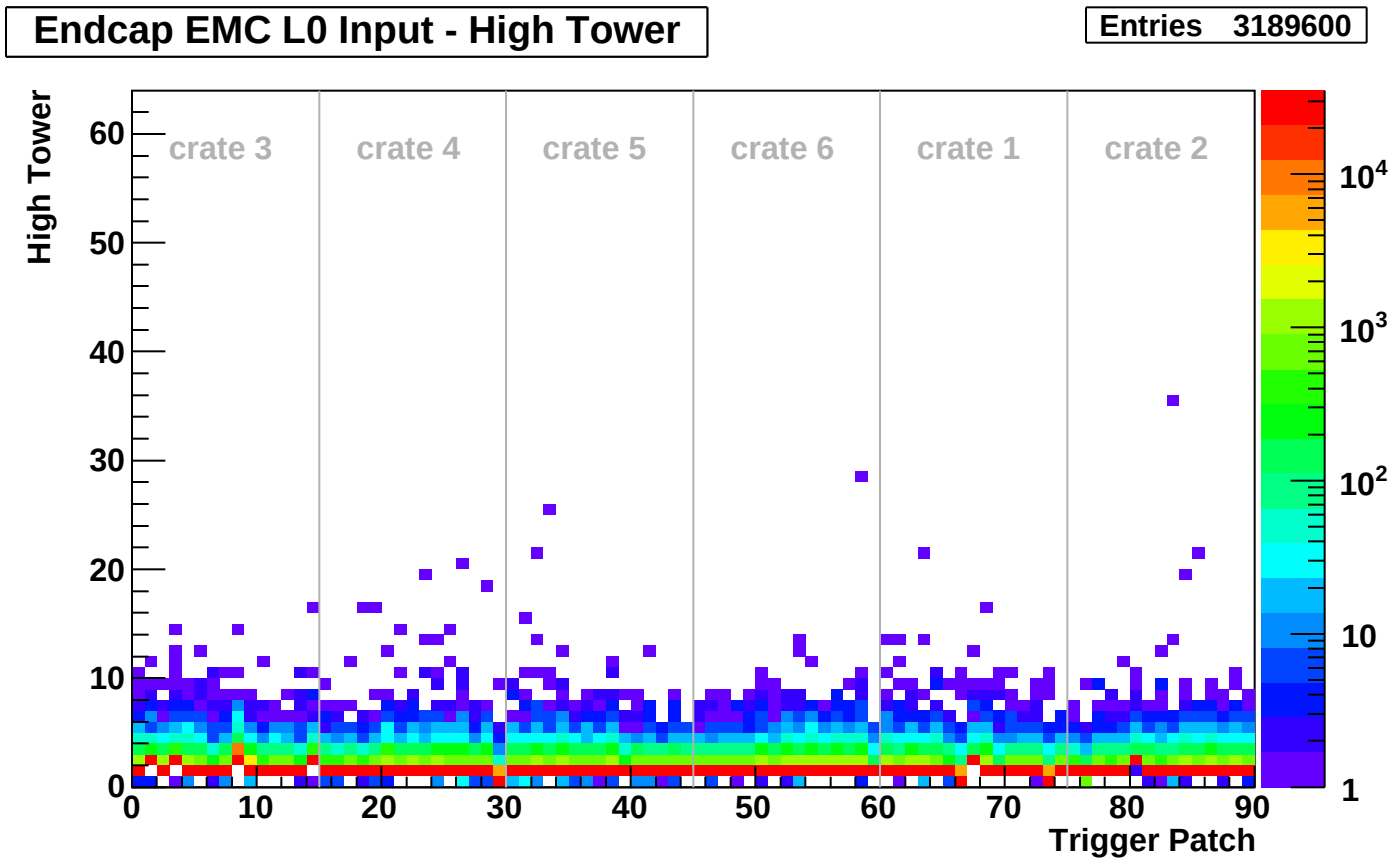
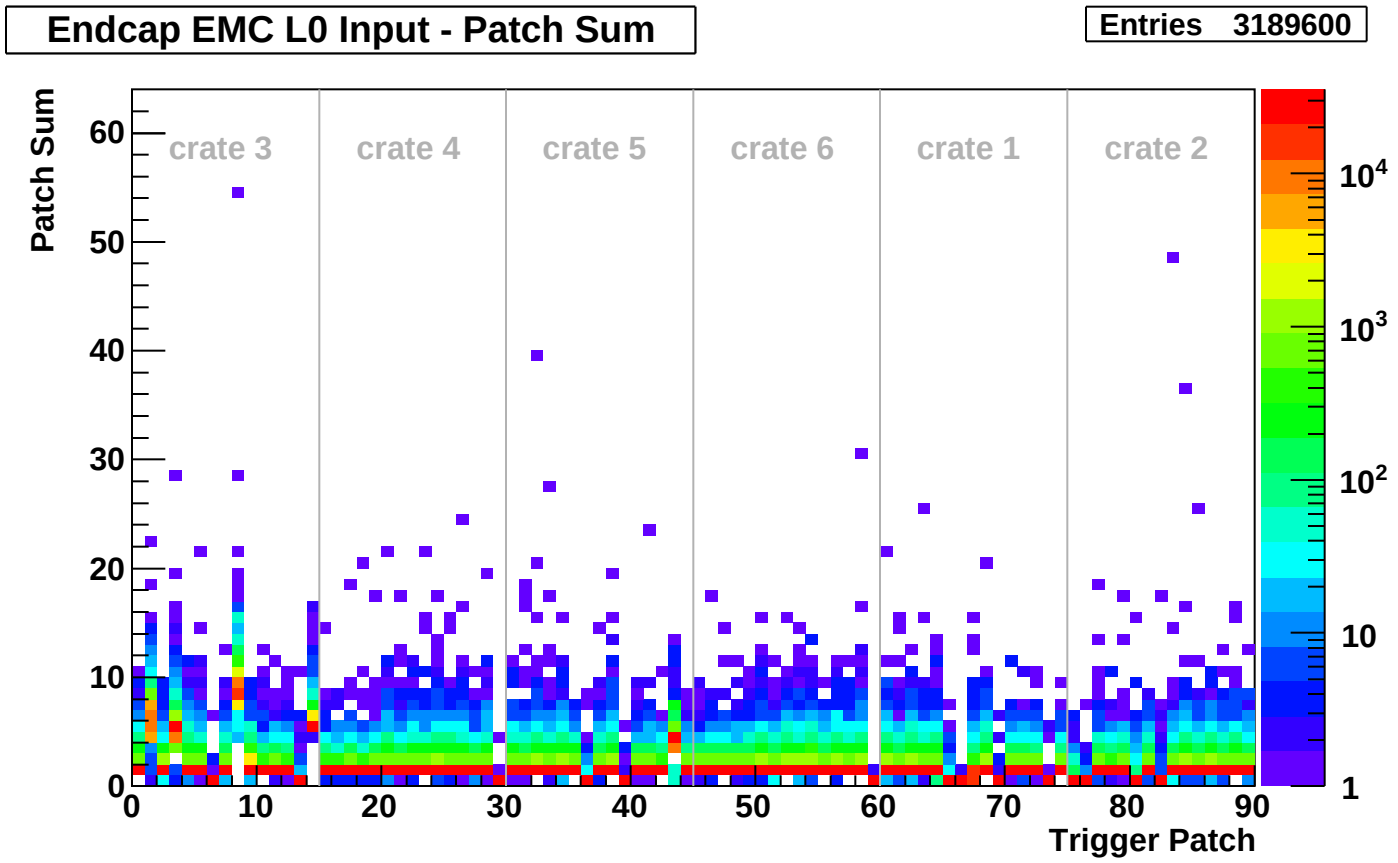
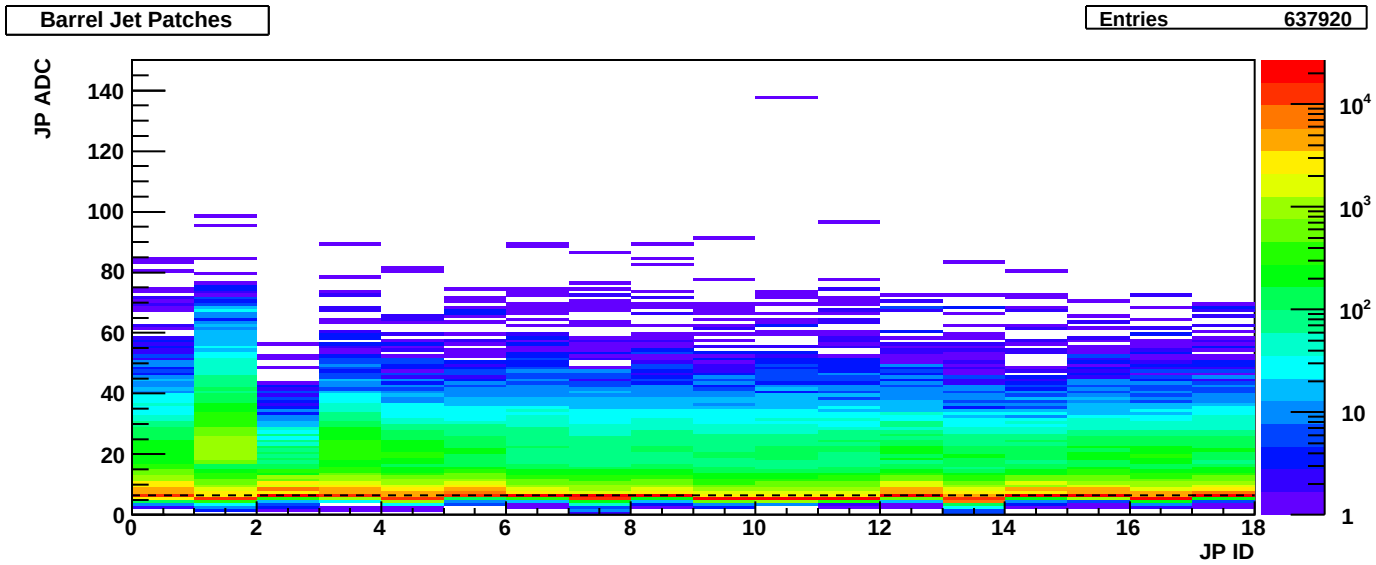
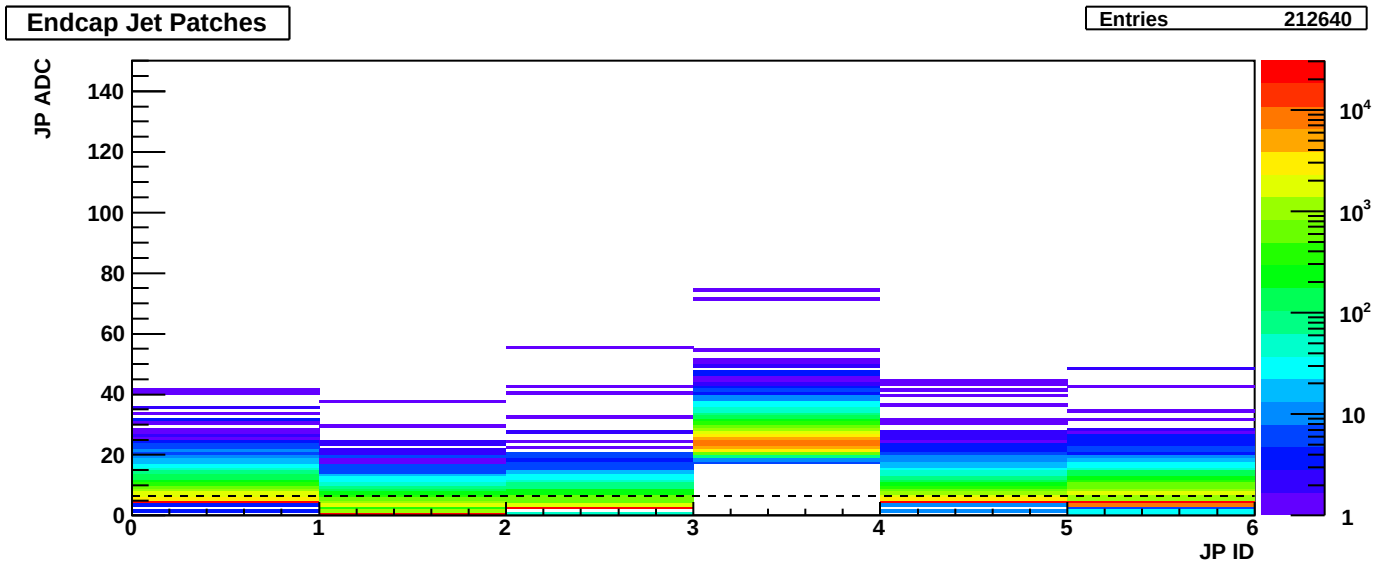

Barrel EMC L0 Input - High Tower
Entries 1.0632e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

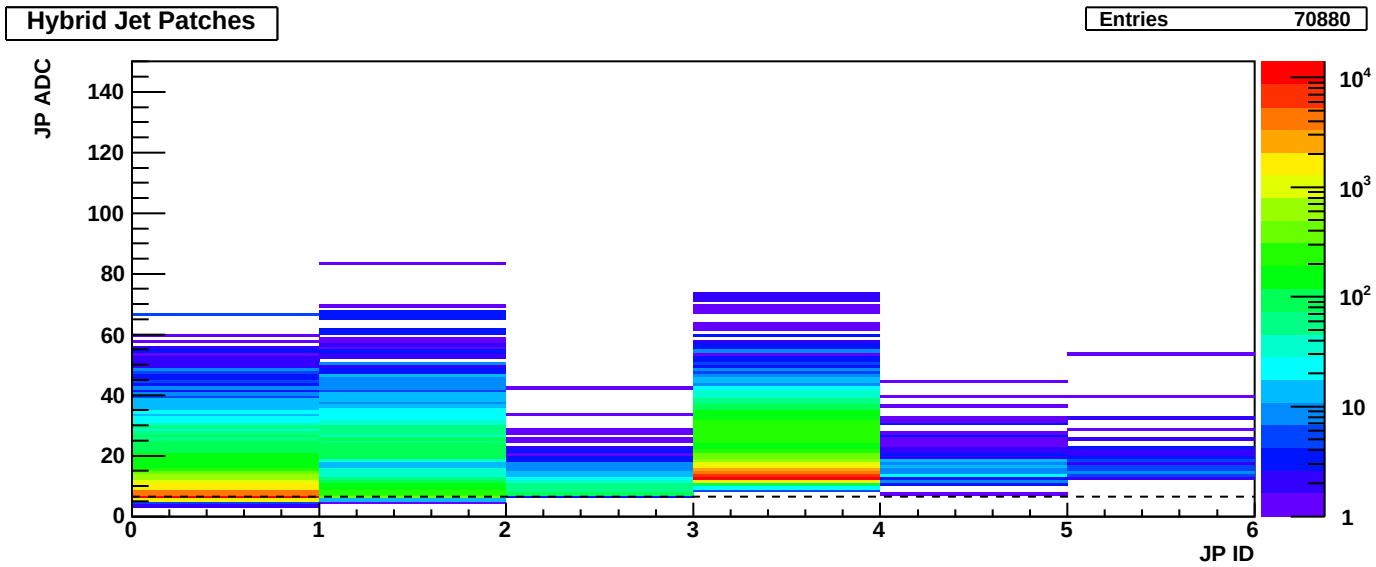

Barrel EMC L0 Input - Patch Sum
Entries 1.0632e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

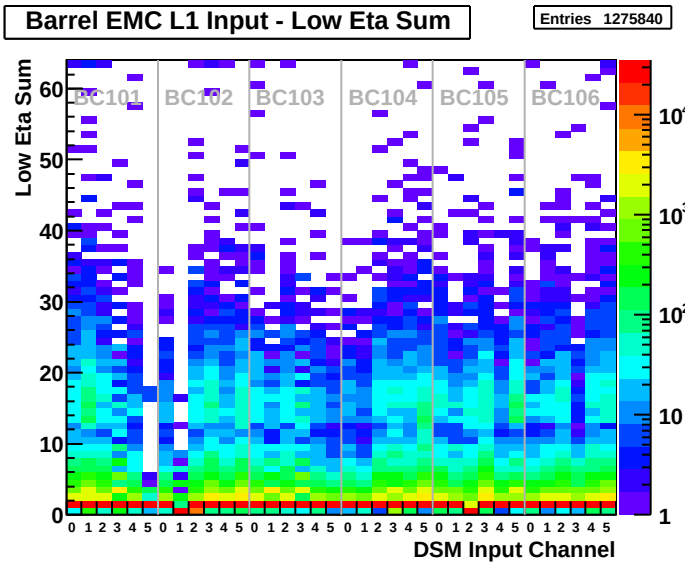

Endcap EMC L0 Input - High Tower
Entries 3189600
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

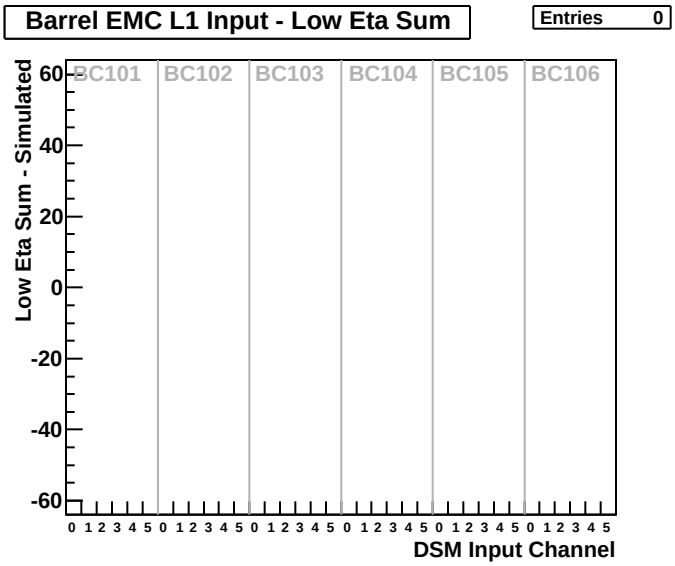

Endcap EMC L0 Input - Patch Sum
Entries 3189600
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

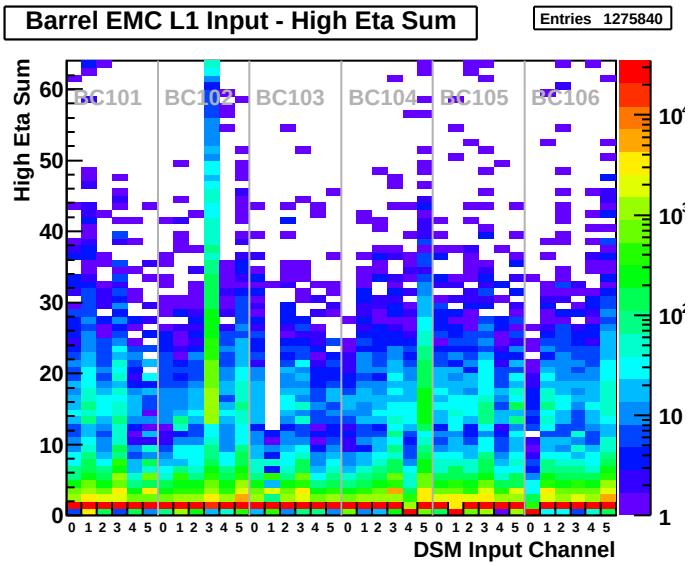

Barrel Jet Patches
Entries 637920
JP ADC
JP ID

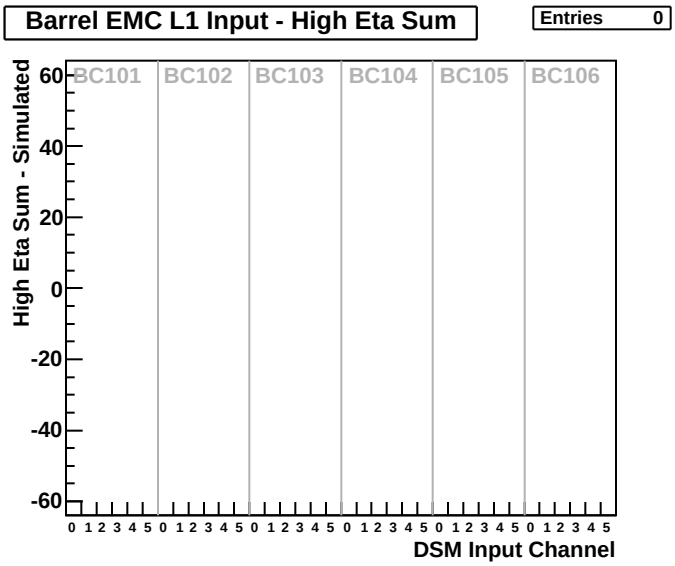

Endcap Jet Patches
Entries 212640
JP ADC
JP ID

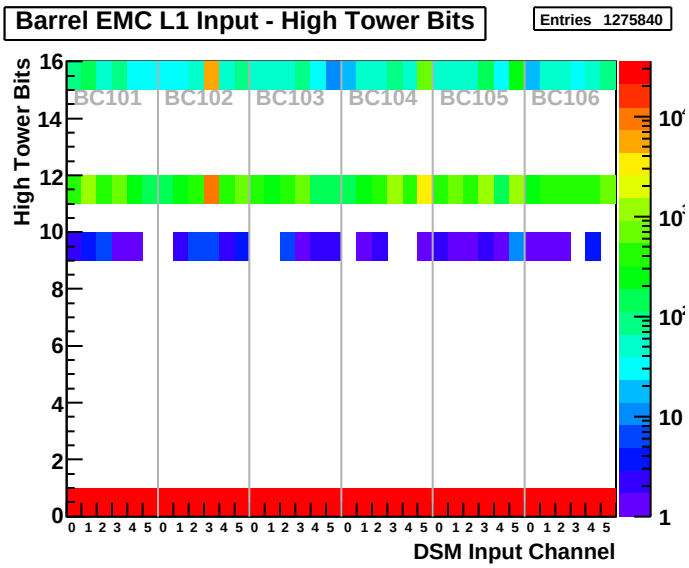

Hybrid Jet Patches
Entries 70880
JP ADC
JP ID

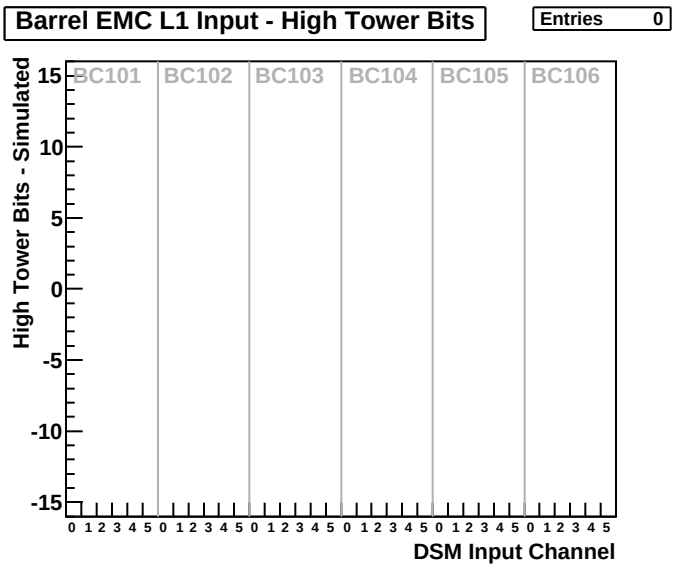

Barrel EMC L1 Input - Low Eta Sum
Entries 1275840
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

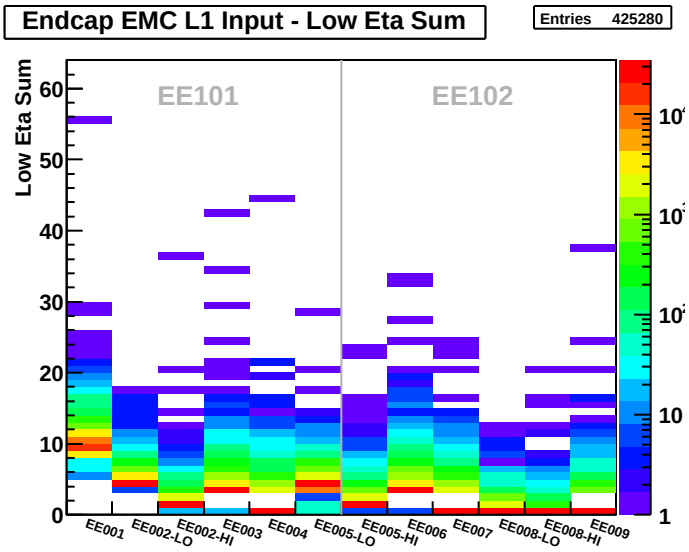

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

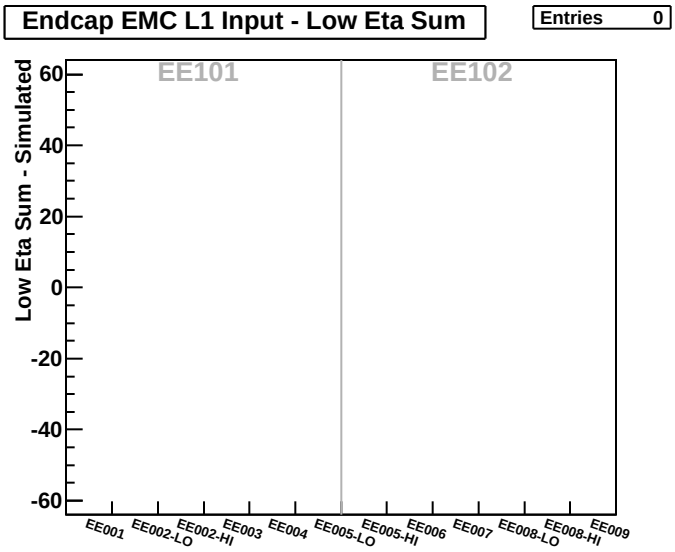

Barrel EMC L1 Input - High Eta Sum
Entries 1275840
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

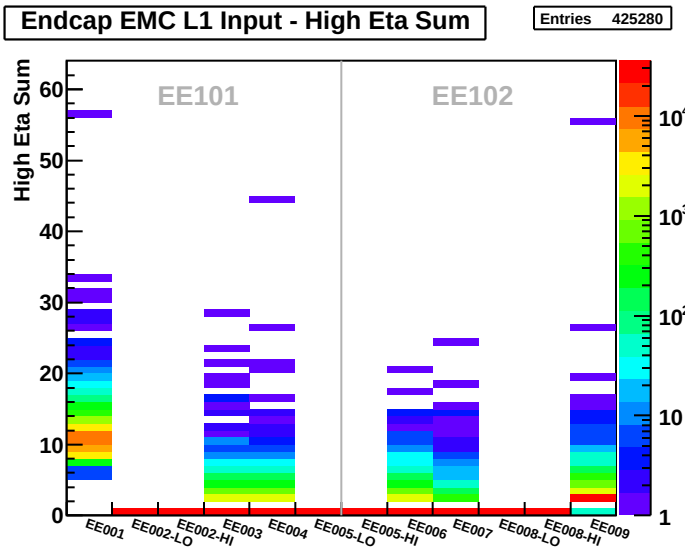

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

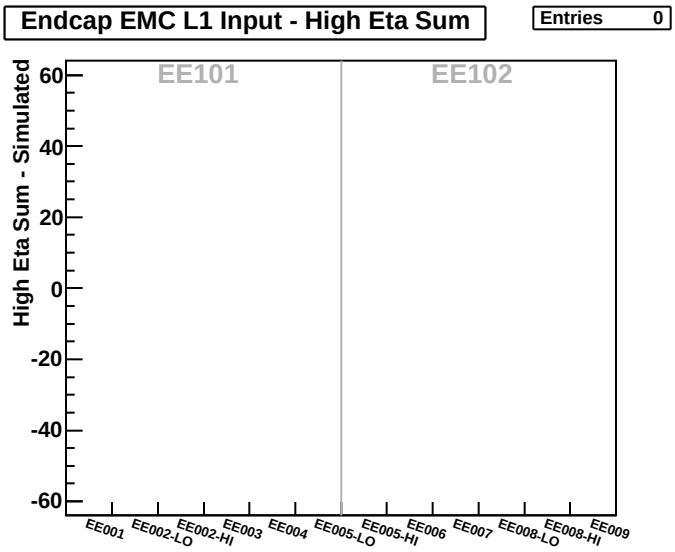

Barrel EMC L1 Input - High Tower Bits
Entries 1275840
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

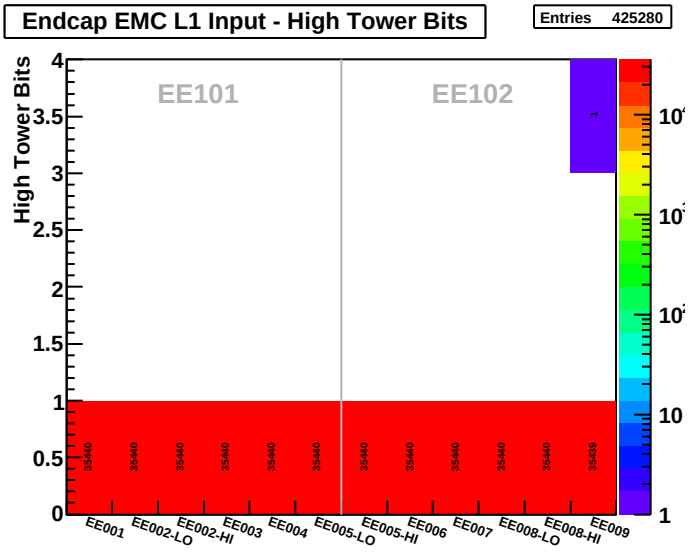

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

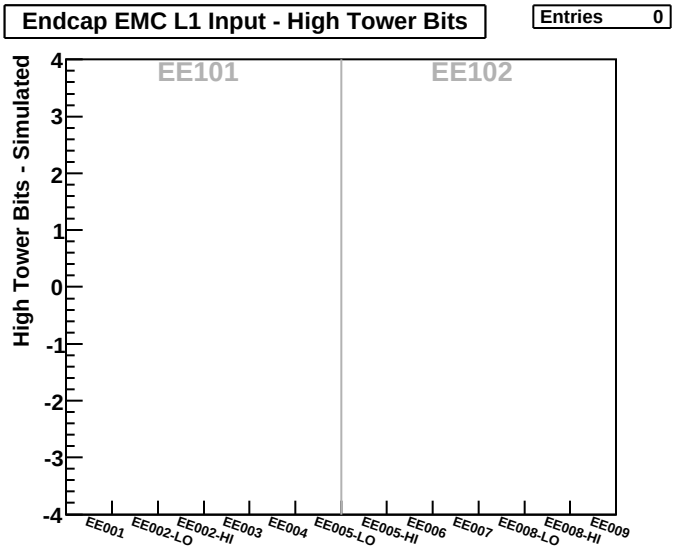

Endcap EMC L1 Input - Low Eta Sum
Entries 425280
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

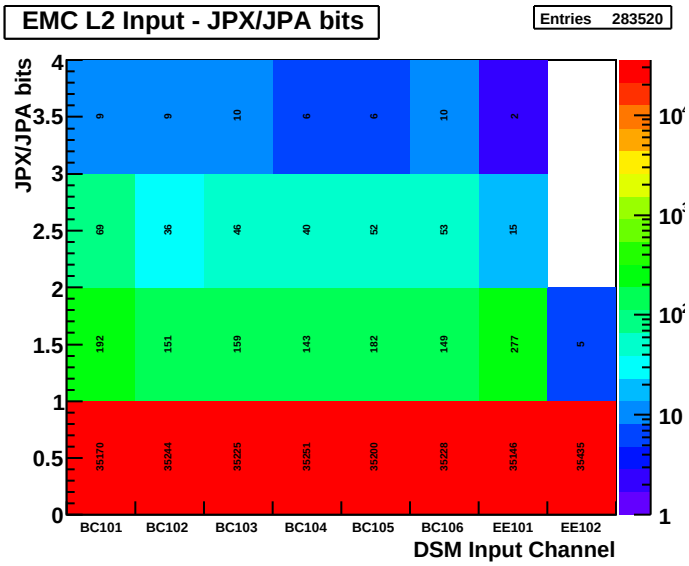

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

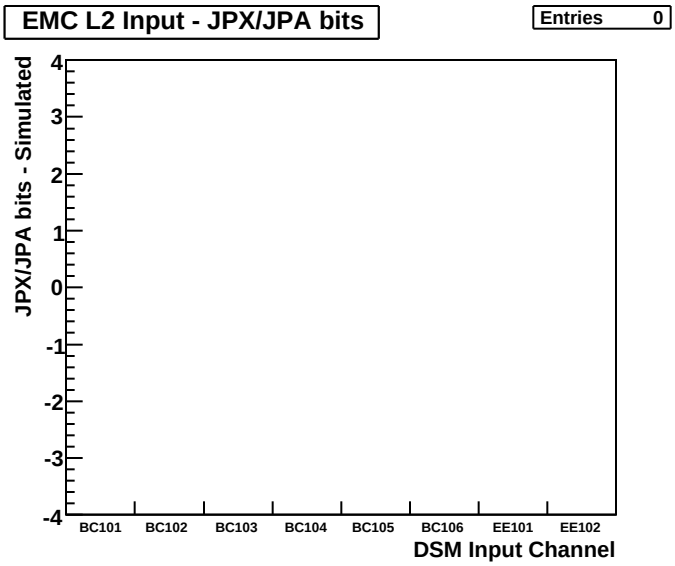

Endcap EMC L1 Input - High Eta Sum
Entries 425280
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

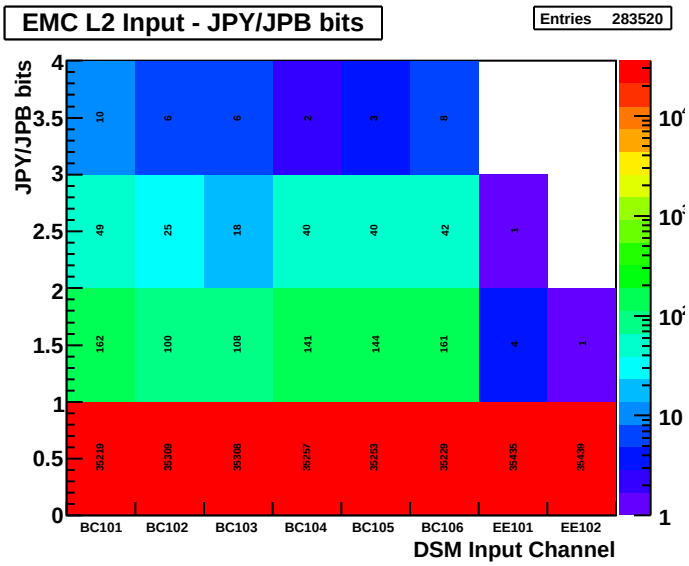

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

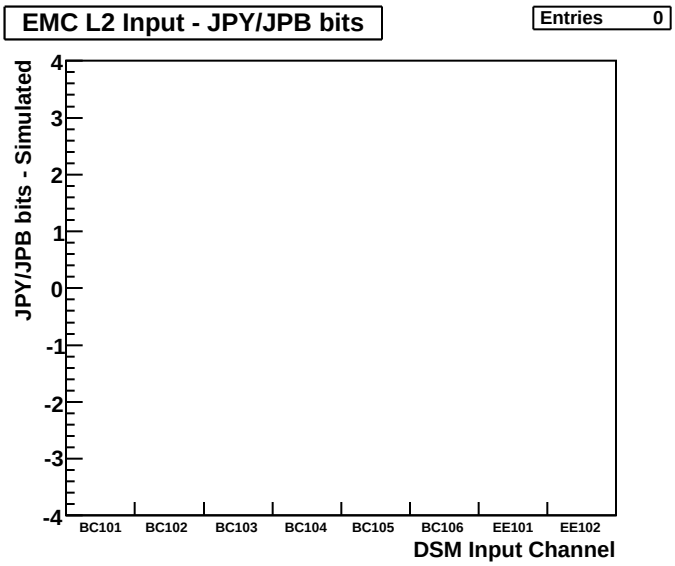

Endcap EMC L1 Input - High Tower Bits
Entries 425280
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

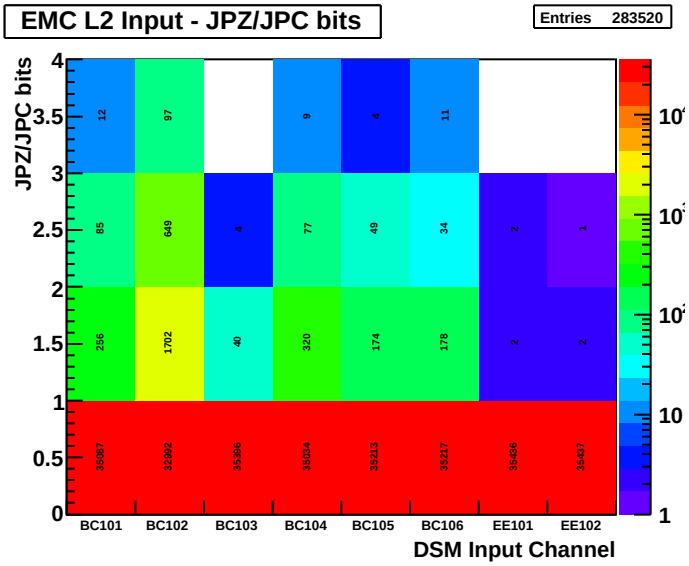

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

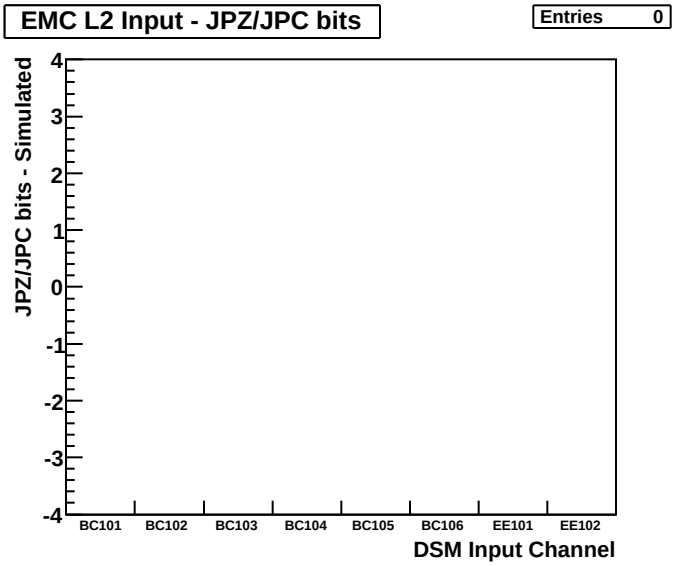

EMC L2 Input - JPX/JPA bits
Entries 283520
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
9 9 10 6 6 10 2
69 36 46 40 52 53 15
192 151 159 143 182 149 277 5
35170 35244 35225 35251 35200 35228 35146 35435

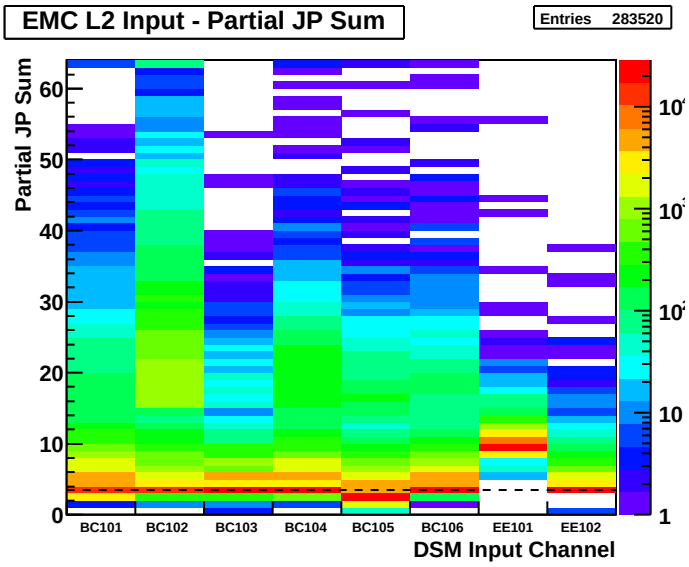

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

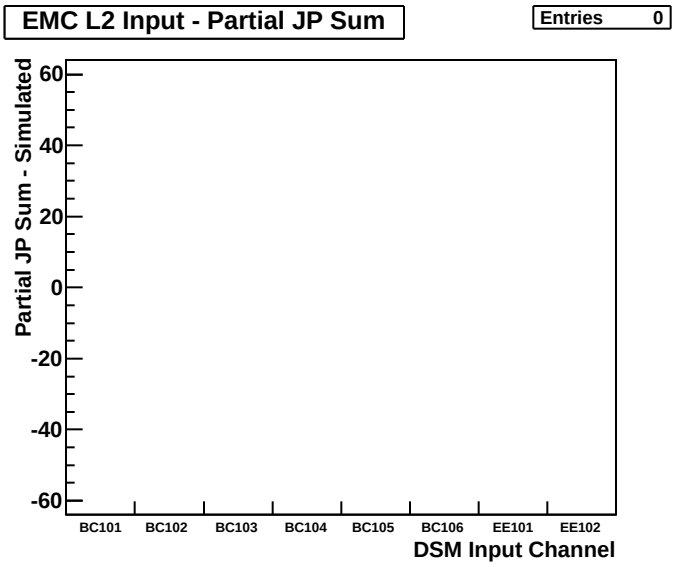

EMC L2 Input - JPY/JPB bits
Entries 283520
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
10 6 6 2 3 8
49 25 18 40 40 42 1
162 100 108 141 144 161 4 1
35219 35309 35308 35257 35253 35229 35435 35439

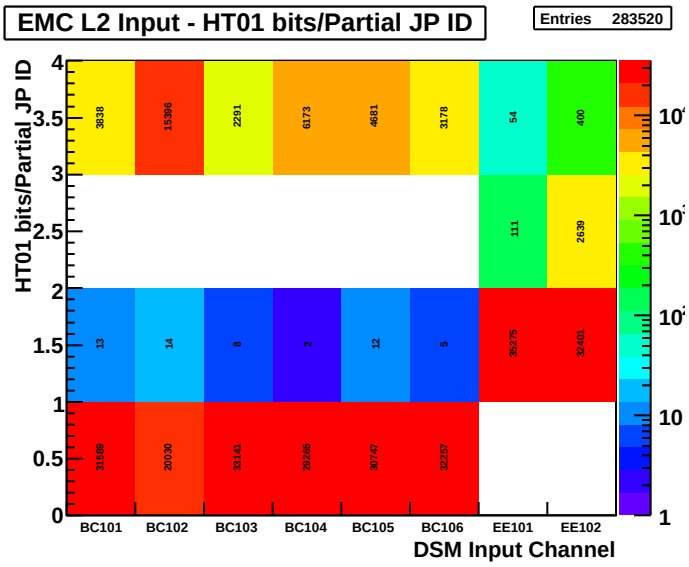

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

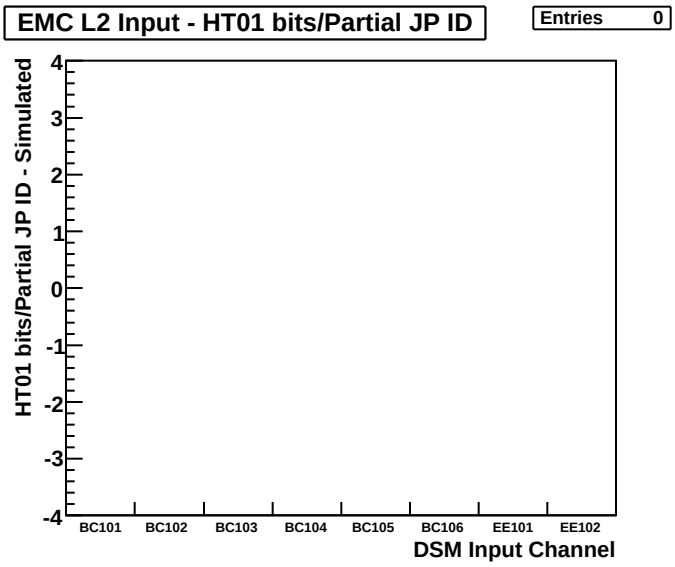

EMC L2 Input - JPZ/JPC bits
Entries 283520
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
12 97 9 4 11
85 649 4 77 49 34 2 1
256 1702 40 320 174 178 2 2
35087 32892 35396 35024 35213 35217 35436 35437

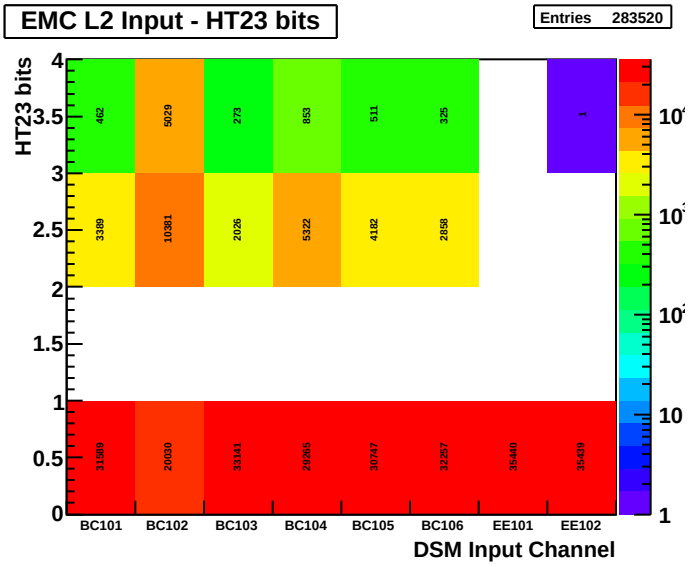

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

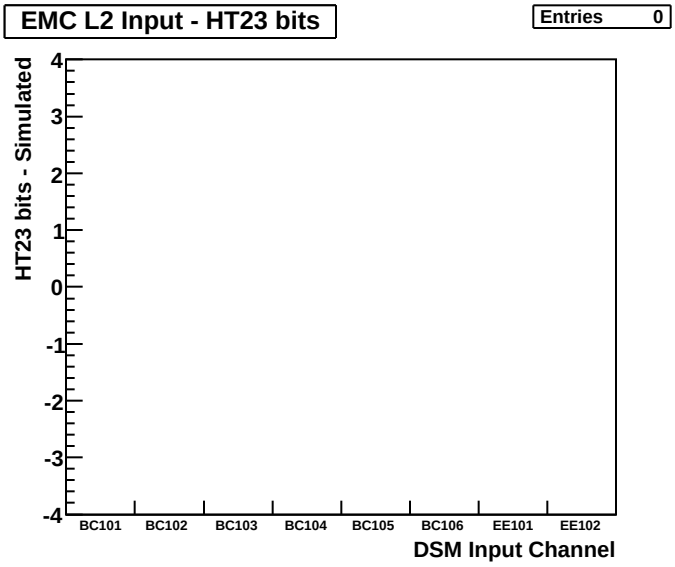

EMC L2 Input - Partial JP Sum
Entries 283520
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

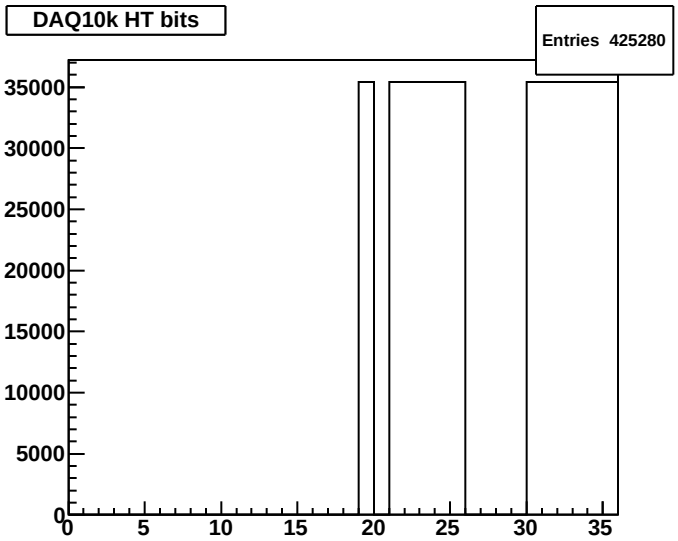

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

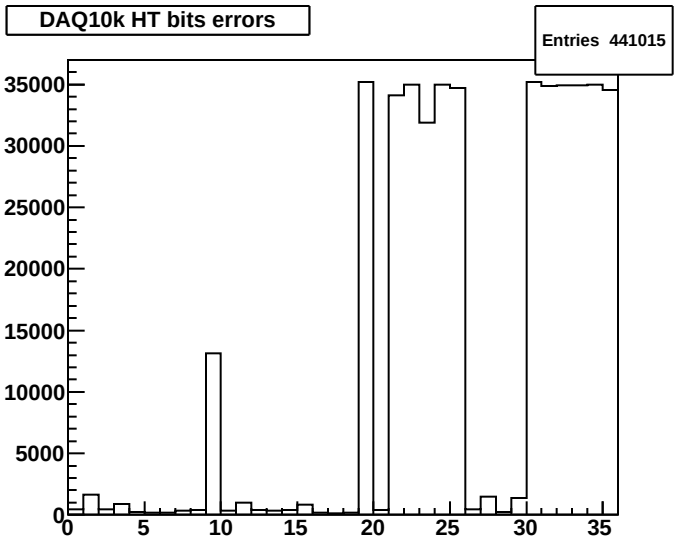

EMC L2 Input - HT01 bits/Partial JP ID
Entries 283520
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

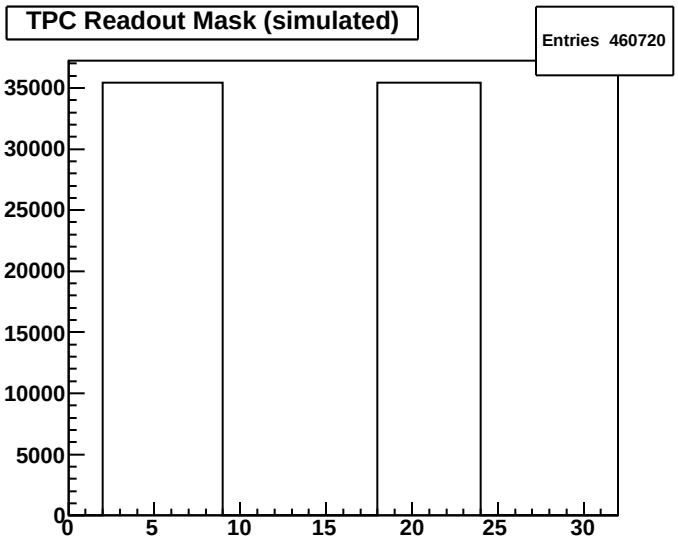

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

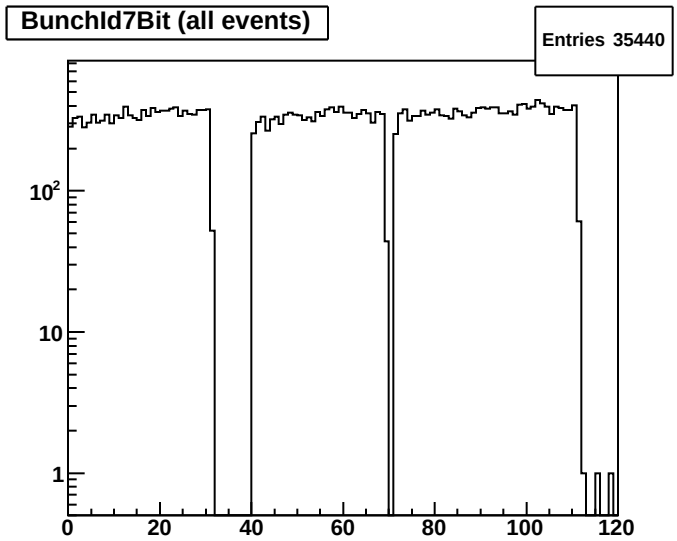

EMC L2 Input - HT23 bits
Entries 283520
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

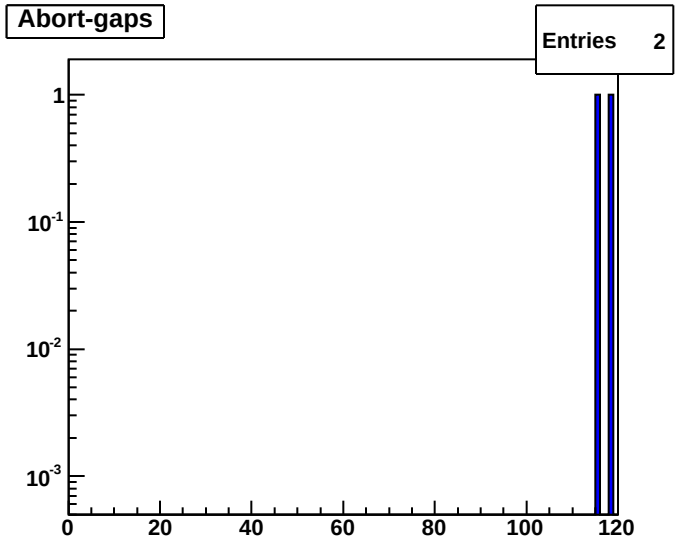

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

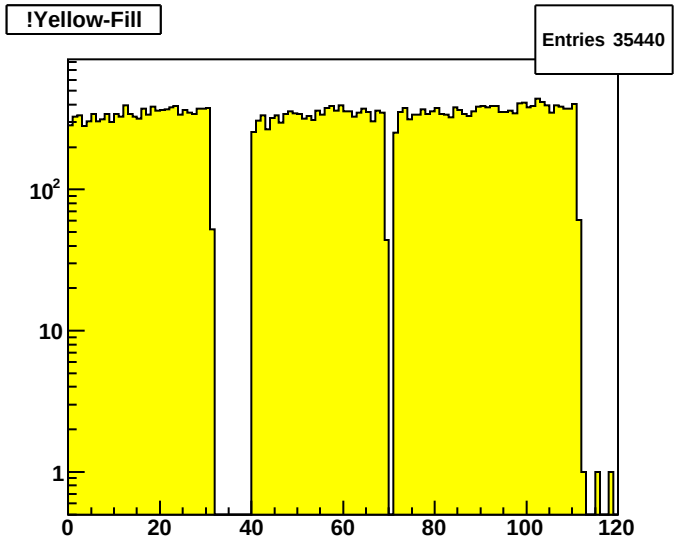

DAQ10k HT bits
Entries 425280
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

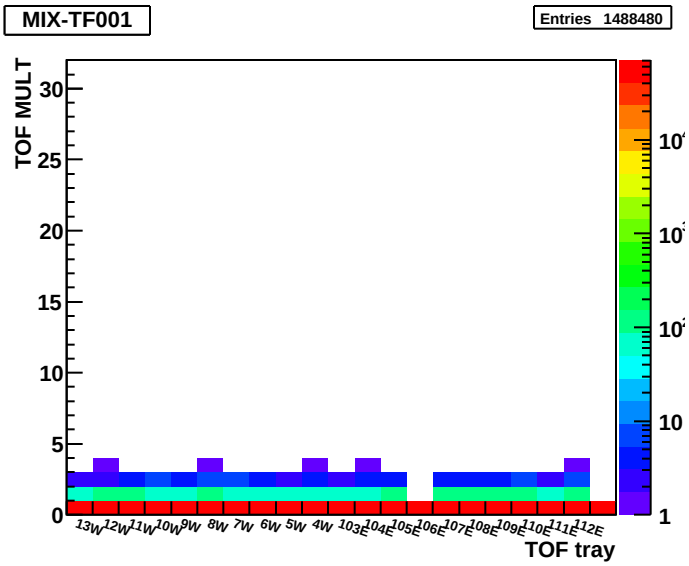

DAQ10k HT bits errors
Entries 441015
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

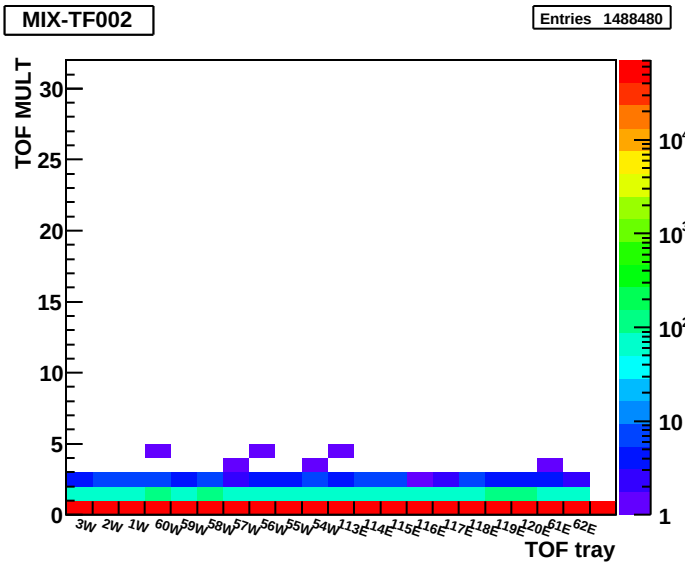

TPC Readout Mask (simulated)
Entries 460720
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

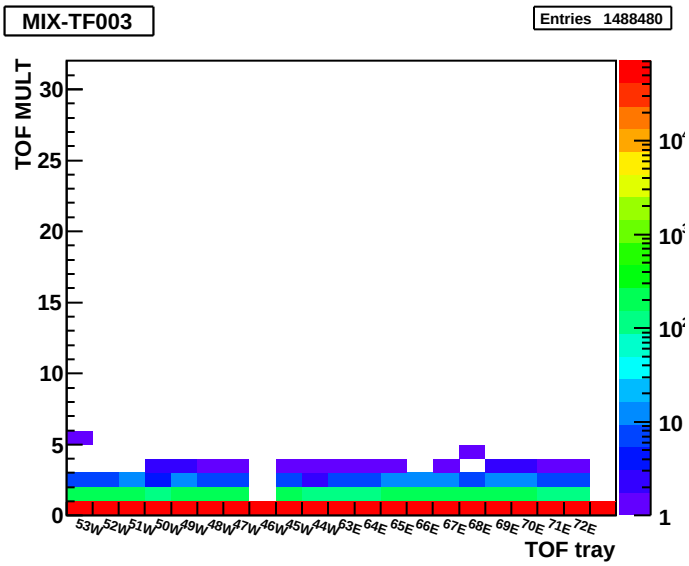

BunchId7Bit (all events)
Entries 35440
10^2
10
1
0 20 40 60 80 100 120

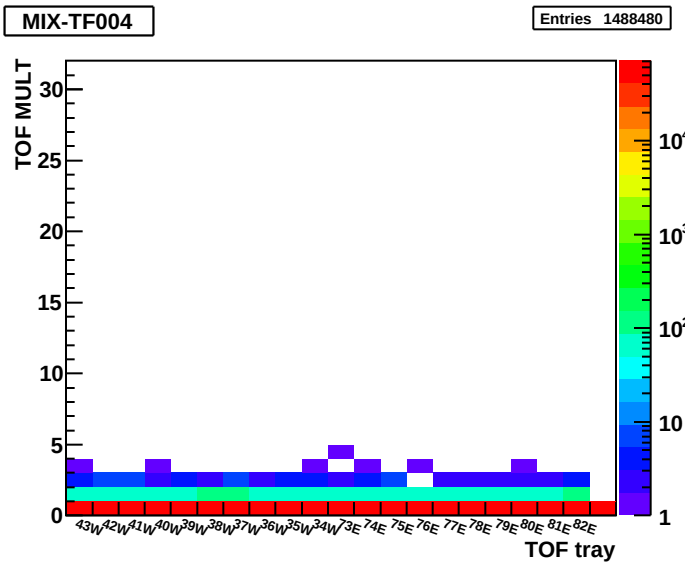

Abort-gaps
Entries 2
1
10^{-1}
10^{-2}
10^{-3}
0 20 40 60 80 100 120

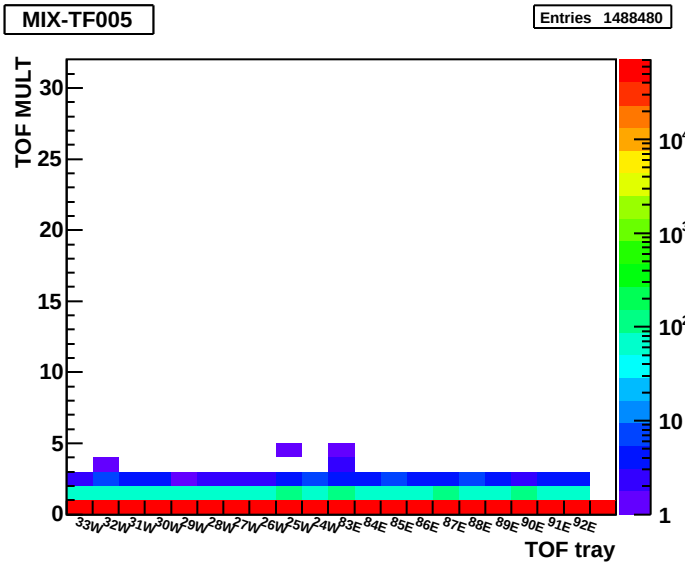

!Yellow-Fill
Entries 35440
10^2
10
1
0 20 40 60 80 100 120

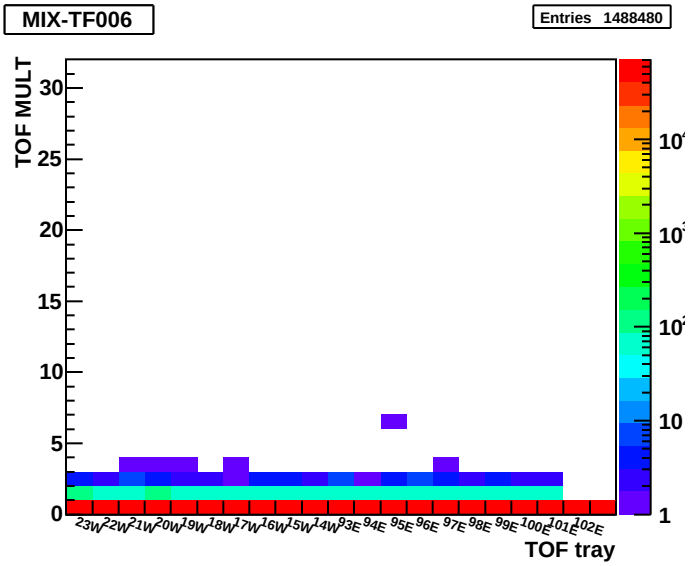

MIX-TF001
Entries 1488480
TOF MULT
TOF tray

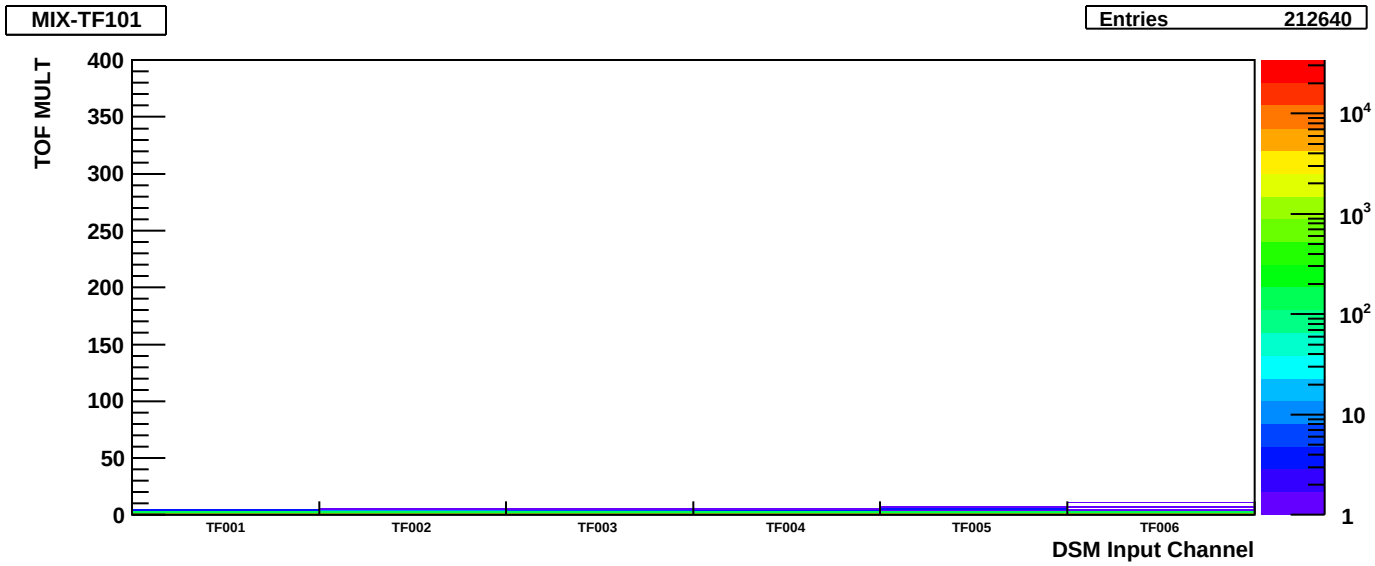

MIX-TF002
Entries 1488480
TOF MULT
TOF tray

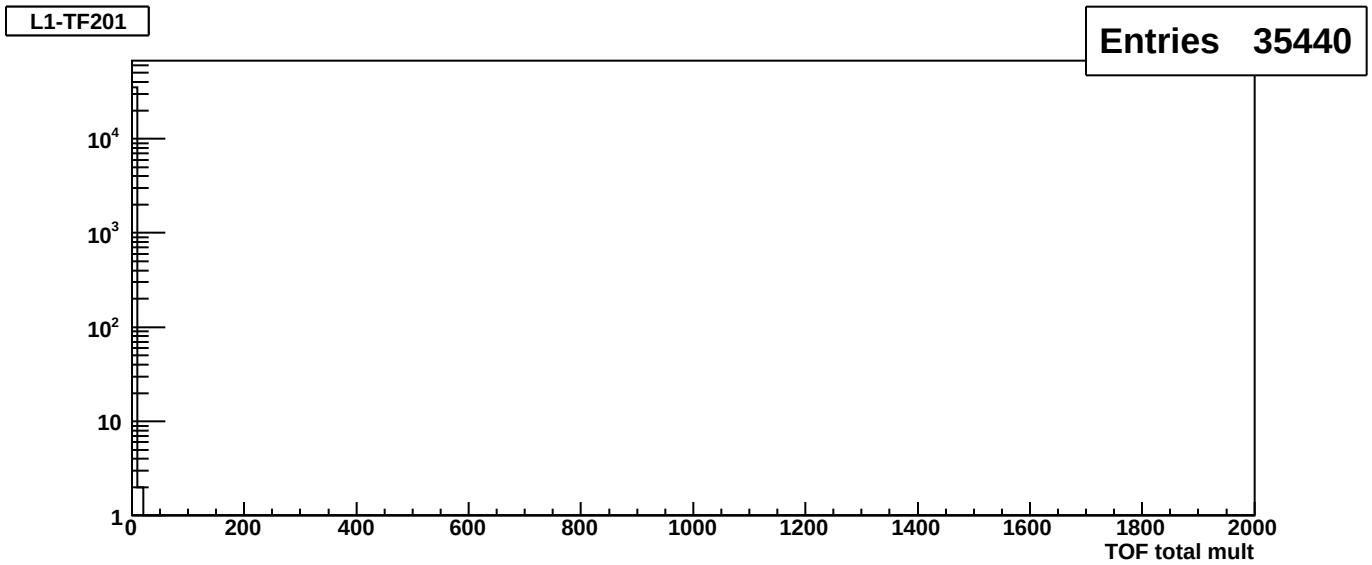

MIX-TF003
Entries 1488480
TOF MULT
TOF tray

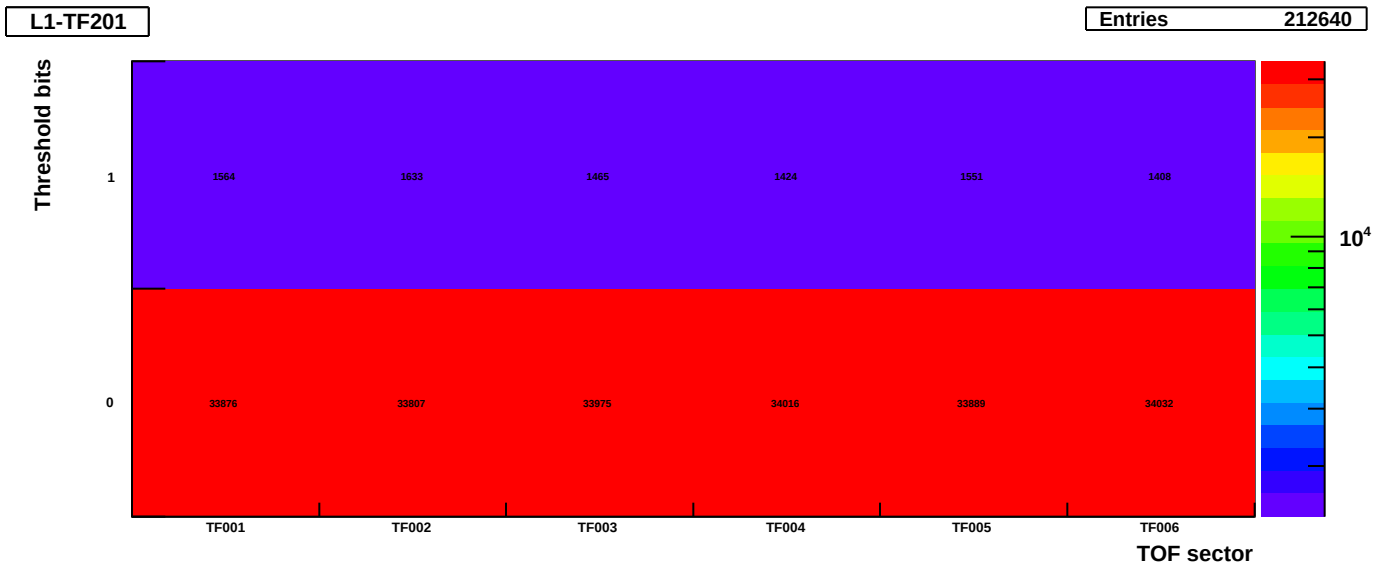

MIX-TF004
Entries 1488480
TOF MULT
TOF tray

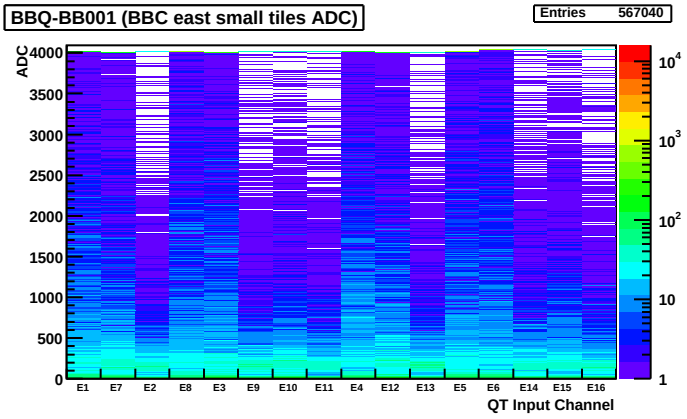

MIX-TF005
Entries 1488480
TOF MULT
TOF tray

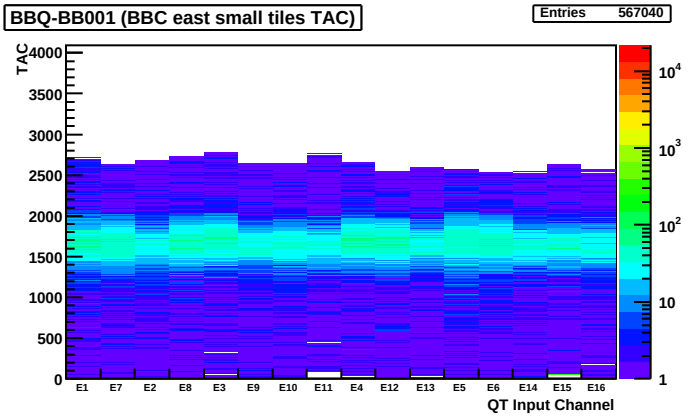

MIX-TF006
Entries 1488480
TOF MULT
TOF tray

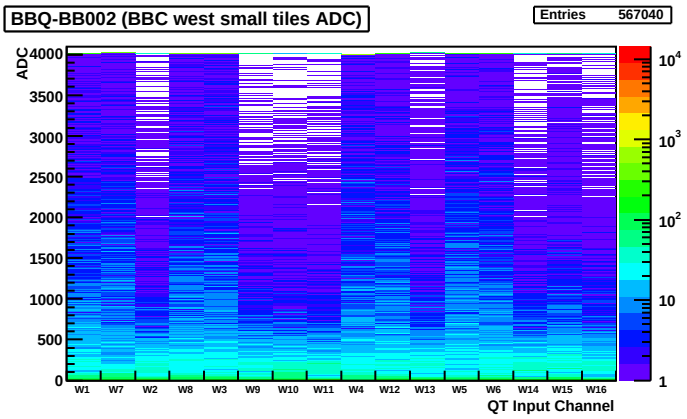

MIX-TF101
Entries 212640
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

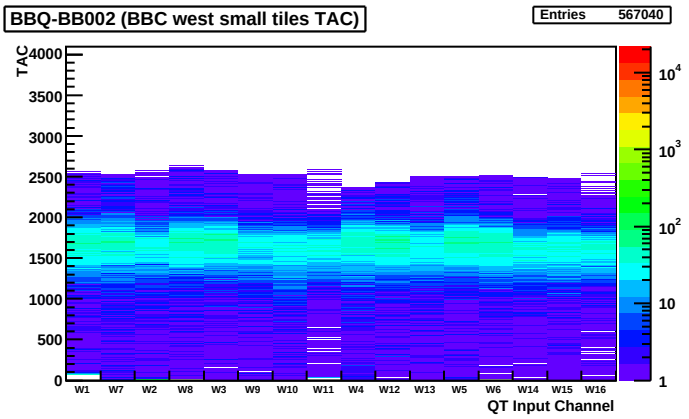

L1-TF201
Entries 35440
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

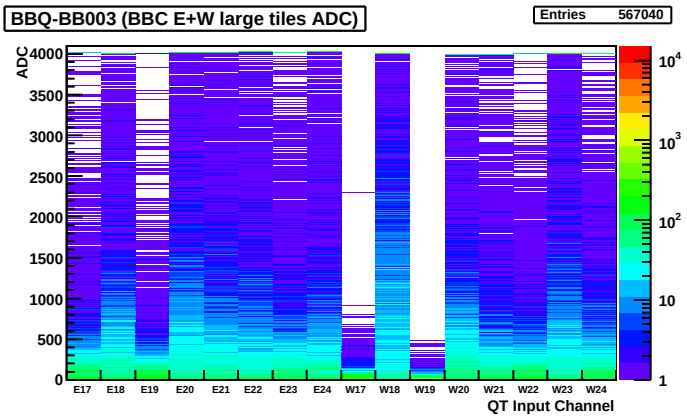

L1-TF201
Entries 212640
Threshold bits
1
0
1564
1633
1465
1424
1551
1408
33876
33807
33975
34016
33889
34032
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

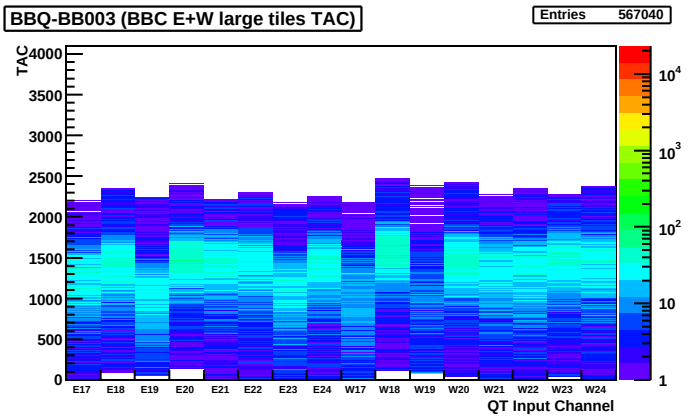

BBQ-BB001 (BBC east small tiles ADC)
Entries 567040
ADC
QT Input Channel

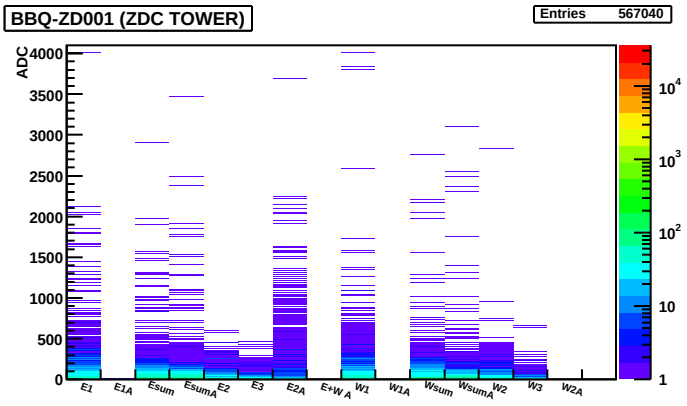

BBQ-BB001 (BBC east small tiles TAC)
Entries 567040
TAC
QT Input Channel

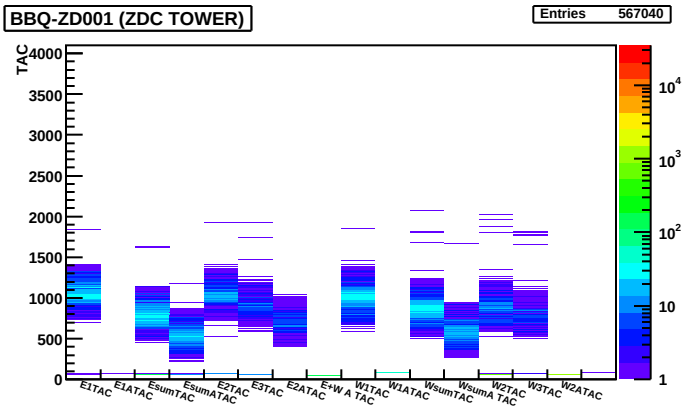

BBQ-BB002 (BBC west small tiles ADC)
Entries 567040
ADC
QT Input Channel

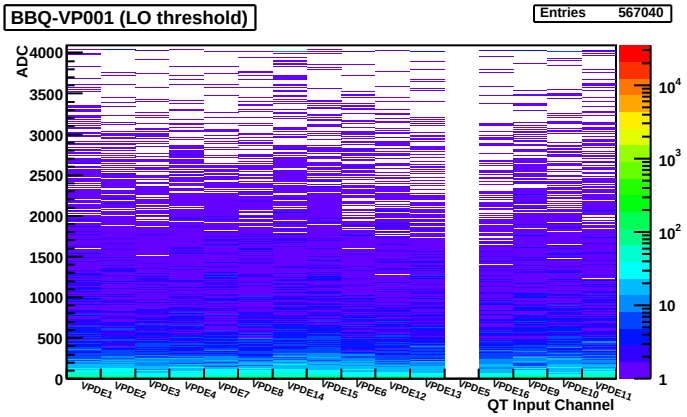

BBQ-BB002 (BBC west small tiles TAC)
Entries 567040
TAC
QT Input Channel

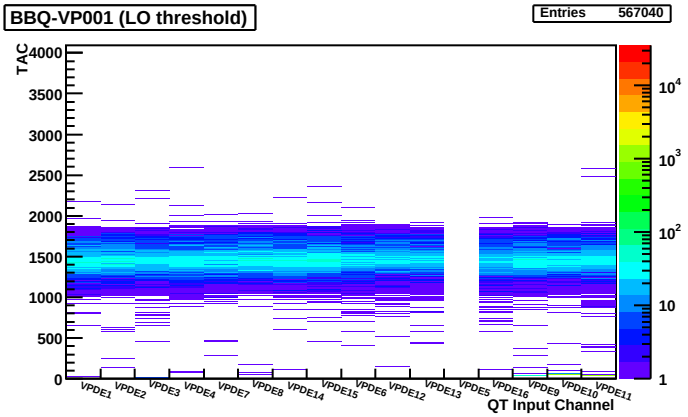

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 567040
ADC
QT Input Channel

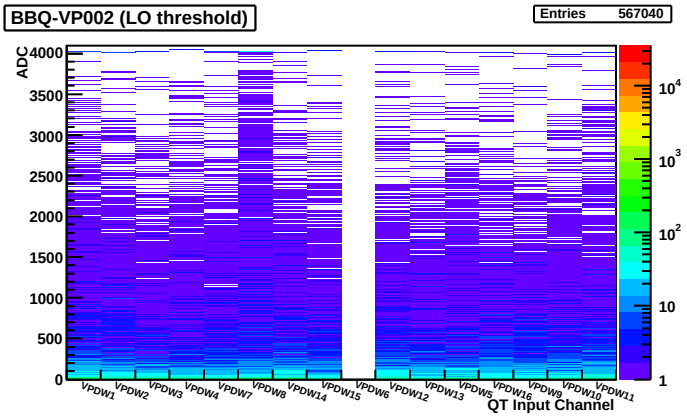

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 567040
TAC
QT Input Channel

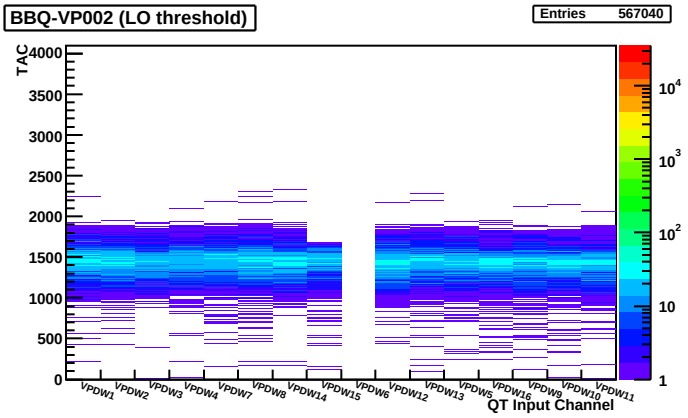

BBQ-ZD001 (ZDC TOWER)
Entries 567040
ADC

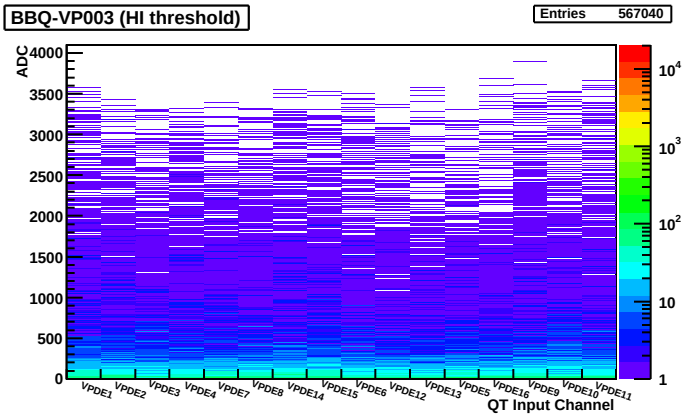

BBQ-ZD001 (ZDC TOWER)
Entries 567040
TAC

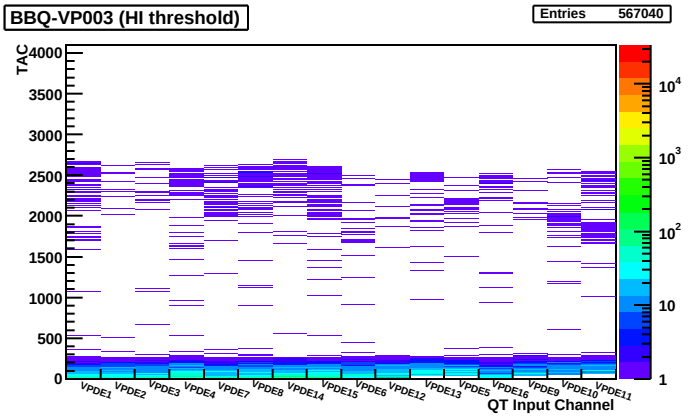

BBQ-VP001 (LO threshold)
Entries 567040
ADC
QT Input Channel

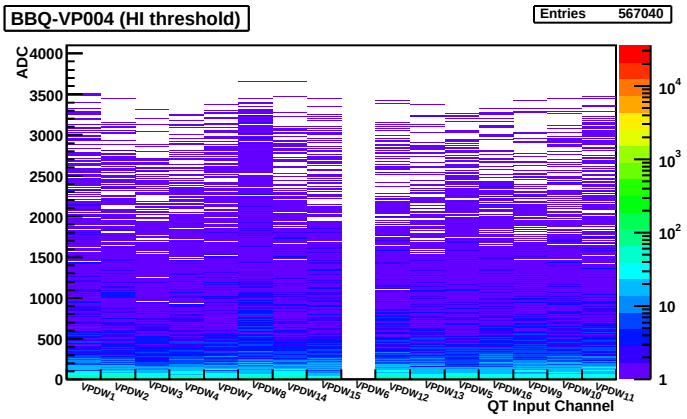

BBQ-VP001 (LO threshold)
Entries 567040
TAC
QT Input Channel

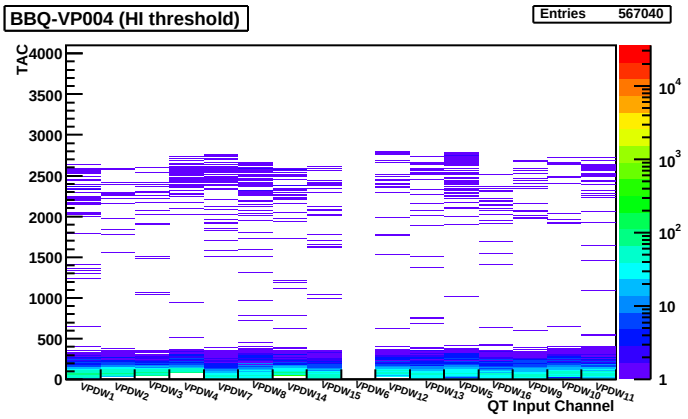

BBQ-VP002 (LO threshold)
Entries 567040
ADC
QT Input Channel

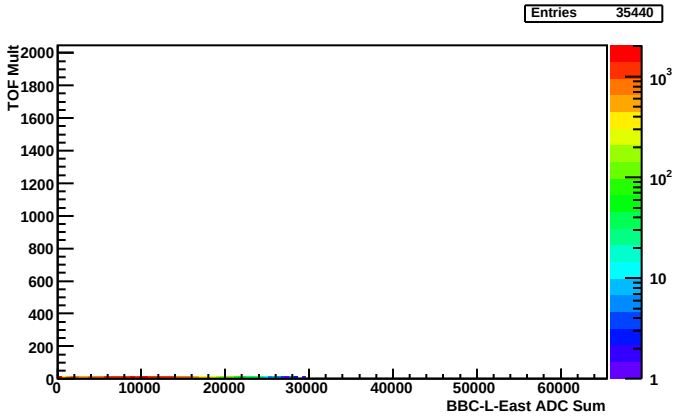

BBQ-VP002 (LO threshold)
Entries 567040
TAC
QT Input Channel

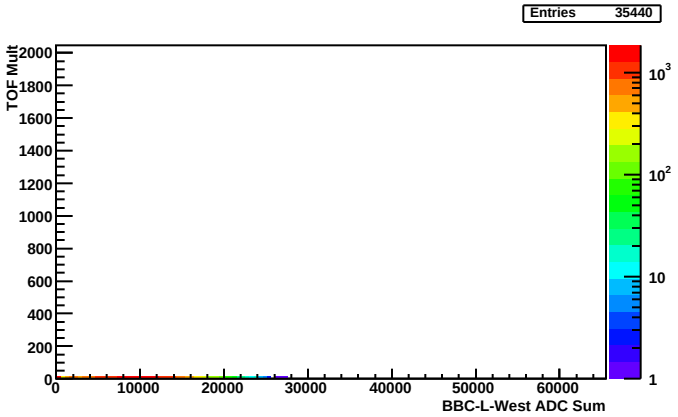

BBQ-VP003 (HI threshold)
Entries 567040
ADC
QT Input Channel

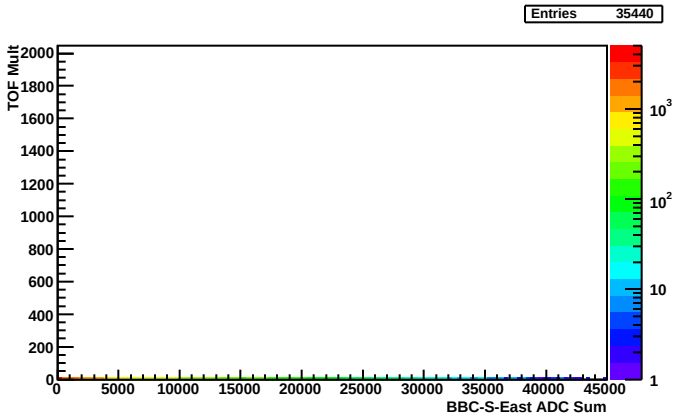

BBQ-VP003 (HI threshold)
Entries 567040
TAC
QT Input Channel

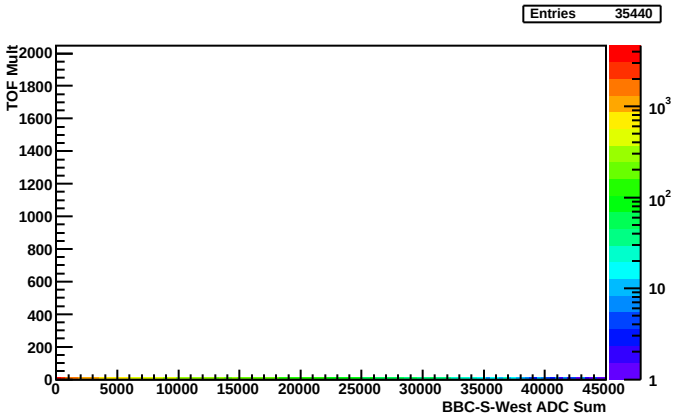

BBQ-VP004 (HI threshold)
Entries 567040
ADC
QT Input Channel

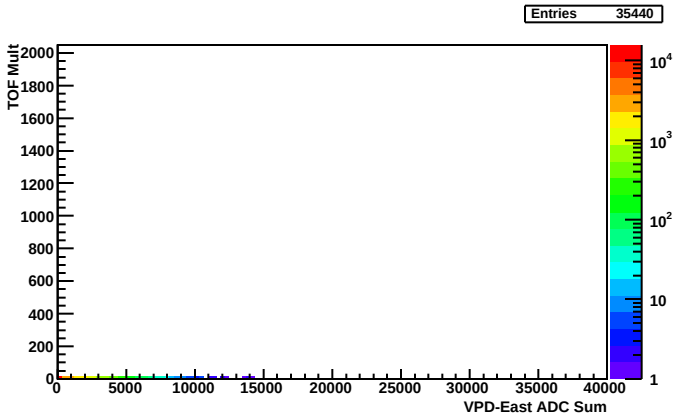

BBQ-VP004 (HI threshold)
Entries 567040
TAC
QT Input Channel

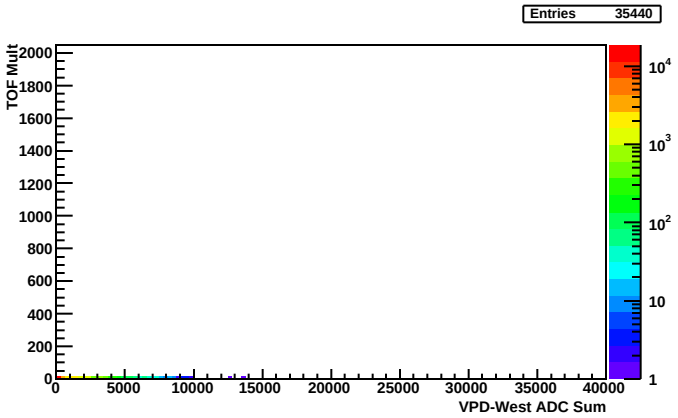

Entries 35440
TOF Mult
BBC-L-East ADC Sum

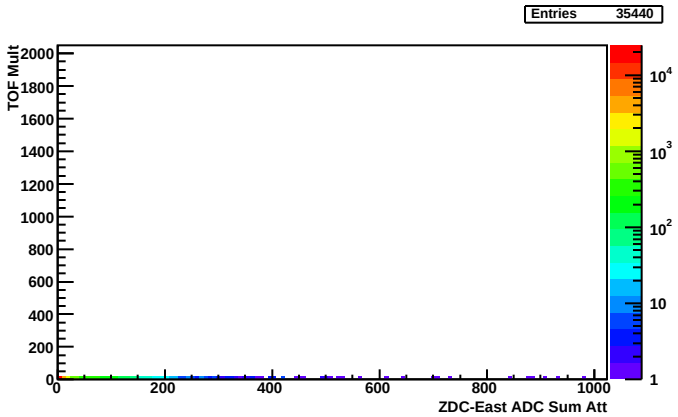

Entries 35440
TOF Mult
BBC-L-West ADC Sum

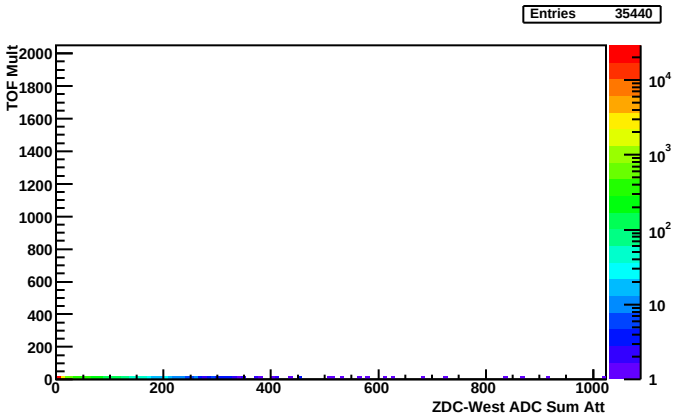

Entries 35440
TOF Mult
BBC-S-East ADC Sum

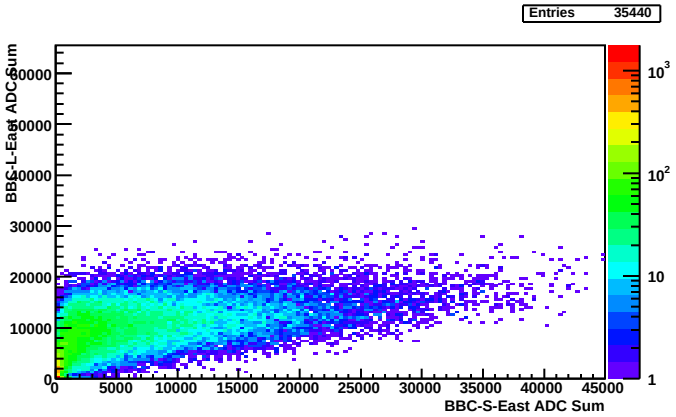

Entries 35440
TOF Mult
BBC-S-West ADC Sum

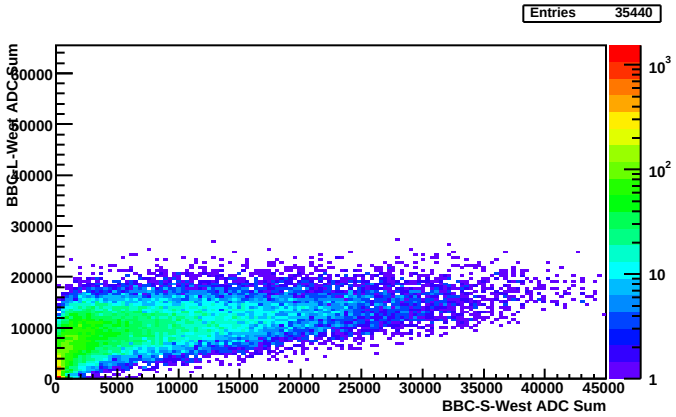

Entries 35440
TOF Mult
VPD-East ADC Sum

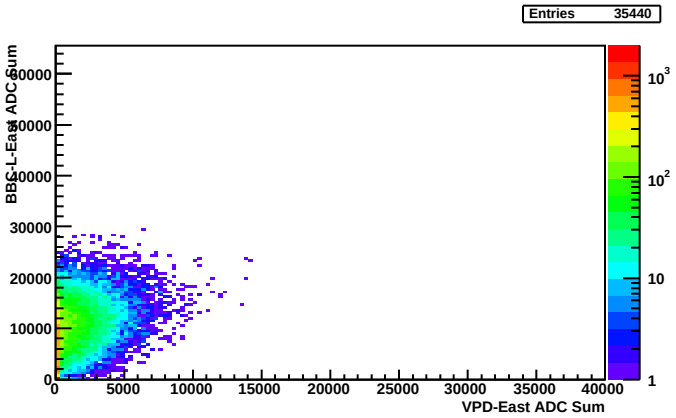

Entries 35440
TOF Mult
VPD-West ADC Sum

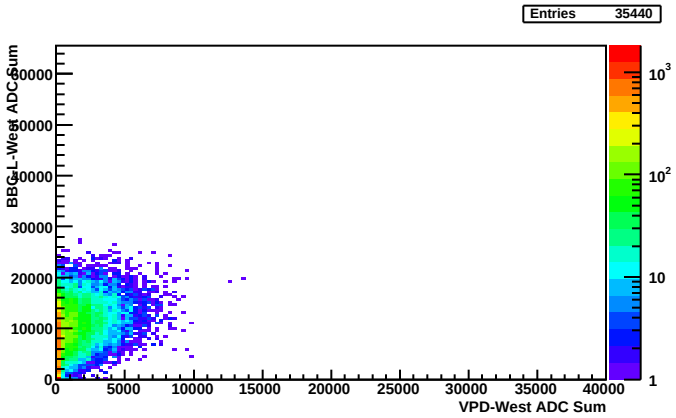

Entries 35440
TOF Mult
ZDC-East ADC Sum Att

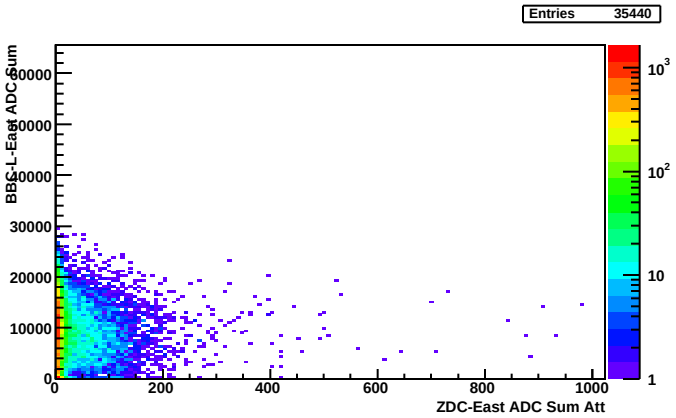

Entries 35440
TOF Mult
ZDC-West ADC Sum Att

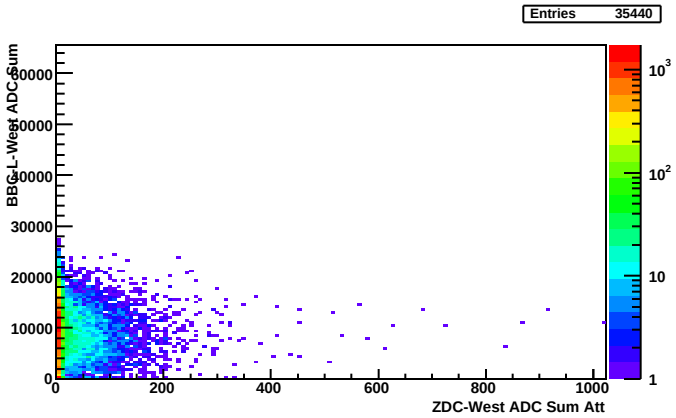

Entries 35440
BBC-L-East ADC Sum
BBC-S-East ADC Sum

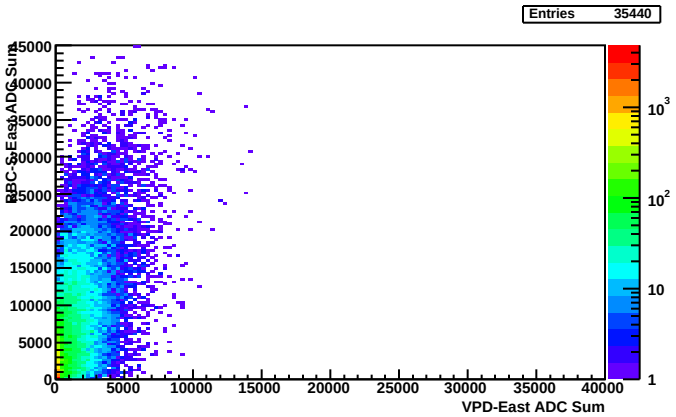

Entries 35440
BBC-L-West ADC Sum
BBC-S-West ADC Sum

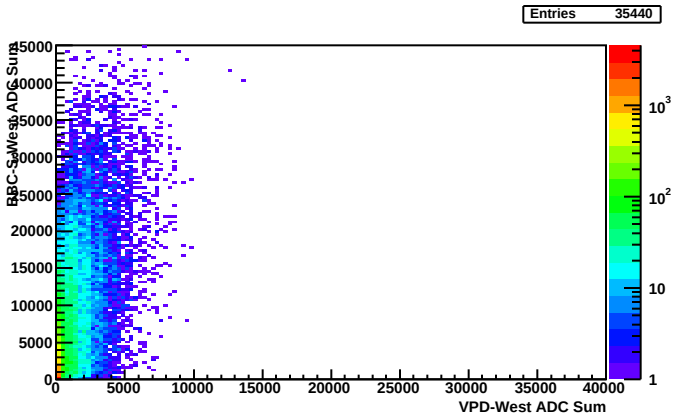

Entries 35440
BBC-L-East ADC Sum
VPD-East ADC Sum

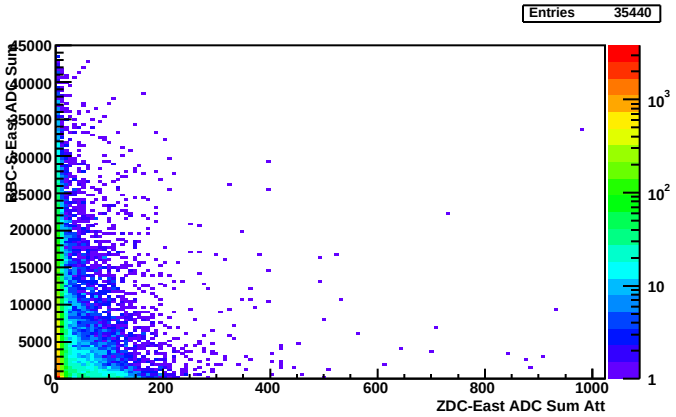

Entries 35440
BBC-L-West ADC Sum
VPD-West ADC Sum

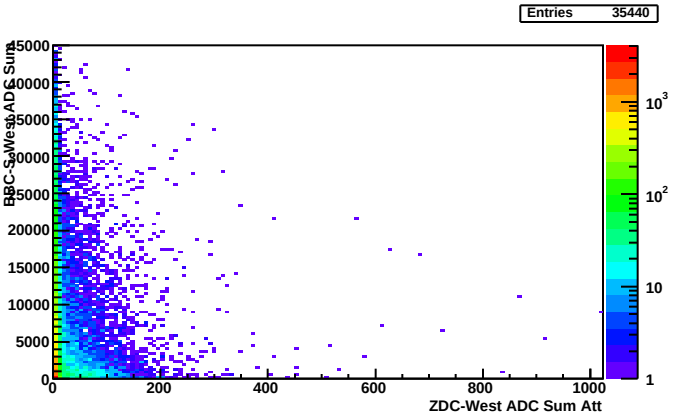

Entries 35440
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

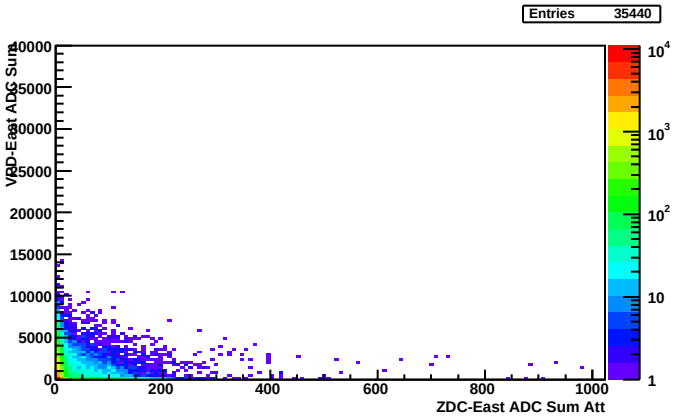

Entries 35440
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

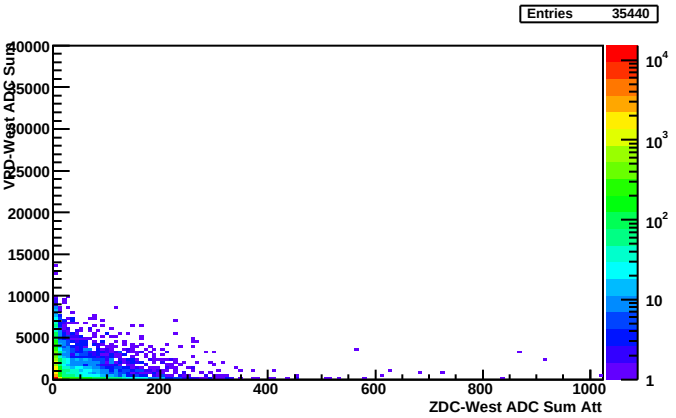

Entries 35440
BBC-S-East ADC Sum
VPD-East ADC Sum

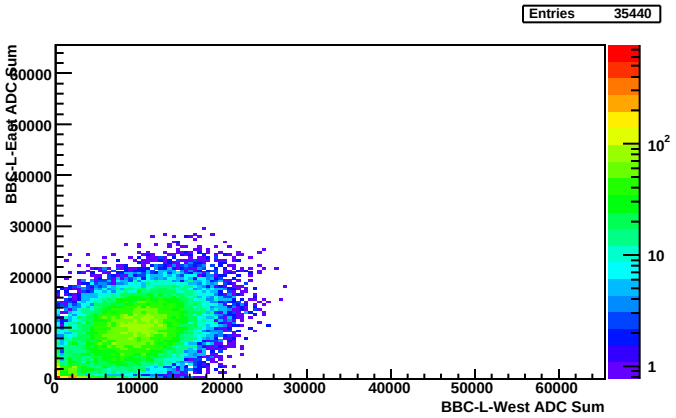

Entries 35440
BBC-S-West ADC Sum
VPD-West ADC Sum

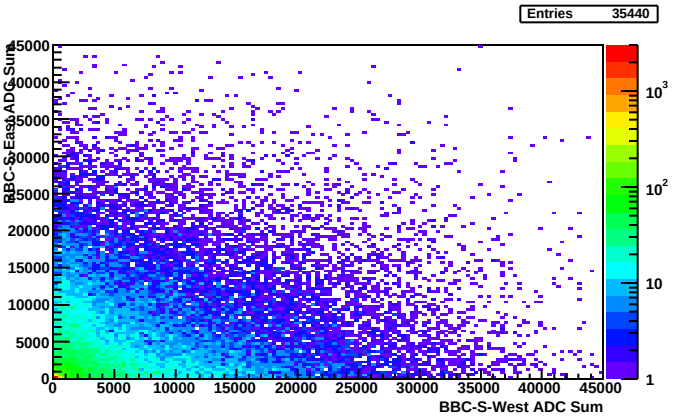

Entries 35440
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

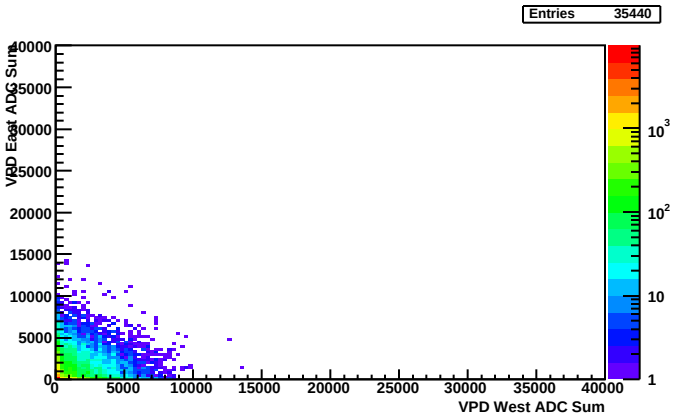

Entries 35440
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

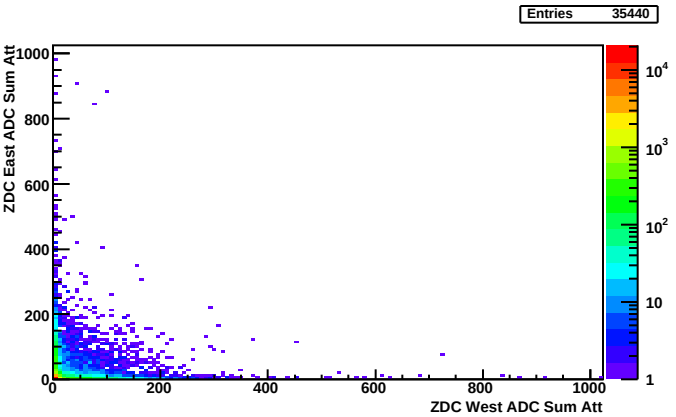

Entries 35440
VPD-East ADC Sum
ZDC-East ADC Sum Att

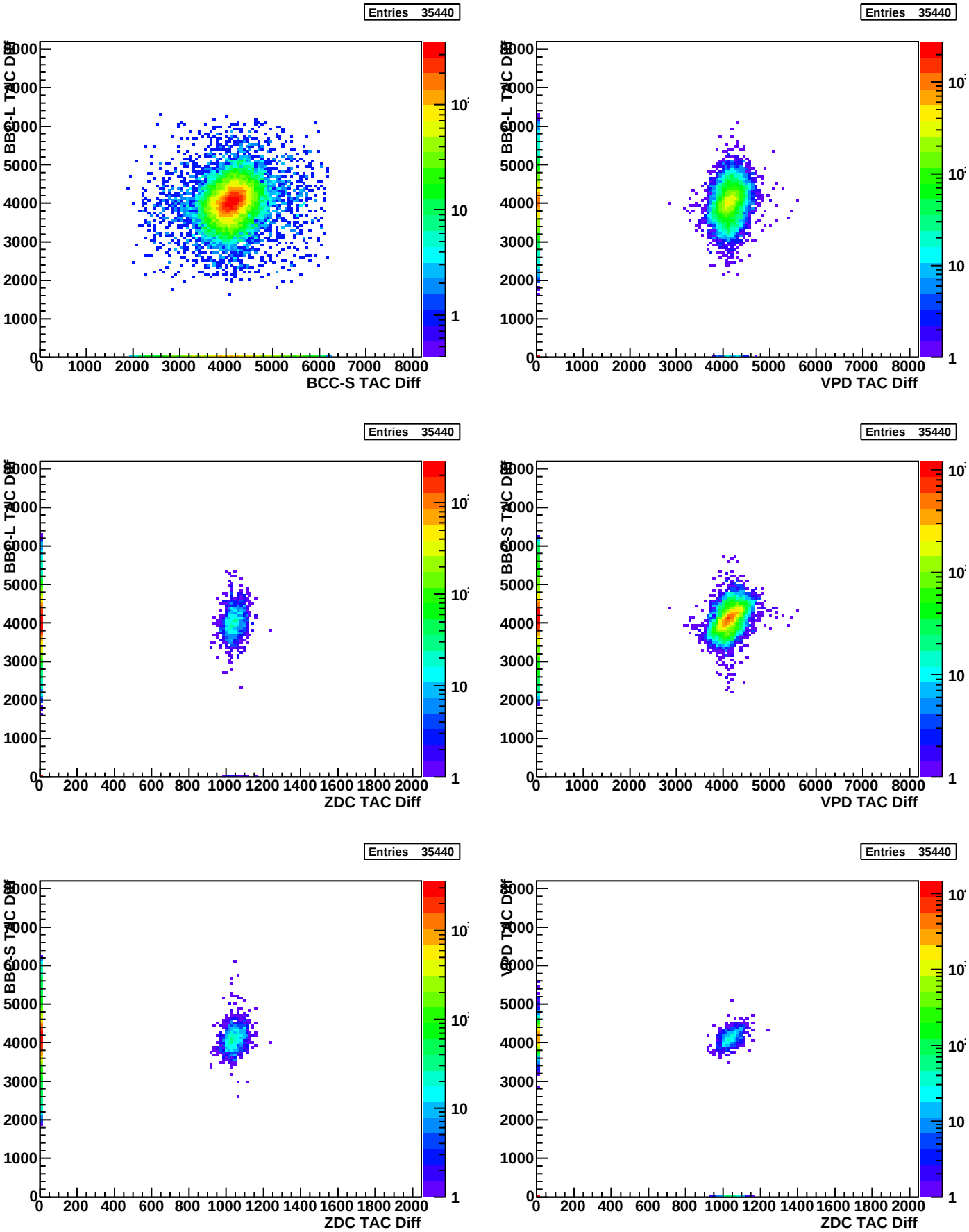

Entries 35440
VPD-West ADC Sum
ZDC-West ADC Sum Att

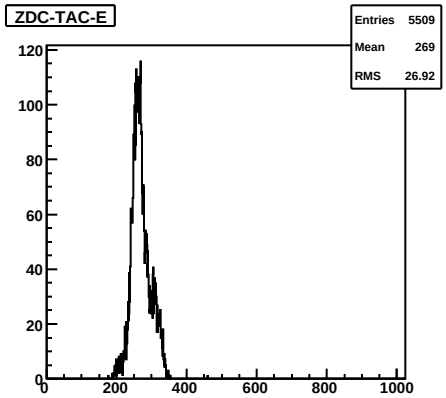

Entries 35440
BBC-L-East ADC Sum
BBC-L-West ADC Sum

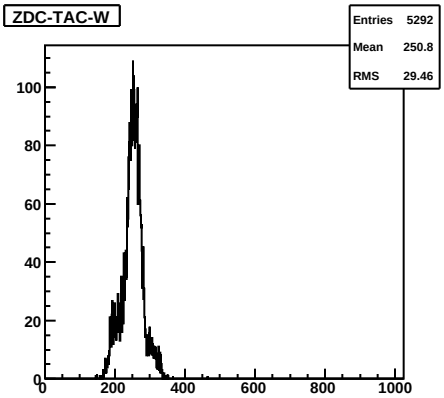

Entries 35440
BBC-S-East ADC Sum
BBC-S-West ADC Sum

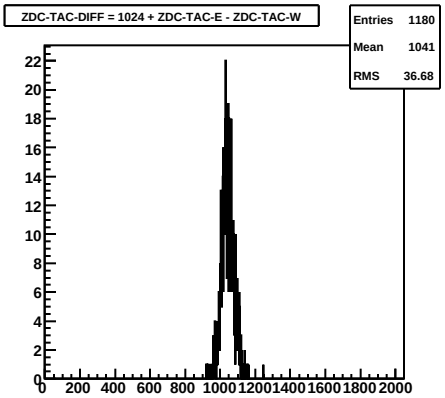

Entries 35440
VPD East ADC Sum
VPD West ADC Sum

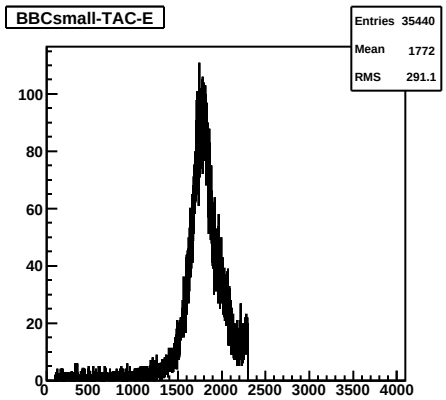

Entries 35440
ZDC East ADC Sum Att
ZDC West ADC Sum Att

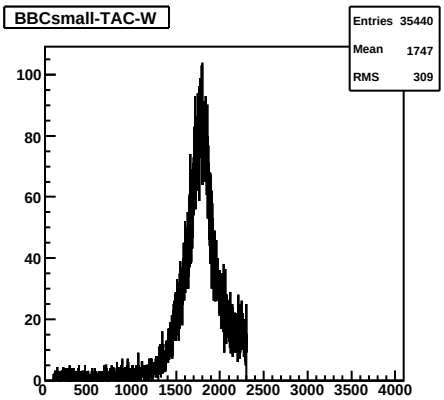

Entries 35440
BBC-L TAC Diff
BCC-S TAC Diff
Entries 35440
BBC-L TAC Diff
VPD TAC Diff
Entries 35440
BBC-L TAC Diff
ZDC TAC Diff
Entries 35440
BBC-S TAC Diff
VPD TAC Diff
Entries 35440
BBC-S TAC Diff
ZDC TAC Diff
Entries 35440
VPD TAC Diff
ZDC TAC Diff

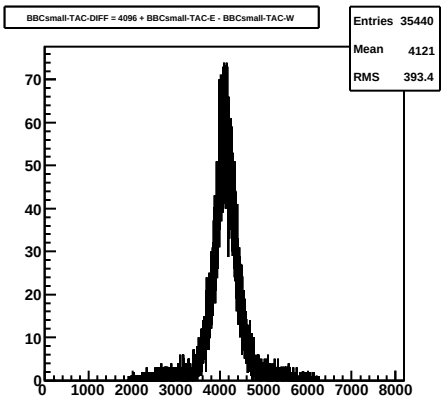

ZDC-TAC-E
Entries 5509
Mean 269
RMS 26.92

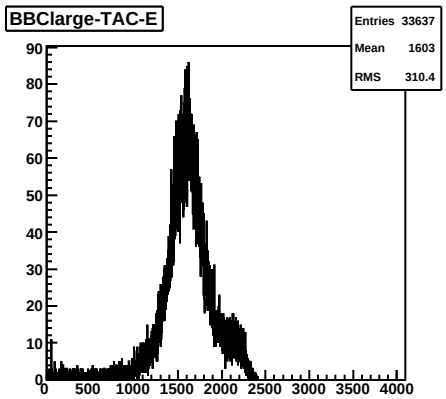

ZDC-TAC-W
Entries 5292
Mean 250.8
RMS 29.46

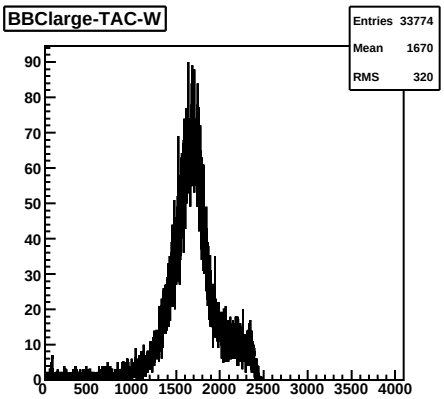

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1180
Mean 1041
RMS 36.68

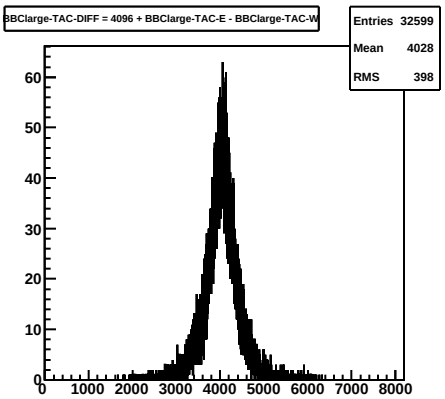

BBCsmall-TAC-E
Entries 35440
Mean 1772
RMS 291.1

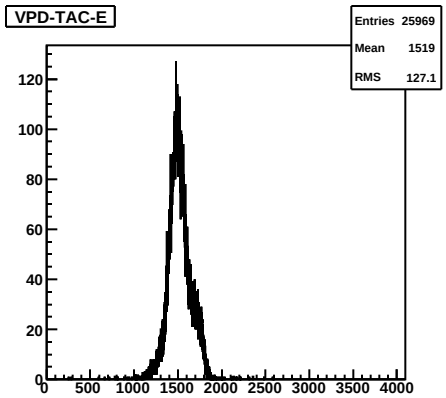

BBCsmall-TAC-W
Entries 35440
Mean 1747
RMS 309

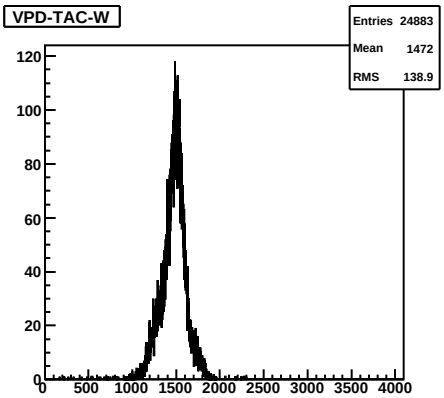

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 35440
Mean 4121
RMS 393.4

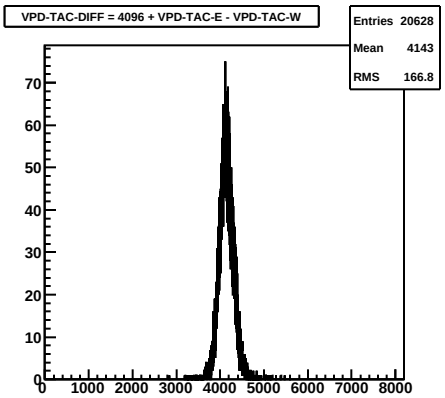

BBClarge-TAC-E
Entries 33637
Mean 1603
RMS 310.4

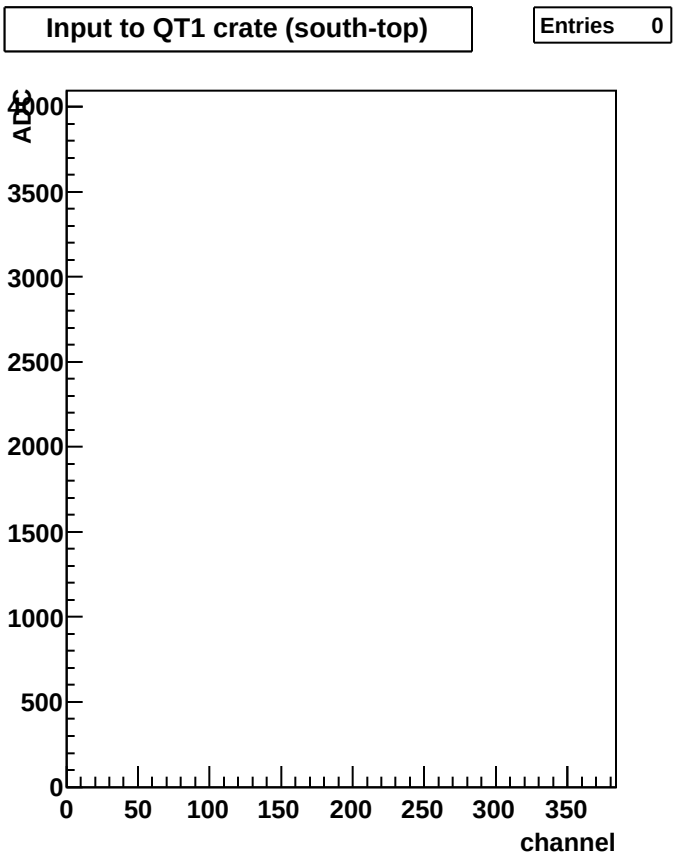

BBClarge-TAC-W
Entries 33774
Mean 1670
RMS 320

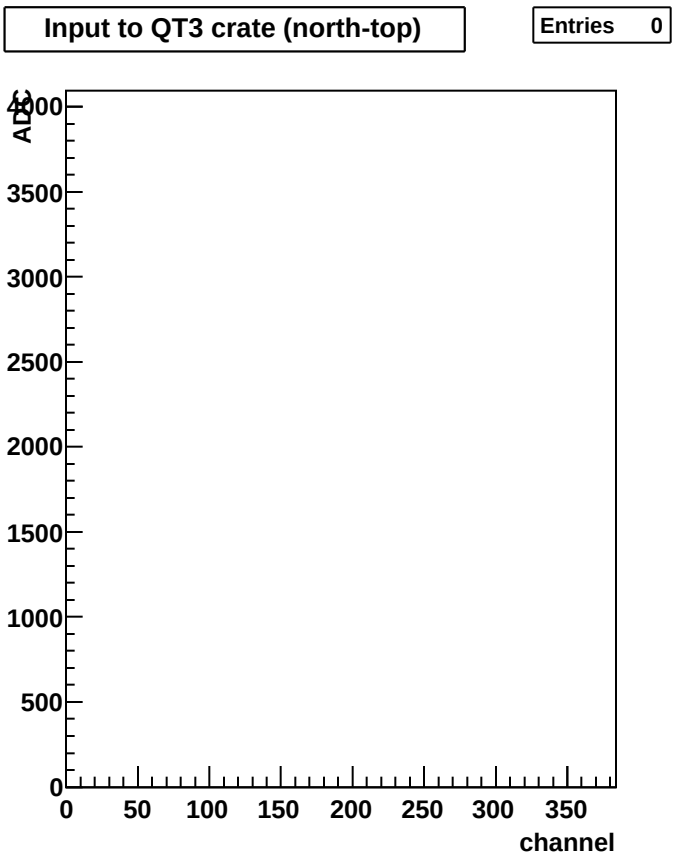

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 32599
Mean 4028
RMS 398

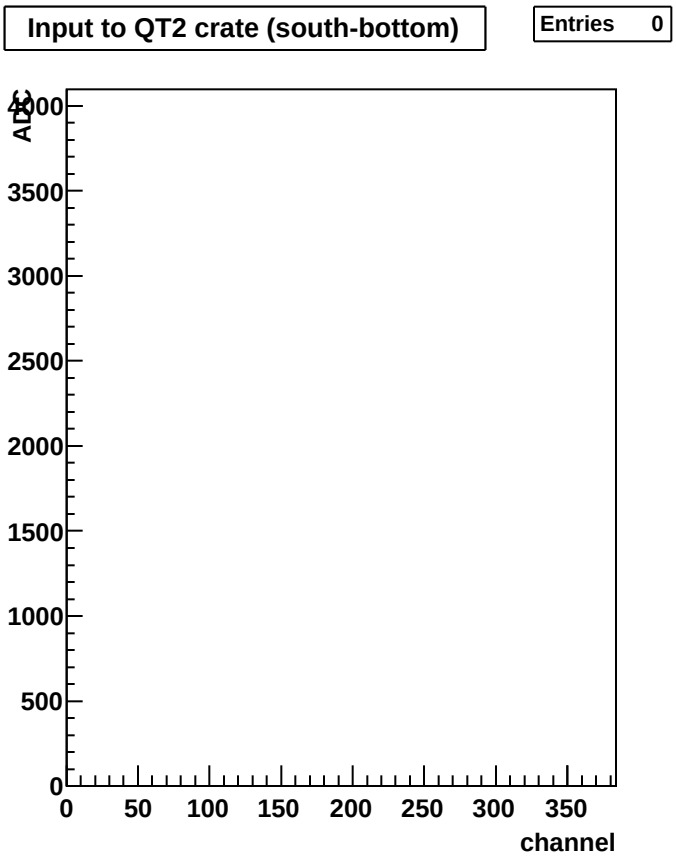

VPD-TAC-E
Entries 25969
Mean 1519
RMS 127.1

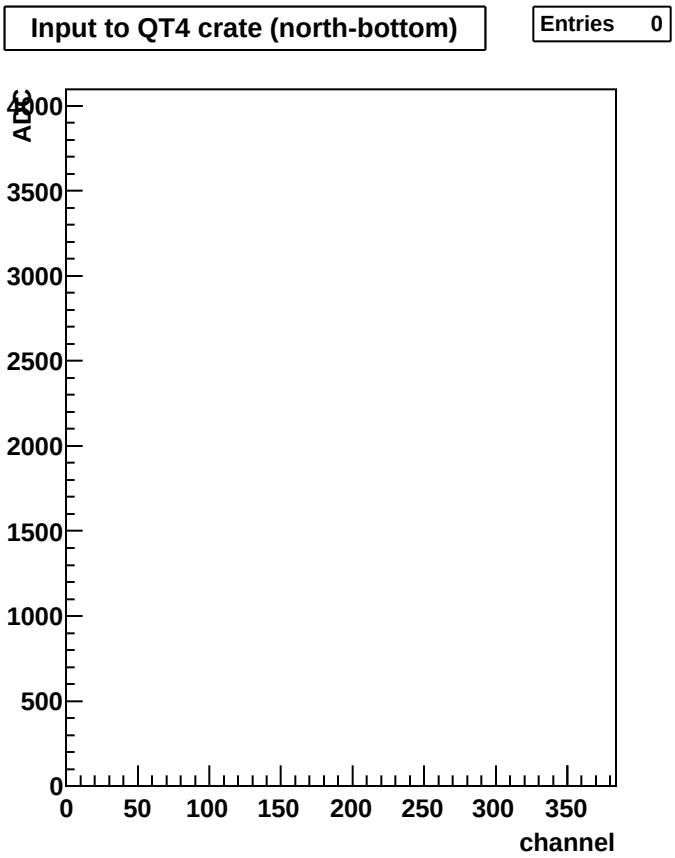

VPD-TAC-W
Entries 24883
Mean 1472
RMS 138.9

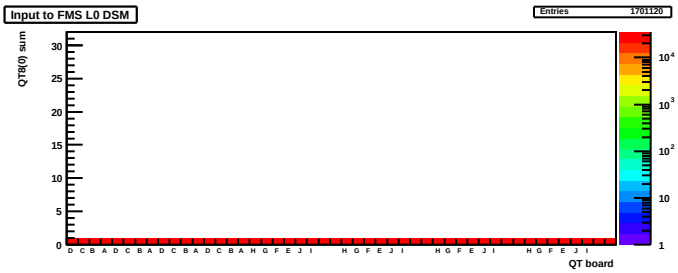

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 20628
Mean 4143
RMS 166.8

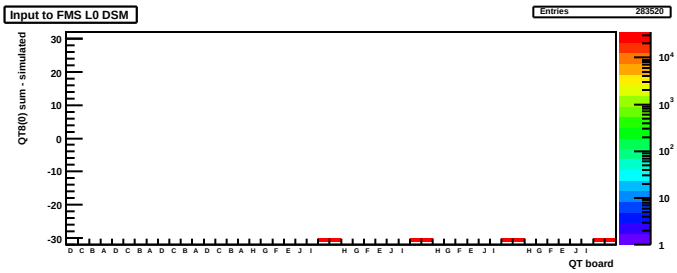

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

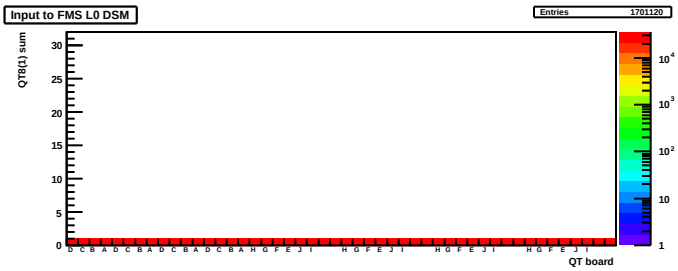

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

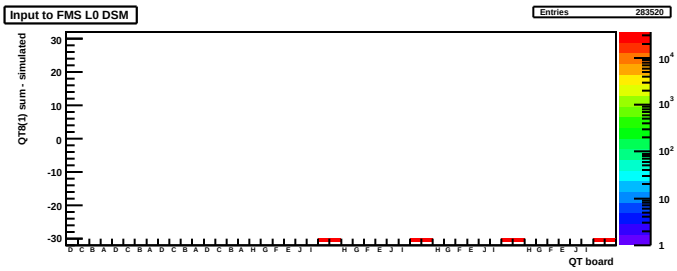

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

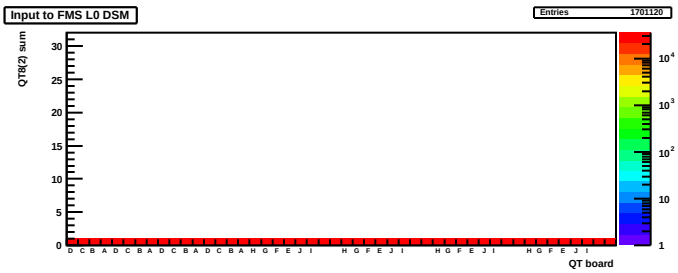

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

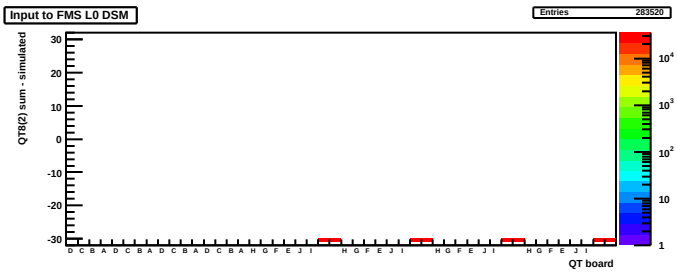

Input to FMS L0 DSM
Entries 1701120
QT8(0) sum
QT board

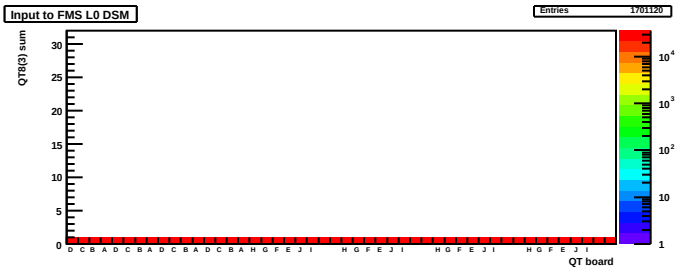

Input to FMS L0 DSM
Entries 283520
QT8(0) sum - simulated
QT board

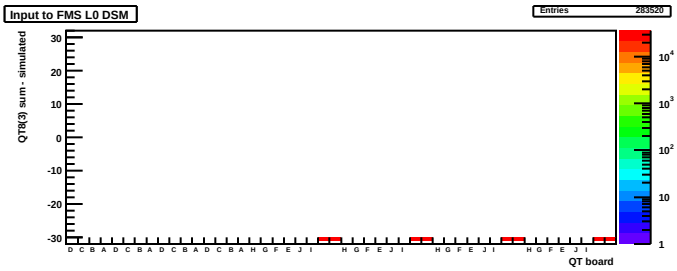

Input to FMS L0 DSM
Entries 1701120
QT8(1) sum
QT board

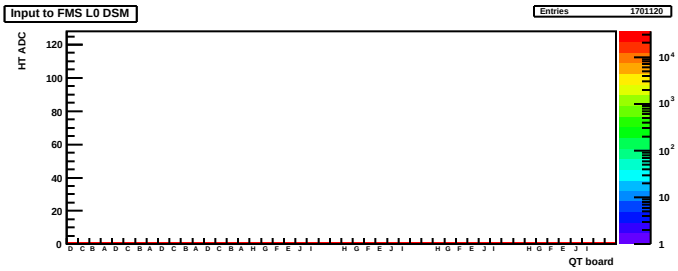

Input to FMS L0 DSM
Entries 283520
QT8(1) sum - simulated
QT board

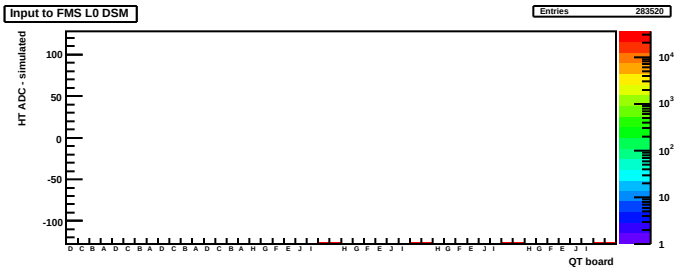

Input to FMS L0 DSM
Entries 1701120
QT8(2) sum
QT board

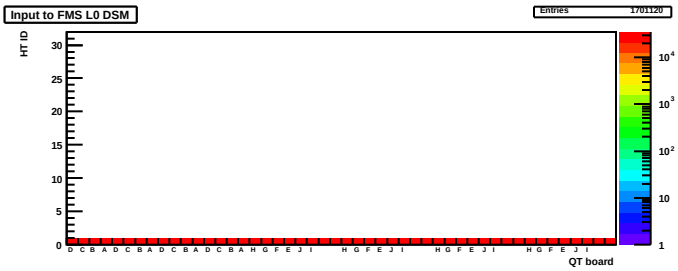

Input to FMS L0 DSM
Entries 283520
QT8(2) sum - simulated
QT board

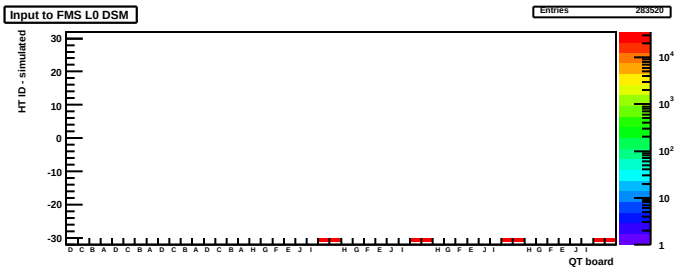

Input to FMS L0 DSM
Entries 1701120
QT8(3) sum
QT board

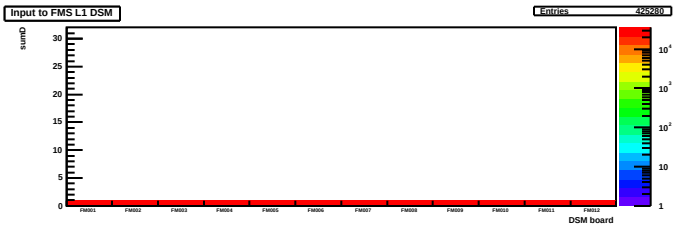

Input to FMS L0 DSM
Entries 283520
QT8(3) sum - simulated
QT board

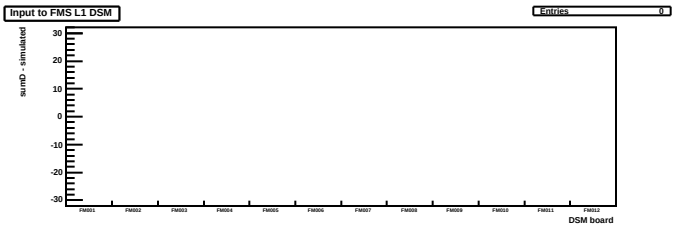

Input to FMS L0 DSM
Entries 1701120
HT ADC
QT board

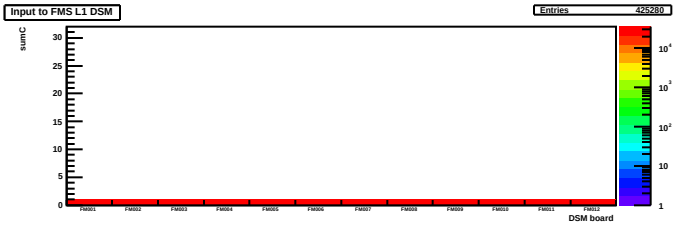

Input to FMS L0 DSM
Entries 283520
HT ADC - simulated
QT board

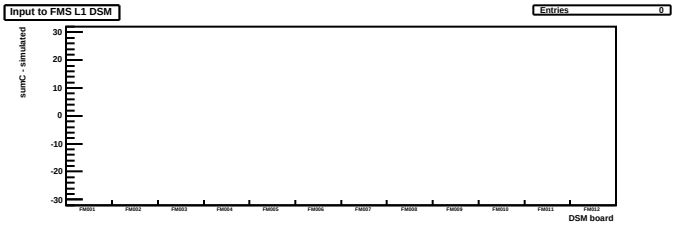

Input to FMS L0 DSM
Entries 1701120
HT ID
QT board

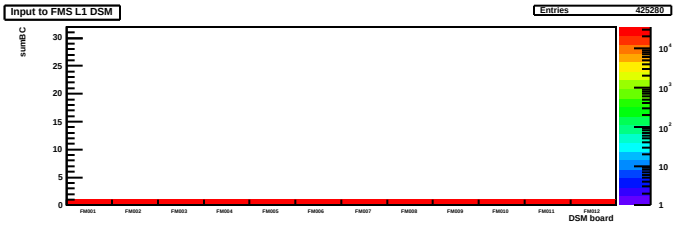

Input to FMS L0 DSM
Entries 283520
HT ID - simulated
QT board

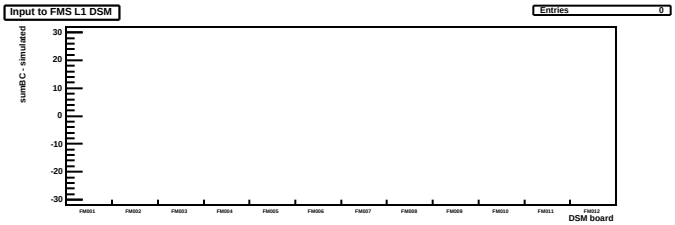

Input to FMS L1 DSM
Entries 425280
sumD
DSM board

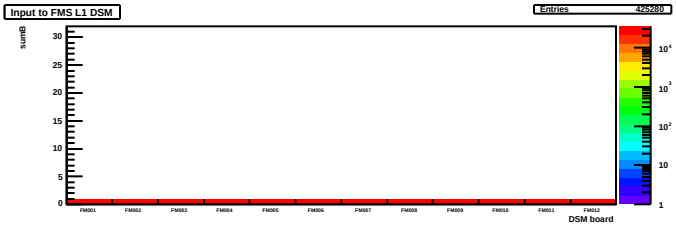

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

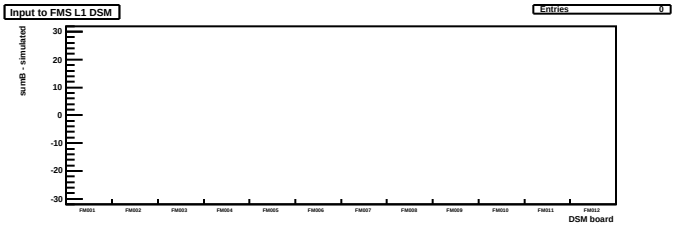

Input to FMS L1 DSM
Entries 425280
sumC
DSM board

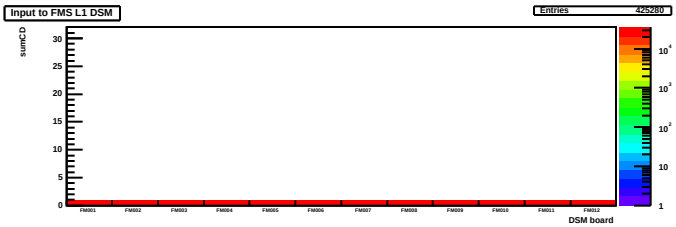

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

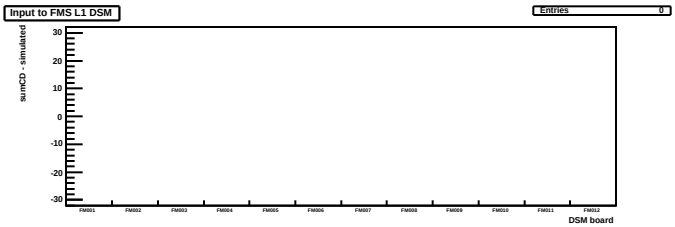

Input to FMS L1 DSM
Entries 425280
sumBC
DSM board

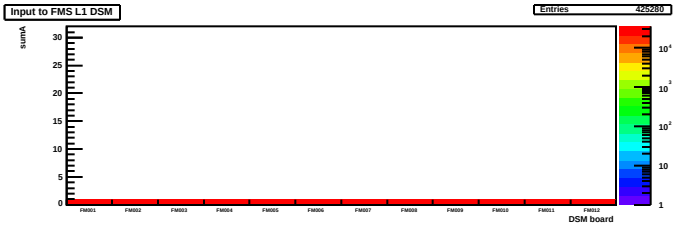

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

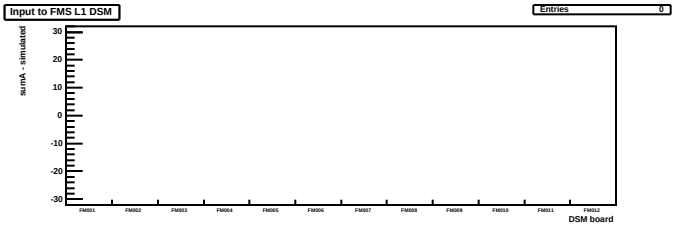

Input to FMS L1 DSM
Entries 425280
sumB
DSM board

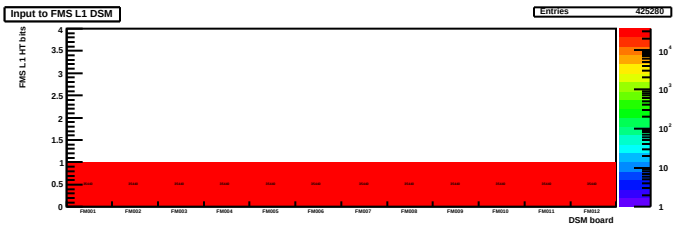

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

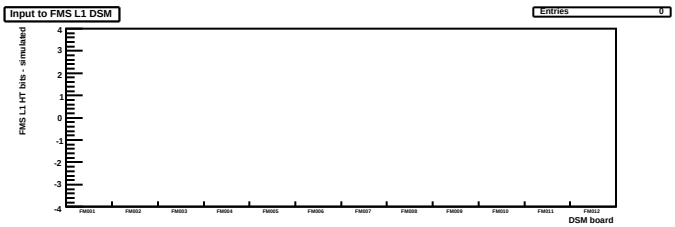

Input to FMS L1 DSM
Entries 425280
sumCD
DSM board

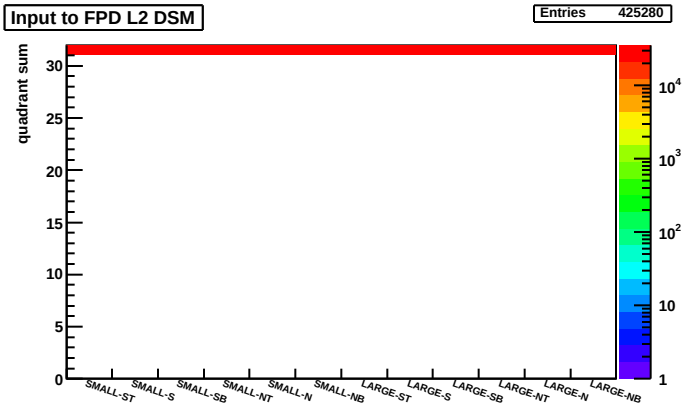

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

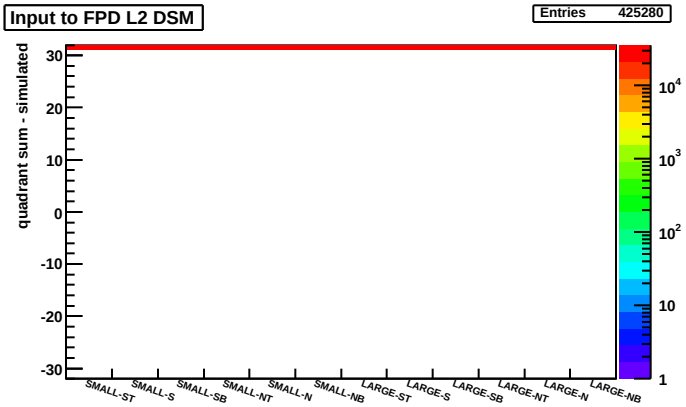

Input to FMS L1 DSM
Entries 425280
sumA
DSM board

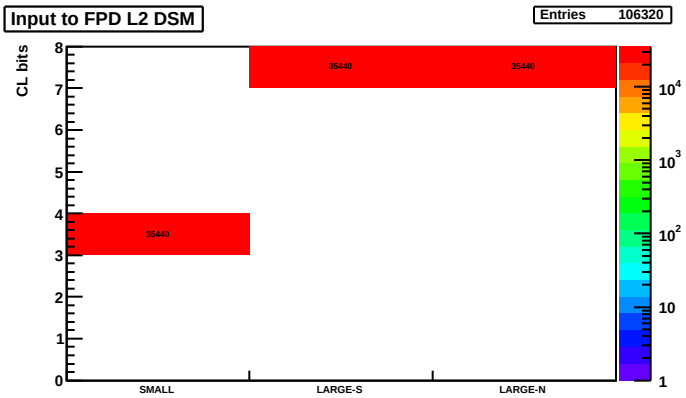

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

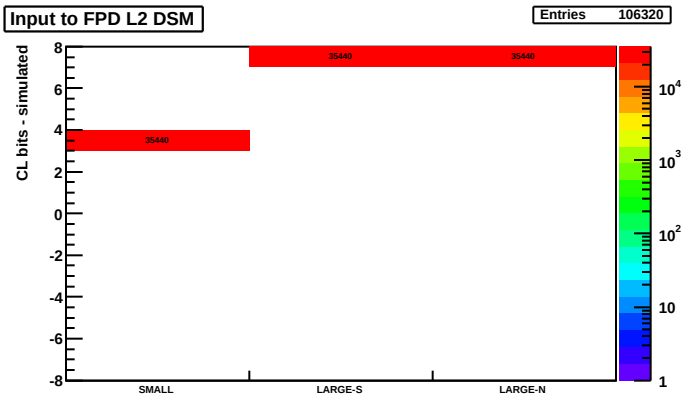

Input to FMS L1 DSM
Entries 425280
FMS L1 HT bits
DSM board

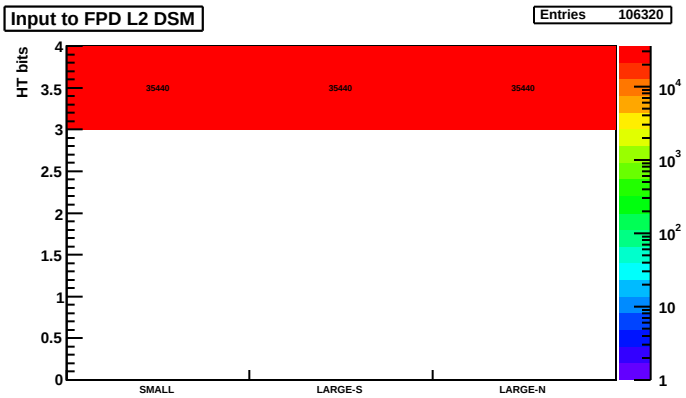

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

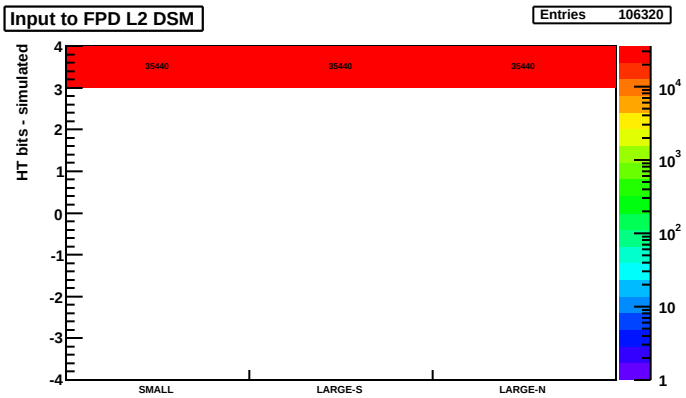

Input to FPD L2 DSM
Entries 425280
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

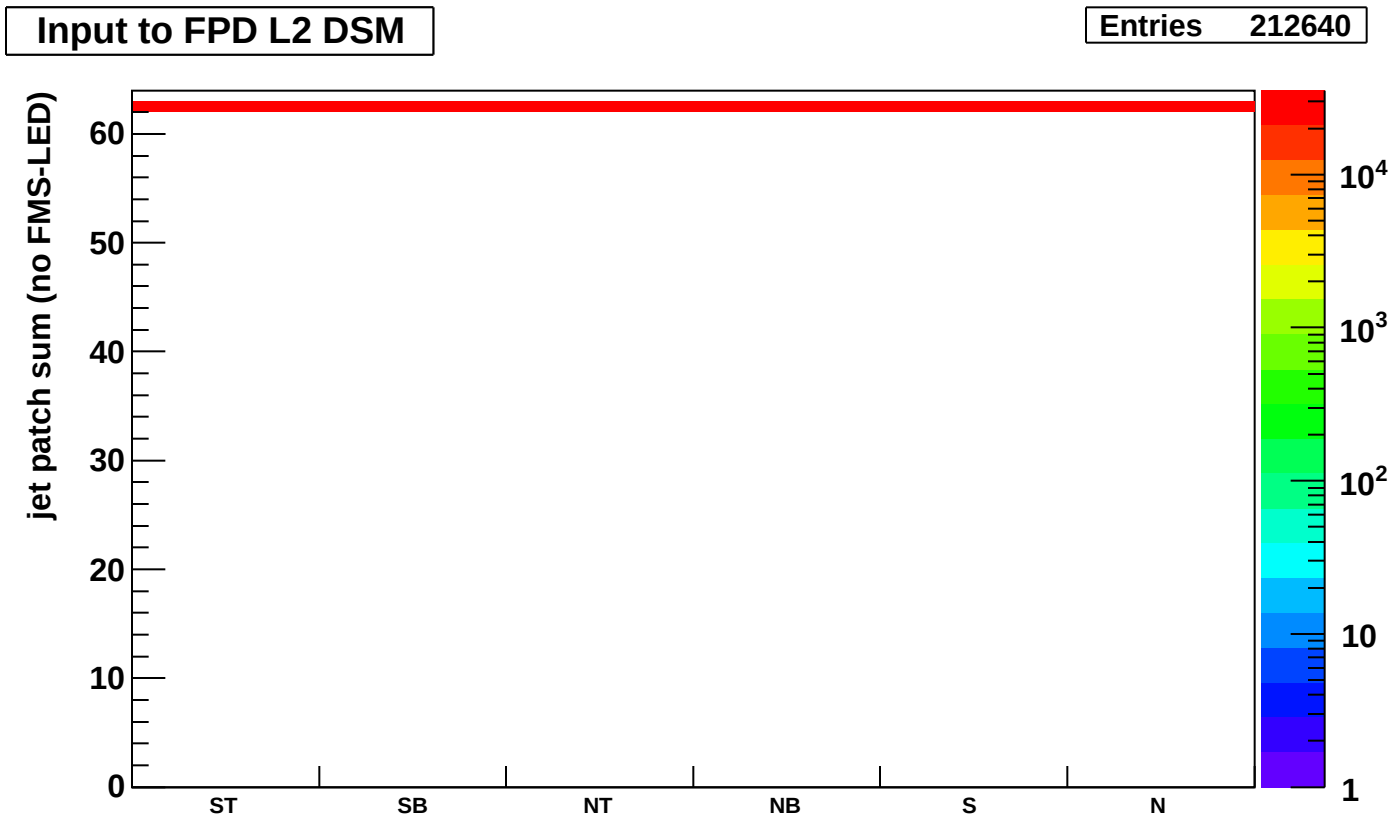

Input to FPD L2 DSM
Entries 425280
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

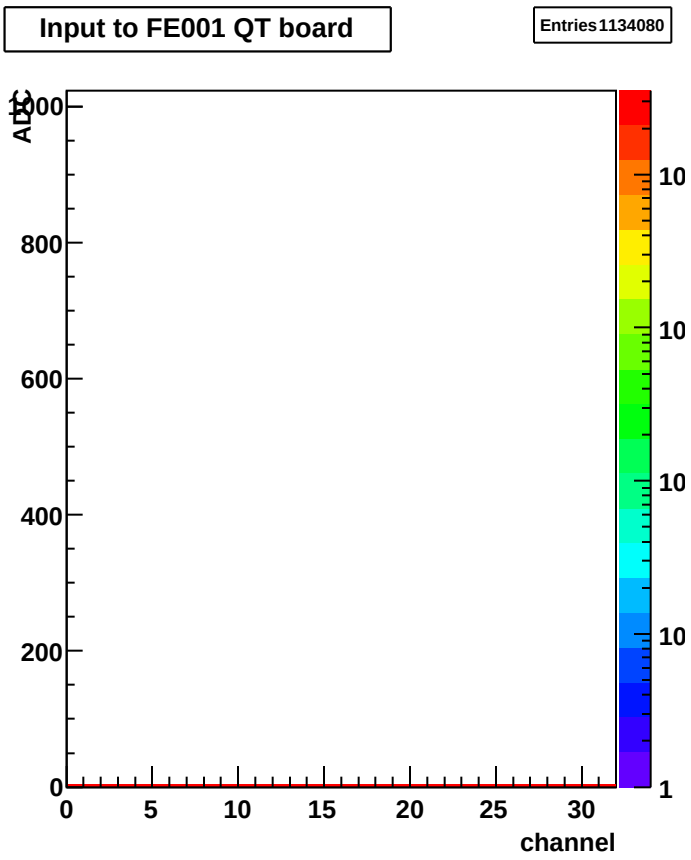

Input to FPD L2 DSM
Entries 106320
CL bits
35440
35440
35440
SMALL
LARGE-S
LARGE-N

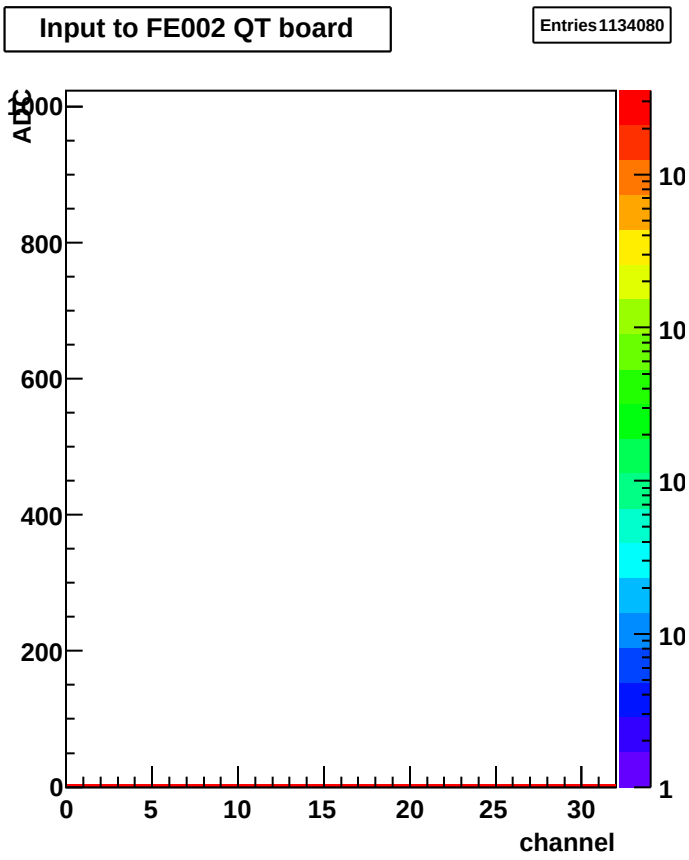

Input to FPD L2 DSM
Entries 106320
CL bits - simulated
35440
35440
35440
SMALL
LARGE-S
LARGE-N

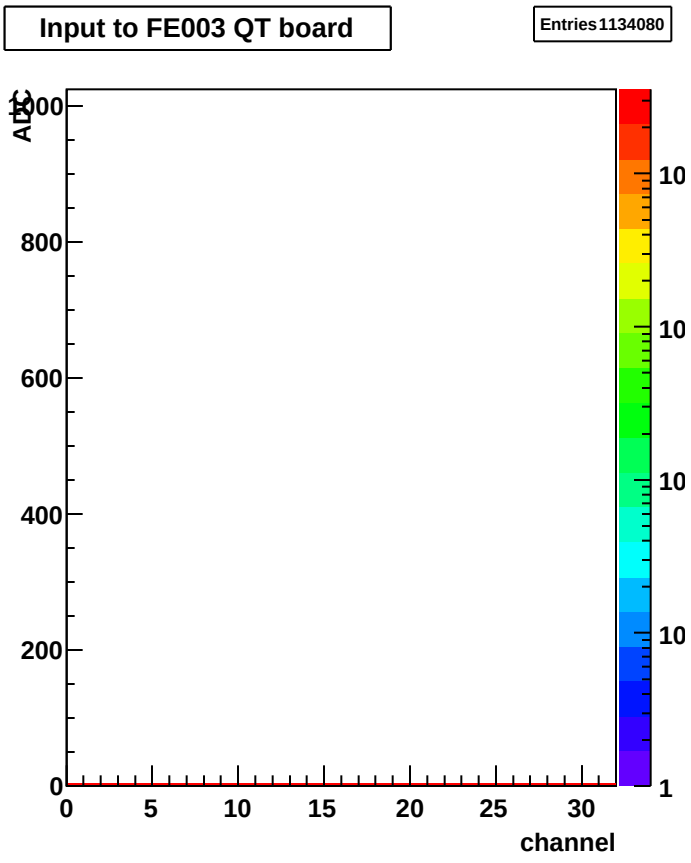

Input to FPD L2 DSM
Entries 106320
HT bits
35440
35440
35440
SMALL
LARGE-S
LARGE-N

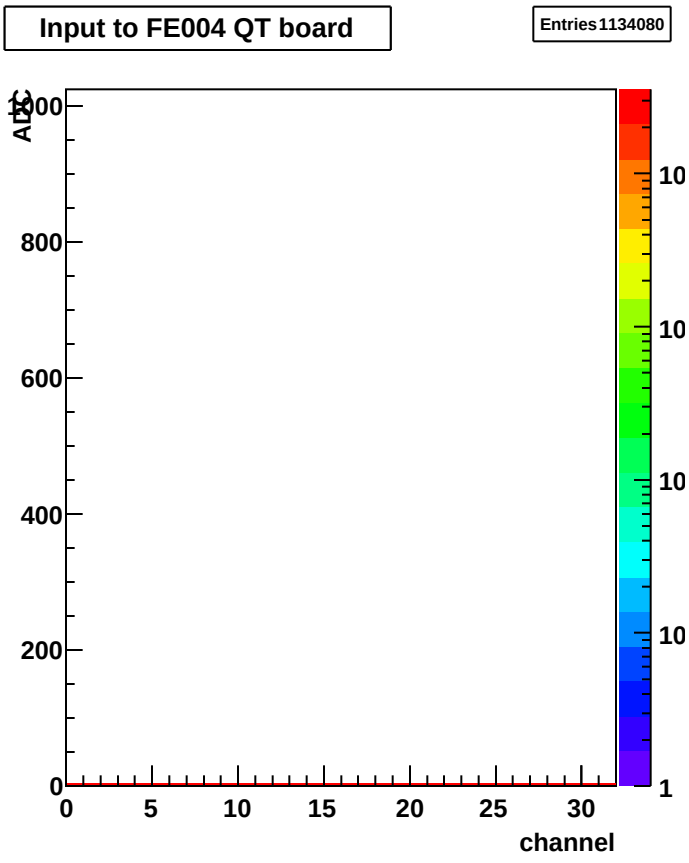

Input to FPD L2 DSM
Entries 106320
HT bits - simulated
35440
35440
35440
SMALL
LARGE-S
LARGE-N

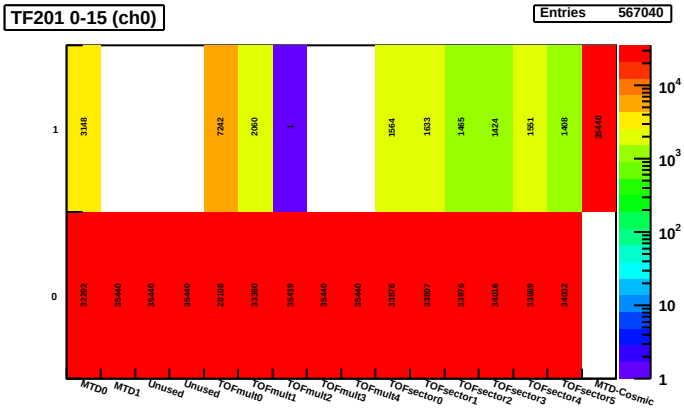

Input to FPD L2 DSM
Entries 212640
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

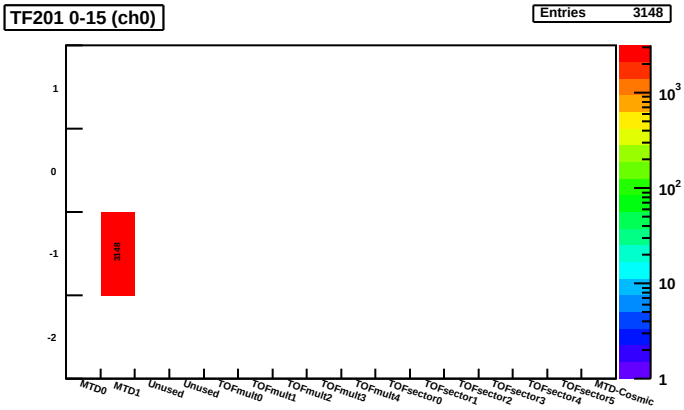

Input to FE001 QT board
Entries 1134080
ADC
channel

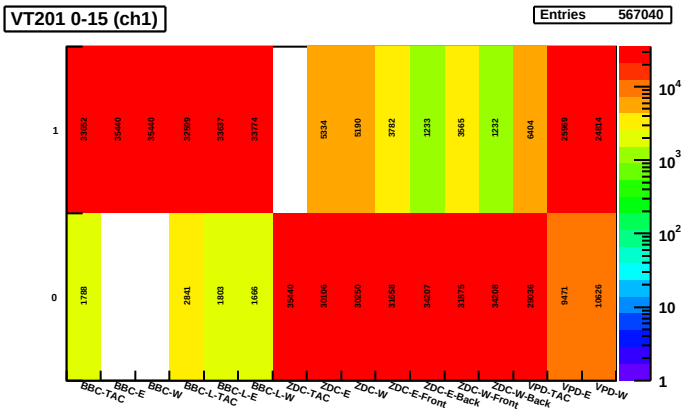

Input to FE002 QT board
Entries 1134080
ADC
channel

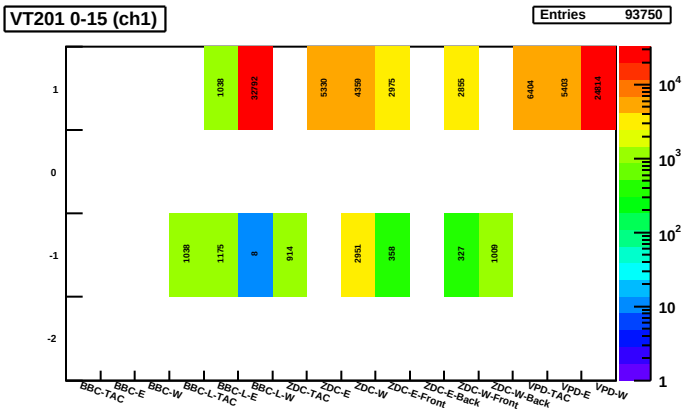

Input to FE003 QT board
Entries 1134080
ADC
channel

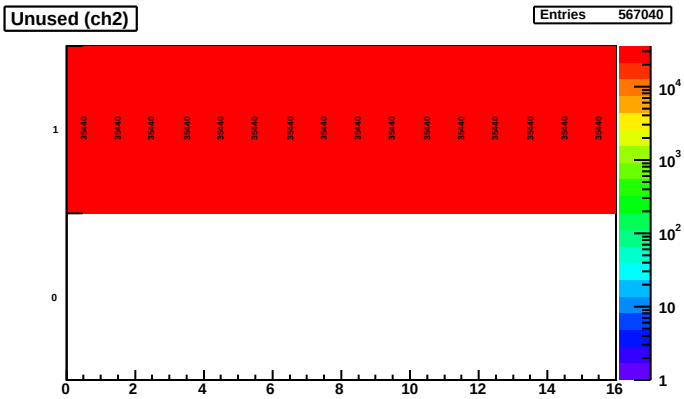

Input to FE004 QT board
Entries 1134080
ADC
channel

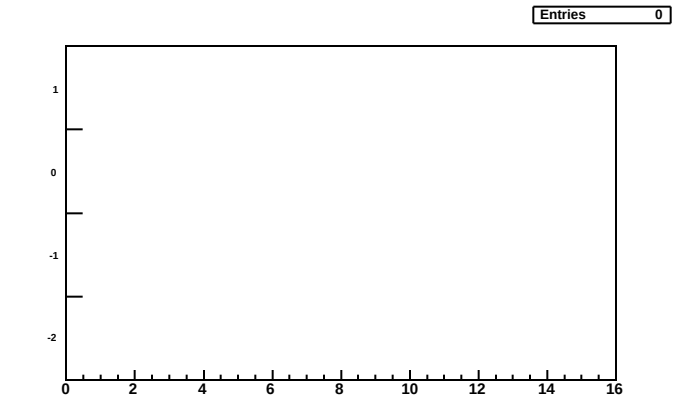

TF201 0-15 (ch0)
Entries 567040
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 3148
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 567040
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 93750
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 567040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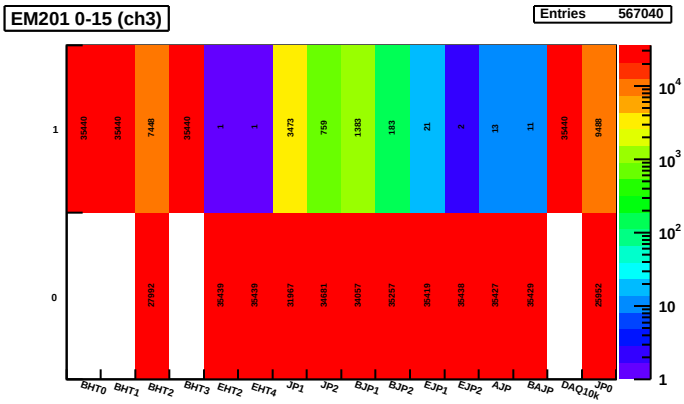
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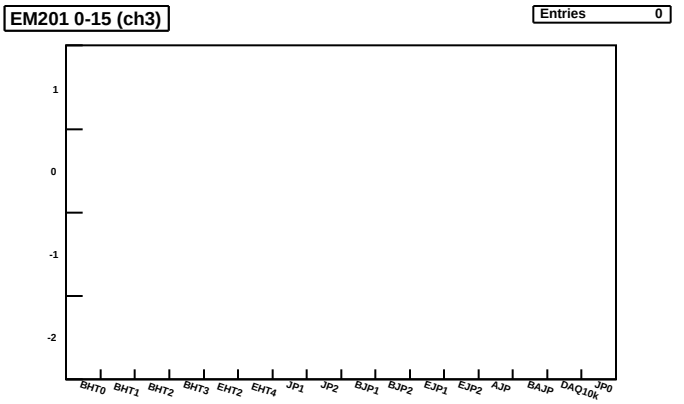
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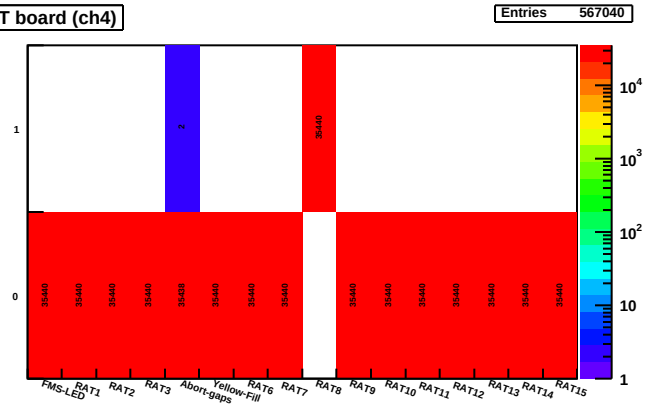
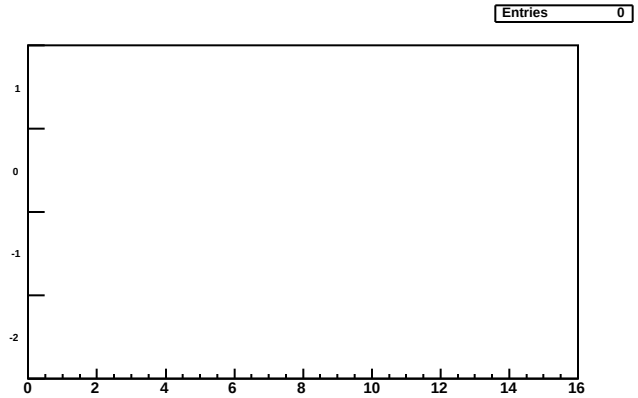
RAT board (ch4)





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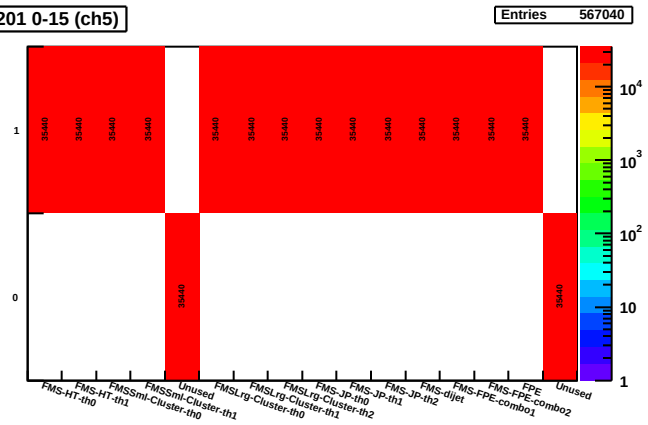

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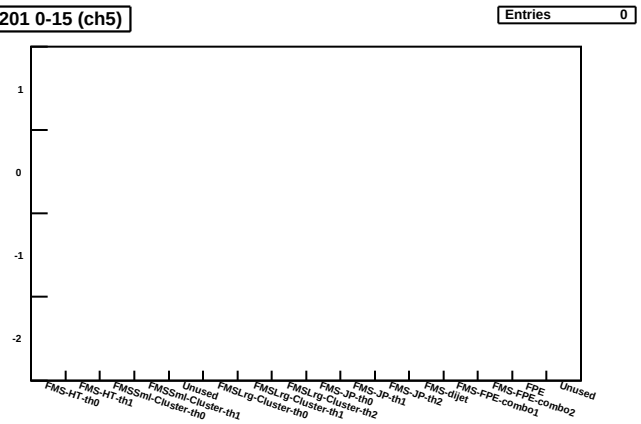

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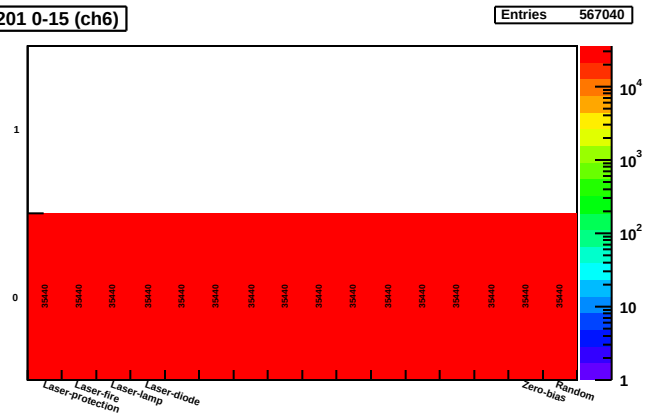

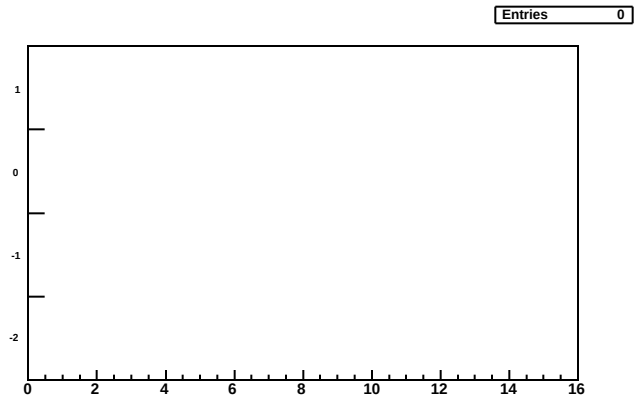
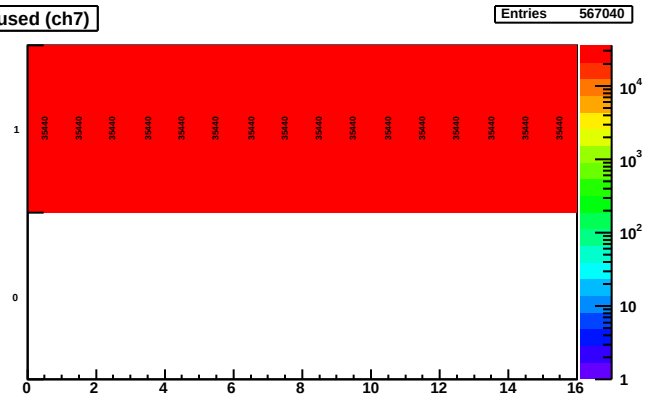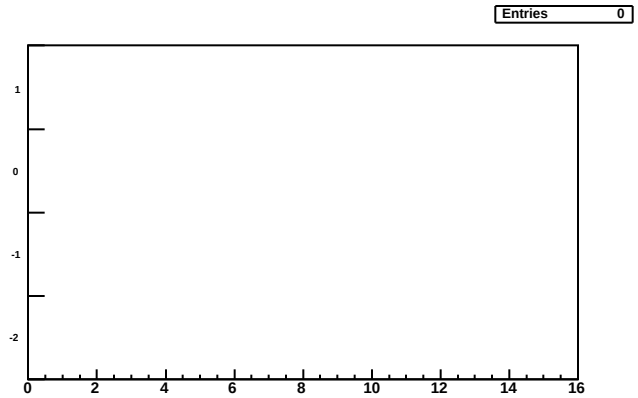
Unused (ch7)