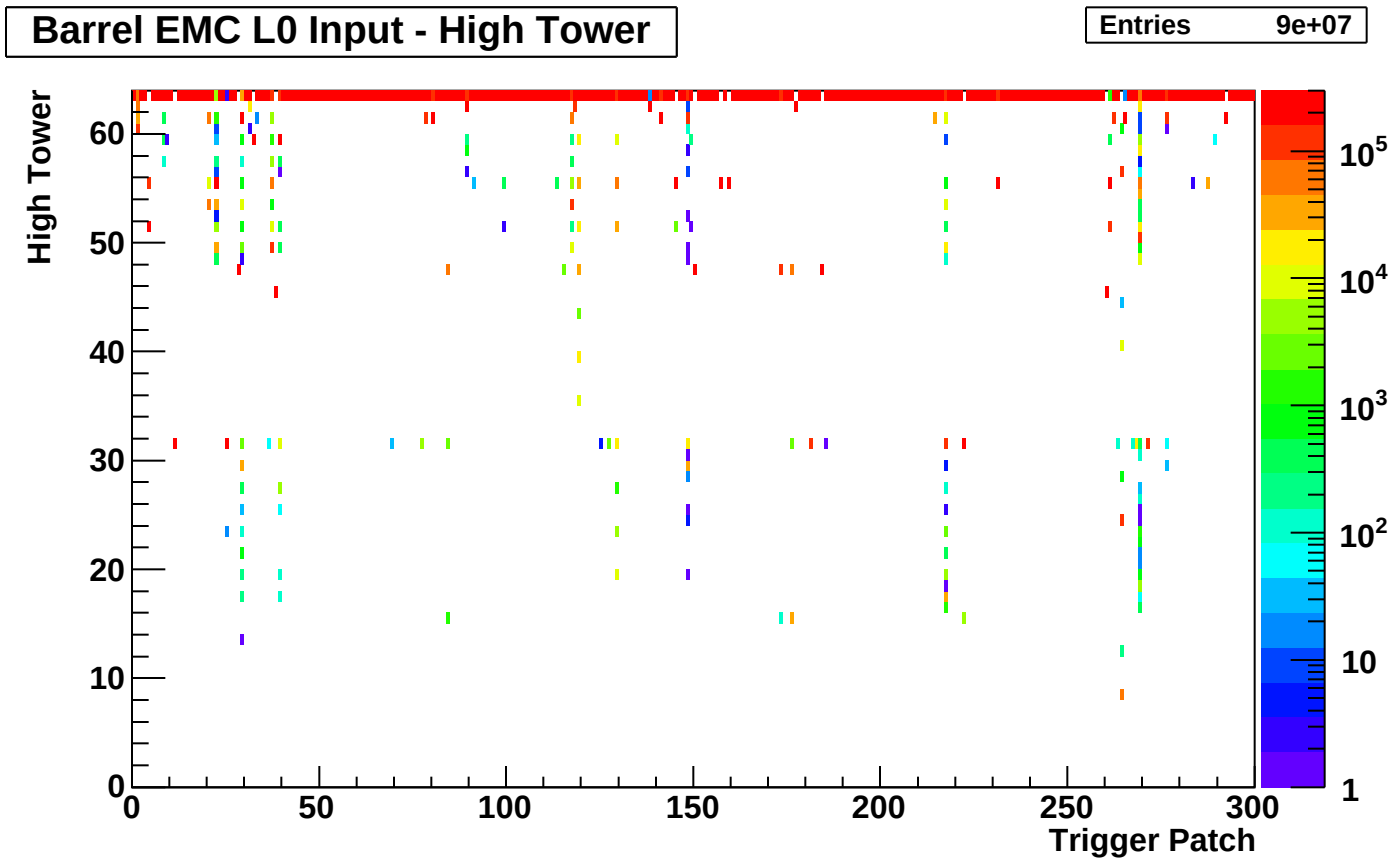
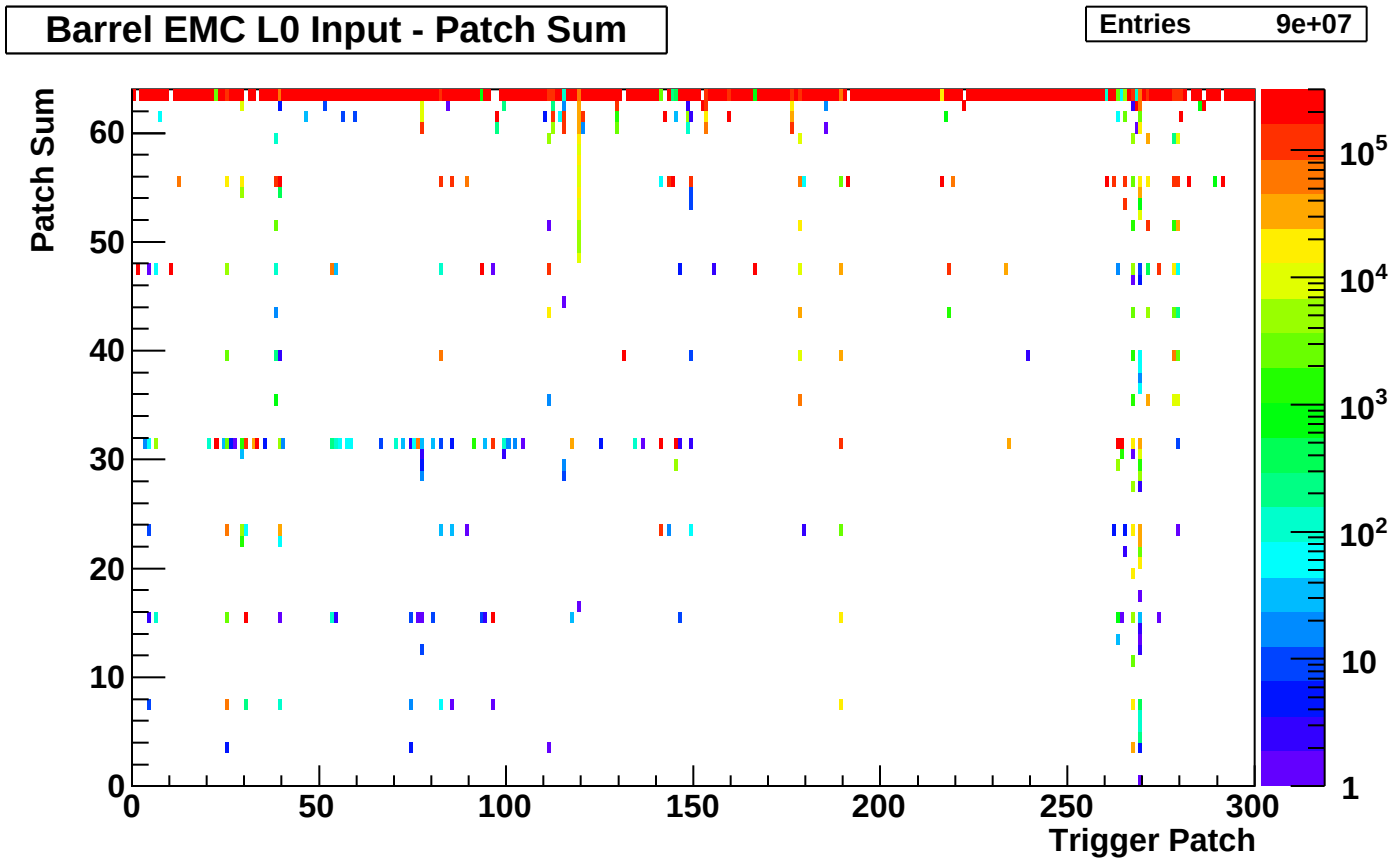
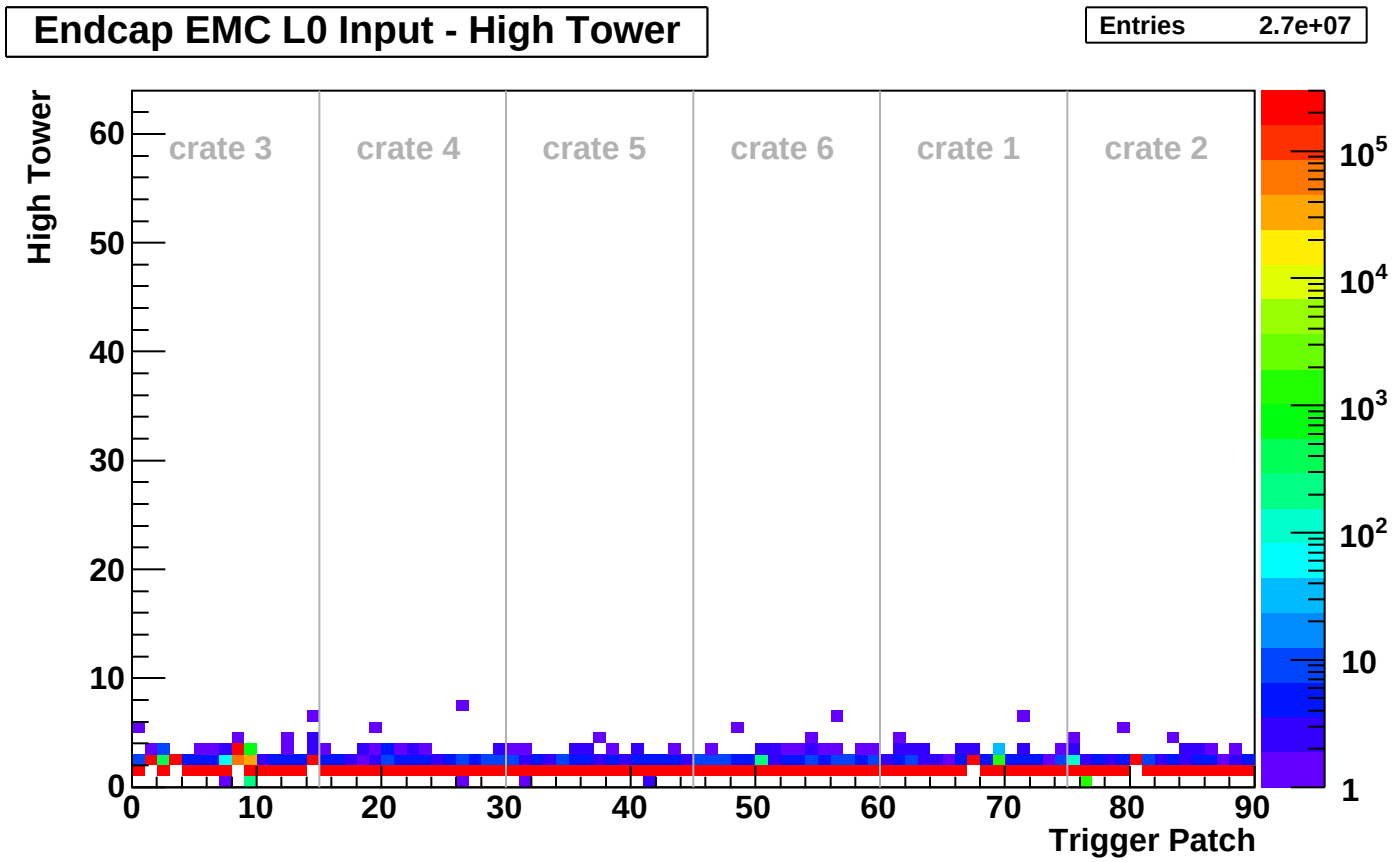
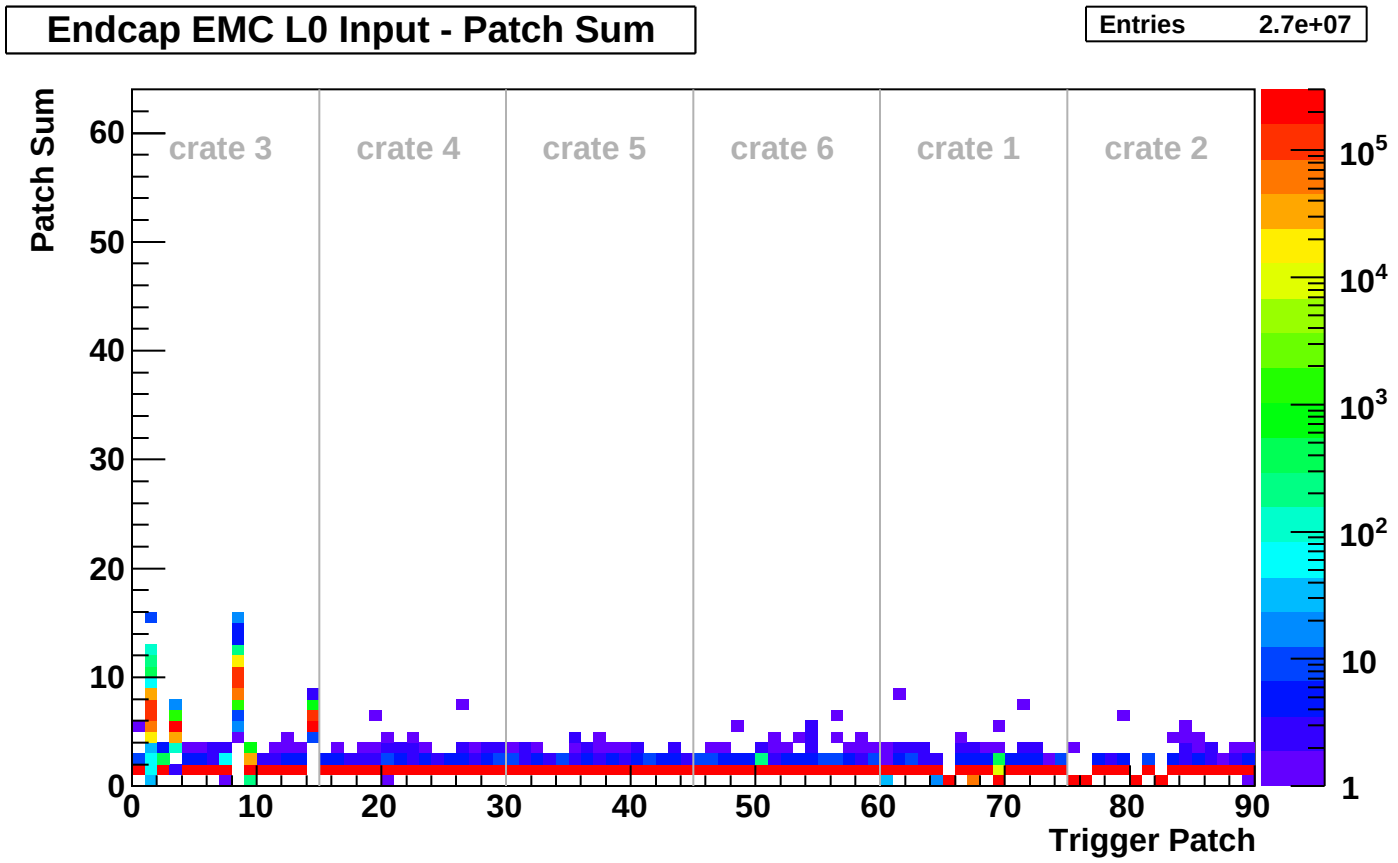
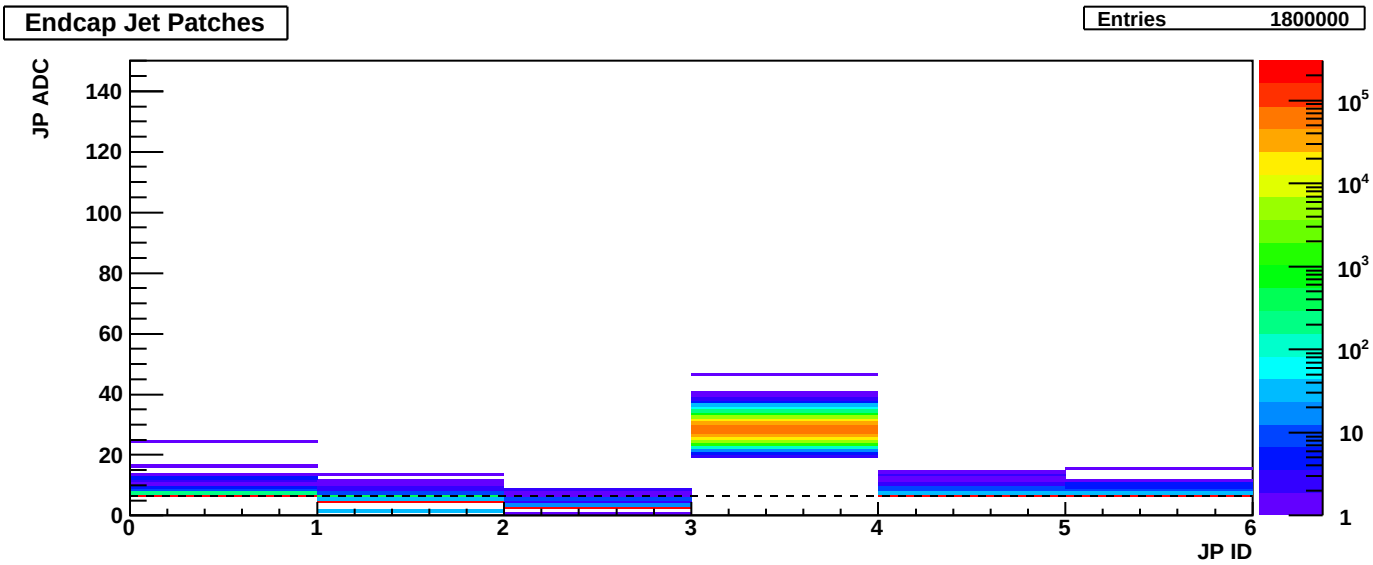
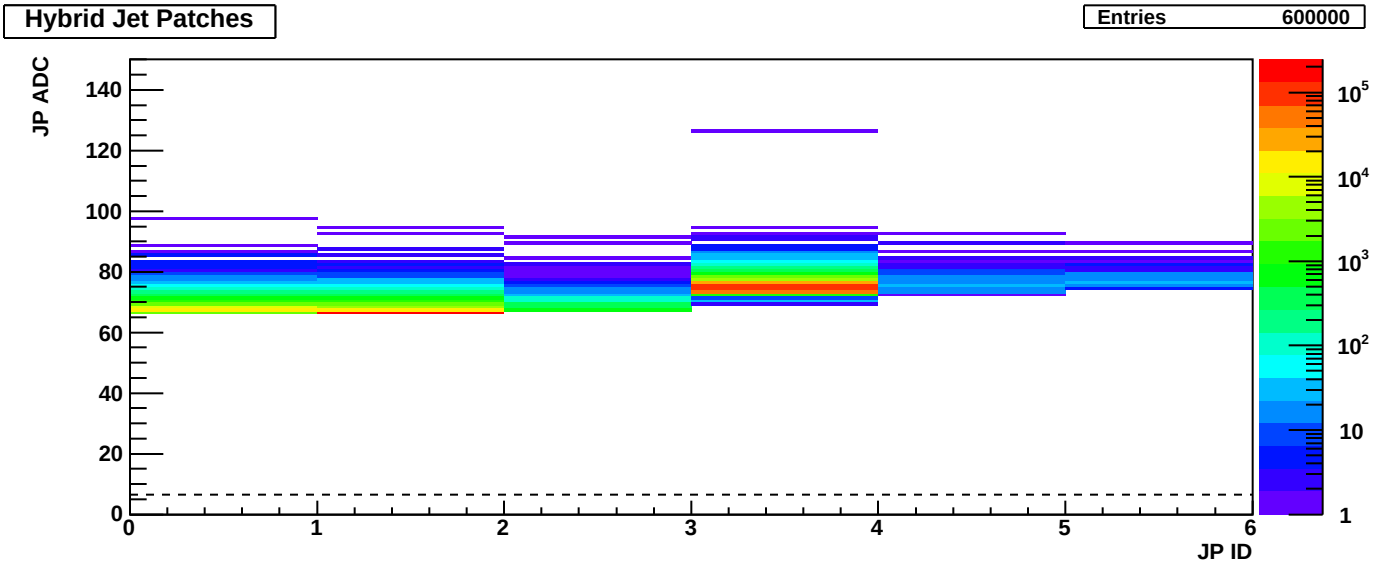

Barrel EMC L0 Input - High Tower
Entries 9e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

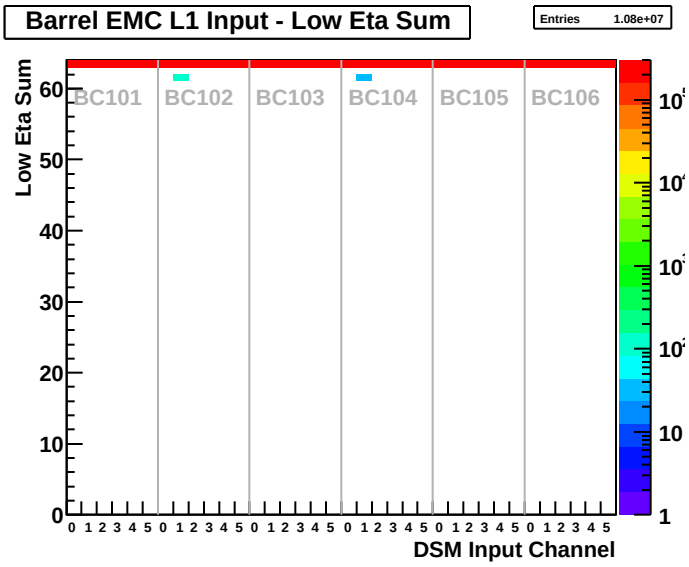

Barrel EMC L0 Input - Patch Sum
Entries 9e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

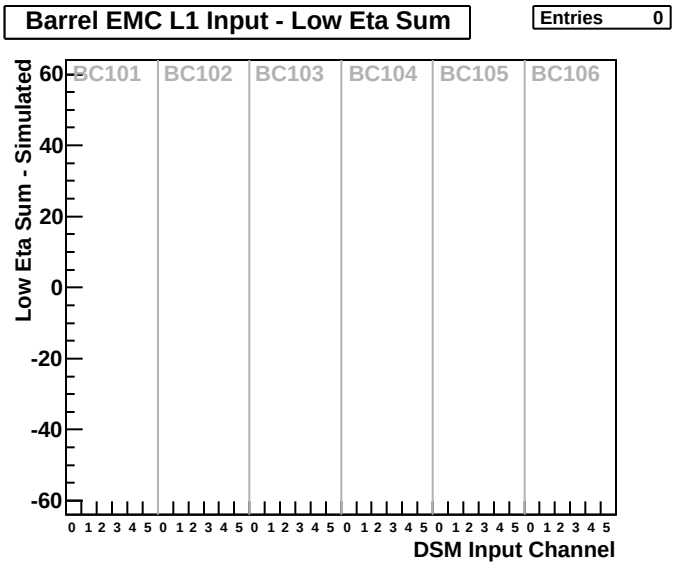

Endcap EMC L0 Input - High Tower
Entries 2.7e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

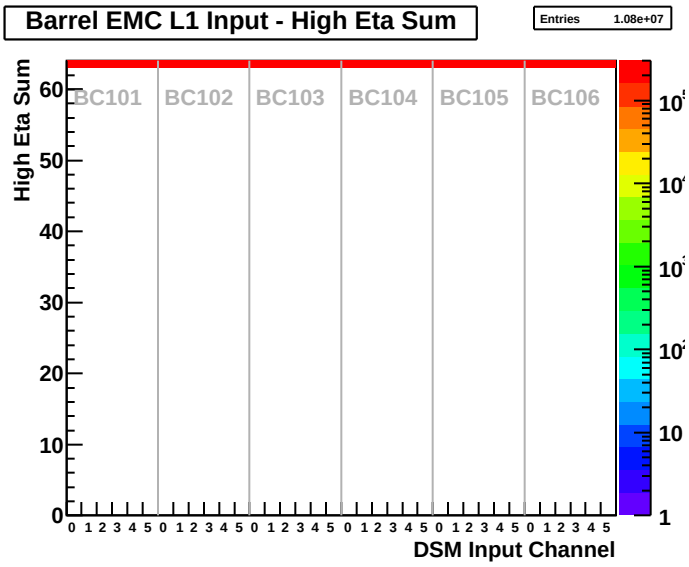

Endcap EMC L0 Input - Patch Sum
Entries 2.7e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

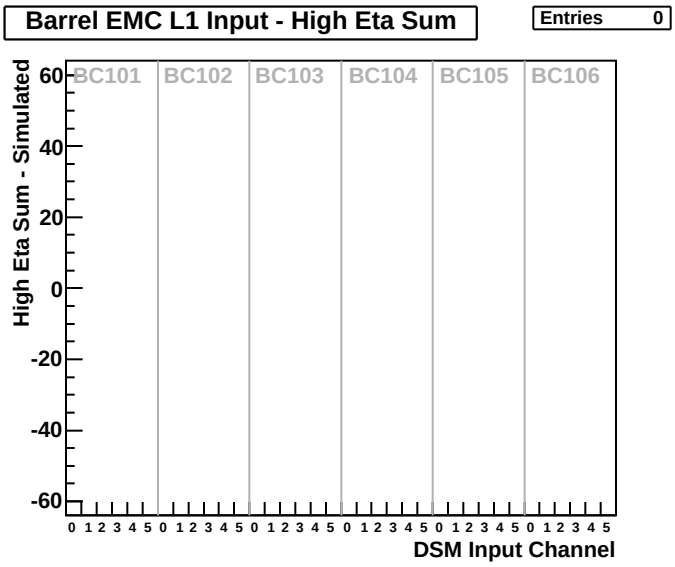

Endcap Jet Patches
Entries 1800000
JP ADC
JP ID

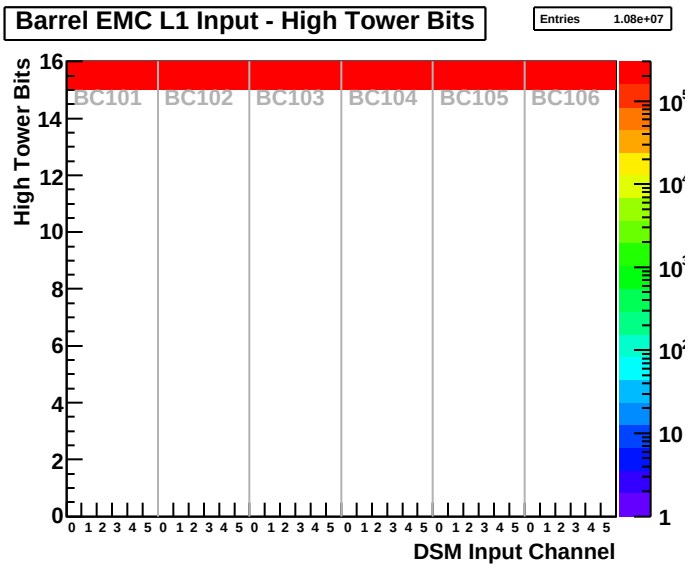

Hybrid Jet Patches
Entries 600000
JP ADC
JP ID

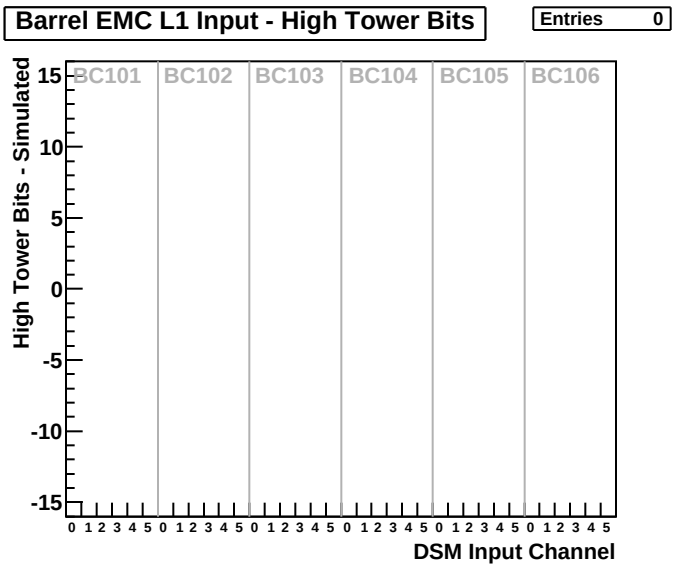

Barrel EMC L1 Input - Low Eta Sum
Entries 1.08e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

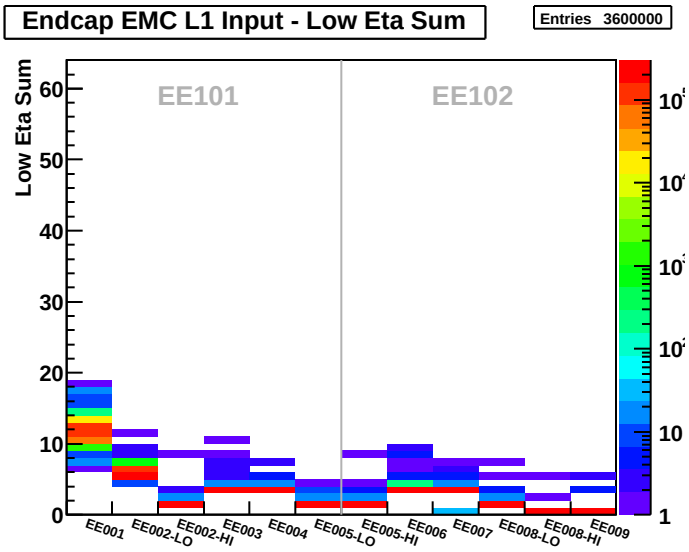

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

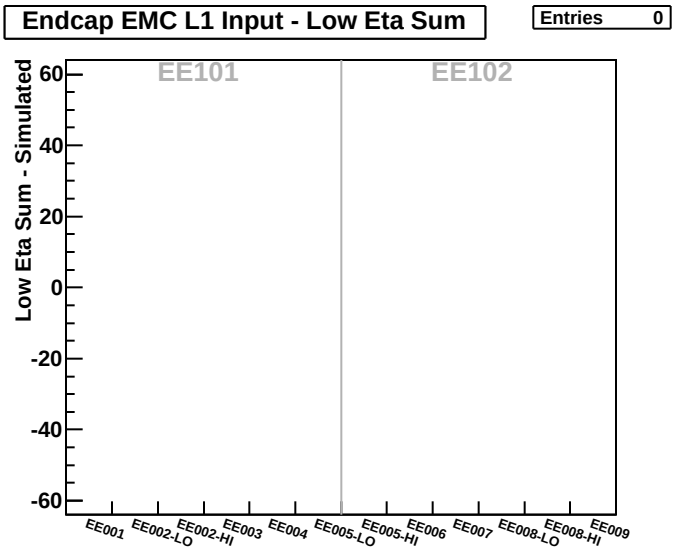

Barrel EMC L1 Input - High Eta Sum
Entries 1.08e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

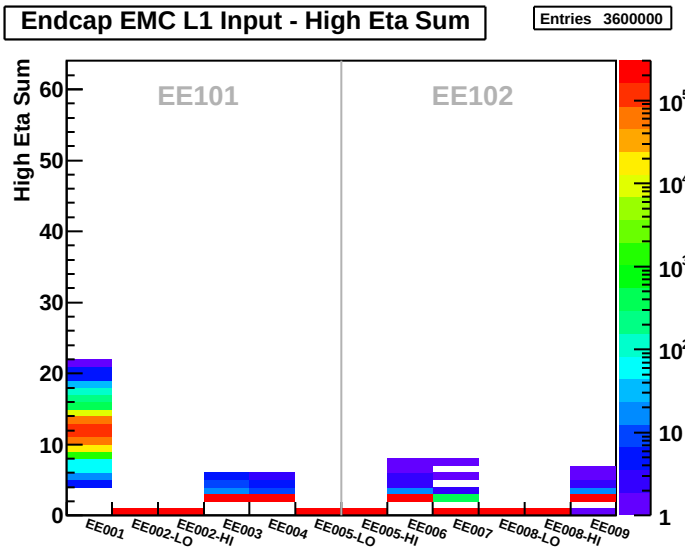

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

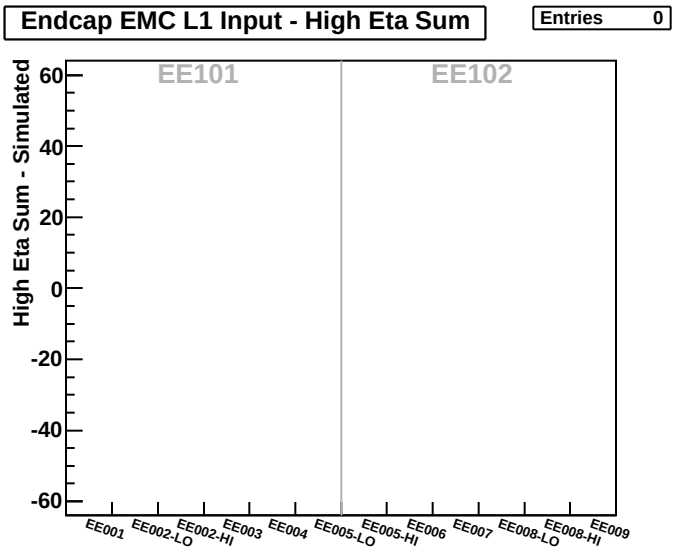

Barrel EMC L1 Input - High Tower Bits
Entries 1.08e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

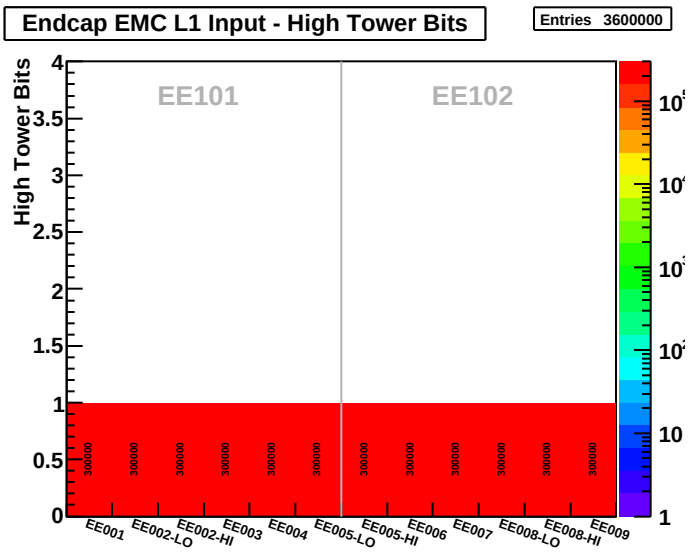

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

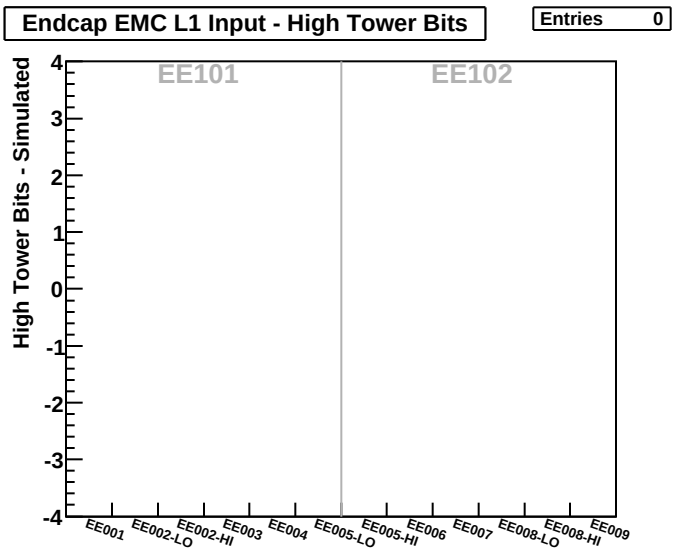

Endcap EMC L1 Input - Low Eta Sum
Entries 3600000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

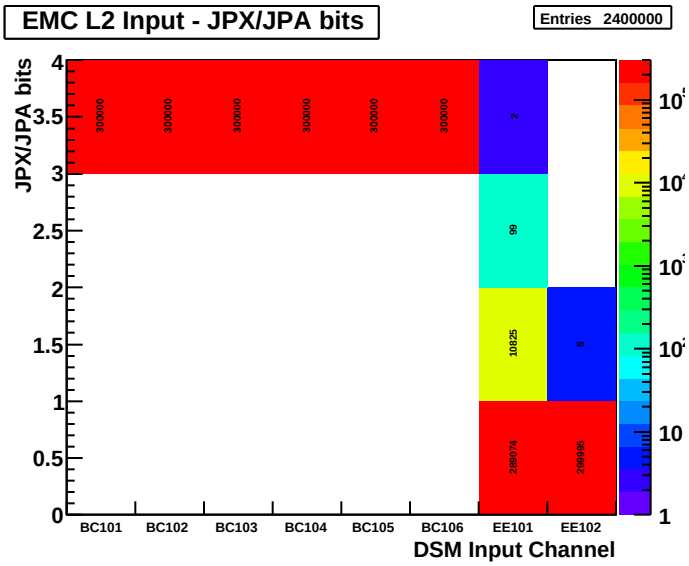

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

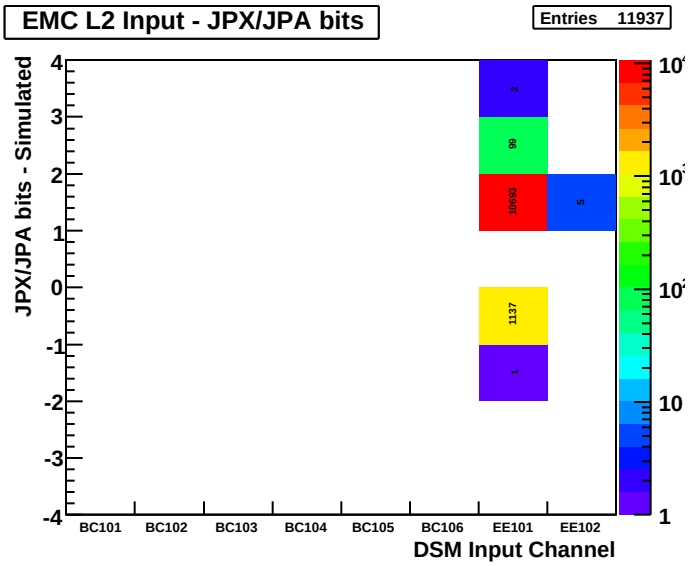

Endcap EMC L1 Input - High Eta Sum
Entries 3600000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

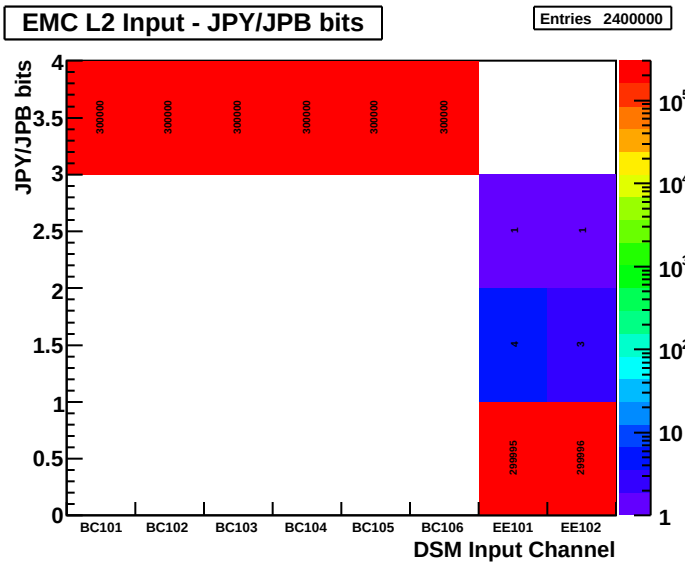

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

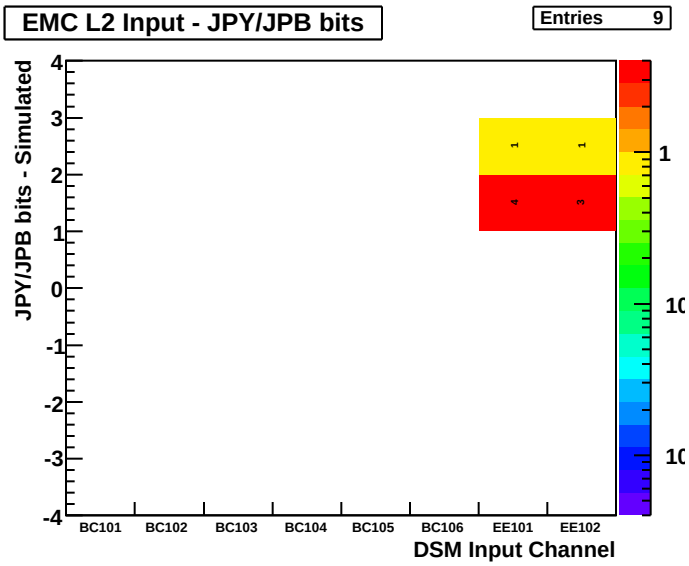

Endcap EMC L1 Input - High Tower Bits
Entries 3600000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

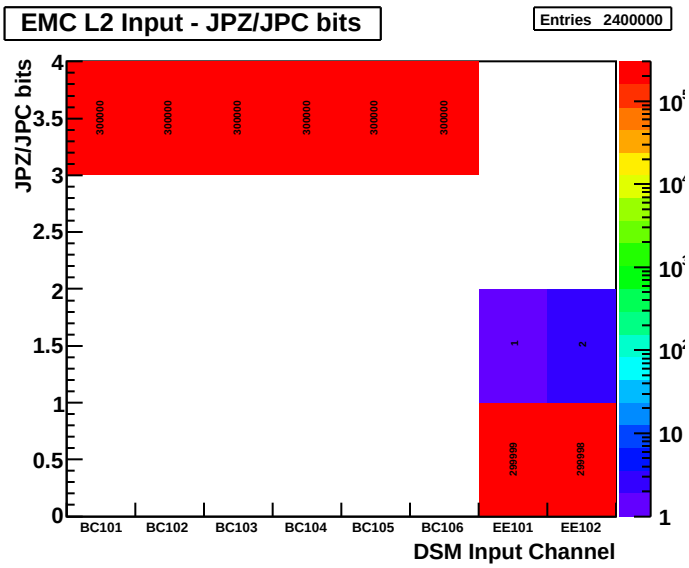

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

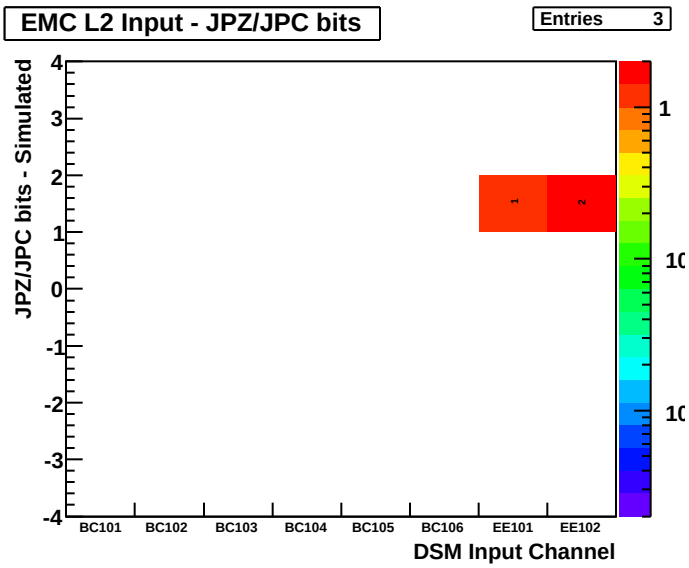

EMC L2 Input - JPX/JPA bits
Entries 2400000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
300000 300000 300000 300000 300000 300000 2
99
10825 5
289074 299995

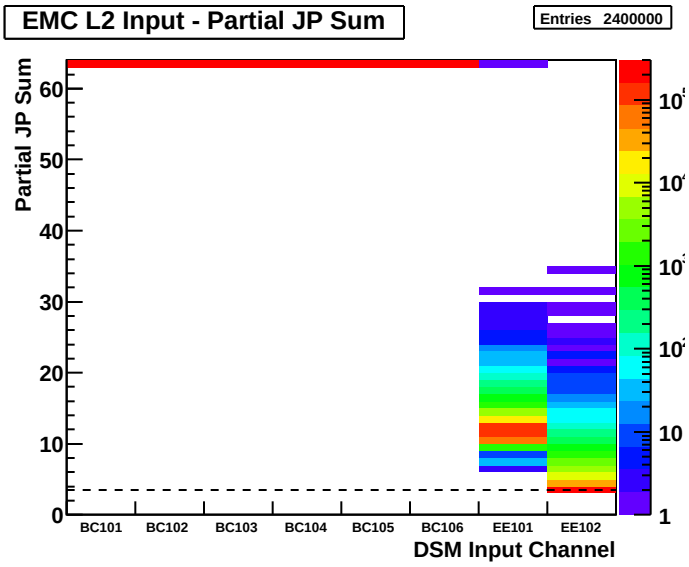

EMC L2 Input - JPX/JPA bits
Entries 11937
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2
99
10693 5
1137
1

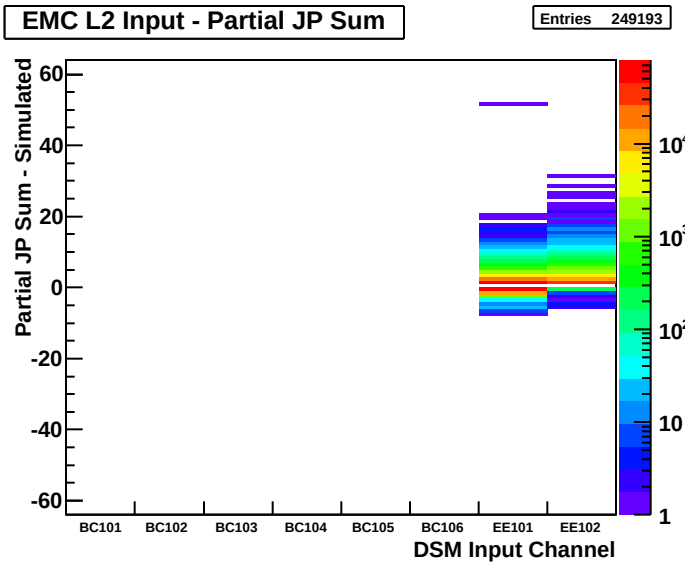

EMC L2 Input - JPY/JPB bits
Entries 2400000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
300000 300000 300000 300000 300000 300000
1 1
4 3
299995 299996

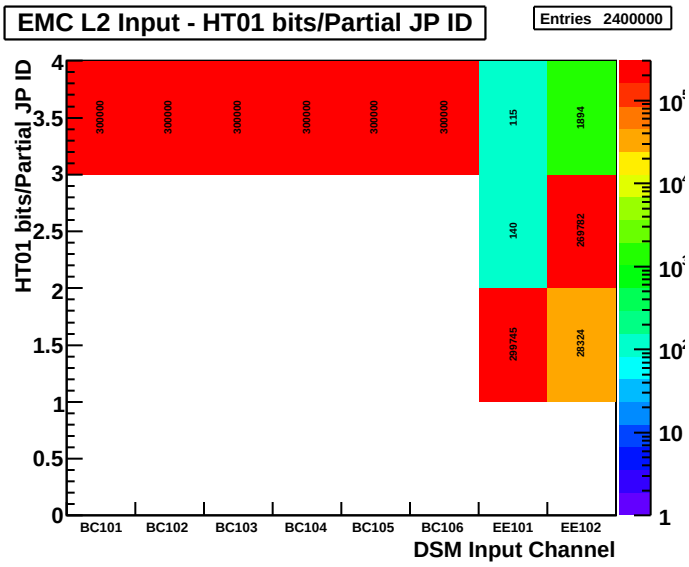

EMC L2 Input - JPY/JPB bits
Entries 9
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1
4 3

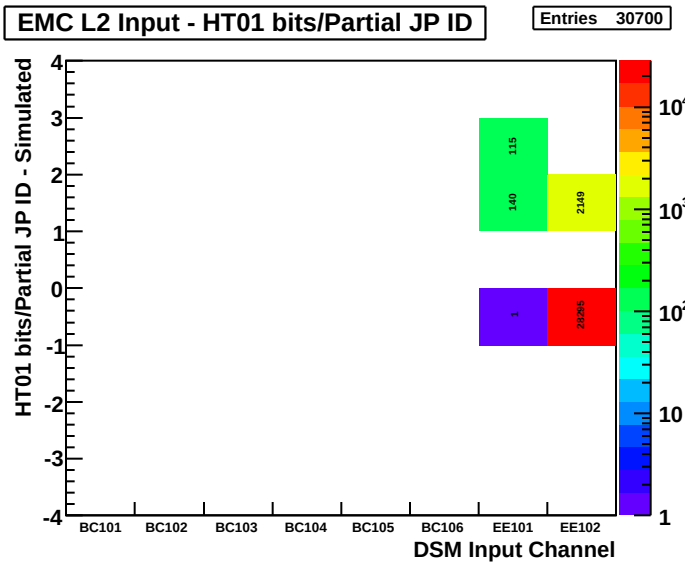

EMC L2 Input - JPZ/JPC bits
Entries 2400000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
300000 300000 300000 300000 300000 300000
1 2
299999 299998

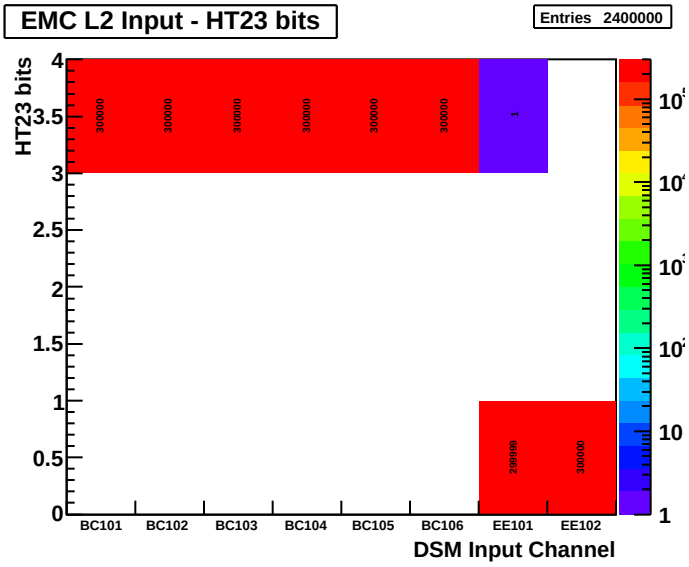

EMC L2 Input - JPZ/JPC bits
Entries 3
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 2

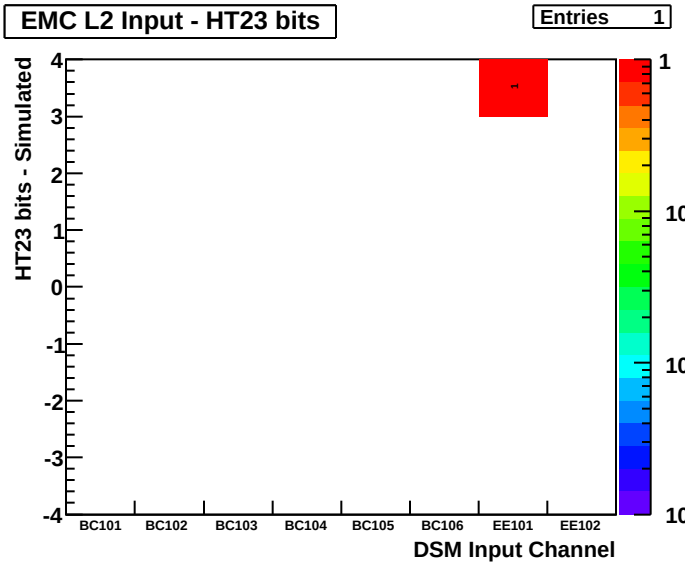

EMC L2 Input - Partial JP Sum
Entries 2400000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

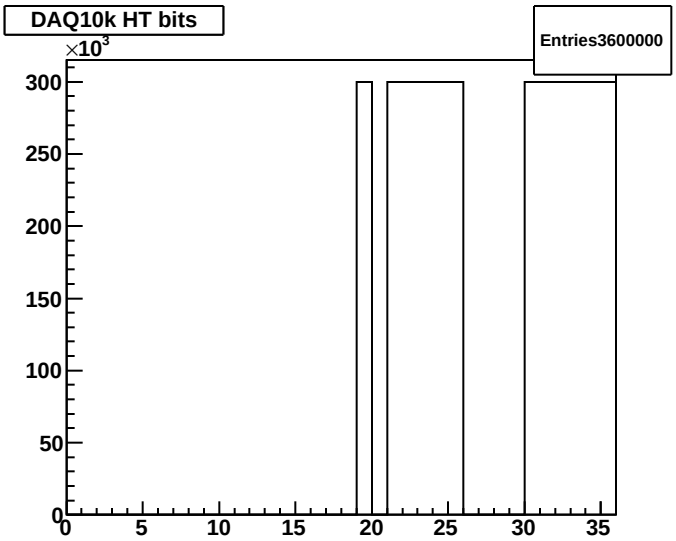

EMC L2 Input - Partial JP Sum
Entries 249193
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

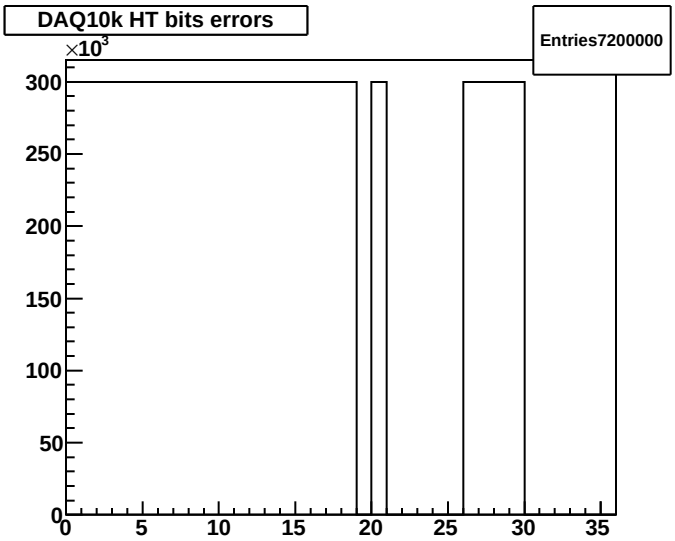

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2400000
HT01 bits/Partial JP ID
300000
115
1894
140
269782
299745
28324
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

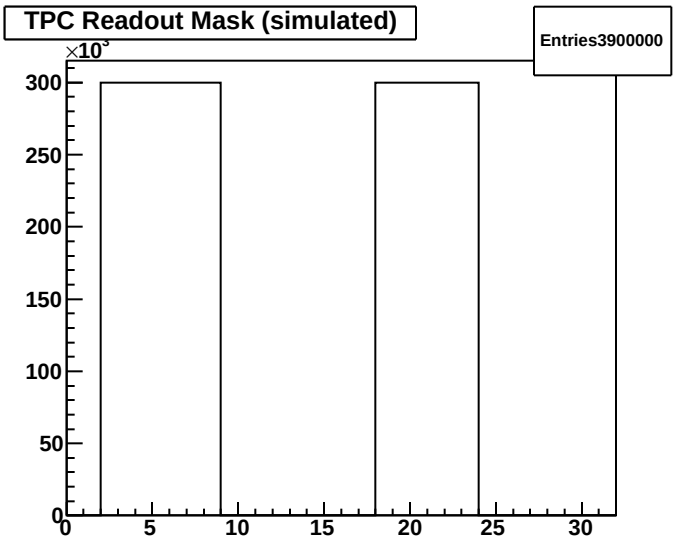

EMC L2 Input - HT01 bits/Partial JP ID
Entries 30700
HT01 bits/Partial JP ID - Simulated
115
140
2149
1
28295
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

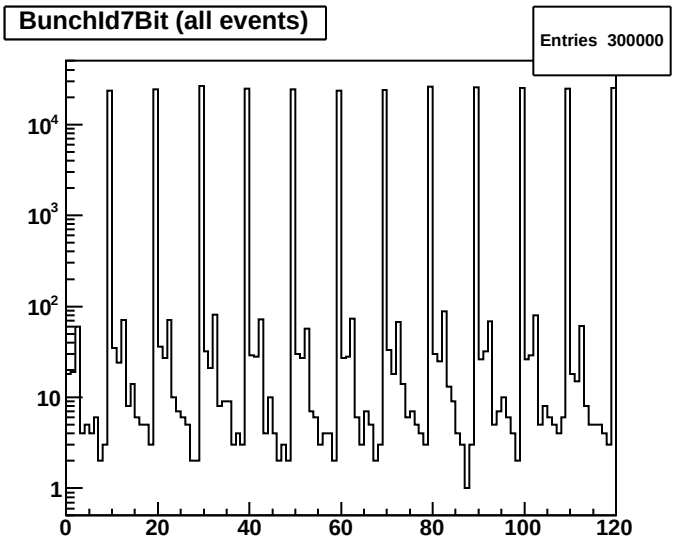

EMC L2 Input - HT23 bits
Entries 2400000
HT23 bits
300000
1
299999
300000
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

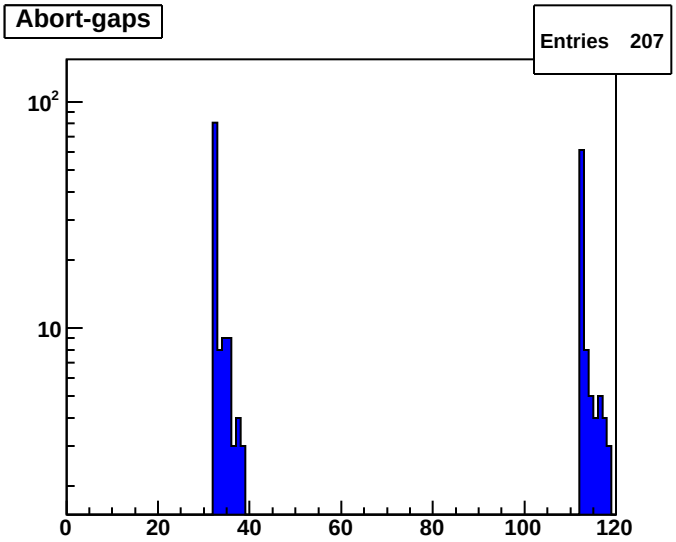

EMC L2 Input - HT23 bits
Entries 1
HT23 bits - Simulated
1
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

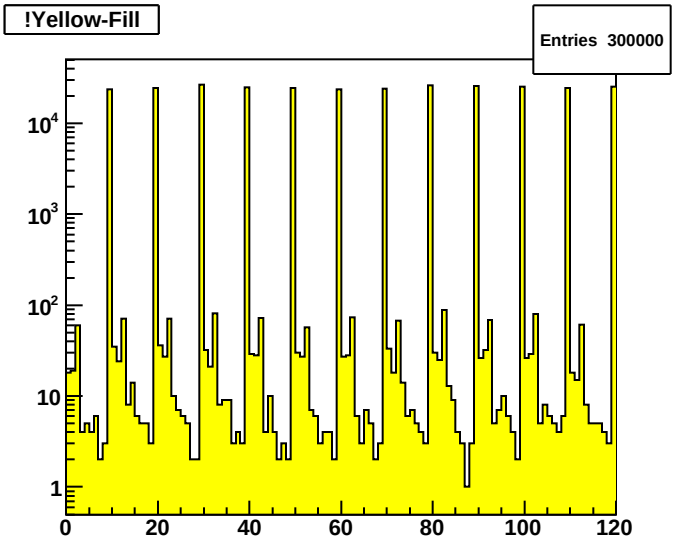

DAQ10k HT bits
Entries3600000
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

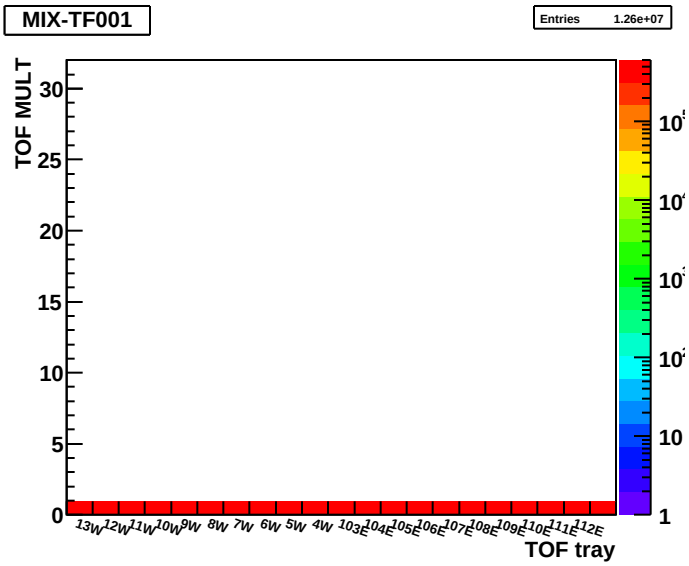

DAQ10k HT bits errors
Entries7200000
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

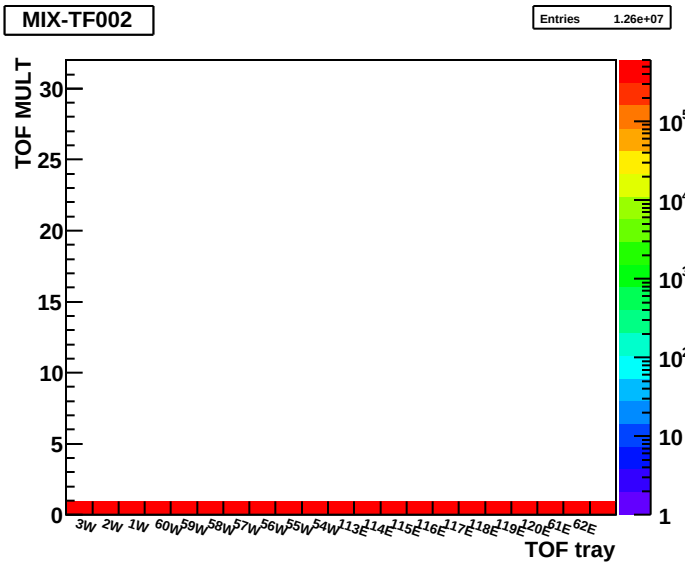

TPC Readout Mask (simulated)
Entries3900000
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30

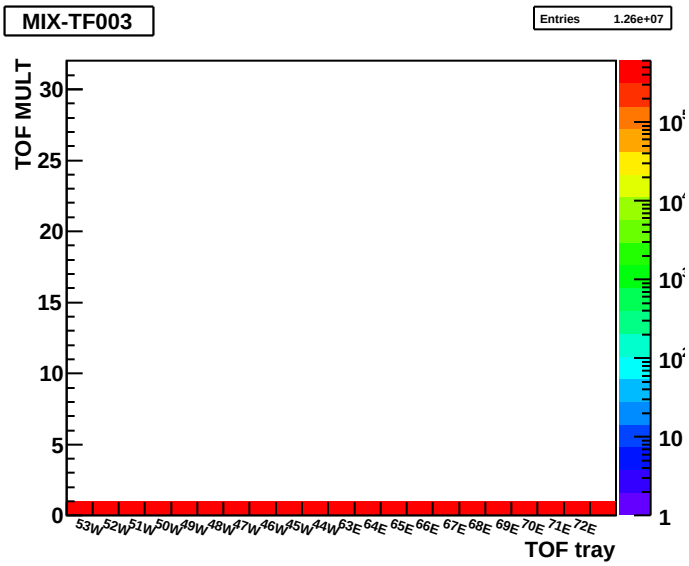

BunchId7Bit (all events)
Entries 300000
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

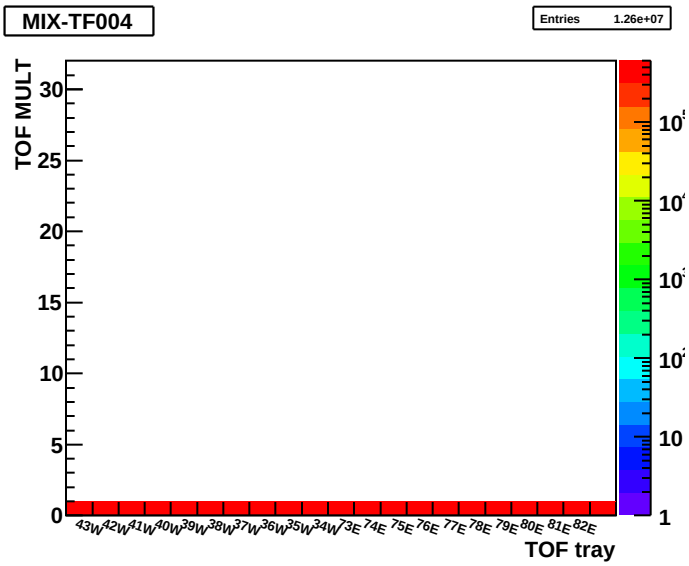

Abort-gaps
Entries 207
10^2
10
0 20 40 60 80 100 120

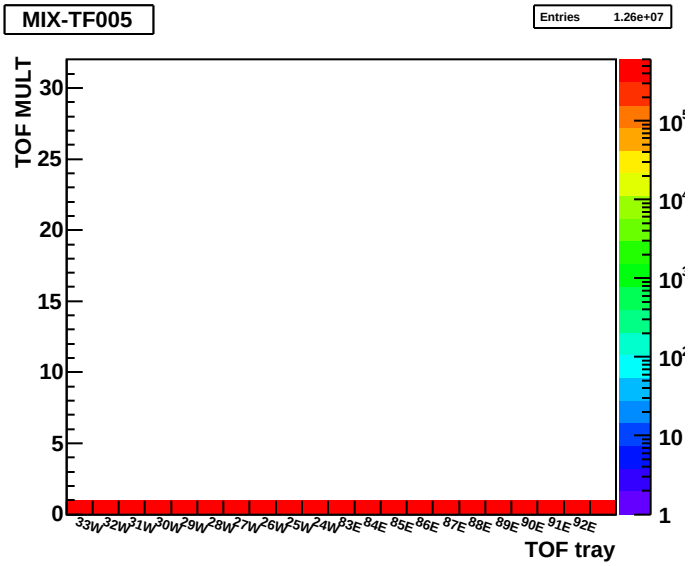

!Yellow-Fill
Entries 300000
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

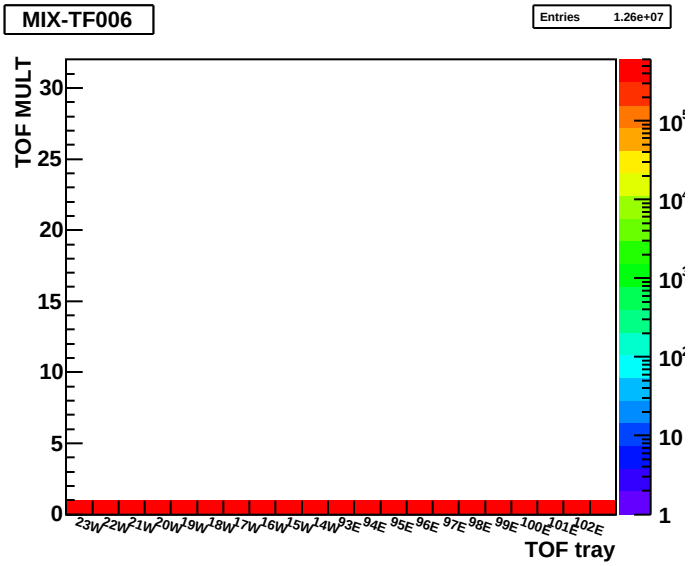

MIX-TF001
Entries 1.26e+07
TOF MULT
TOF tray

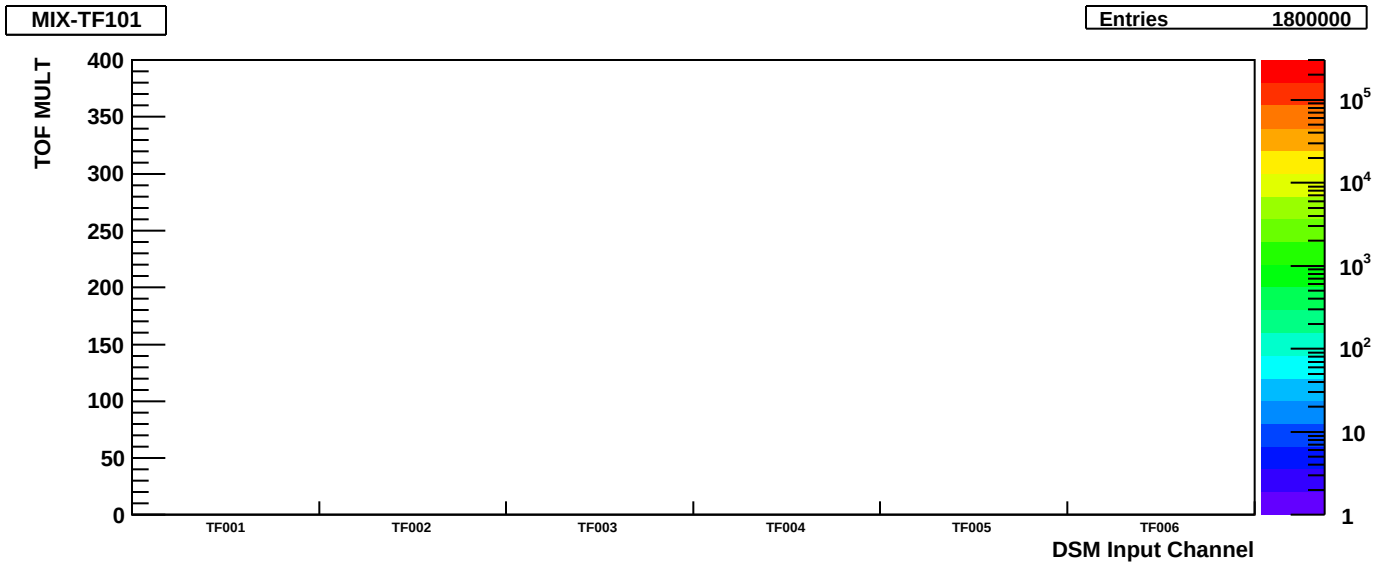

MIX-TF002
Entries 1.26e+07
TOF MULT
TOF tray

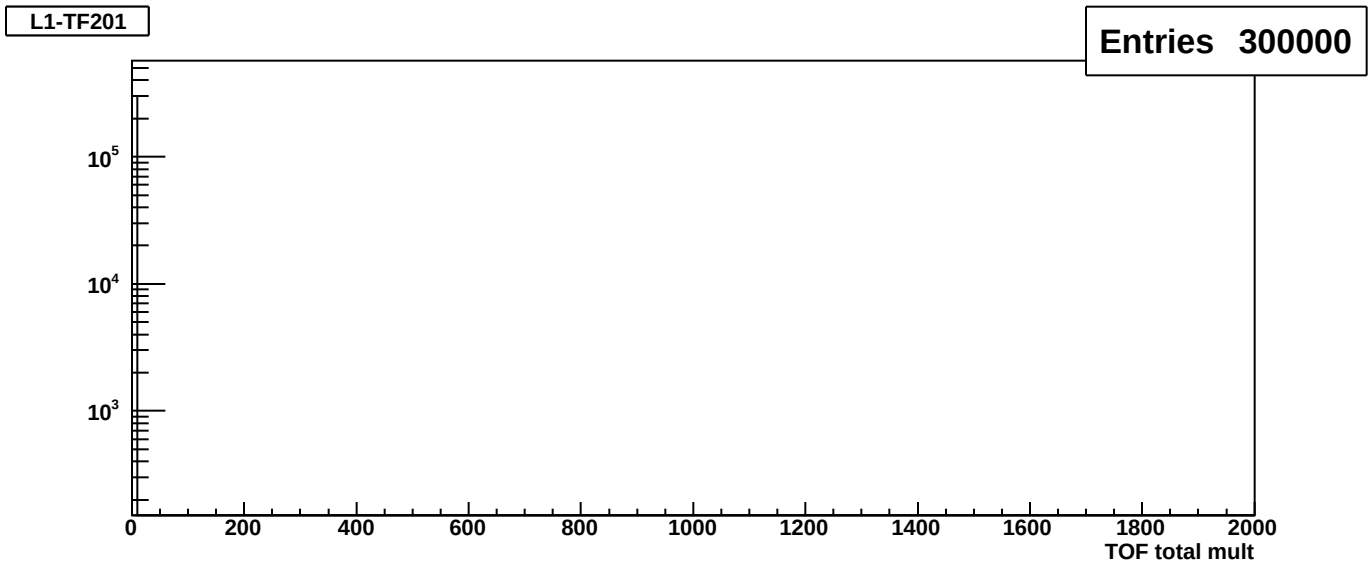

MIX-TF003
Entries 1.26e+07
TOF MULT
TOF tray

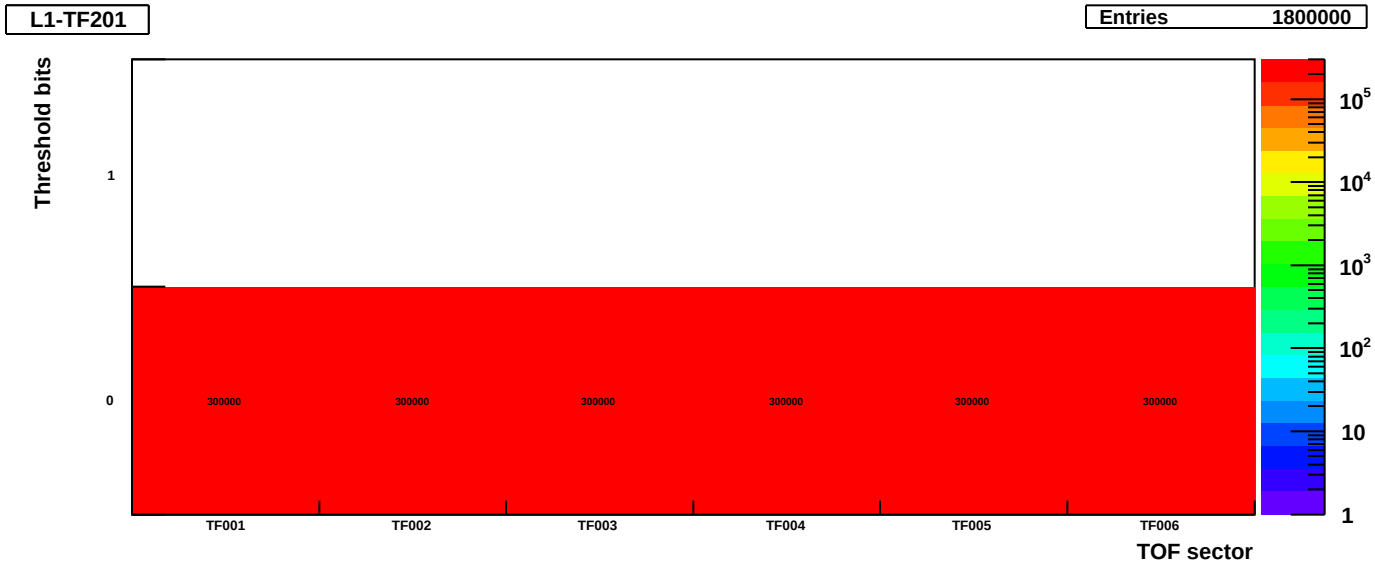

MIX-TF004
Entries 1.26e+07
TOF MULT
TOF tray

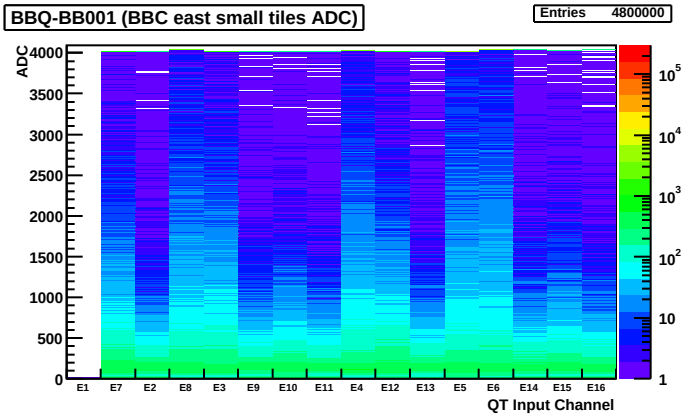

MIX-TF005
Entries 1.26e+07
TOF MULT
TOF tray

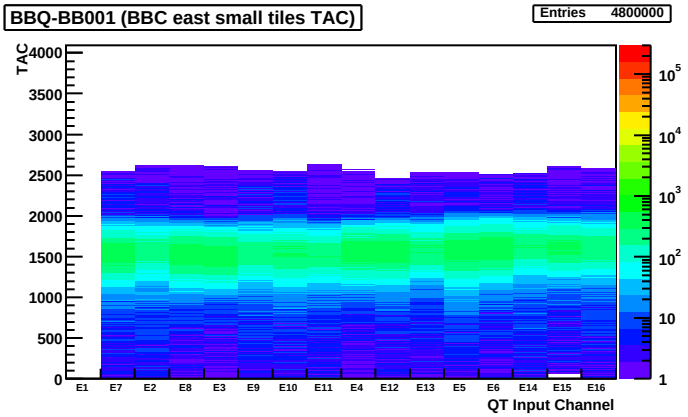

MIX-TF006
Entries 1.26e+07
TOF MULT
TOF tray

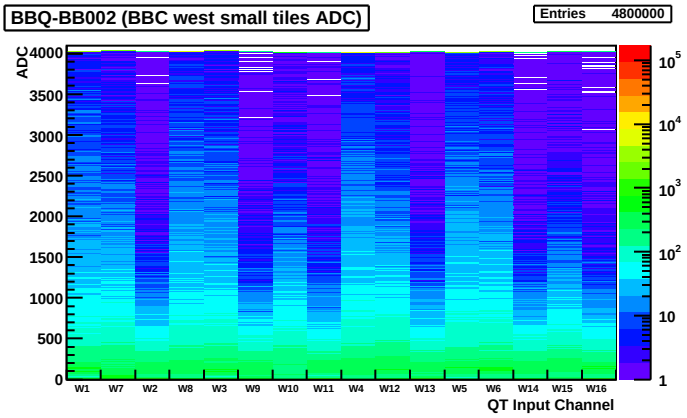

MIX-TF101
Entries 1800000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

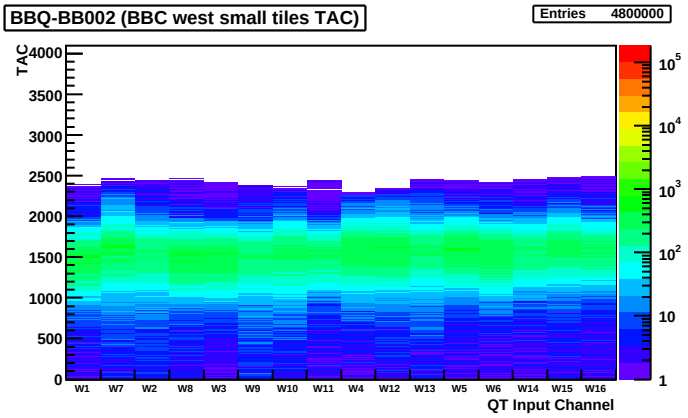

L1-TF201
Entries 300000
10^5
10^4
10^3
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

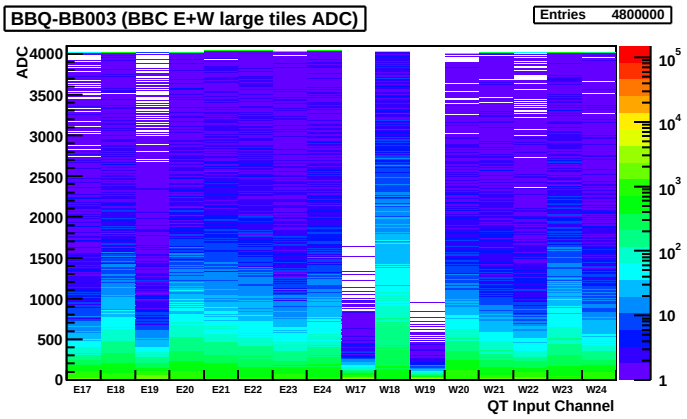

L1-TF201
Entries 1800000
Threshold bits
1
0
300000
300000
300000
300000
300000
300000
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4
10^3
10^2
10
1

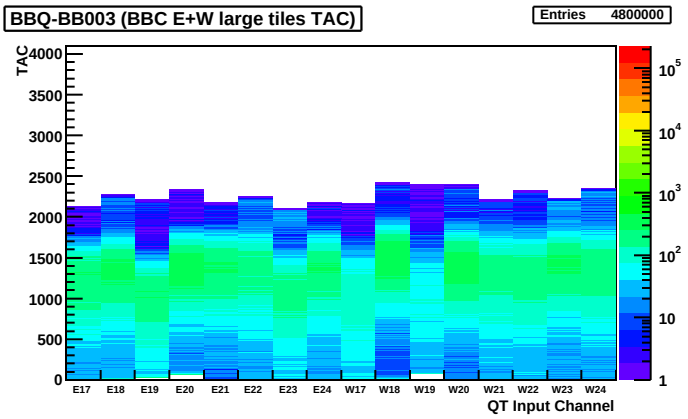

BBQ-BB001 (BBC east small tiles ADC)
Entries 4800000
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

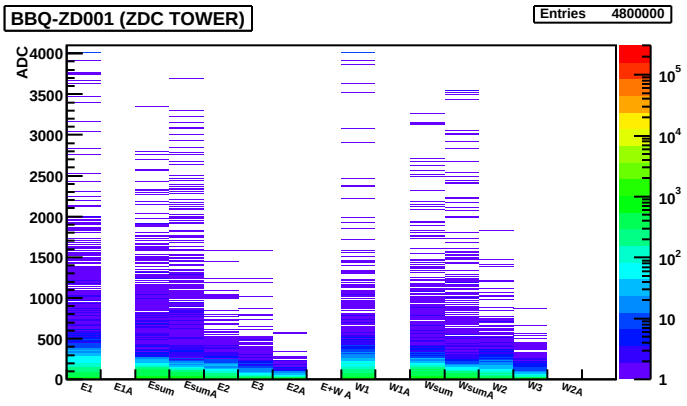

BBQ-BB001 (BBC east small tiles TAC)
Entries 4800000
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

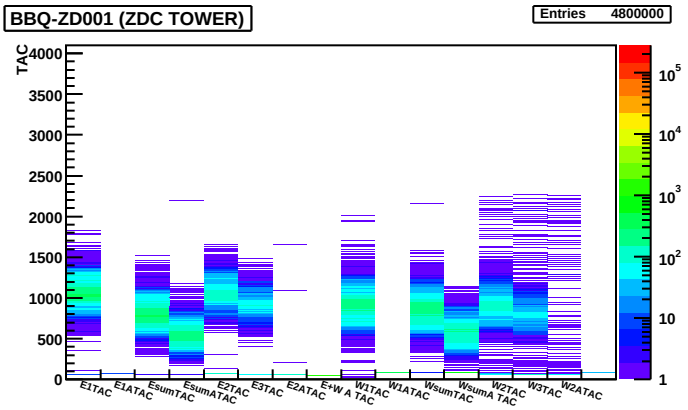

BBQ-BB002 (BBC west small tiles ADC)
Entries 4800000
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

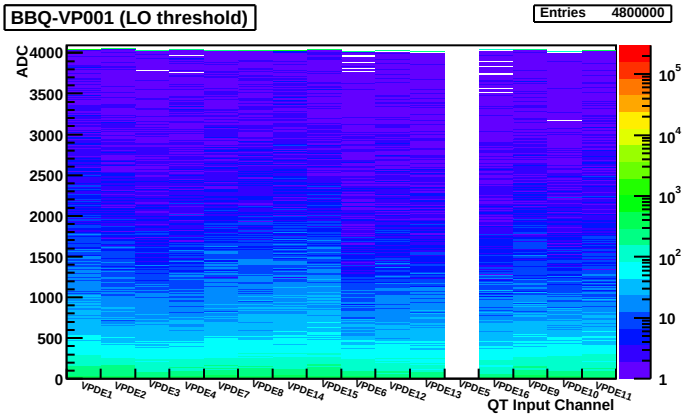

BBQ-BB002 (BBC west small tiles TAC)
Entries 4800000
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

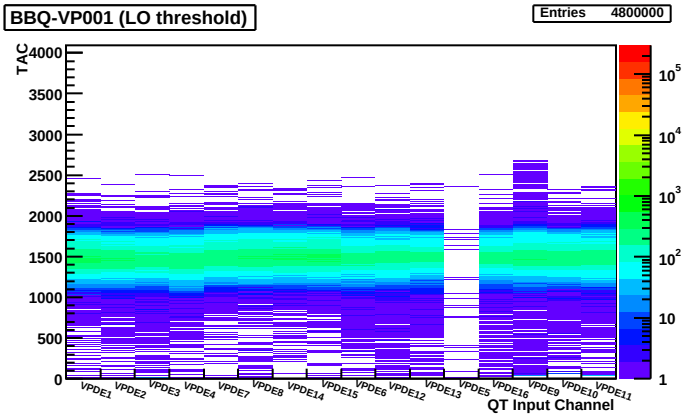

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4800000
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

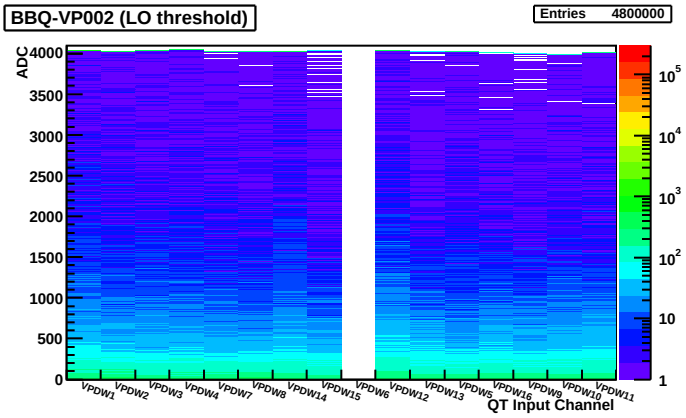

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4800000
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

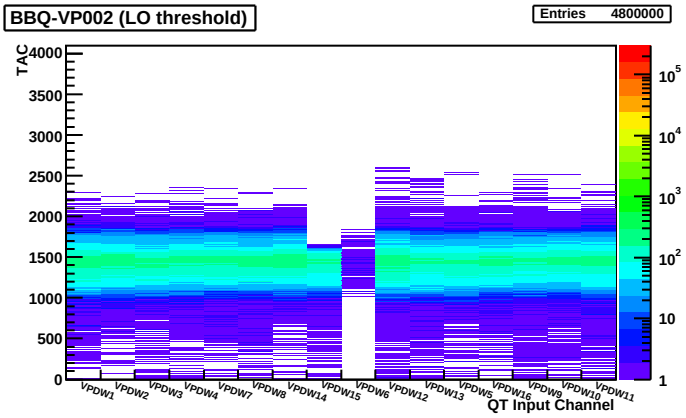

BBQ-ZD001 (ZDC TOWER)
Entries 4800000
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

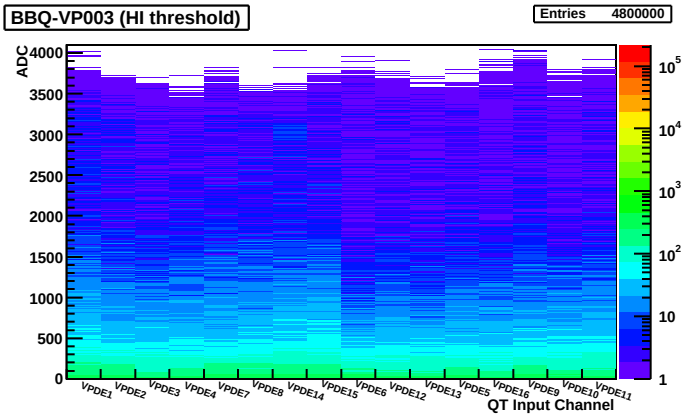

BBQ-ZD001 (ZDC TOWER)
Entries 4800000
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

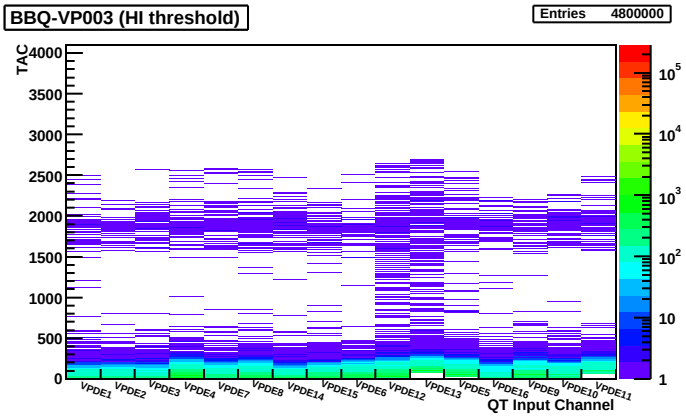

BBQ-VP001 (LO threshold)
Entries 4800000
ADC
QT Input Channel

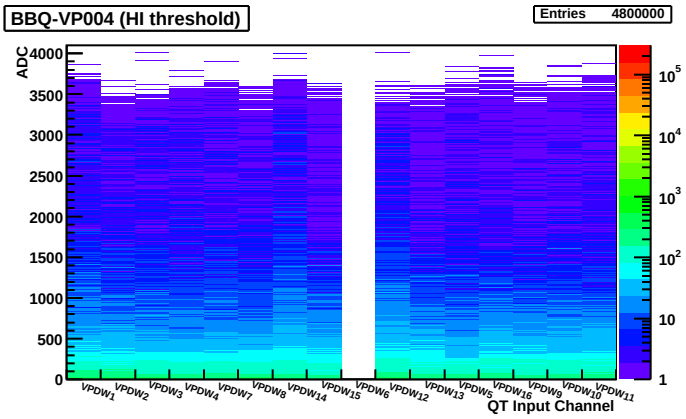

BBQ-VP001 (LO threshold)
Entries 4800000
TAC
QT Input Channel

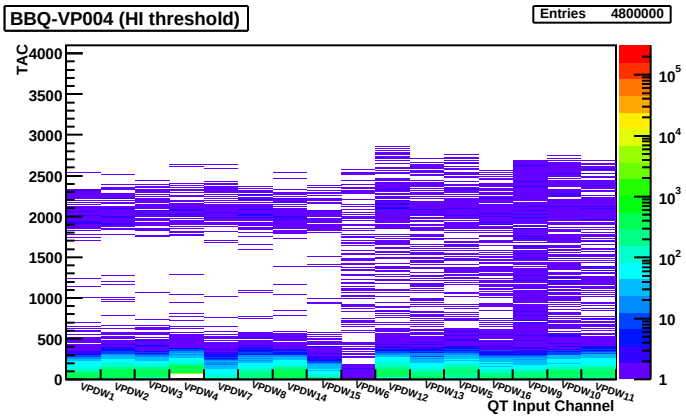

BBQ-VP002 (LO threshold)
Entries 4800000
ADC
QT Input Channel

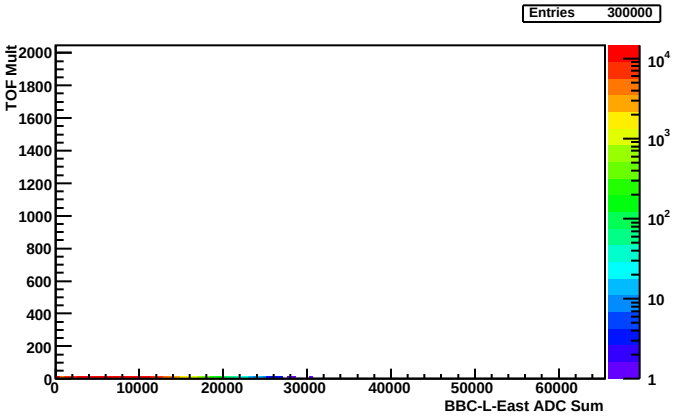

BBQ-VP002 (LO threshold)
Entries 4800000
TAC
QT Input Channel

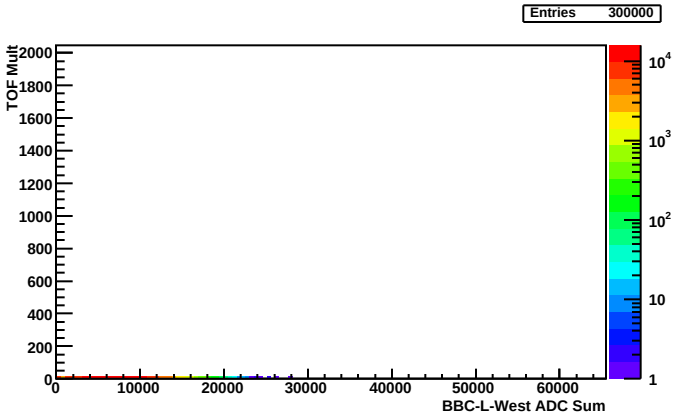

BBQ-VP003 (HI threshold)
Entries 4800000
ADC
QT Input Channel

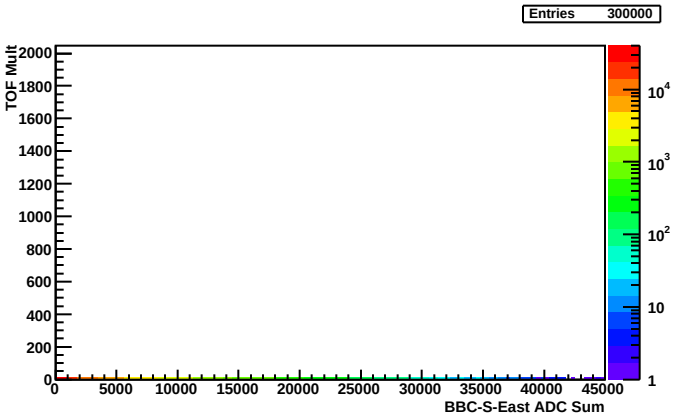

BBQ-VP003 (HI threshold)
Entries 4800000
TAC
QT Input Channel

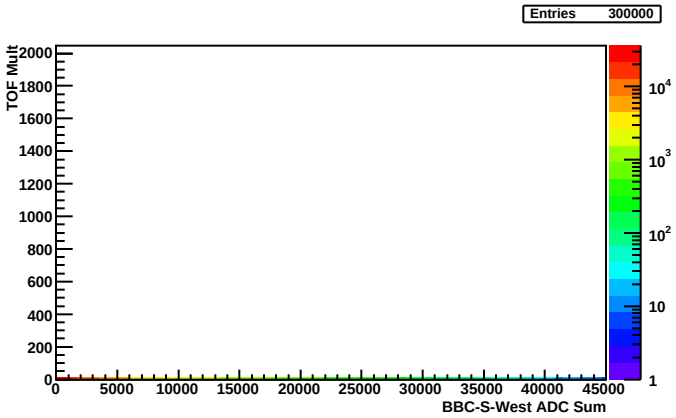

BBQ-VP004 (HI threshold)
Entries 4800000
ADC
QT Input Channel

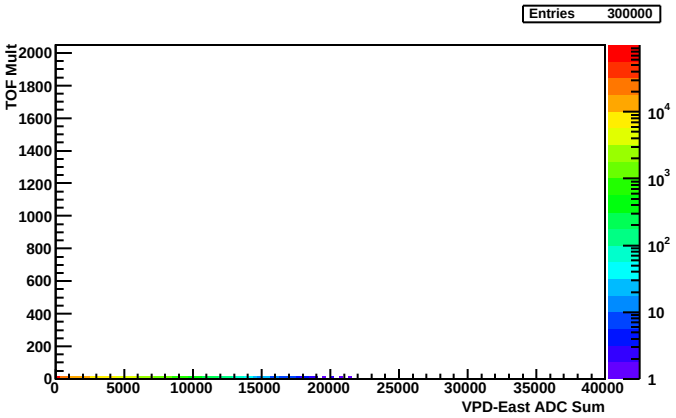

BBQ-VP004 (HI threshold)
Entries 4800000
TAC
QT Input Channel

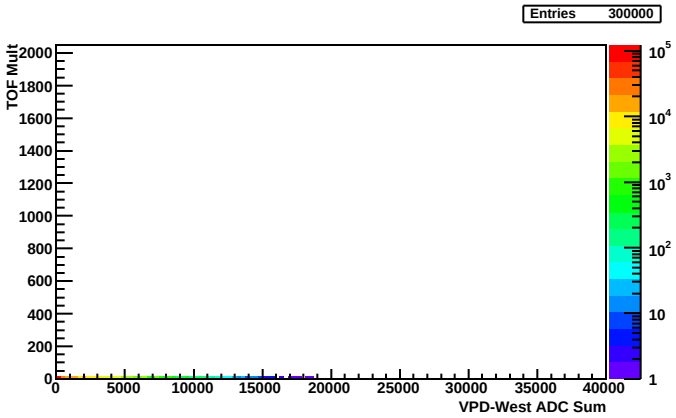

Entries 300000
TOF Mult
BBC-L-East ADC Sum

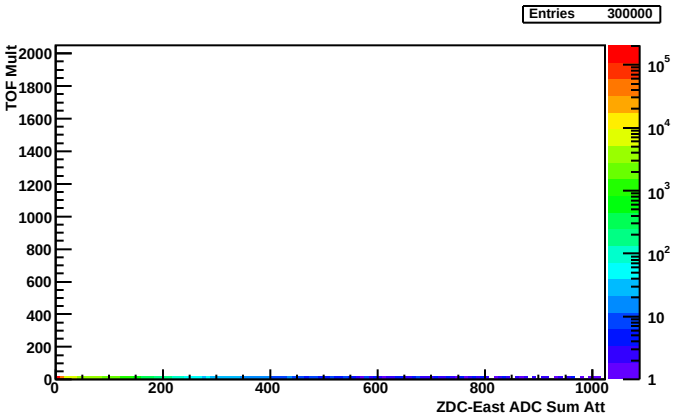

Entries 300000
TOF Mult
BBC-L-West ADC Sum

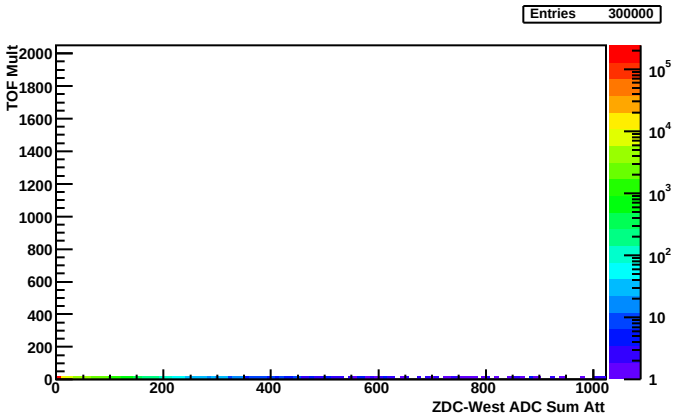

Entries 300000
TOF Mult
BBC-S-East ADC Sum

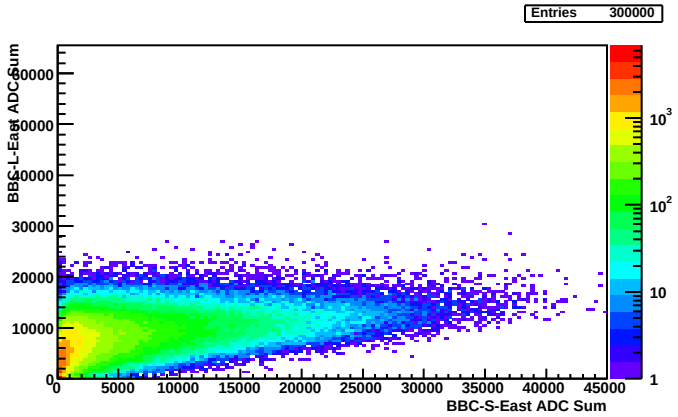

Entries 300000
TOF Mult
BBC-S-West ADC Sum

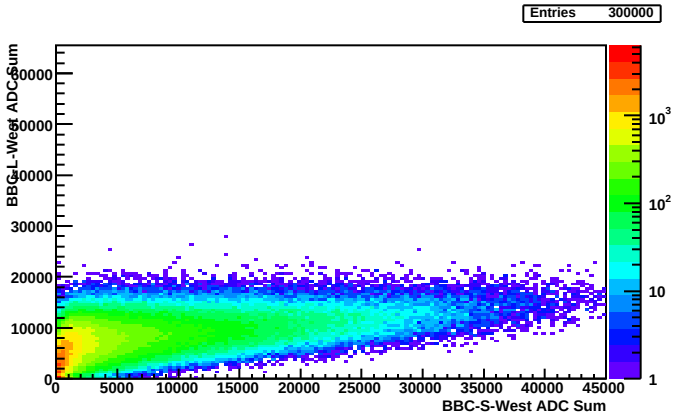

Entries 300000
TOF Mult
VPD-East ADC Sum

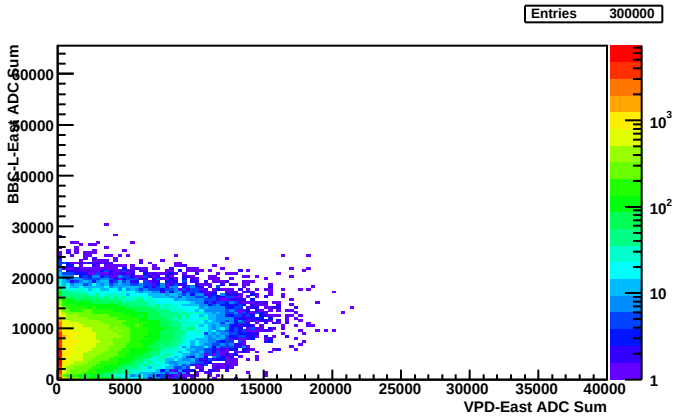

Entries 300000
TOF Mult
VPD-West ADC Sum

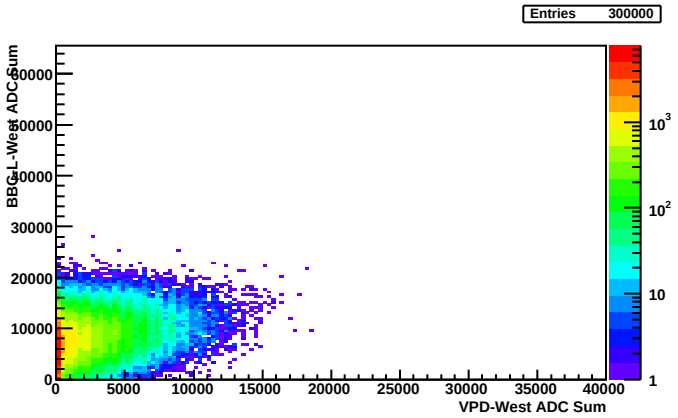

Entries 300000
TOF Mult
ZDC-East ADC Sum Att

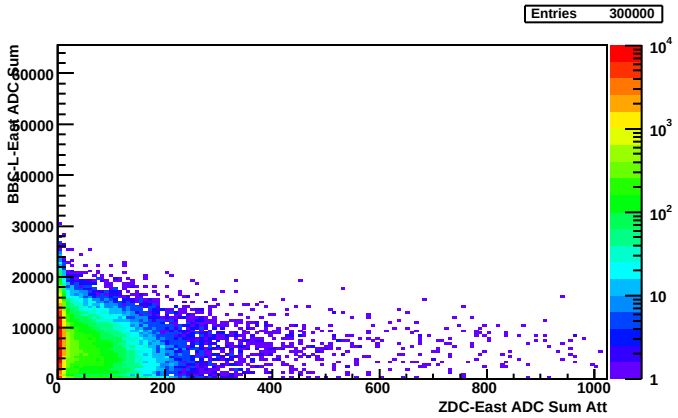

Entries 300000
TOF Mult
ZDC-West ADC Sum Att

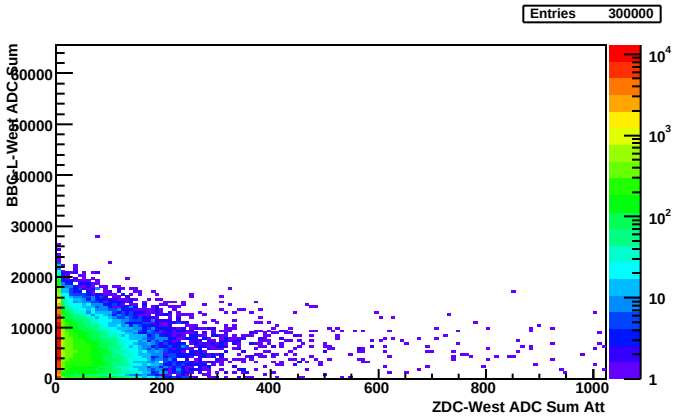

Entries 300000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

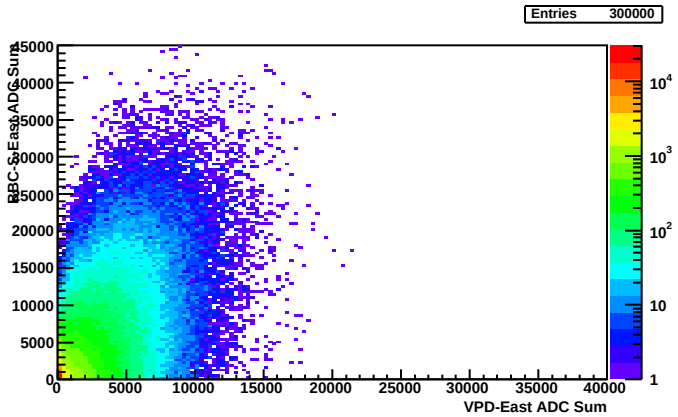

Entries 300000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

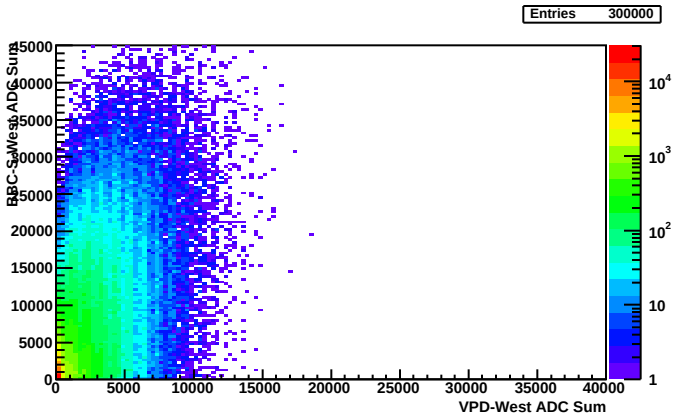

Entries 300000
BBC-L-East ADC Sum
VPD-East ADC Sum

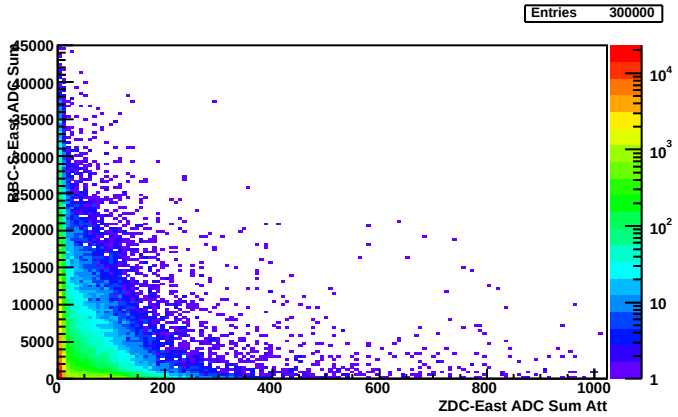

Entries 300000
BBC-L-West ADC Sum
VPD-West ADC Sum

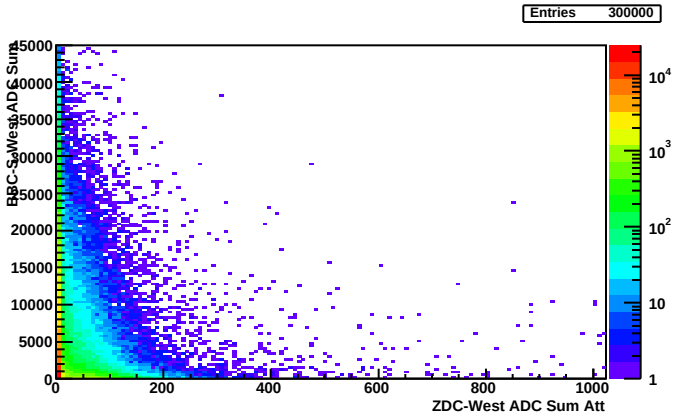

Entries 300000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

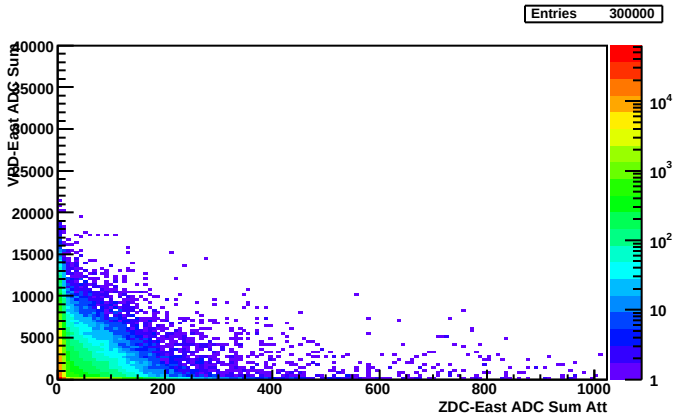

Entries 300000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

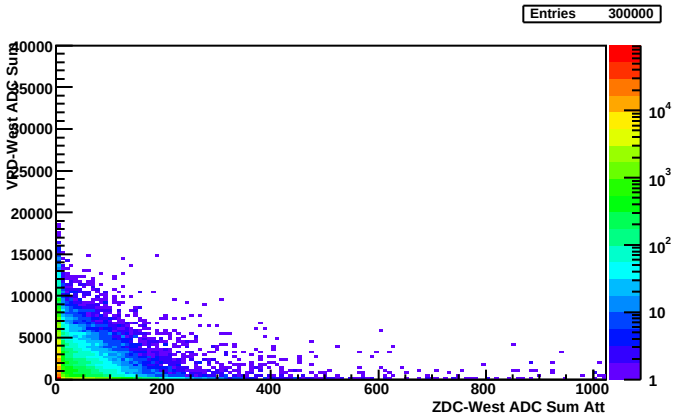

Entries 300000
BBC-S-East ADC Sum
VPD-East ADC Sum

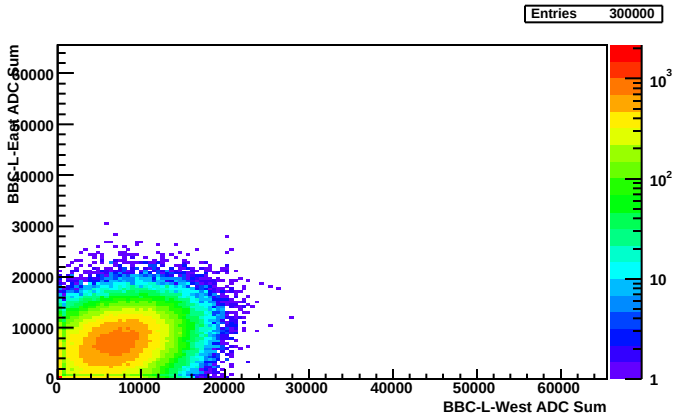

Entries 300000
BBC-S-West ADC Sum
VPD-West ADC Sum

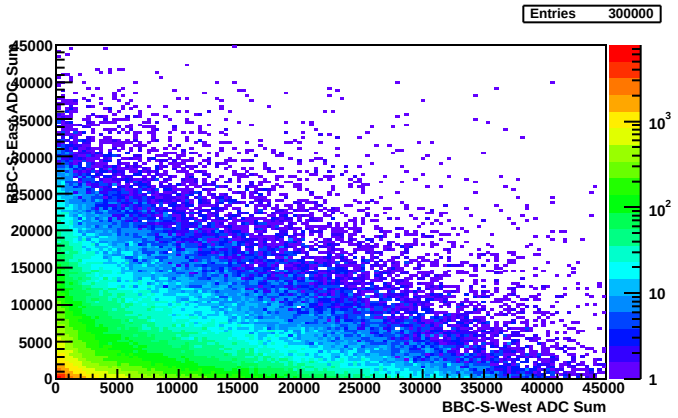

Entries 300000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

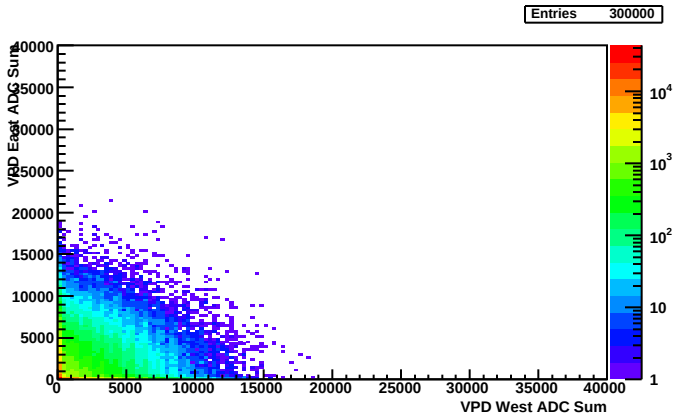

Entries 300000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

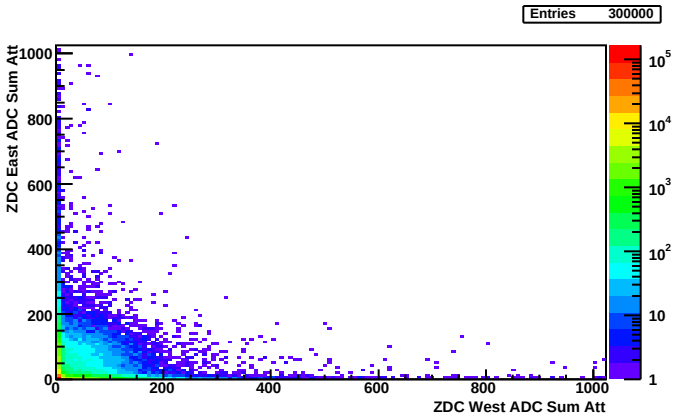

Entries 300000
VPD-East ADC Sum
ZDC-East ADC Sum Att

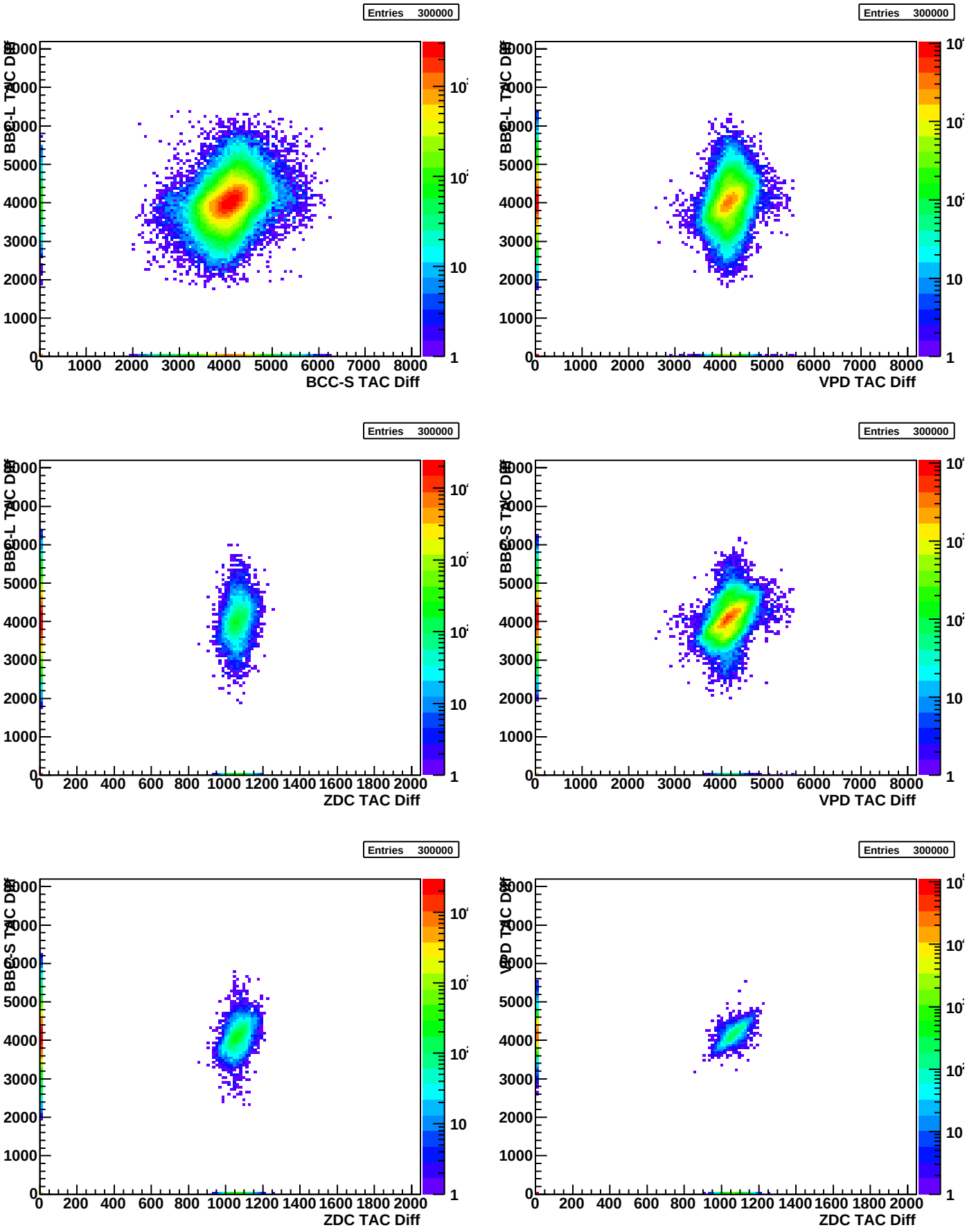

Entries 300000
VPD-West ADC Sum
ZDC-West ADC Sum Att

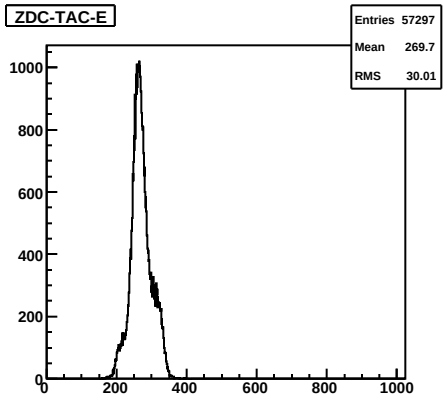

Entries 300000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

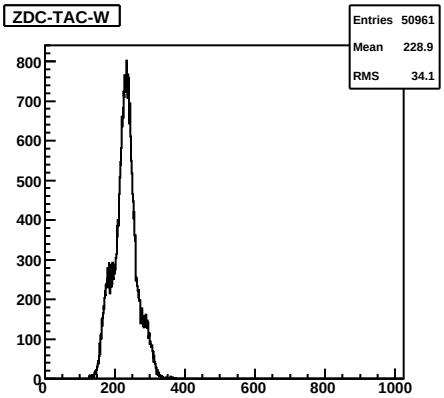

Entries 300000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

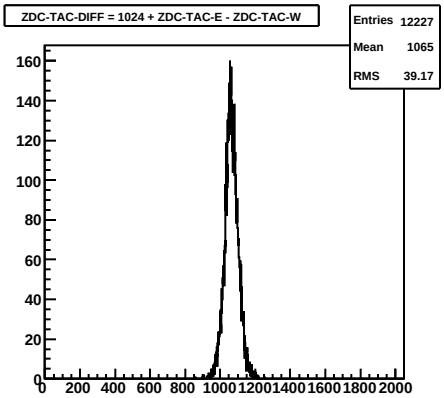

Entries 300000
VPD East ADC Sum
VPD West ADC Sum

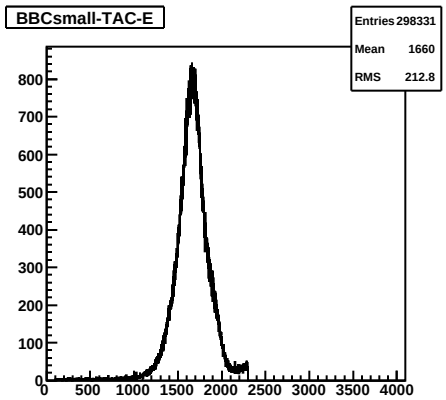

Entries 300000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

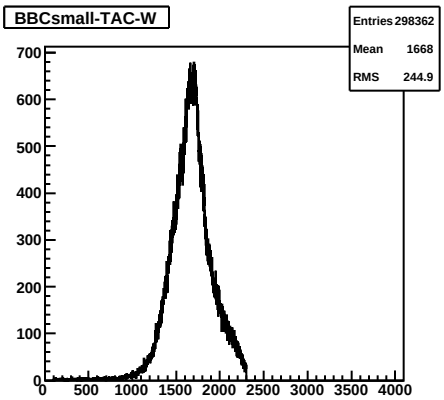

Entries 300000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 300000
BBC-L TAC Diff
VPD TAC Diff
Entries 300000
BBC-L TAC Diff
ZDC TAC Diff
Entries 300000
BBC-S TAC Diff
VPD TAC Diff
Entries 300000
BBC-S TAC Diff
ZDC TAC Diff
Entries 300000
VPD TAC Diff
ZDC TAC Diff

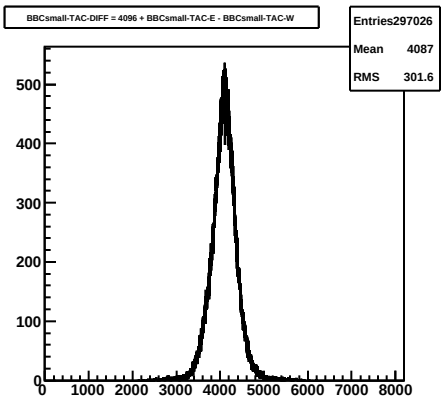

ZDC-TAC-E
Entries 57297
Mean 269.7
RMS 30.01

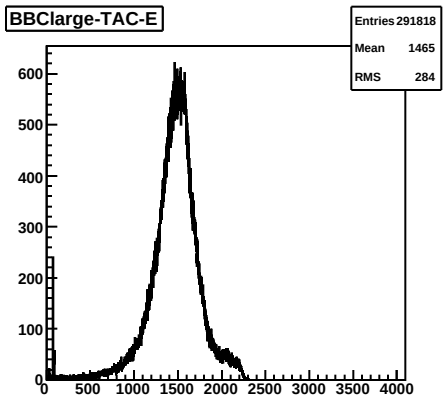

ZDC-TAC-W
Entries 50961
Mean 228.9
RMS 34.1

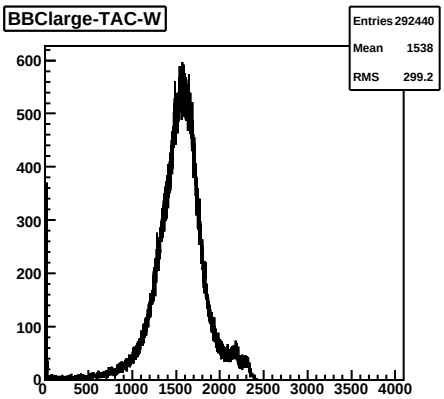

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 12227
Mean 1065
RMS 39.17

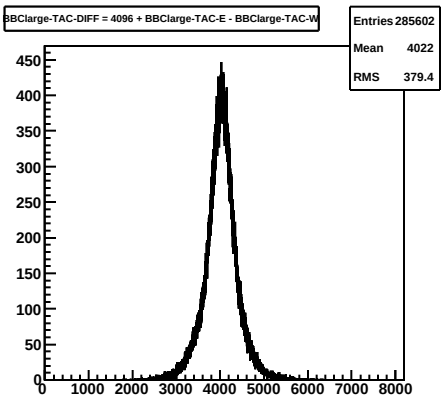

BBCsmall-TAC-E
Entries 298331
Mean 1660
RMS 212.8

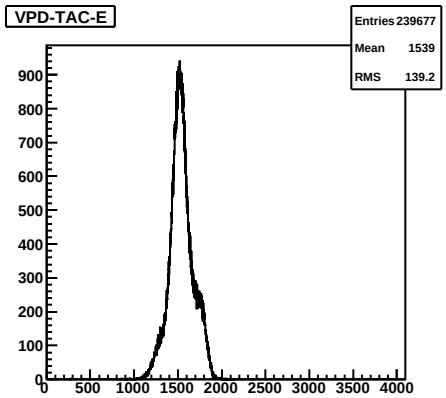

BBCsmall-TAC-W
Entries 298362
Mean 1668
RMS 244.9

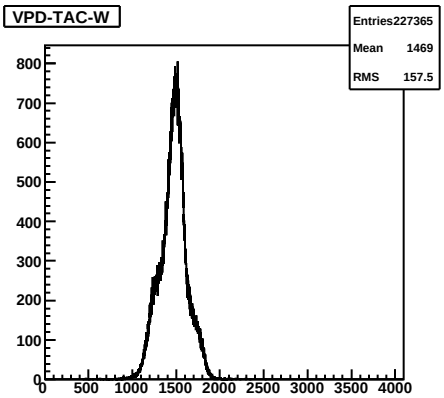

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 297026
Mean 4087
RMS 301.6

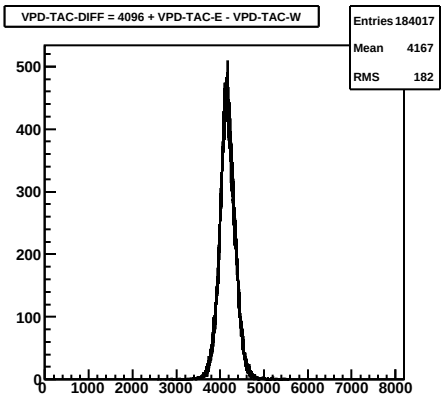

BBClarge-TAC-E
Entries 291818
Mean 1465
RMS 284

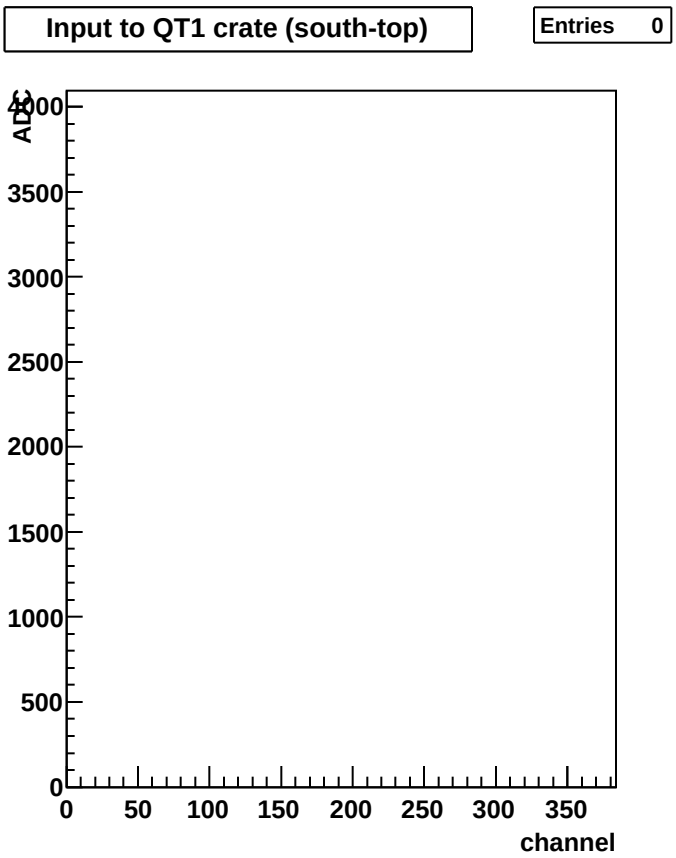

BBClarge-TAC-W
Entries 292440
Mean 1538
RMS 299.2

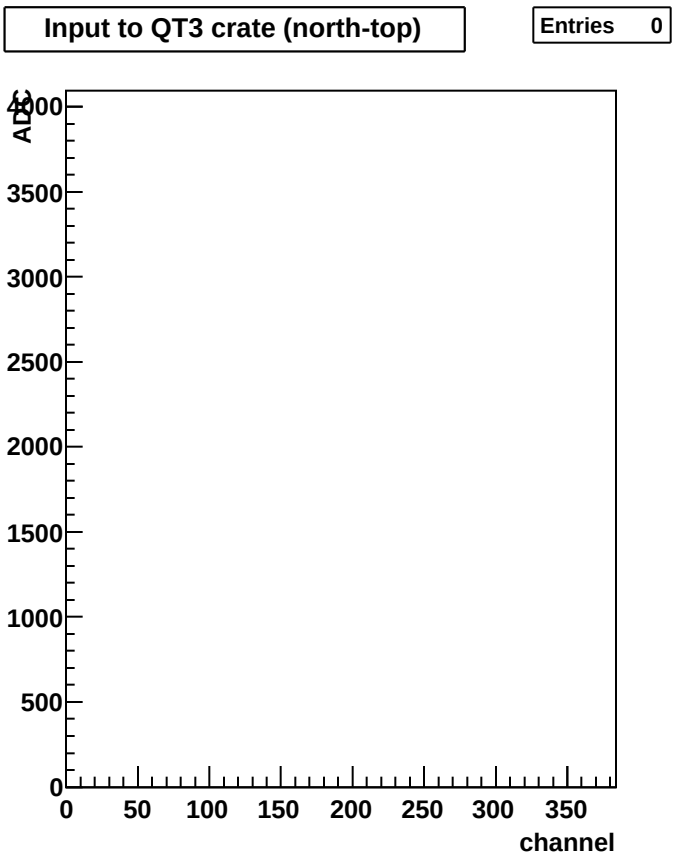

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 285602
Mean 4022
RMS 379.4

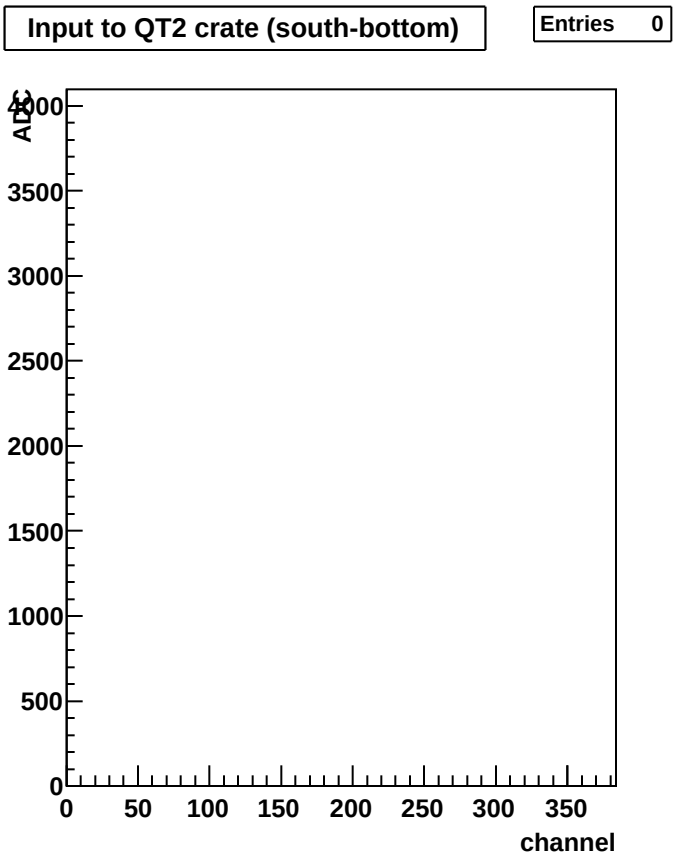

VPD-TAC-E
Entries 239677
Mean 1539
RMS 139.2

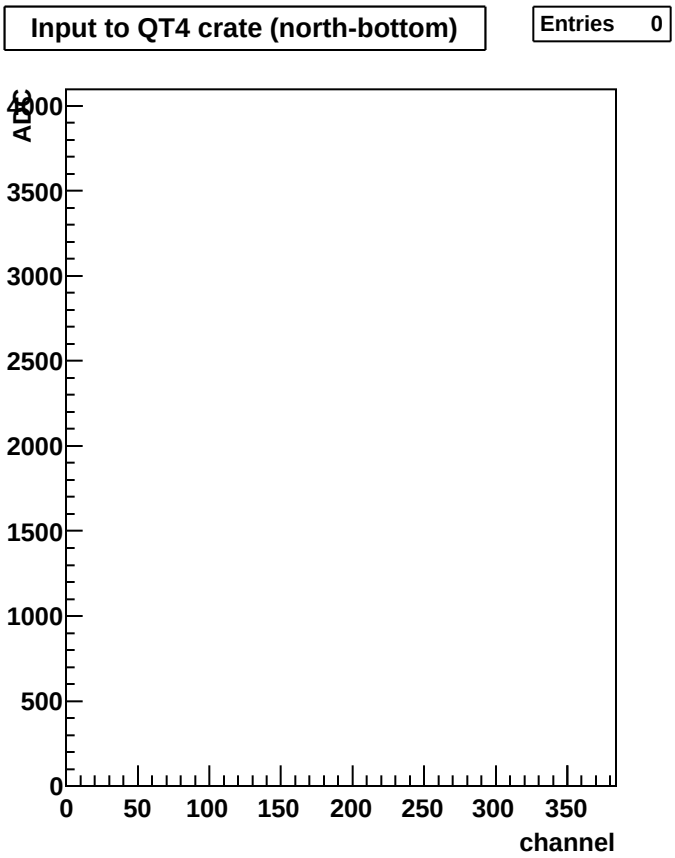

VPD-TAC-W
Entries 227365
Mean 1469
RMS 157.5

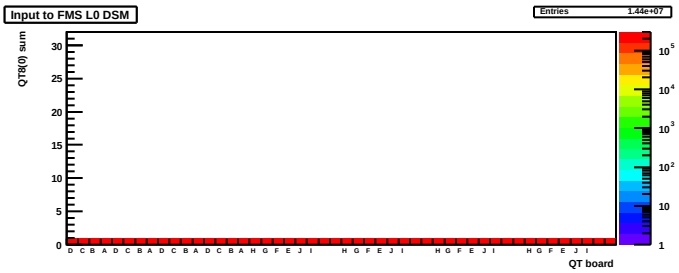

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 184017
Mean 4167
RMS 182

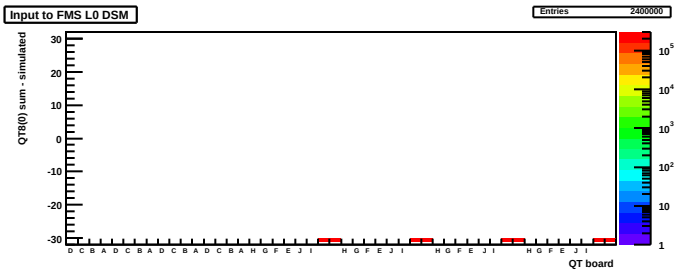

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

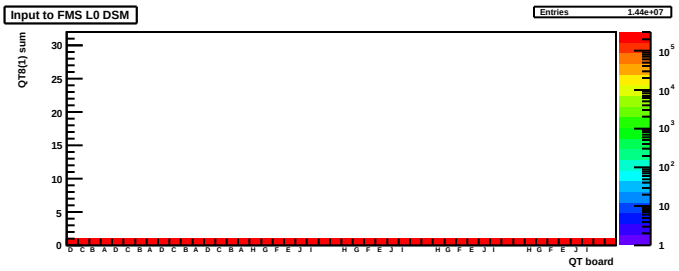

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

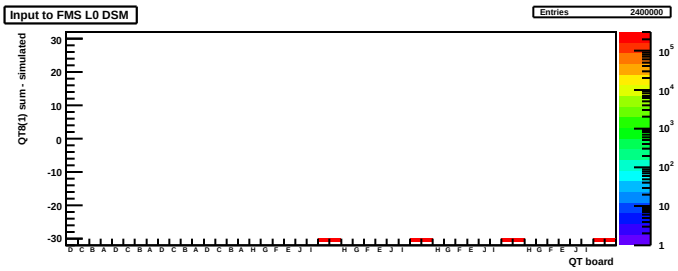

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

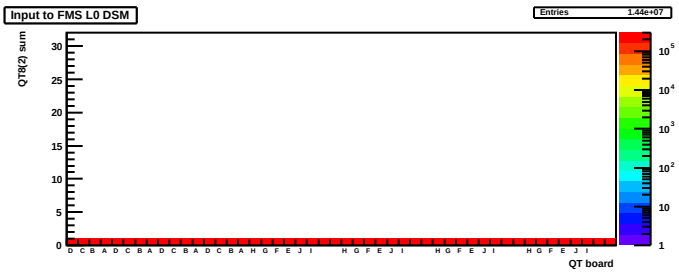

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

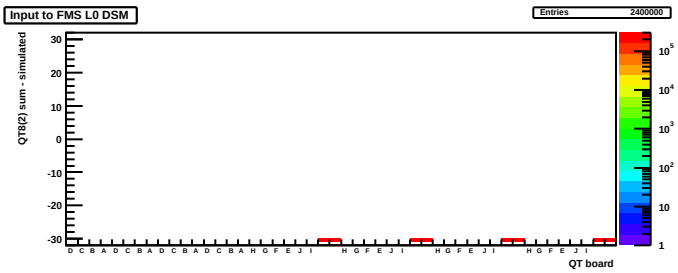

Input to FMS L0 DSM
Entries 1.44e+07
QT8(0) sum
QT board

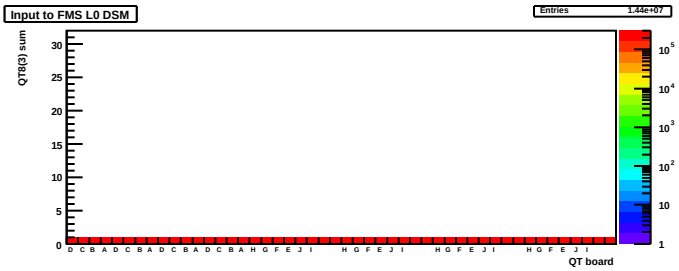

Input to FMS L0 DSM
Entries 2400000
QT8(0) sum - simulated
QT board

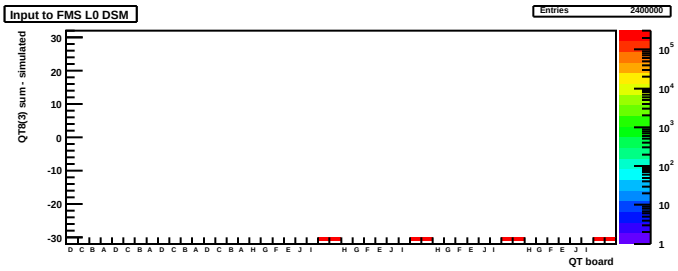

Input to FMS L0 DSM
Entries 1.44e+07
QT8(1) sum
QT board

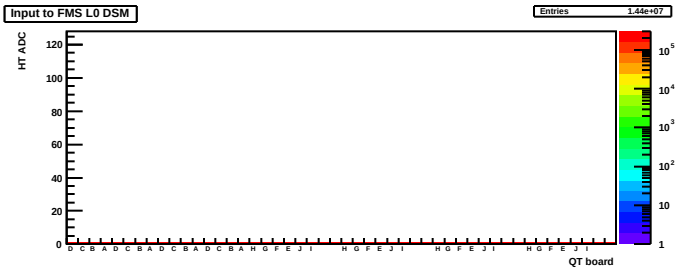

Input to FMS L0 DSM
Entries 2400000
QT8(1) sum - simulated
QT board

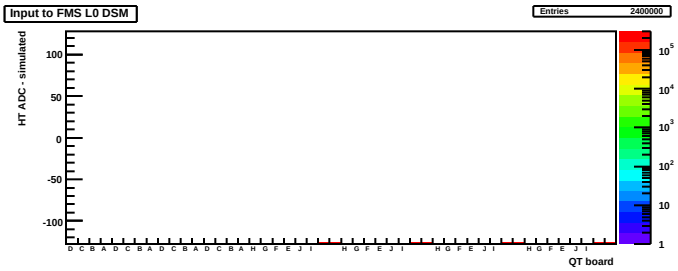

Input to FMS L0 DSM
Entries 1.44e+07
QT8(2) sum
QT board

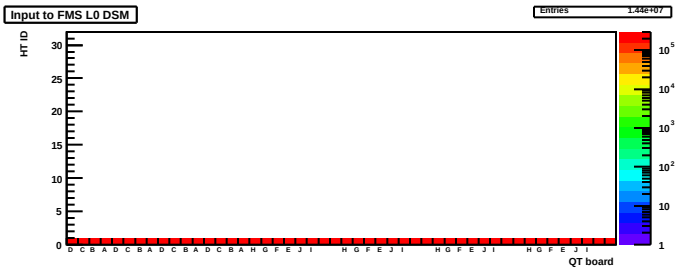

Input to FMS L0 DSM
Entries 2400000
QT8(2) sum - simulated
QT board

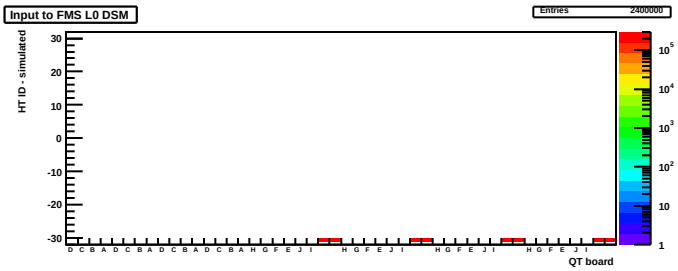

Input to FMS L0 DSM
Entries 1.44e+07
QT8(3) sum
QT board

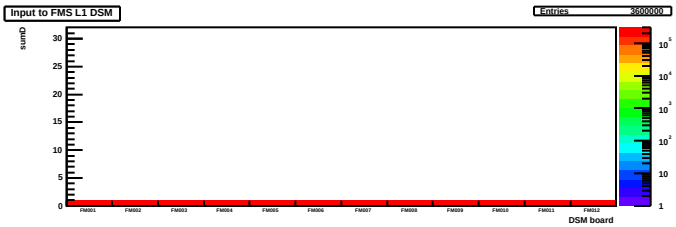

Input to FMS L0 DSM
Entries 2400000
QT8(3) sum - simulated
QT board

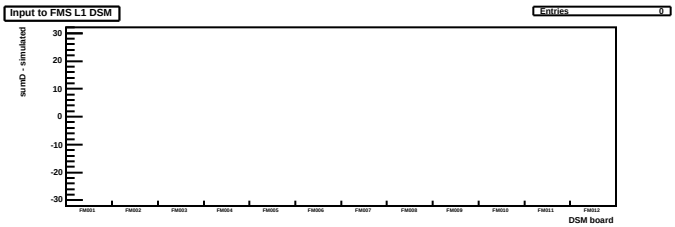

Input to FMS L0 DSM
Entries 1.44e+07
HT ADC
QT board

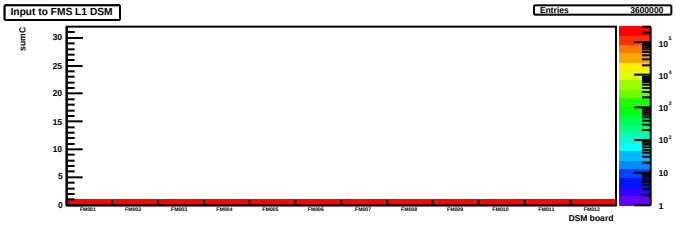

Input to FMS L0 DSM
Entries 2400000
HT ADC - simulated
QT board

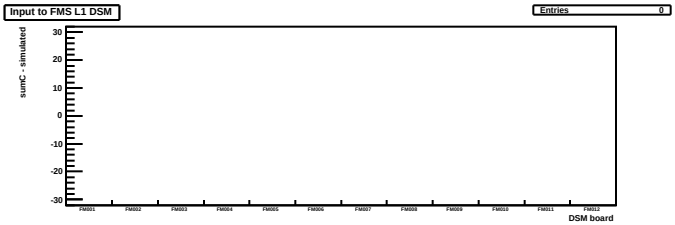

Input to FMS L0 DSM
Entries 1.44e+07
HT ID
QT board

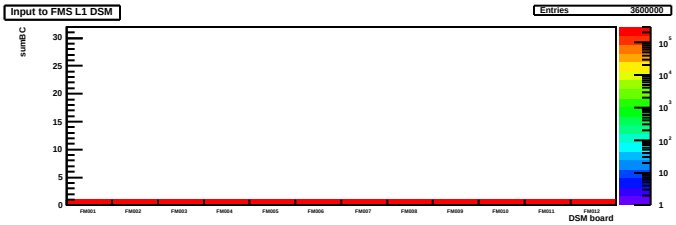

Input to FMS L0 DSM
Entries 2400000
HT ID - simulated
QT board

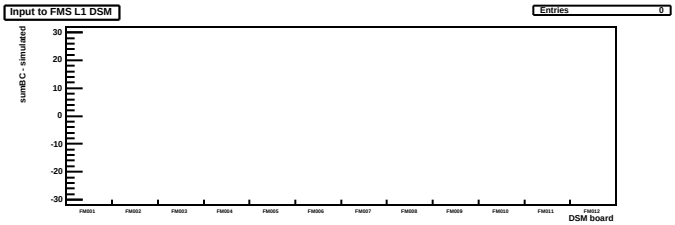

Input to FMS L1 DSM
Entries 3600000
sumD
DSM board

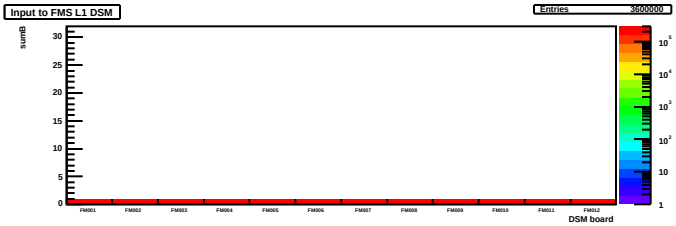

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

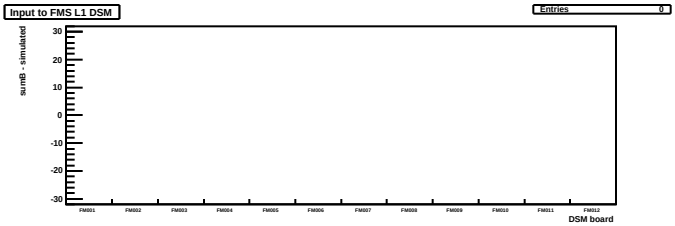

Input to FMS L1 DSM
Entries 3600000
sumC
DSM board

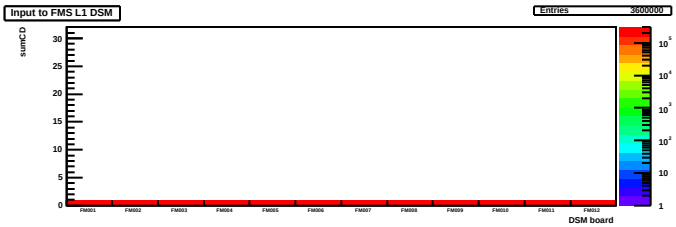

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

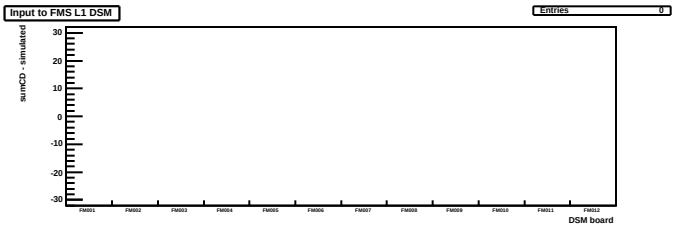

Input to FMS L1 DSM
Entries 3600000
sumBC
DSM board

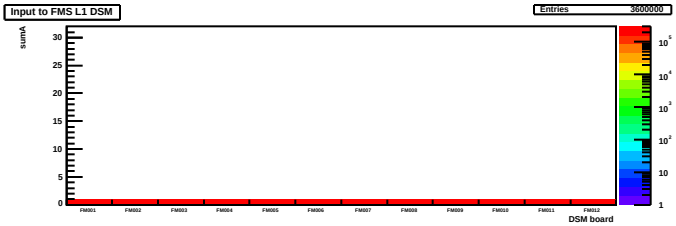

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

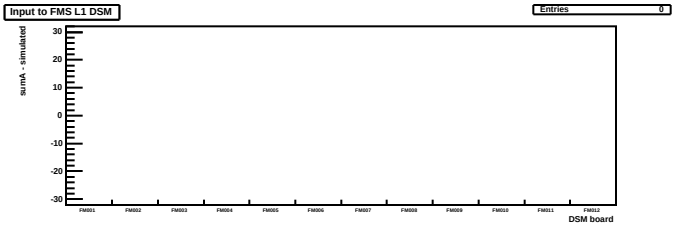

Input to FMS L1 DSM
Entries 3600000
sumB
DSM board

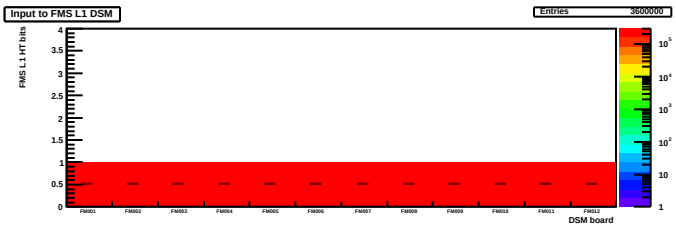

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

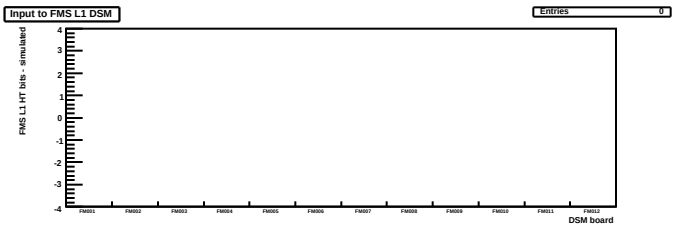

Input to FMS L1 DSM
Entries 3600000
sumCD
DSM board

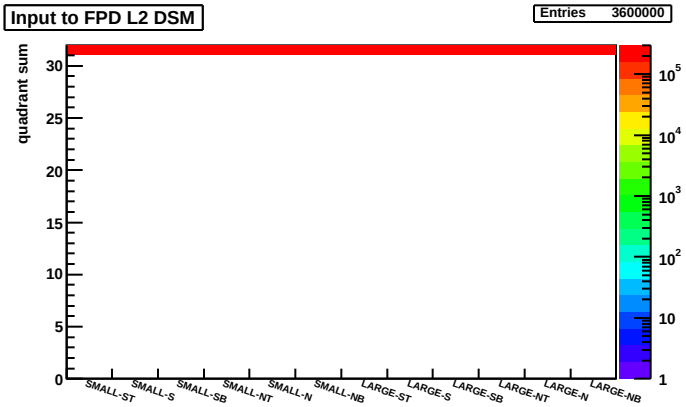

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

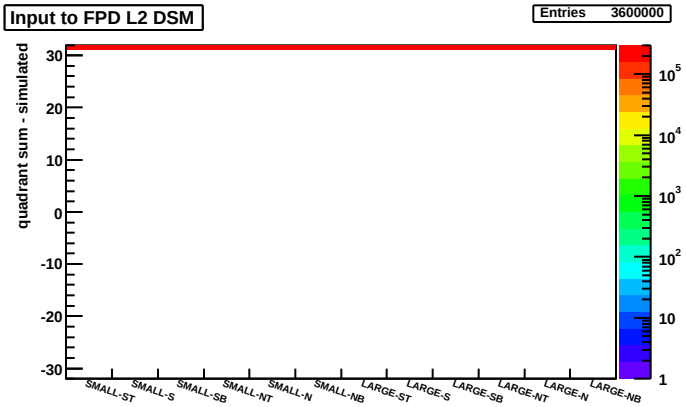

Input to FMS L1 DSM
Entries 3600000
sumA
DSM board

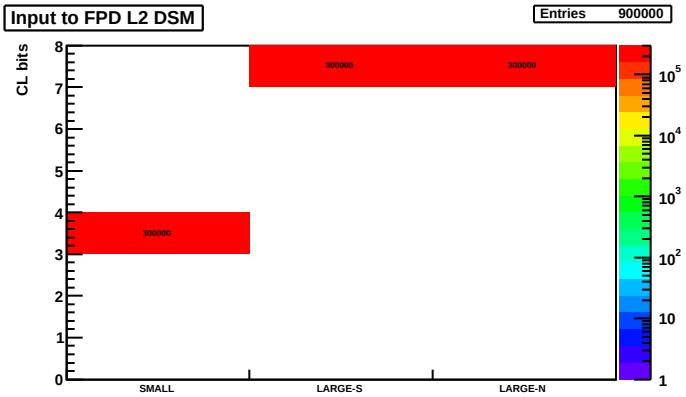

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

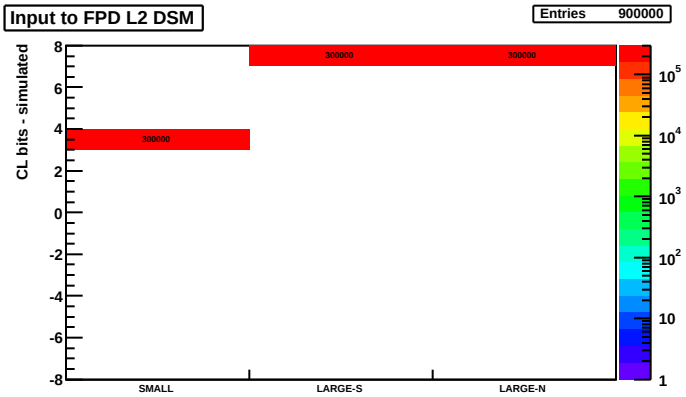

Input to FMS L1 DSM
Entries 3600000
FMS L1 HT bits
DSM board

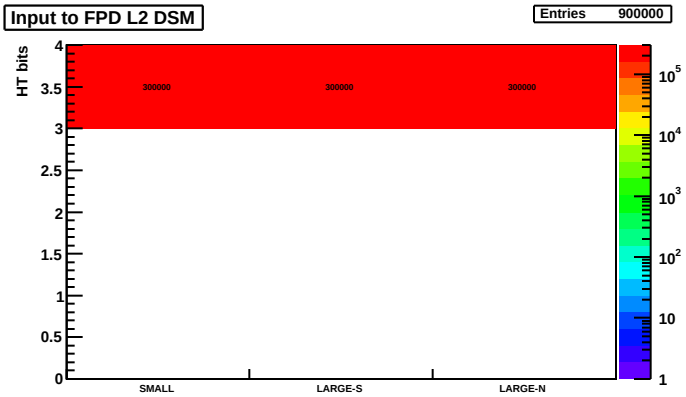

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

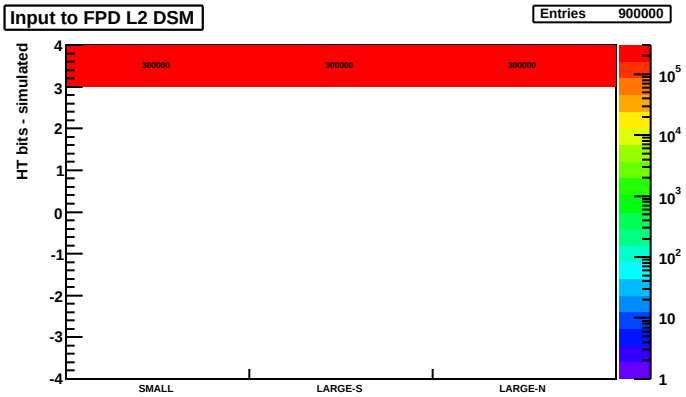

Input to FPD L2 DSM
Entries 3600000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

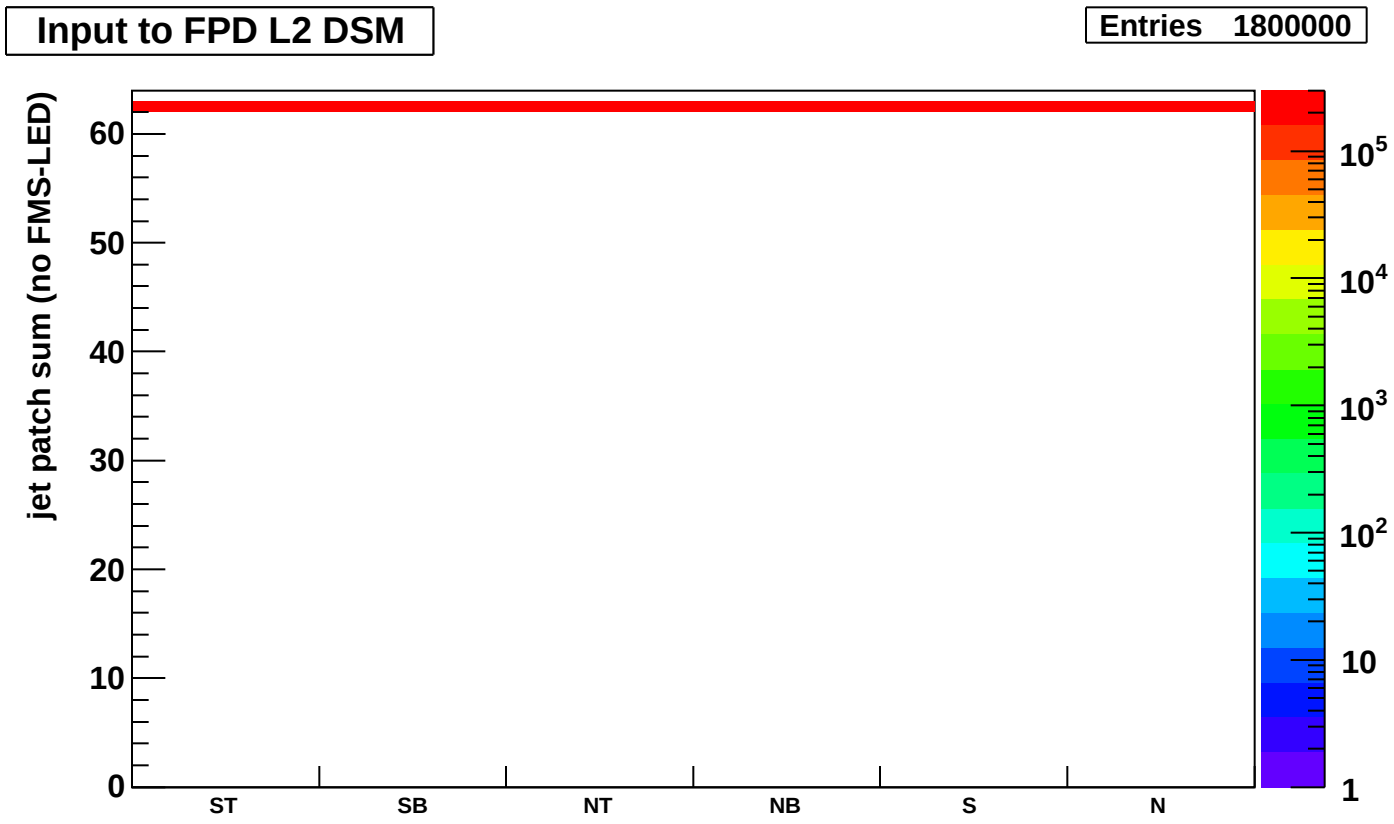

Input to FPD L2 DSM
Entries 3600000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

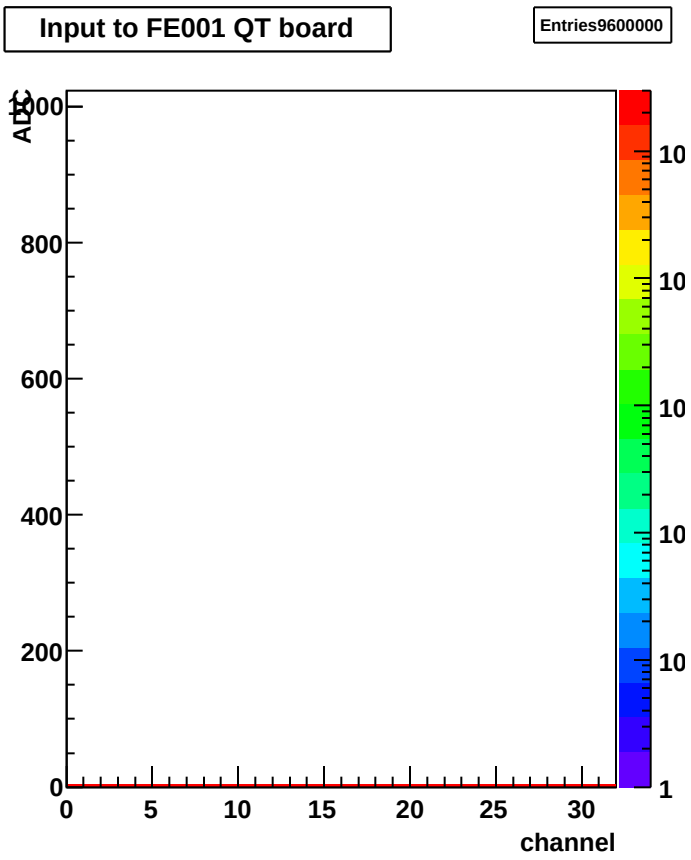

Input to FPD L2 DSM
Entries 900000
CL bits
300000
300000
300000
SMALL
LARGE-S
LARGE-N

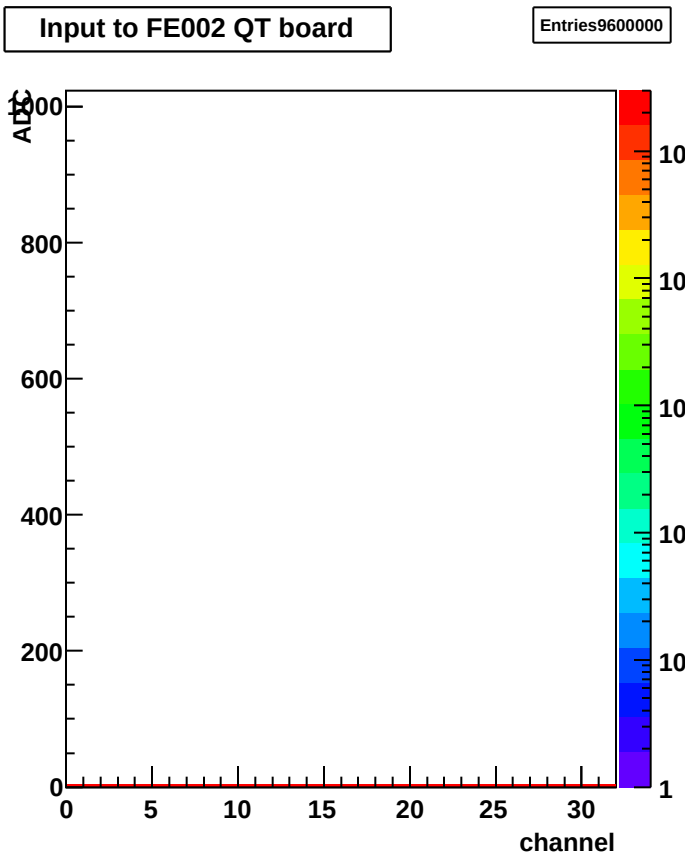

Input to FPD L2 DSM
Entries 900000
CL bits - simulated
300000
300000
300000
SMALL
LARGE-S
LARGE-N

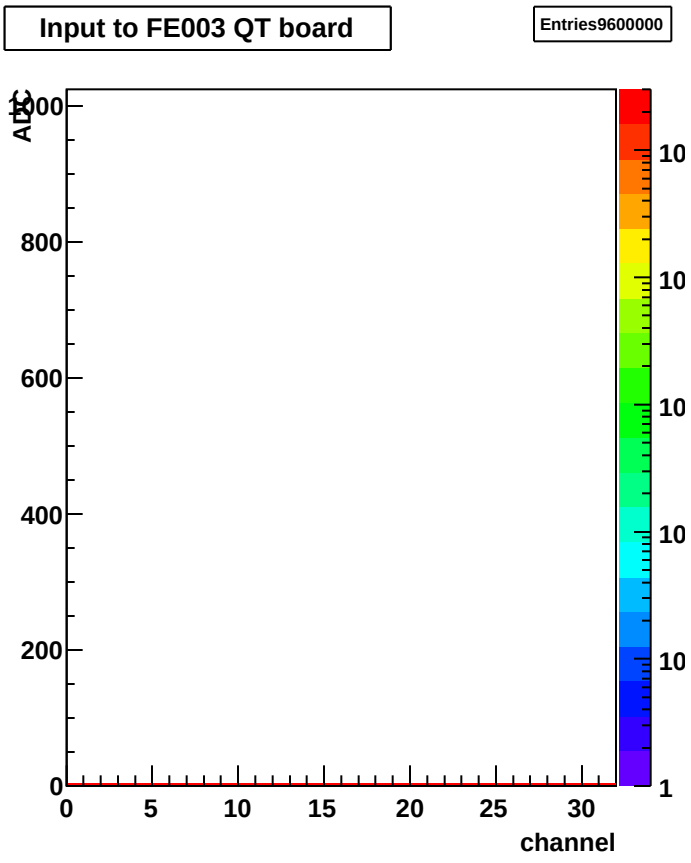

Input to FPD L2 DSM
Entries 900000
HT bits
300000
300000
300000
SMALL
LARGE-S
LARGE-N

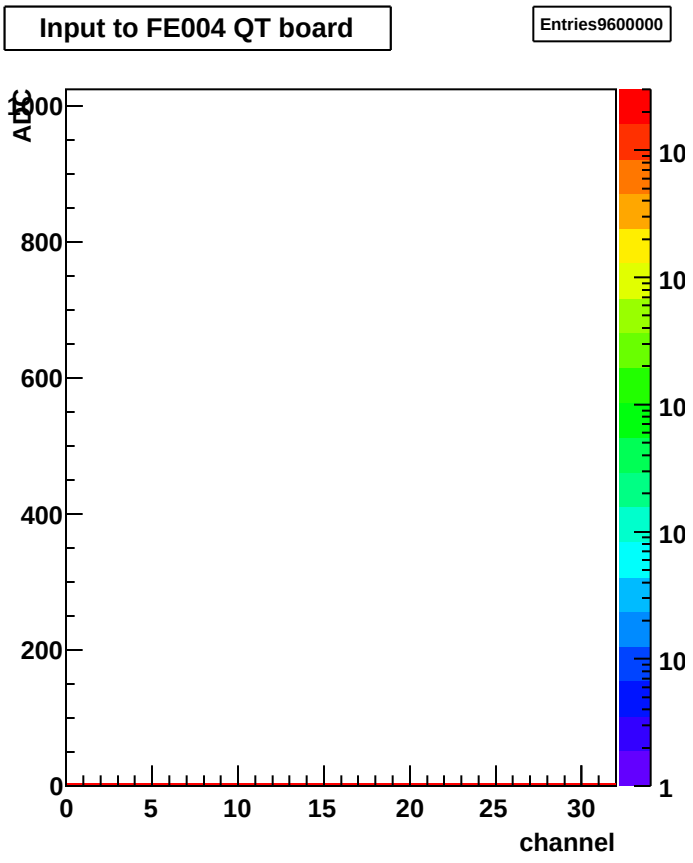

Input to FPD L2 DSM
Entries 900000
HT bits - simulated
300000
300000
300000
SMALL
LARGE-S
LARGE-N

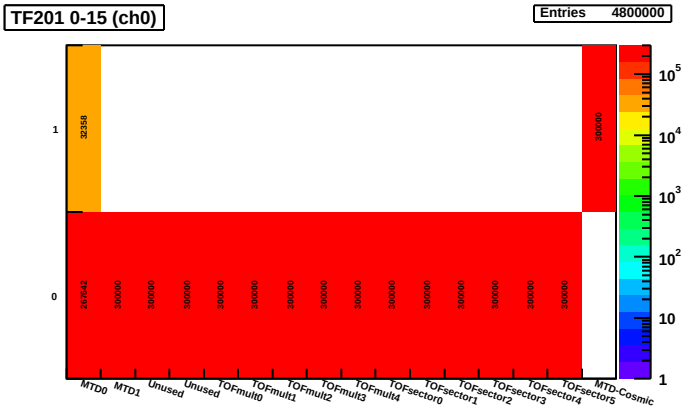

Input to FPD L2 DSM
Entries 1800000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

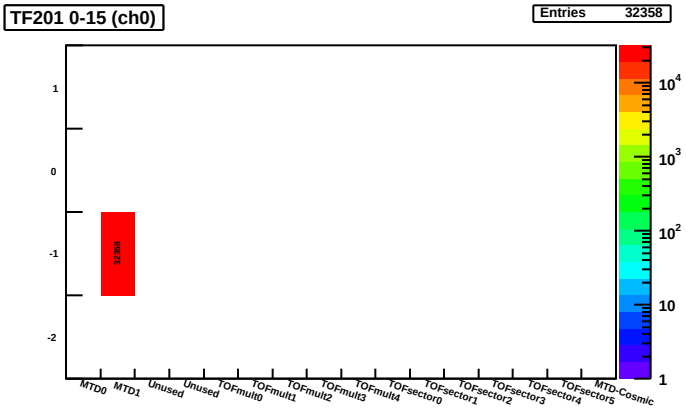

Input to FE001 QT board
Entries9600000
ADC
channel

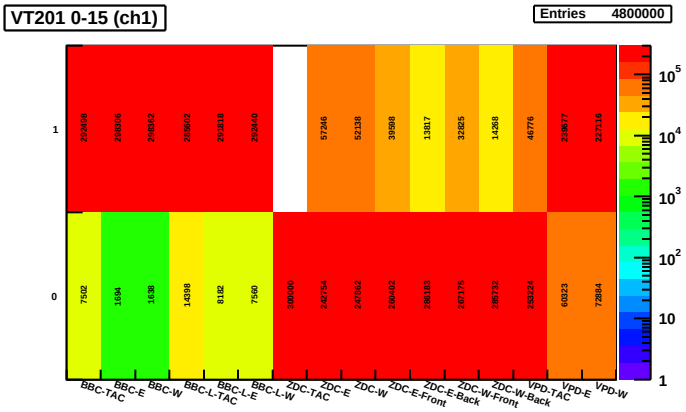

Input to FE002 QT board
Entries9600000
ADC
channel

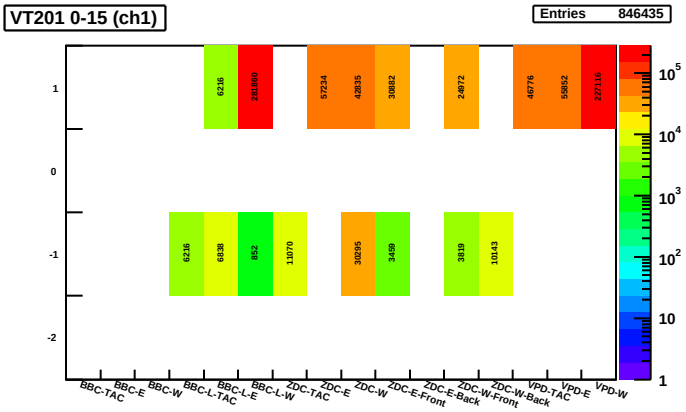

Input to FE003 QT board
Entries9600000
ADC
channel


Input to FE004 QT board
Entries9600000
ADC
channel


TF201 0-15 (ch0)
Entries 4800000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 32358
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 4800000
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 846435
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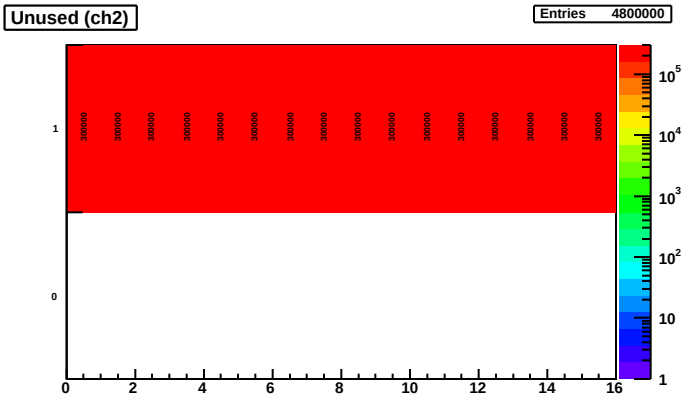
Unused (ch2)
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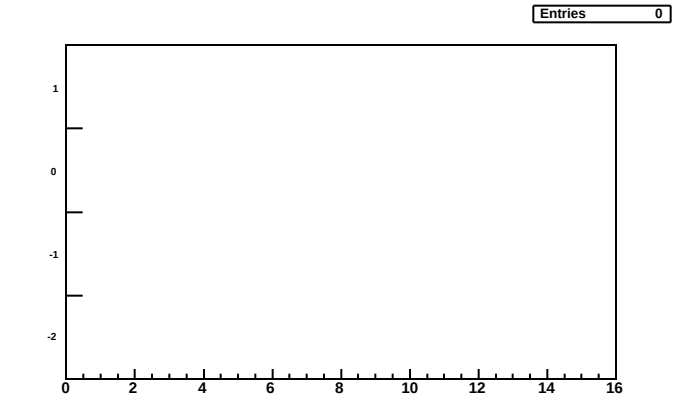
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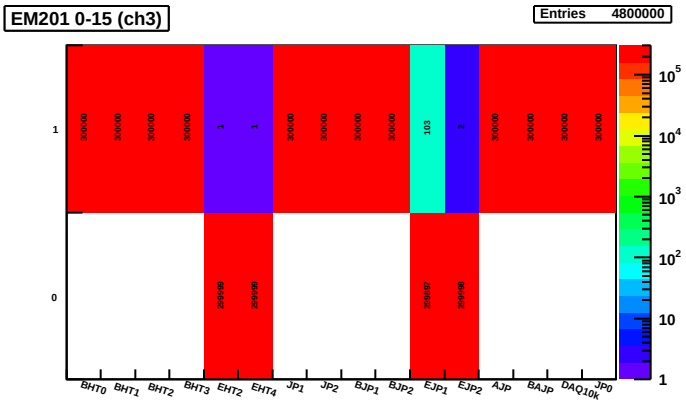
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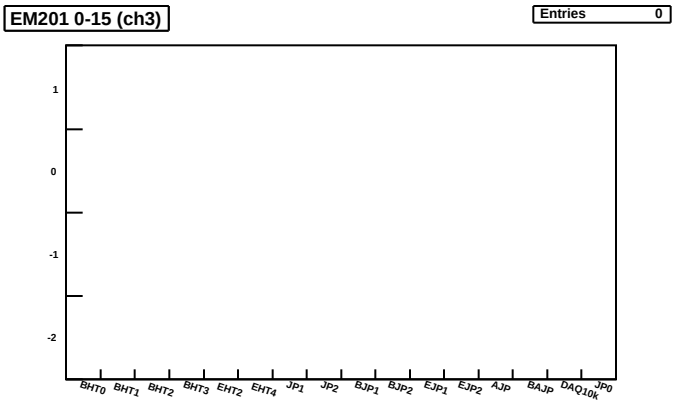
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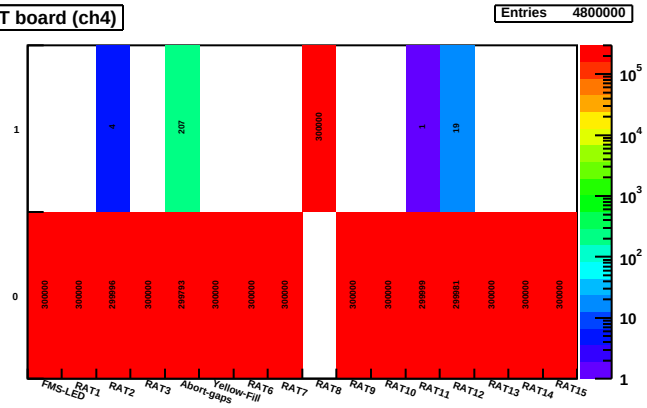
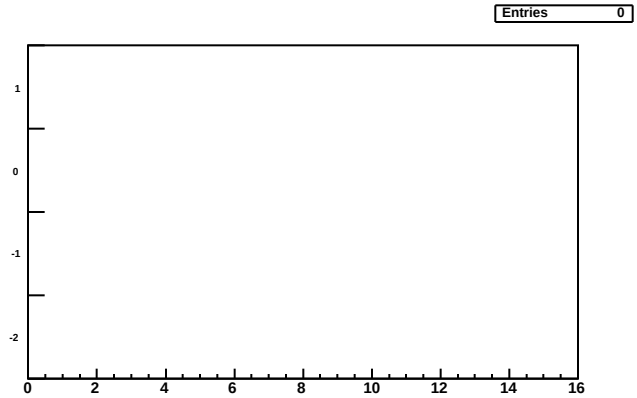
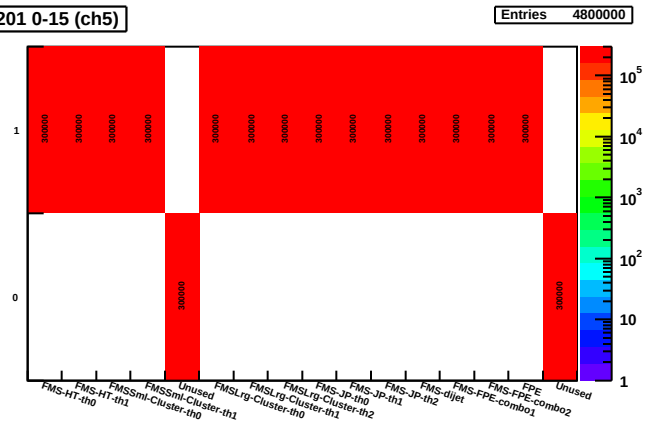
RAT board (ch4)





FP201 0-15 (ch5)



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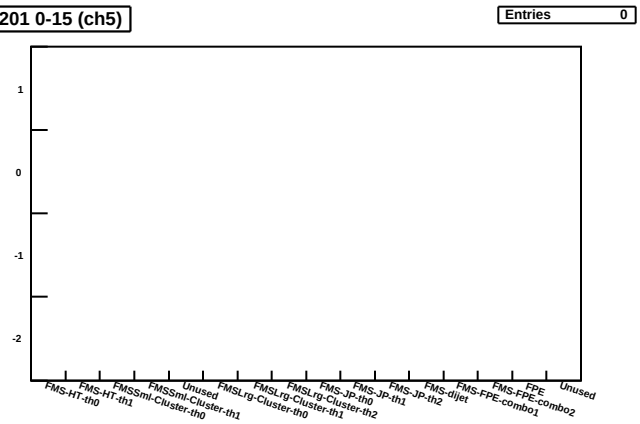
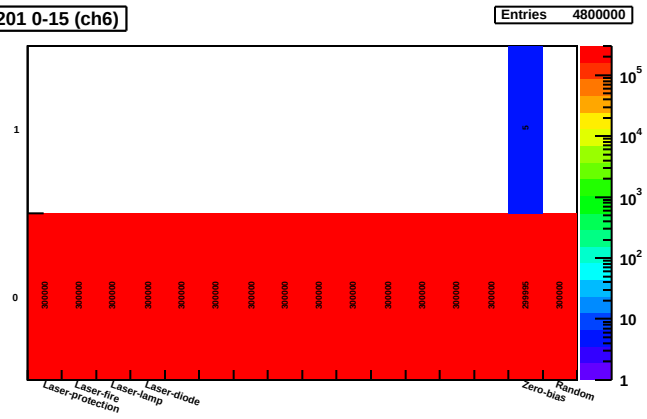
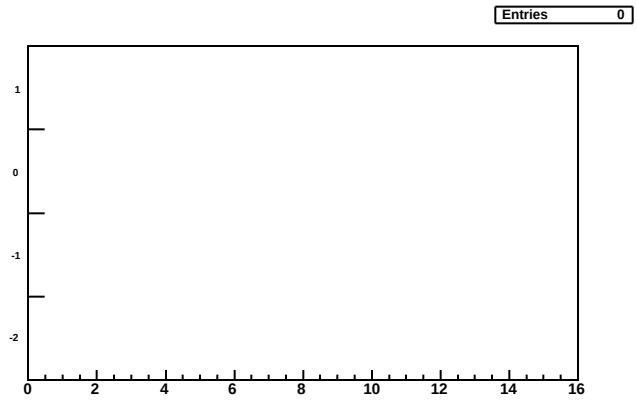
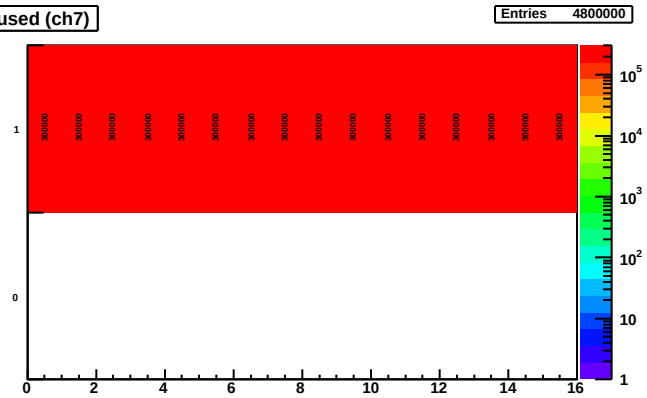
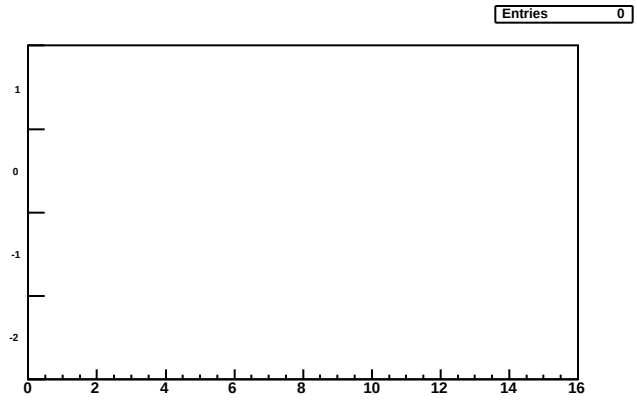


ST201 0-15 (ch6)





Unused (ch7)