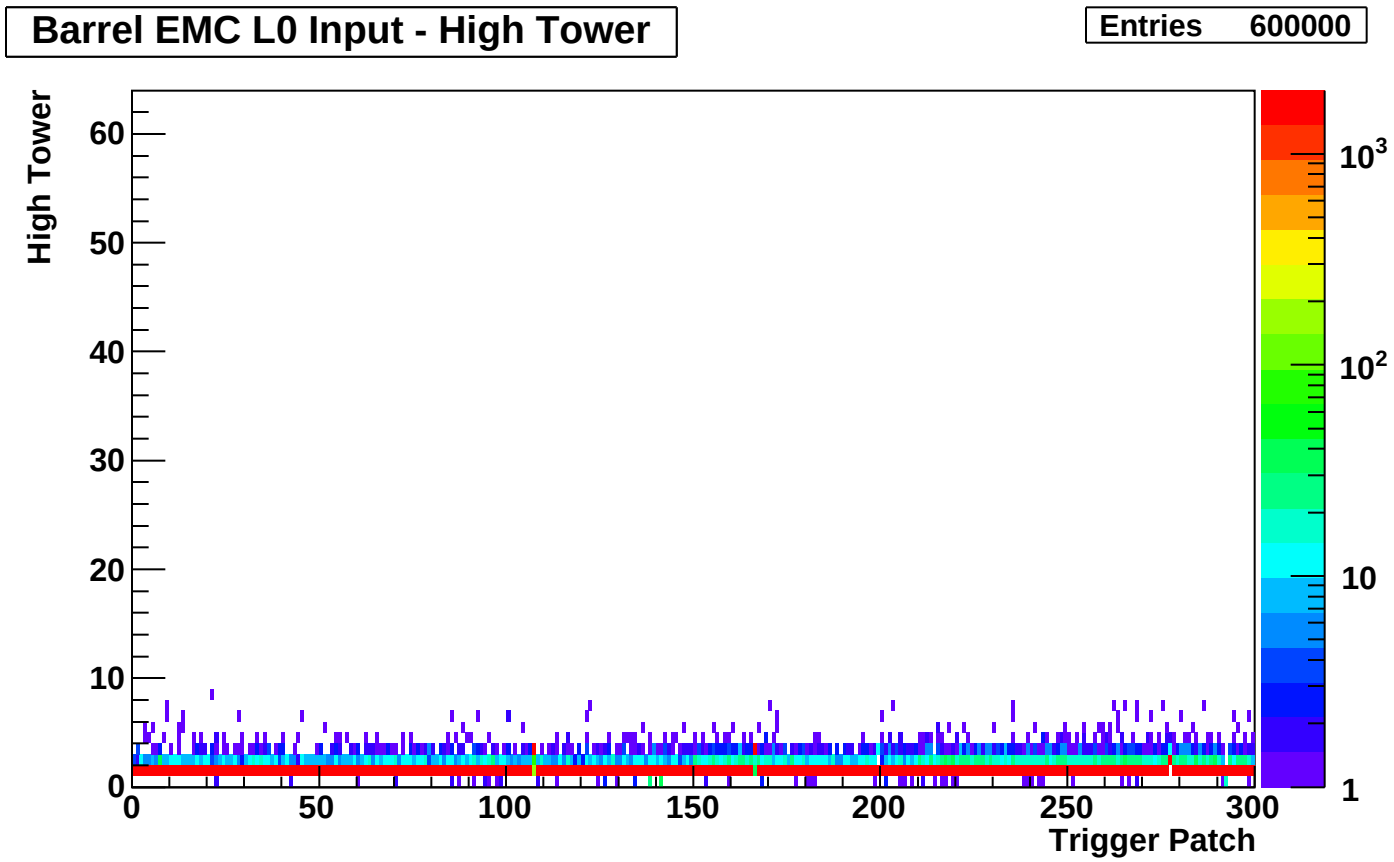
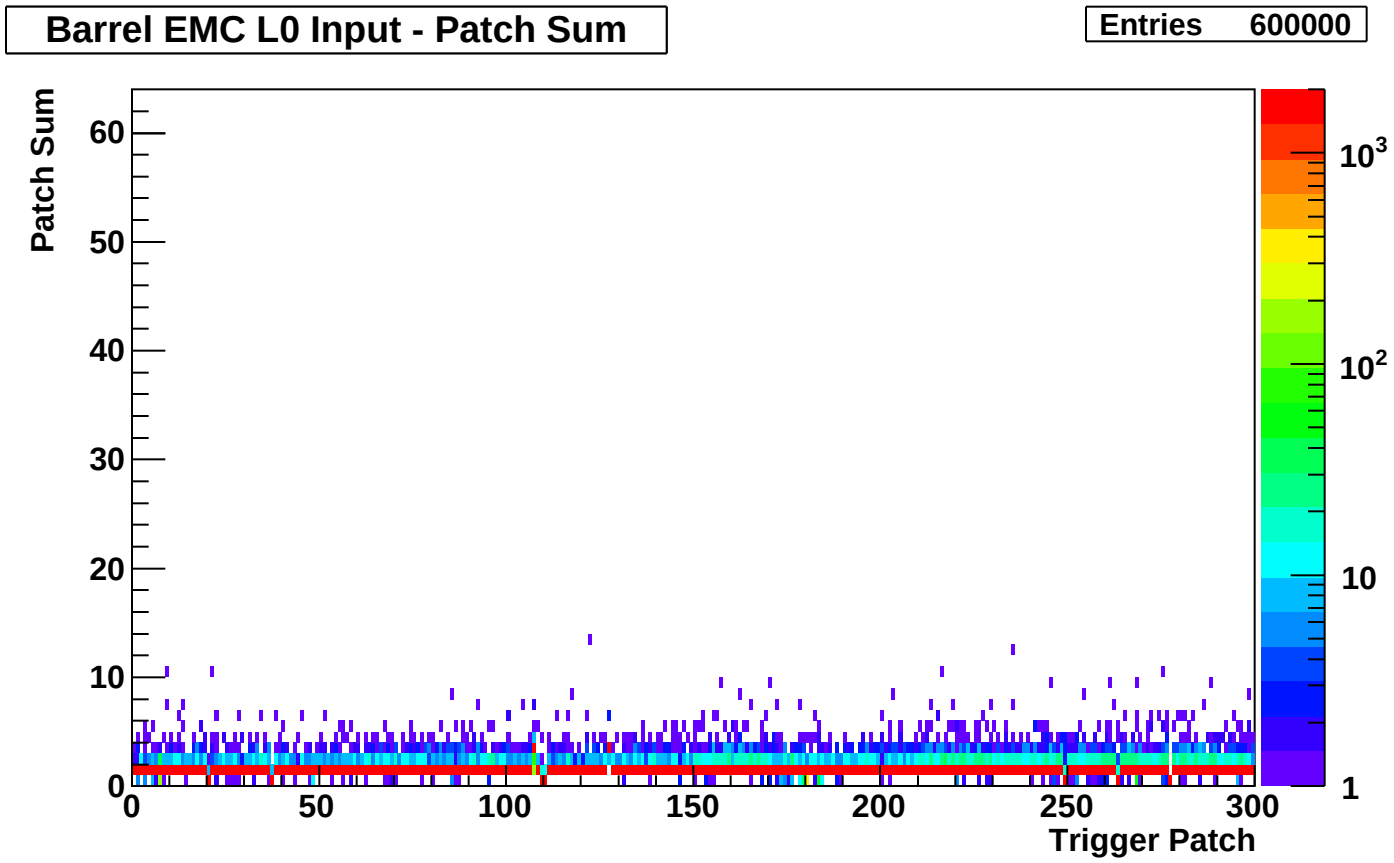
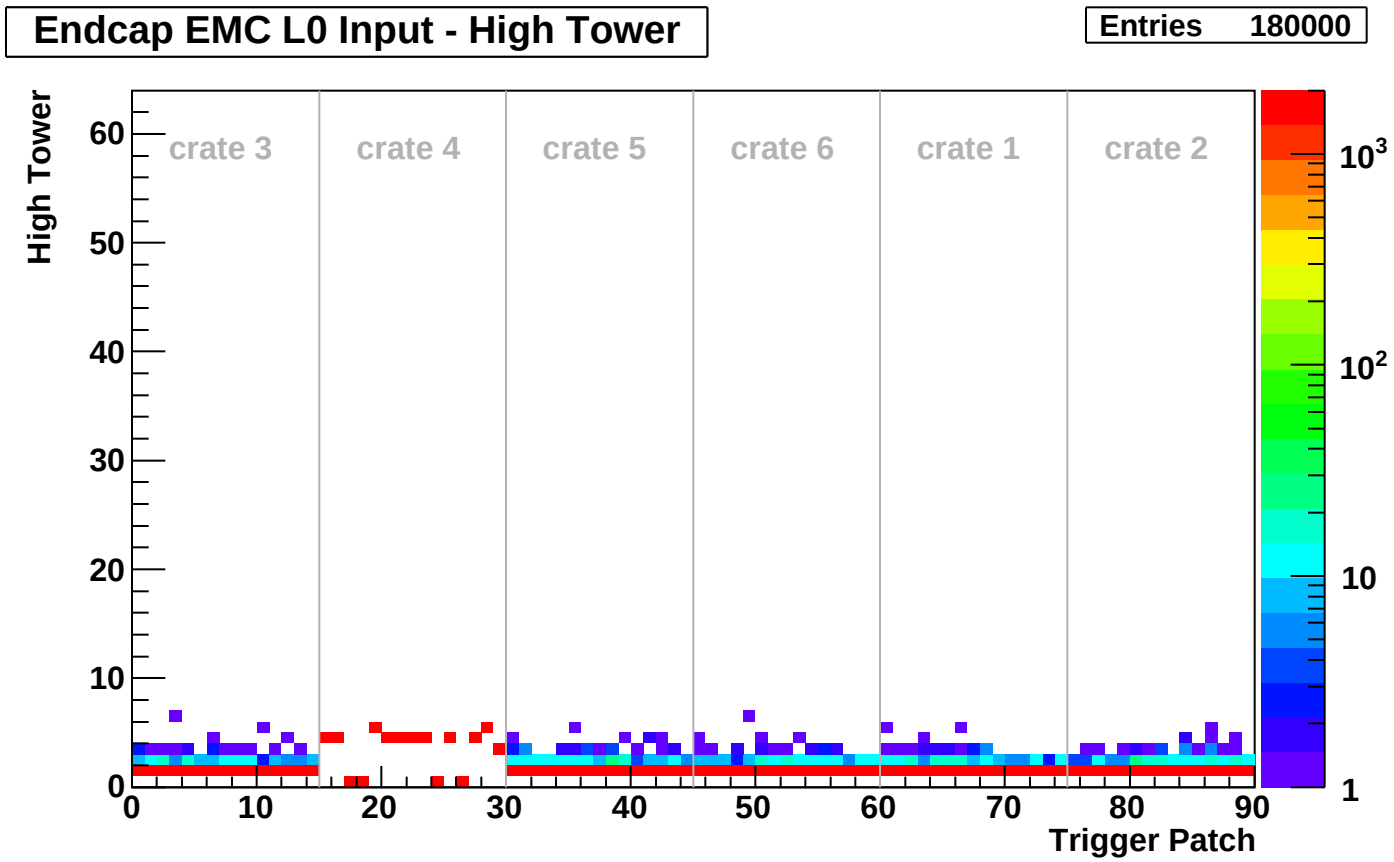
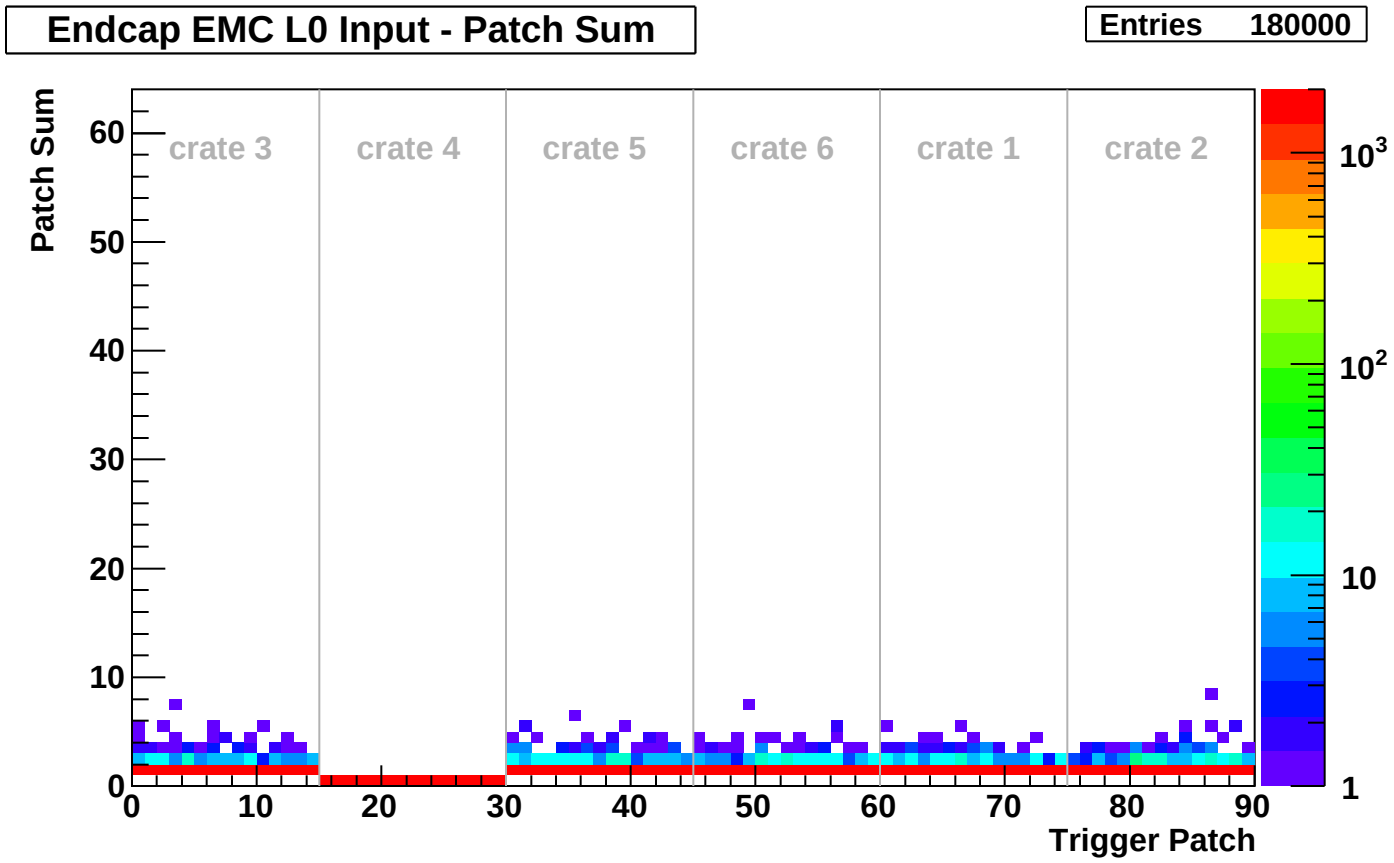
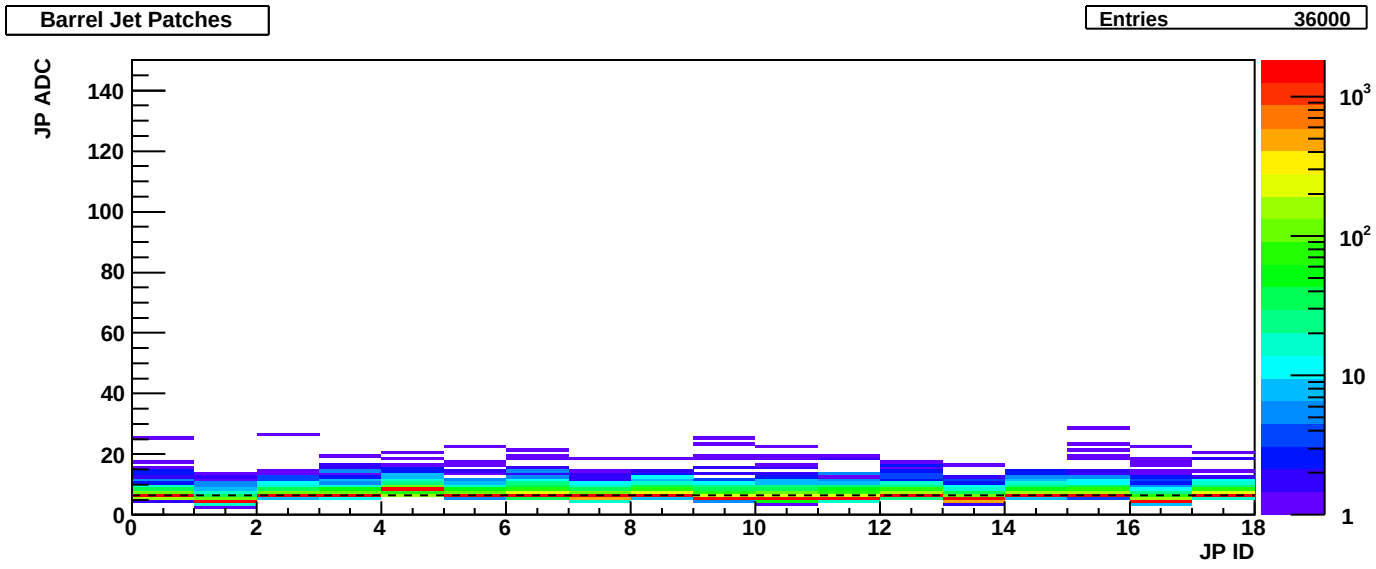
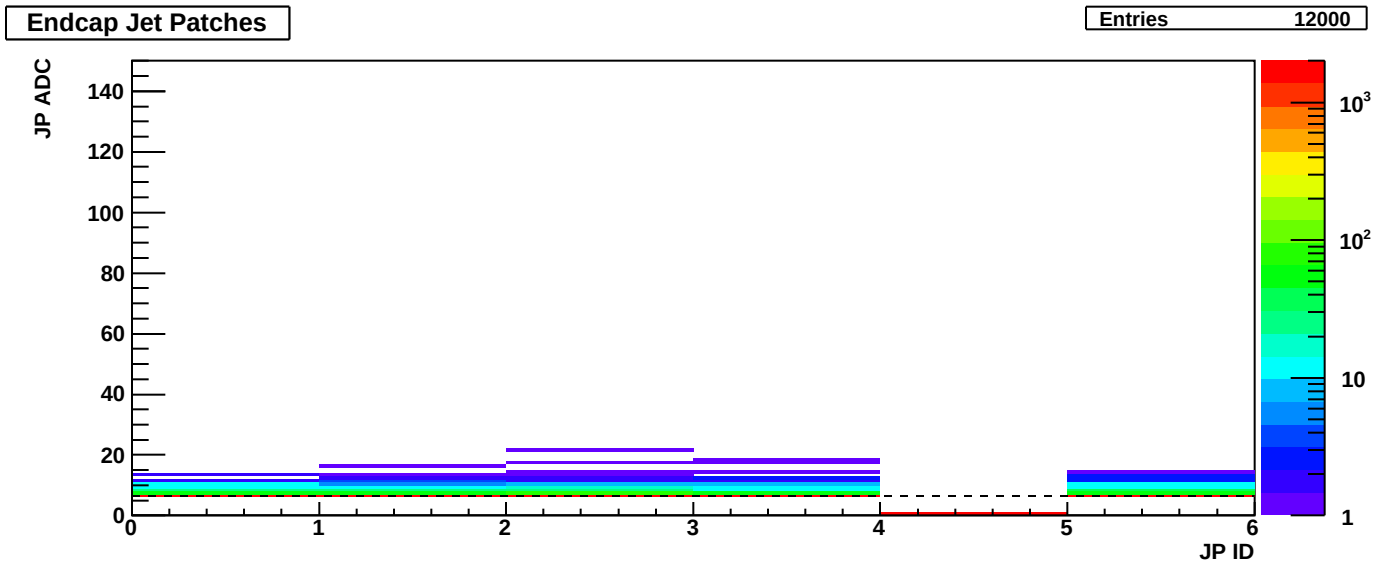

Barrel EMC L0 Input - High Tower
Entries 600000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

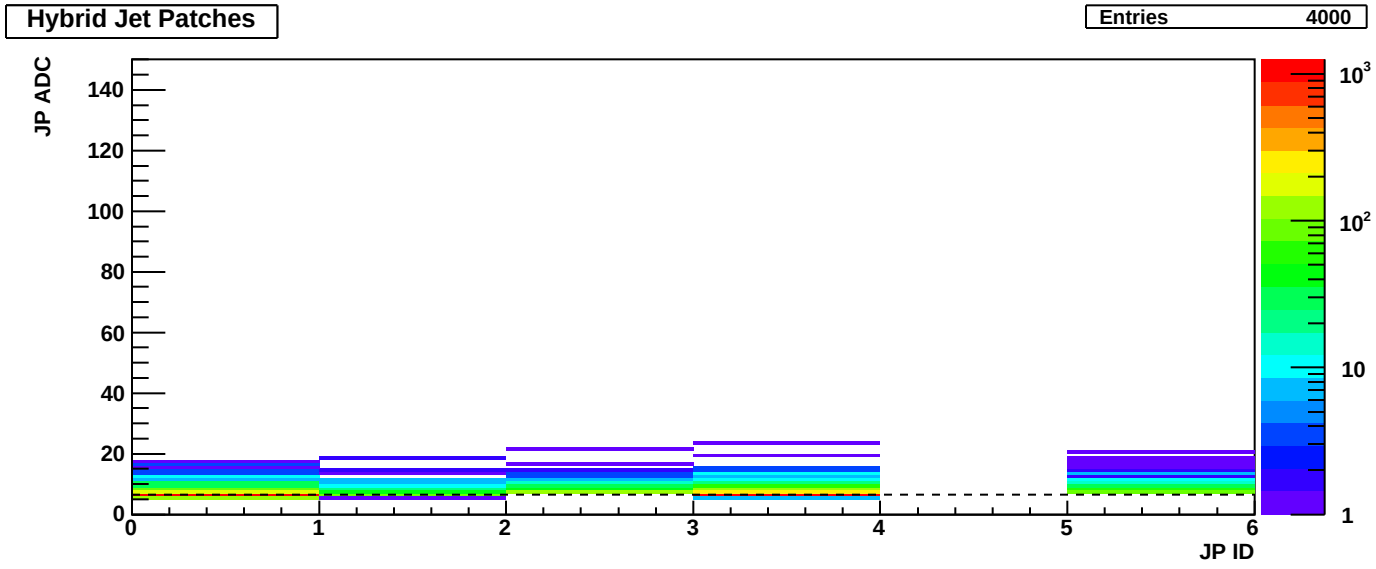

Barrel EMC L0 Input - Patch Sum
Entries 600000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

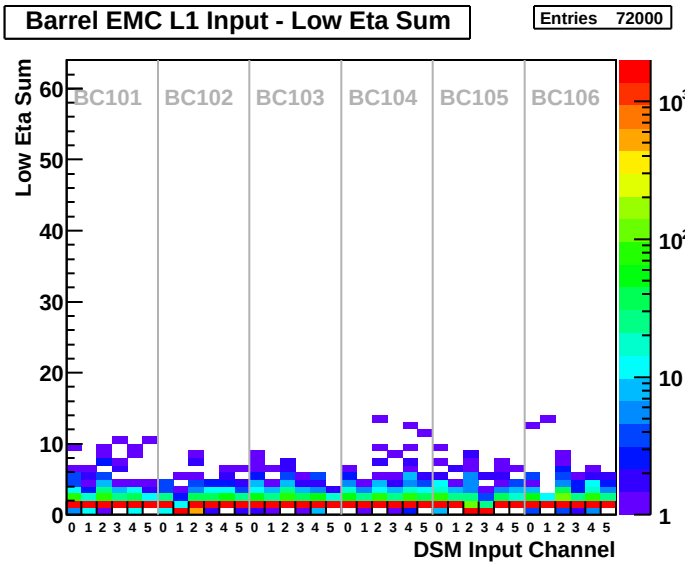

Endcap EMC L0 Input - High Tower
Entries 180000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

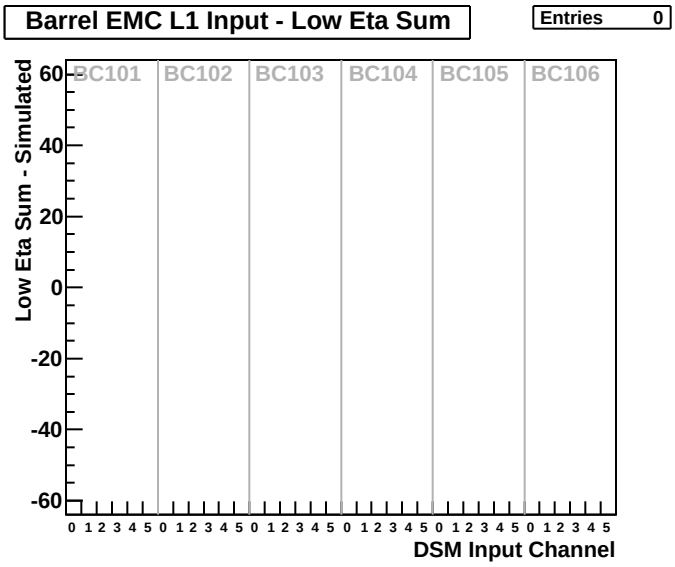

Endcap EMC L0 Input - Patch Sum
Entries 180000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

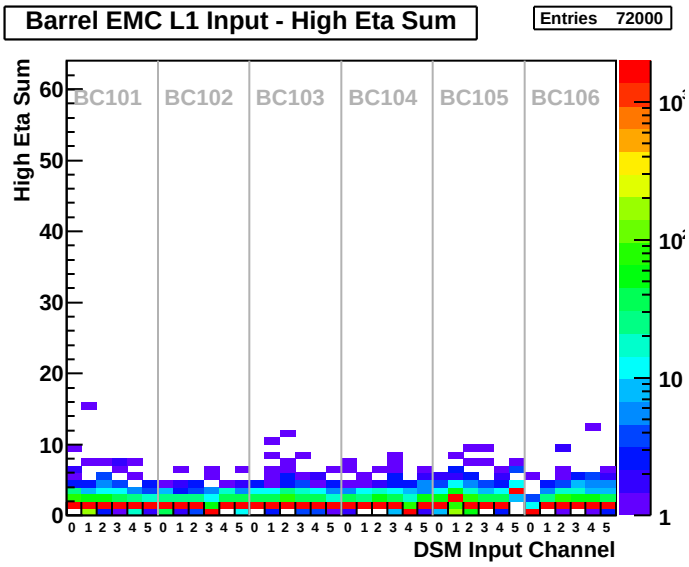

Barrel Jet Patches
Entries 36000
JP ADC
JP ID

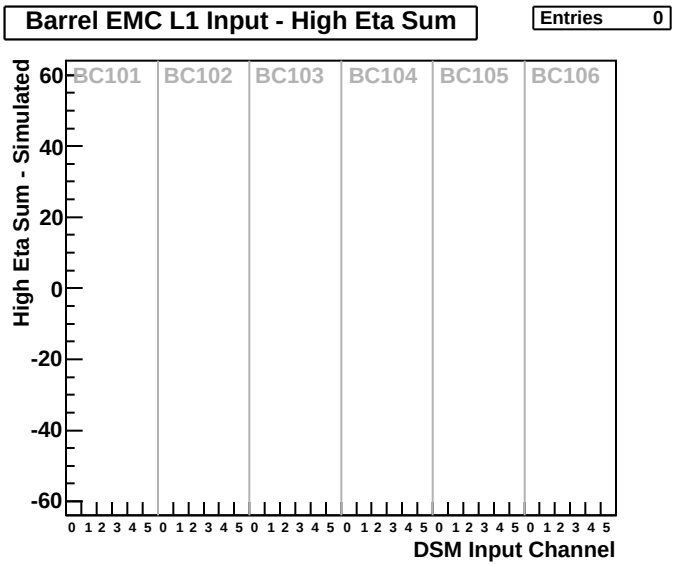

Endcap Jet Patches
Entries 12000
JP ADC
JP ID

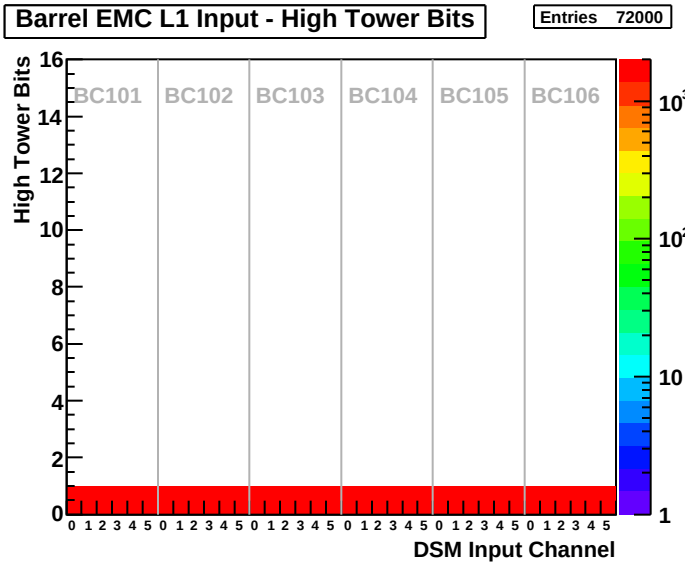

Hybrid Jet Patches
Entries 4000
JP ADC
JP ID

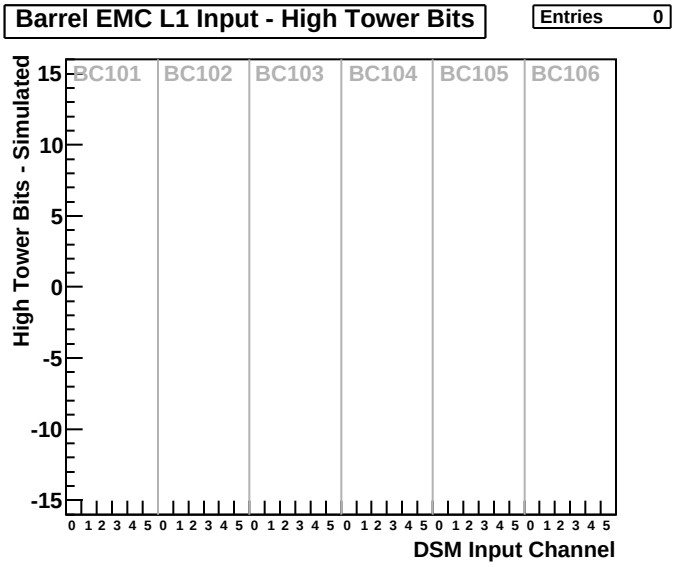

Barrel EMC L1 Input - Low Eta Sum
Entries 72000
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

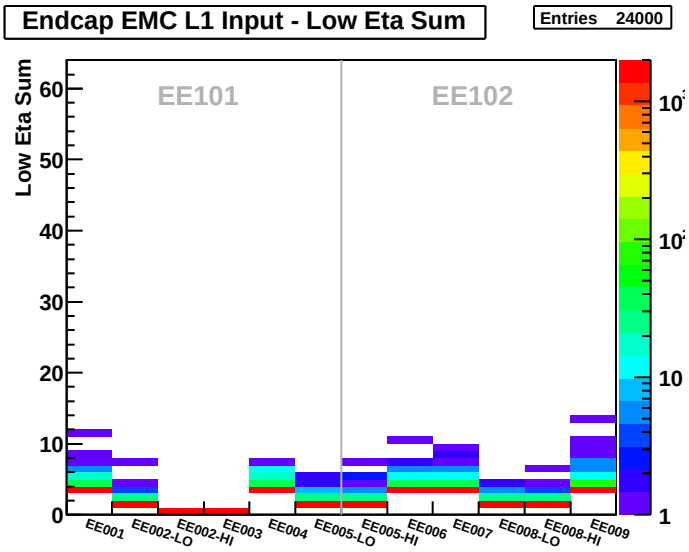

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

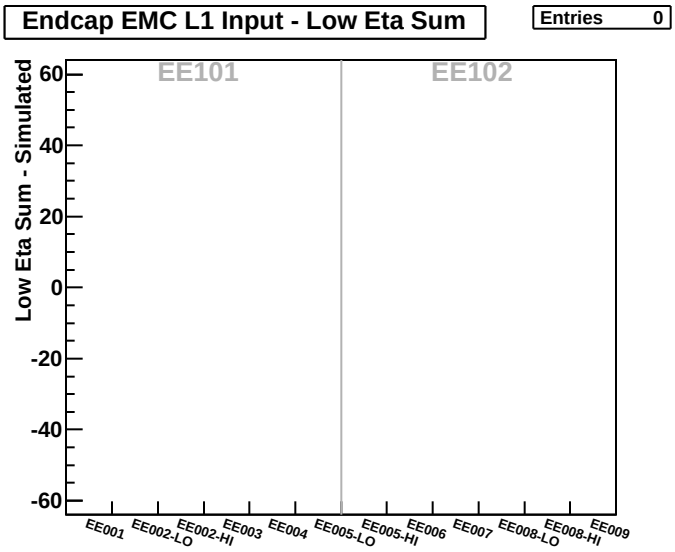

Barrel EMC L1 Input - High Eta Sum
Entries 72000
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

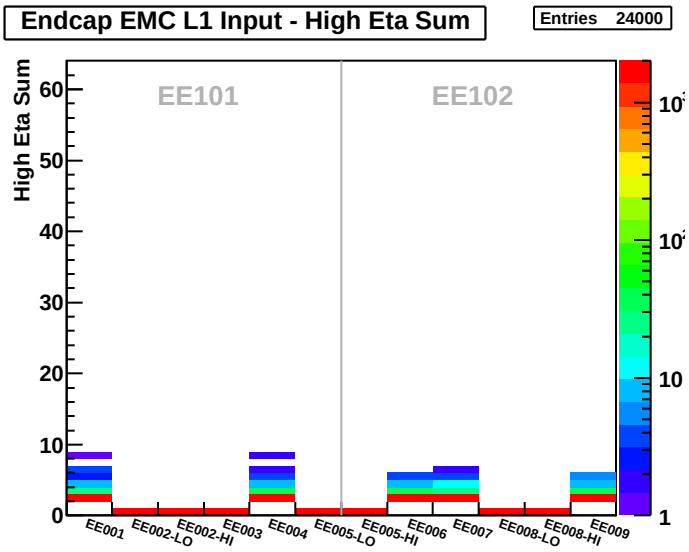

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

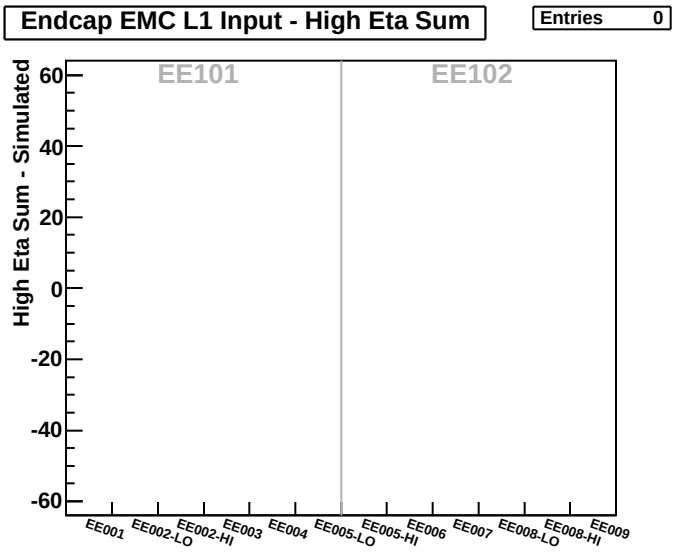

Barrel EMC L1 Input - High Tower Bits
Entries 72000
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

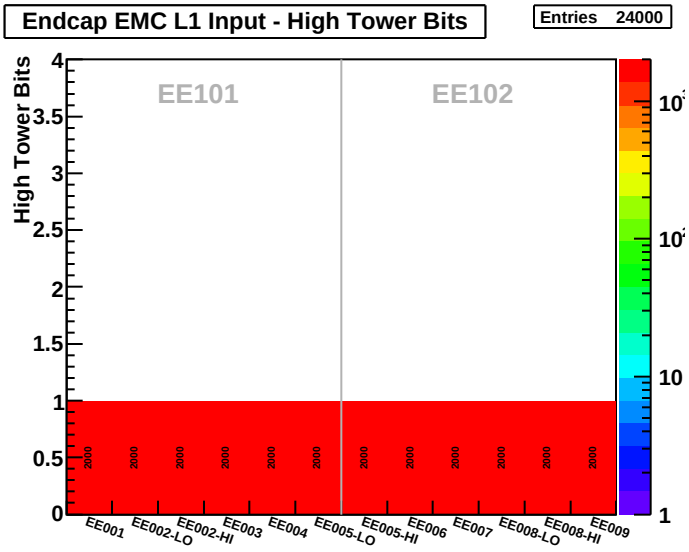

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

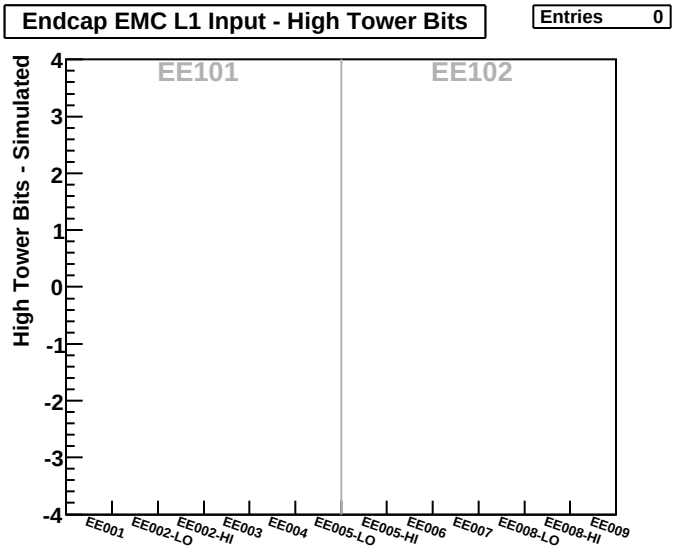

Endcap EMC L1 Input - Low Eta Sum
Entries 24000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

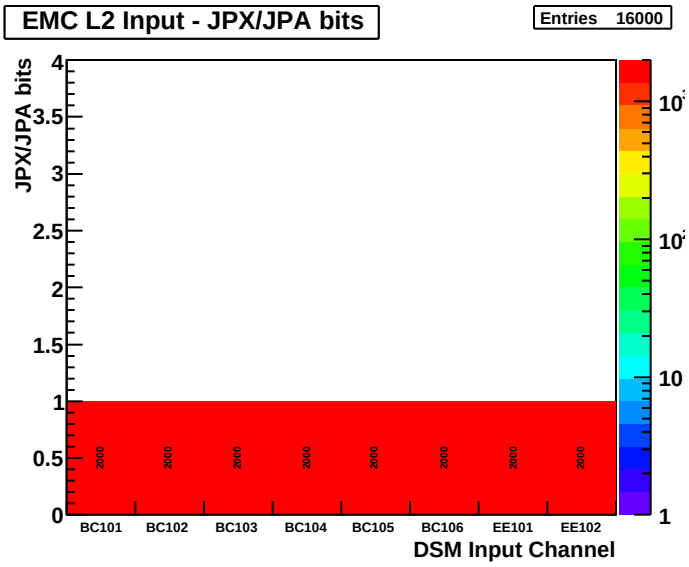

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

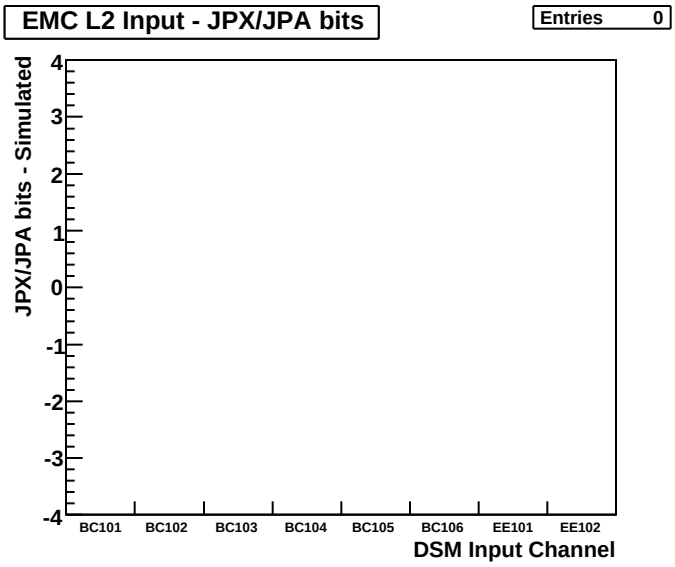

Endcap EMC L1 Input - High Eta Sum
Entries 24000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

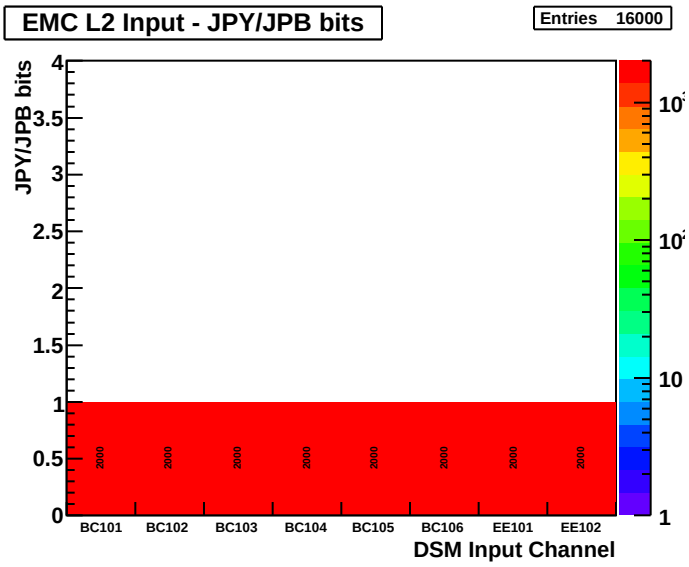

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

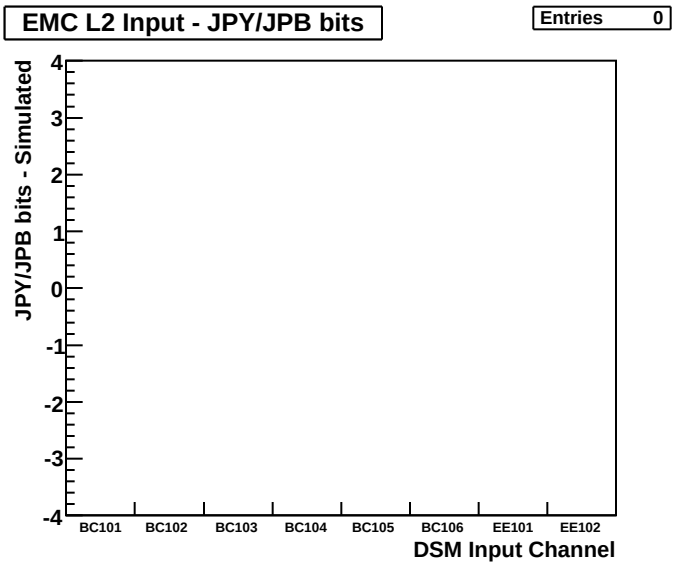

Endcap EMC L1 Input - High Tower Bits
Entries 24000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

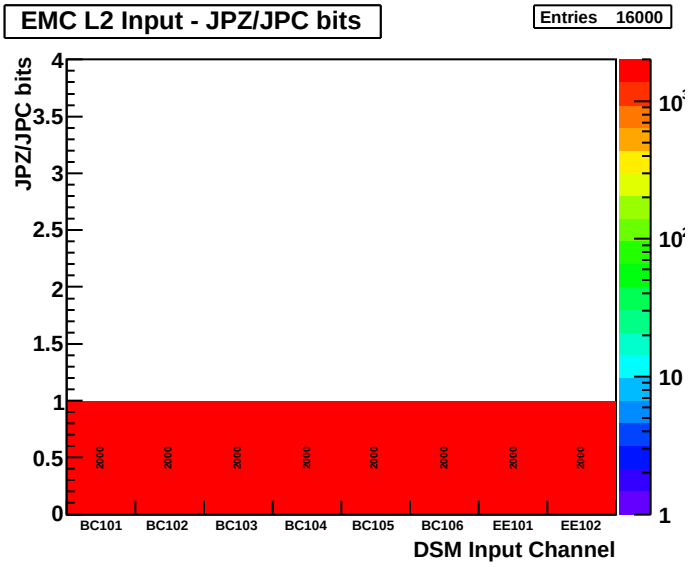

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

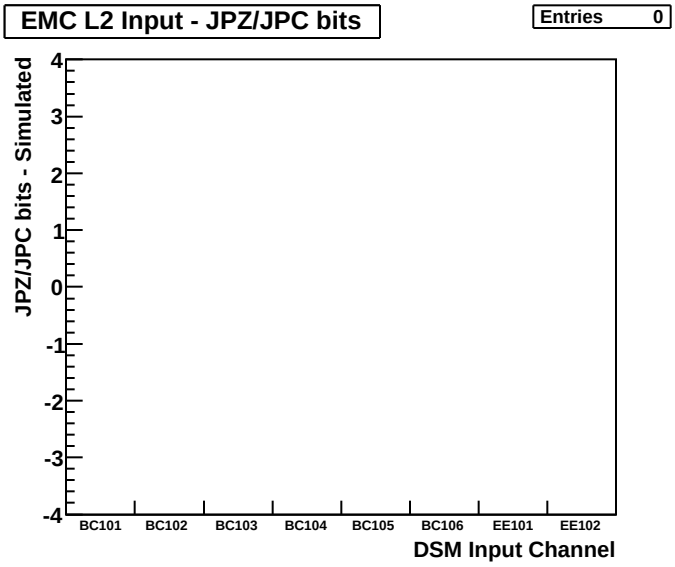

EMC L2 Input - JPX/JPA bits
Entries 16000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2000

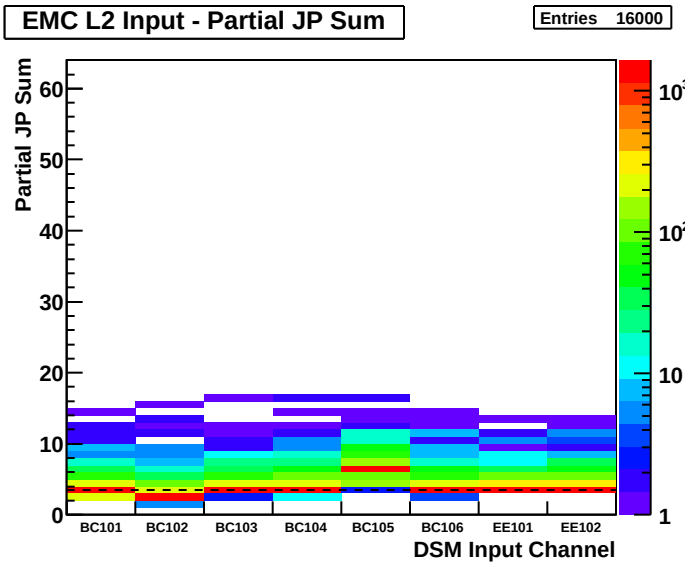

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

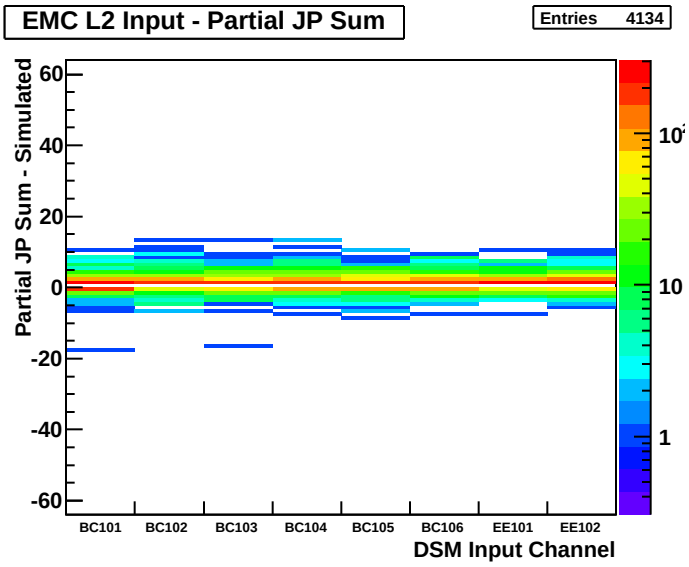

EMC L2 Input - JPY/JPB bits
Entries 16000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2000

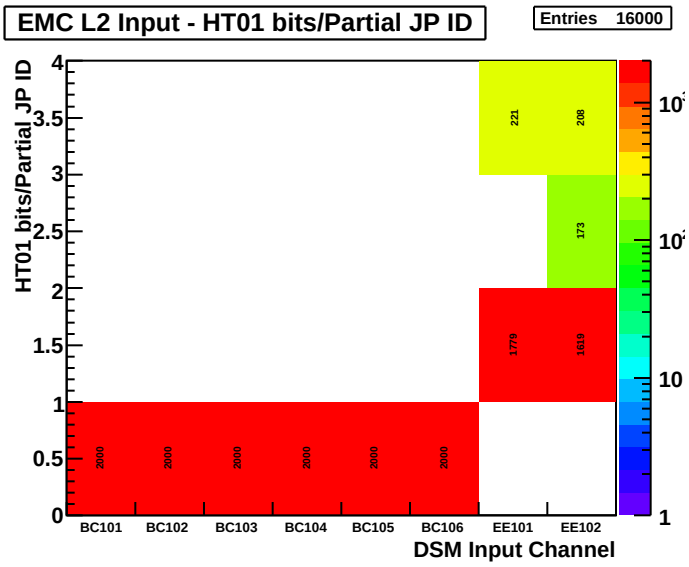

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

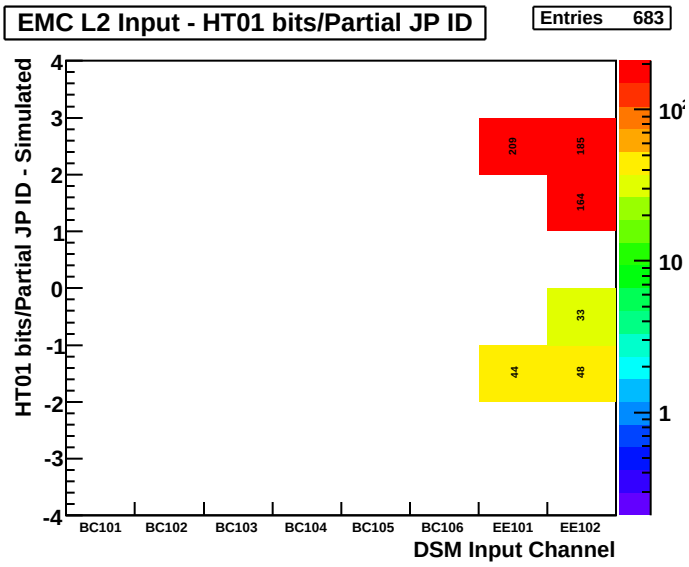

EMC L2 Input - JPZ/JPC bits
Entries 16000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2000

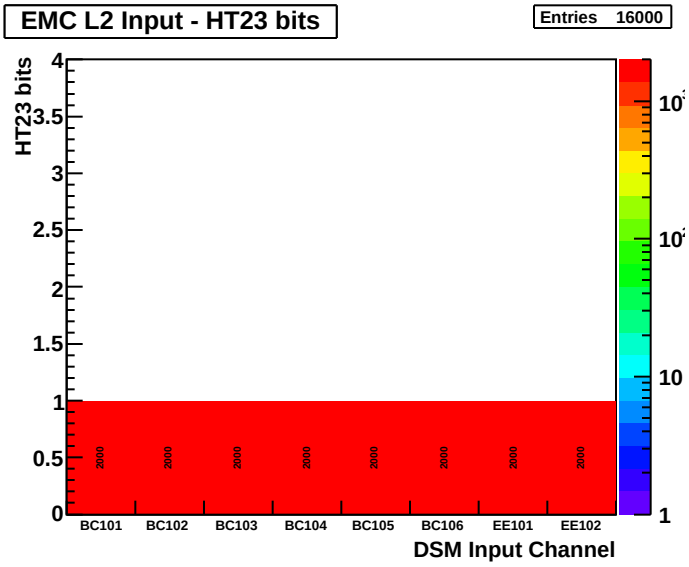

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

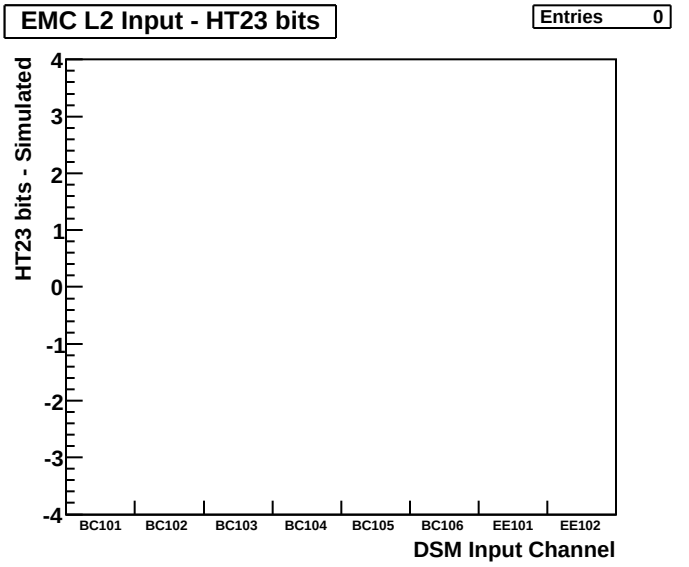

EMC L2 Input - Partial JP Sum
Entries 16000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

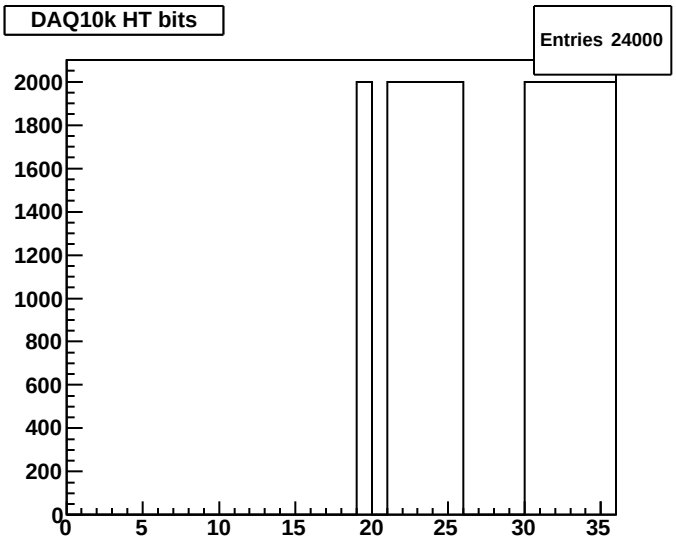

EMC L2 Input - Partial JP Sum
Entries 4134
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

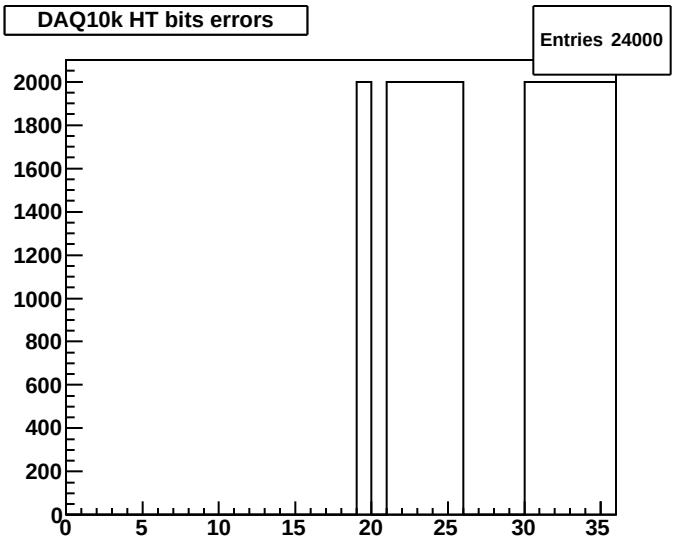

EMC L2 Input - HT01 bits/Partial JP ID
Entries 16000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

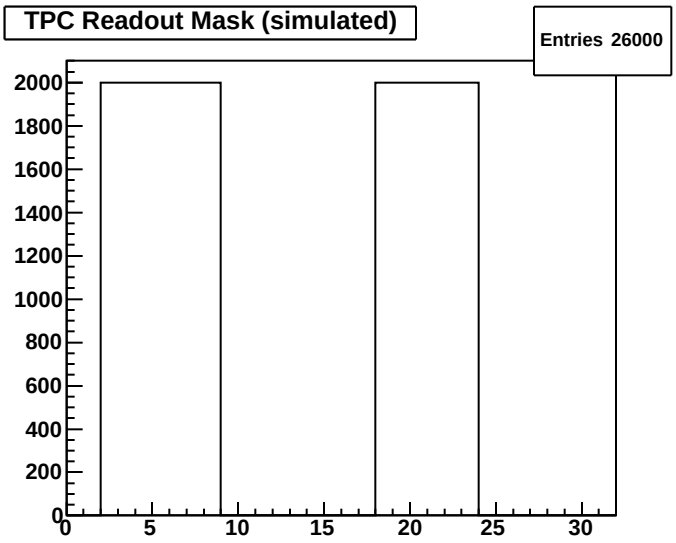

EMC L2 Input - HT01 bits/Partial JP ID
Entries 683
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

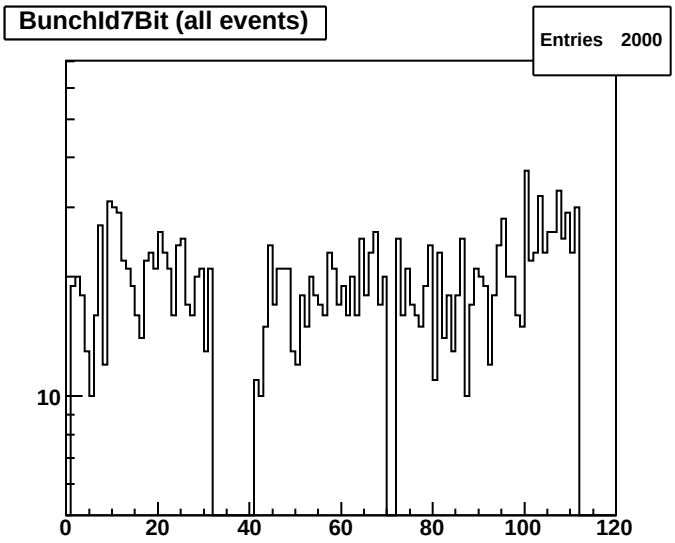

EMC L2 Input - HT23 bits
Entries 16000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

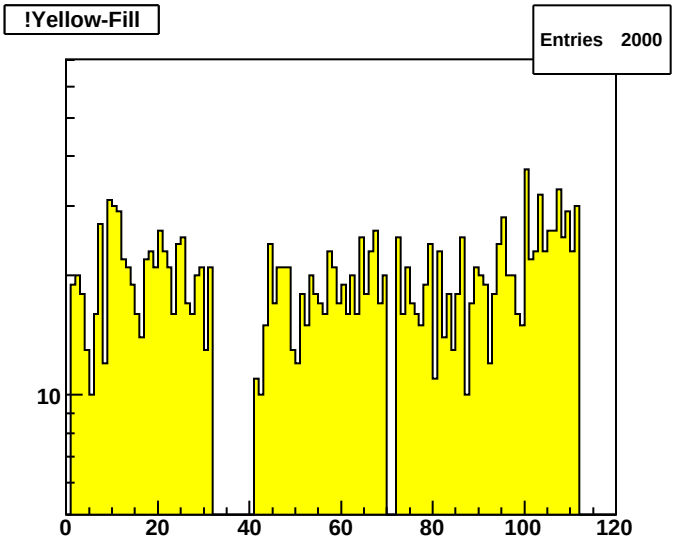

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

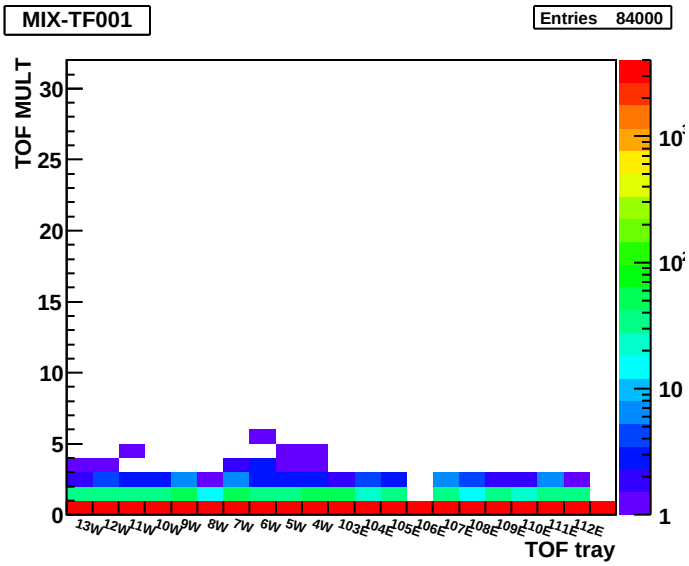

DAQ10k HT bits
Entries 24000
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

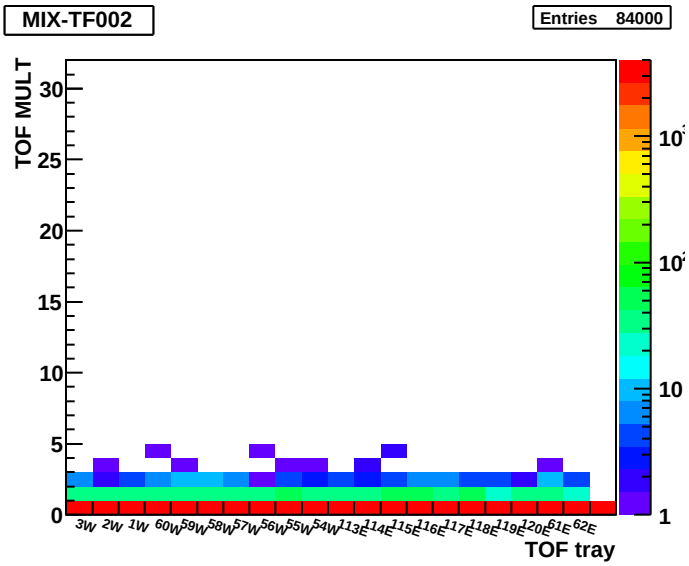

DAQ10k HT bits errors
Entries 24000
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

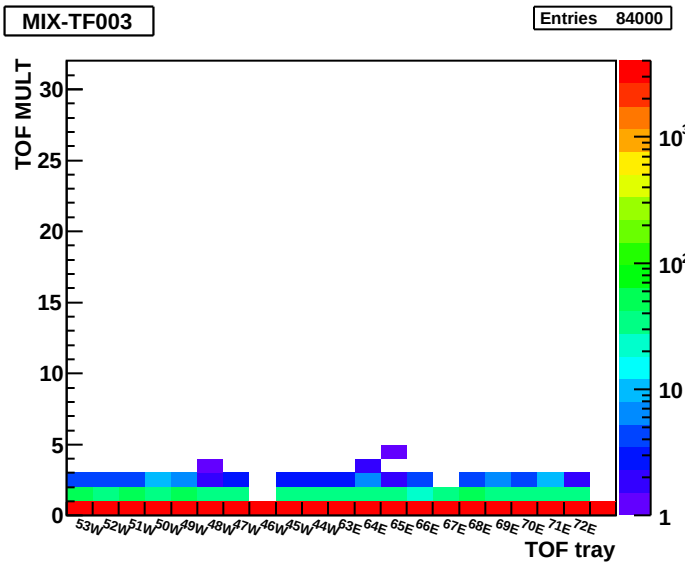

TPC Readout Mask (simulated)
Entries 26000
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0 5 10 15 20 25 30

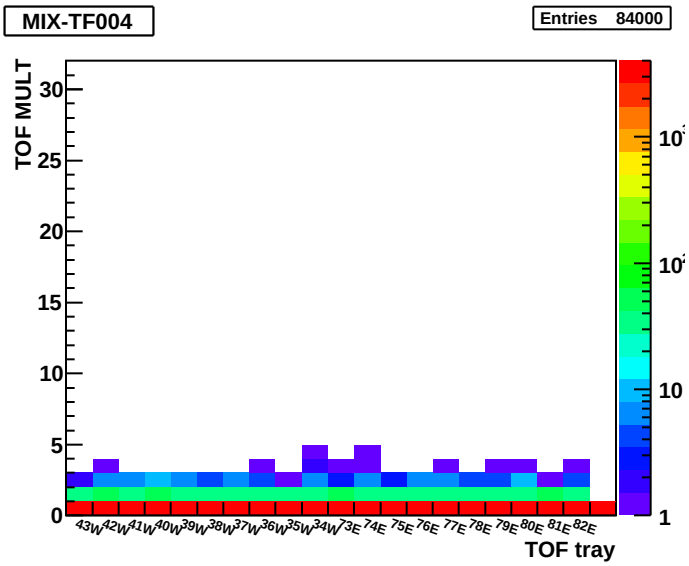

BunchId7Bit (all events)
Entries 2000
10
0 20 40 60 80 100 120

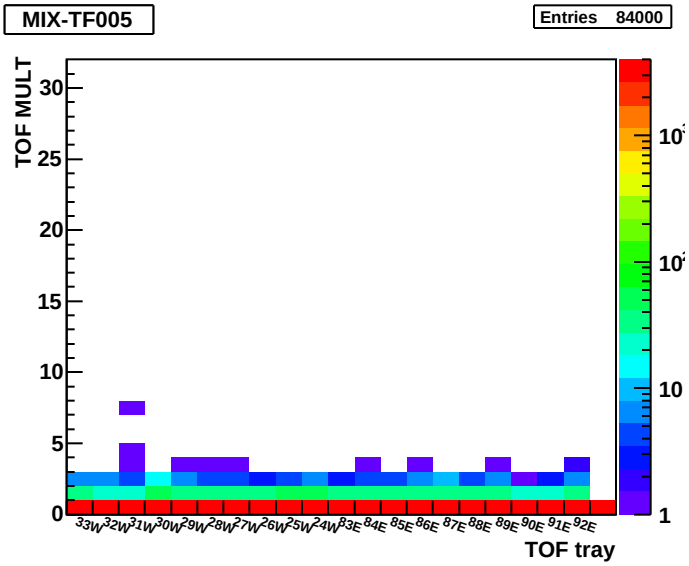

!Yellow-Fill
Entries 2000
10
0 20 40 60 80 100 120

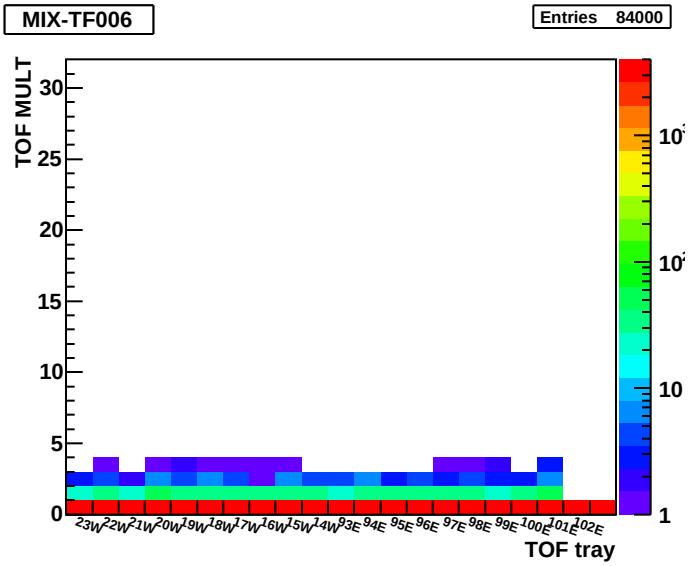

MIX-TF001
Entries 84000
TOF MULT
TOF tray

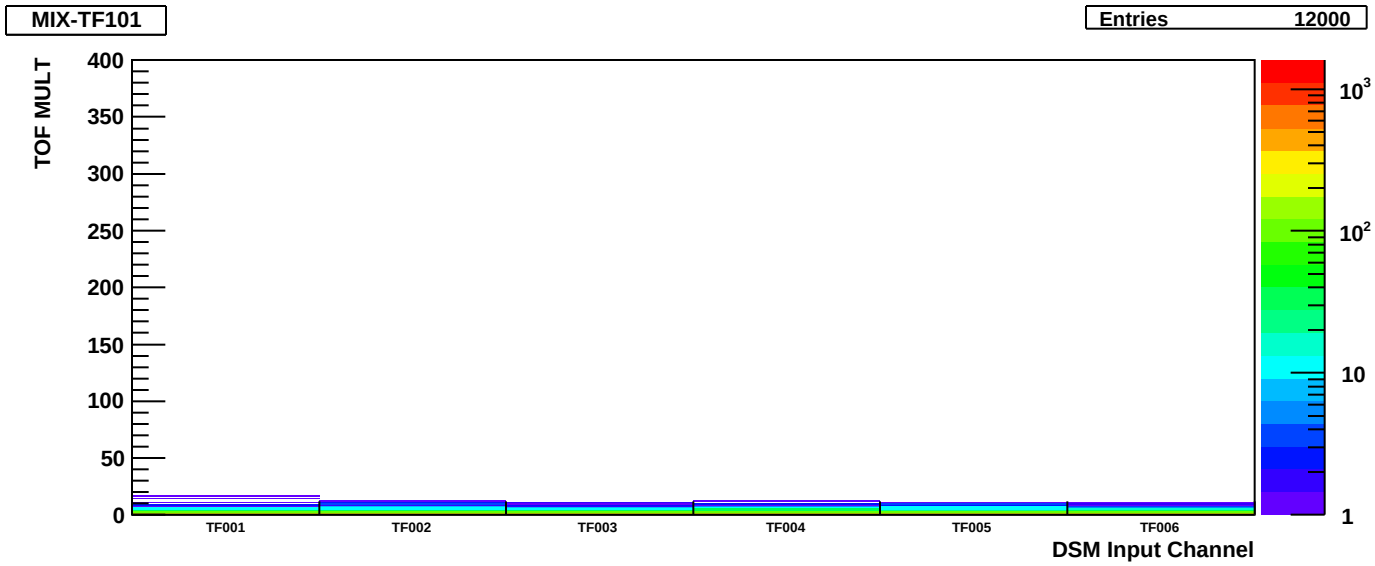

MIX-TF002
Entries 84000
TOF MULT
TOF tray

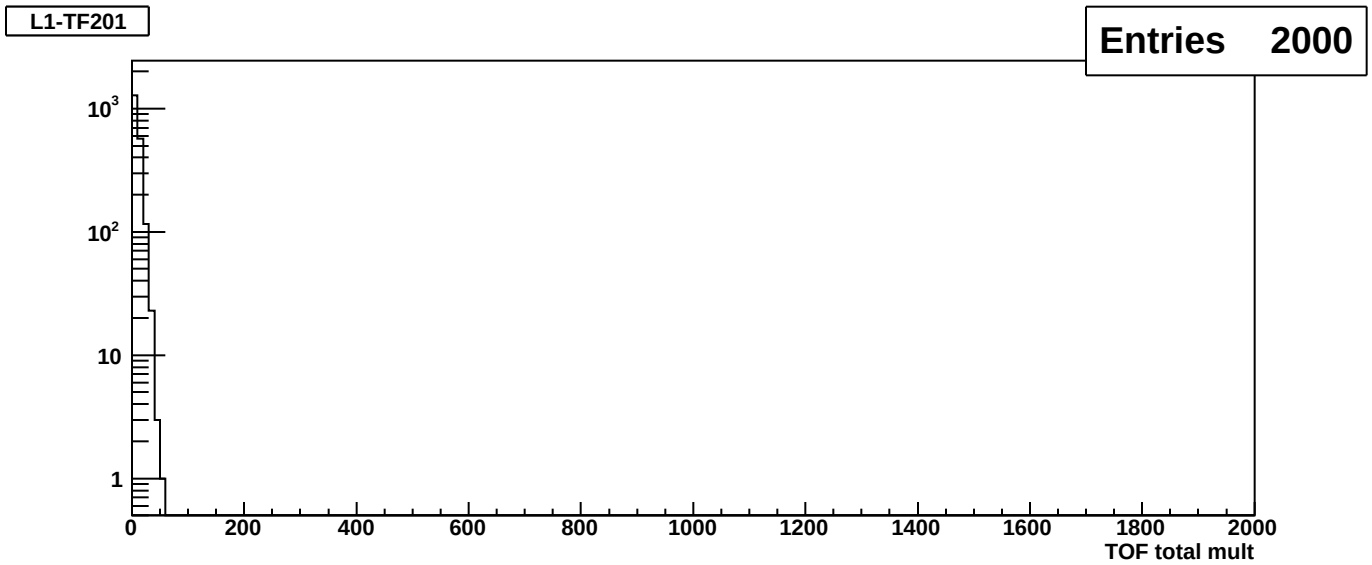

MIX-TF003
Entries 84000
TOF MULT
TOF tray

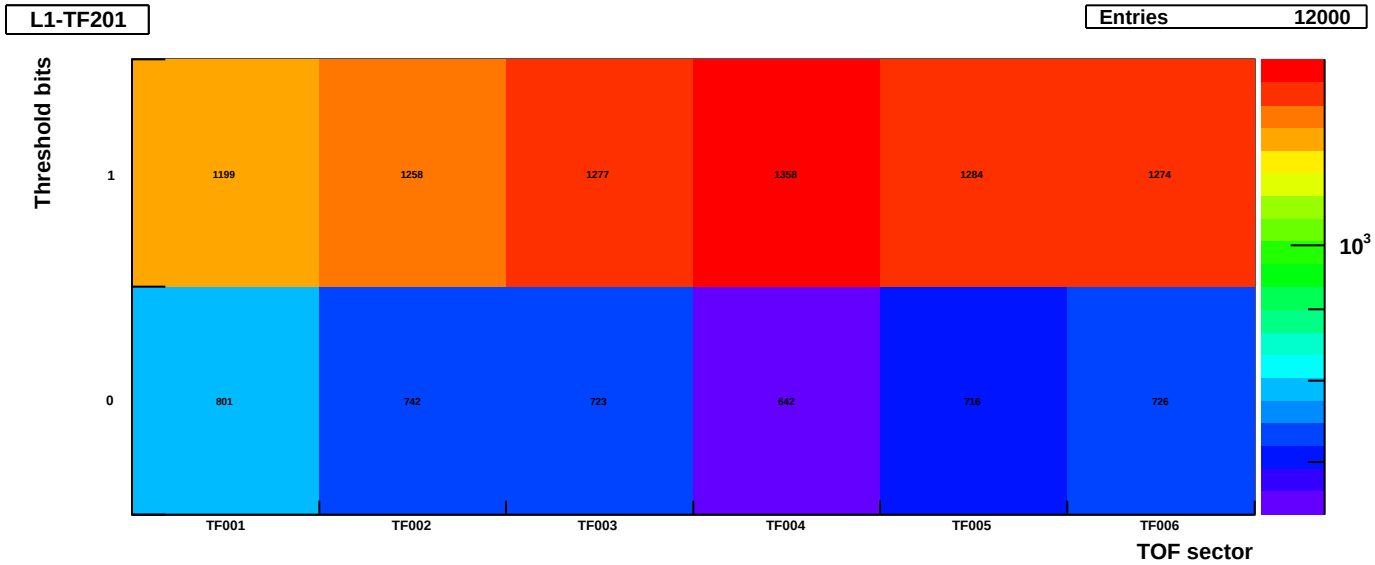

MIX-TF004
Entries 84000
TOF MULT
TOF tray

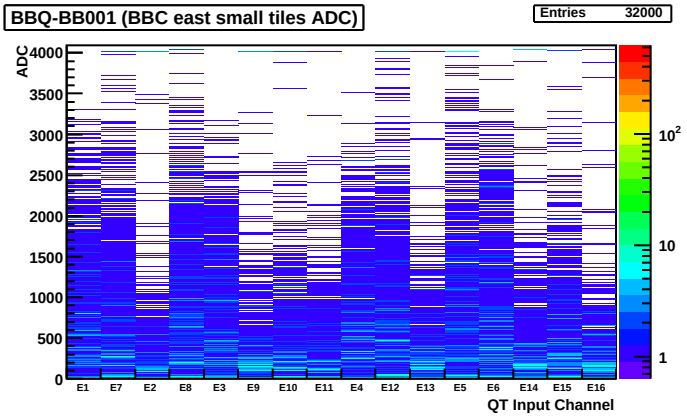

MIX-TF005
Entries 84000
TOF MULT
TOF tray

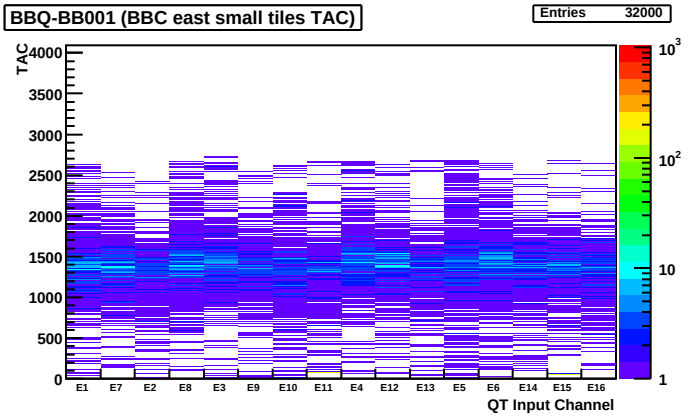

MIX-TF006
Entries 84000
TOF MULT
TOF tray

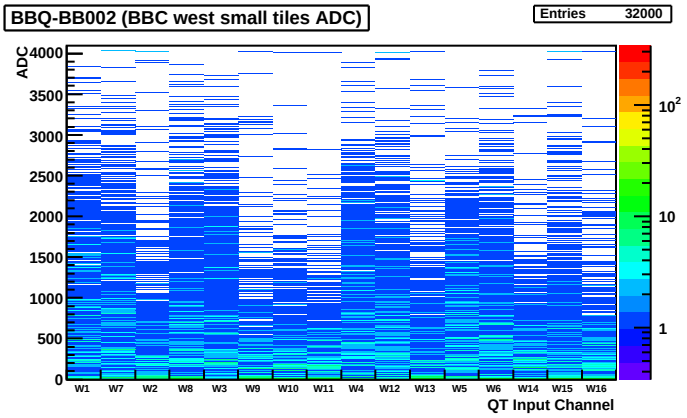

MIX-TF101
Entries 12000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

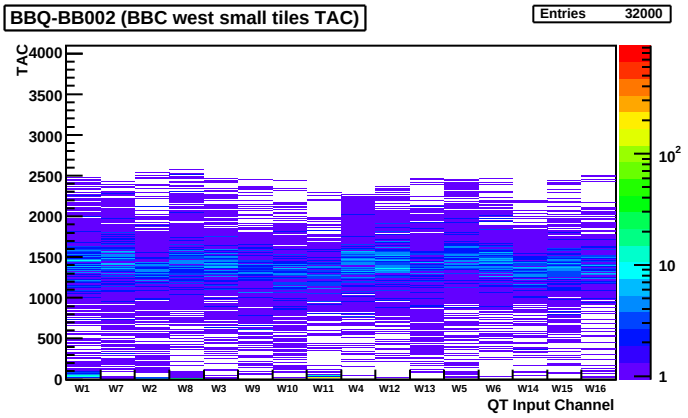

L1-TF201
Entries 2000
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

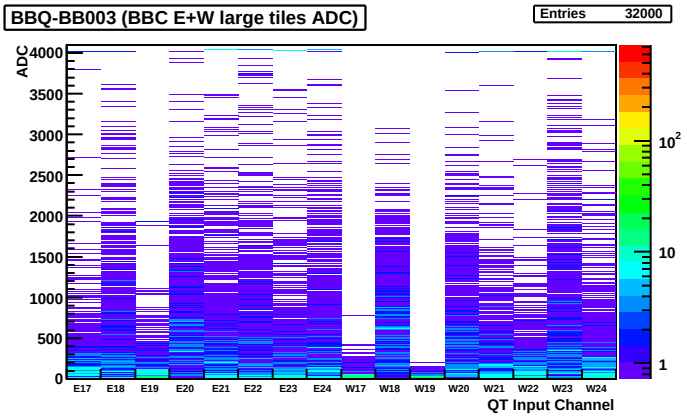

L1-TF201
Entries 12000
Threshold bits
1
0
1199
1258
1277
1358
1284
1274
801
742
723
642
716
726
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3

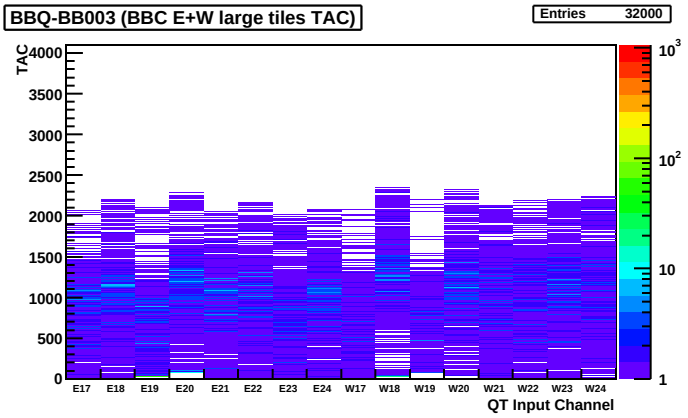

BBQ-BB001 (BBC east small tiles ADC)
Entries 32000
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

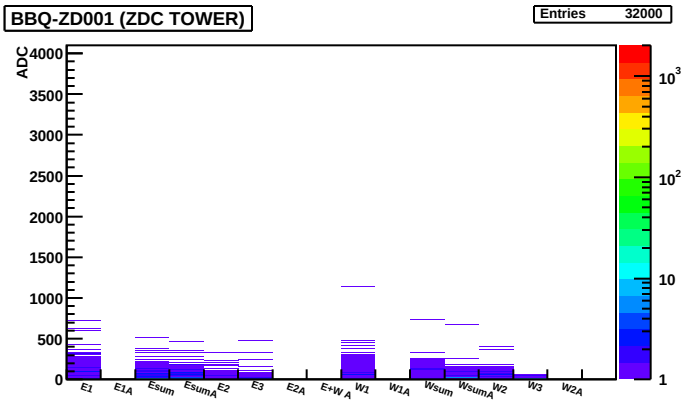

BBQ-BB001 (BBC east small tiles TAC)
Entries 32000
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

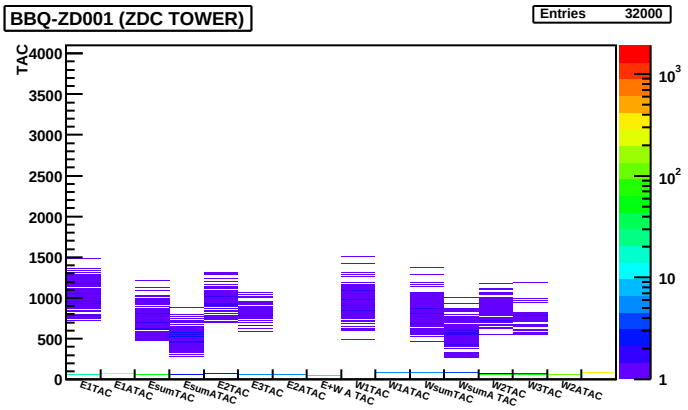

BBQ-BB002 (BBC west small tiles ADC)
Entries 32000
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

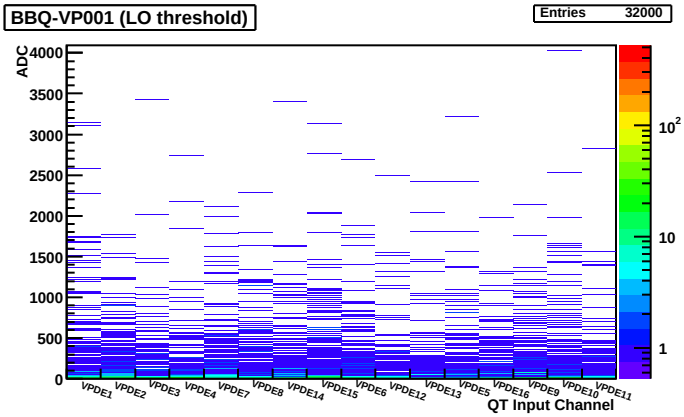

BBQ-BB002 (BBC west small tiles TAC)
Entries 32000
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

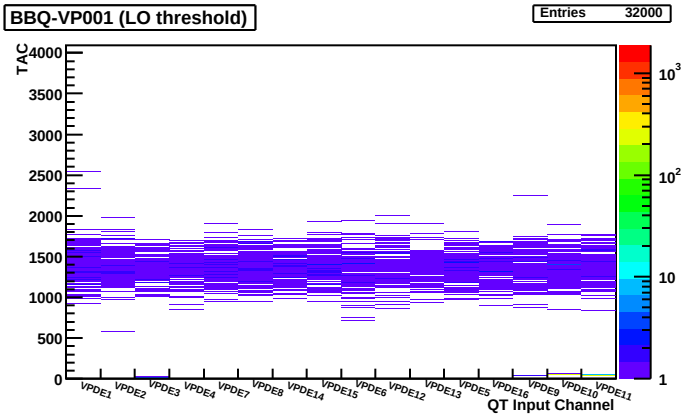

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 32000
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

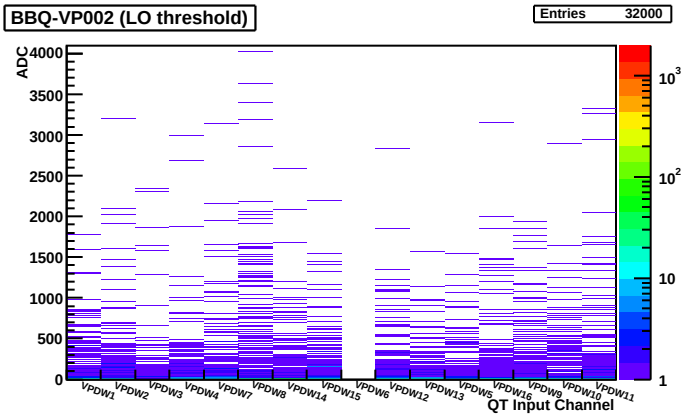

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 32000
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

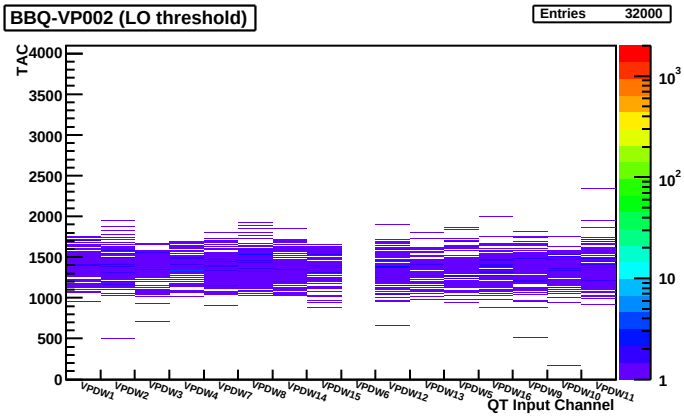

BBQ-ZD001 (ZDC TOWER)
Entries 32000
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

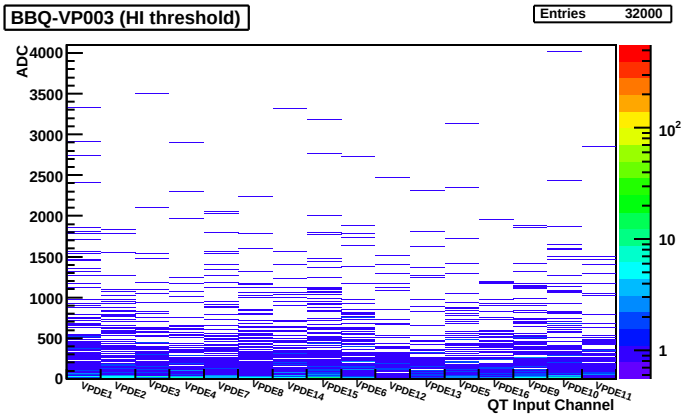

BBQ-ZD001 (ZDC TOWER)
Entries 32000
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

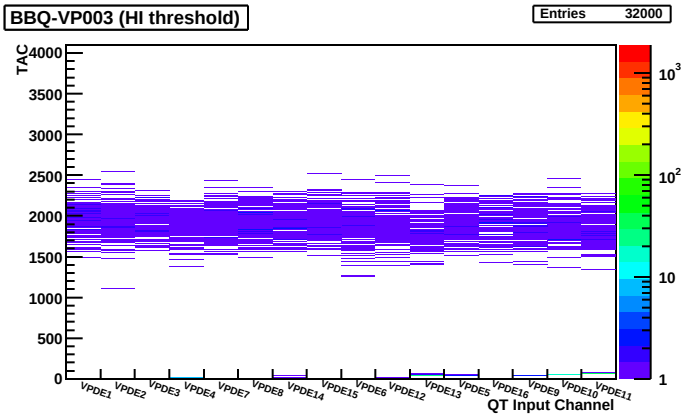

BBQ-VP001 (LO threshold)
Entries 32000
ADC
QT Input Channel

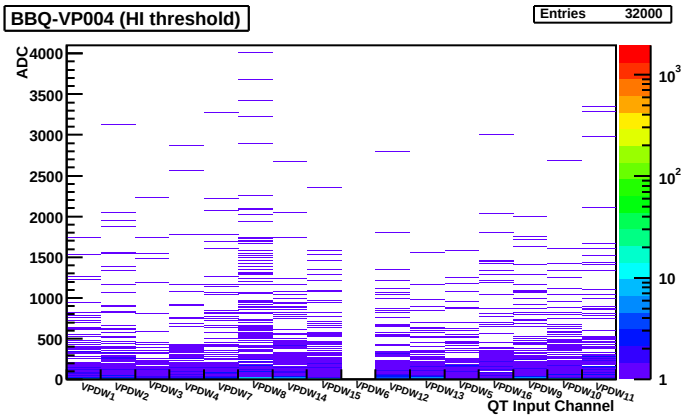

BBQ-VP001 (LO threshold)
Entries 32000
TAC
QT Input Channel

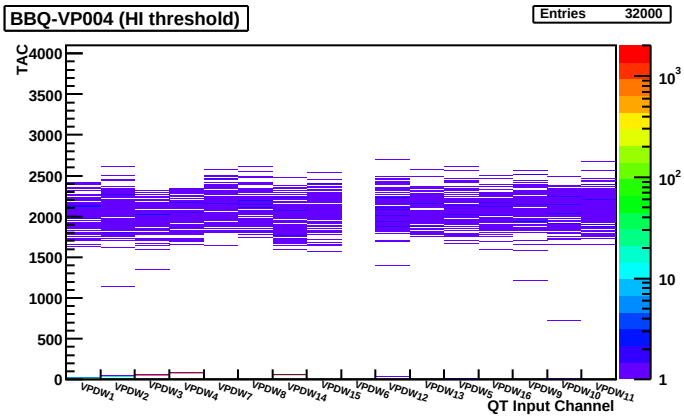

BBQ-VP002 (LO threshold)
Entries 32000
ADC
QT Input Channel

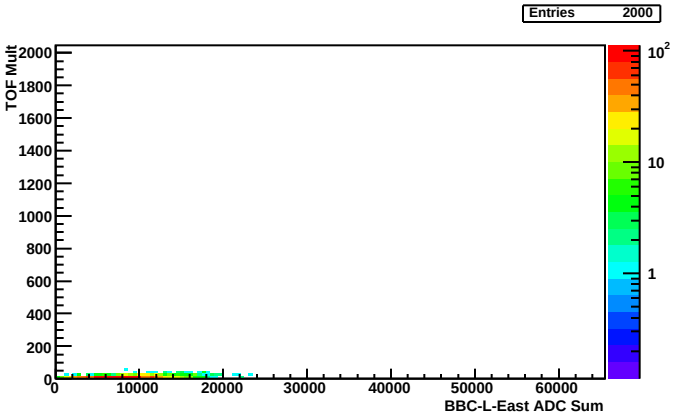

BBQ-VP002 (LO threshold)
Entries 32000
TAC
QT Input Channel

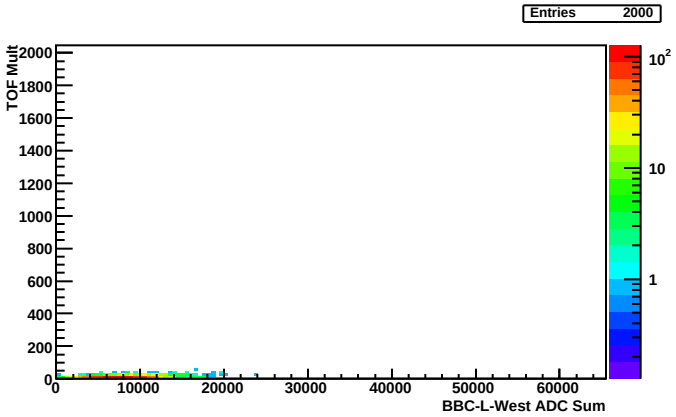

BBQ-VP003 (HI threshold)
Entries 32000
ADC
QT Input Channel

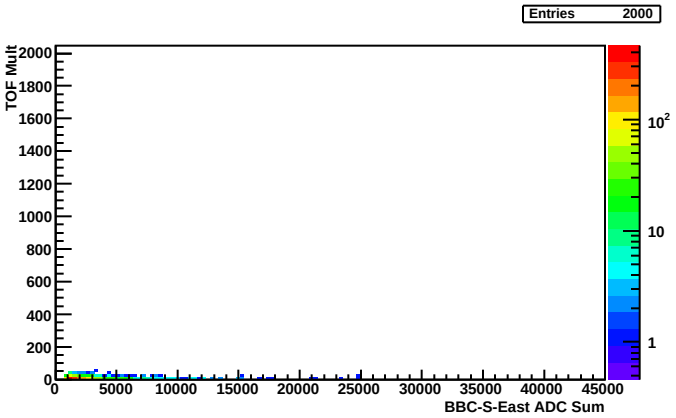

BBQ-VP003 (HI threshold)
Entries 32000
TAC
QT Input Channel

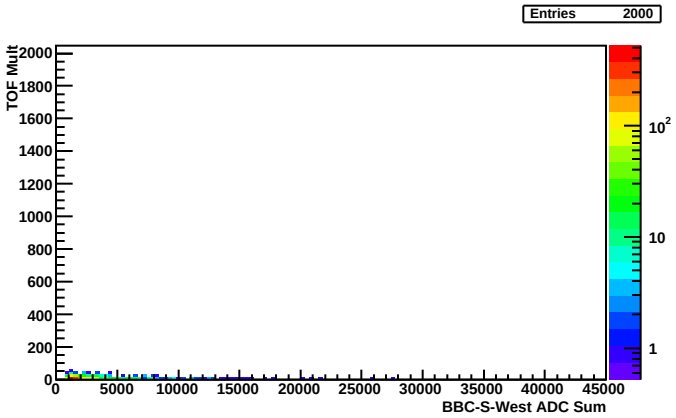

BBQ-VP004 (HI threshold)
Entries 32000
ADC
QT Input Channel

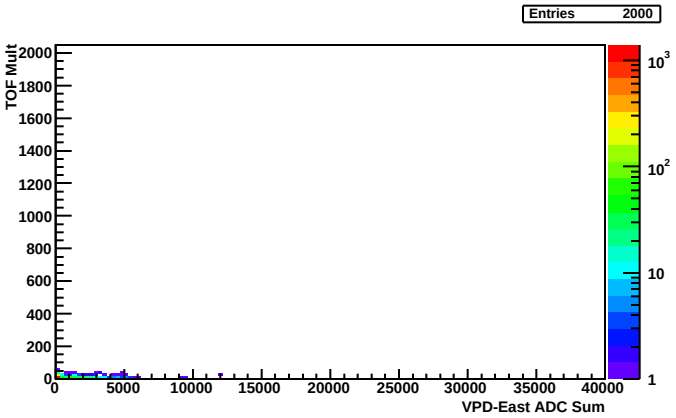

BBQ-VP004 (HI threshold)
Entries 32000
TAC
QT Input Channel

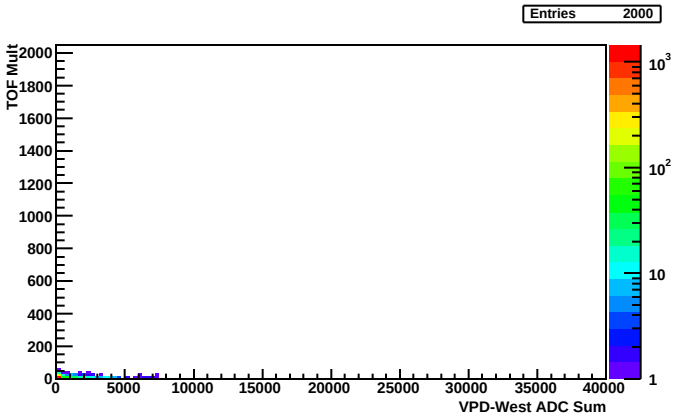

Entries 2000
TOF Mult
BBC-L-East ADC Sum

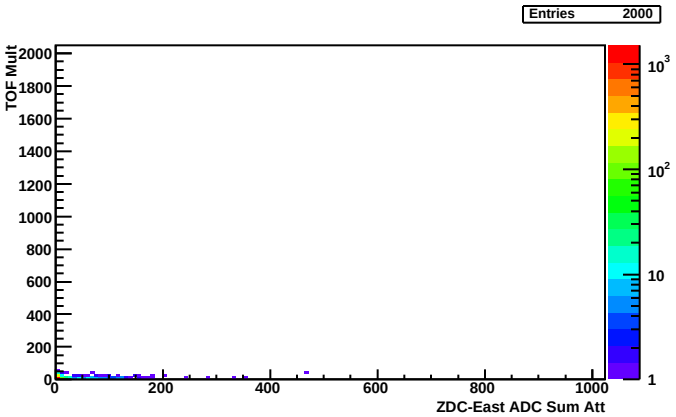

Entries 2000
TOF Mult
BBC-L-West ADC Sum

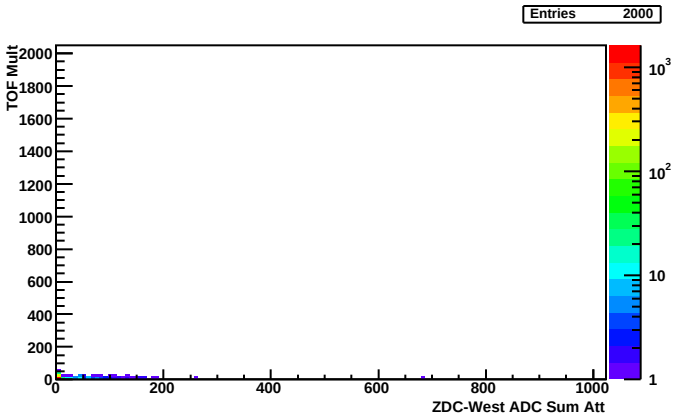

Entries 2000
TOF Mult
BBC-S-East ADC Sum

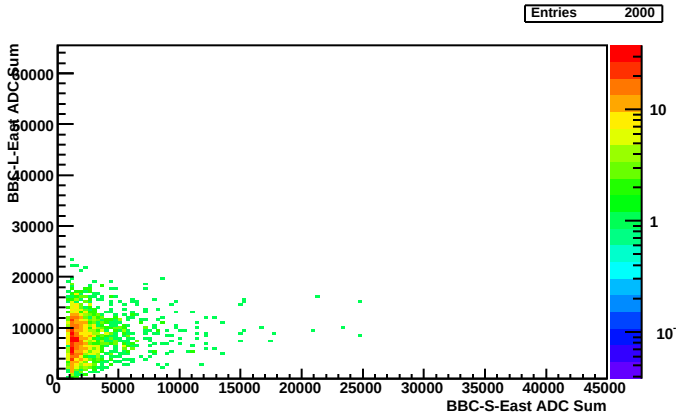

Entries 2000
TOF Mult
BBC-S-West ADC Sum

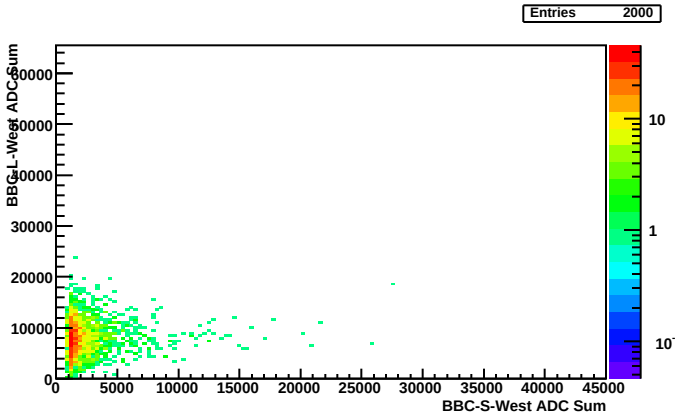

Entries 2000
TOF Mult
VPD-East ADC Sum

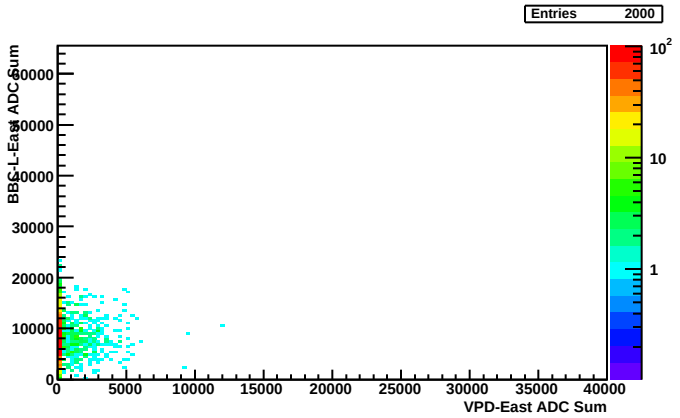

Entries 2000
TOF Mult
VPD-West ADC Sum

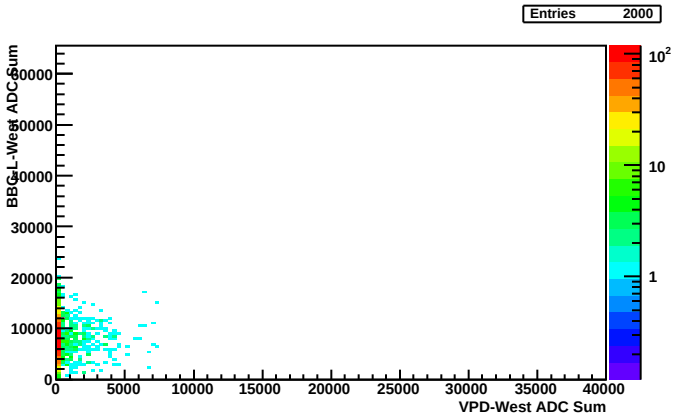

Entries 2000
TOF Mult
ZDC-East ADC Sum Att

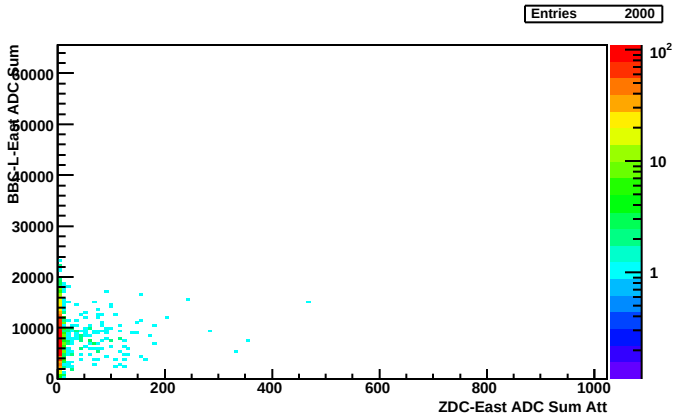

Entries 2000
TOF Mult
ZDC-West ADC Sum Att

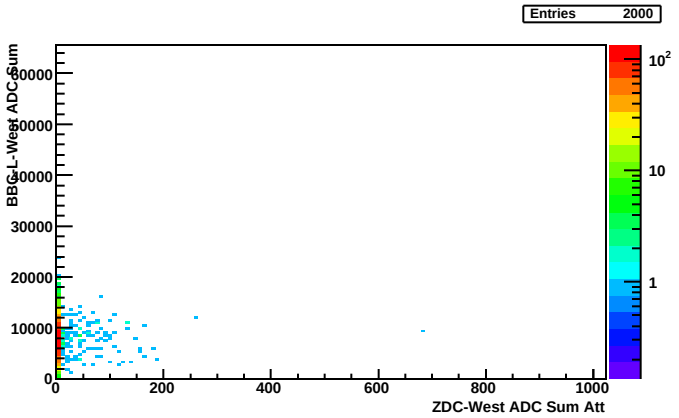

Entries 2000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

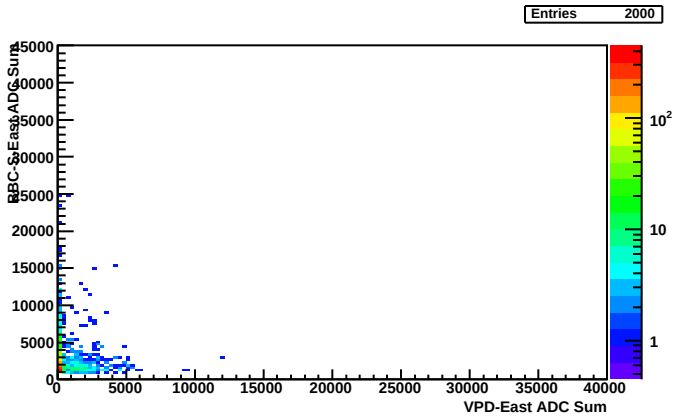

Entries 2000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

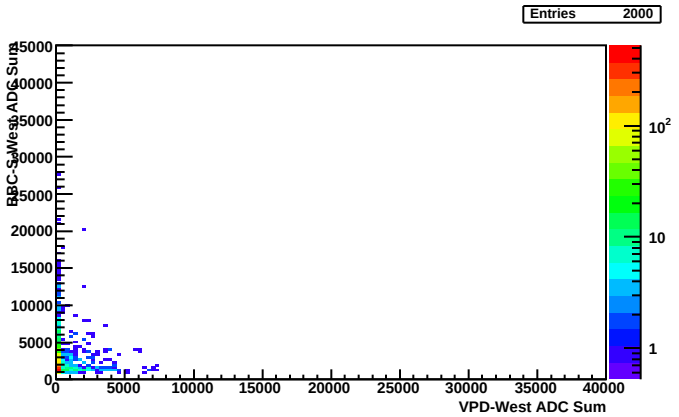

Entries 2000
BBC-L-East ADC Sum
VPD-East ADC Sum

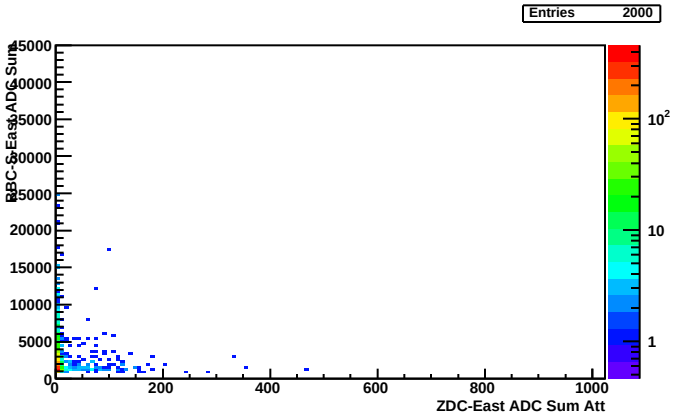

Entries 2000
BBC-L-West ADC Sum
VPD-West ADC Sum

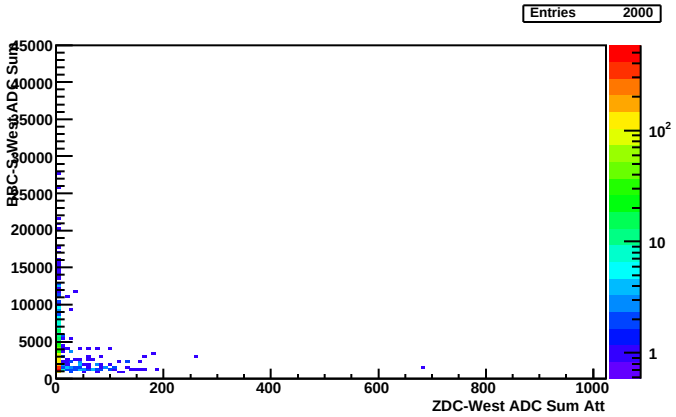

Entries 2000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

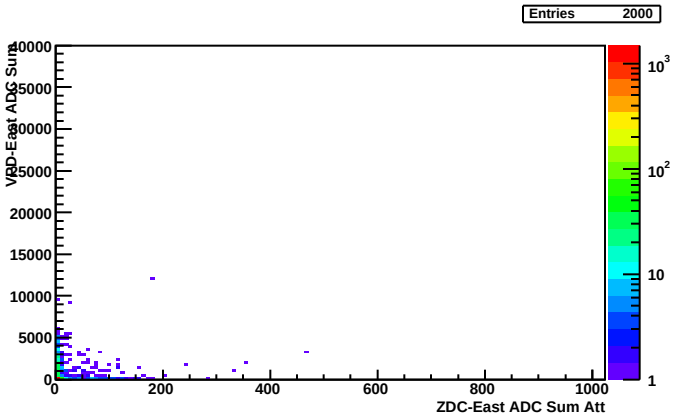

Entries 2000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

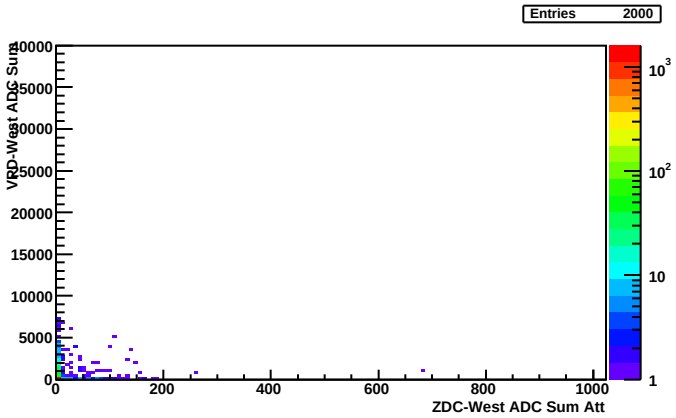

Entries 2000
BBC-S-East ADC Sum
VPD-East ADC Sum

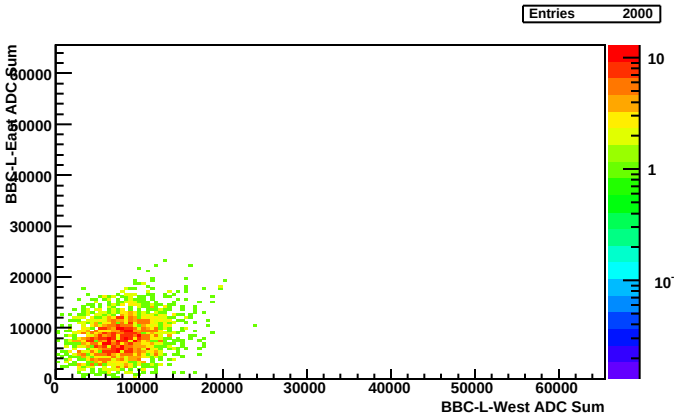

Entries 2000
BBC-S-West ADC Sum
VPD-West ADC Sum

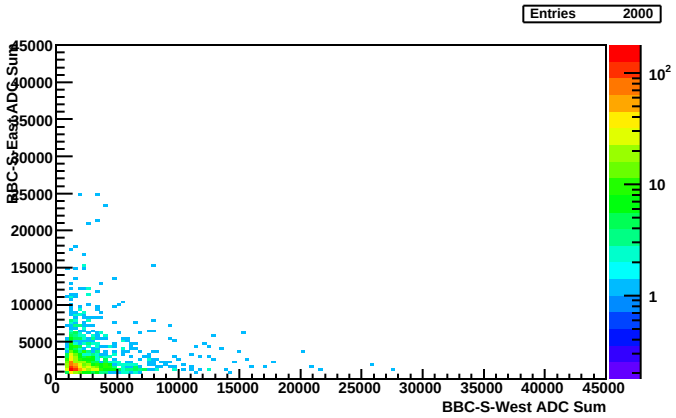

Entries 2000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

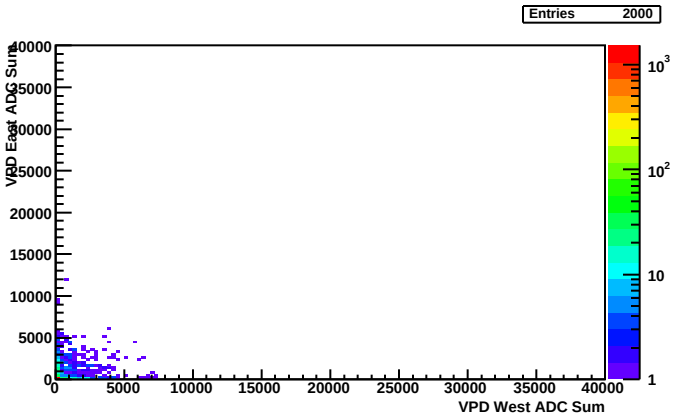

Entries 2000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

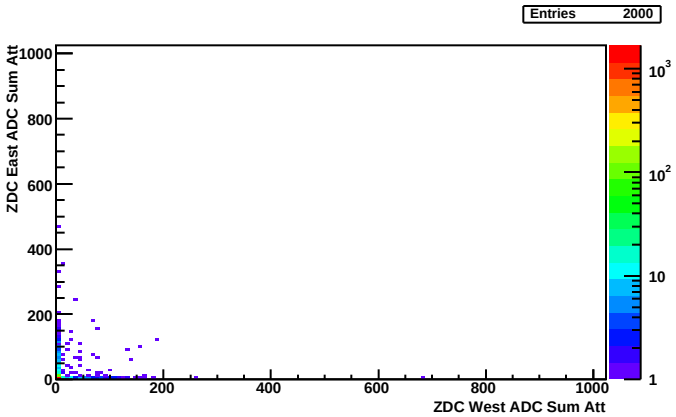

Entries 2000
VPD-East ADC Sum
ZDC-East ADC Sum Att

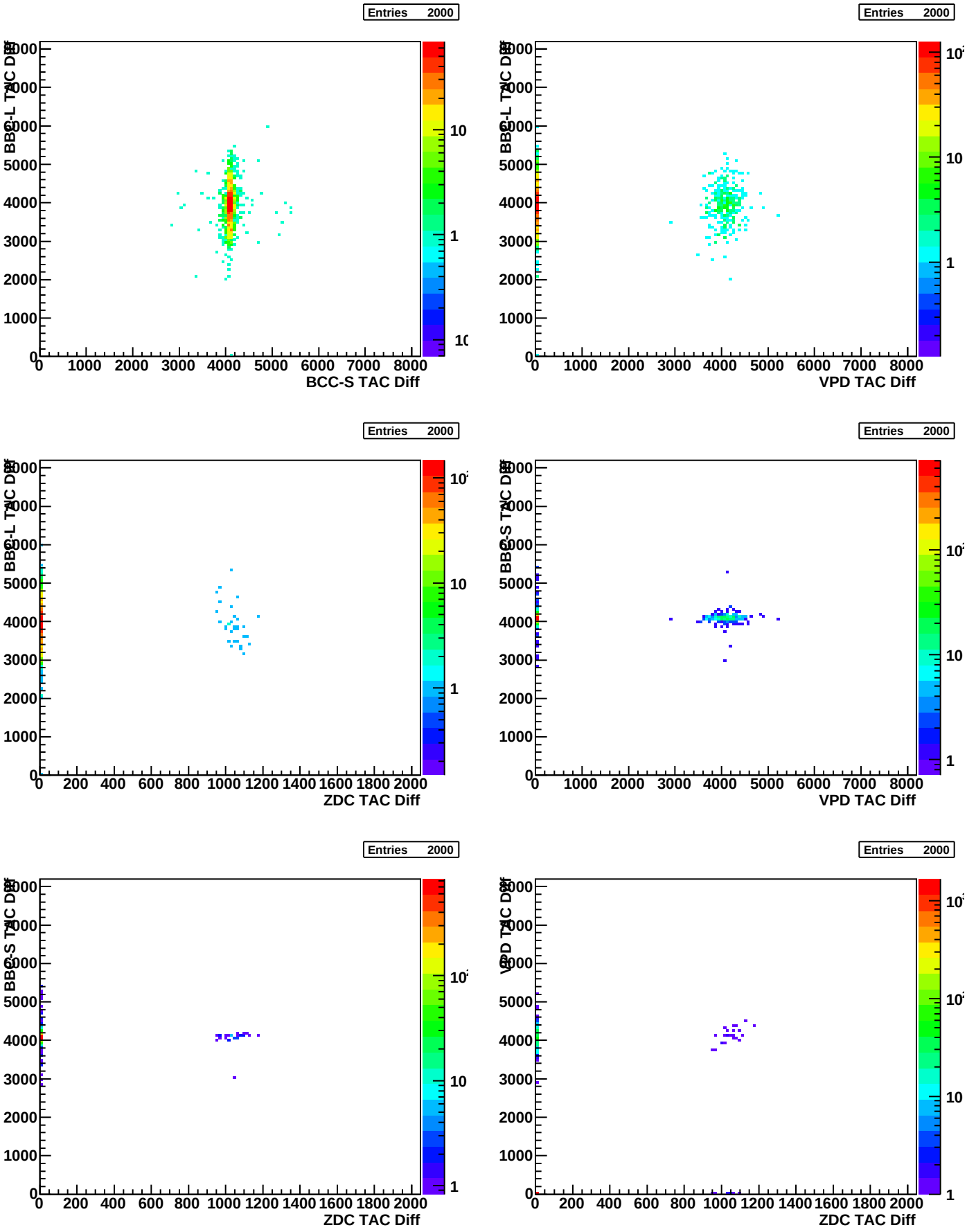

Entries 2000
VPD-West ADC Sum
ZDC-West ADC Sum Att

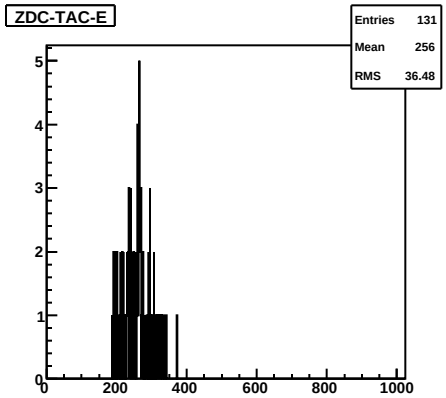

Entries 2000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

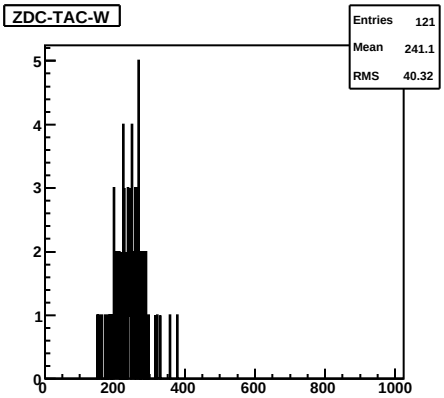

Entries 2000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

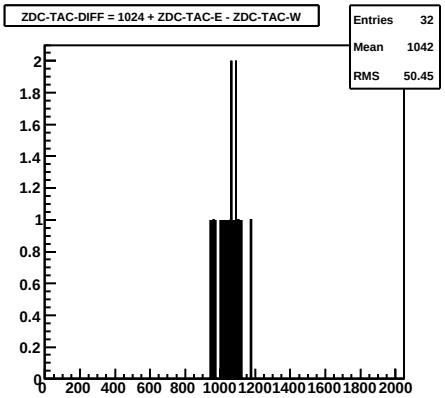

Entries 2000
VPD East ADC Sum
VPD West ADC Sum

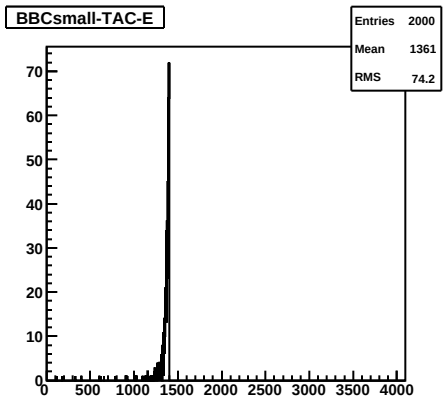

Entries 2000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

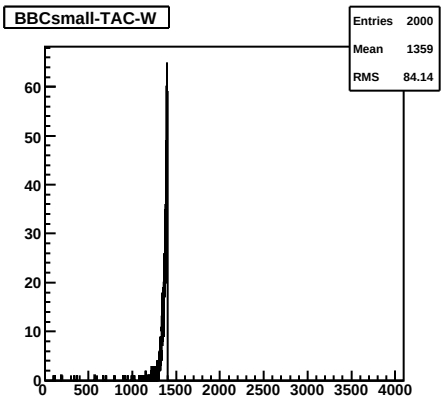

Entries 2000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 2000
BBC-L TAC Diff
VPD TAC Diff
Entries 2000
BBC-L TAC Diff
ZDC TAC Diff
Entries 2000
BBC-S TAC Diff
VPD TAC Diff
Entries 2000
BBC-S TAC Diff
ZDC TAC Diff
Entries 2000
VPD TAC Diff
ZDC TAC Diff

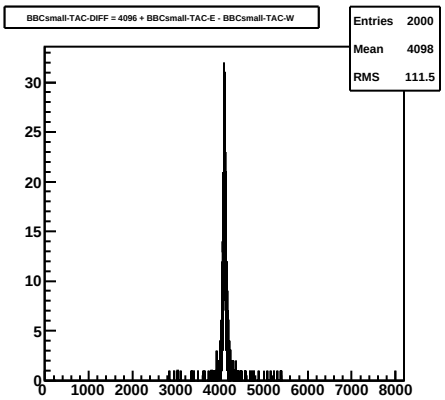

ZDC-TAC-E
Entries 131
Mean 256
RMS 36.48

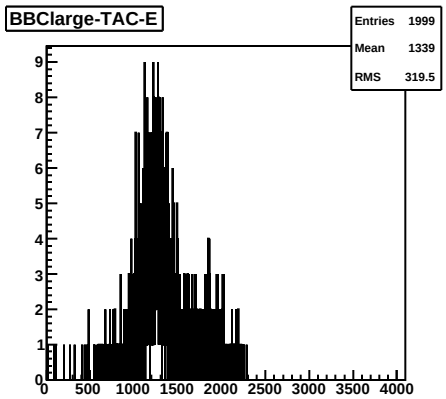

ZDC-TAC-W
Entries 121
Mean 241.1
RMS 40.32

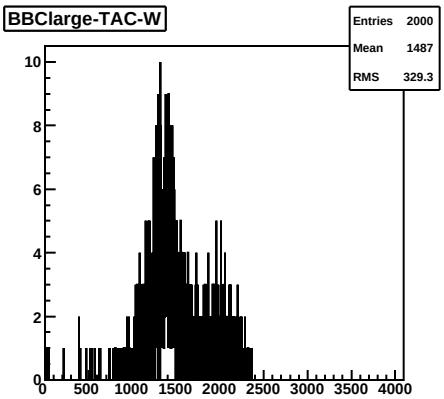

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 32
Mean 1042
RMS 50.45

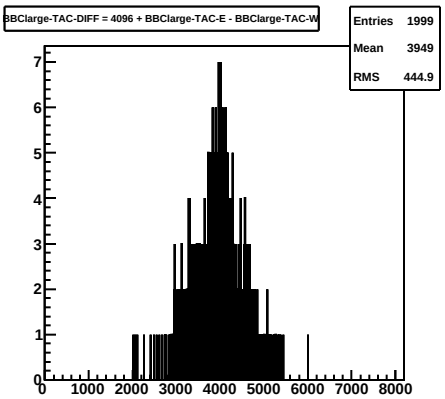

BBCsmall-TAC-E
Entries 2000
Mean 1361
RMS 74.2

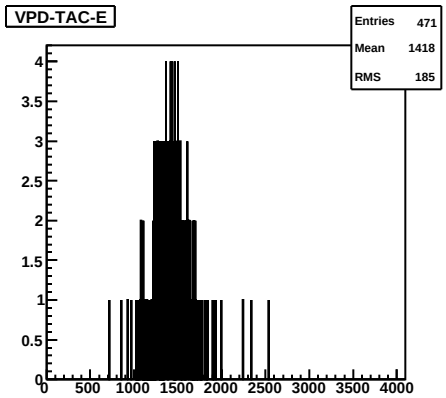

BBCsmall-TAC-W
Entries 2000
Mean 1359
RMS 84.14

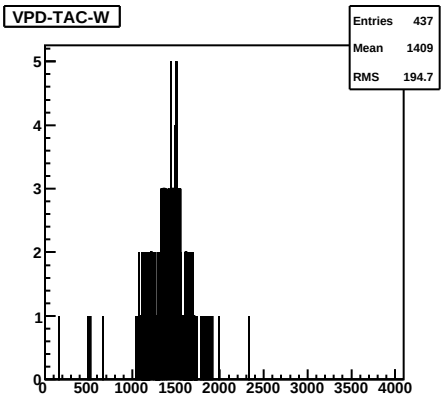

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 2000
Mean 4098
RMS 111.5

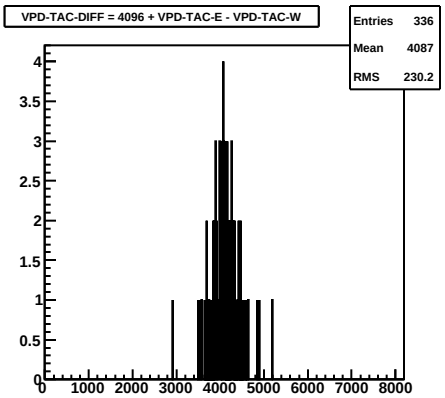

BBClarge-TAC-E
Entries 1999
Mean 1339
RMS 319.5

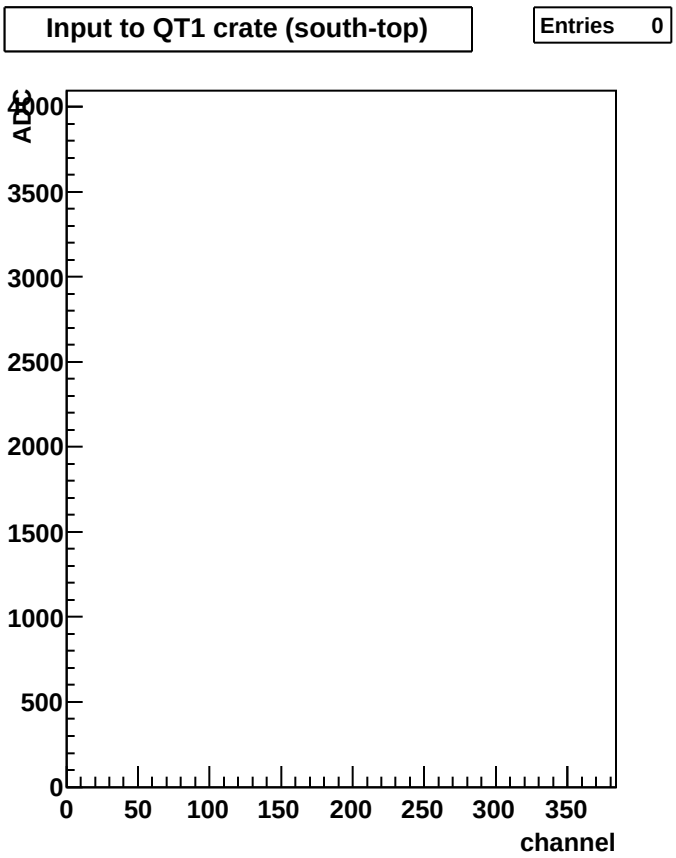

BBClarge-TAC-W
Entries 2000
Mean 1487
RMS 329.3

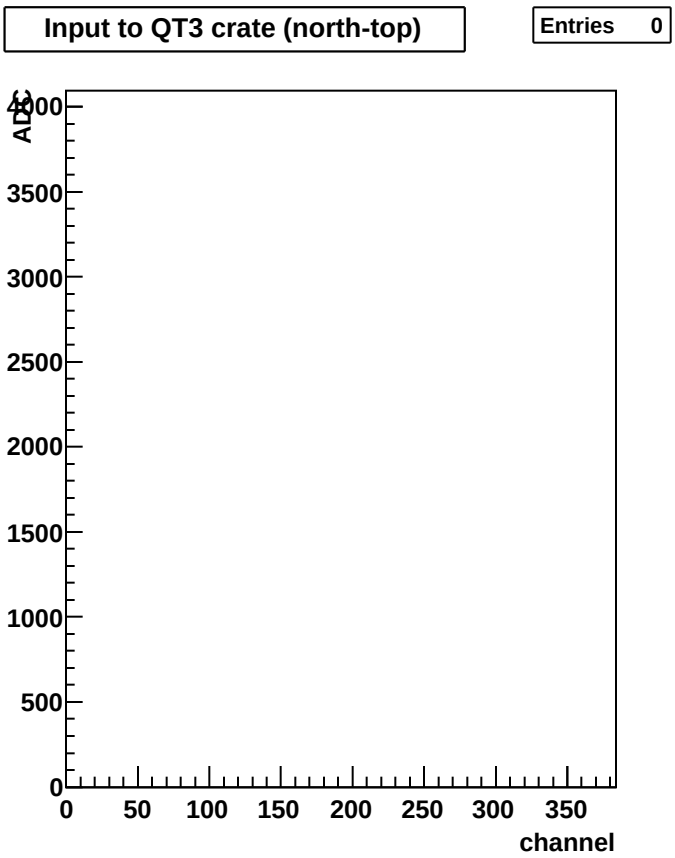

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1999
Mean 3949
RMS 444.9

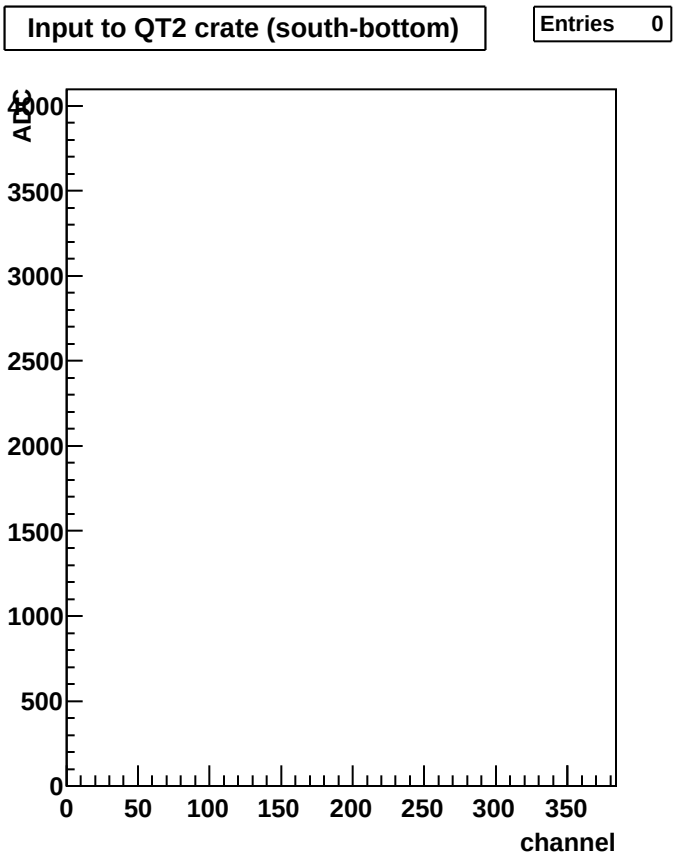

VPD-TAC-E
Entries 471
Mean 1418
RMS 185

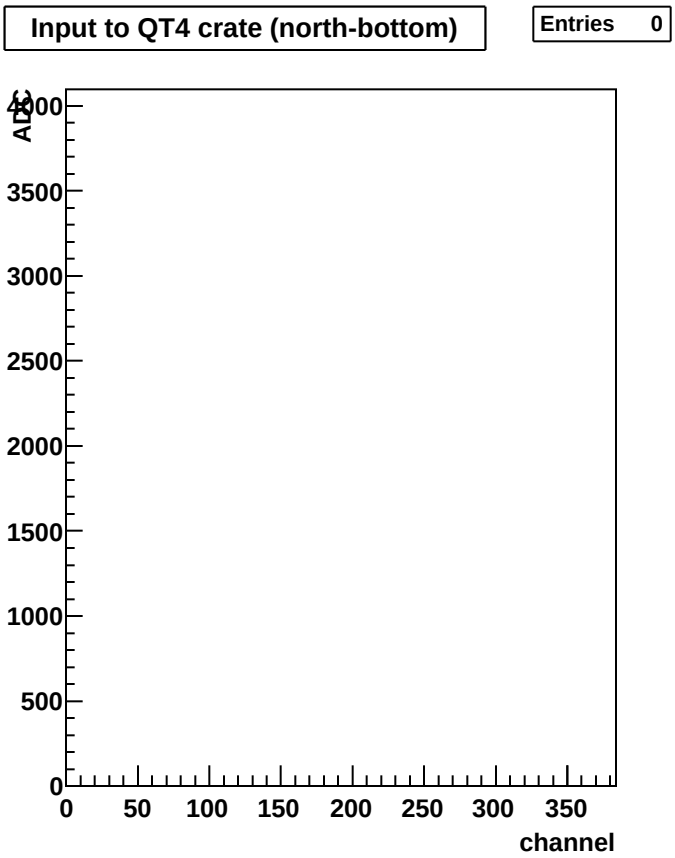

VPD-TAC-W
Entries 437
Mean 1409
RMS 194.7

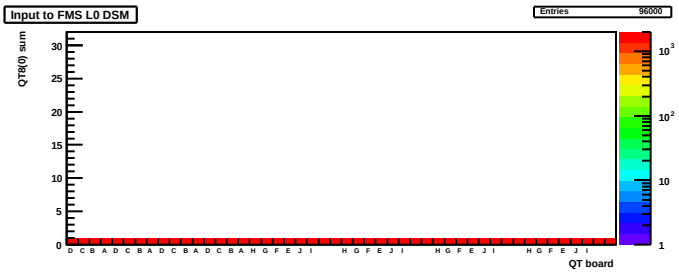

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 336
Mean 4087
RMS 230.2

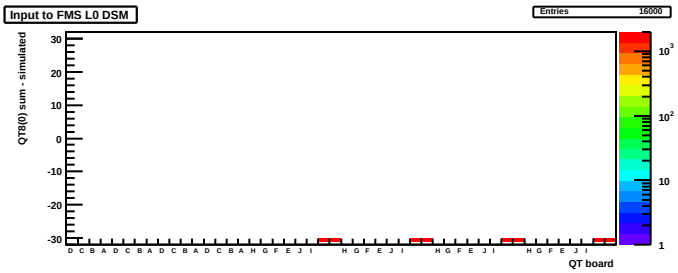

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

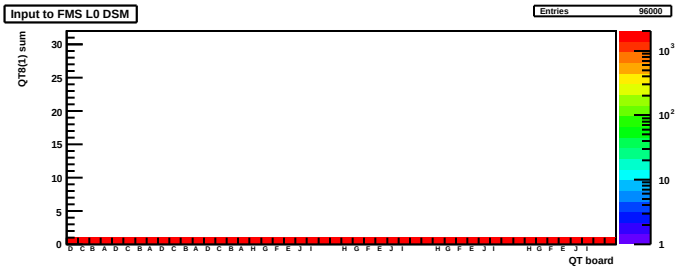

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

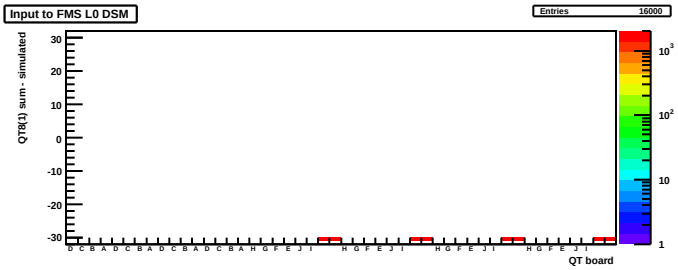

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

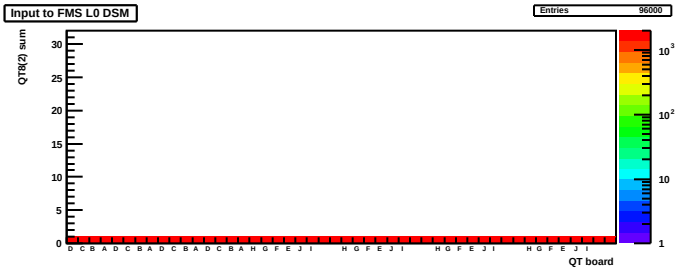

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

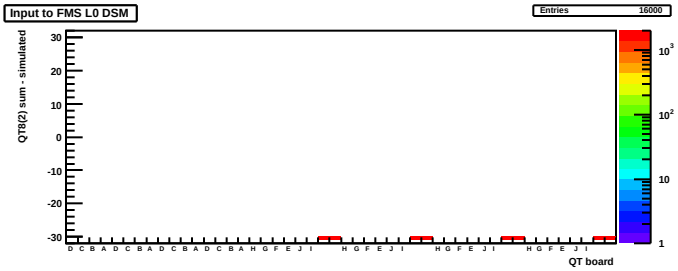

Input to FMS L0 DSM
Entries 96000
QT8(0) sum
QT board

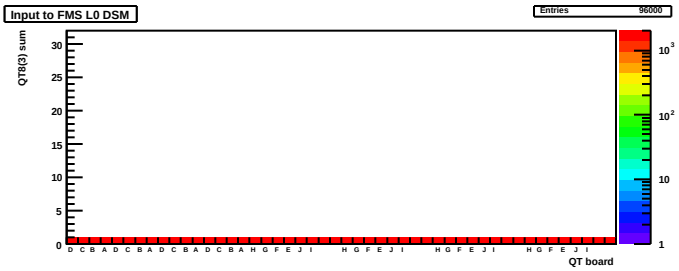

Input to FMS L0 DSM
Entries 16000
QT8(0) sum - simulated
QT board

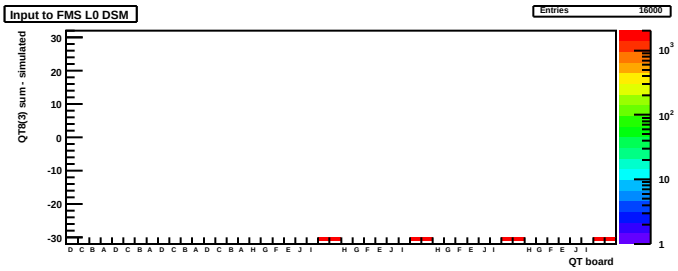

Input to FMS L0 DSM
Entries 96000
QT8(1) sum
QT board

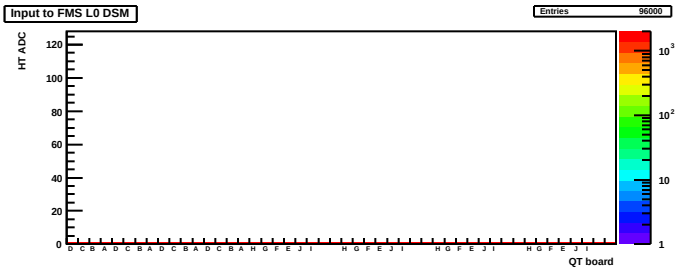

Input to FMS L0 DSM
Entries 16000
QT8(1) sum - simulated
QT board

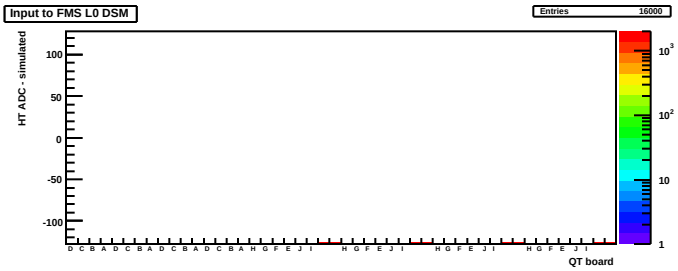

Input to FMS L0 DSM
Entries 96000
QT8(2) sum
QT board

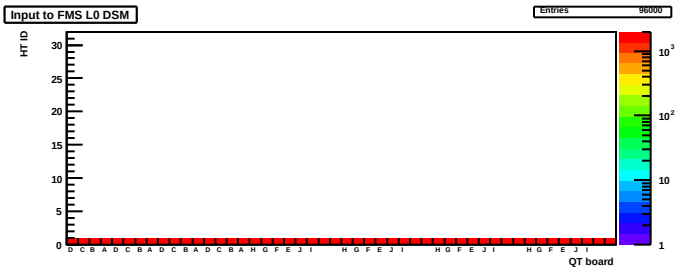

Input to FMS L0 DSM
Entries 16000
QT8(2) sum - simulated
QT board

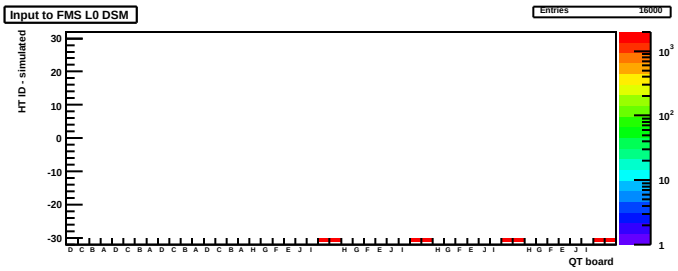

Input to FMS L0 DSM
Entries 96000
QT8(3) sum
QT board

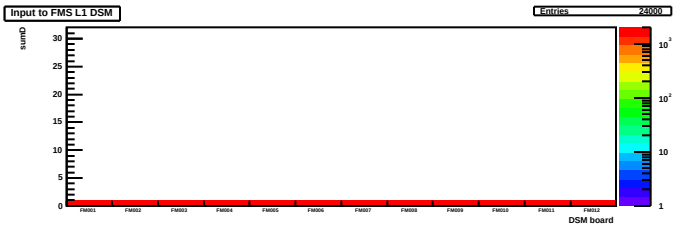

Input to FMS L0 DSM
Entries 16000
QT8(3) sum - simulated
QT board

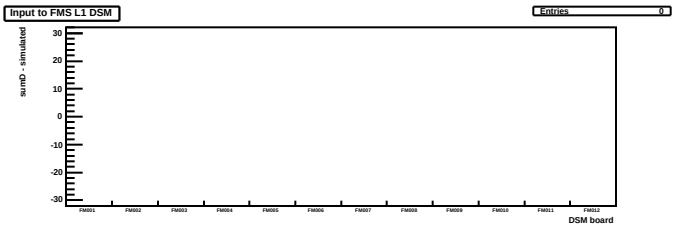

Input to FMS L0 DSM
Entries 96000
HT ADC
QT board

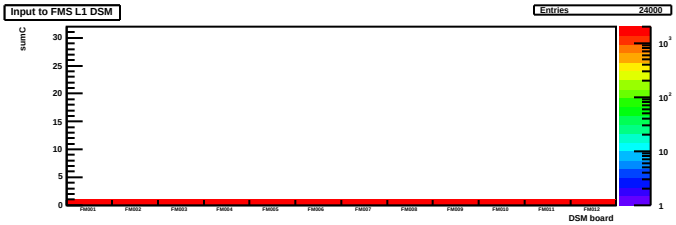

Input to FMS L0 DSM
Entries 16000
HT ADC - simulated
QT board

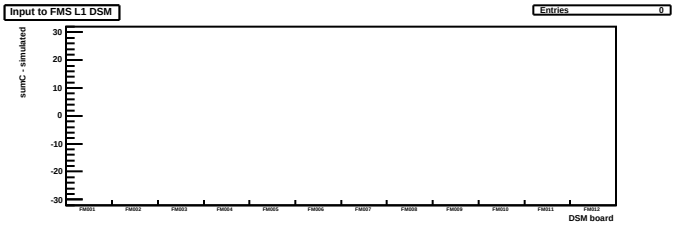

Input to FMS L0 DSM
Entries 96000
HT ID
QT board

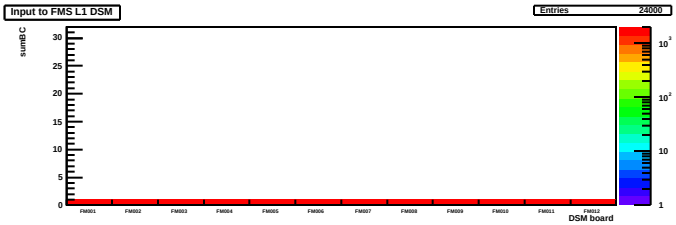

Input to FMS L0 DSM
Entries 16000
HT ID - simulated
QT board

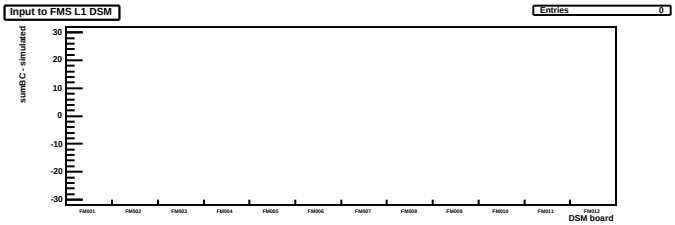

Input to FMS L1 DSM
Entries 24000
sumD
DSM board

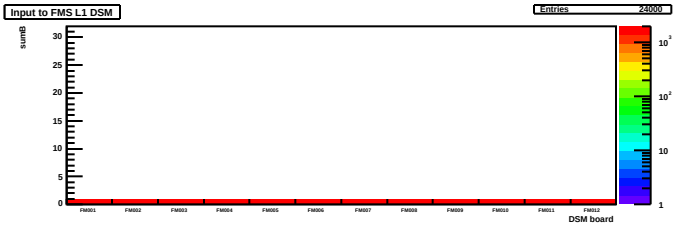

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

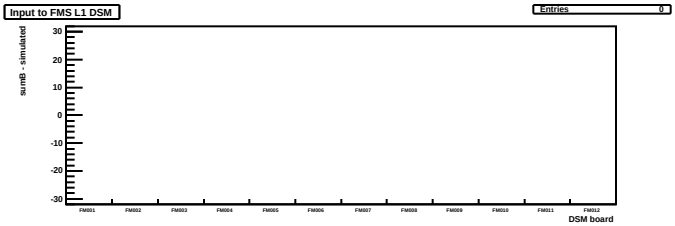

Input to FMS L1 DSM
Entries 24000
sumC
DSM board

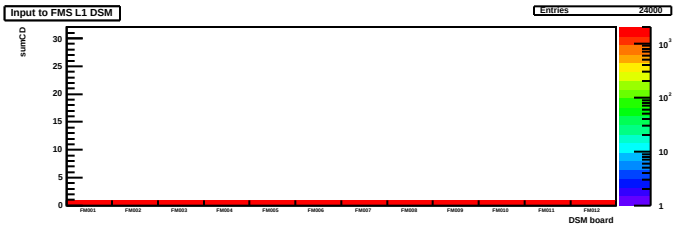

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

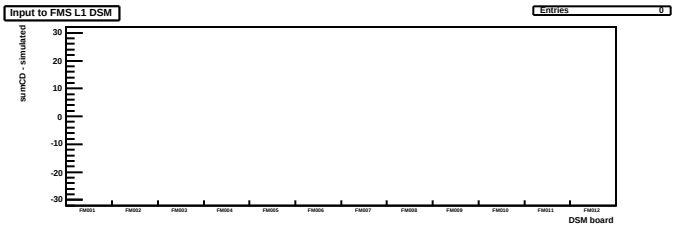

Input to FMS L1 DSM
Entries 24000
sumBC
DSM board

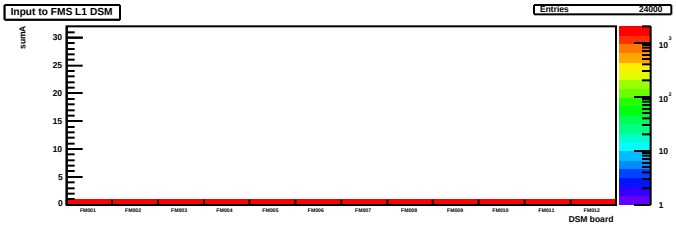

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

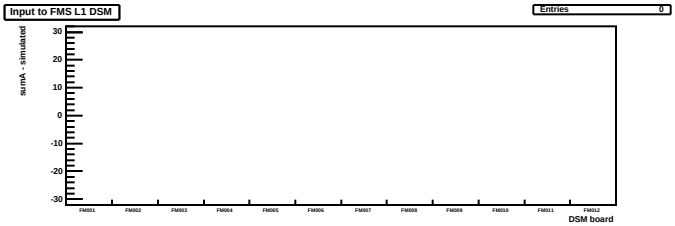

Input to FMS L1 DSM
Entries 24000
sumB
DSM board

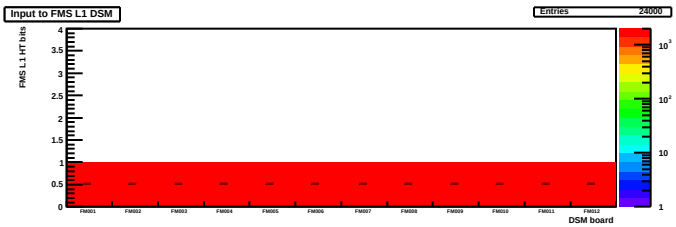

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

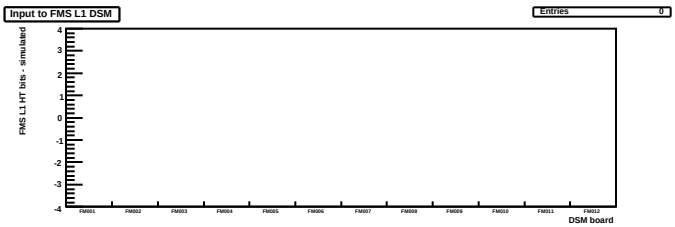

Input to FMS L1 DSM
Entries 24000
sumCD
DSM board

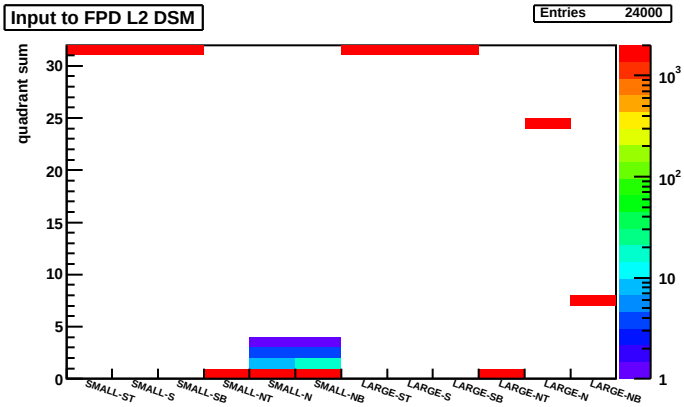

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

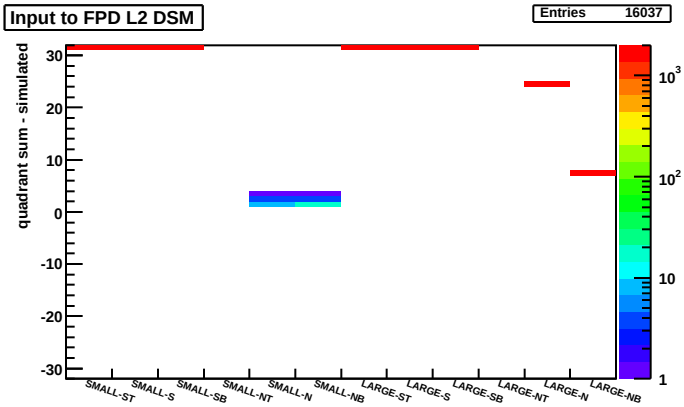

Input to FMS L1 DSM
Entries 24000
sumA
DSM board

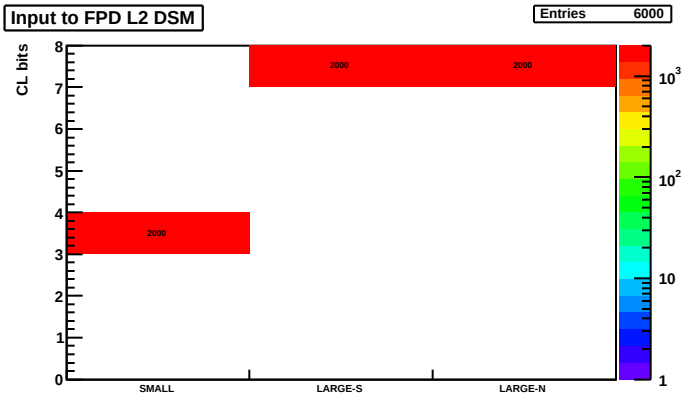

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

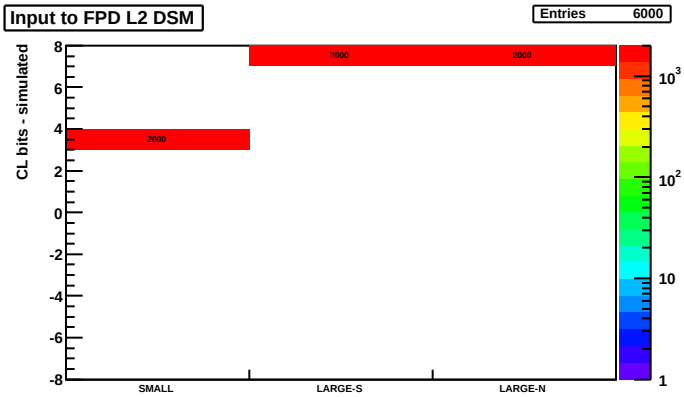

Input to FMS L1 DSM
Entries 24000
FMS L1 HT bits
DSM board

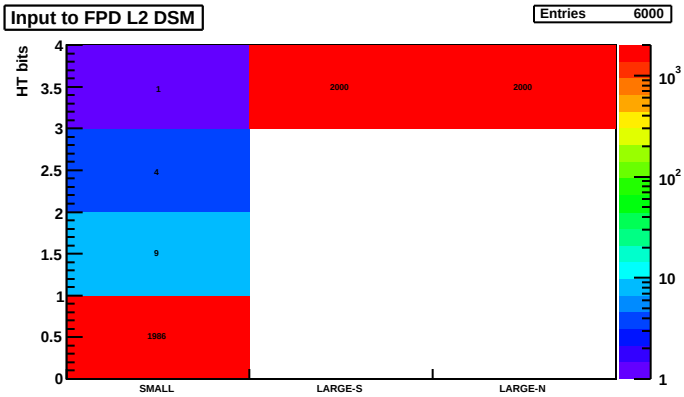

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

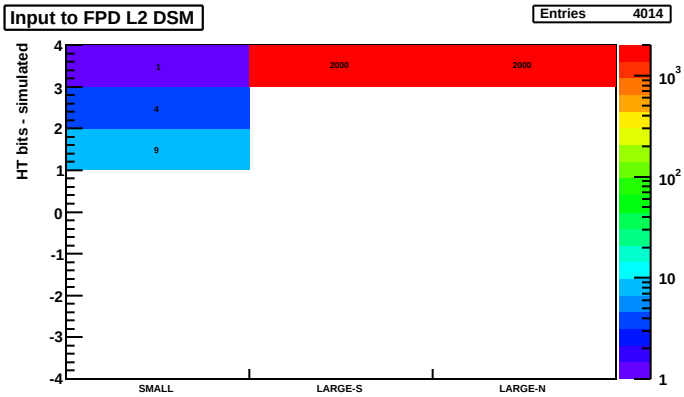

Input to FPD L2 DSM
Entries 24000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

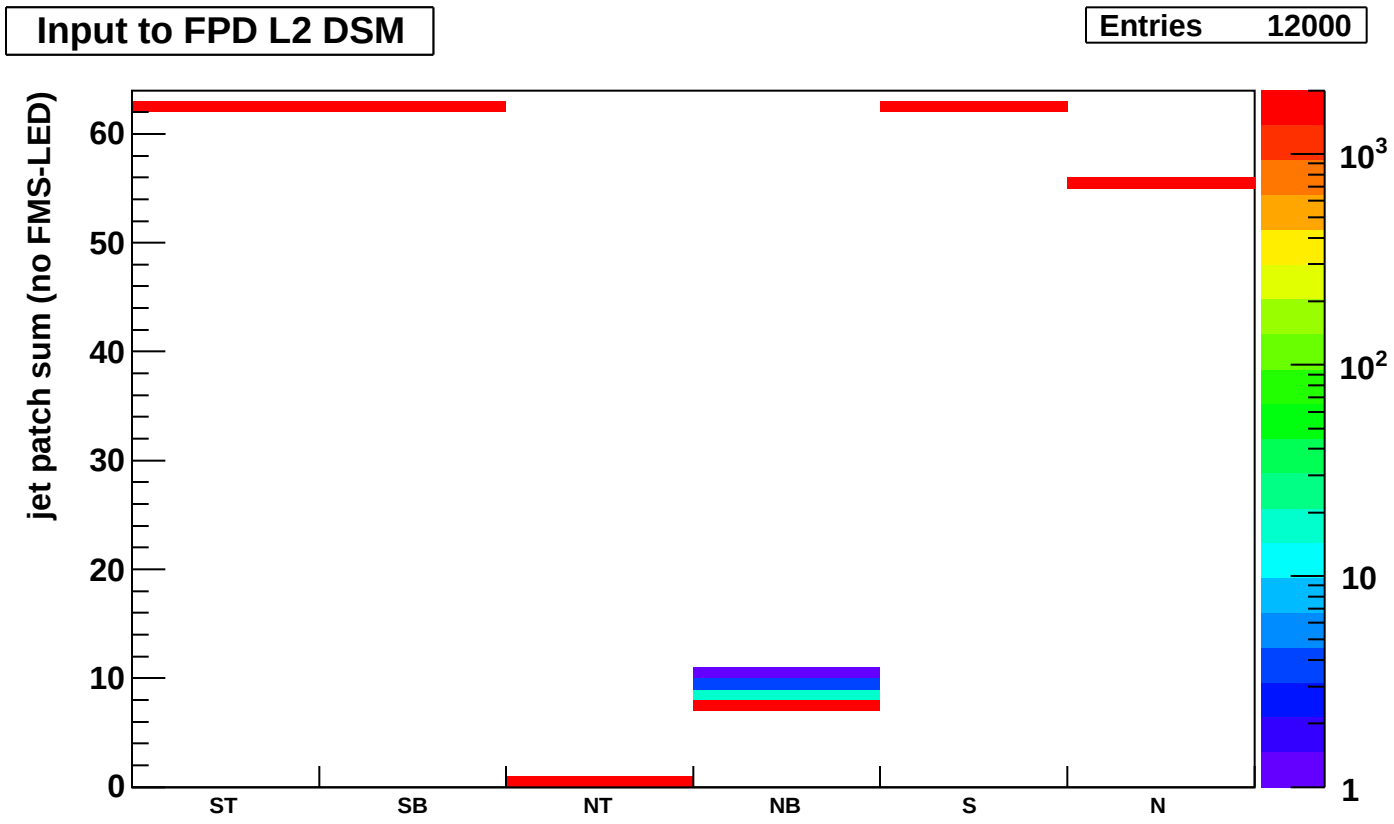

Input to FPD L2 DSM
Entries 16037
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

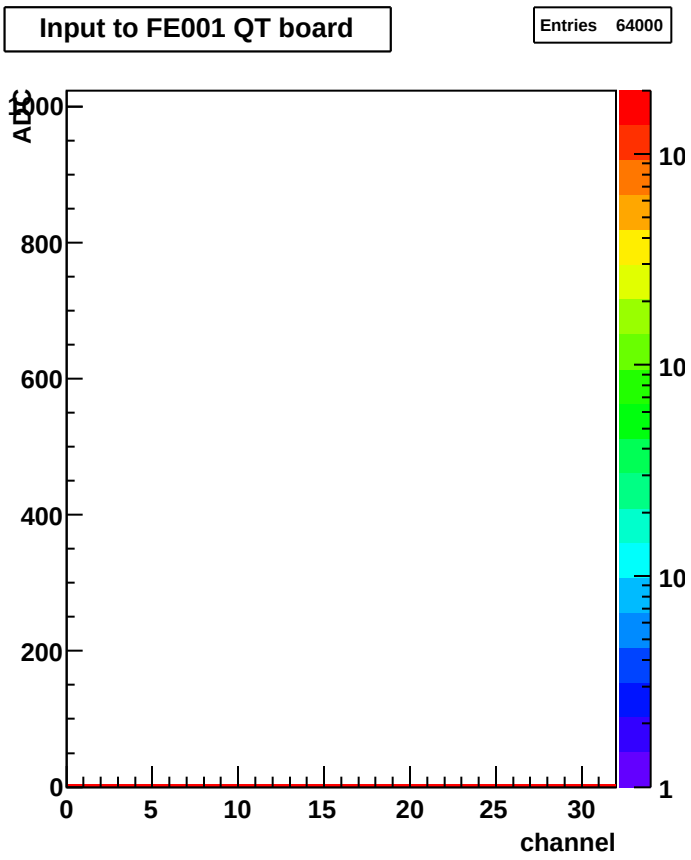

Input to FPD L2 DSM
Entries 6000
CL bits
2000
2000
2000
SMALL
LARGE-S
LARGE-N

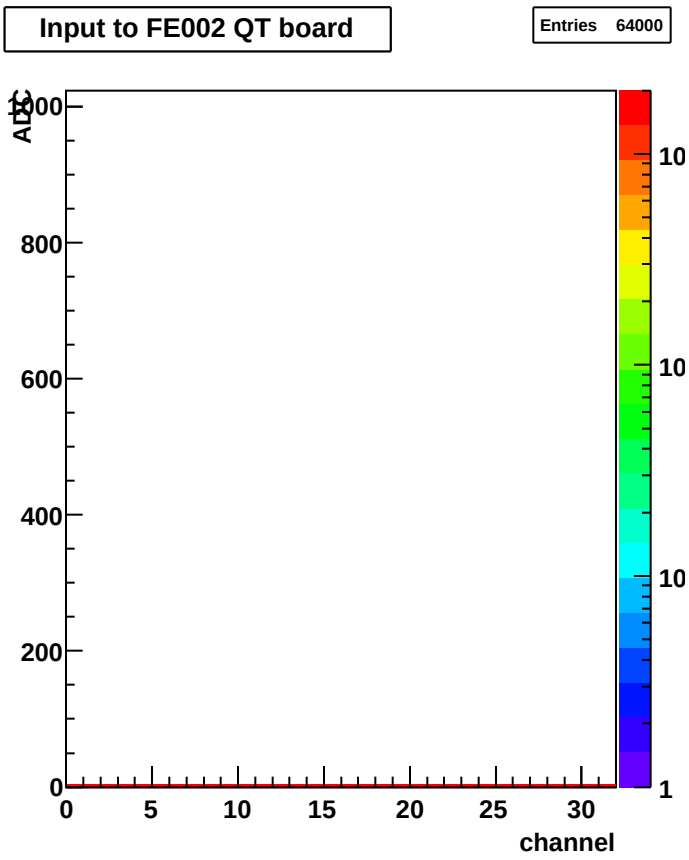

Input to FPD L2 DSM
Entries 6000
CL bits - simulated
2000
2000
2000
SMALL
LARGE-S
LARGE-N

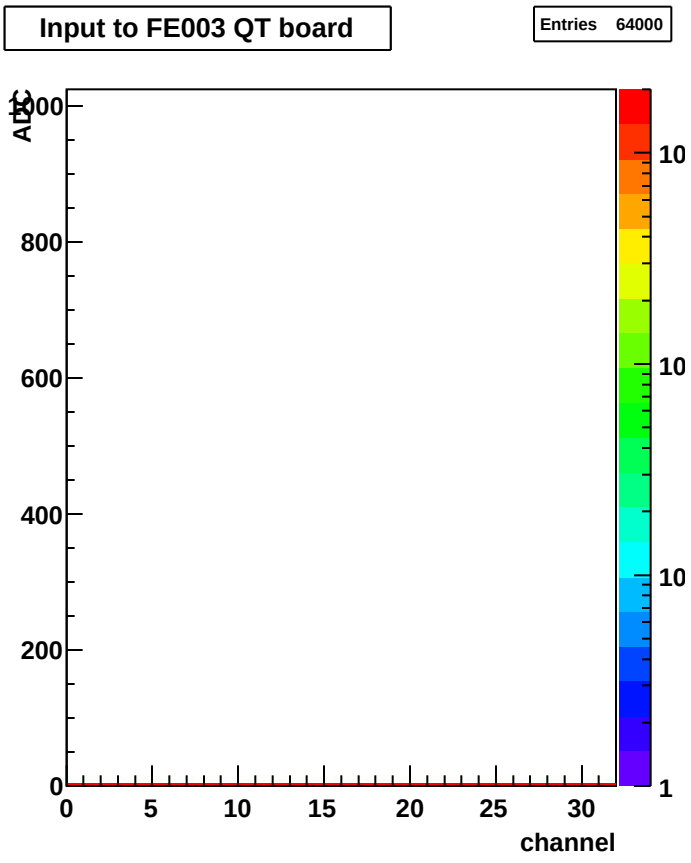

Input to FPD L2 DSM
Entries 6000
HT bits
1
4
9
1986
2000
2000
SMALL
LARGE-S
LARGE-N

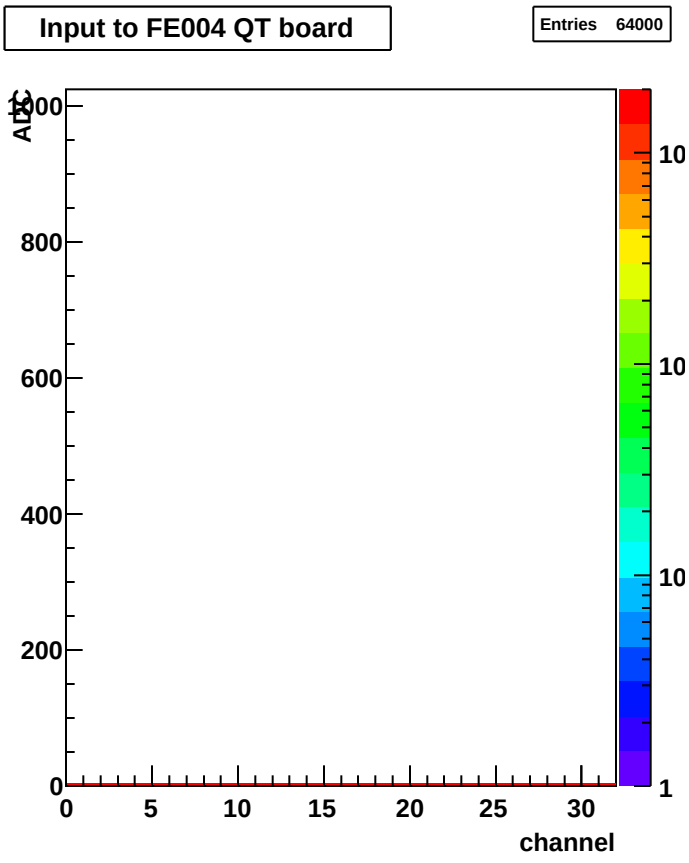

Input to FPD L2 DSM
Entries 4014
HT bits - simulated
1
4
9
2000
2000
SMALL
LARGE-S
LARGE-N

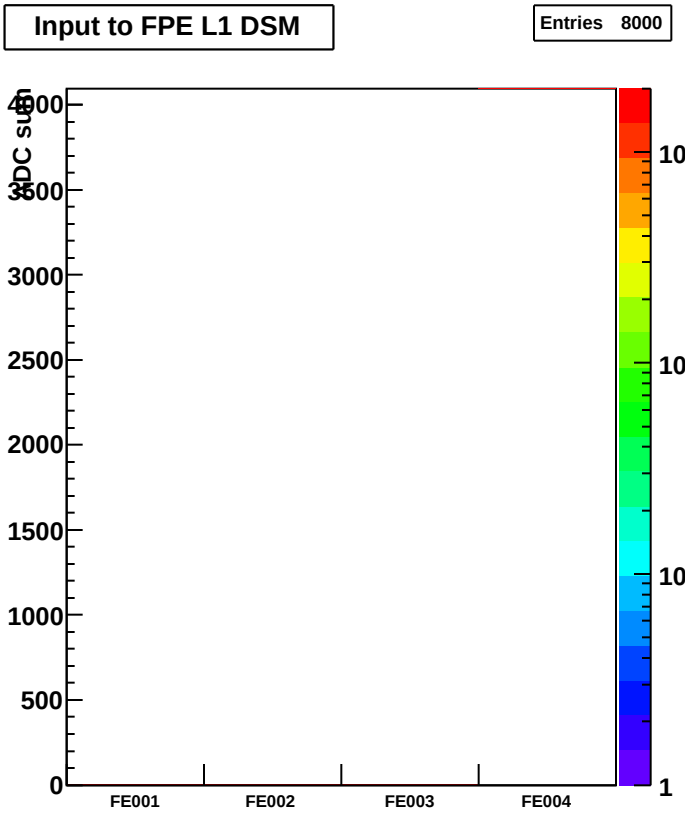

Input to FPD L2 DSM
Entries 12000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

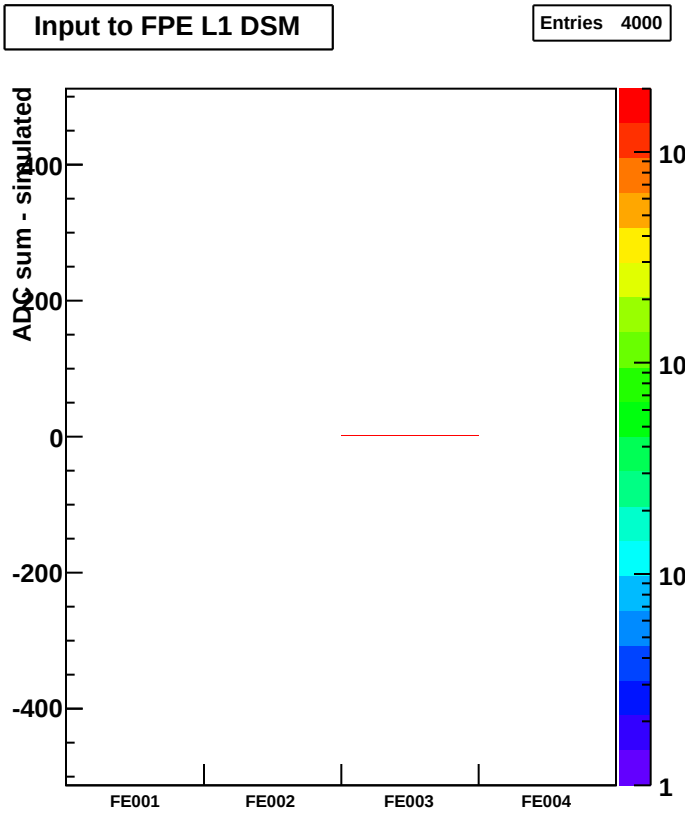

Input to FE001 QT board
Entries 64000
ADC
channel


Input to FE002 QT board
Entries 64000
ADC
channel

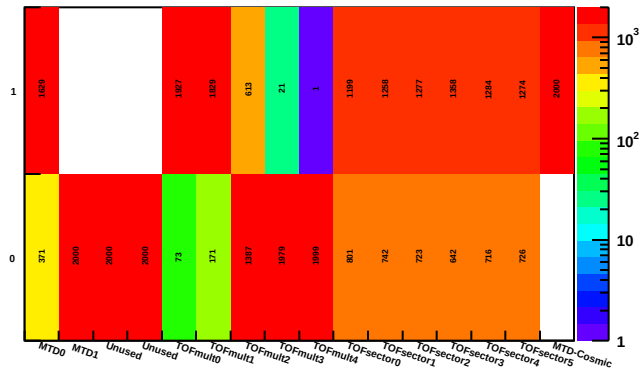

Input to FE003 QT board
Entries 64000
ADC
channel


Input to FE004 QT board
Entries 64000
ADC
channel

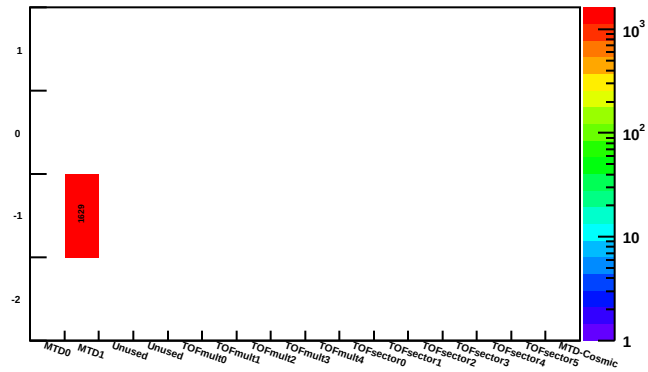

Input to FPE L1 DSM
Entries 8000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1


Input to FPE L1 DSM
Entries 4000
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
1

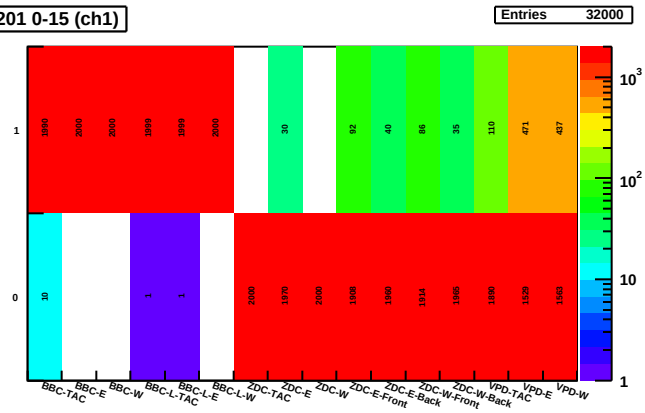
TF201 0-15 (ch0)



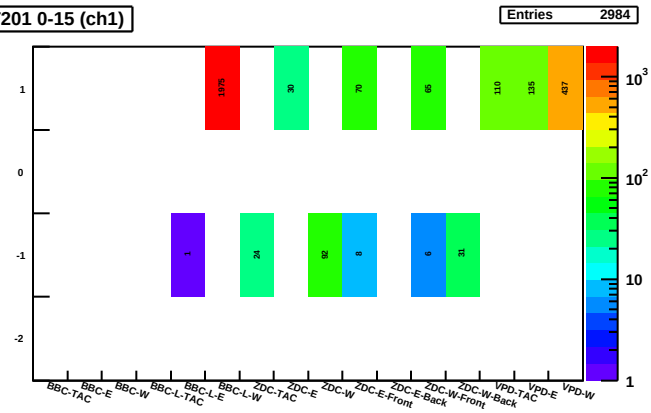
TF201 0-15 (ch0)



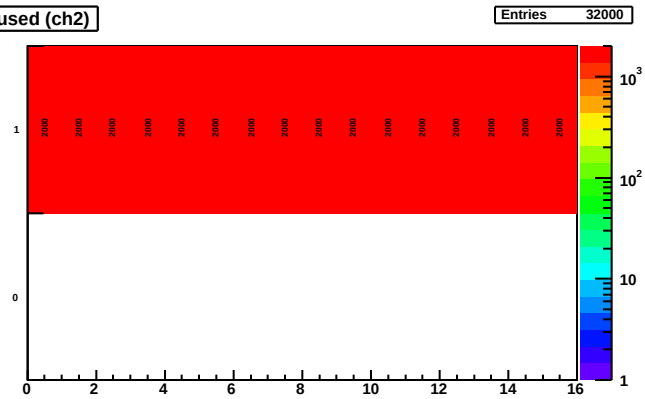
VT201 0-15 (ch1)

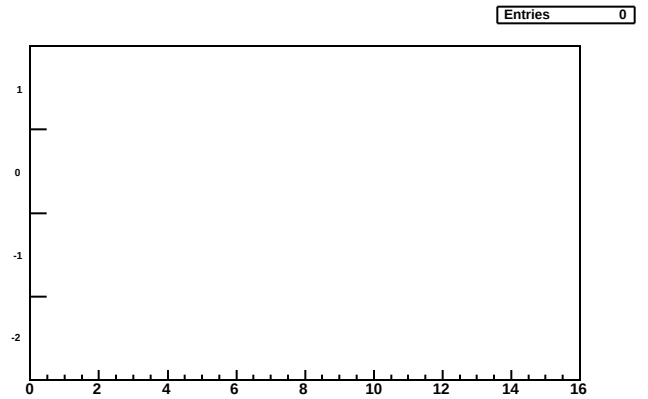


VT201 0-15 (ch1)

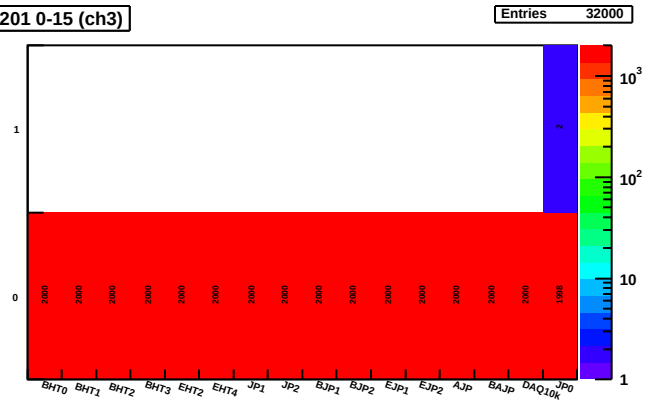


Unused (ch2)

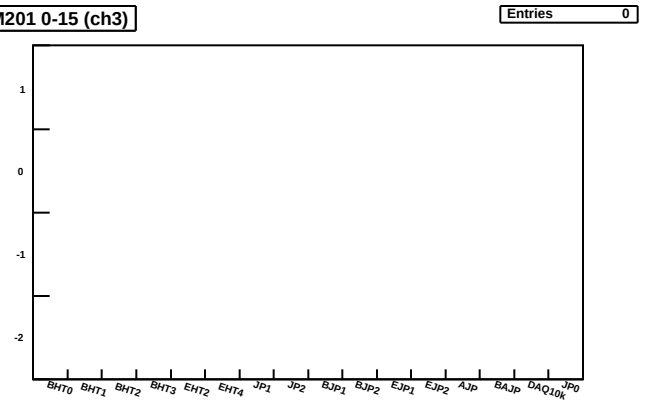




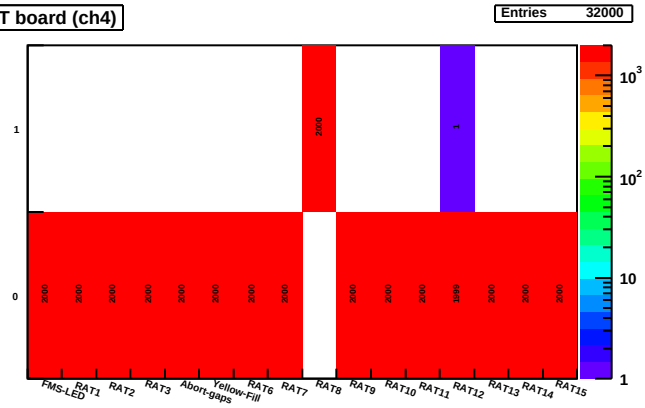
EM201 0-15 (ch3)

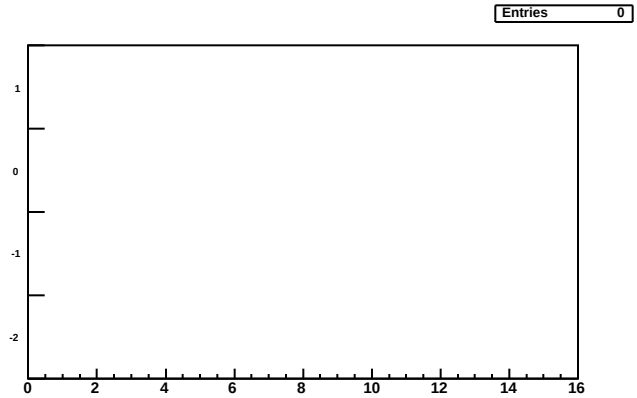


EM201 0-15 (ch3)

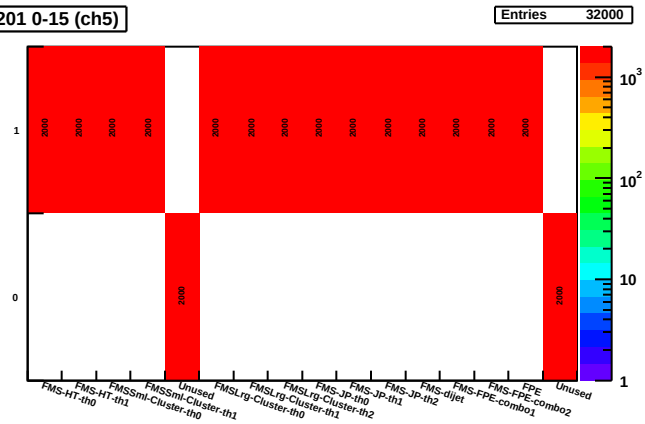


RAT board (ch4)

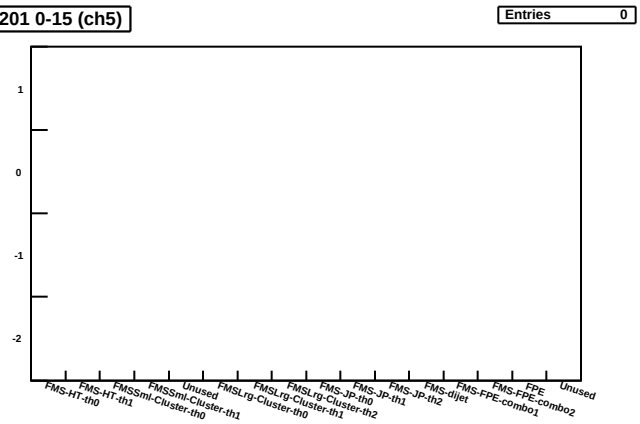




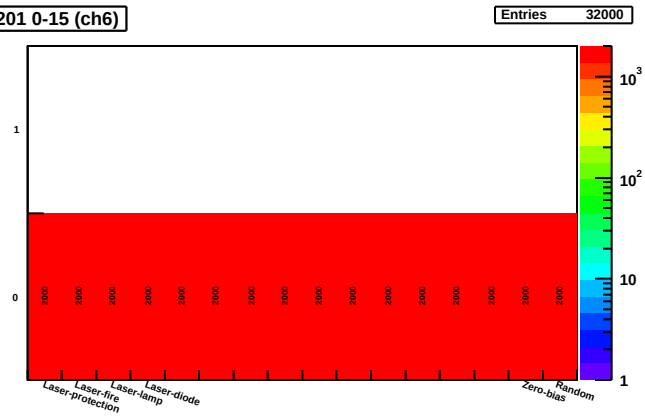
FP201 0-15 (ch5)

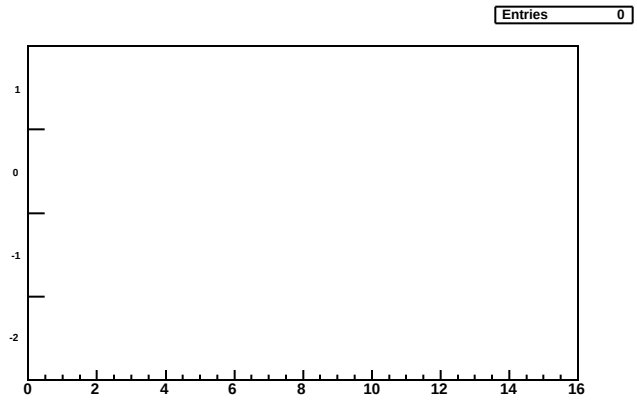
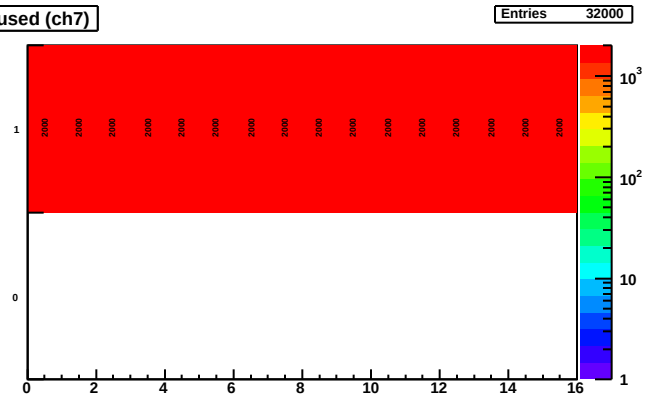
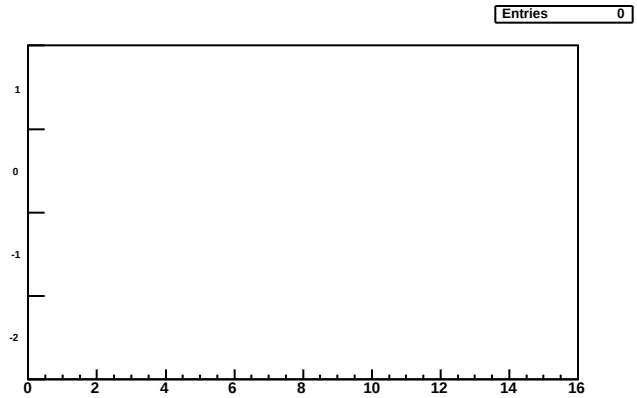


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)