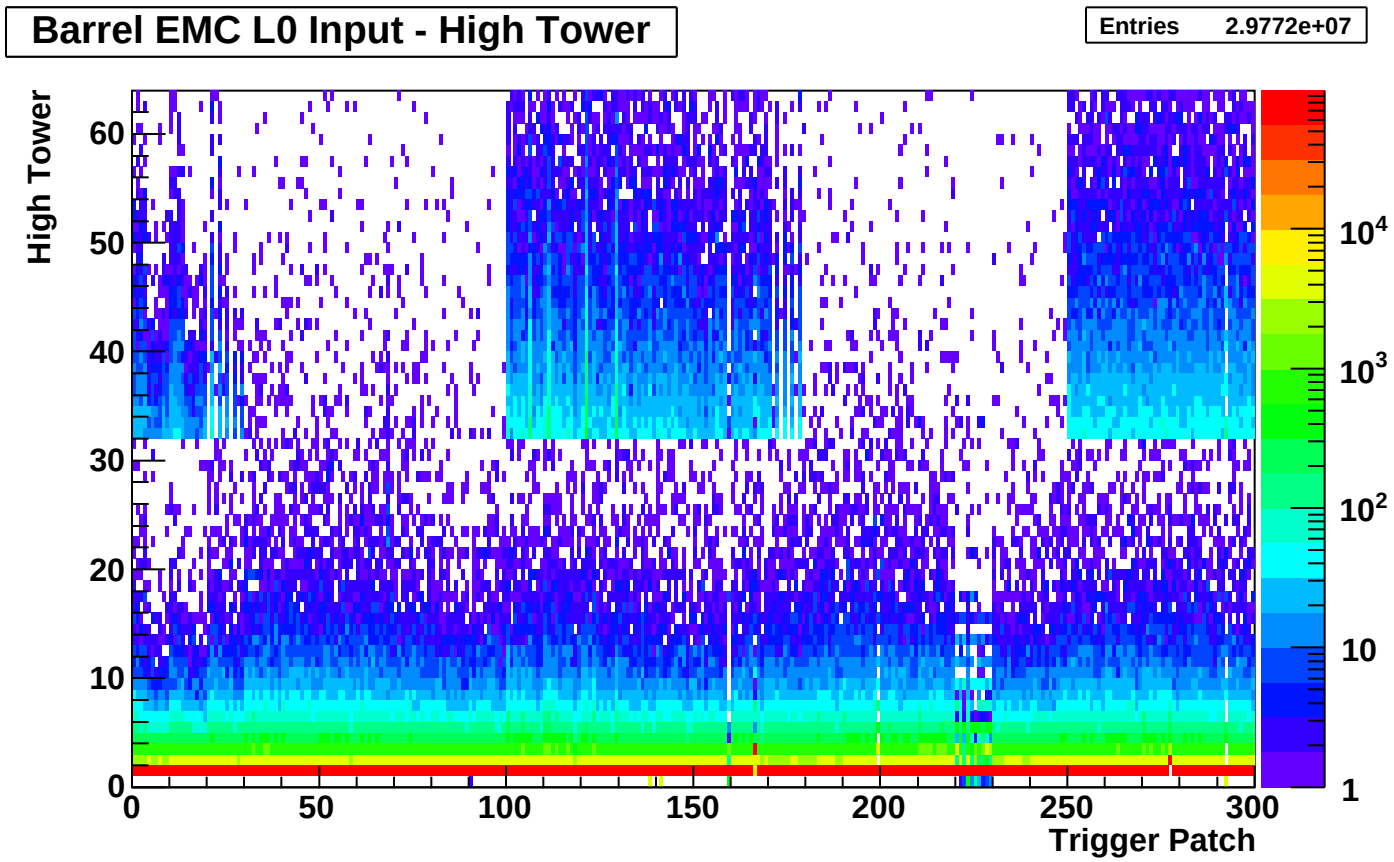
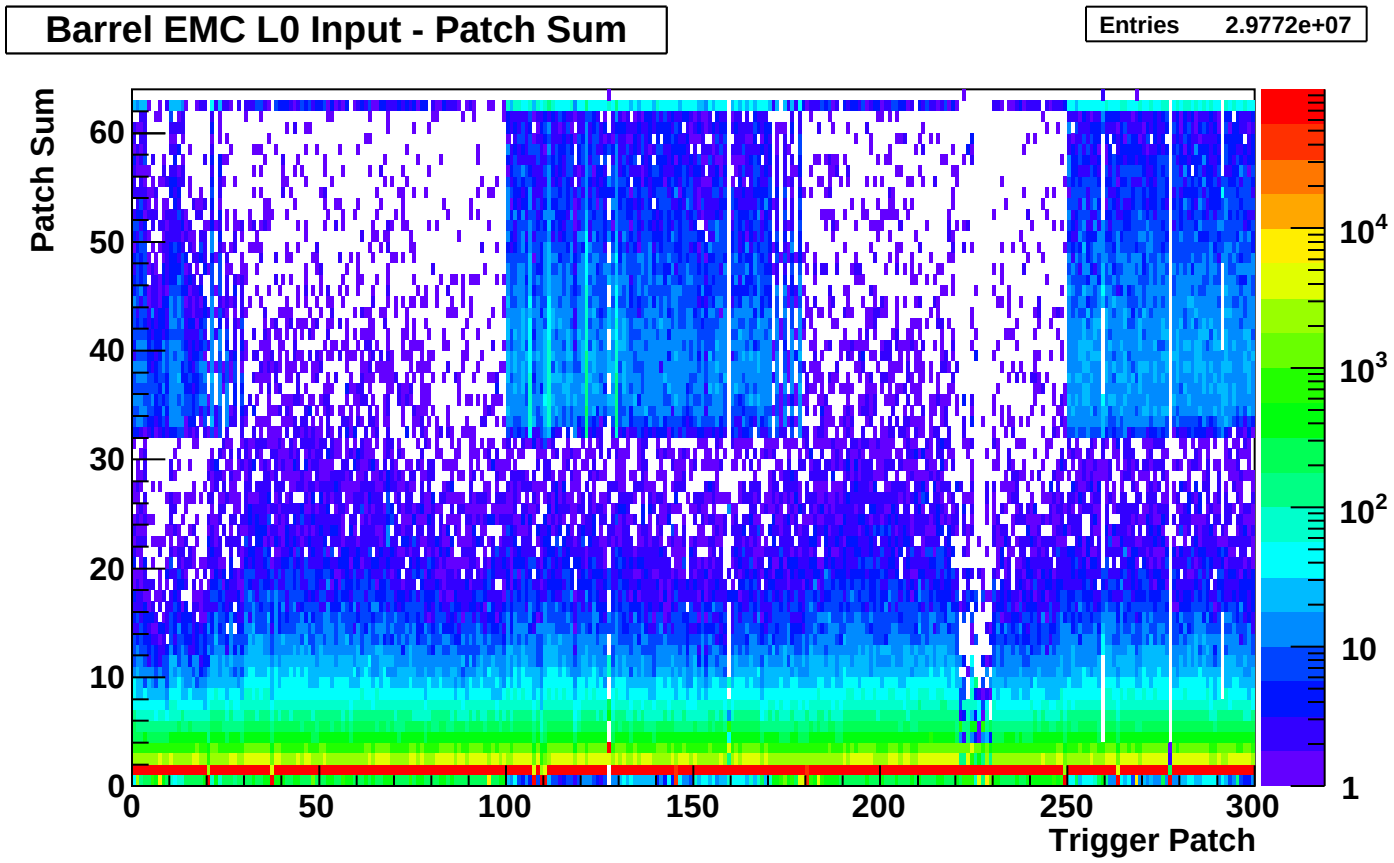
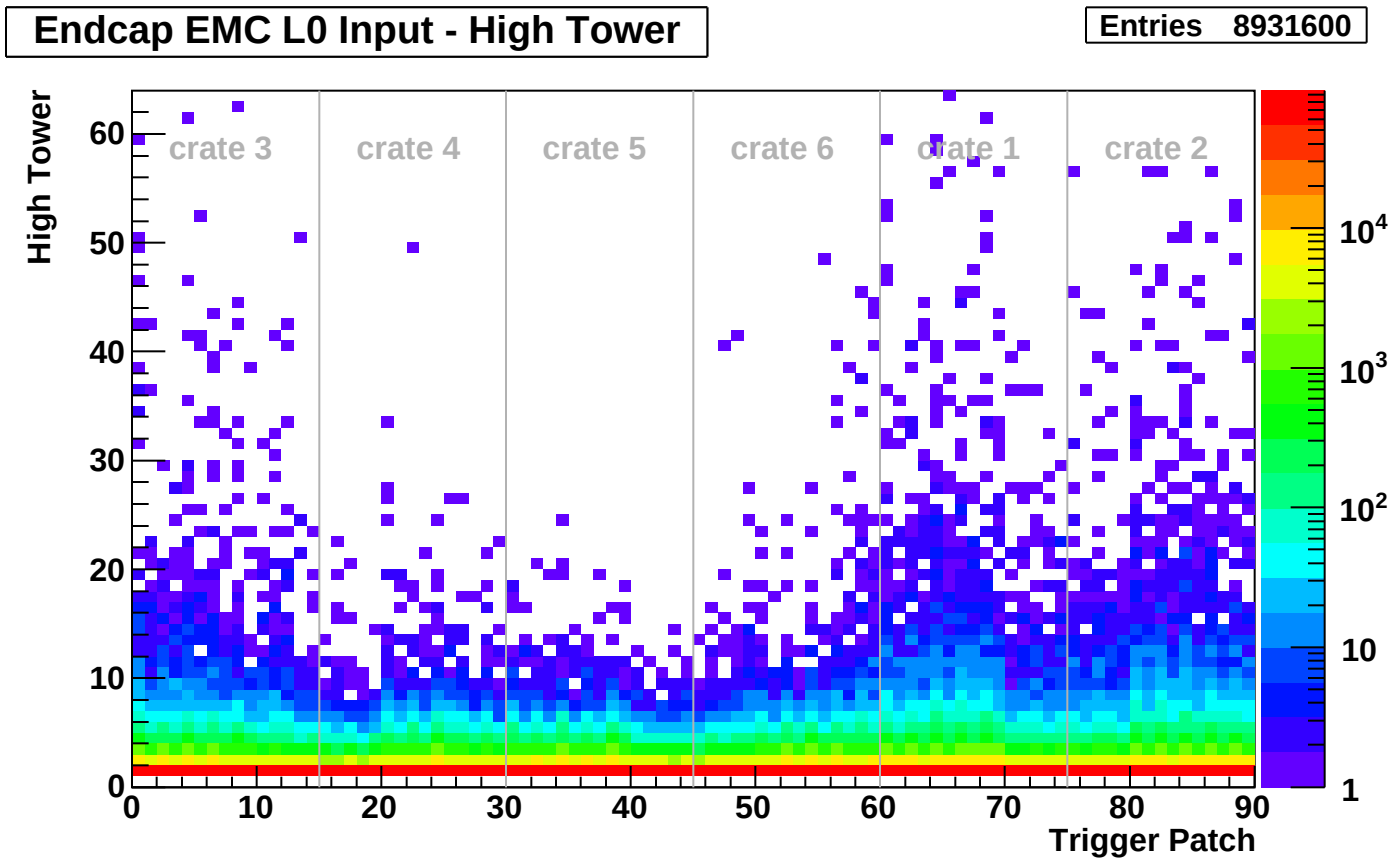
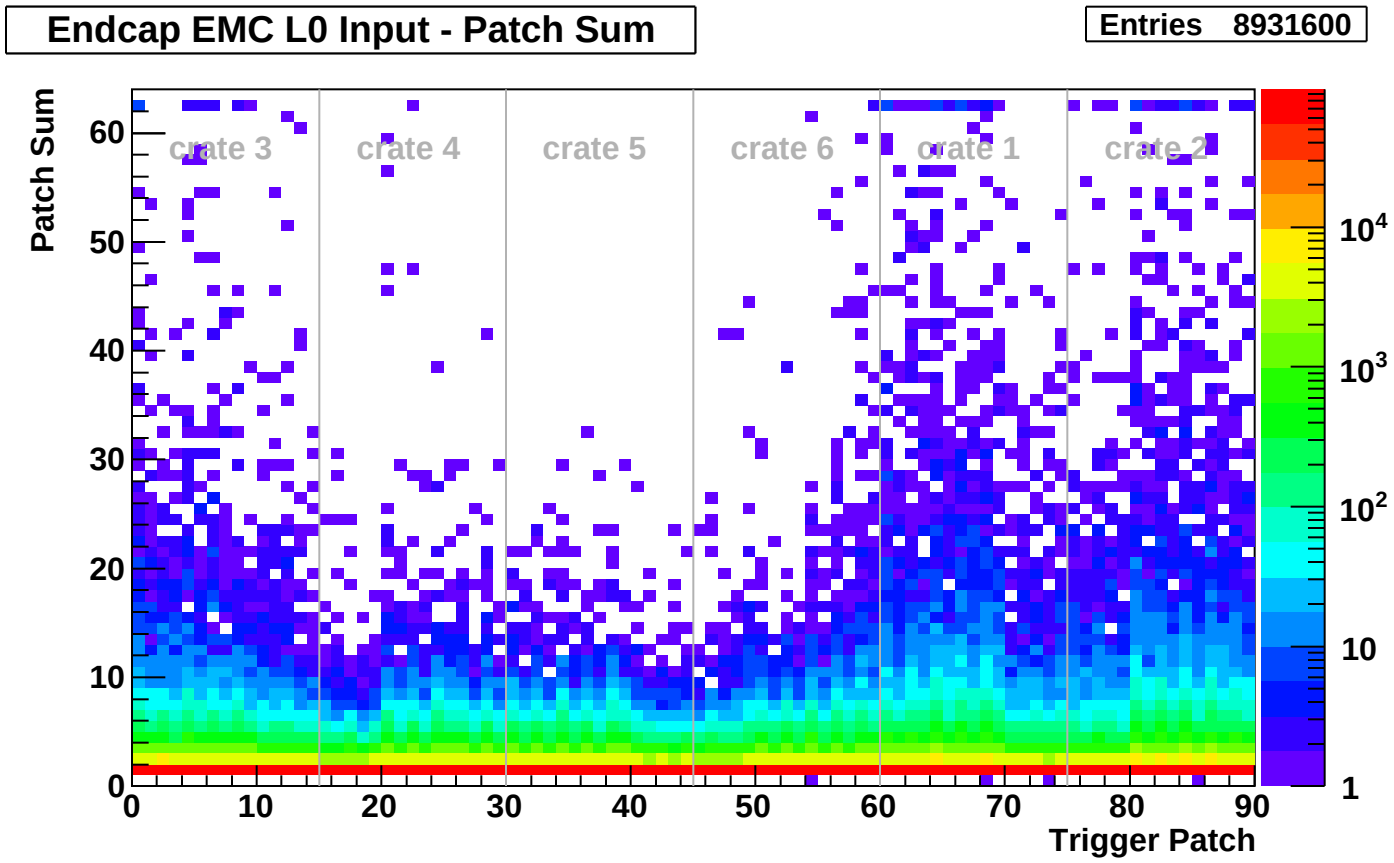
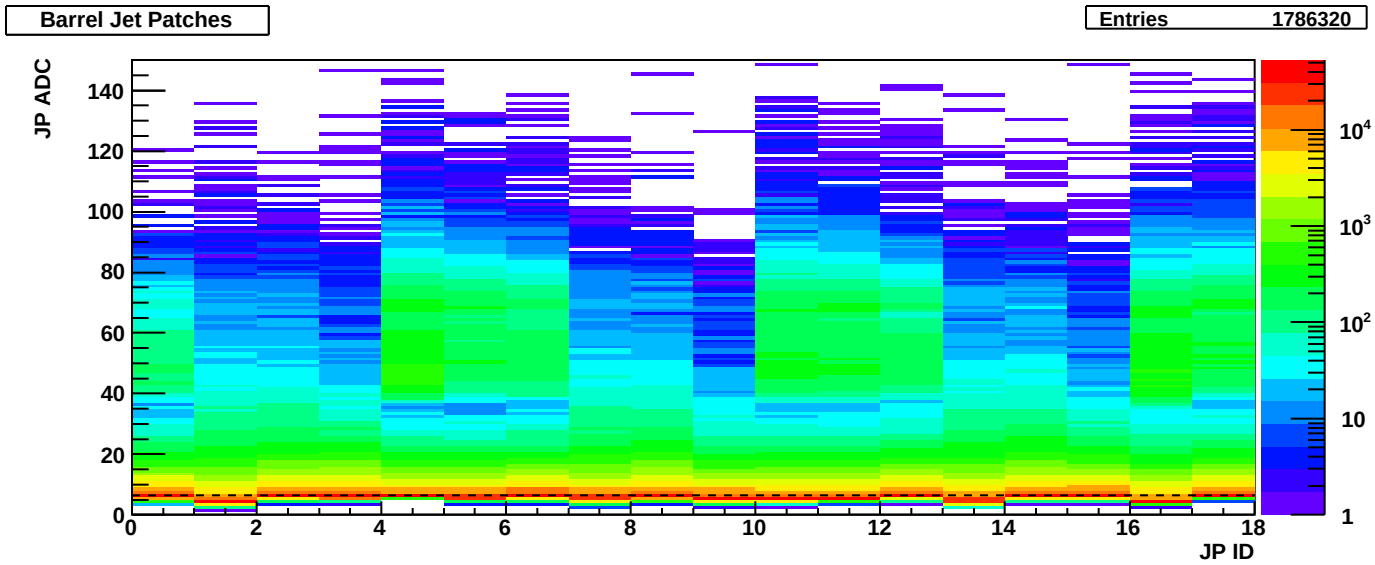
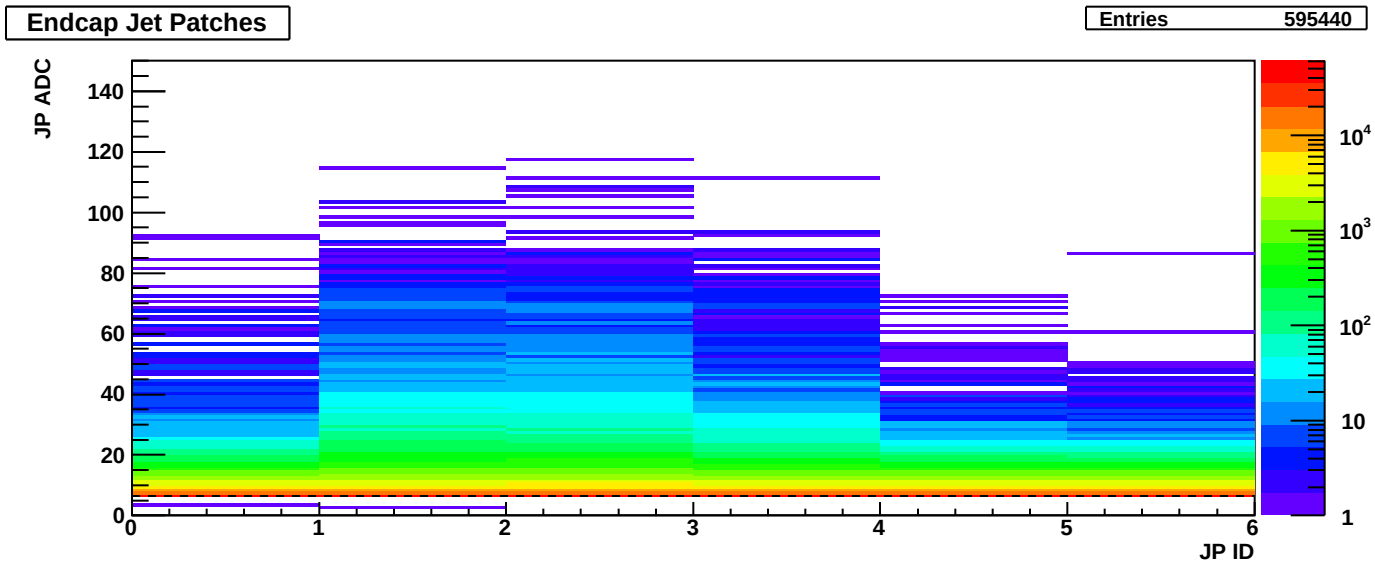

Barrel EMC L0 Input - High Tower
Entries 2.9772e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

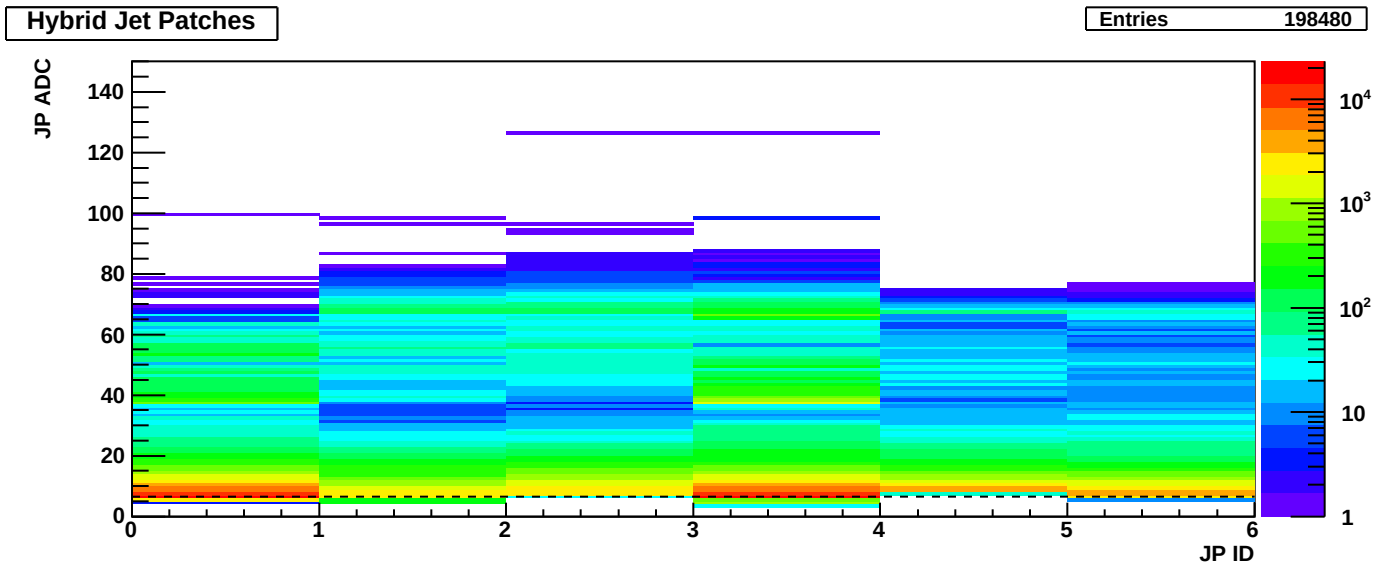

Barrel EMC L0 Input - Patch Sum
Entries 2.9772e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

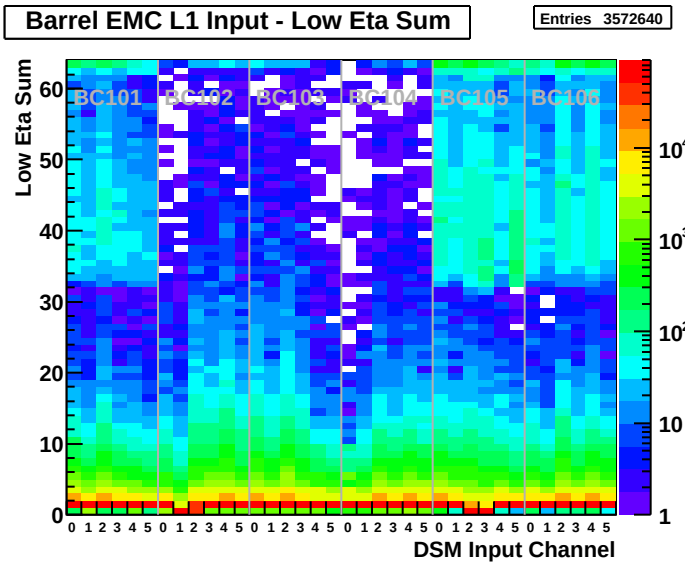

Endcap EMC L0 Input - High Tower
Entries 8931600
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

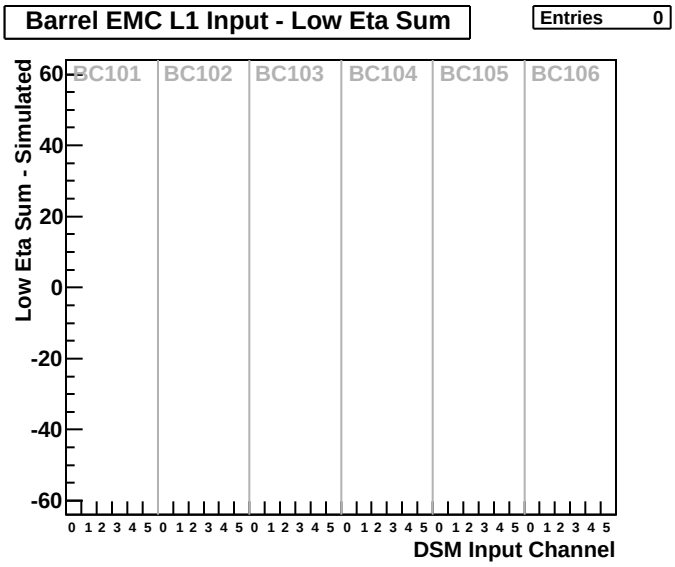

Endcap EMC L0 Input - Patch Sum
Entries 8931600
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

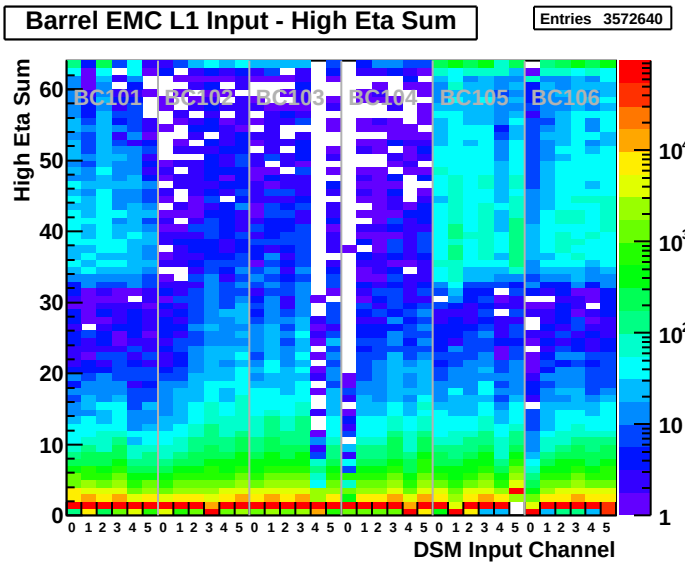

Barrel Jet Patches
Entries 1786320
JP ADC
JP ID

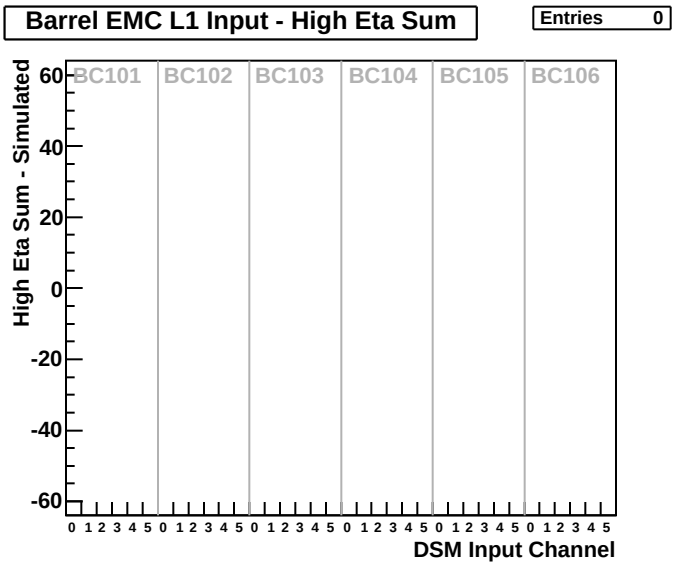

Endcap Jet Patches
Entries 595440
JP ADC
JP ID

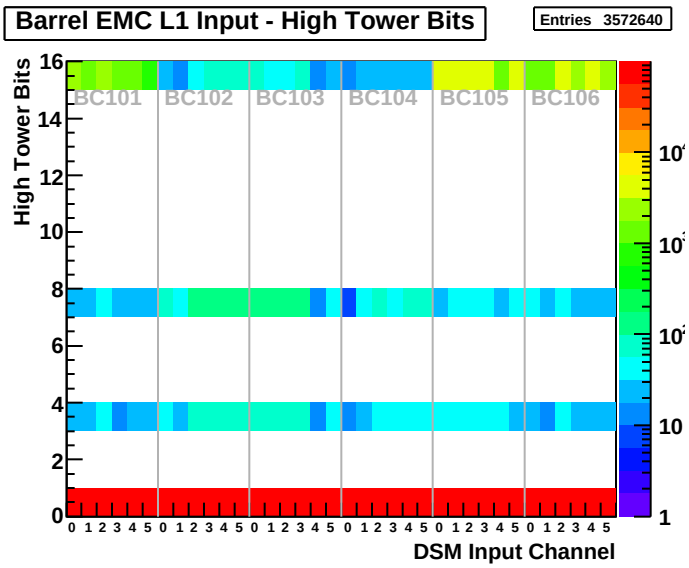

Hybrid Jet Patches
Entries 198480
JP ADC
JP ID

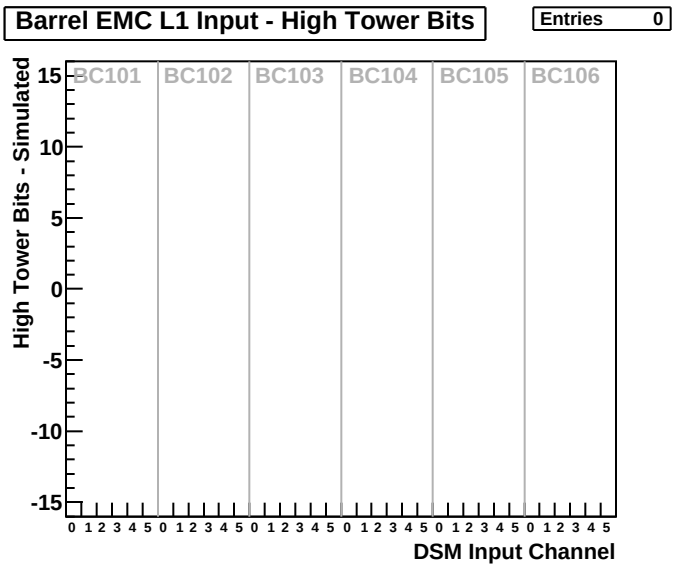

Barrel EMC L1 Input - Low Eta Sum
Entries 3572640
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

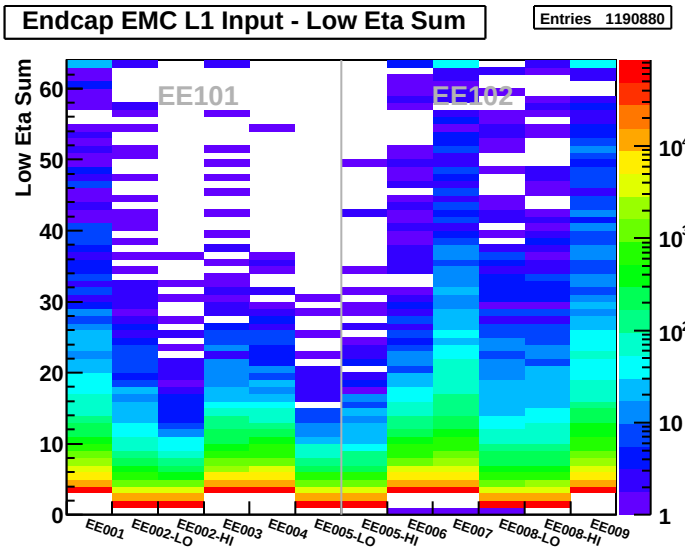

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

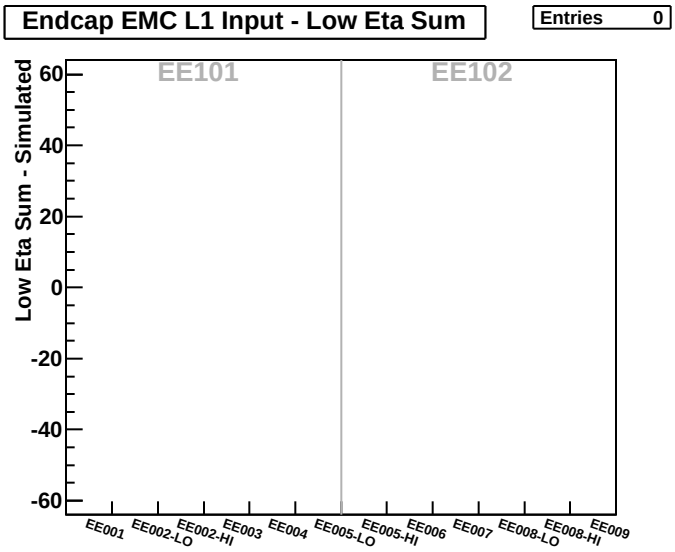

Barrel EMC L1 Input - High Eta Sum
Entries 3572640
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

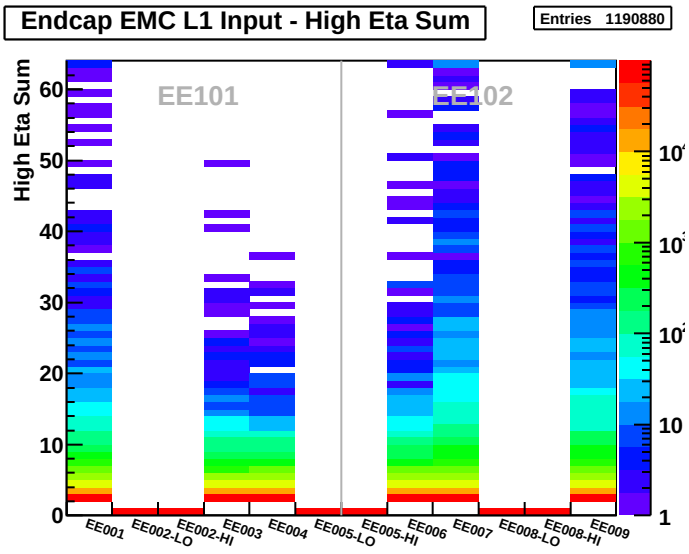

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

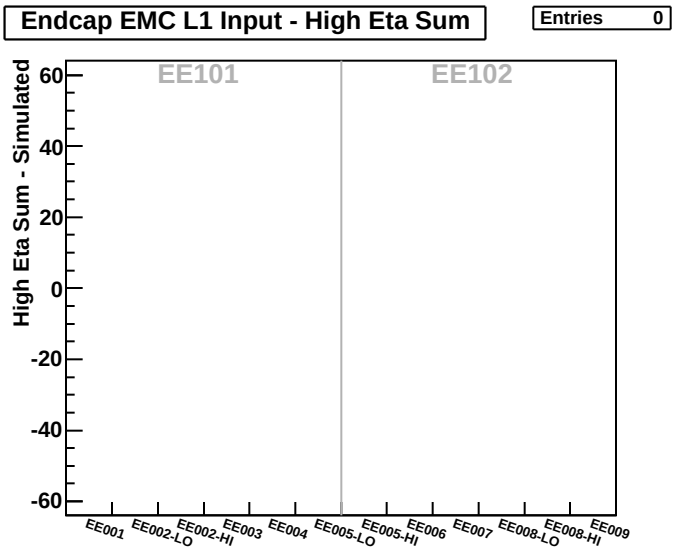

Barrel EMC L1 Input - High Tower Bits
Entries 3572640
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

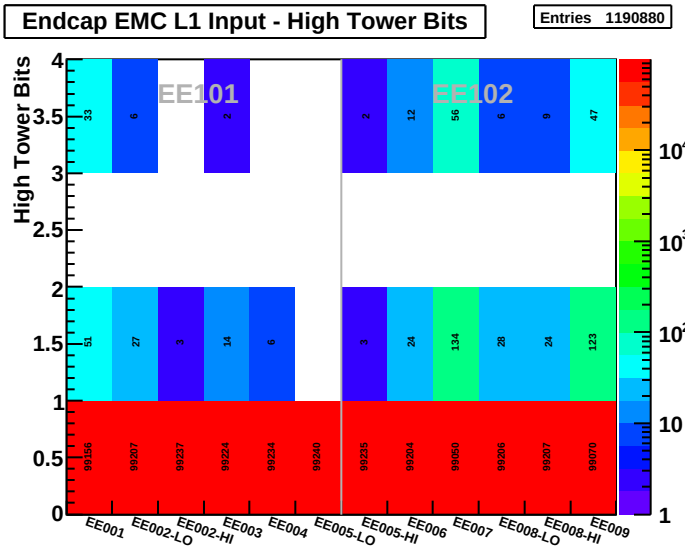

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

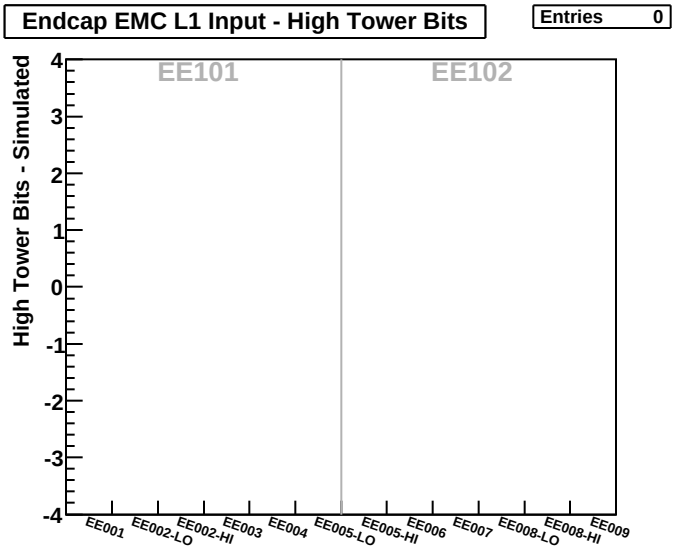

Endcap EMC L1 Input - Low Eta Sum
Entries 1190880
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

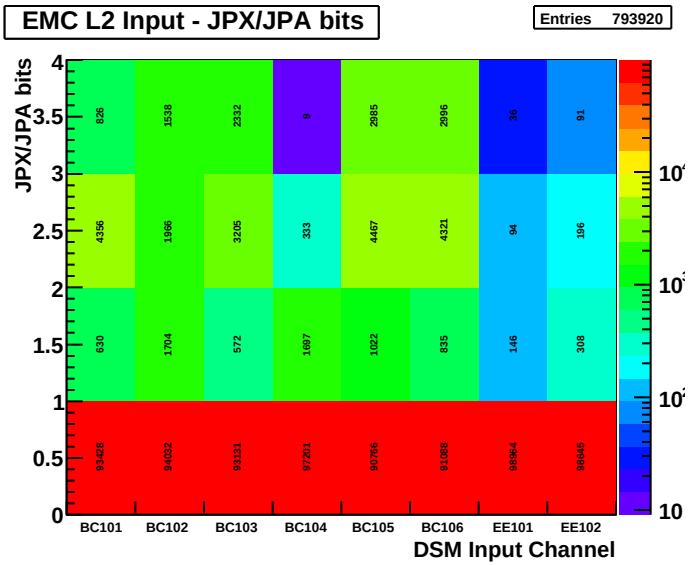

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

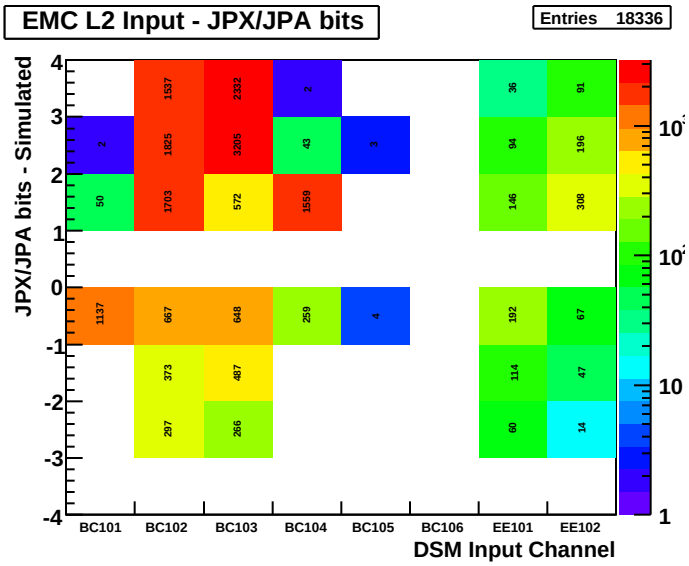

Endcap EMC L1 Input - High Eta Sum
Entries 1190880
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

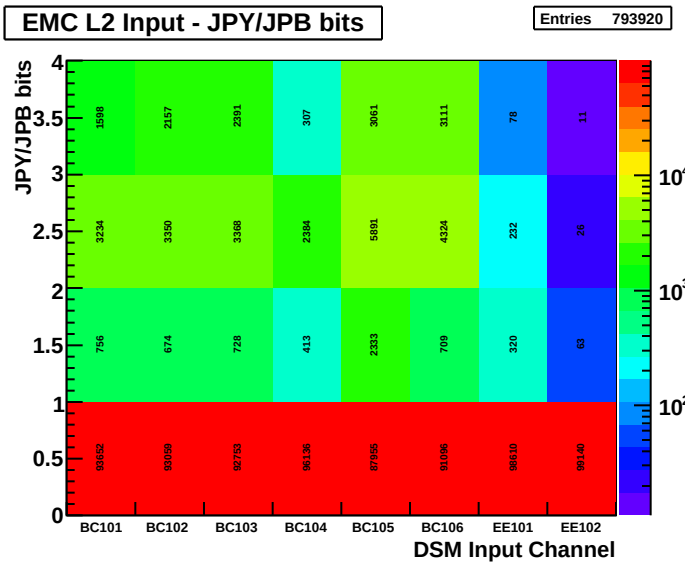

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

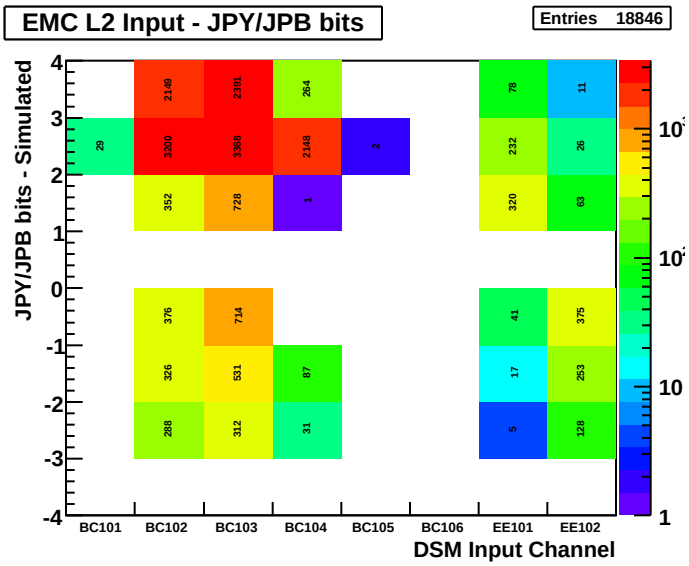

Endcap EMC L1 Input - High Tower Bits
Entries 1190880
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

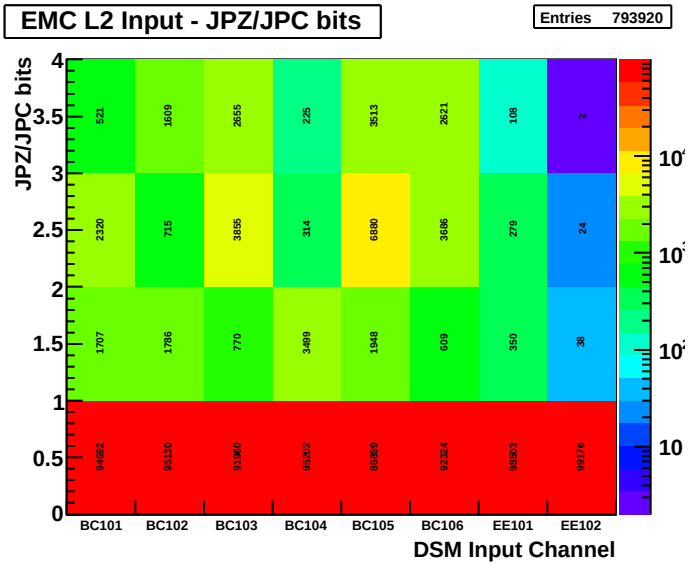

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

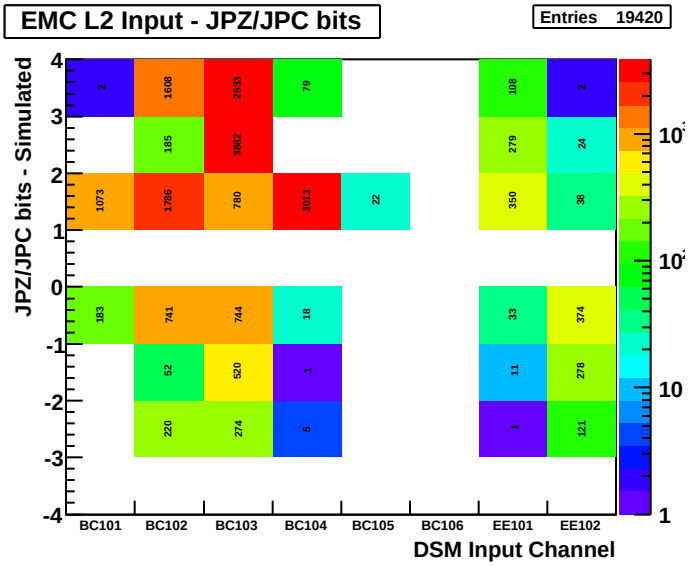

EMC L2 Input - JPX/JPA bits
Entries 793920
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

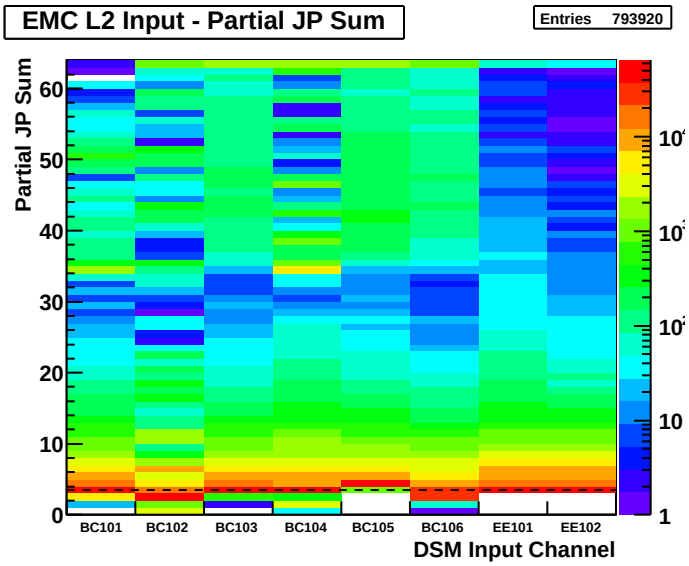

EMC L2 Input - JPX/JPA bits
Entries 18336
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

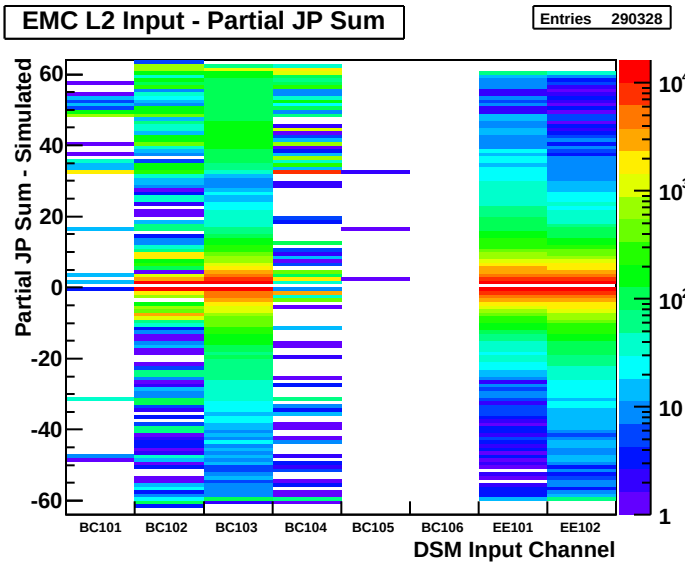

EMC L2 Input - JPY/JPB bits
Entries 793920
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

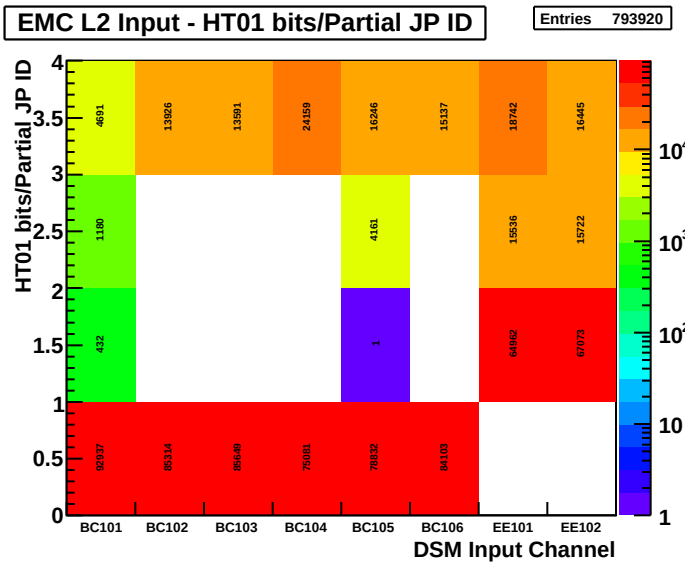

EMC L2 Input - JPY/JPB bits
Entries 18846
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

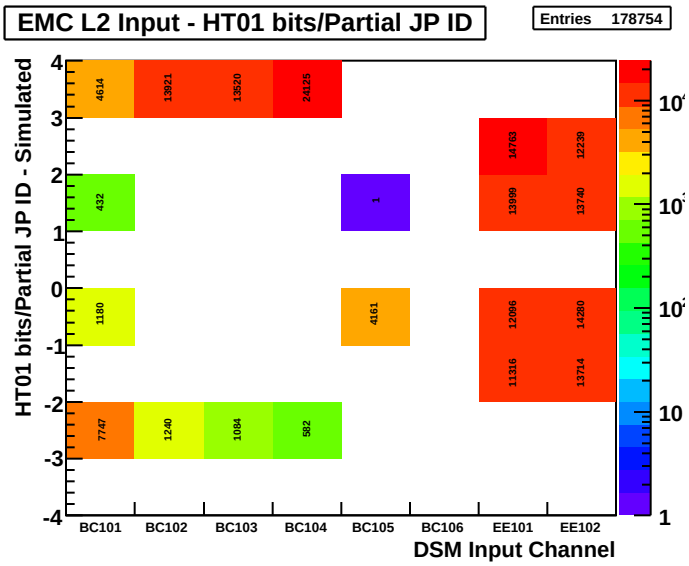

EMC L2 Input - JPZ/JPC bits
Entries 793920
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

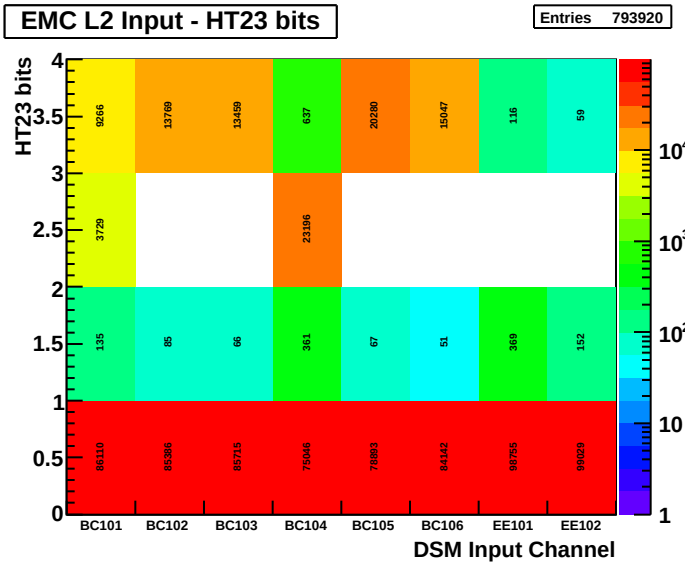

EMC L2 Input - JPZ/JPC bits
Entries 19420
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

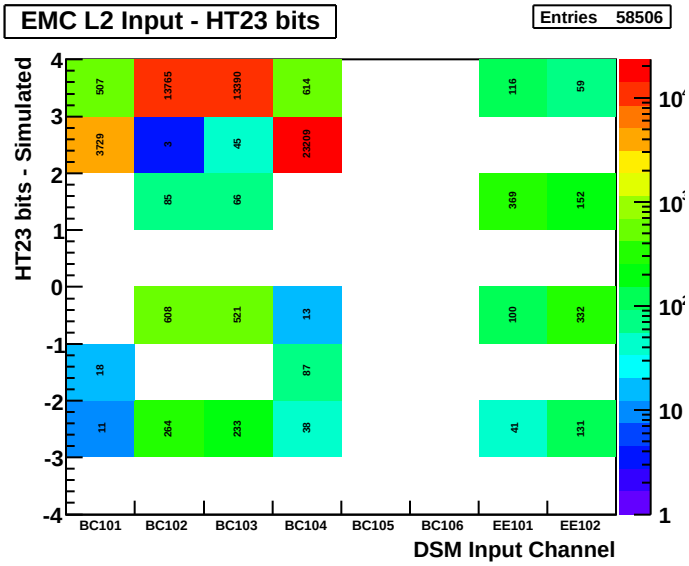

EMC L2 Input - Partial JP Sum
Entries 793920
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

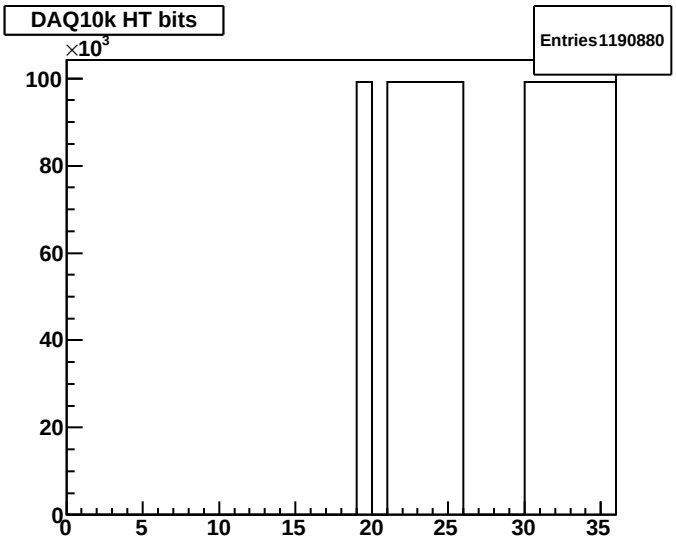

EMC L2 Input - Partial JP Sum
Entries 290328
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

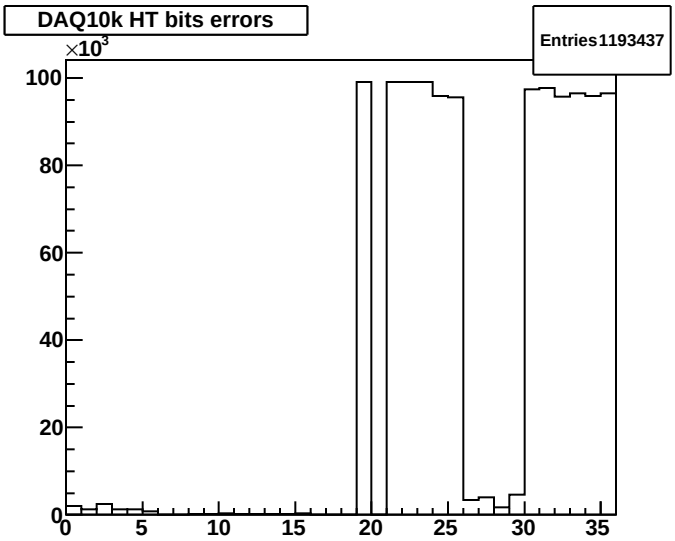

EMC L2 Input - HT01 bits/Partial JP ID
Entries 793920
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

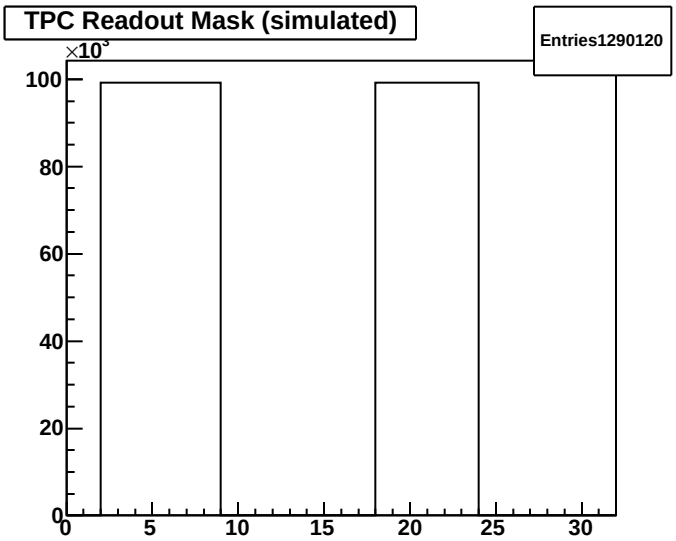

EMC L2 Input - HT01 bits/Partial JP ID
Entries 178754
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

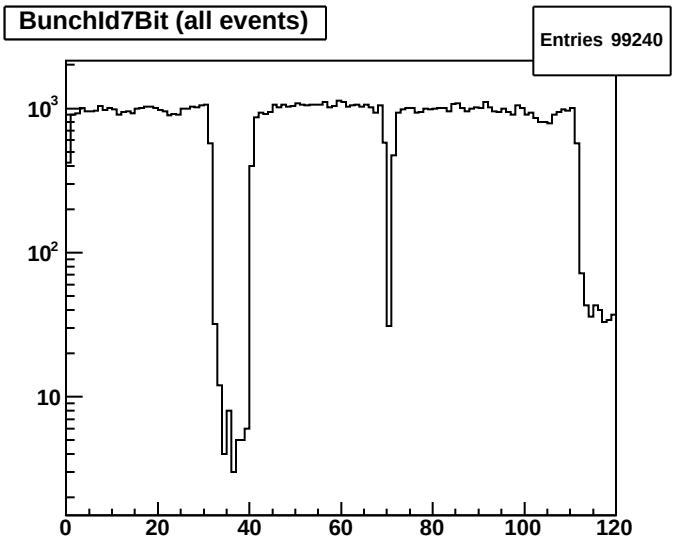

EMC L2 Input - HT23 bits
Entries 793920
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

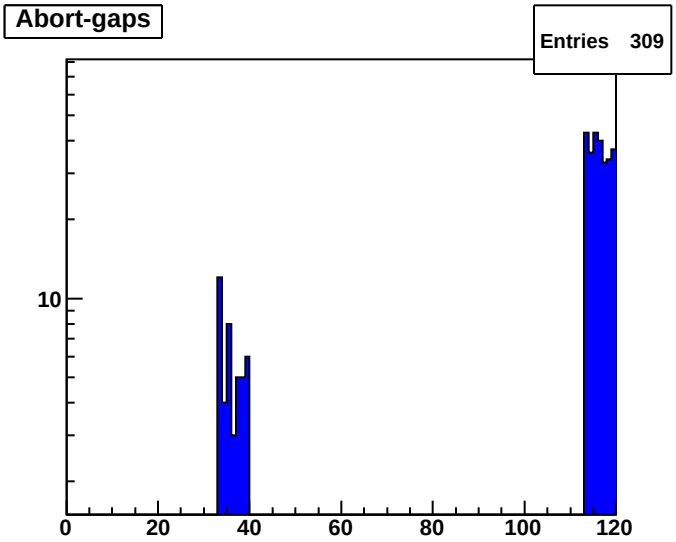

EMC L2 Input - HT23 bits
Entries 58506
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

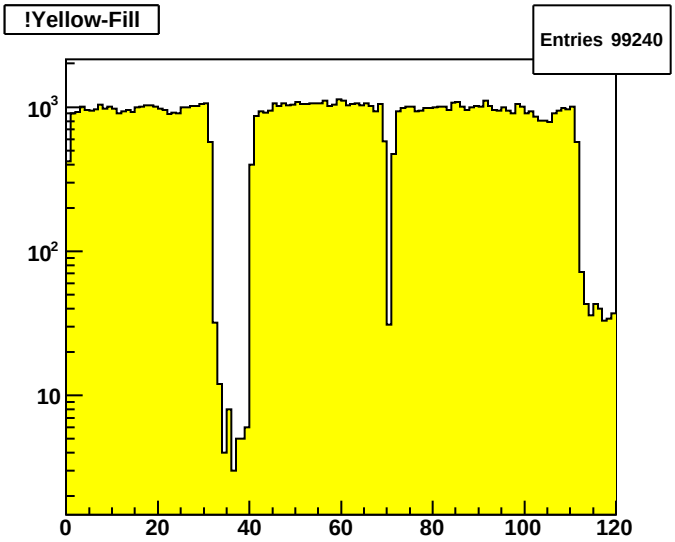

DAQ10k HT bits
Entries 1190880
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30 35

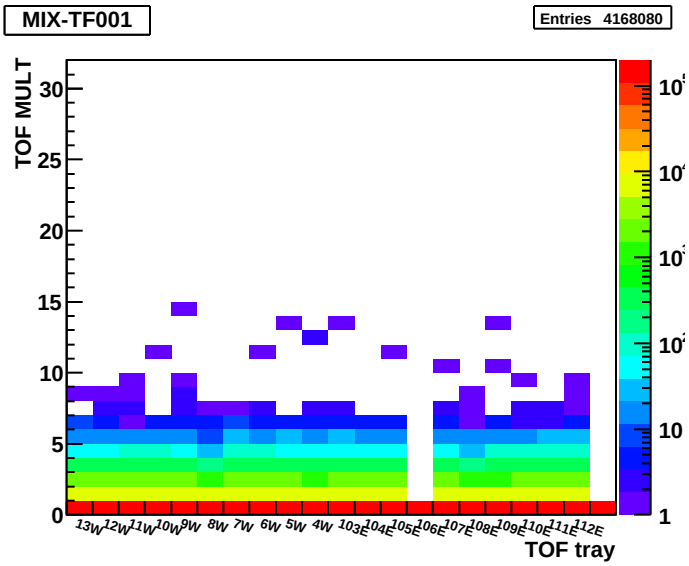

DAQ10k HT bits errors
Entries 1193437
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30 35

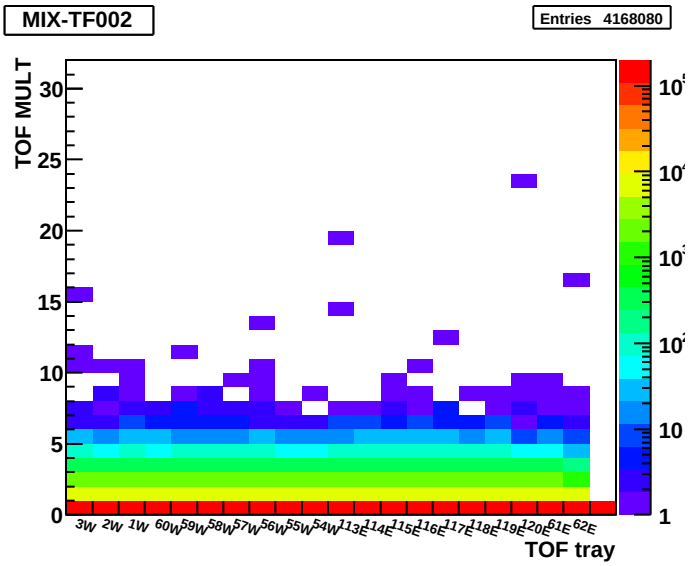

TPC Readout Mask (simulated)
Entries 1290120
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30

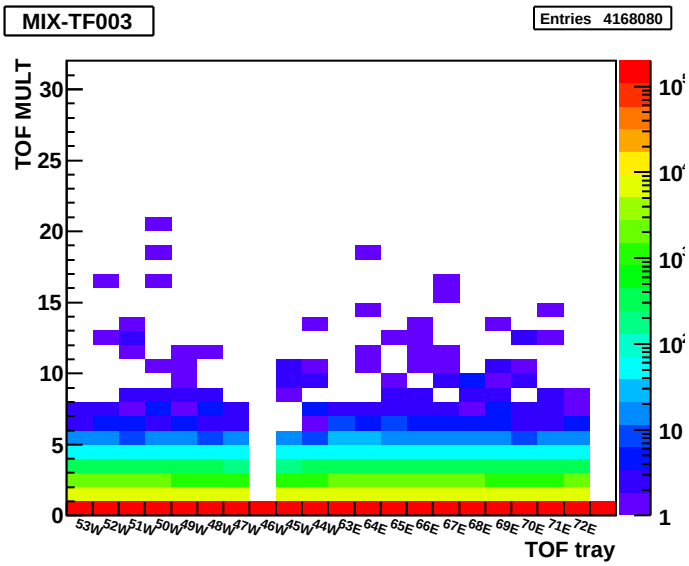

BunchId7Bit (all events)
Entries 99240
10^3
10^2
10
0 20 40 60 80 100 120

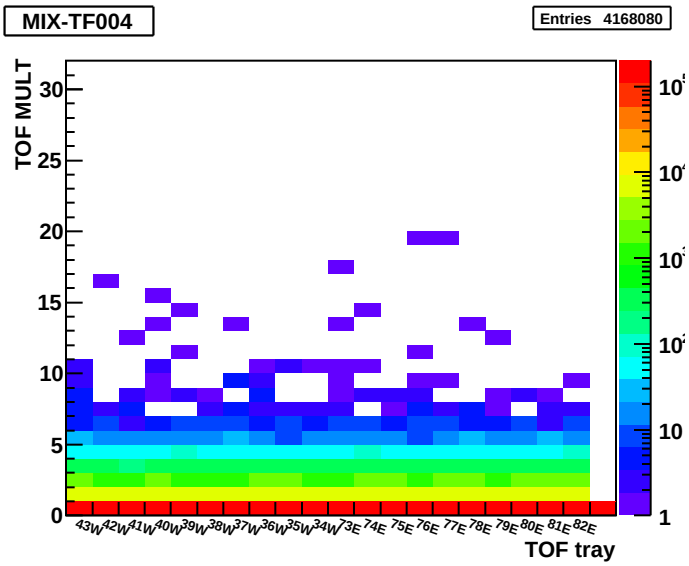

Abort-gaps
Entries 309
10
0 20 40 60 80 100 120

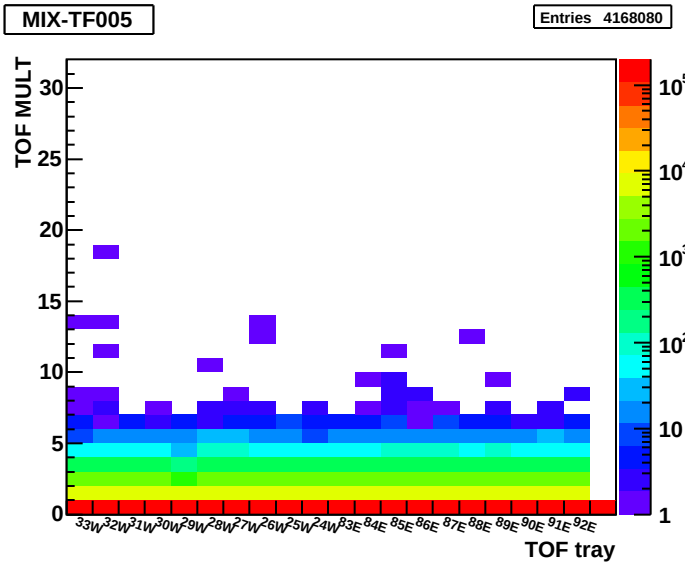

!Yellow-Fill
Entries 99240
10^3
10^2
10
0 20 40 60 80 100 120

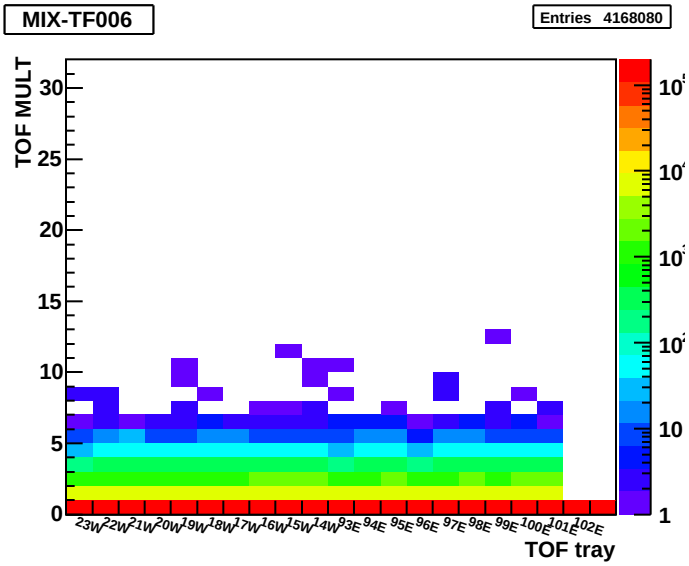

MIX-TF001
Entries 4168080
TOF MULT
TOF tray

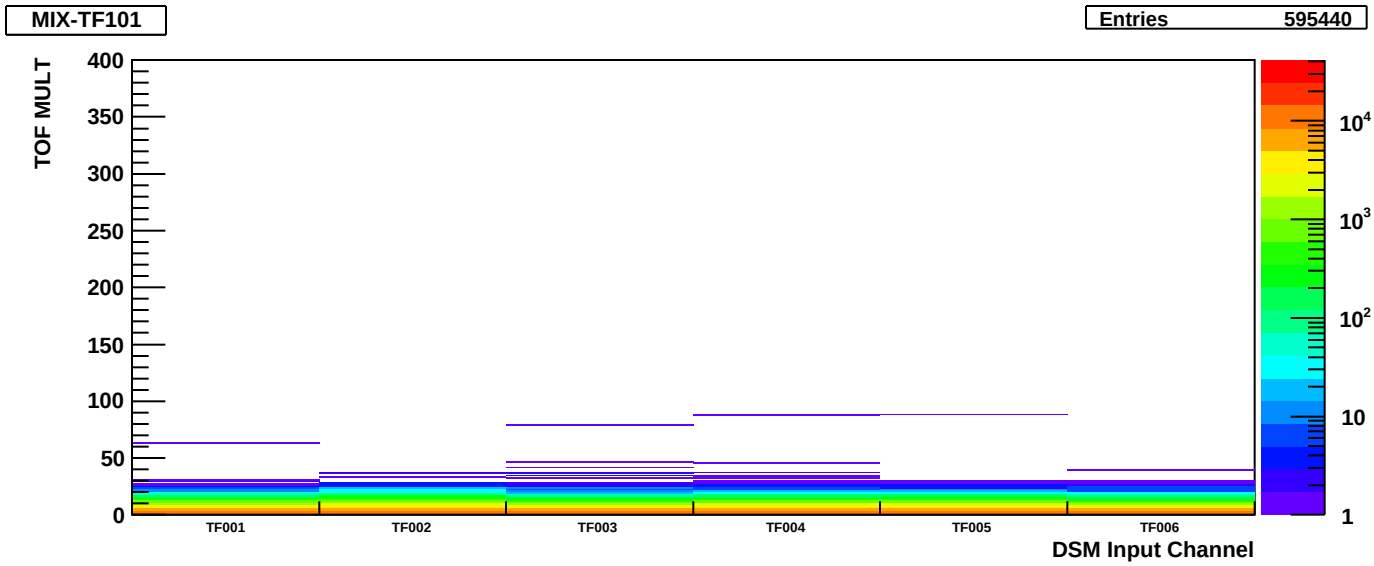

MIX-TF002
Entries 4168080
TOF MULT
TOF tray

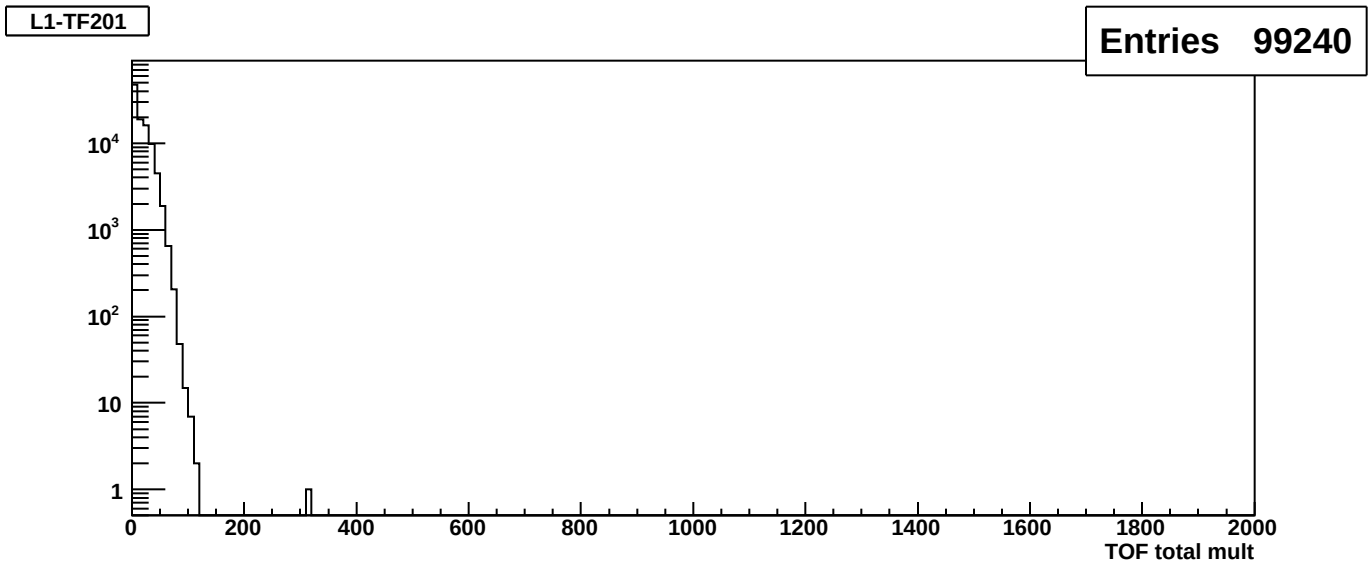

MIX-TF003
Entries 4168080
TOF MULT
TOF tray

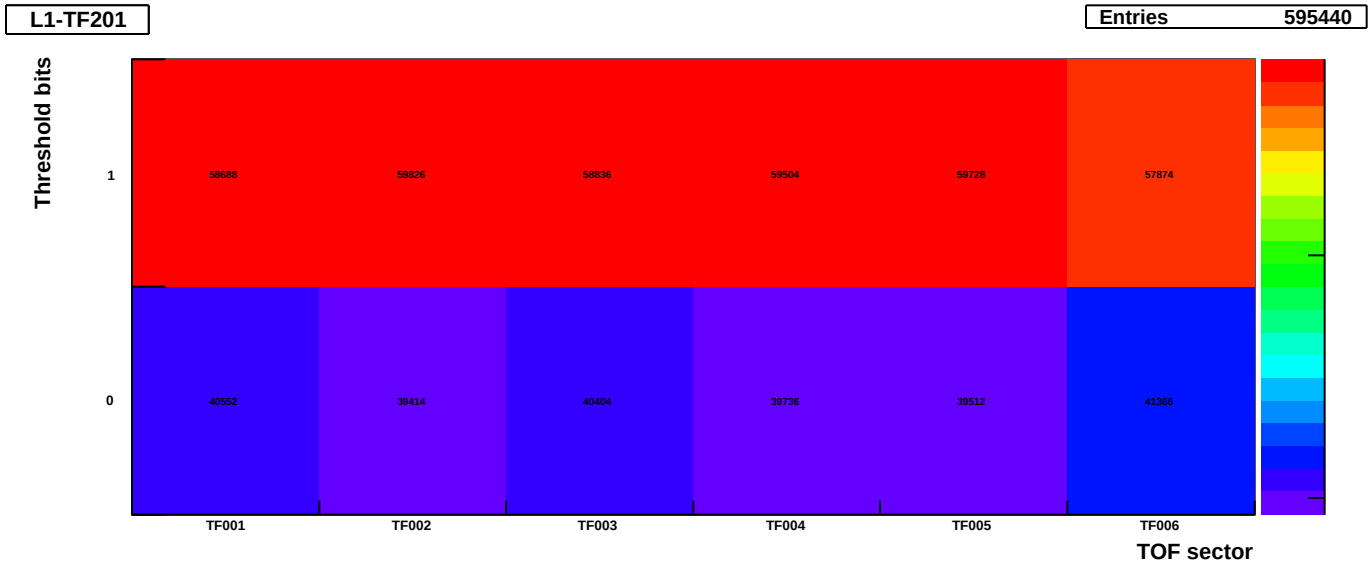

MIX-TF004
Entries 4168080
TOF MULT
TOF tray

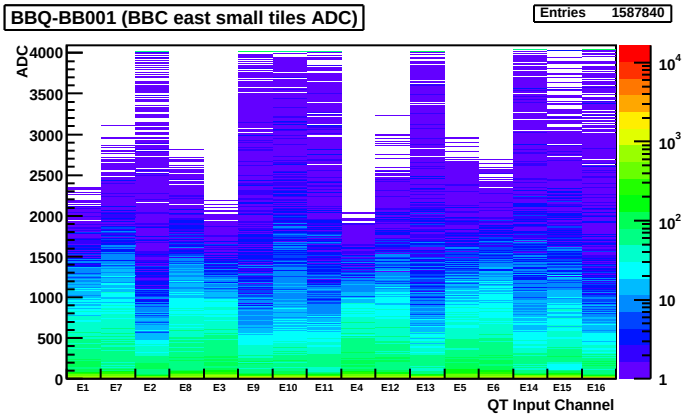

MIX-TF005
Entries 4168080
TOF MULT
TOF tray

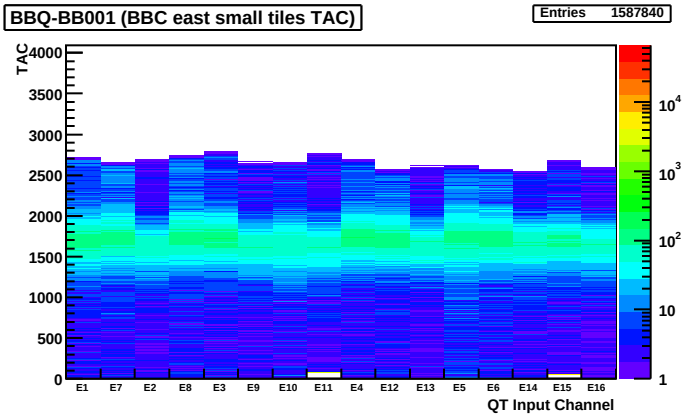

MIX-TF006
Entries 4168080
TOF MULT
TOF tray

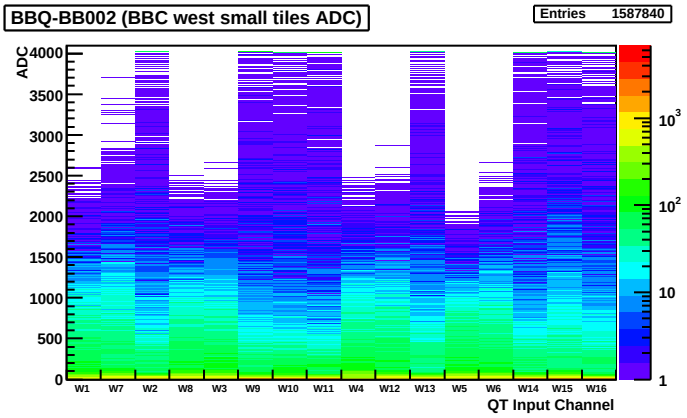

MIX-TF101
Entries 595440
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

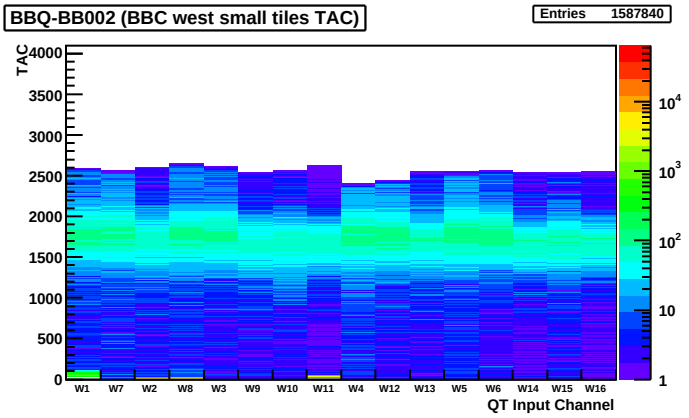

L1-TF201
Entries 99240
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

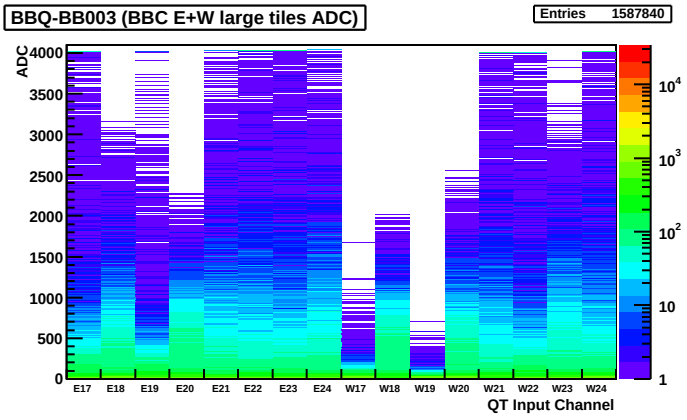

L1-TF201
Entries 595440
Threshold bits
1
0
58688
59826
58836
59504
59728
57874
40552
39414
40404
39736
39512
41366
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

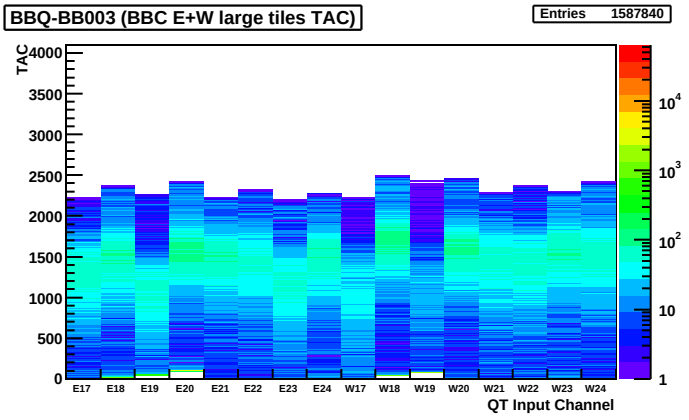

BBQ-BB001 (BBC east small tiles ADC)
Entries 1587840
ADC
QT Input Channel

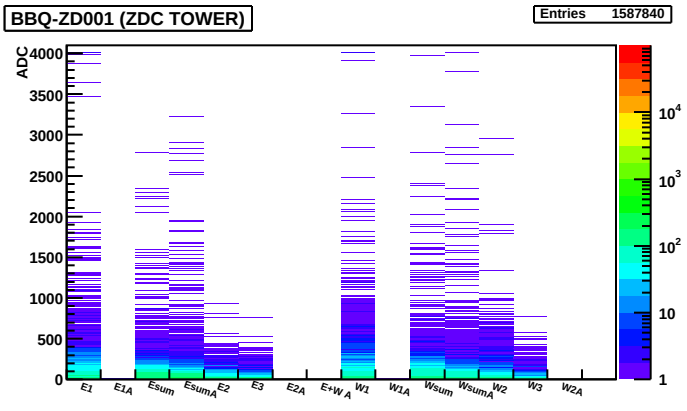

BBQ-BB001 (BBC east small tiles TAC)
Entries 1587840
TAC
QT Input Channel

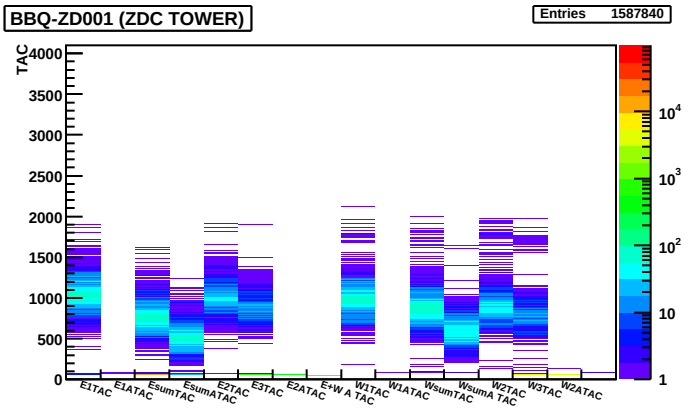

BBQ-BB002 (BBC west small tiles ADC)
Entries 1587840
ADC
QT Input Channel

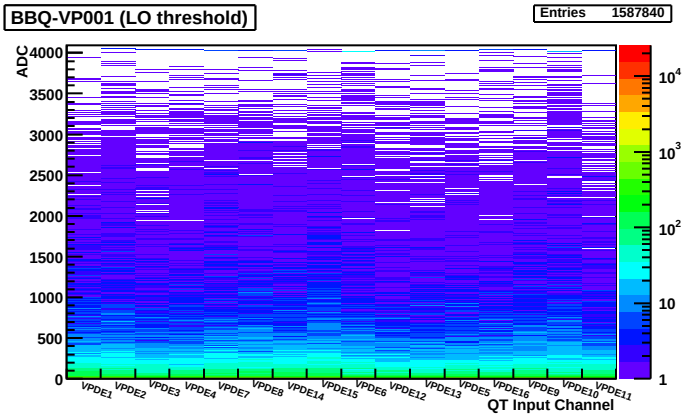

BBQ-BB002 (BBC west small tiles TAC)
Entries 1587840
TAC
QT Input Channel

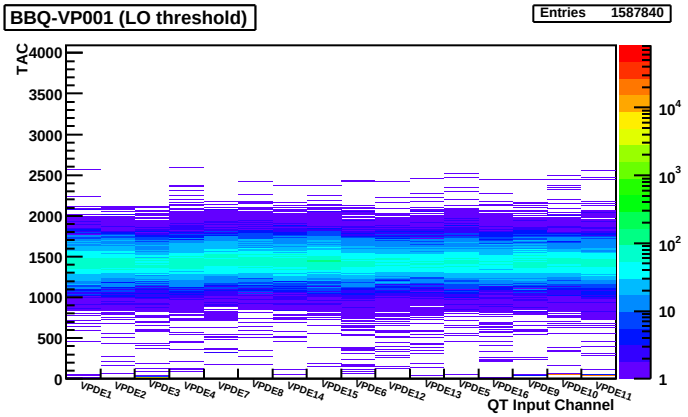

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1587840
ADC
QT Input Channel

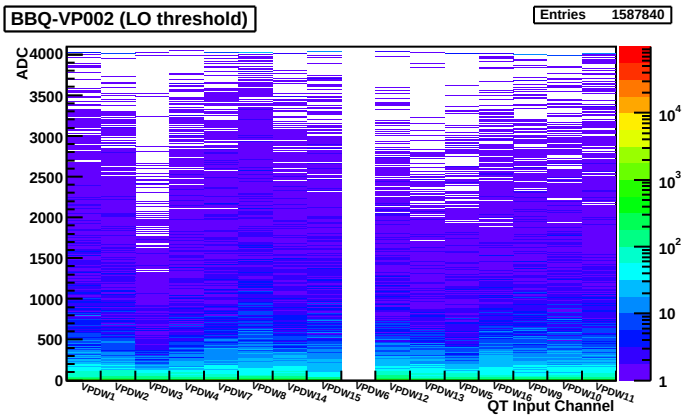

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1587840
TAC
QT Input Channel

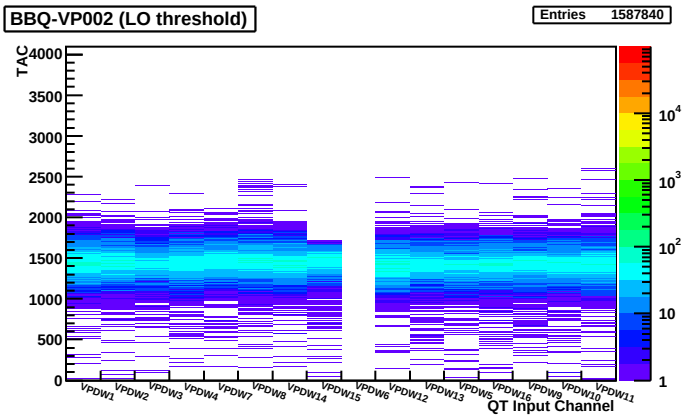

BBQ-ZD001 (ZDC TOWER)
Entries 1587840
ADC

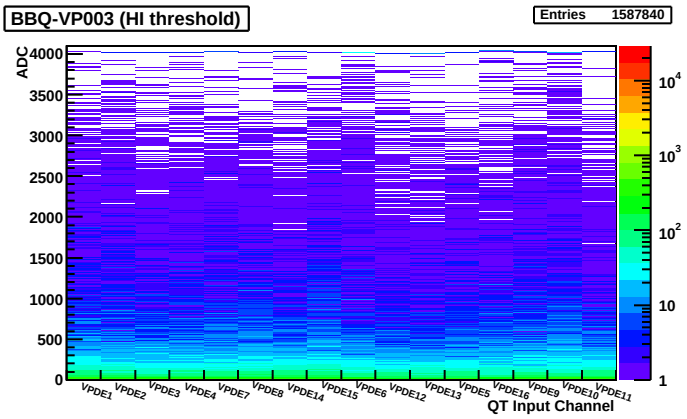

BBQ-ZD001 (ZDC TOWER)
Entries 1587840
TAC

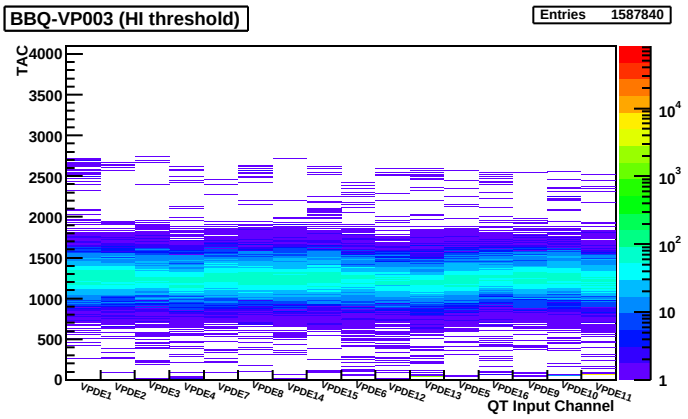

BBQ-VP001 (LO threshold)
Entries 1587840
ADC
QT Input Channel

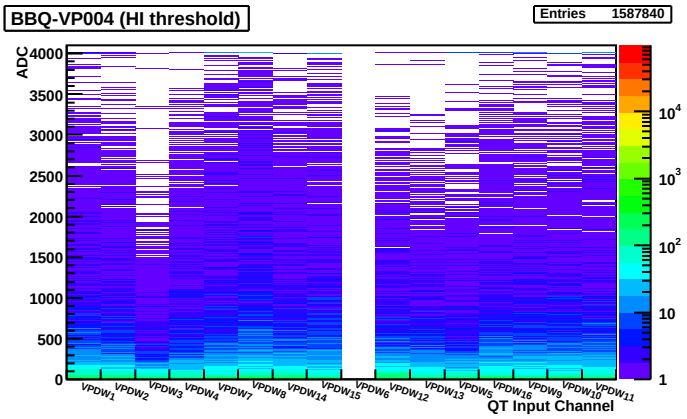

BBQ-VP001 (LO threshold)
Entries 1587840
TAC
QT Input Channel

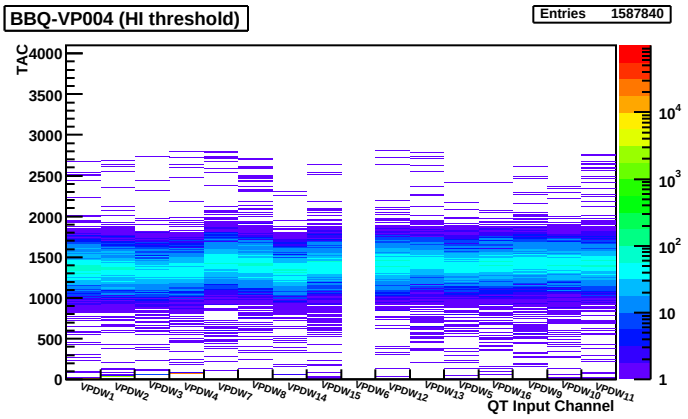

BBQ-VP002 (LO threshold)
Entries 1587840
ADC
QT Input Channel

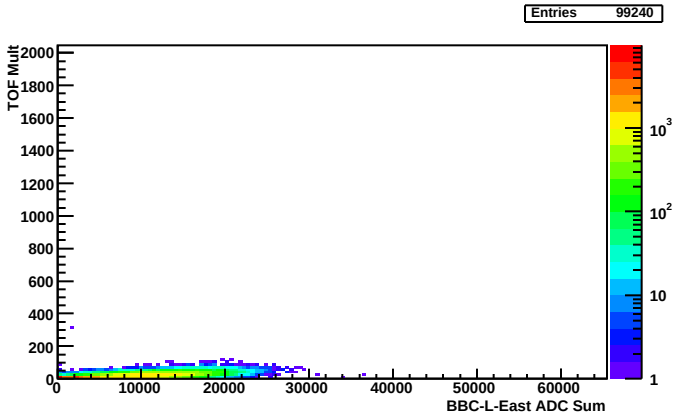

BBQ-VP002 (LO threshold)
Entries 1587840
TAC
QT Input Channel

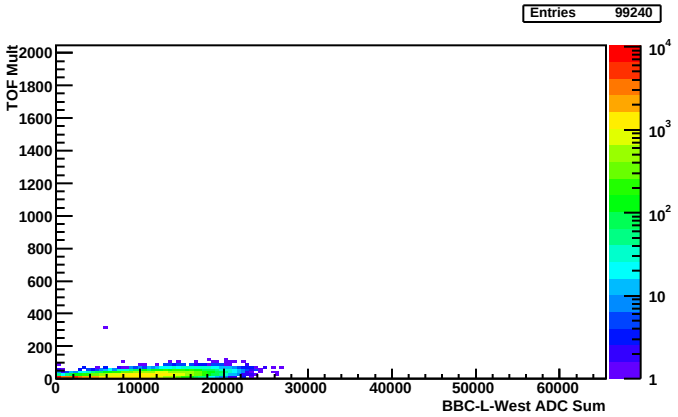

BBQ-VP003 (HI threshold)
Entries 1587840
ADC
QT Input Channel

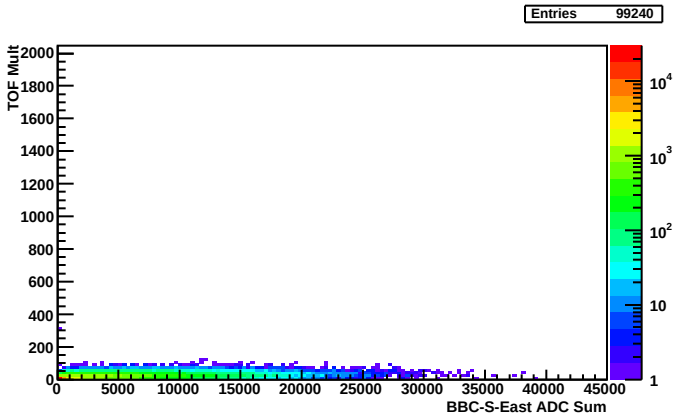

BBQ-VP003 (HI threshold)
Entries 1587840
TAC
QT Input Channel

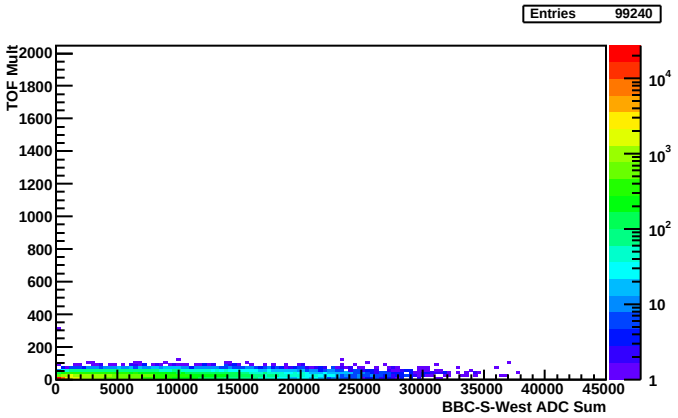

BBQ-VP004 (HI threshold)
Entries 1587840
ADC
QT Input Channel

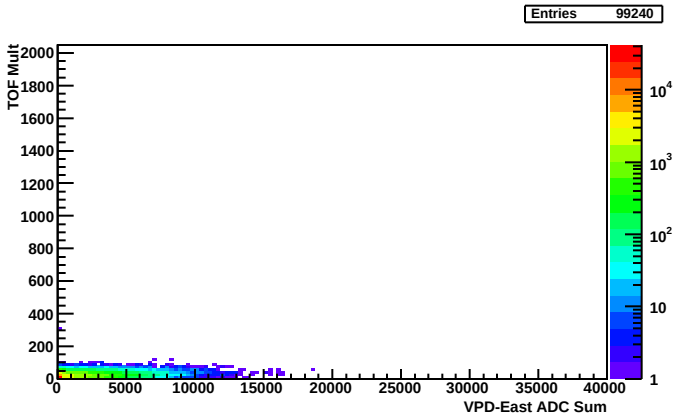

BBQ-VP004 (HI threshold)
Entries 1587840
TAC
QT Input Channel

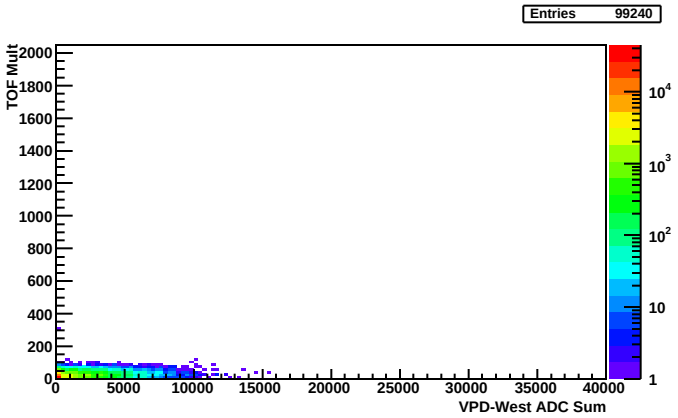

Entries 99240
TOF Mult
BBC-L-East ADC Sum

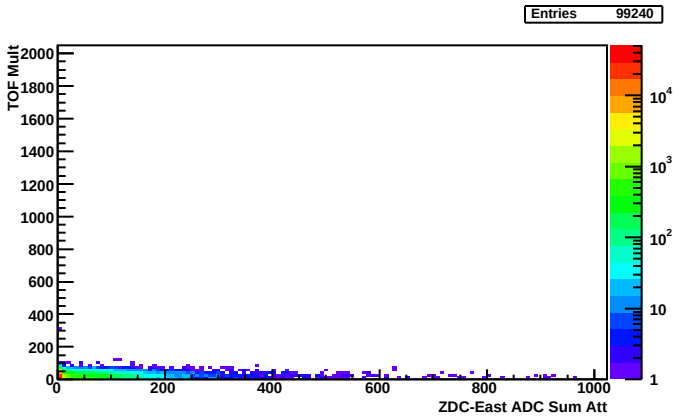

Entries 99240
TOF Mult
BBC-L-West ADC Sum

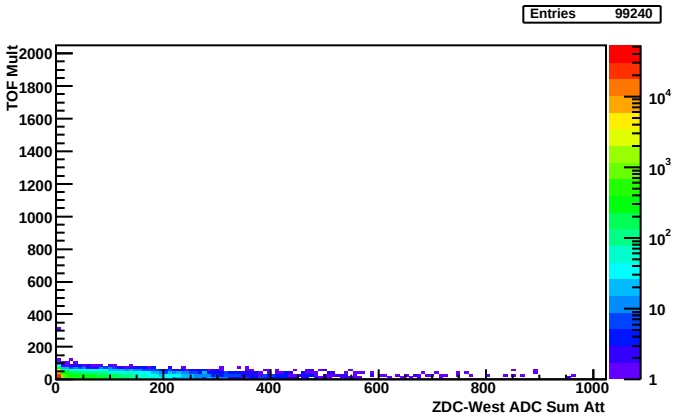

Entries 99240
TOF Mult
BBC-S-East ADC Sum

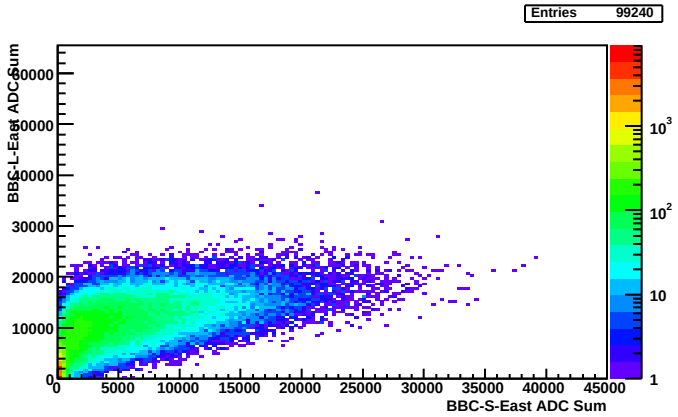

Entries 99240
TOF Mult
BBC-S-West ADC Sum

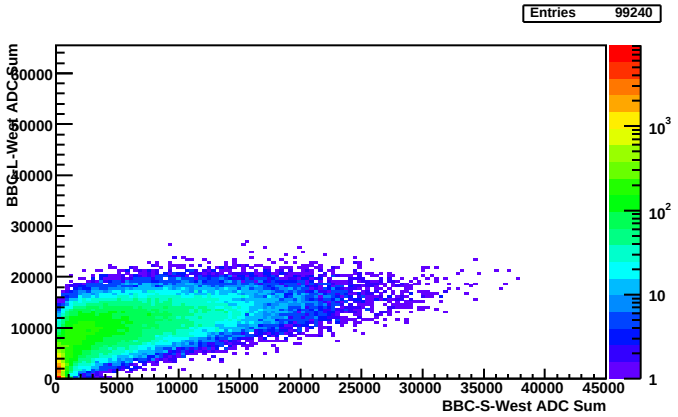

Entries 99240
TOF Mult
VPD-East ADC Sum

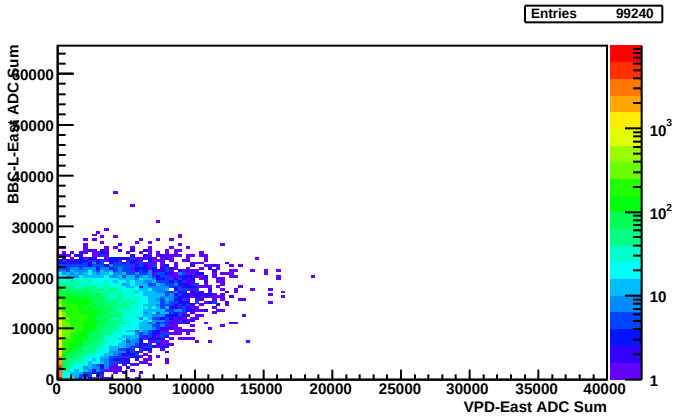

Entries 99240
TOF Mult
VPD-West ADC Sum

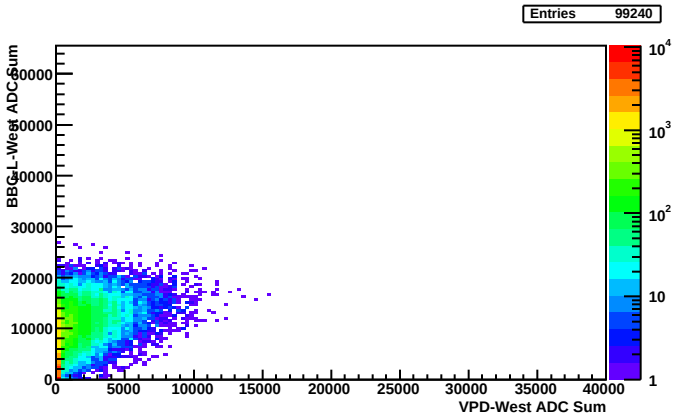

Entries 99240
TOF Mult
ZDC-East ADC Sum Att

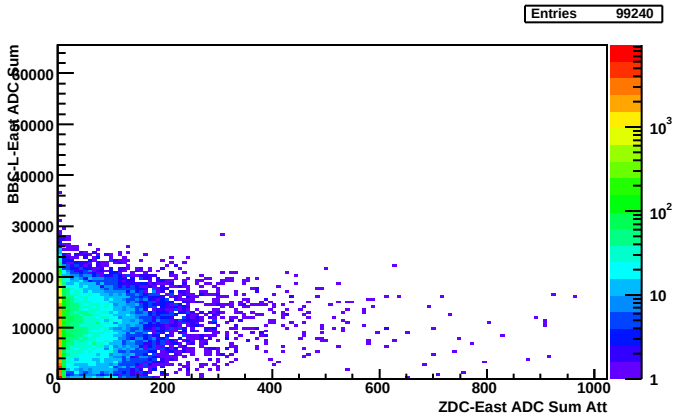

Entries 99240
TOF Mult
ZDC-West ADC Sum Att

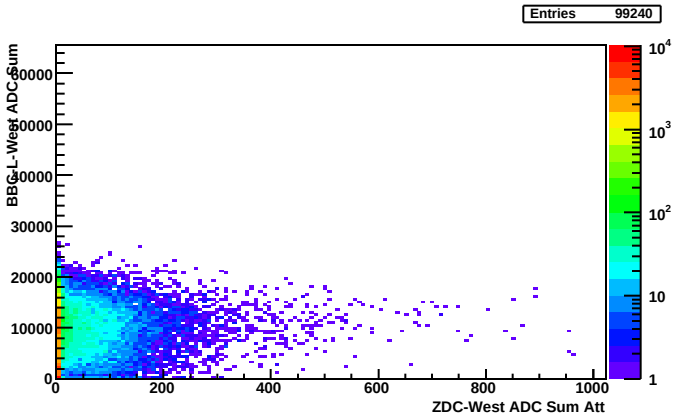

Entries 99240
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 99240
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 99240
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 99240
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 99240
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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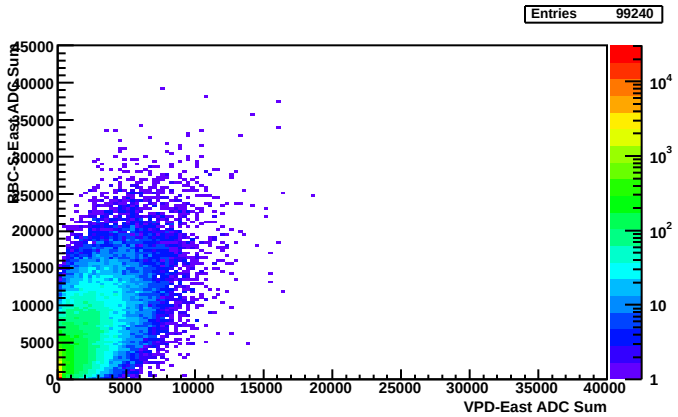
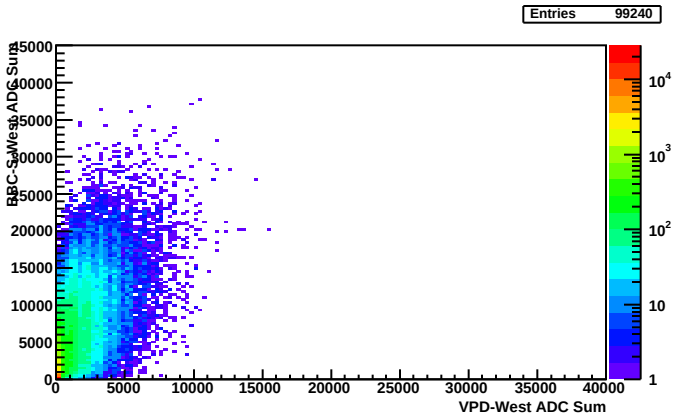
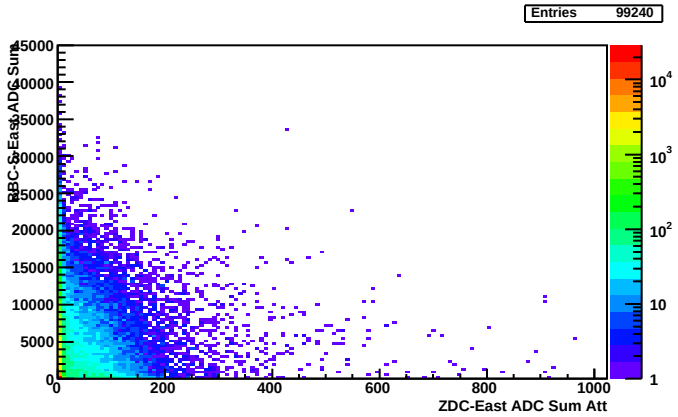
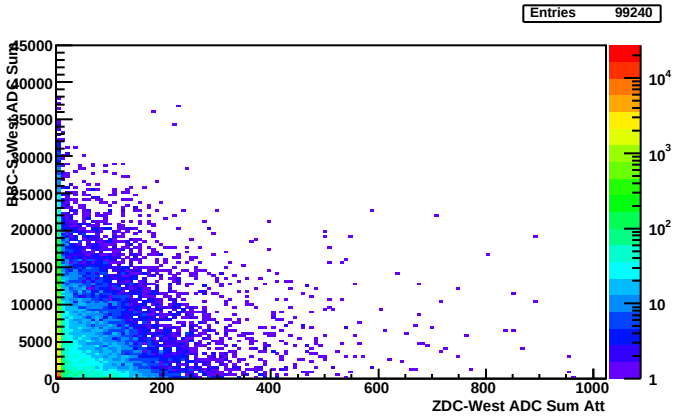
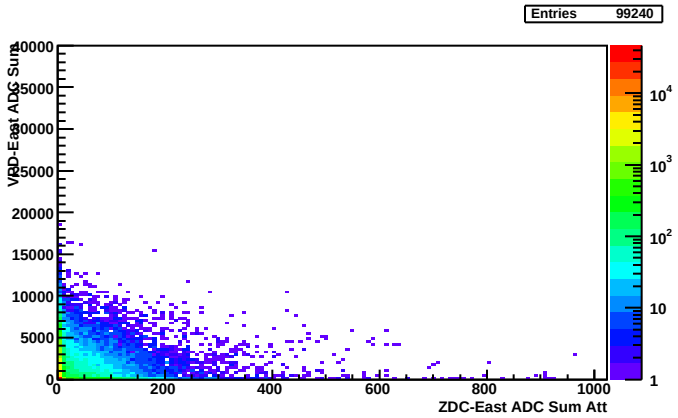
BBC-L-West ADC Sum
ZDC-West ADC Sum Att


Entries 99240
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 99240
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 99240
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 99240
BBC-S-West ADC Sum
ZDC-West ADC Sum Att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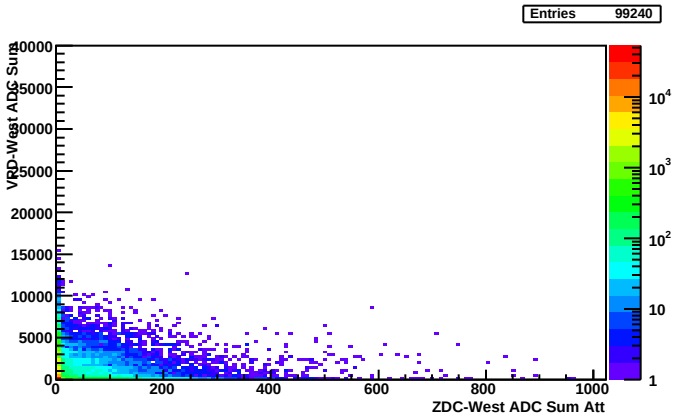
VPD-East ADC Sum
ZDC-East ADC Sum Att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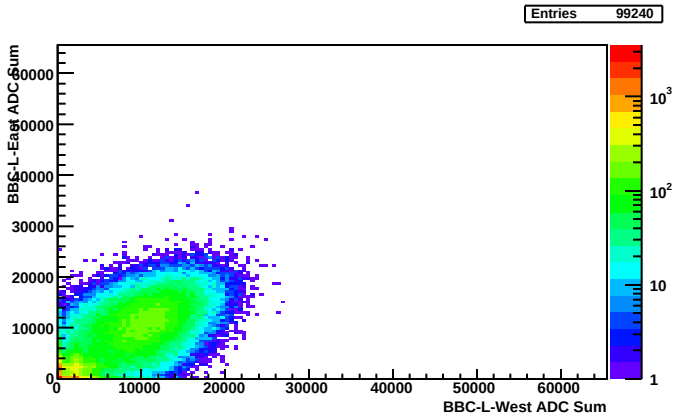
VPD-West ADC Sum
ZDC-West ADC Sum Att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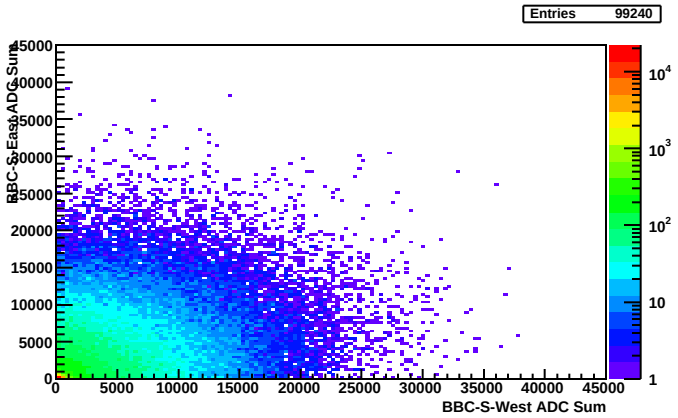
BBC-L-East ADC Sum
BBC-L-West ADC Sum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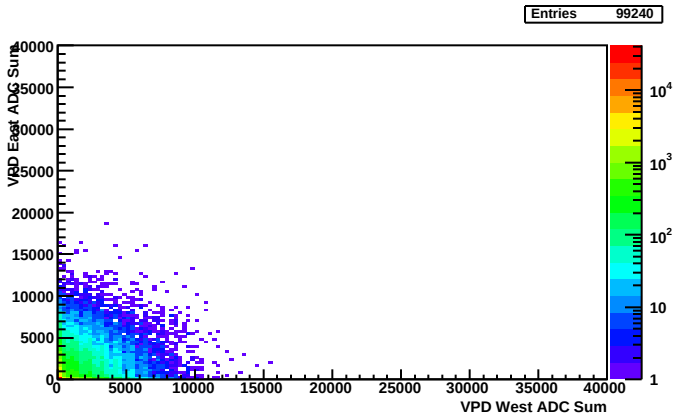
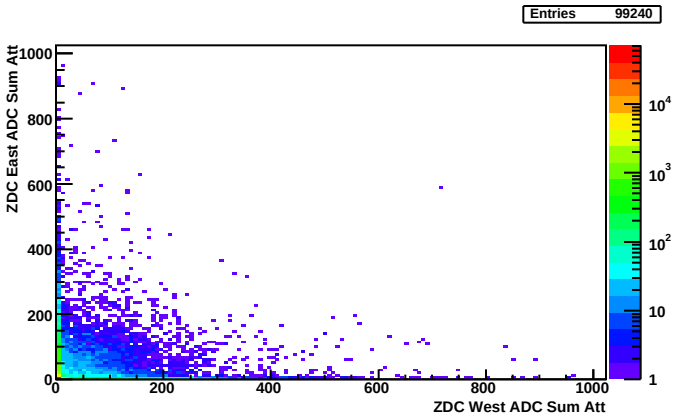
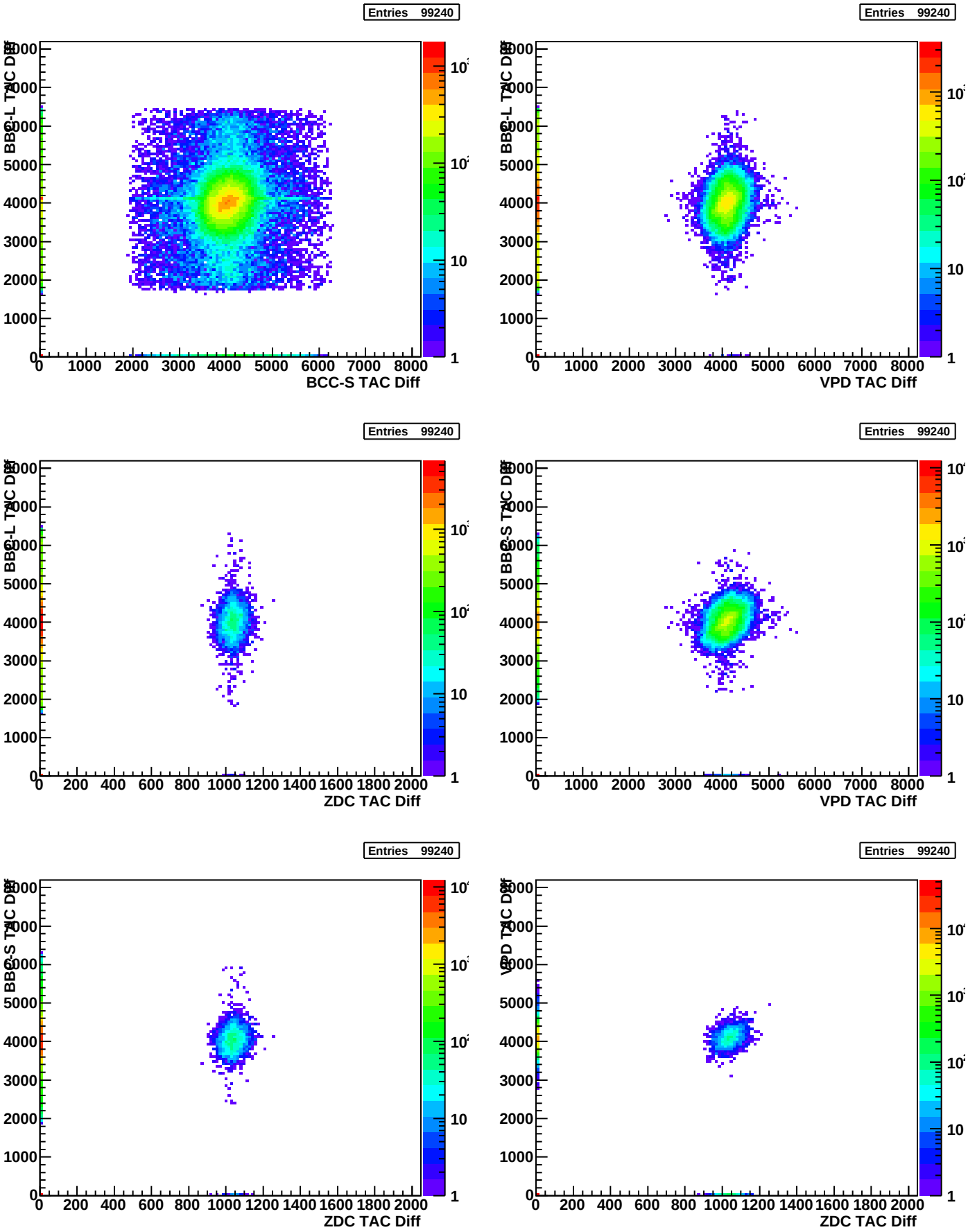
BBC-S-East ADC Sum
BBC-S-West ADC Sum


Entries 99240
VPD East ADC Sum
VPD West ADC Sum


Entries 99240
ZDC East ADC Sum Att
ZDC West ADC Sum Att


Entries 99240
BBC-L TAC Diff
BCC-S TAC Diff
Entries 99240
BBC-L TAC Diff
VPD TAC Diff
Entries 99240
BBC-L TAC Diff
ZDC TAC Diff
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VPD TAC Diff
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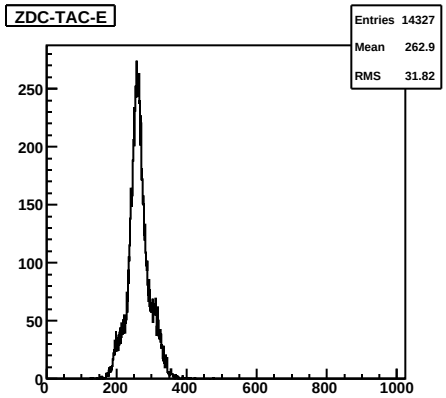
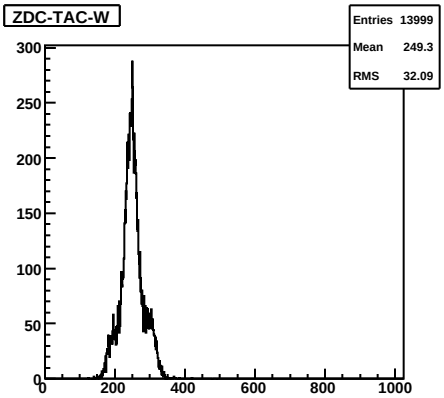
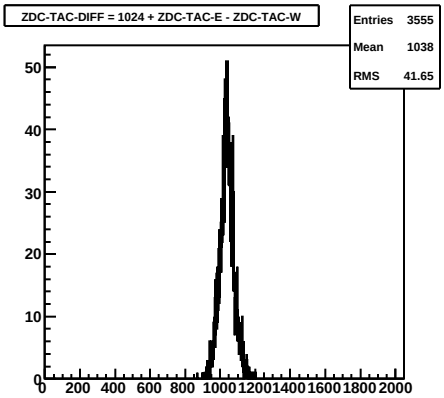
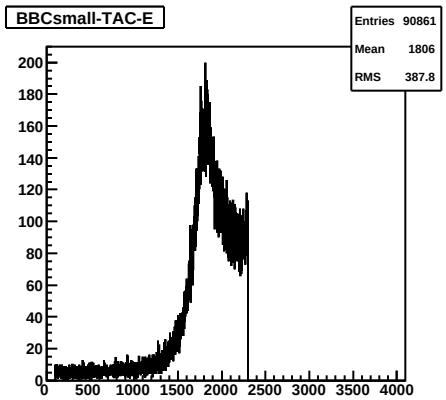
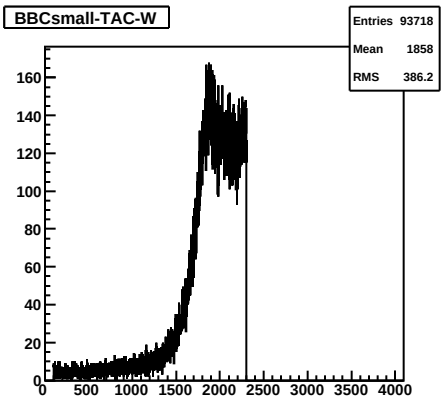
ZDC TAC Diff
Entries 99240
VPD TAC Diff
ZDC TAC Diff

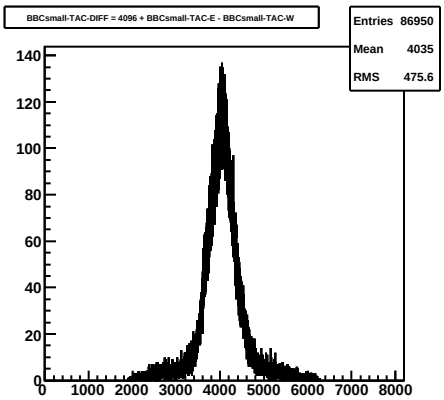

ZDC-TAC-E
Entries 14327
Mean 262.9
RMS 31.82

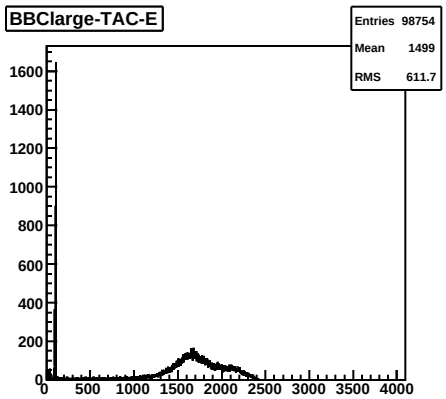

ZDC-TAC-W
Entries 13999
Mean 249.3
RMS 32.09

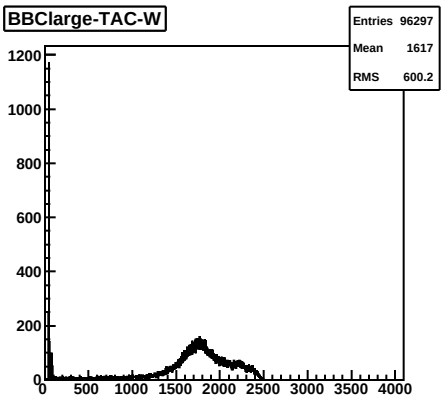

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3555
Mean 1038
RMS 41.65

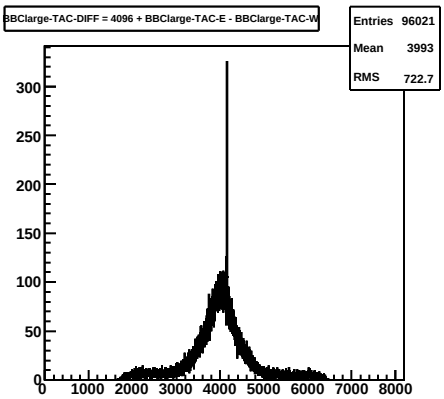

BBCsmall-TAC-E
Entries 90861
Mean 1806
RMS 387.8

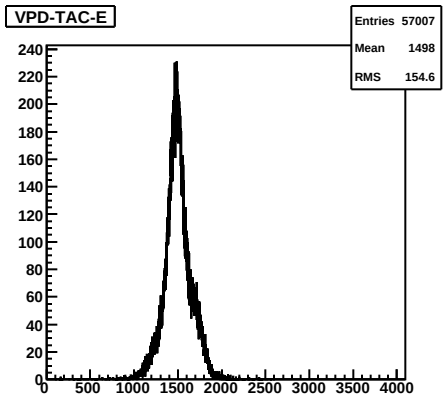

BBCsmall-TAC-W
Entries 93718
Mean 1858
RMS 386.2

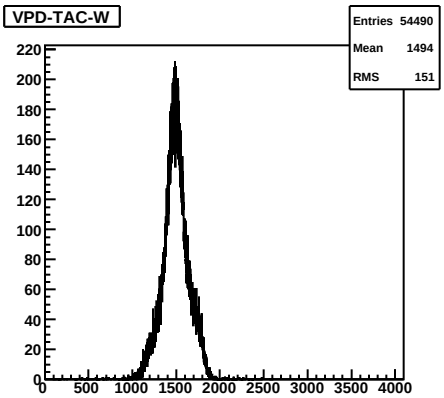

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 86950
Mean 4035
RMS 475.6

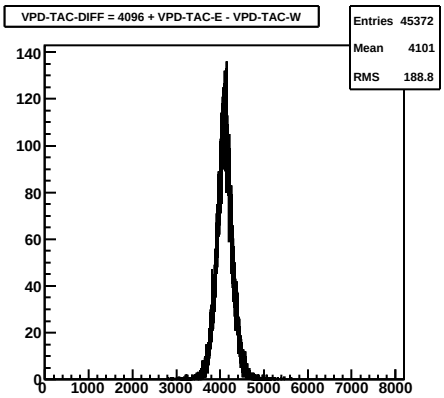

BBClarge-TAC-E
Entries 98754
Mean 1499
RMS 611.7

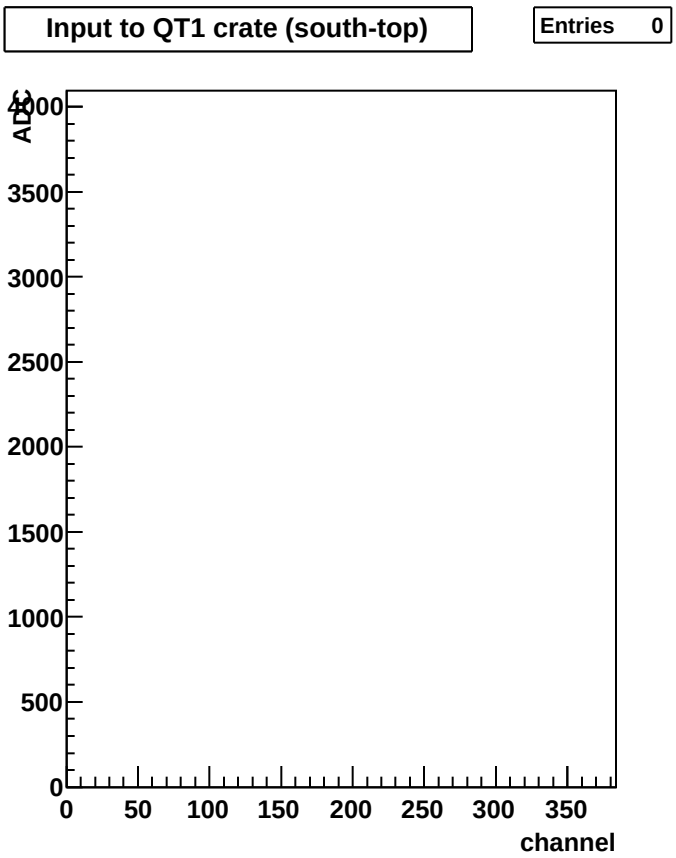

BBClarge-TAC-W
Entries 96297
Mean 1617
RMS 600.2

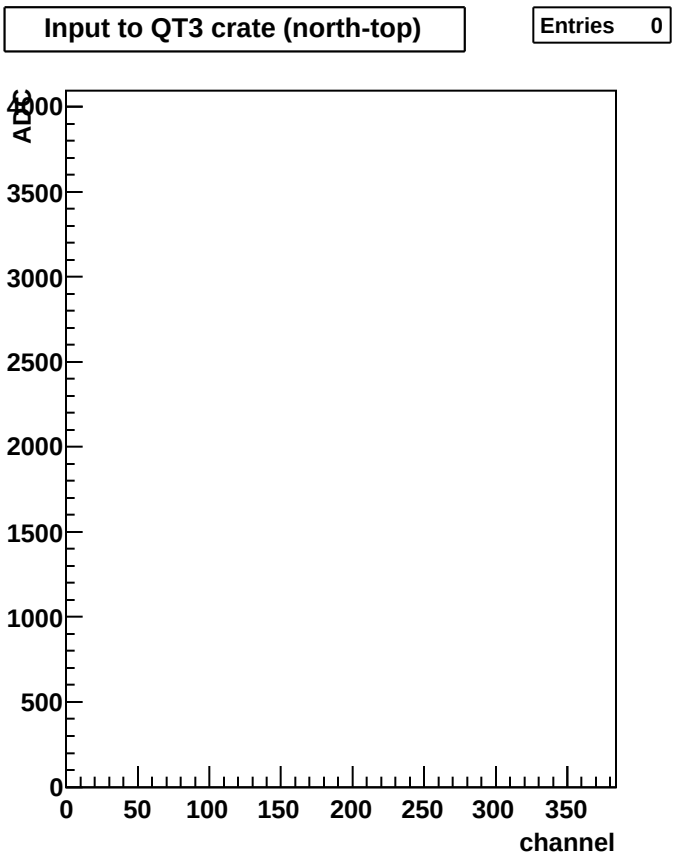

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 96021
Mean 3993
RMS 722.7

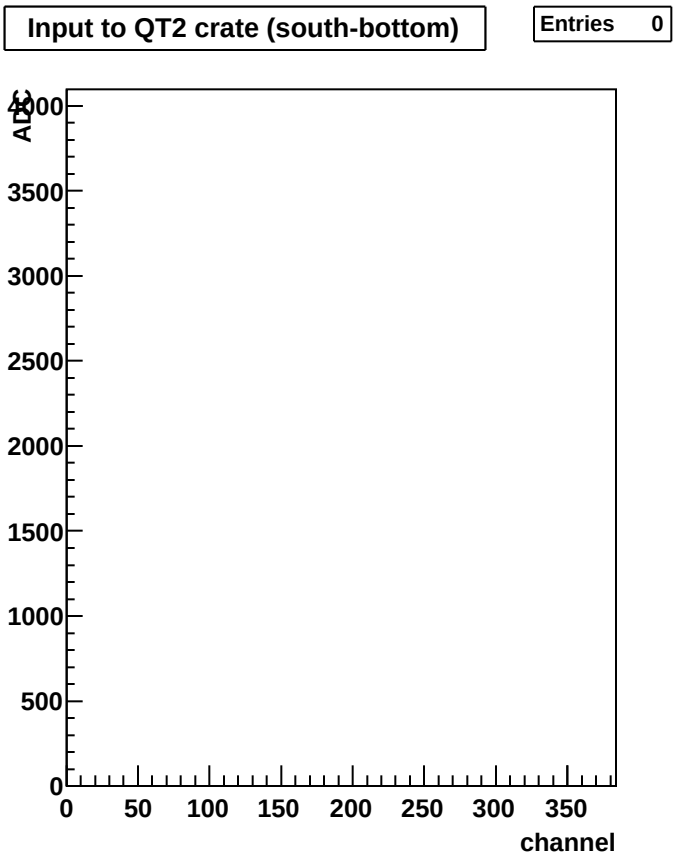

VPD-TAC-E
Entries 57007
Mean 1498
RMS 154.6

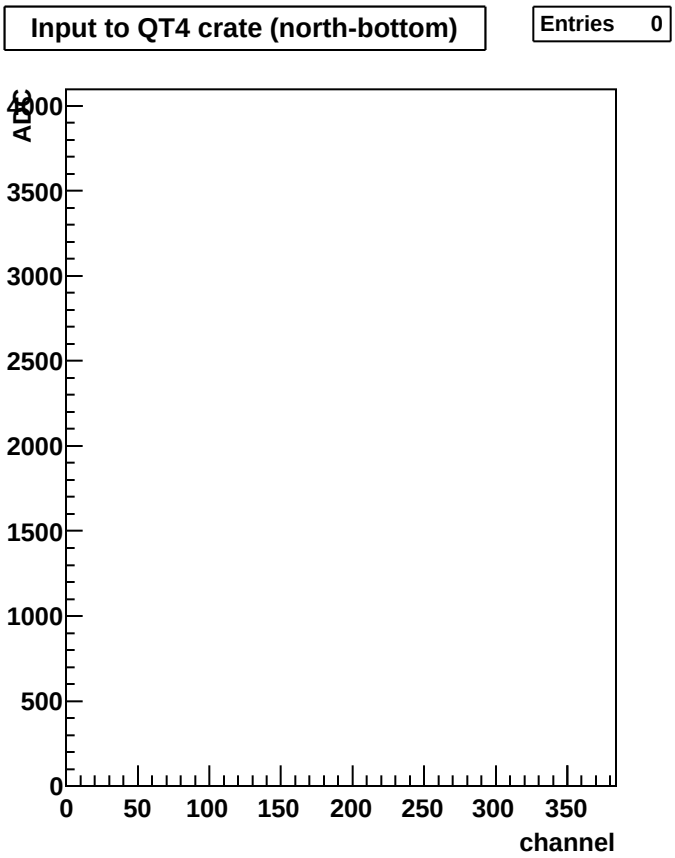

VPD-TAC-W
Entries 54490
Mean 1494
RMS 151

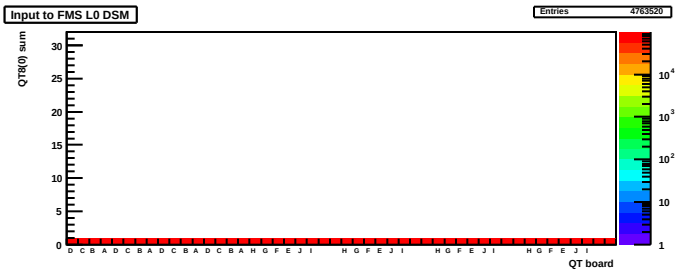

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 45372
Mean 4101
RMS 188.8

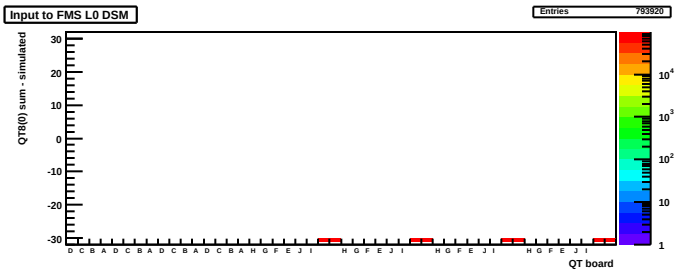

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

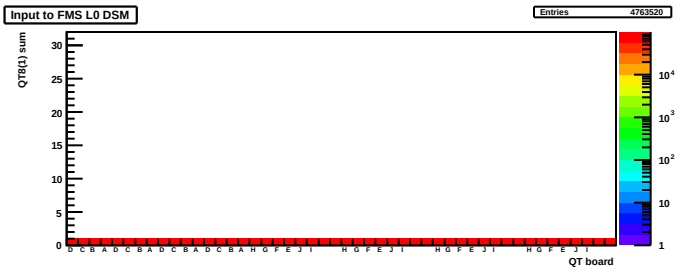

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

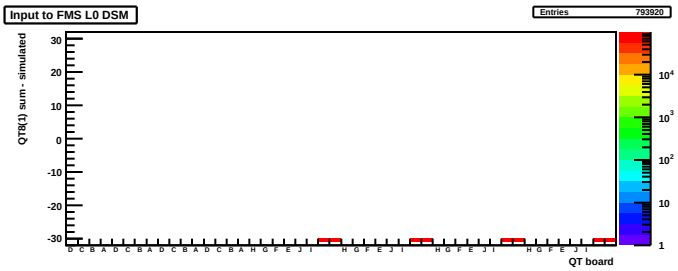

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

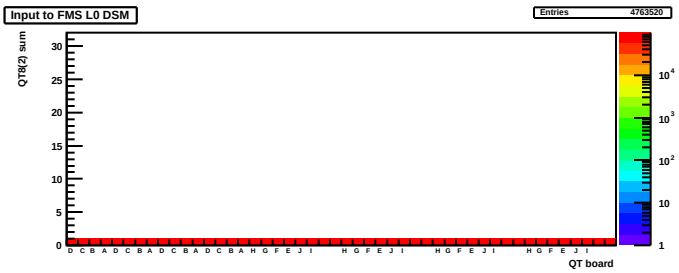

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

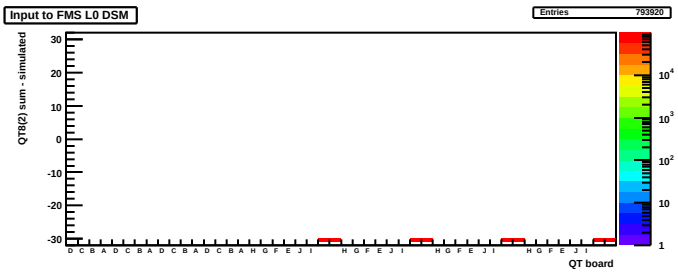

Input to FMS L0 DSM
Entries 4763520
QT8(0) sum
QT board

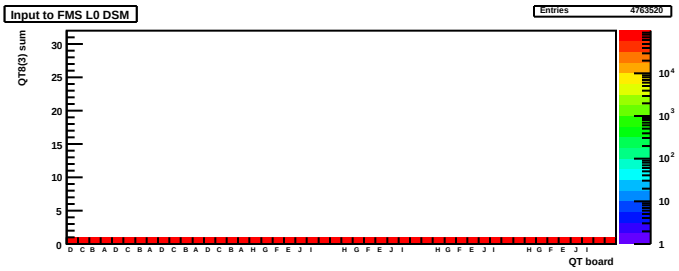

Input to FMS L0 DSM
Entries 793920
QT8(0) sum - simulated
QT board

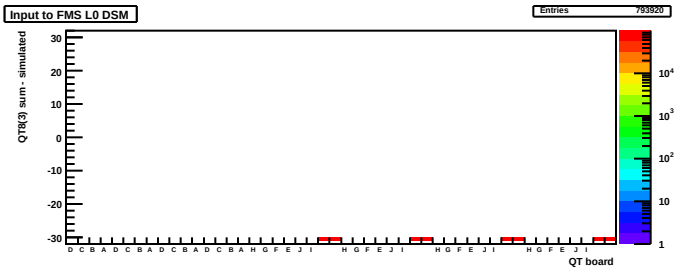

Input to FMS L0 DSM
Entries 4763520
QT8(1) sum
QT board

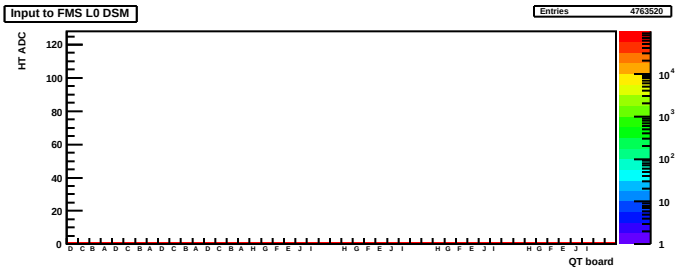

Input to FMS L0 DSM
Entries 793920
QT8(1) sum - simulated
QT board

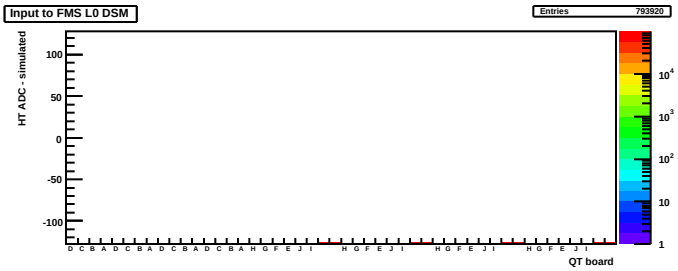

Input to FMS L0 DSM
Entries 4763520
QT8(2) sum
QT board

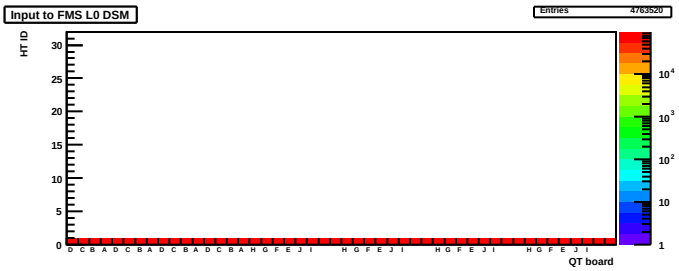

Input to FMS L0 DSM
Entries 793920
QT8(2) sum - simulated
QT board

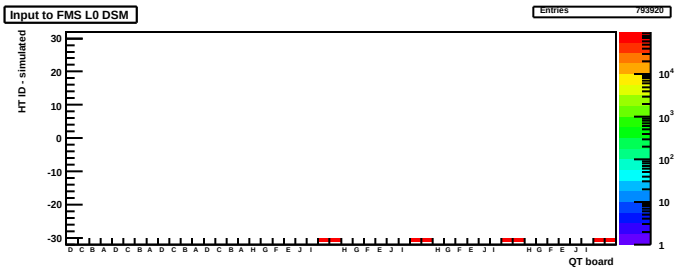

Input to FMS L0 DSM
Entries 4763520
QT8(3) sum
QT board

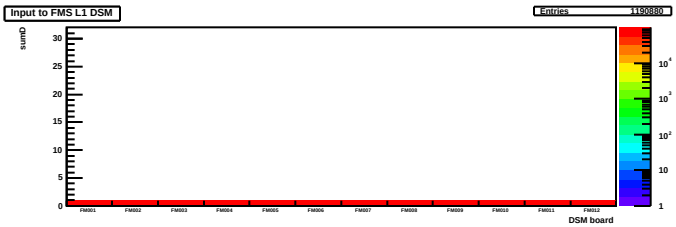

Input to FMS L0 DSM
Entries 793920
QT8(3) sum - simulated
QT board

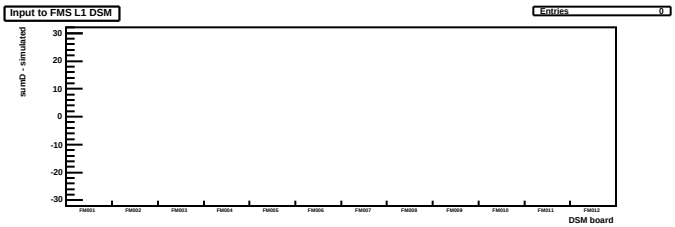

Input to FMS L0 DSM
Entries 4763520
HT ADC
QT board

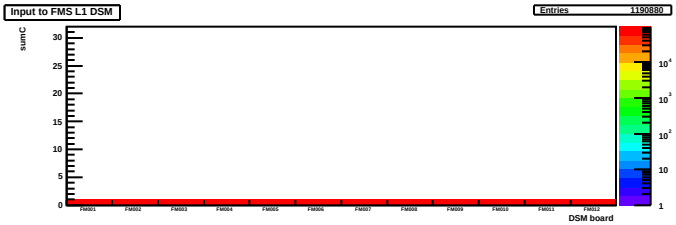

Input to FMS L0 DSM
Entries 793920
HT ADC - simulated
QT board

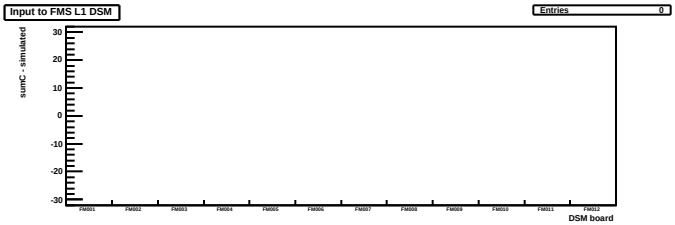

Input to FMS L0 DSM
Entries 4763520
HT ID
QT board

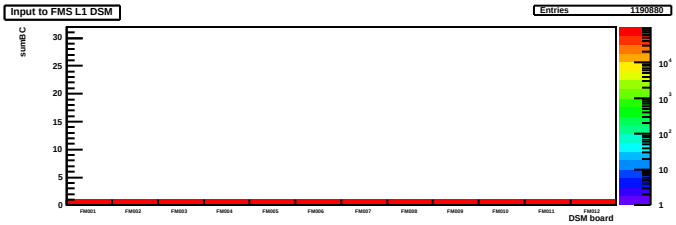

Input to FMS L0 DSM
Entries 793920
HT ID - simulated
QT board

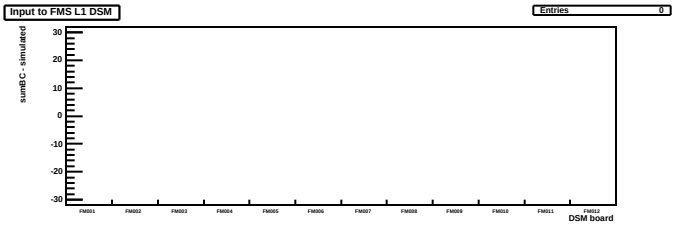

Input to FMS L1 DSM
Entries 1190880
sumD
DSM board

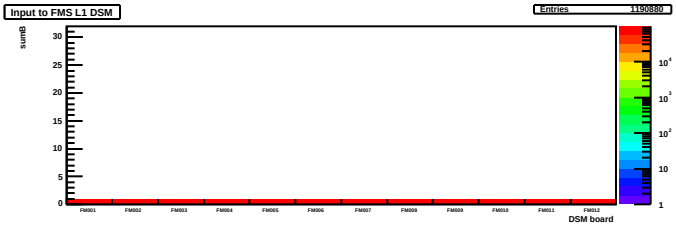

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

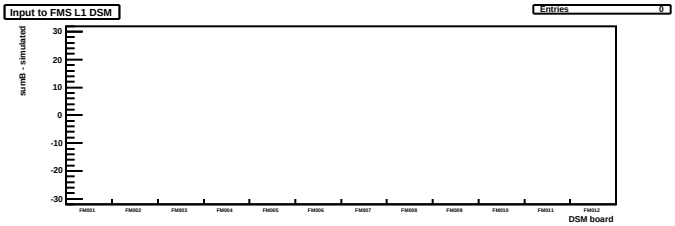

Input to FMS L1 DSM
Entries 1190880
sumC
DSM board

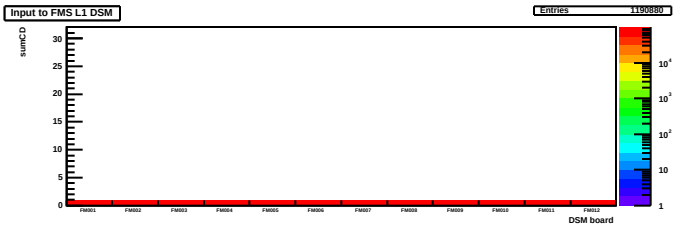

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

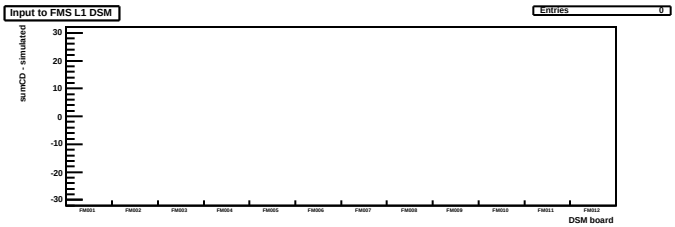

Input to FMS L1 DSM
Entries 1190880
sumBC
DSM board

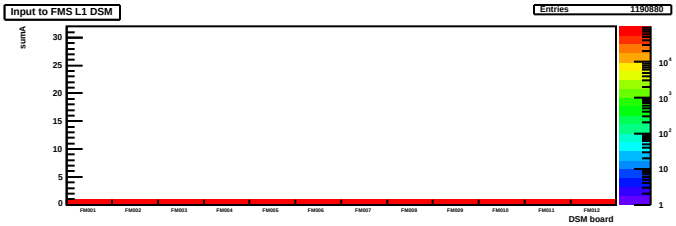

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

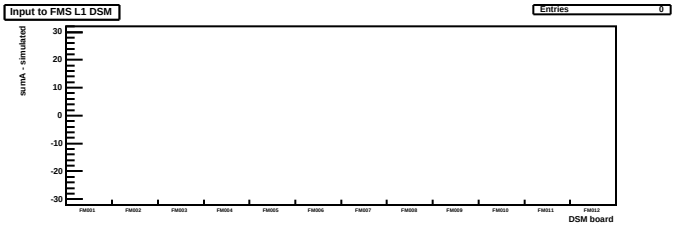

Input to FMS L1 DSM
Entries 1190880
sumB
DSM board

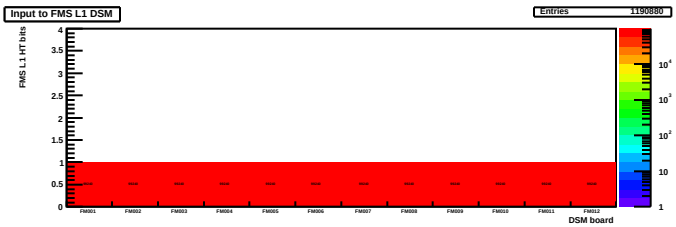

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

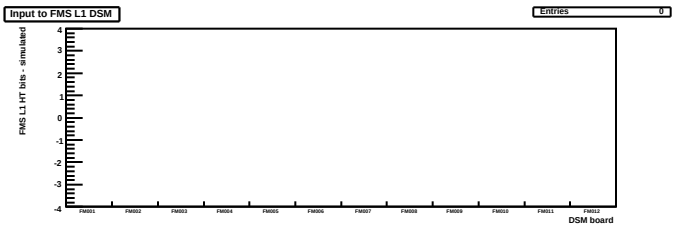

Input to FMS L1 DSM
Entries 1190880
sumCD
DSM board

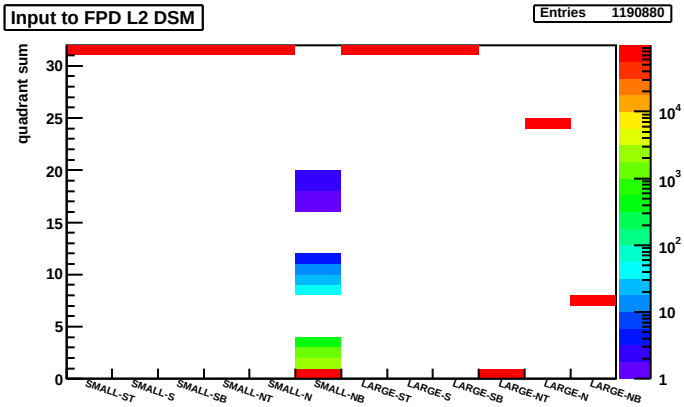

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

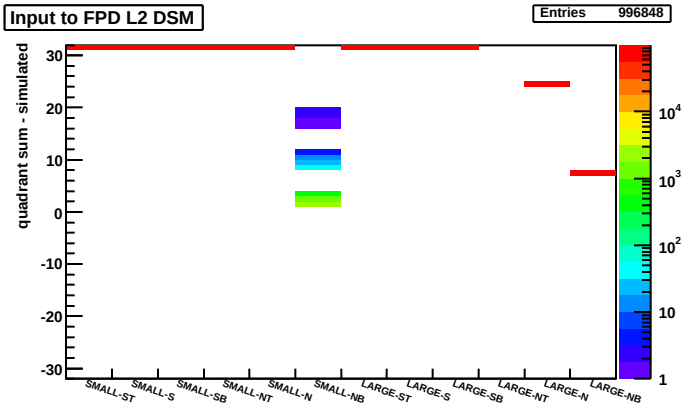

Input to FMS L1 DSM
Entries 1190880
sumA
DSM board

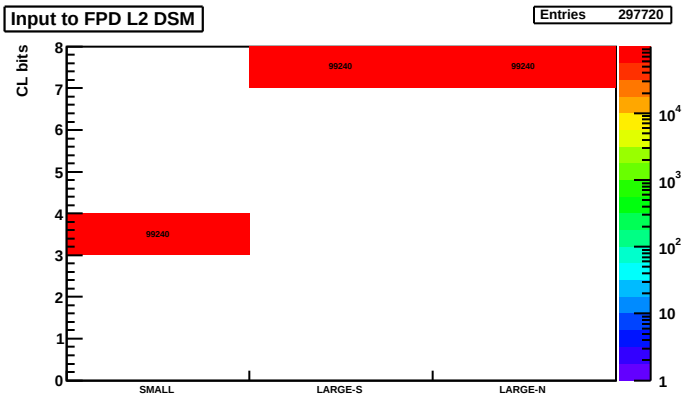

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

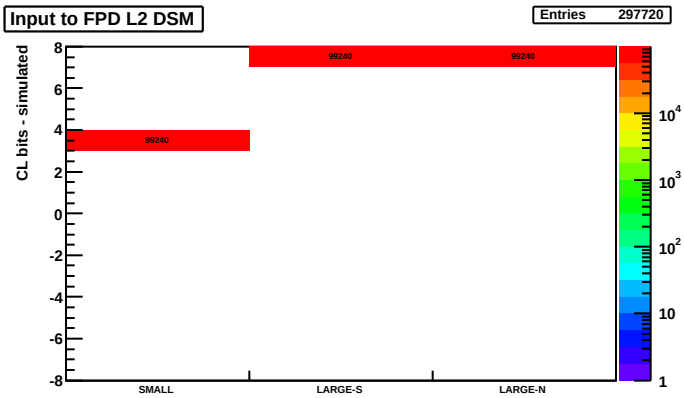

Input to FMS L1 DSM
Entries 1190880
FMS L1 HT bits
DSM board

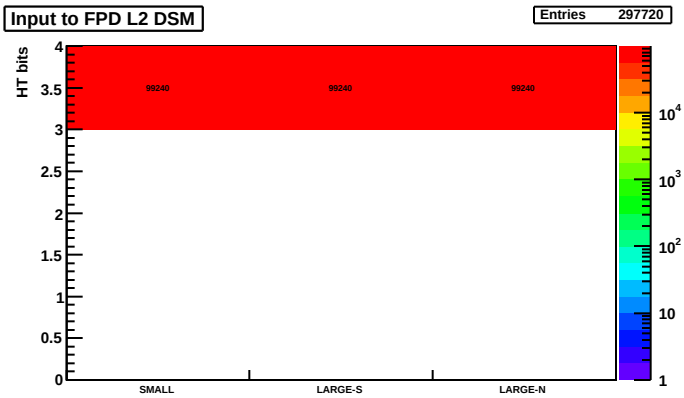

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

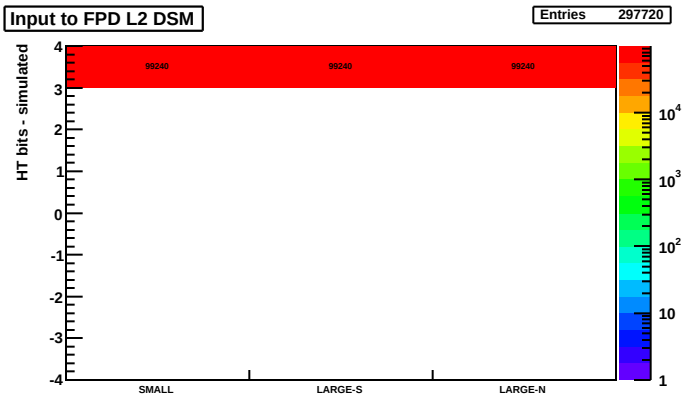

Input to FPD L2 DSM
Entries 1190880
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

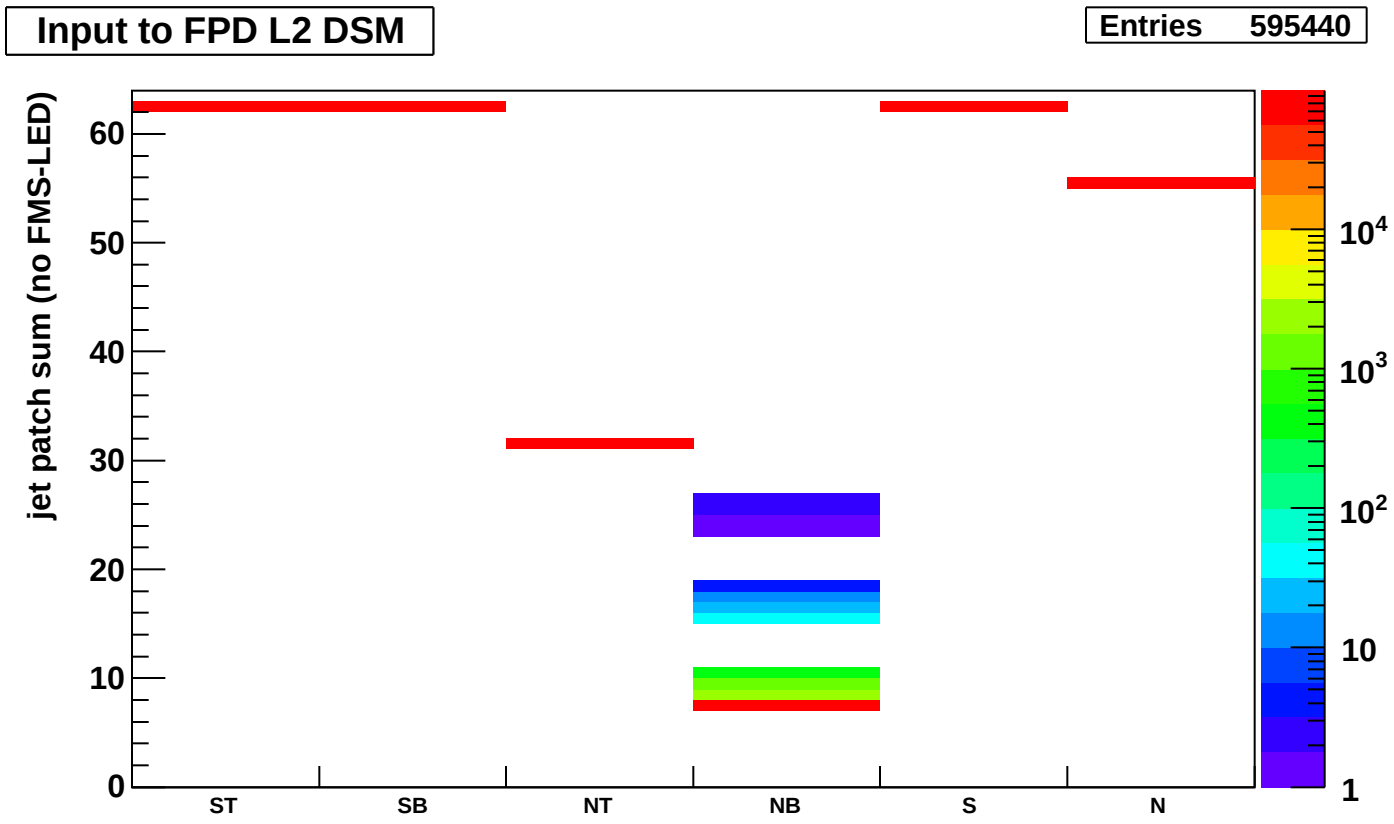

Input to FPD L2 DSM
Entries 996848
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

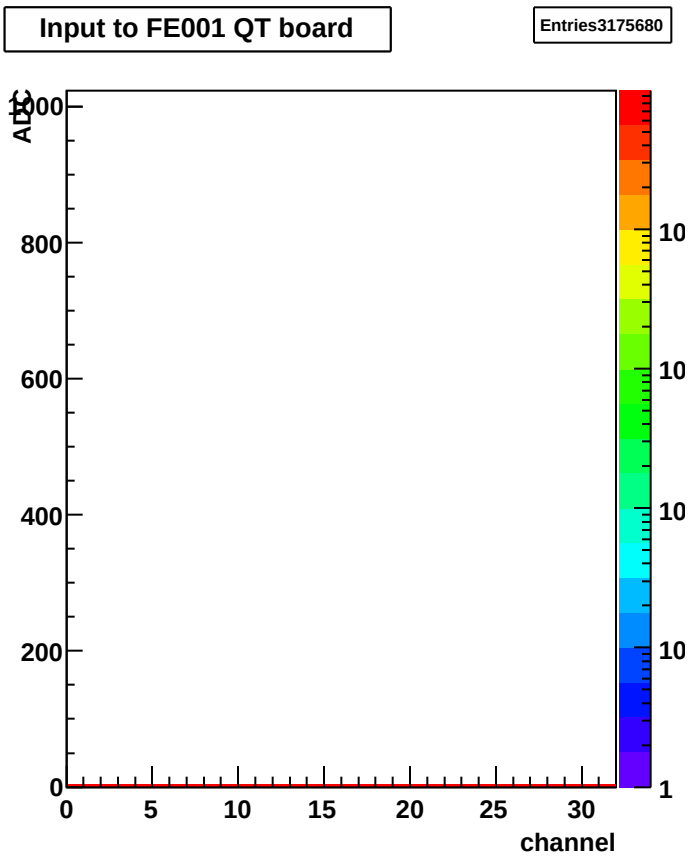

Input to FPD L2 DSM
Entries 297720
CL bits
99240
99240
99240
SMALL
LARGE-S
LARGE-N

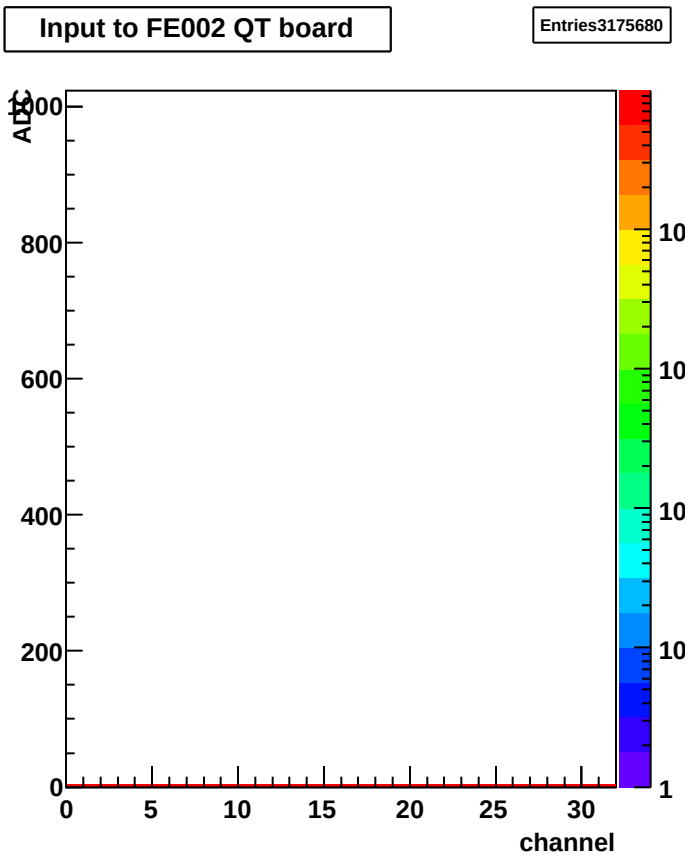

Input to FPD L2 DSM
Entries 297720
CL bits - simulated
99240
99240
99240
SMALL
LARGE-S
LARGE-N

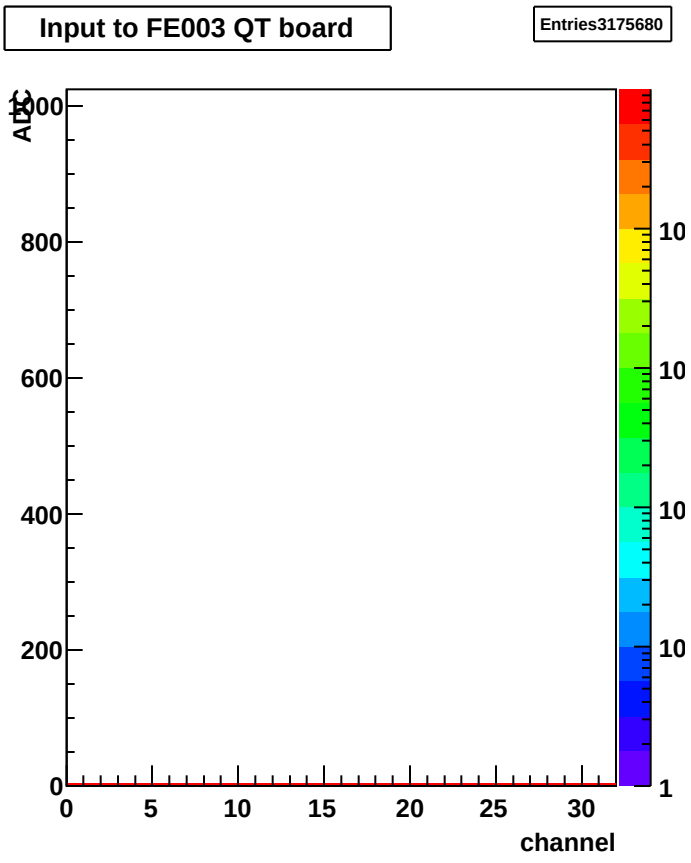

Input to FPD L2 DSM
Entries 297720
HT bits
99240
99240
99240
SMALL
LARGE-S
LARGE-N

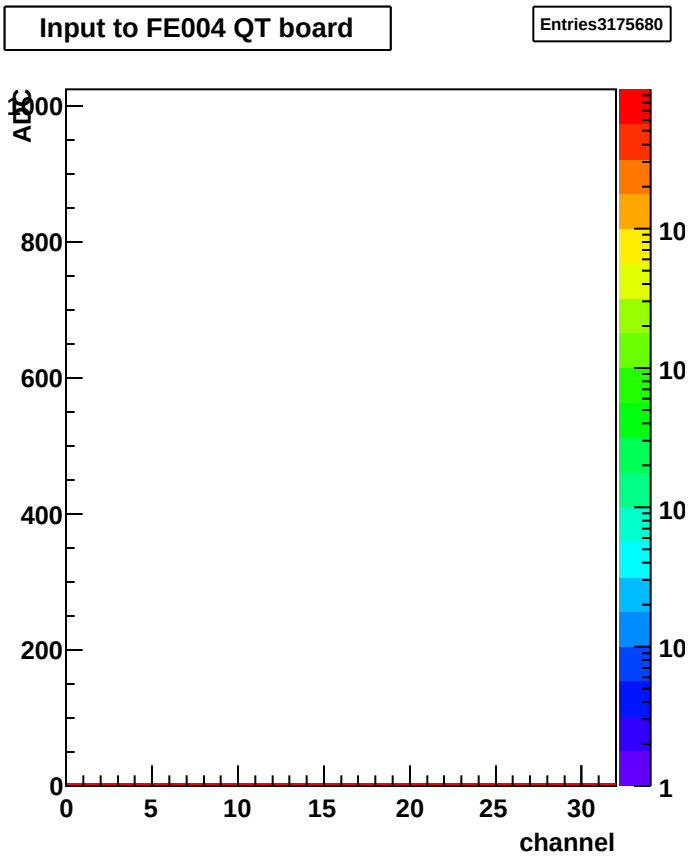

Input to FPD L2 DSM
Entries 297720
HT bits - simulated
99240
99240
99240
SMALL
LARGE-S
LARGE-N

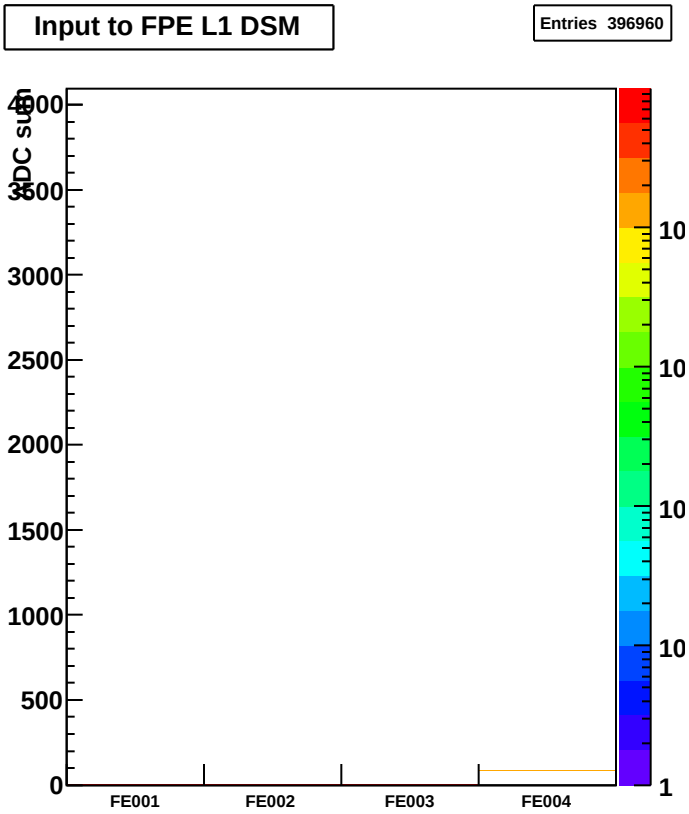

Input to FPD L2 DSM
Entries 595440
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

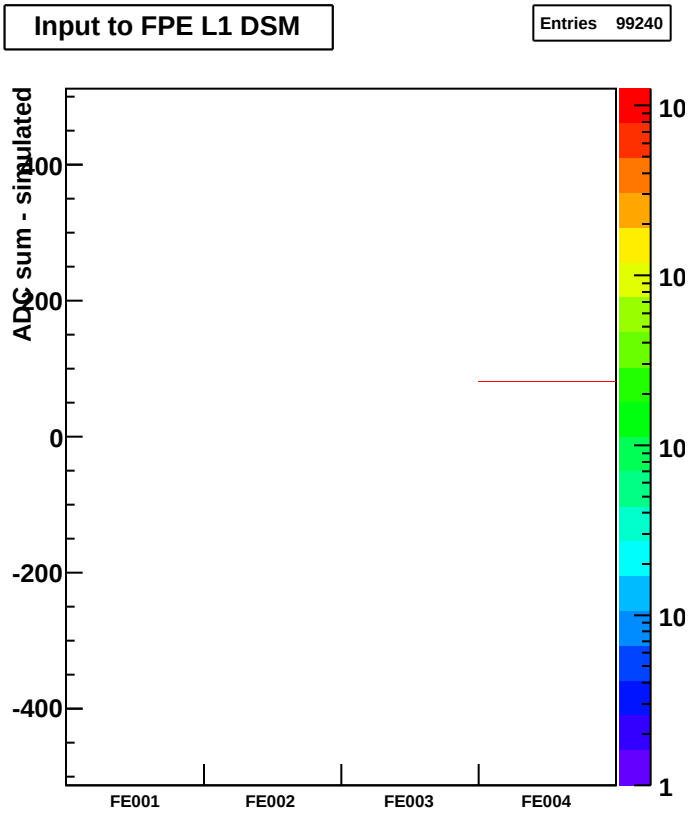

Input to FE001 QT board
Entries3175680
ADC
channel

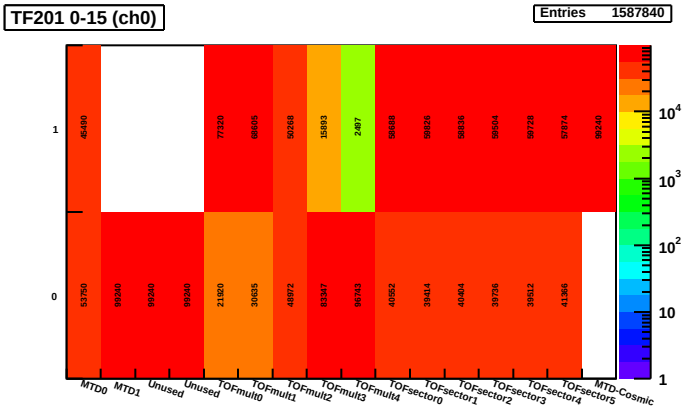

Input to FE002 QT board
Entries3175680
ADC
channel

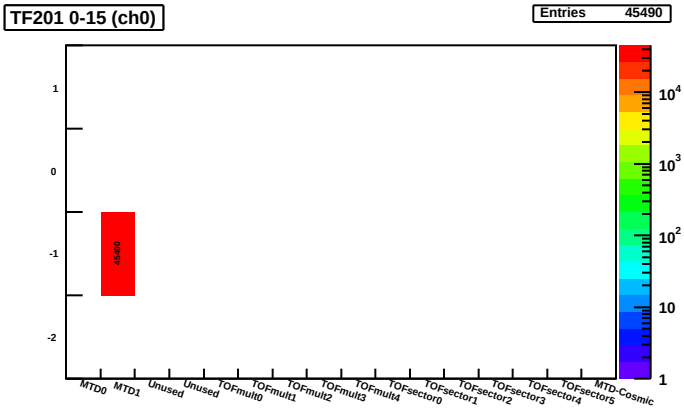

Input to FE003 QT board
Entries3175680
ADC
channel

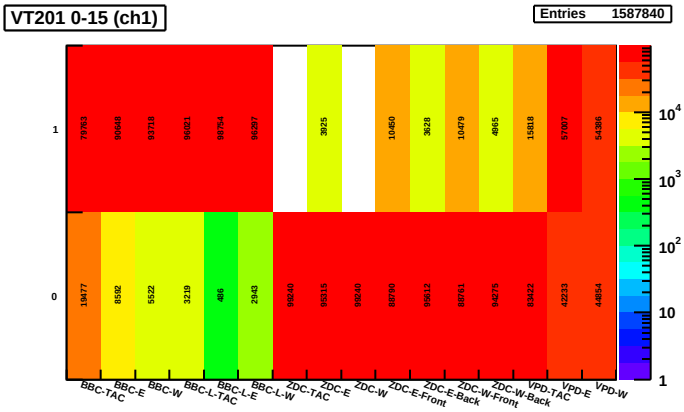

Input to FE004 QT board
Entries3175680
ADC
channel

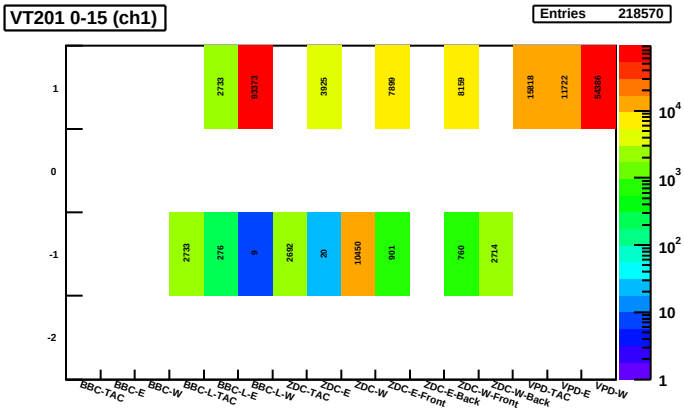

Input to FPE L1 DSM
Entries 396960
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

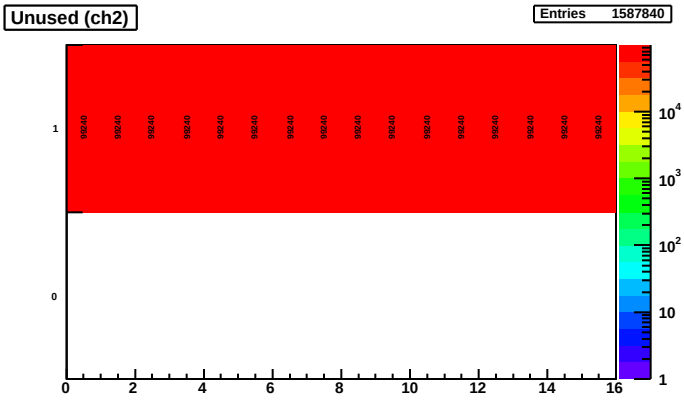

Input to FPE L1 DSM
Entries 99240
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

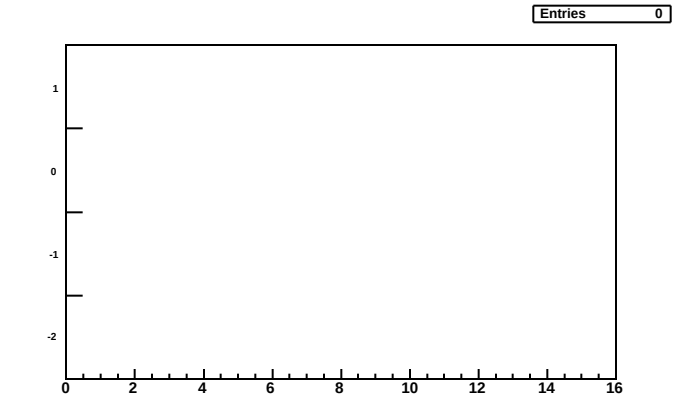

TF201 0-15 (ch0)
Entries 1587840
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

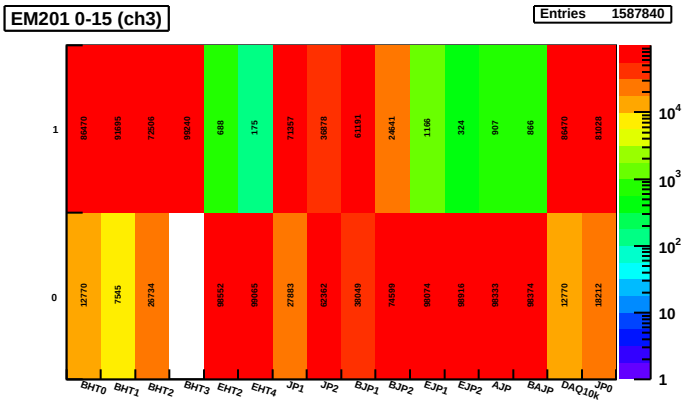

TF201 0-15 (ch0)
Entries 45490
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

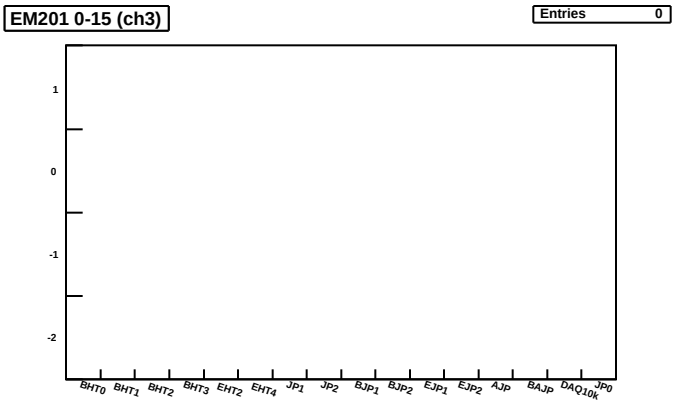

VT201 0-15 (ch1)
Entries 1587840
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 218570
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

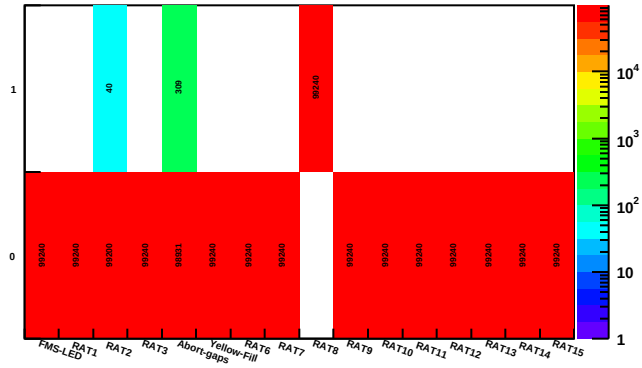

Unused (ch2)
Entries 1587840

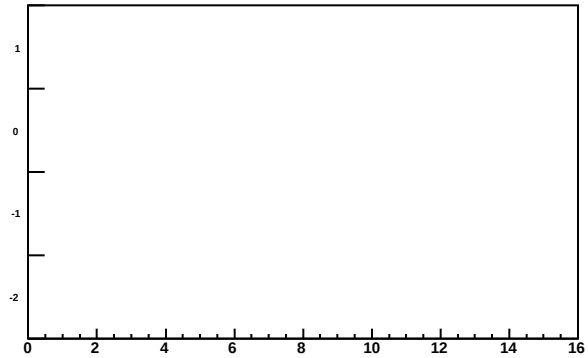

Entries 0


EM201 0-15 (ch3)
Entries 1587840
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

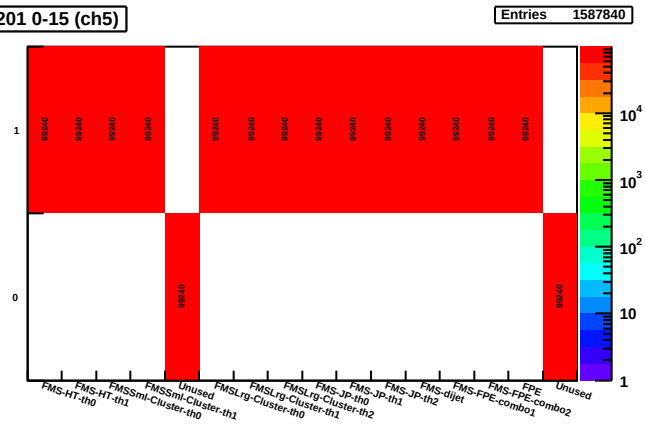

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

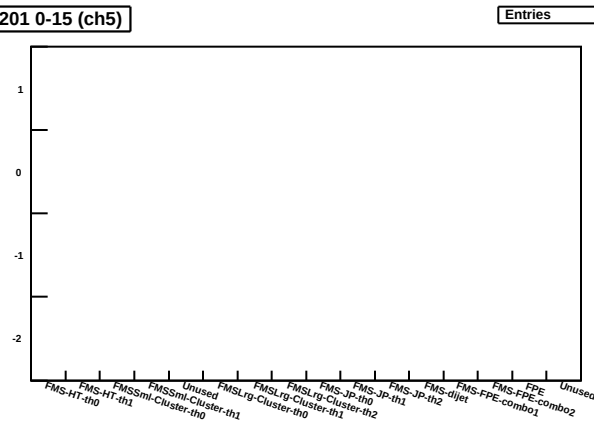




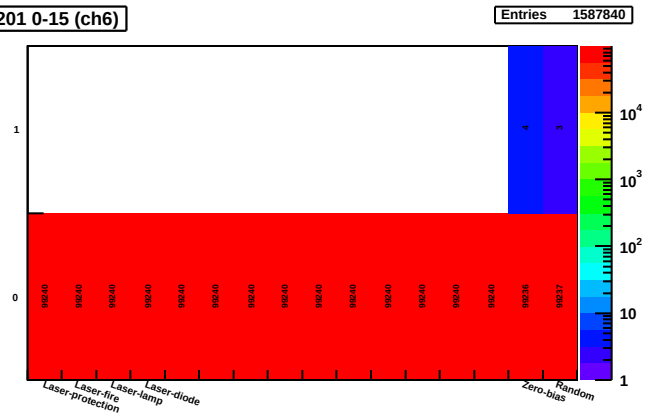
FP201 0-15 (ch5)

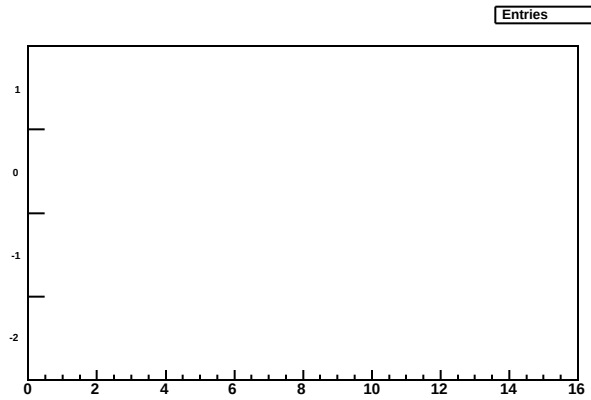
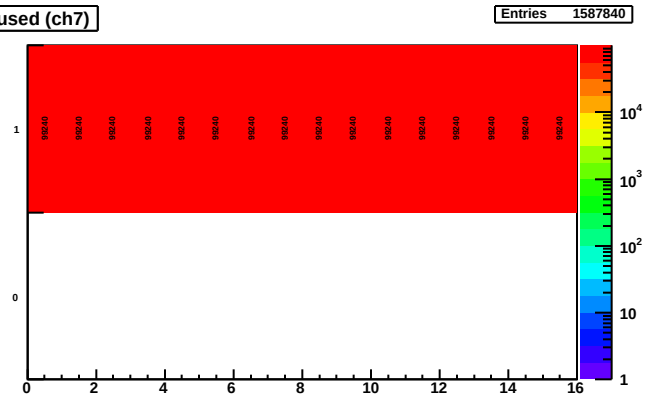
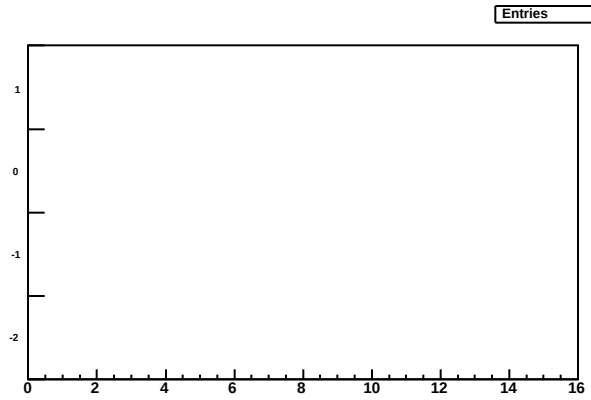


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)