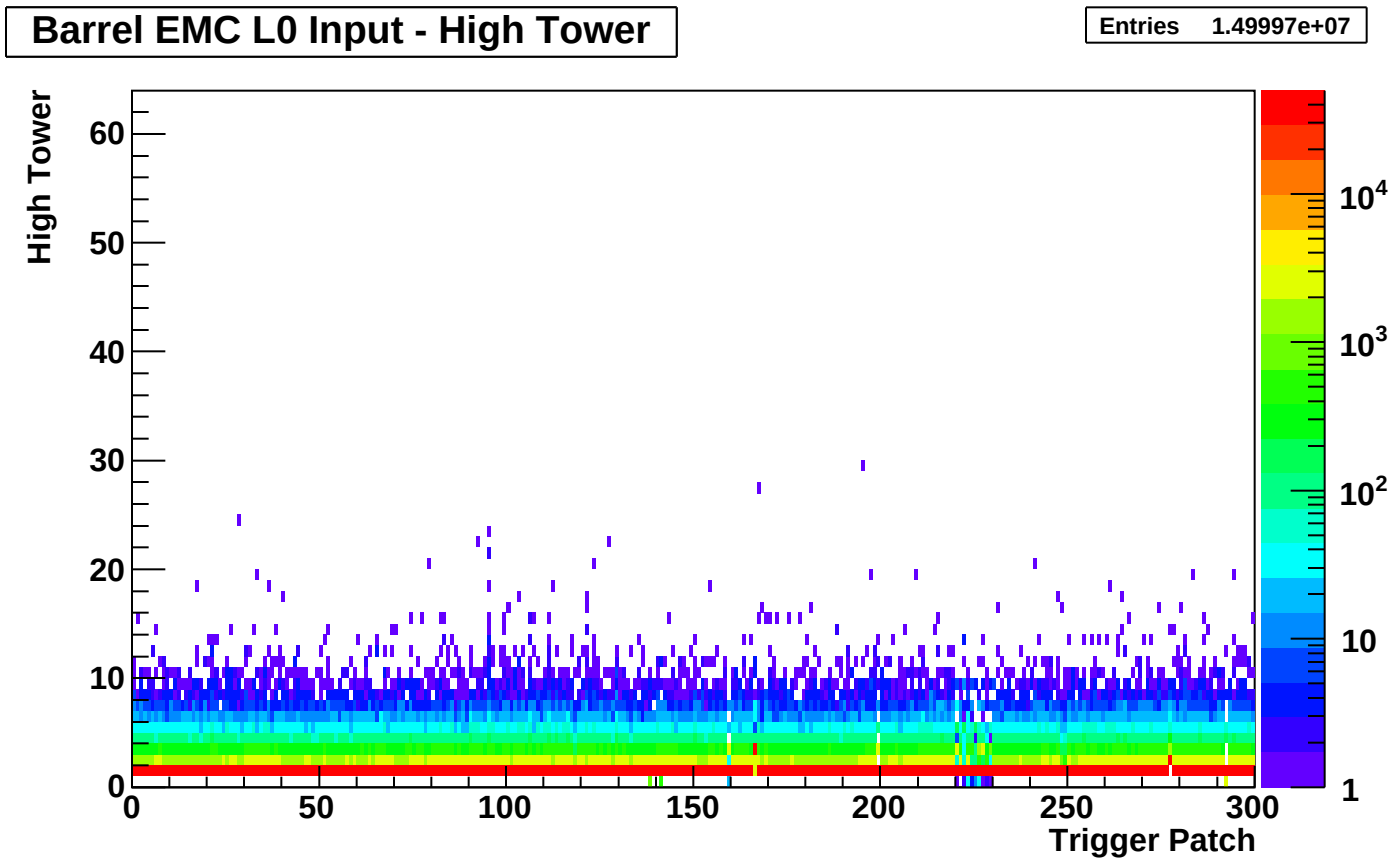
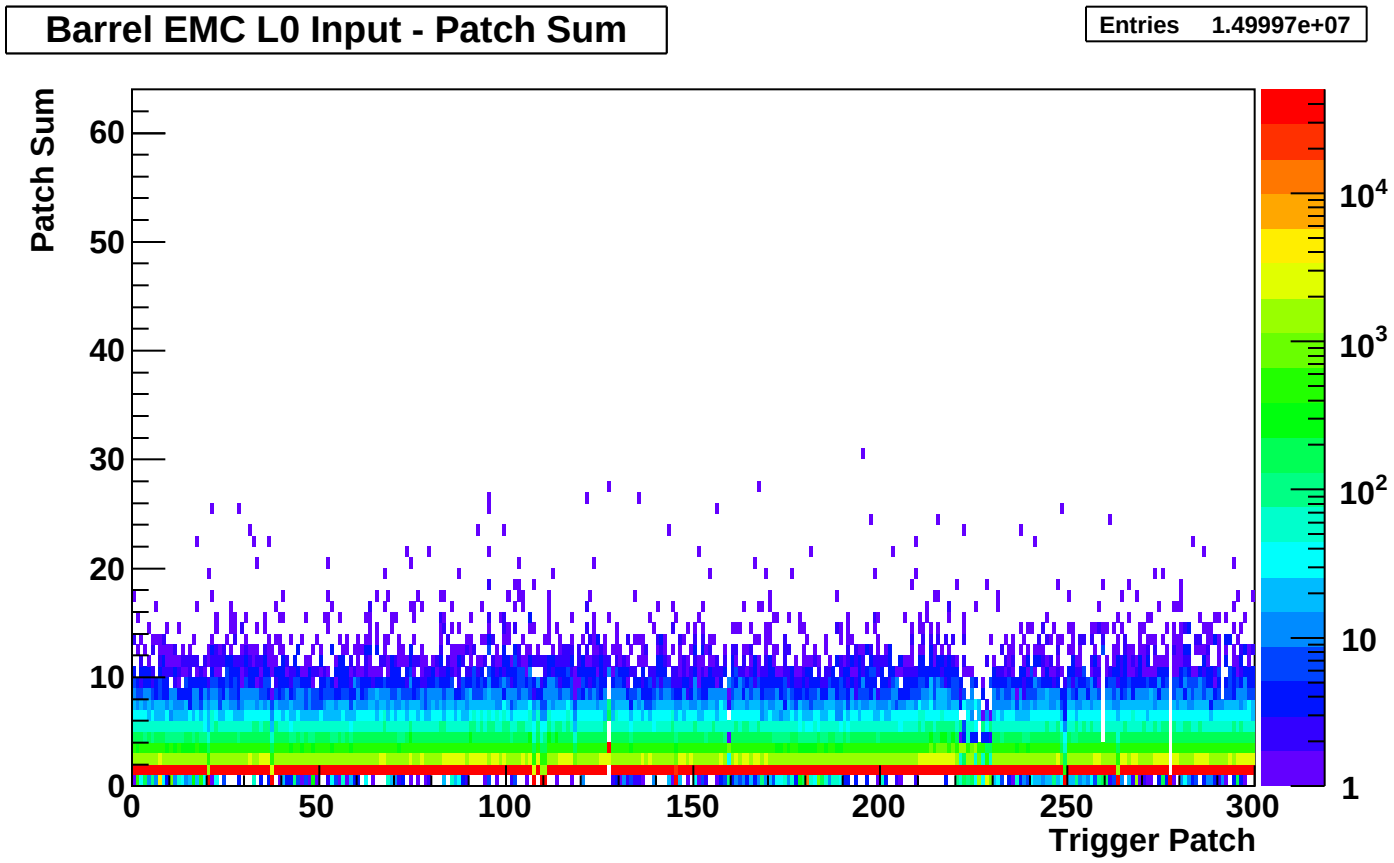
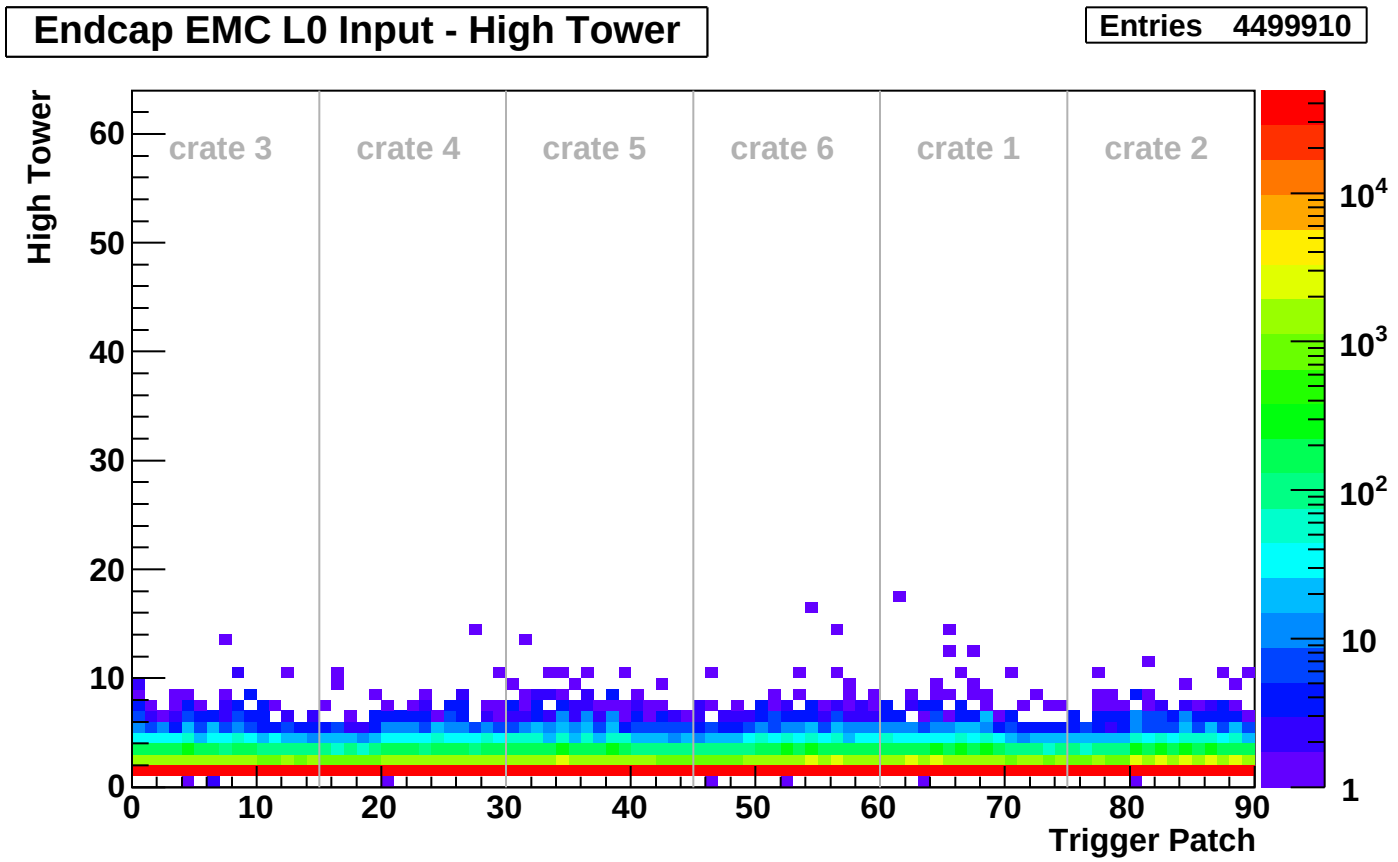
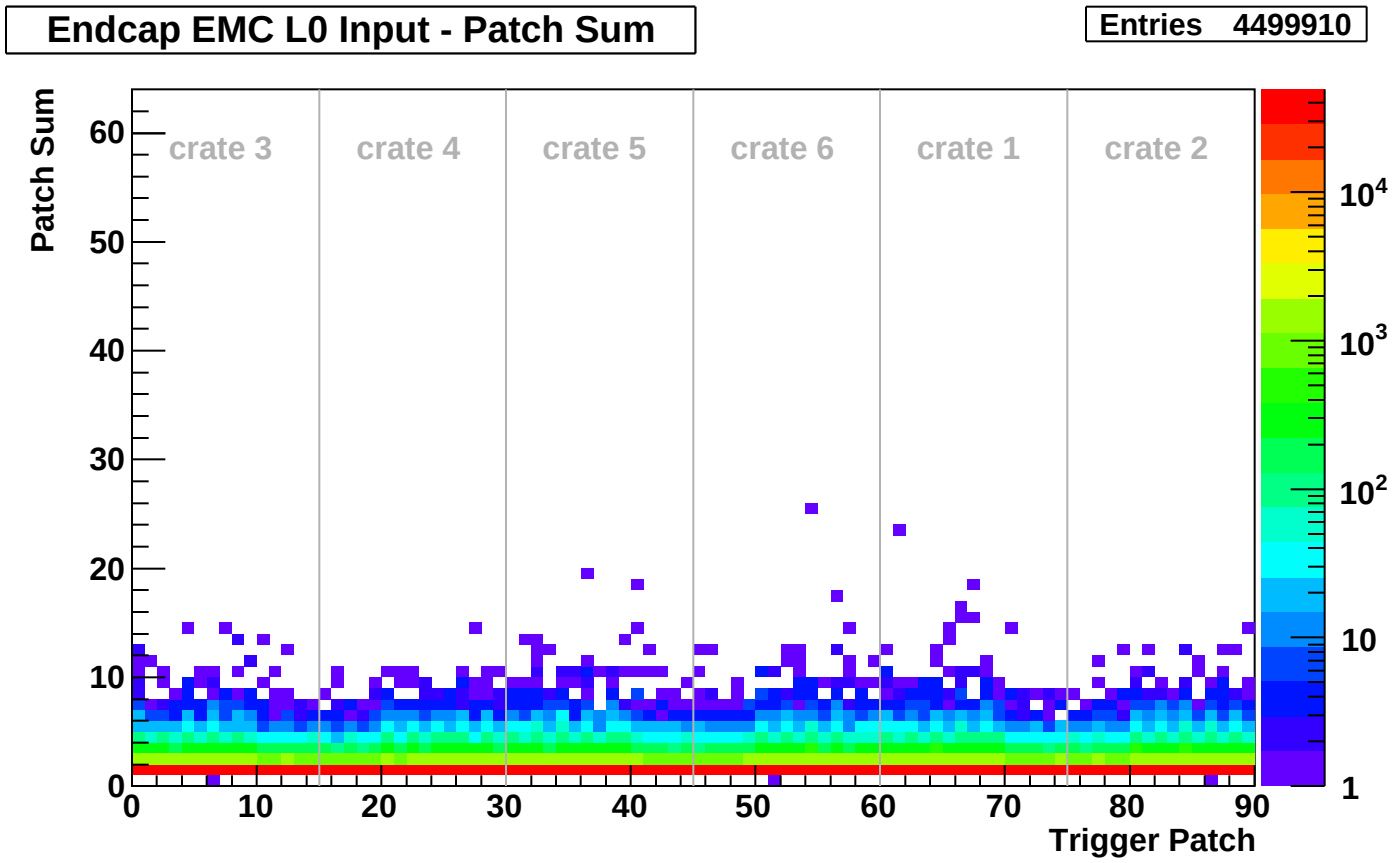
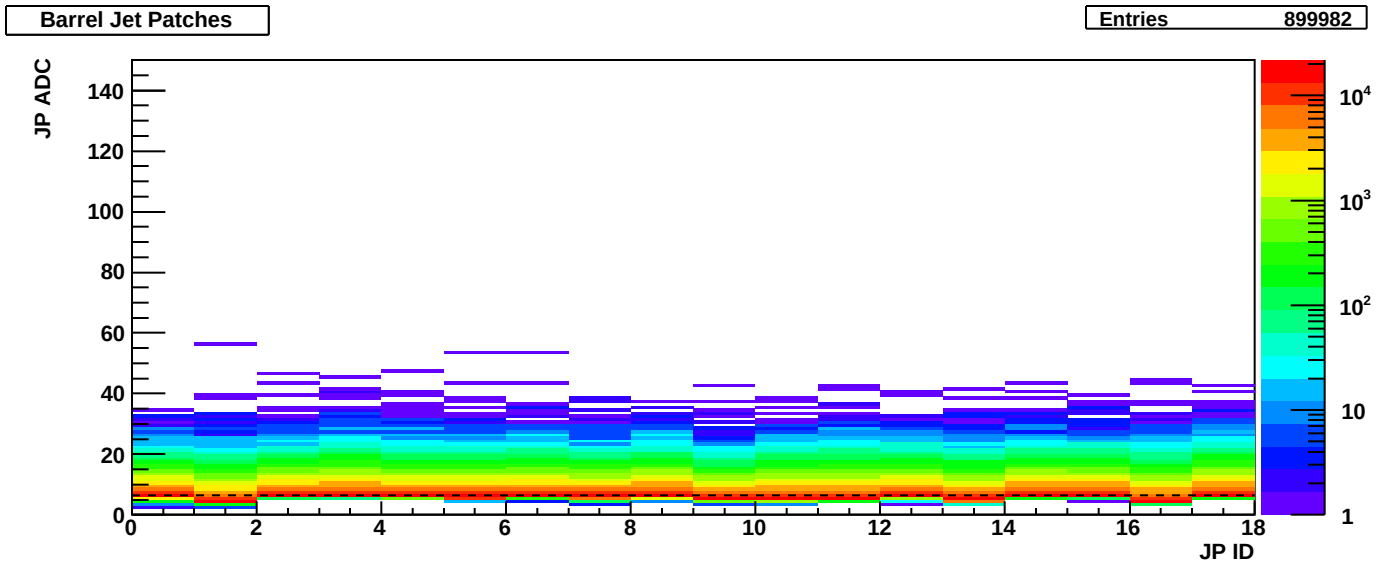
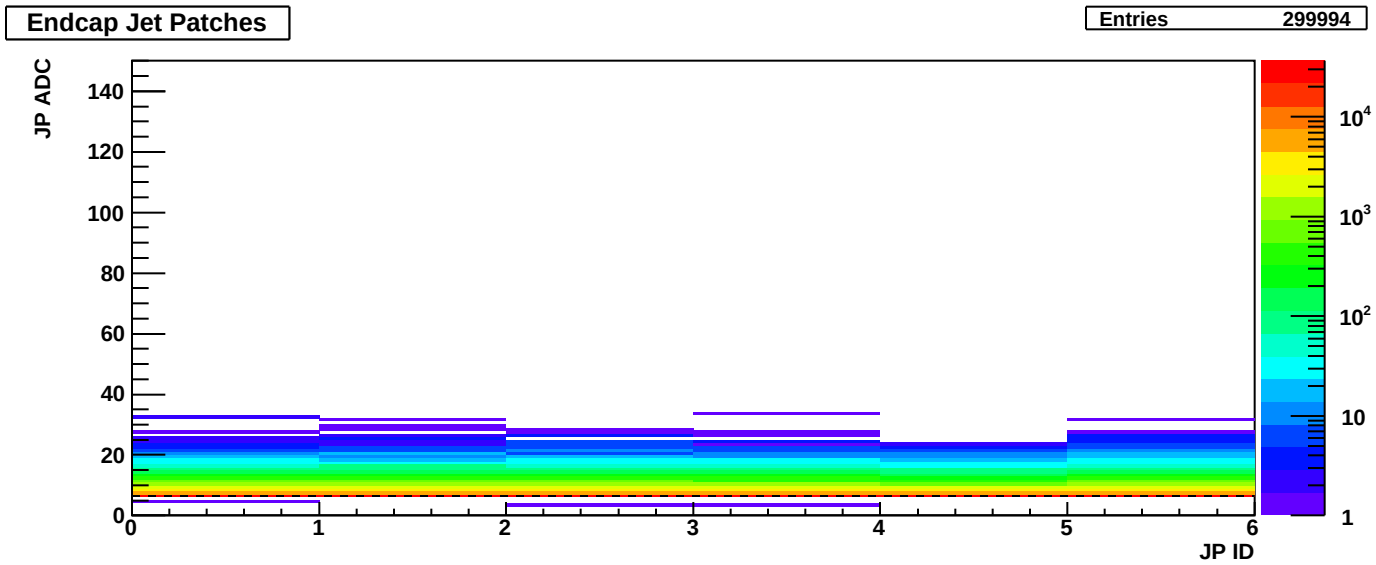

Barrel EMC L0 Input - High Tower
Entries 1.49997e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

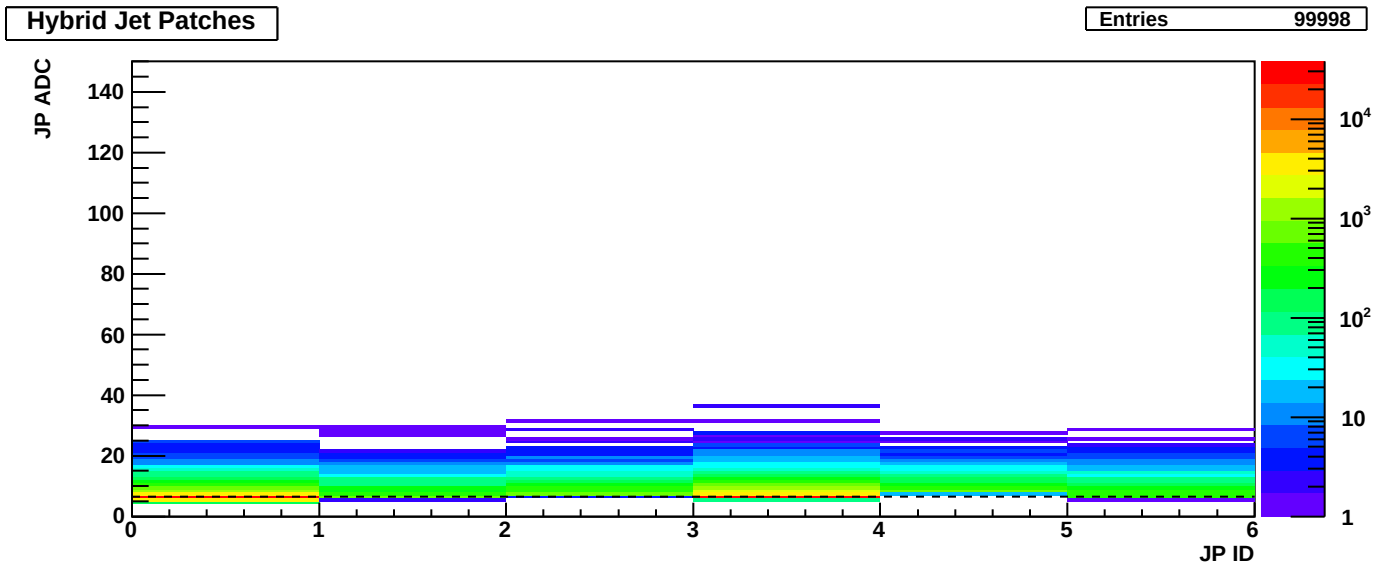

Barrel EMC L0 Input - Patch Sum
Entries 1.49997e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

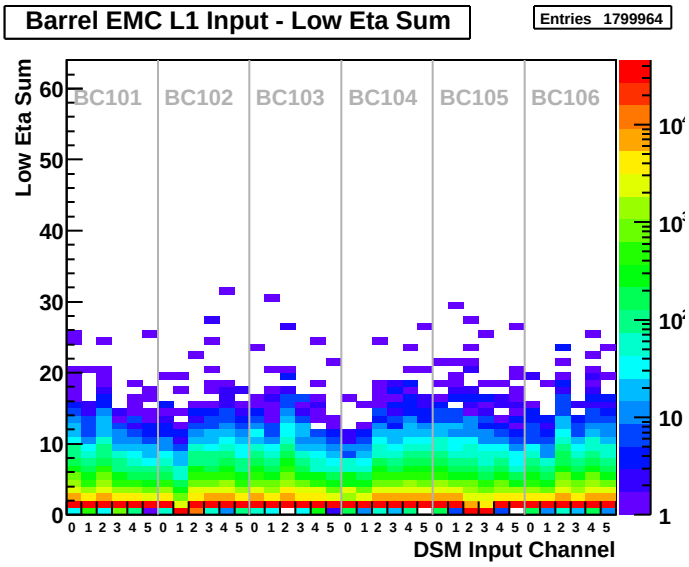

Endcap EMC L0 Input - High Tower
Entries 4499910
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

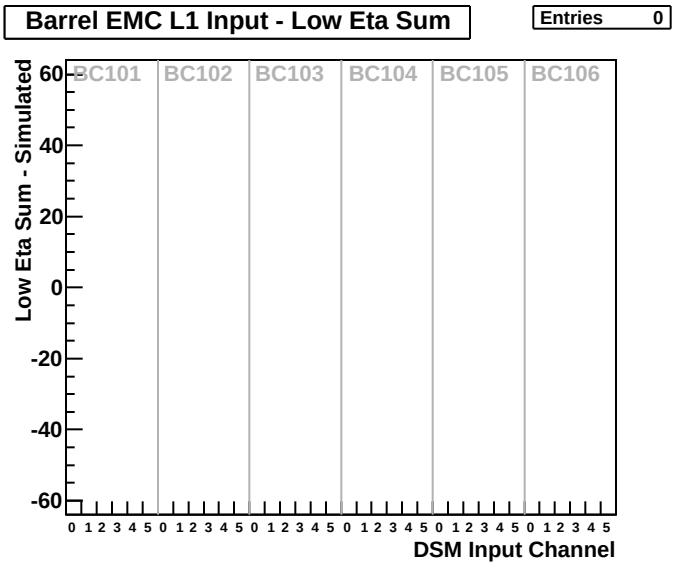

Endcap EMC L0 Input - Patch Sum
Entries 4499910
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

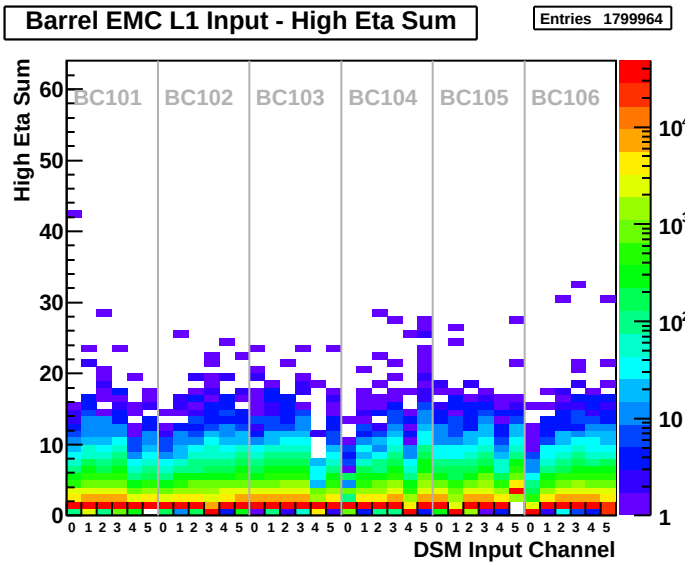

Barrel Jet Patches
Entries 899982
JP ADC
JP ID

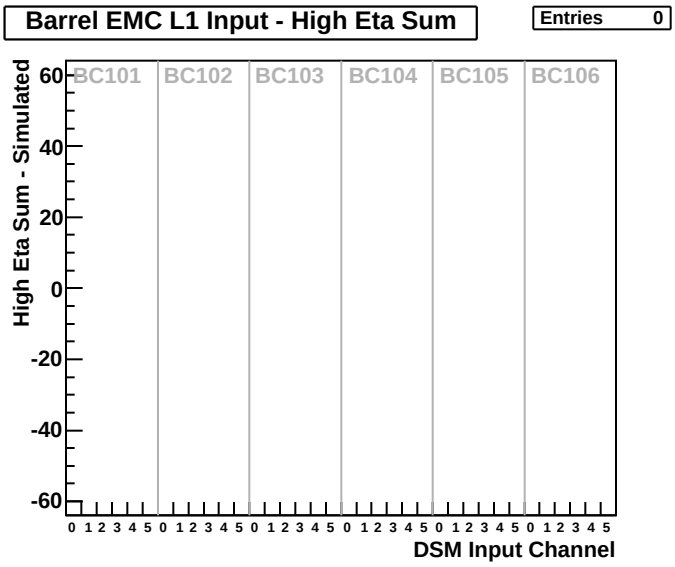

Endcap Jet Patches
Entries 299994
JP ADC
JP ID

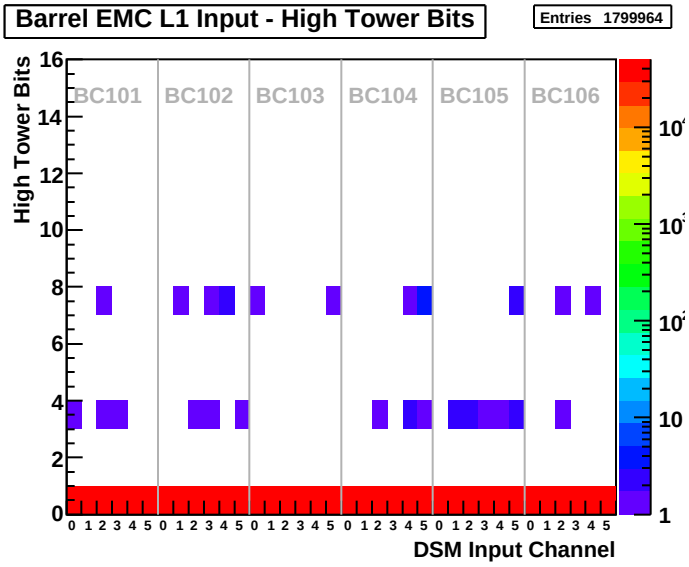

Hybrid Jet Patches
Entries 99998
JP ADC
JP ID

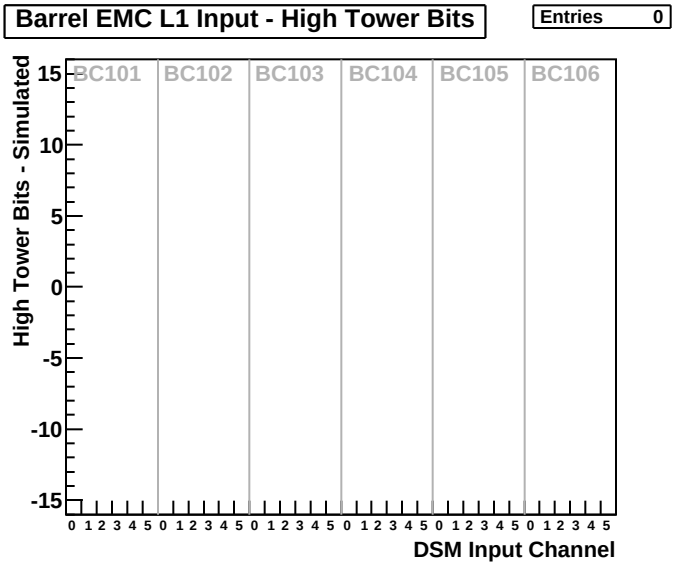

Barrel EMC L1 Input - Low Eta Sum
Entries 1799964
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

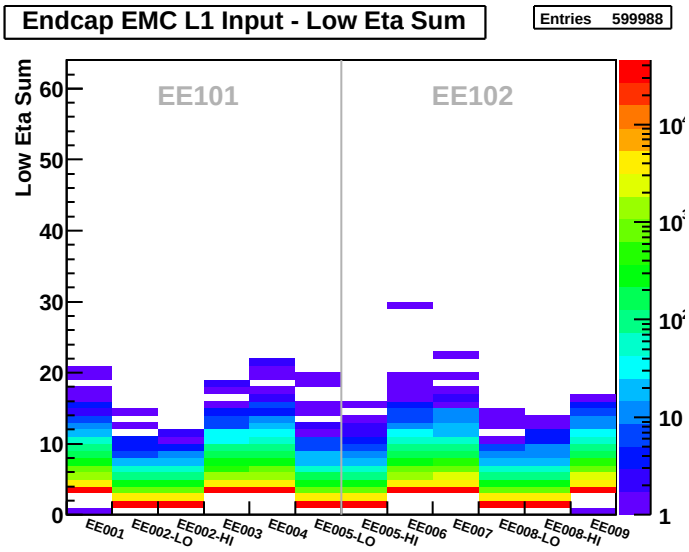

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

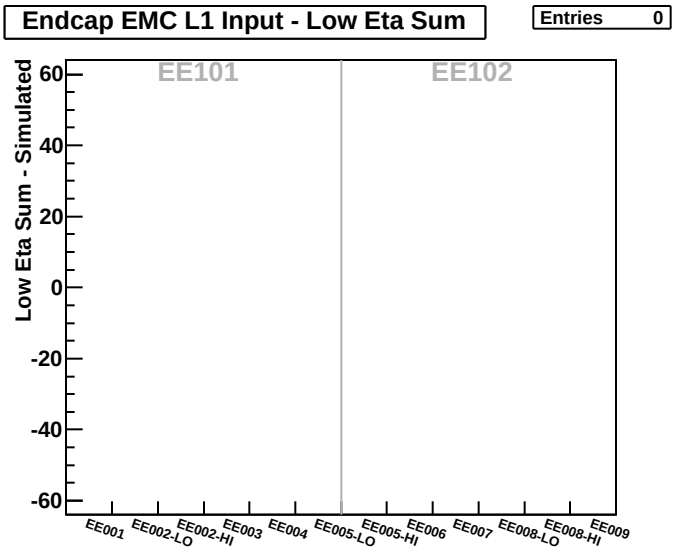

Barrel EMC L1 Input - High Eta Sum
Entries 1799964
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

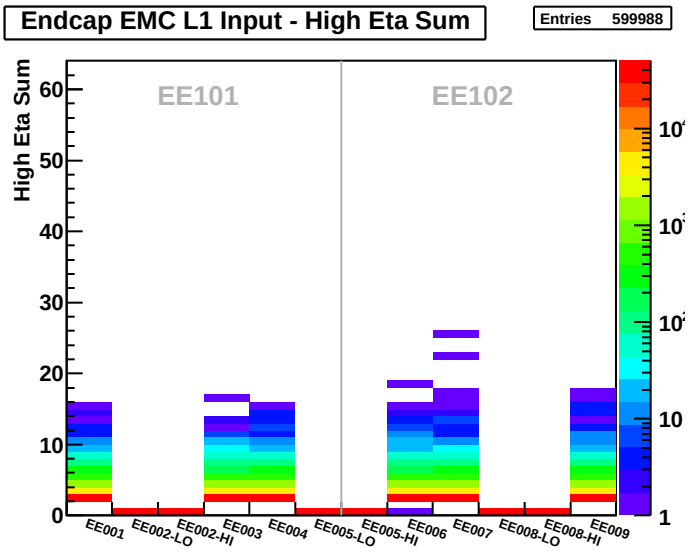

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

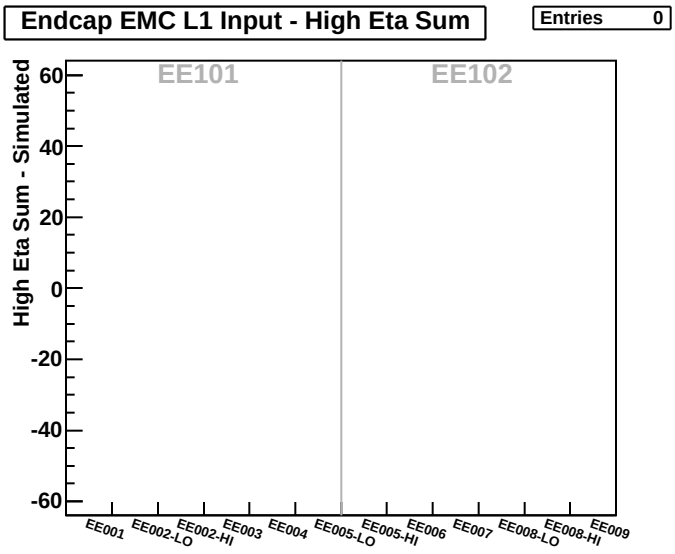

Barrel EMC L1 Input - High Tower Bits
Entries 1799964
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

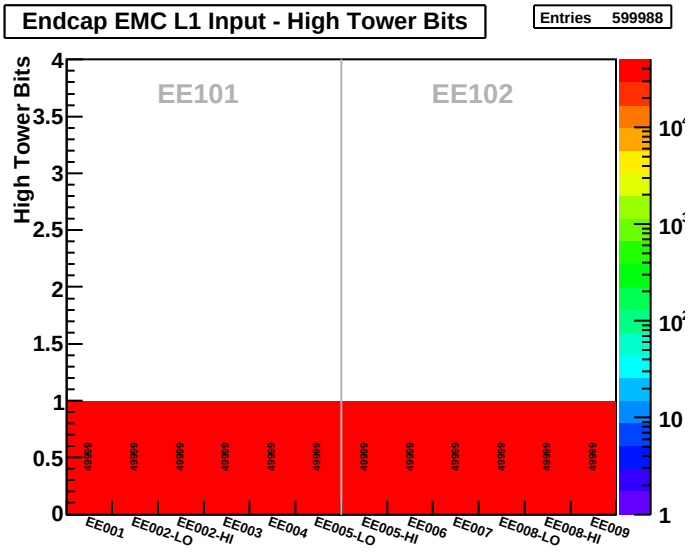

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

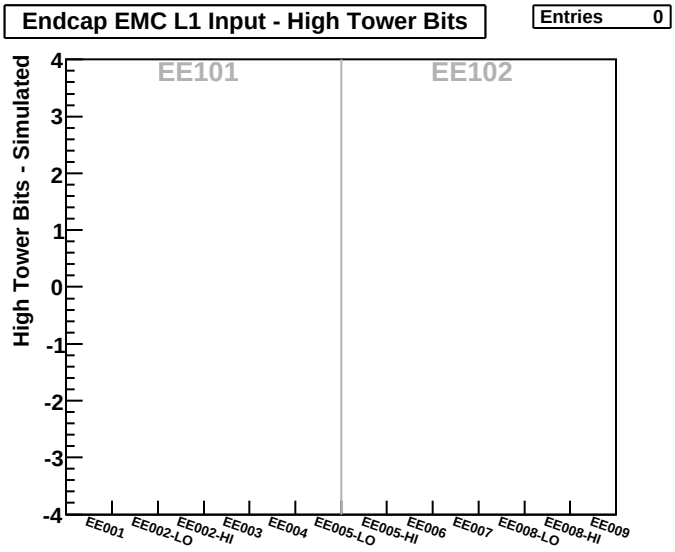

Endcap EMC L1 Input - Low Eta Sum
Entries 599988
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

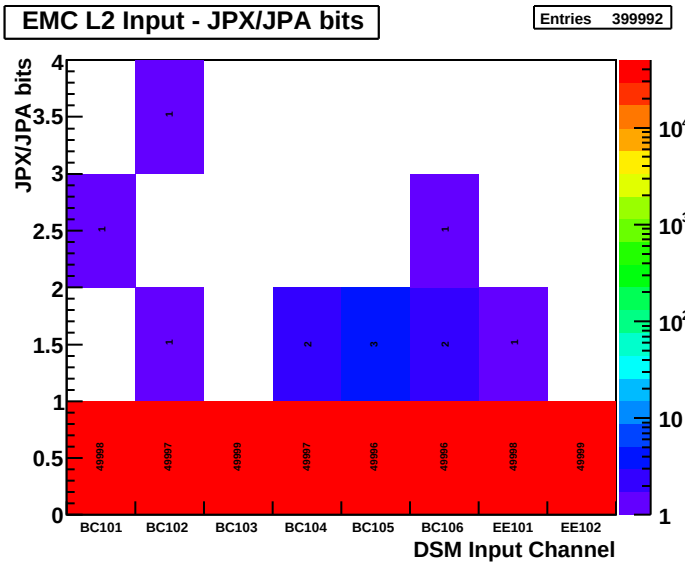

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

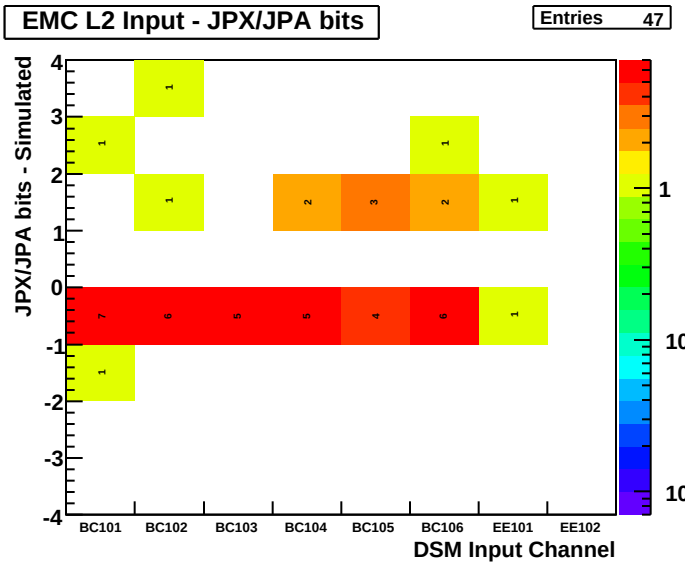

Endcap EMC L1 Input - High Eta Sum
Entries 599988
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

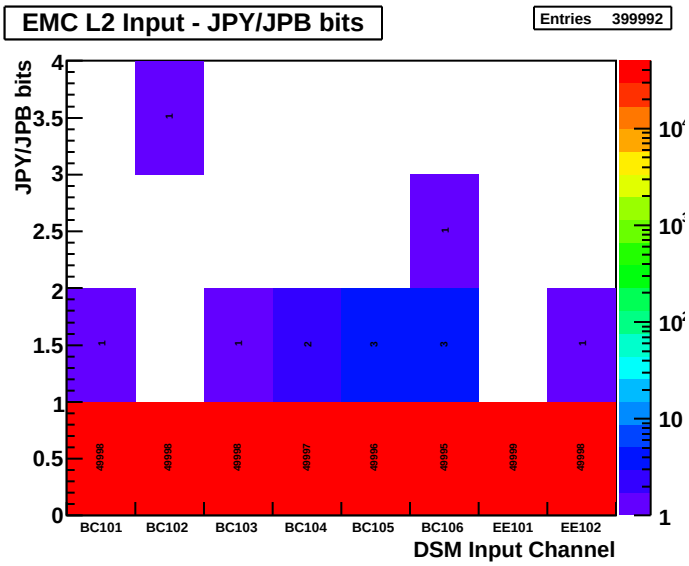

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

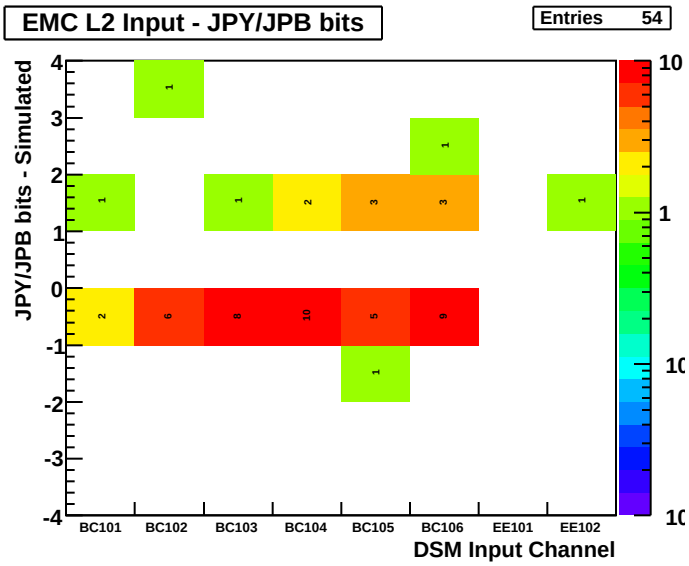

Endcap EMC L1 Input - High Tower Bits
Entries 599988
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

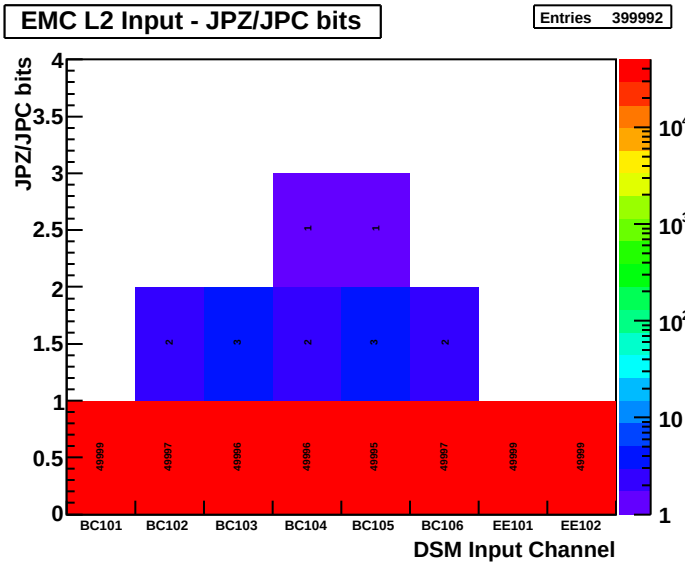

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

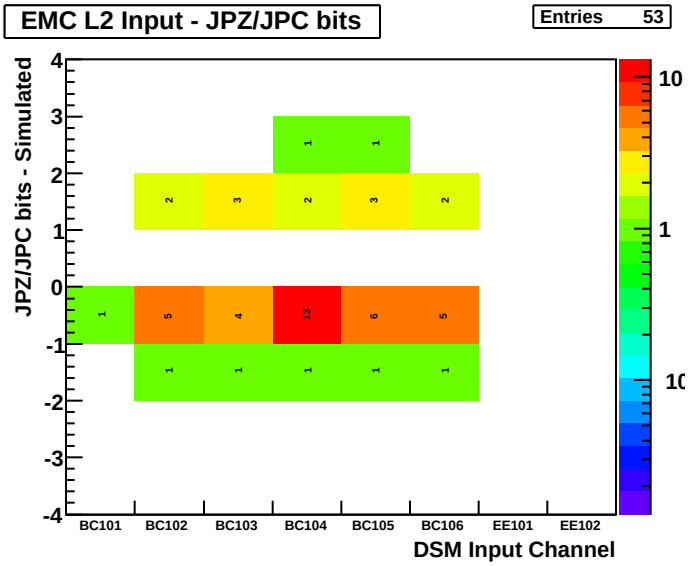

EMC L2 Input - JPX/JPA bits
Entries 399992
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

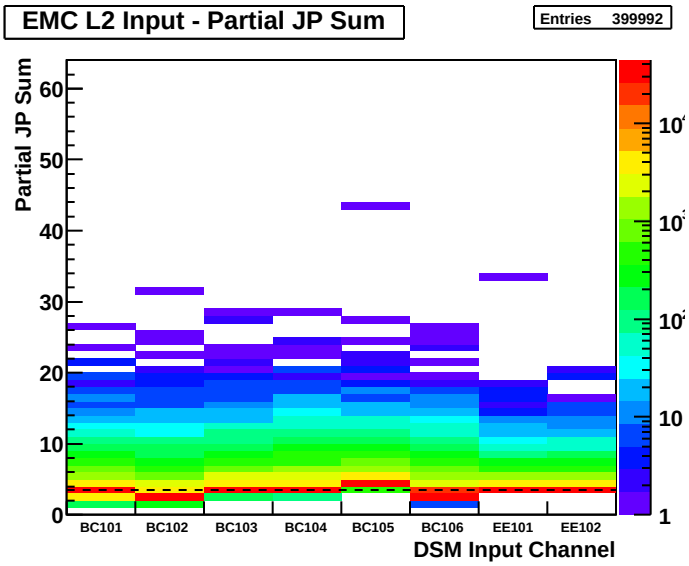

EMC L2 Input - JPX/JPA bits
Entries 47
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

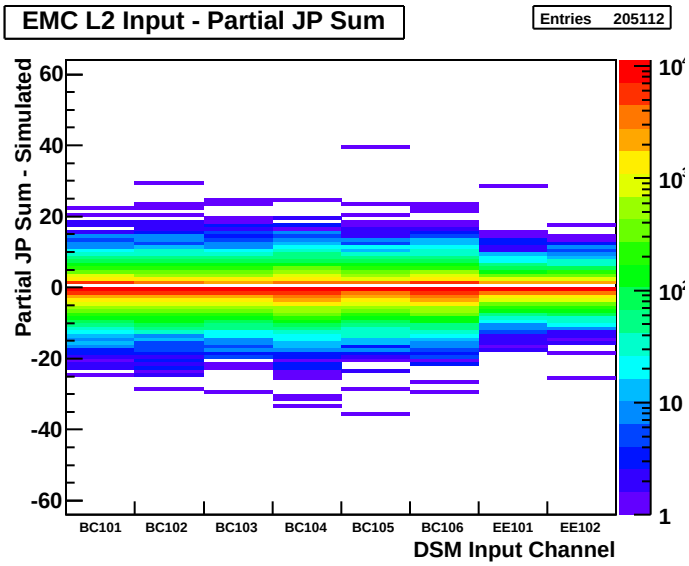

EMC L2 Input - JPY/JPB bits
Entries 399992
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

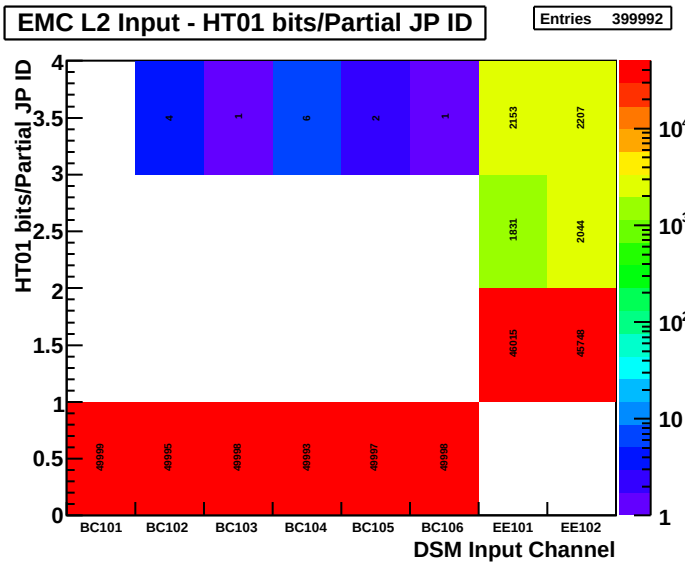

EMC L2 Input - JPY/JPB bits
Entries 54
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

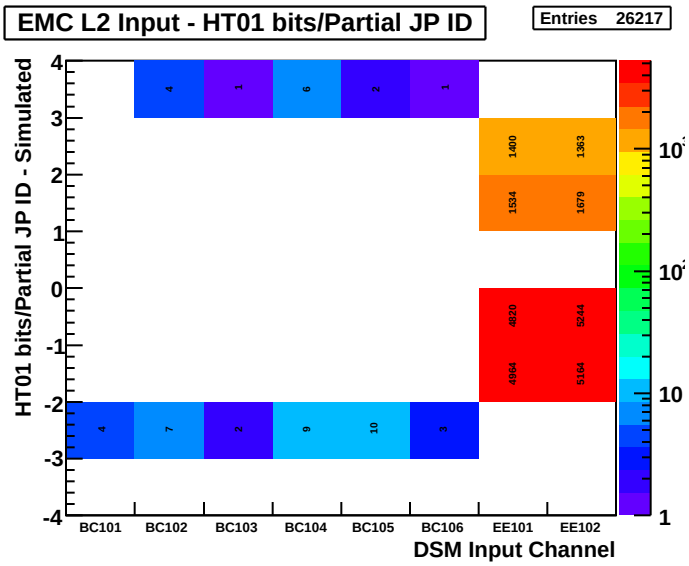

EMC L2 Input - JPZ/JPC bits
Entries 399992
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

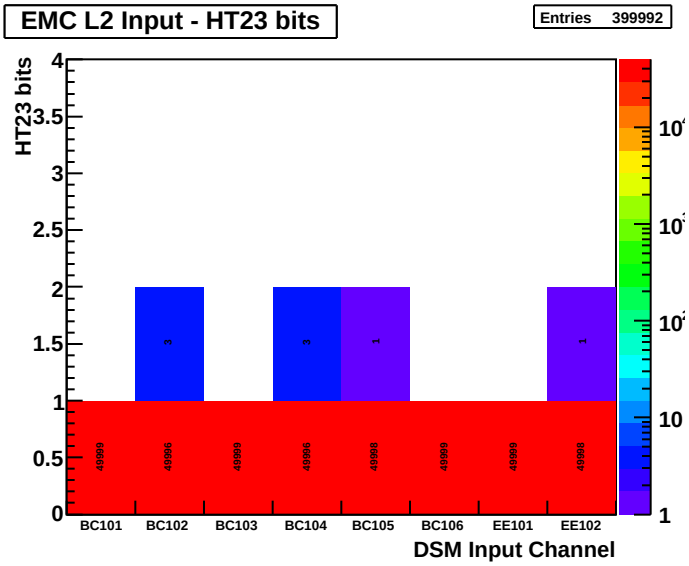

EMC L2 Input - JPZ/JPC bits
Entries 53
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

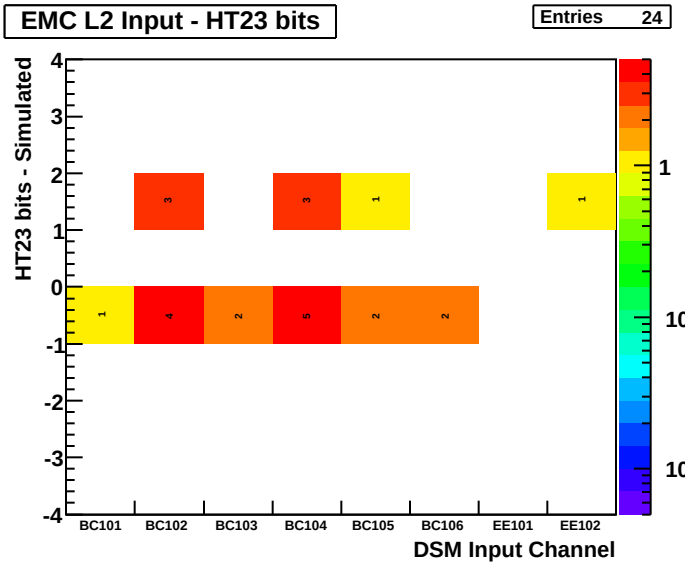

EMC L2 Input - Partial JP Sum
Entries 399992
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

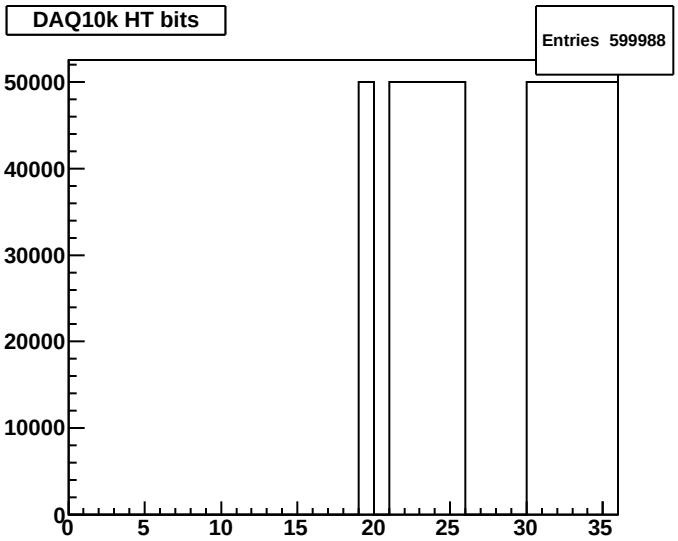

EMC L2 Input - Partial JP Sum
Entries 205112
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

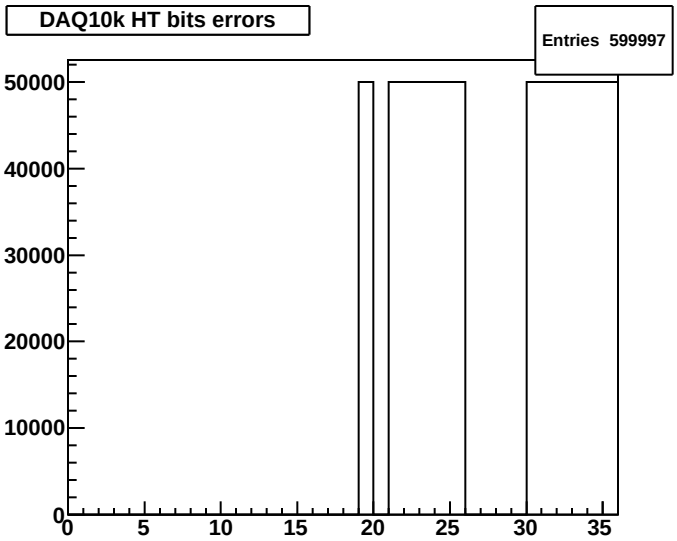

EMC L2 Input - HT01 bits/Partial JP ID
Entries 399992
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

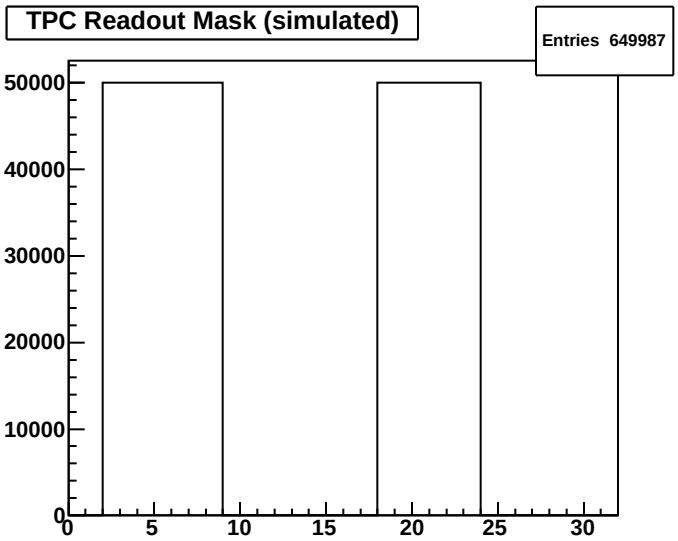

EMC L2 Input - HT01 bits/Partial JP ID
Entries 26217
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

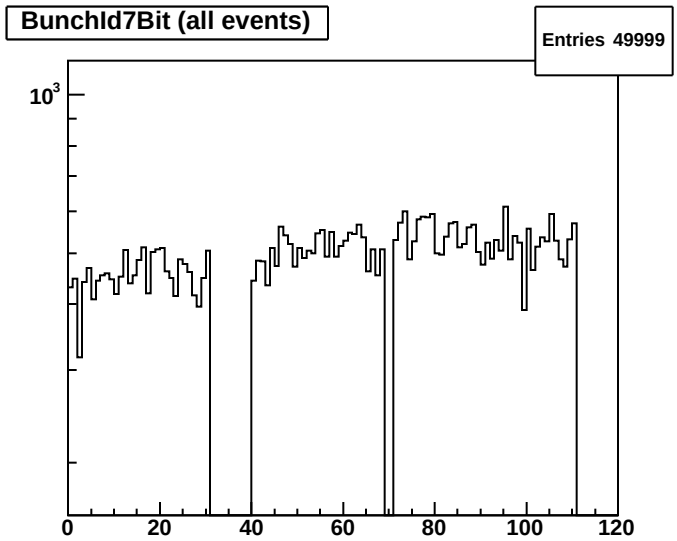

EMC L2 Input - HT23 bits
Entries 399992
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

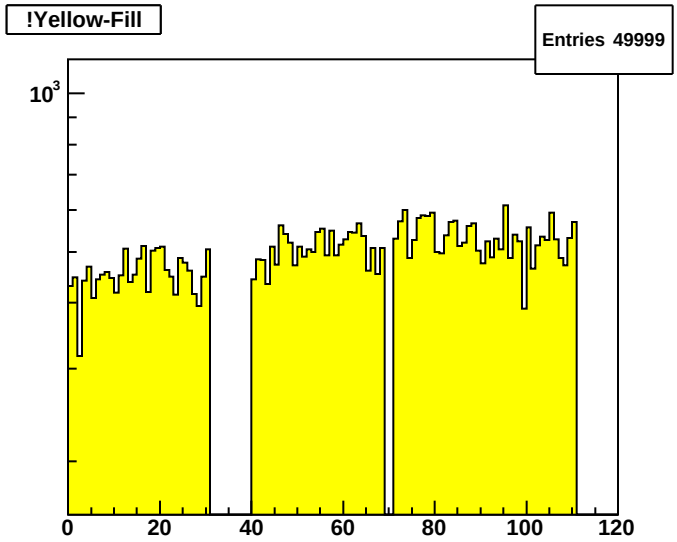

EMC L2 Input - HT23 bits
Entries 24
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

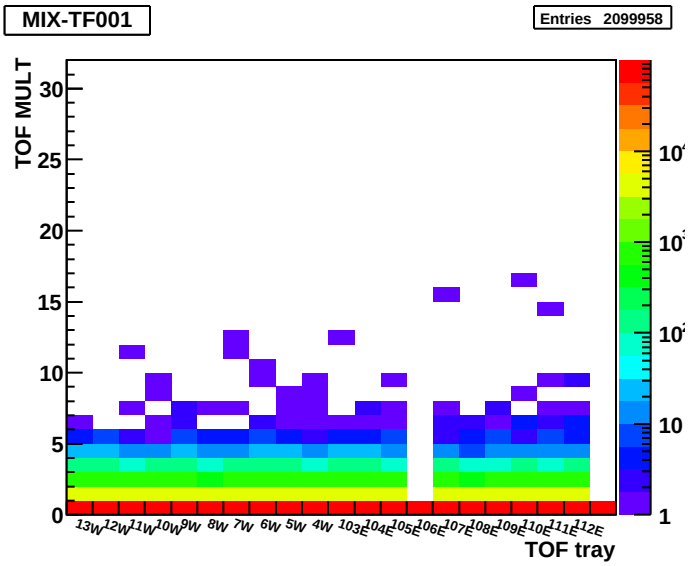

DAQ10k HT bits
Entries 599988
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

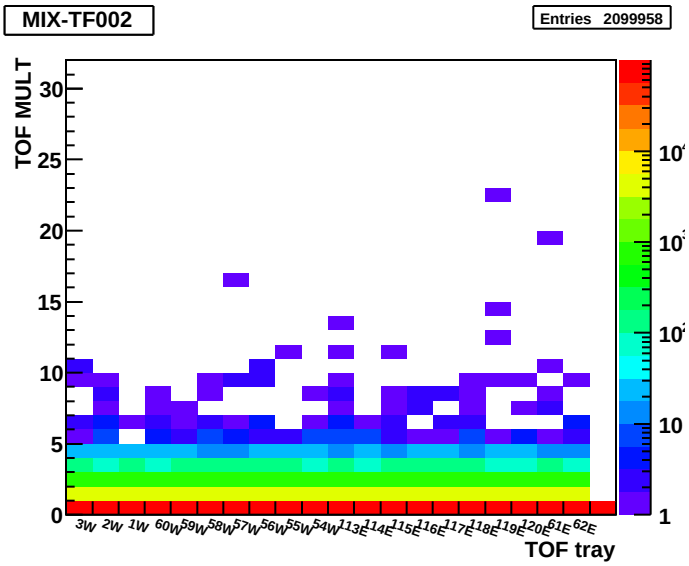

DAQ10k HT bits errors
Entries 599997
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

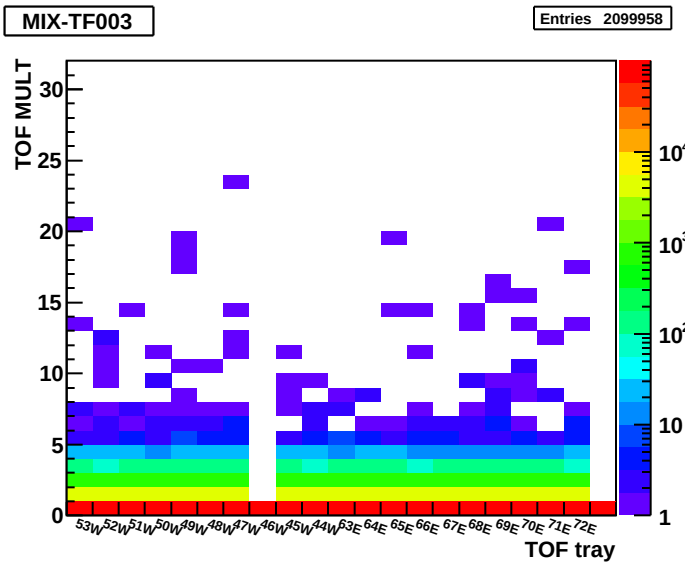

TPC Readout Mask (simulated)
Entries 649987
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

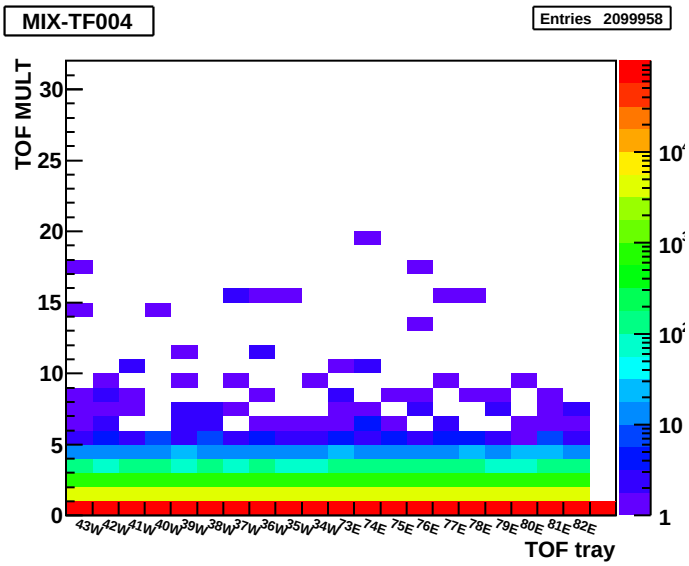

BunchId7Bit (all events)
Entries 49999
10^3
0 20 40 60 80 100 120

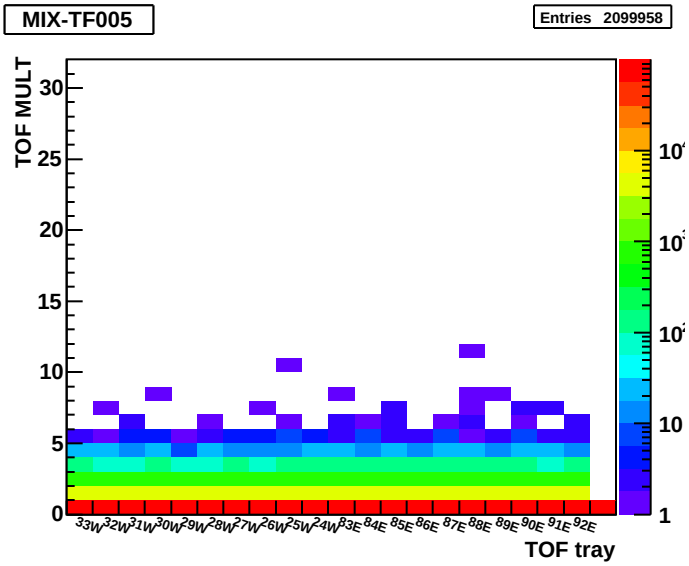

!Yellow-Fill
Entries 49999
10^3
0 20 40 60 80 100 120

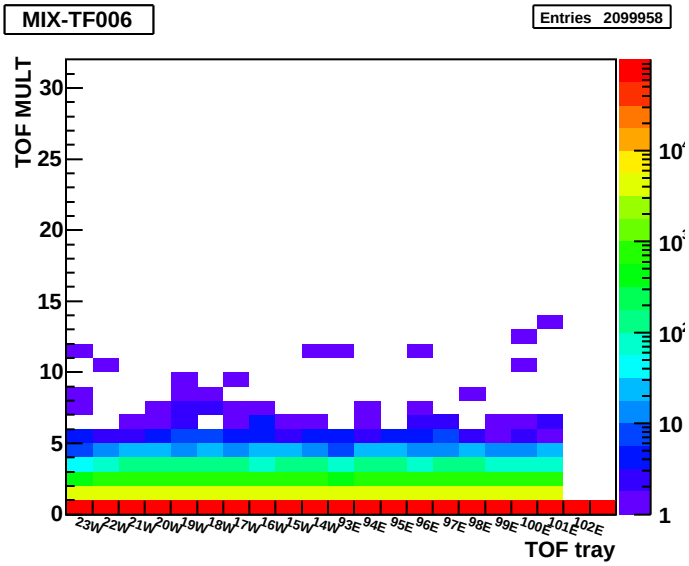

MIX-TF001
Entries 2099958
TOF MULT
TOF tray

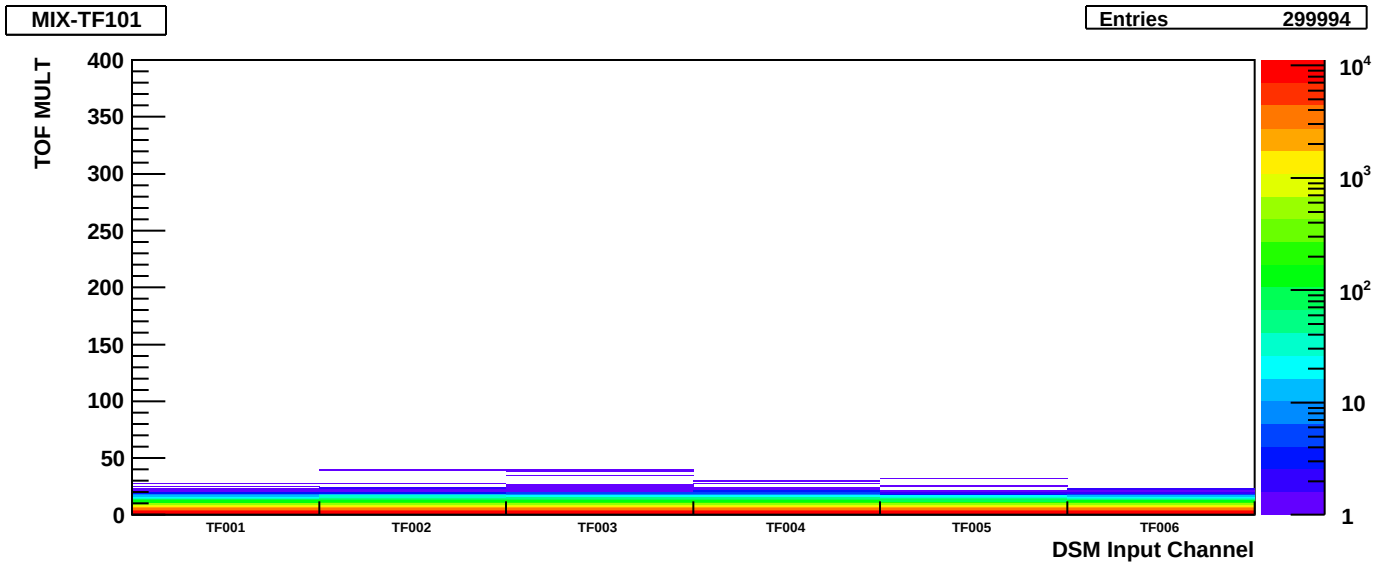

MIX-TF002
Entries 2099958
TOF MULT
TOF tray

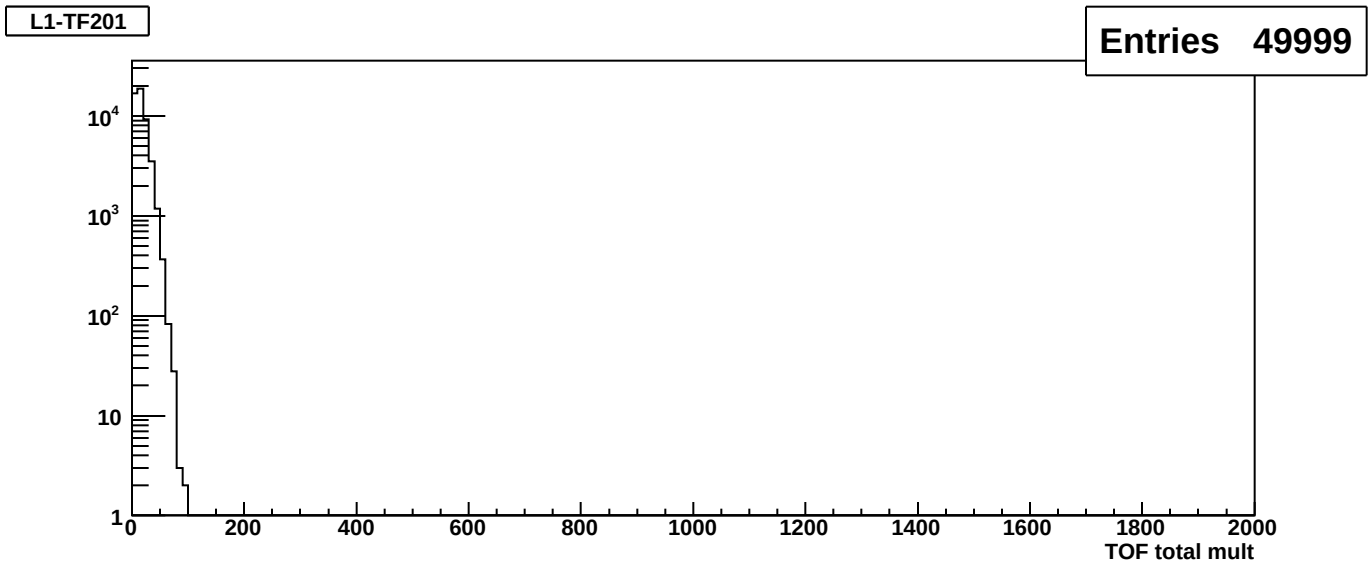

MIX-TF003
Entries 2099958
TOF MULT
TOF tray

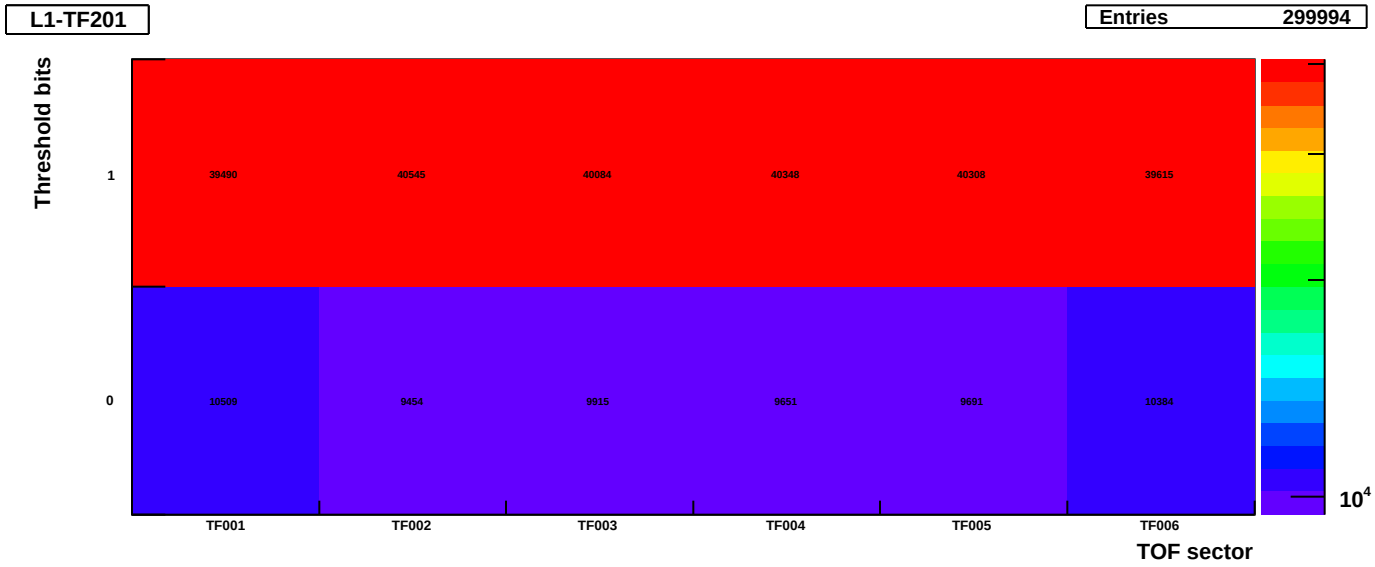

MIX-TF004
Entries 2099958
TOF MULT
TOF tray

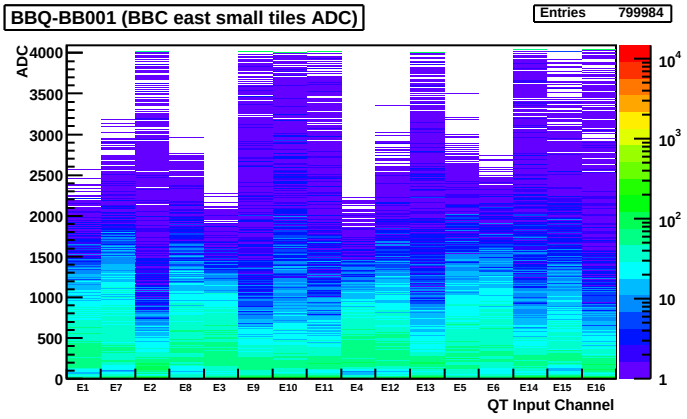

MIX-TF005
Entries 2099958
TOF MULT
TOF tray

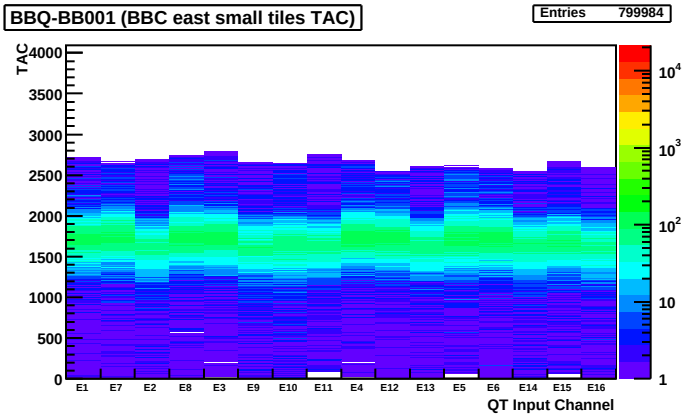

MIX-TF006
Entries 2099958
TOF MULT
TOF tray

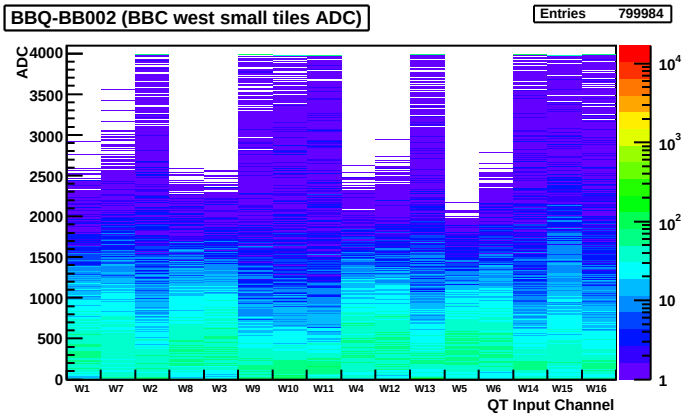

MIX-TF101
Entries 299994
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

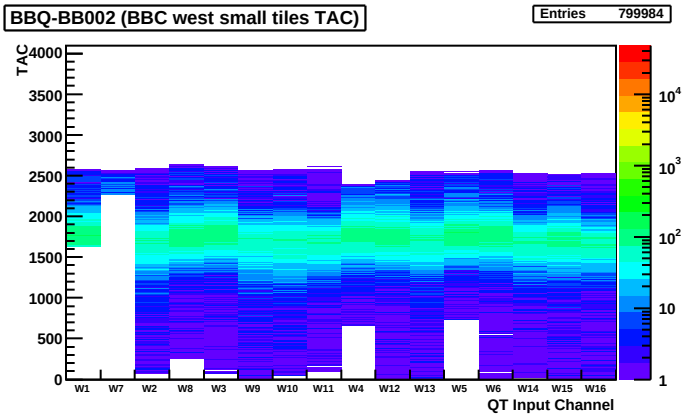

L1-TF201
Entries 49999
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

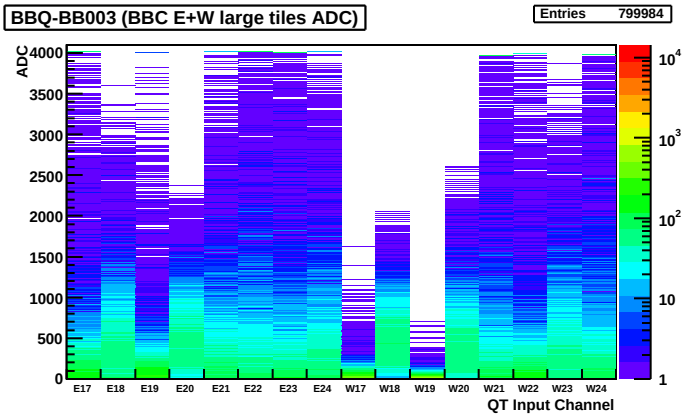

L1-TF201
Entries 299994
Threshold bits
1
0
39490
40545
40084
40348
40308
39615
10509
9454
9915
9651
9691
10384
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

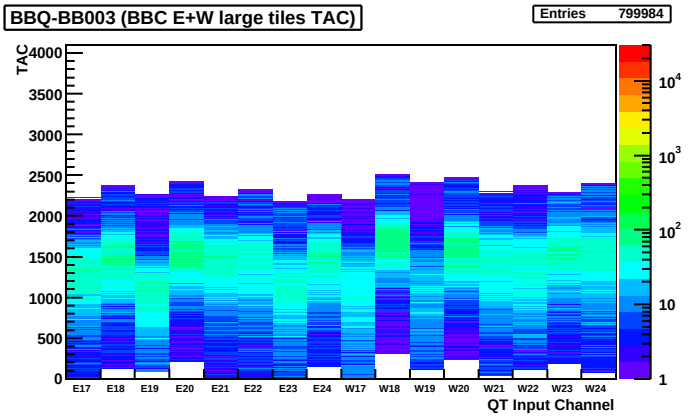

BBQ-BB001 (BBC east small tiles ADC)
Entries 799984
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

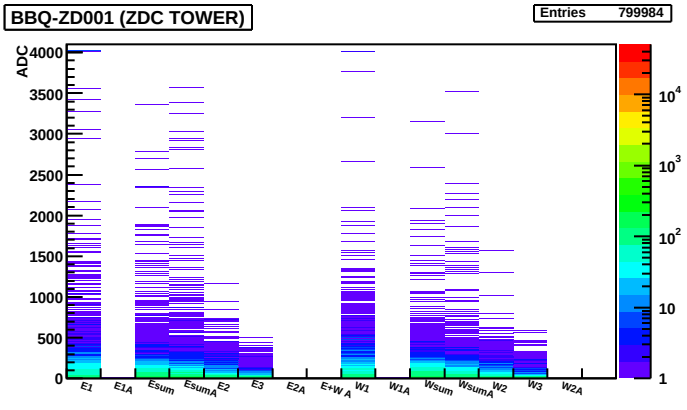

BBQ-BB001 (BBC east small tiles TAC)
Entries 799984
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

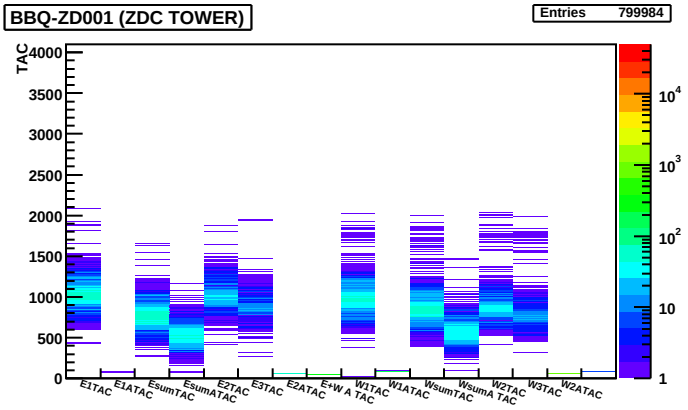

BBQ-BB002 (BBC west small tiles ADC)
Entries 799984
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

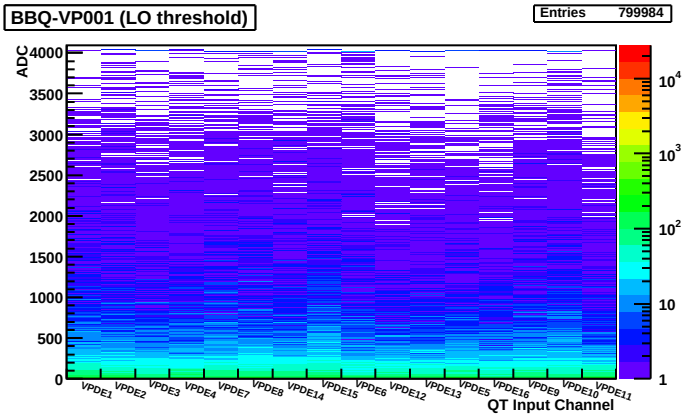

BBQ-BB002 (BBC west small tiles TAC)
Entries 799984
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

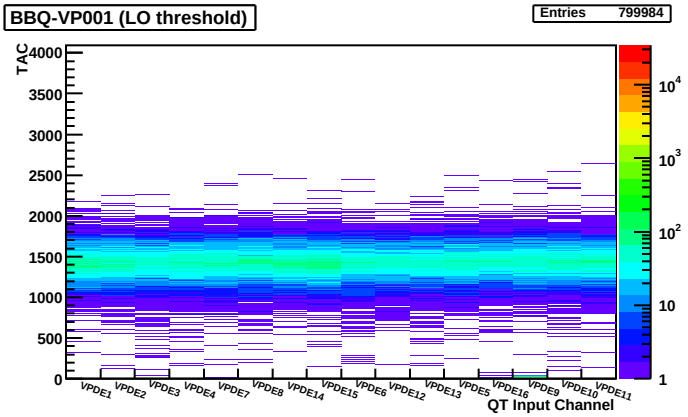

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 799984
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

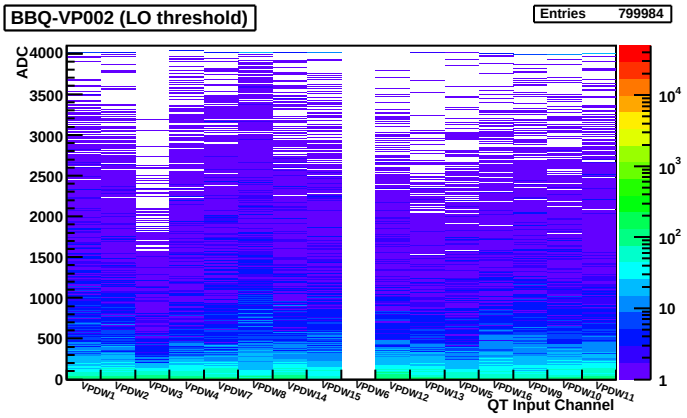

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 799984
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

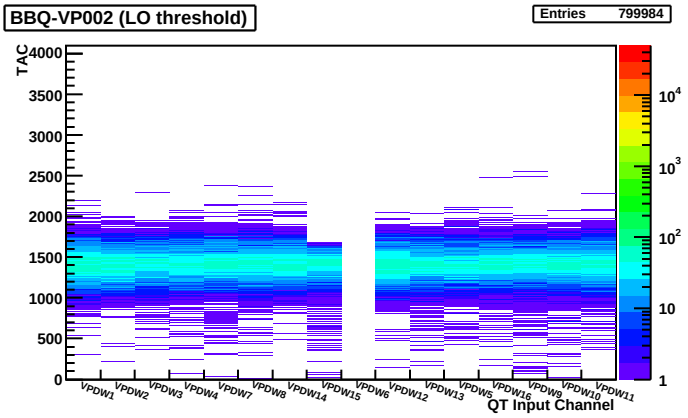

BBQ-ZD001 (ZDC TOWER)
Entries 799984
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

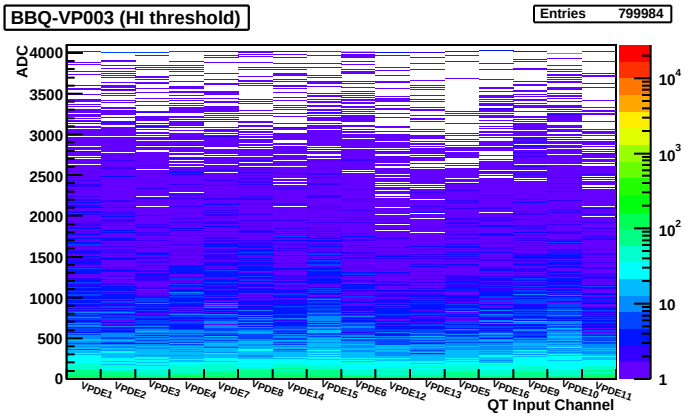

BBQ-ZD001 (ZDC TOWER)
Entries 799984
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

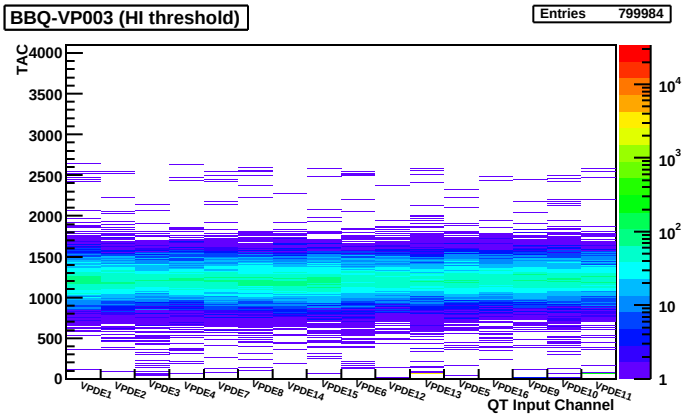

BBQ-VP001 (LO threshold)
Entries 799984
ADC
QT Input Channel

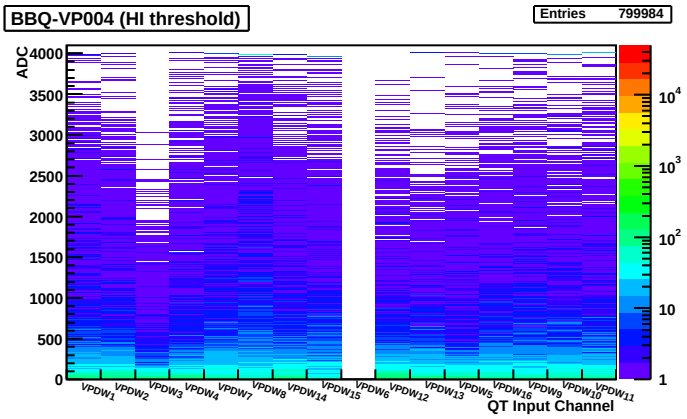

BBQ-VP001 (LO threshold)
Entries 799984
TAC
QT Input Channel

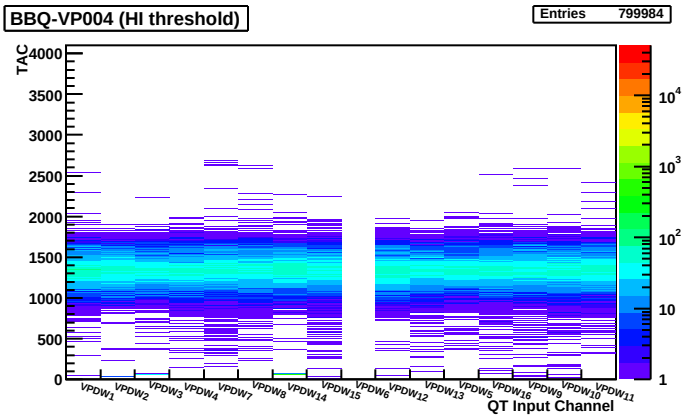

BBQ-VP002 (LO threshold)
Entries 799984
ADC
QT Input Channel

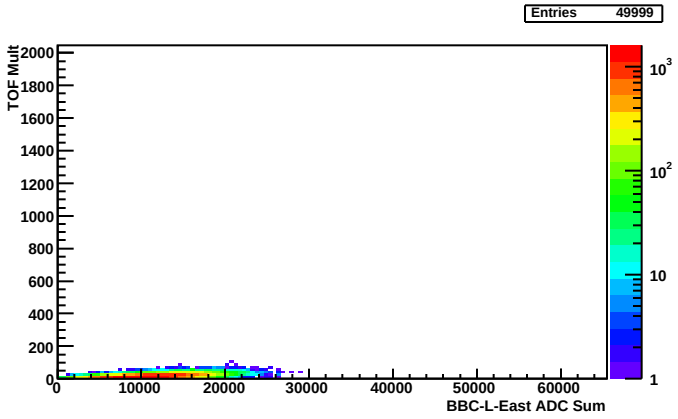

BBQ-VP002 (LO threshold)
Entries 799984
TAC
QT Input Channel

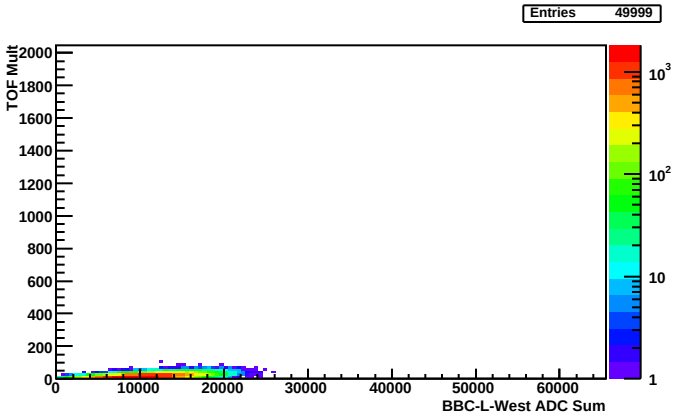

BBQ-VP003 (HI threshold)
Entries 799984
ADC
QT Input Channel

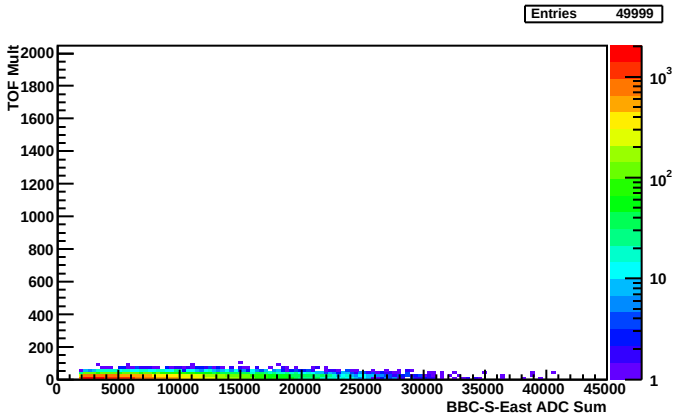

BBQ-VP003 (HI threshold)
Entries 799984
TAC
QT Input Channel

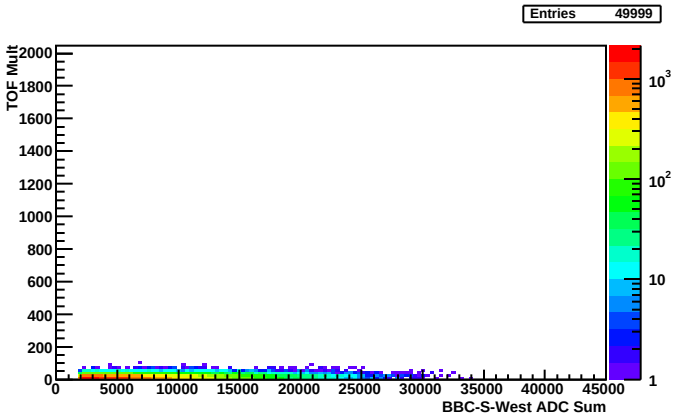

BBQ-VP004 (HI threshold)
Entries 799984
ADC
QT Input Channel

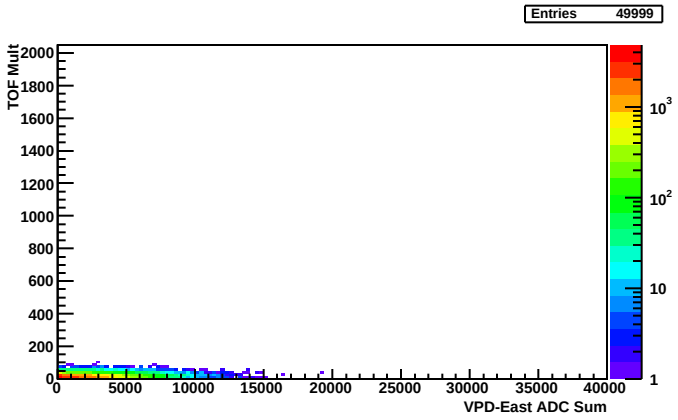

BBQ-VP004 (HI threshold)
Entries 799984
TAC
QT Input Channel

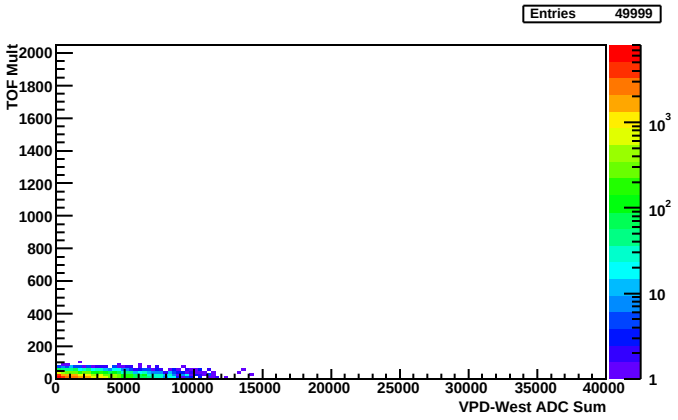

Entries 49999
TOF Mult
BBC-L-East ADC Sum

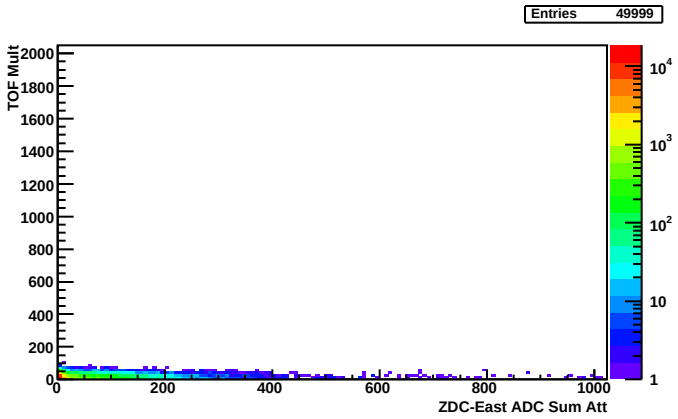

Entries 49999
TOF Mult
BBC-L-West ADC Sum

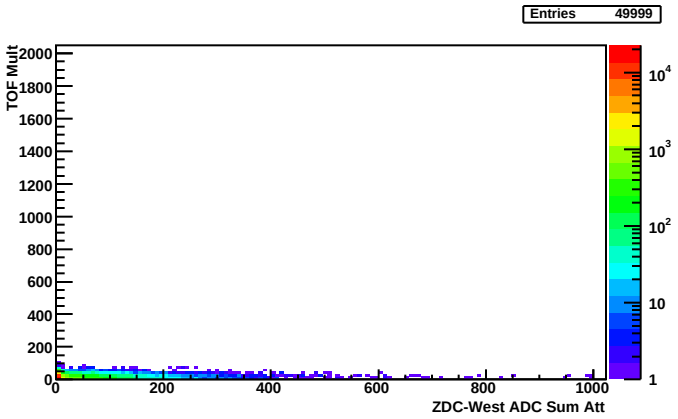

Entries 49999
TOF Mult
BBC-S-East ADC Sum

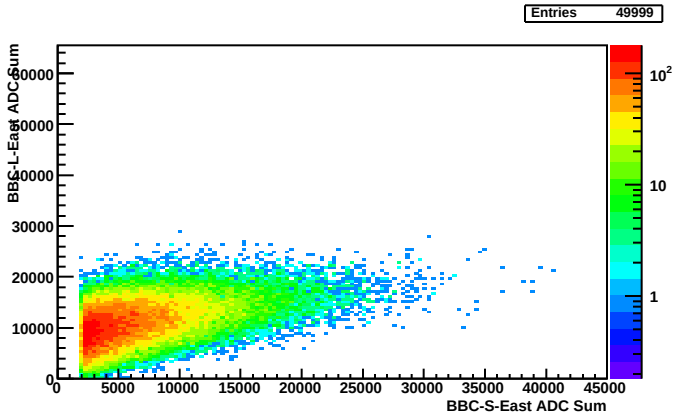

Entries 49999
TOF Mult
BBC-S-West ADC Sum

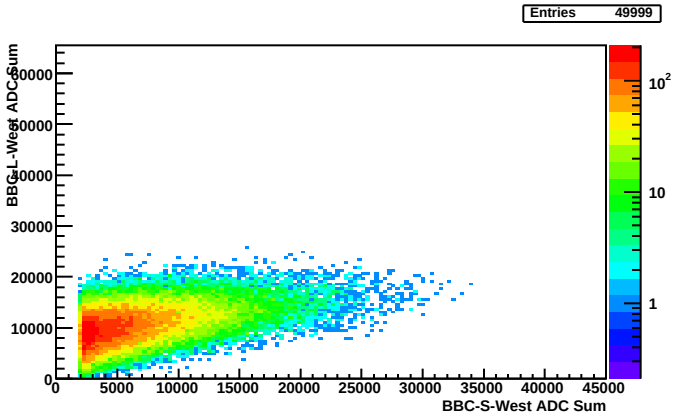

Entries 49999
TOF Mult
VPD-East ADC Sum

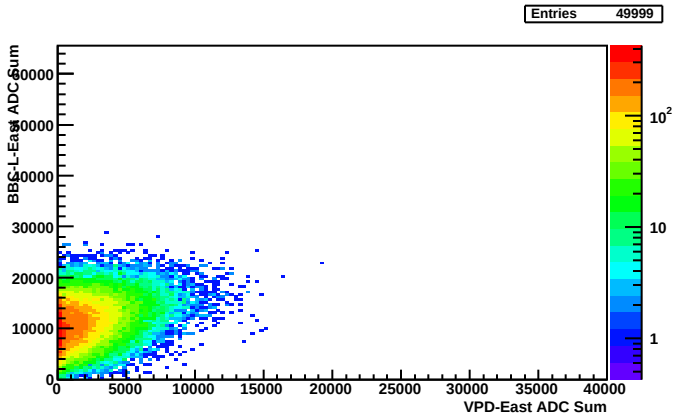

Entries 49999
TOF Mult
VPD-West ADC Sum

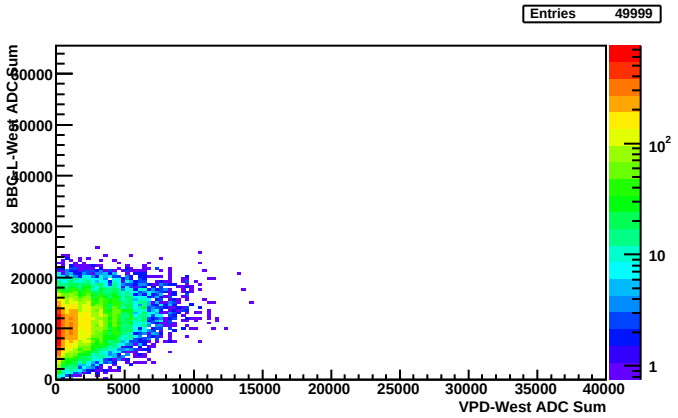

Entries 49999
TOF Mult
ZDC-East ADC Sum Att

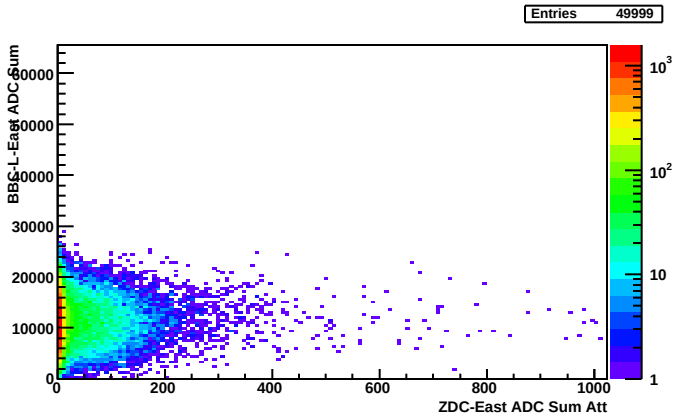

Entries 49999
TOF Mult
ZDC-West ADC Sum Att

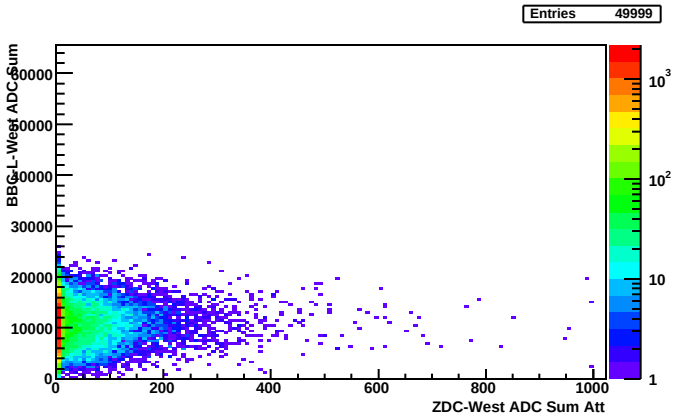

Entries 49999
BBC-L-East ADC Sum
BBC-S-East ADC Sum

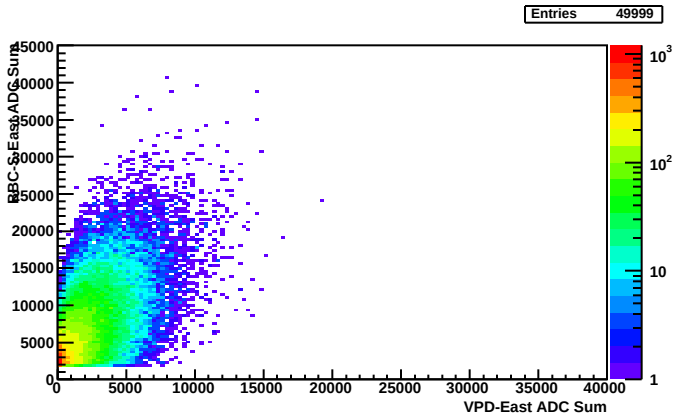

Entries 49999
BBC-L-West ADC Sum
BBC-S-West ADC Sum

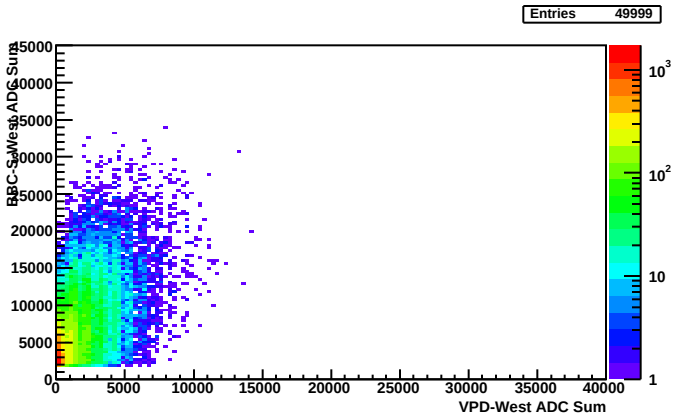

Entries 49999
BBC-L-East ADC Sum
VPD-East ADC Sum

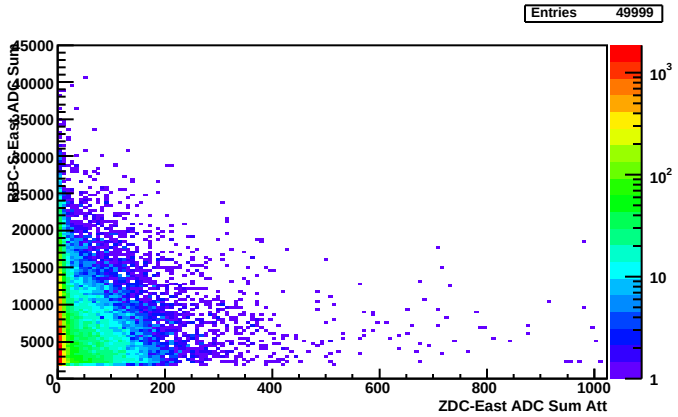

Entries 49999
BBC-L-West ADC Sum
VPD-West ADC Sum

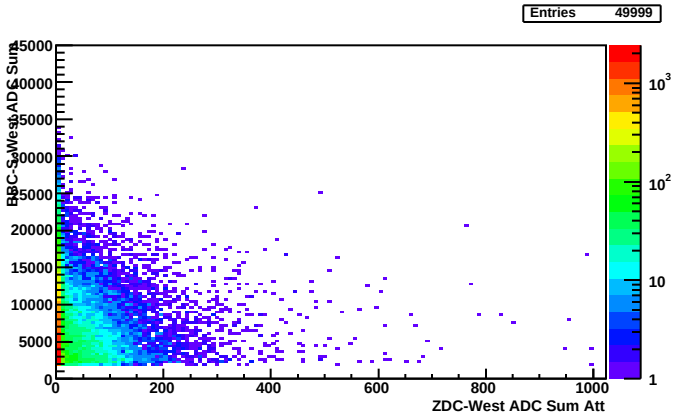

Entries 49999
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

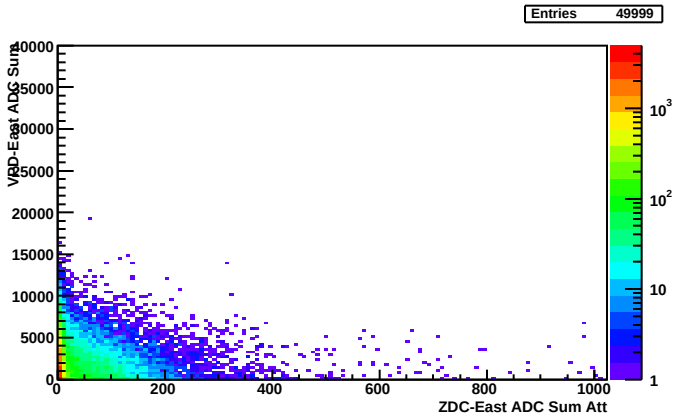

Entries 49999
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

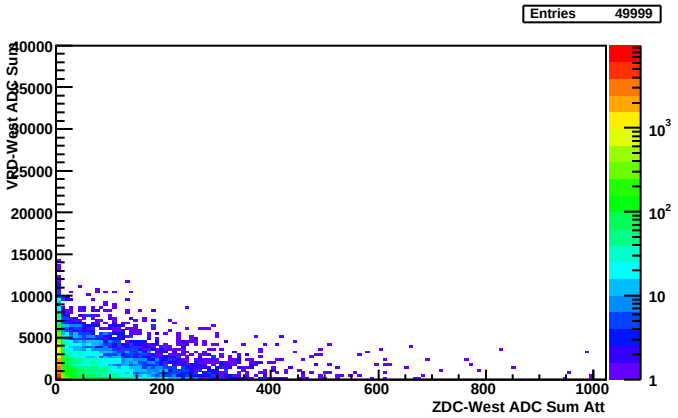

Entries 49999
BBC-S-East ADC Sum
VPD-East ADC Sum

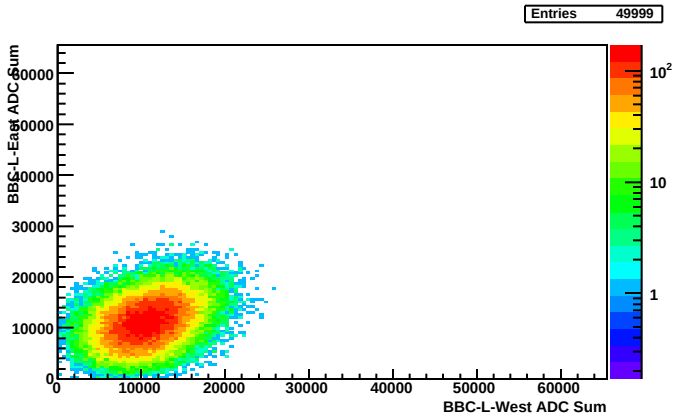

Entries 49999
BBC-S-West ADC Sum
VPD-West ADC Sum

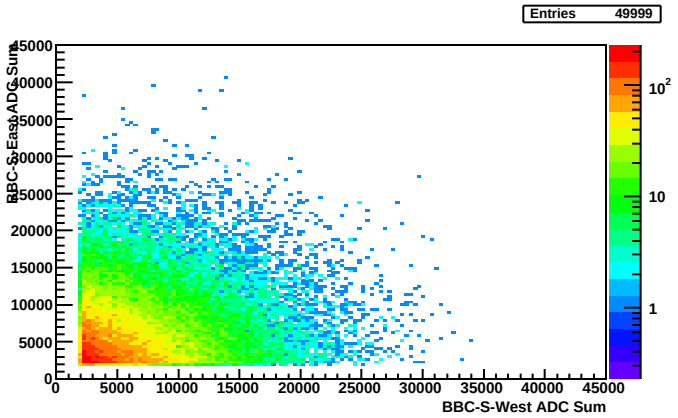

Entries 49999
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

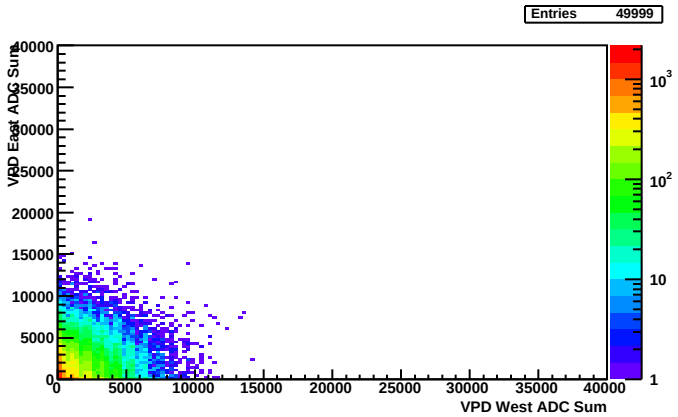

Entries 49999
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

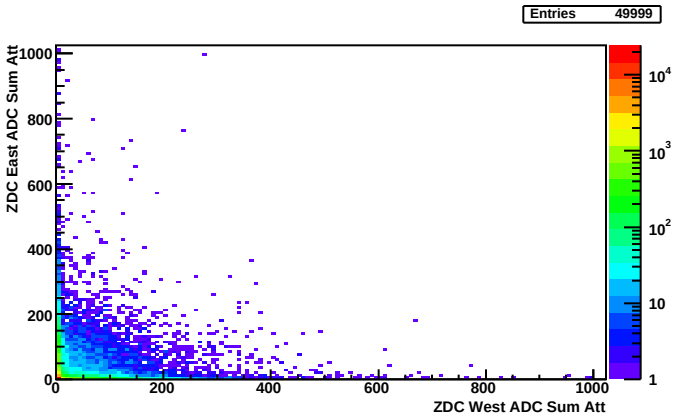

Entries 49999
VPD-East ADC Sum
ZDC-East ADC Sum Att

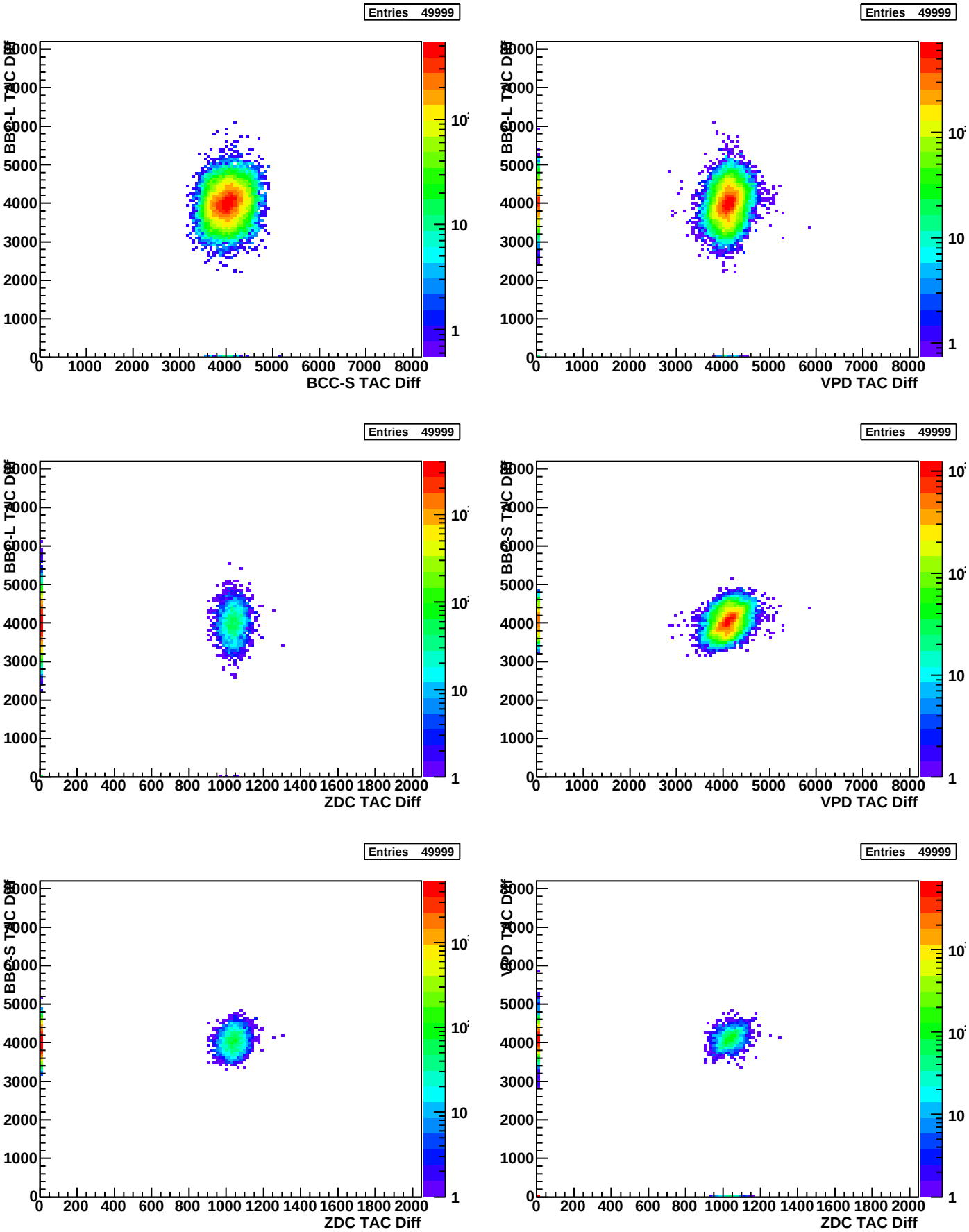

Entries 49999
VPD-West ADC Sum
ZDC-West ADC Sum Att

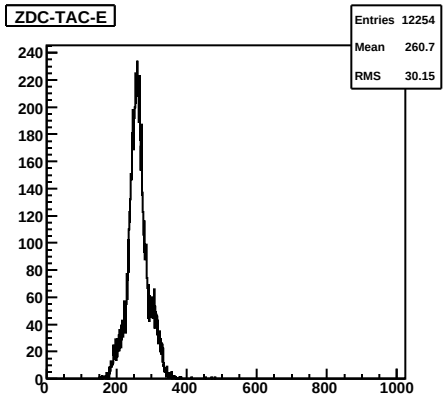

Entries 49999
BBC-L-East ADC Sum
BBC-L-West ADC Sum

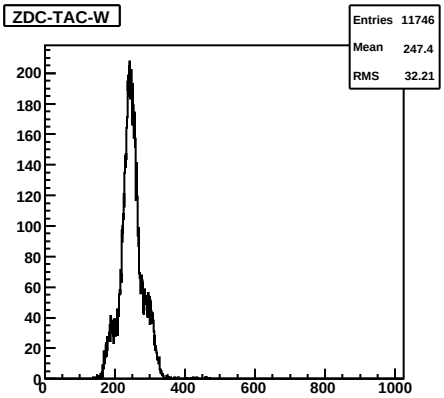

Entries 49999
BBC-S-East ADC Sum
BBC-S-West ADC Sum

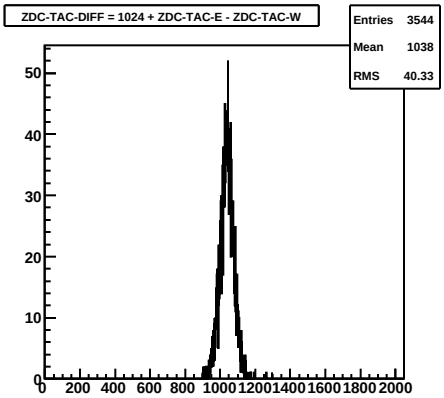

Entries 49999
VPD East ADC Sum
VPD West ADC Sum

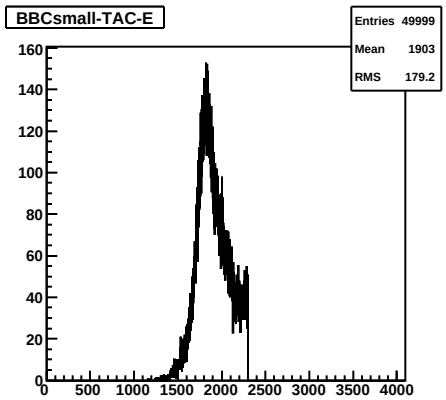

Entries 49999
ZDC East ADC Sum Att
ZDC West ADC Sum Att

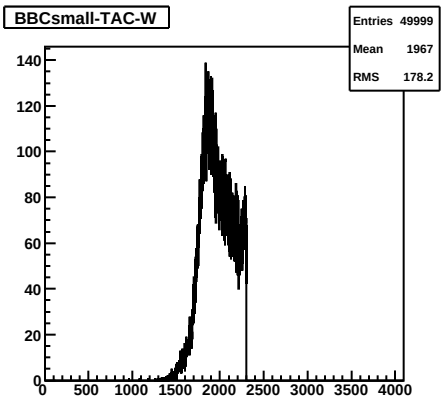

Entries 49999
BBC-L TAC Diff
BCC-S TAC Diff
Entries 49999
BBC-L TAC Diff
VPD TAC Diff
Entries 49999
BBC-L TAC Diff
ZDC TAC Diff
Entries 49999
BBC-S TAC Diff
VPD TAC Diff
Entries 49999
BBC-S TAC Diff
ZDC TAC Diff
Entries 49999
VPD TAC Diff
ZDC TAC Diff

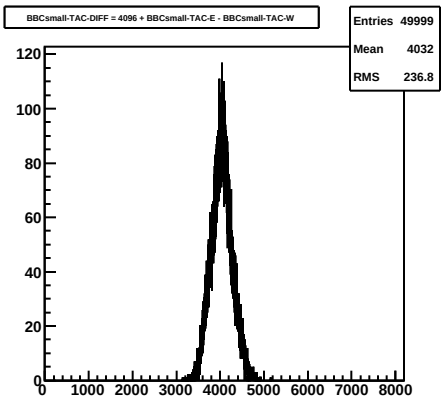

ZDC-TAC-E
Entries 12254
Mean 260.7
RMS 30.15

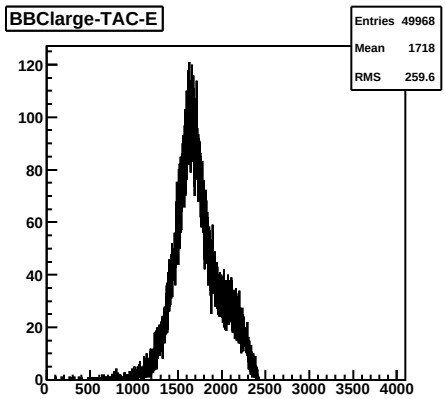

ZDC-TAC-W
Entries 11746
Mean 247.4
RMS 32.21

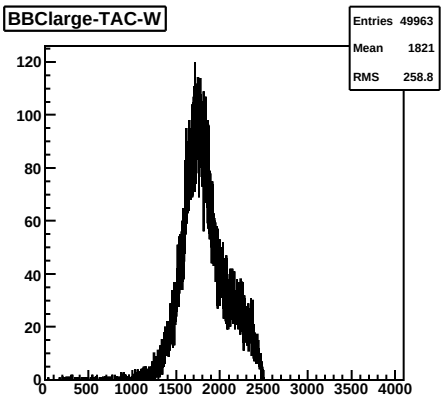

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3544
Mean 1038
RMS 40.33

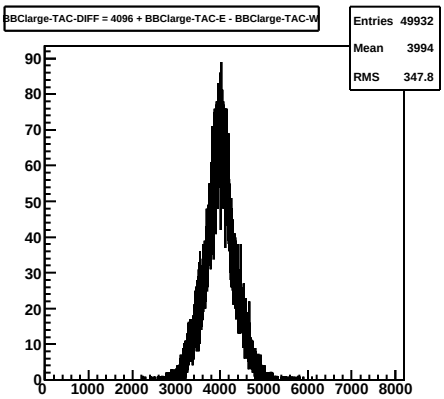

BBCsmall-TAC-E
Entries 49999
Mean 1903
RMS 179.2

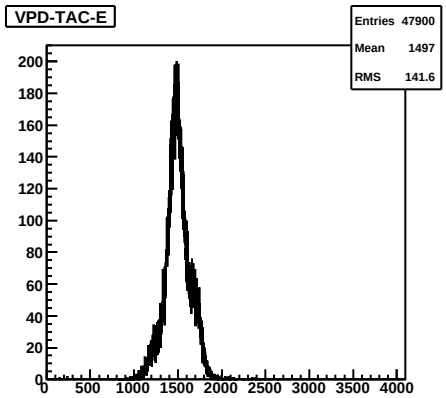

BBCsmall-TAC-W
Entries 49999
Mean 1967
RMS 178.2

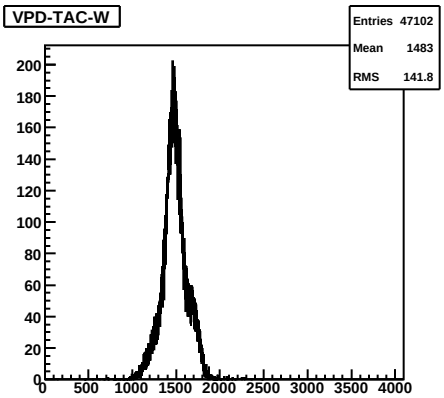

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 49999
Mean 4032
RMS 236.8

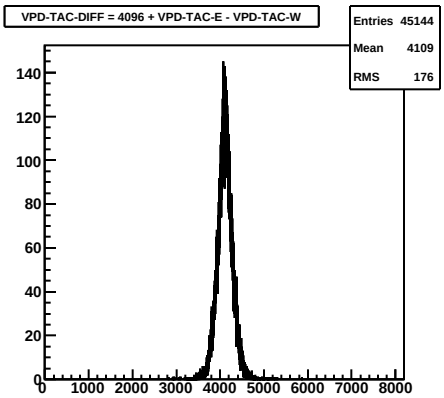

BBClarge-TAC-E
Entries 49968
Mean 1718
RMS 259.6

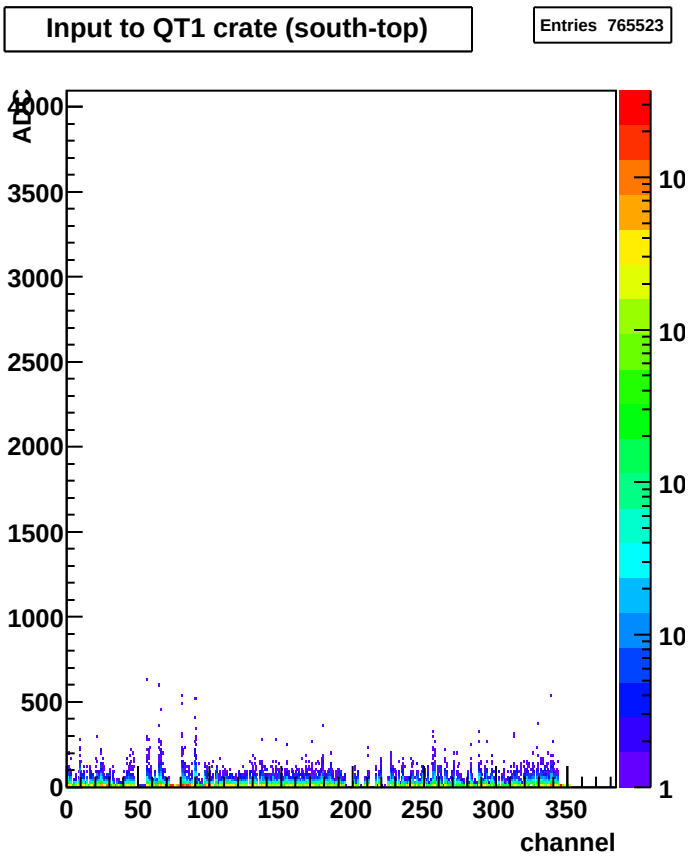

BBClarge-TAC-W
Entries 49963
Mean 1821
RMS 258.8

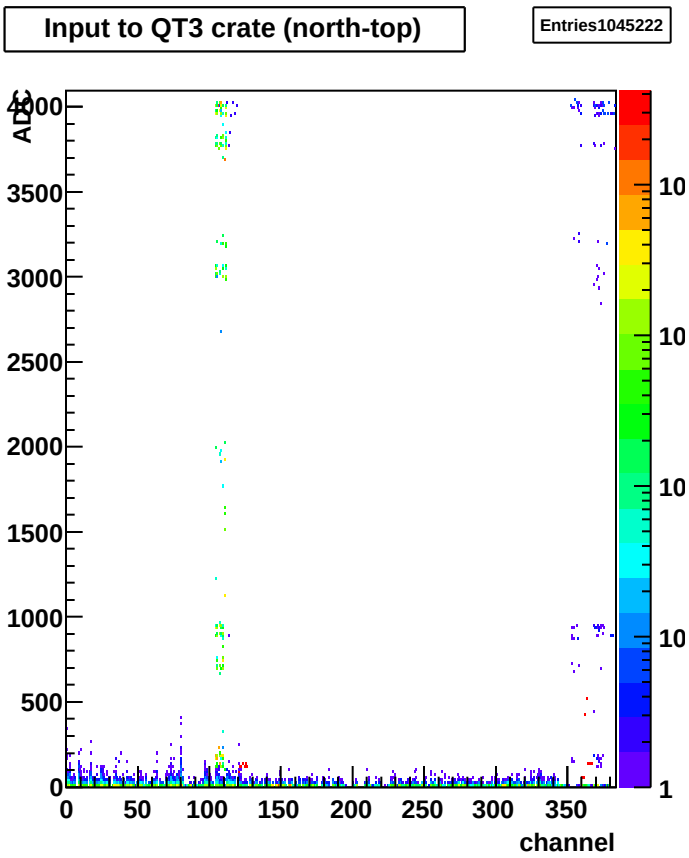

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 49932
Mean 3994
RMS 347.8

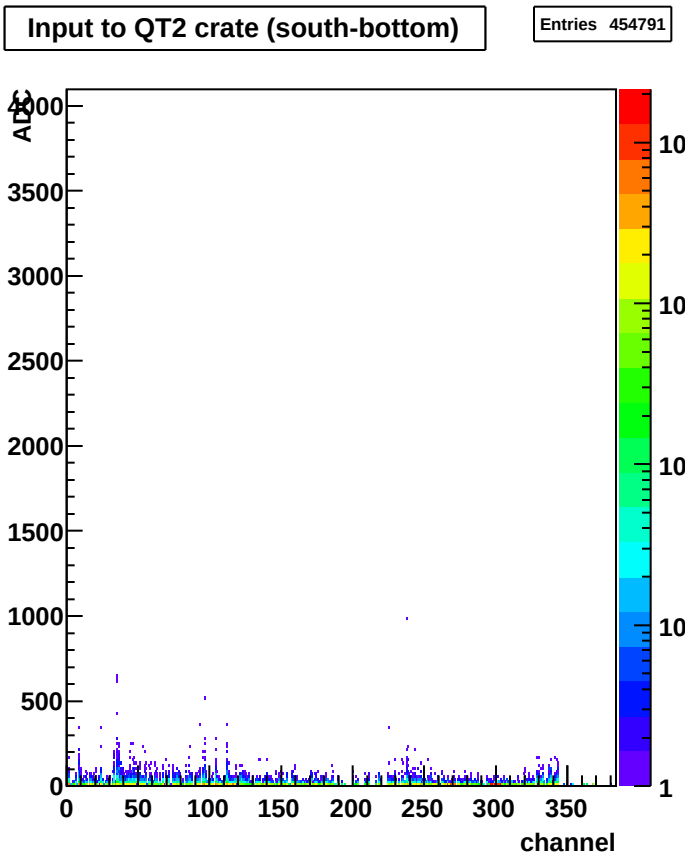

VPD-TAC-E
Entries 47900
Mean 1497
RMS 141.6

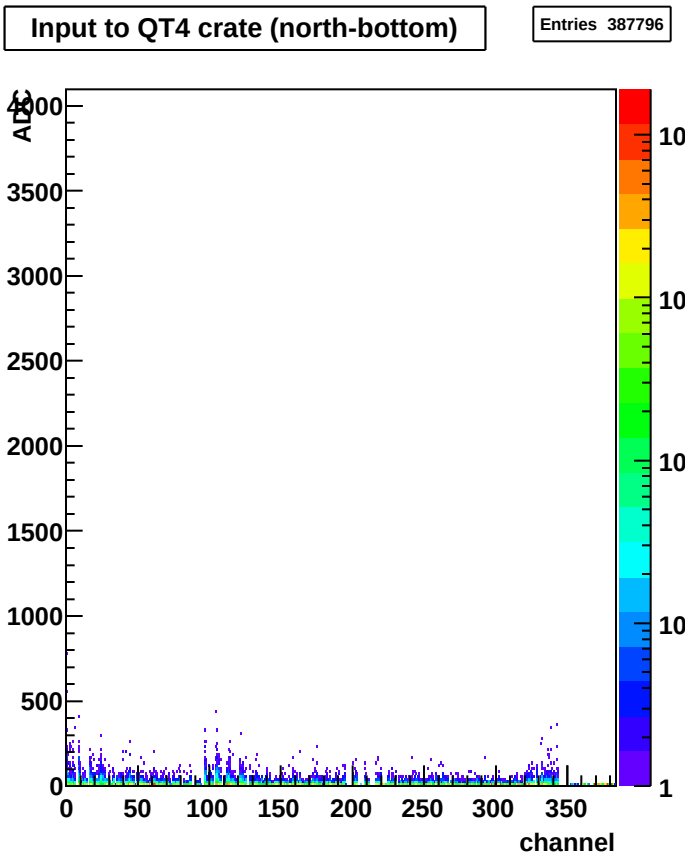

VPD-TAC-W
Entries 47102
Mean 1483
RMS 141.8

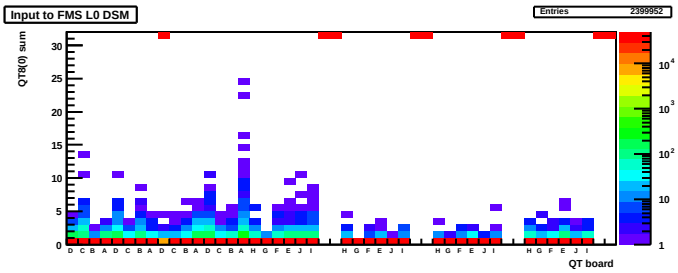

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 45144
Mean 4109
RMS 176

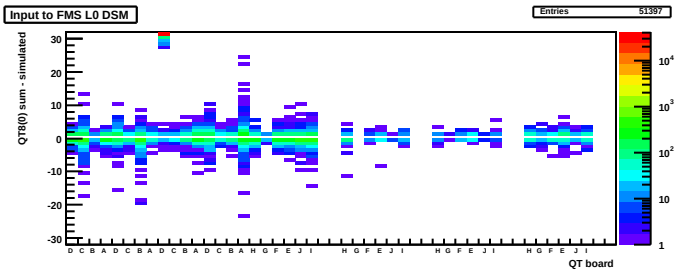

Input to QT1 crate (south-top)
Entries 765523
ADC
channel

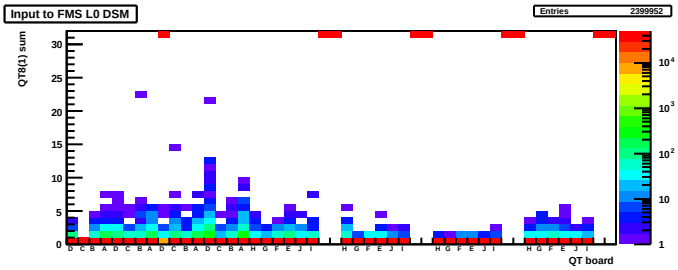

Input to QT3 crate (north-top)
Entries1045222
ADC
channel

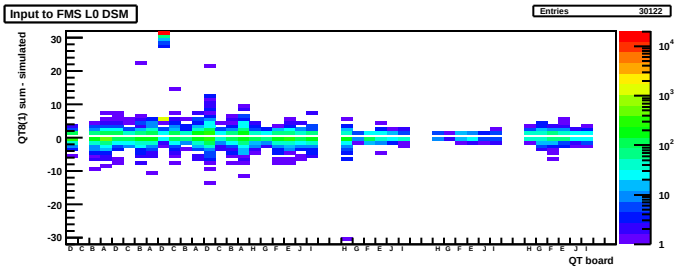

Input to QT2 crate (south-bottom)
Entries 454791
ADC
channel

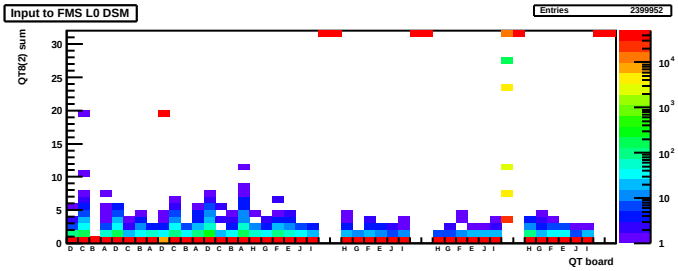

Input to QT4 crate (north-bottom)
Entries 387796
ADC
channel

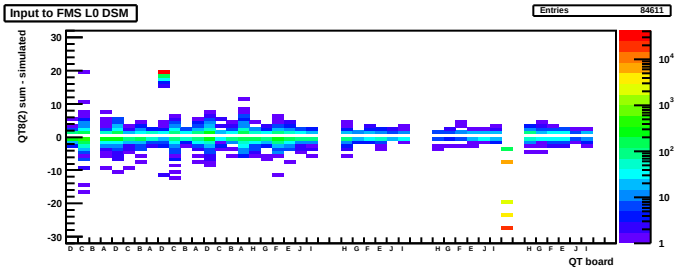

Input to FMS L0 DSM
Entries 2399952
QT8(0) sum
QT board

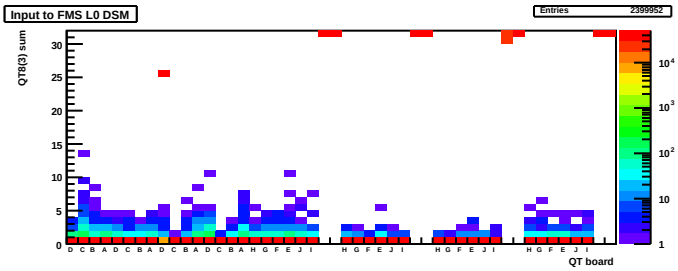

Input to FMS L0 DSM
Entries 51397
QT8(0) sum - simulated
QT board

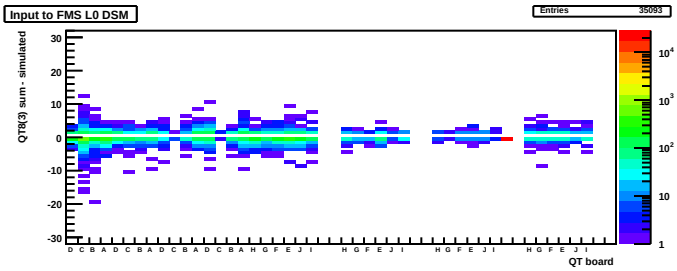

Input to FMS L0 DSM
Entries 2399952
QT8(1) sum
QT board

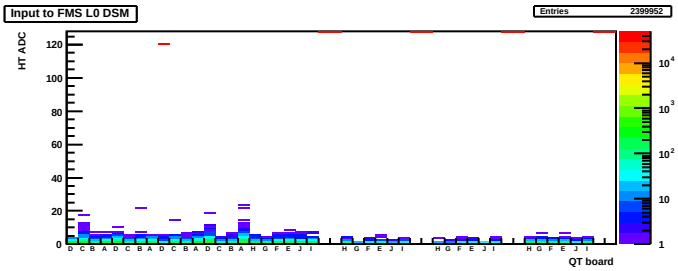

Input to FMS L0 DSM
Entries 30122
QT8(1) sum - simulated
QT board

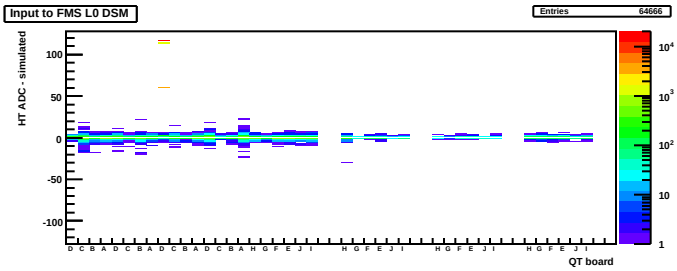

Input to FMS L0 DSM
Entries 2399952
QT8(2) sum
QT board

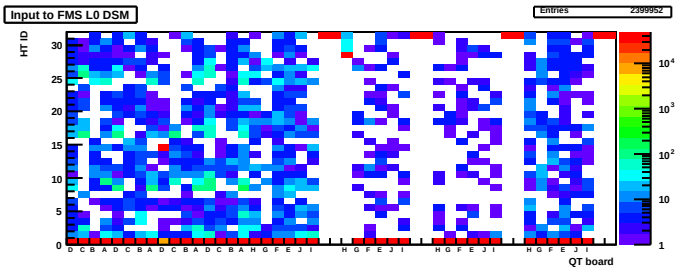

Input to FMS L0 DSM
Entries 84611
QT8(2) sum - simulated
QT board

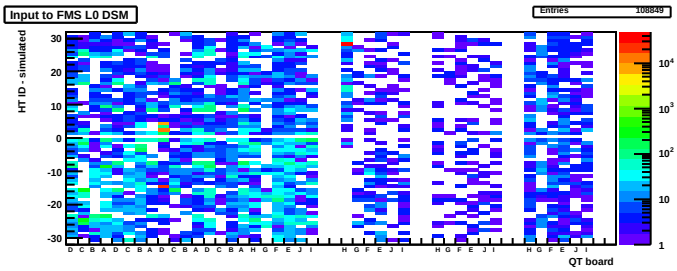

Input to FMS L0 DSM
Entries 2399952
QT8(3) sum
QT board

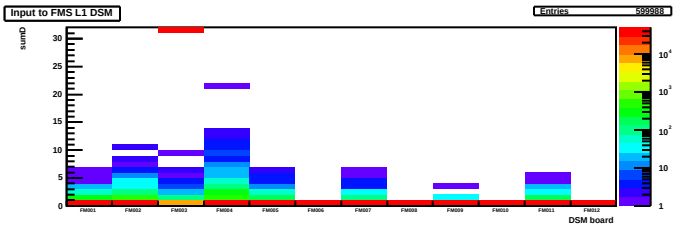

Input to FMS L0 DSM
Entries 35093
QT8(3) sum - simulated
QT board

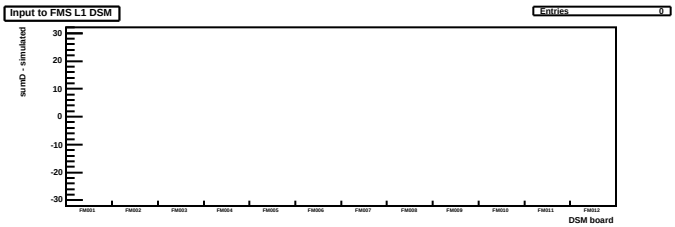

Input to FMS L0 DSM
Entries 2399952
HT ADC
QT board

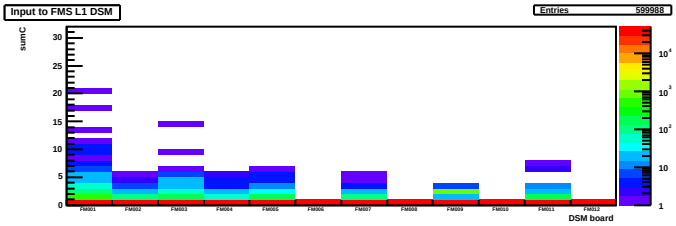

Input to FMS L0 DSM
Entries 64666
HT ADC - simulated
QT board

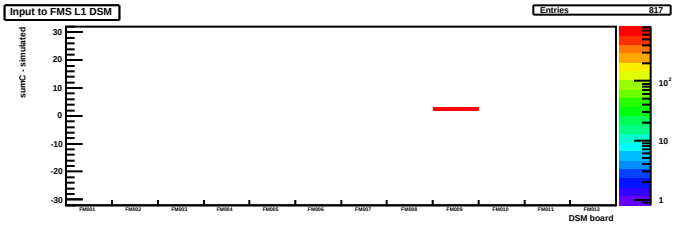

Input to FMS L0 DSM
Entries 2399952
HT ID
QT board

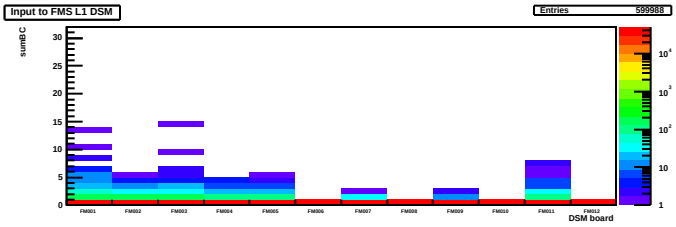

Input to FMS L0 DSM
Entries 108849
HT ID - simulated
QT board

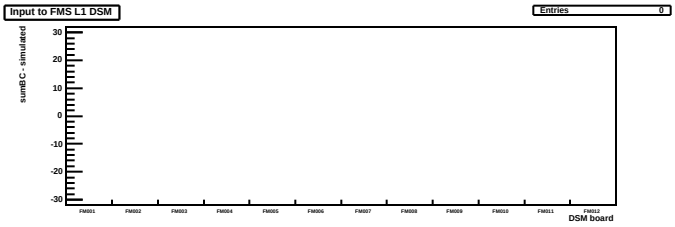

Input to FMS L1 DSM
Entries 599988
sumD
DSM board

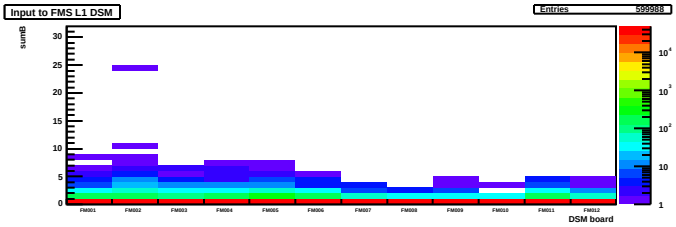

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

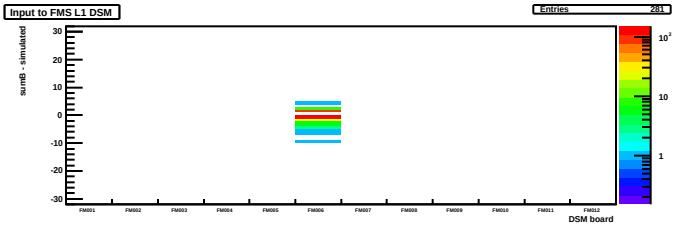

Input to FMS L1 DSM
Entries 599988
sumC
DSM board

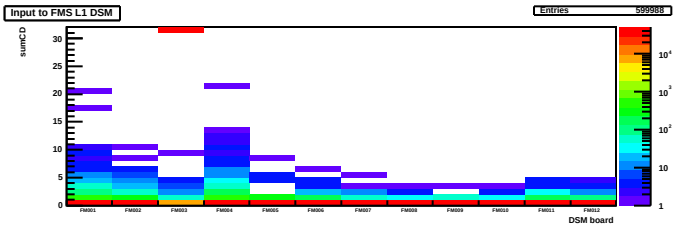

Input to FMS L1 DSM
Entries 817
sumC - simulated
DSM board

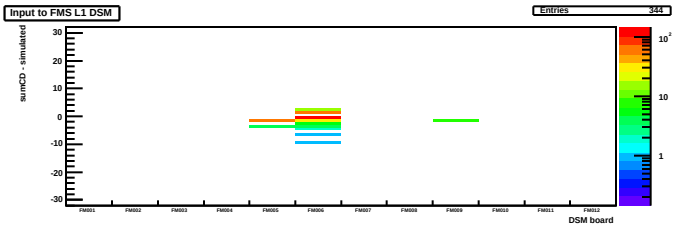

Input to FMS L1 DSM
Entries 599988
sumBC
DSM board

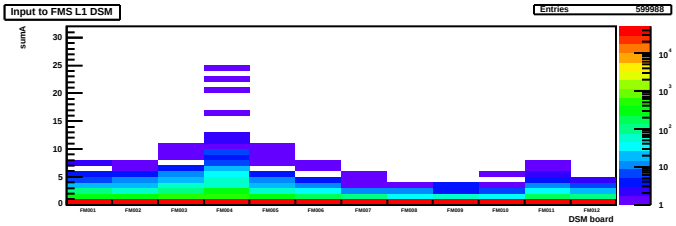

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

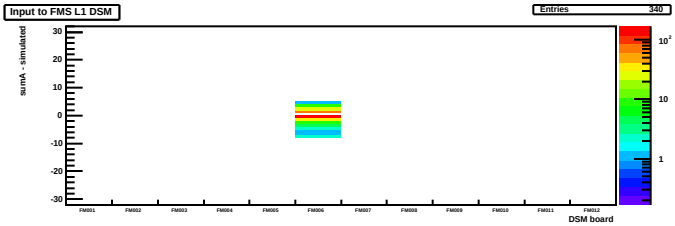

Input to FMS L1 DSM
Entries 599988
sumB
DSM board

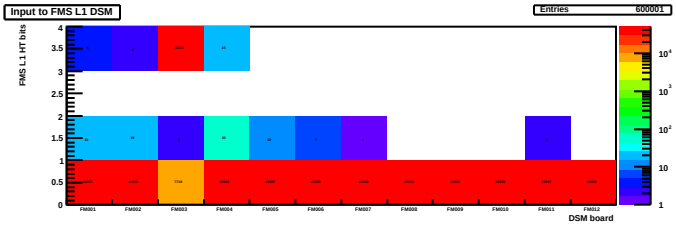

Input to FMS L1 DSM
Entries 281
sumB - simulated
DSM board

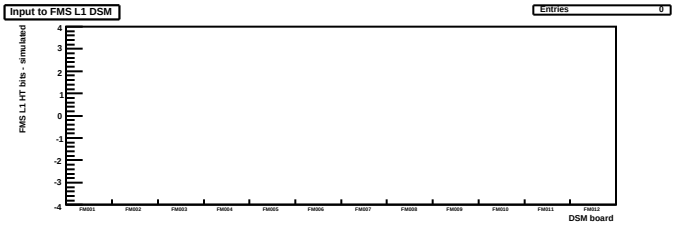

Input to FMS L1 DSM
Entries 599988
sumCD
DSM board

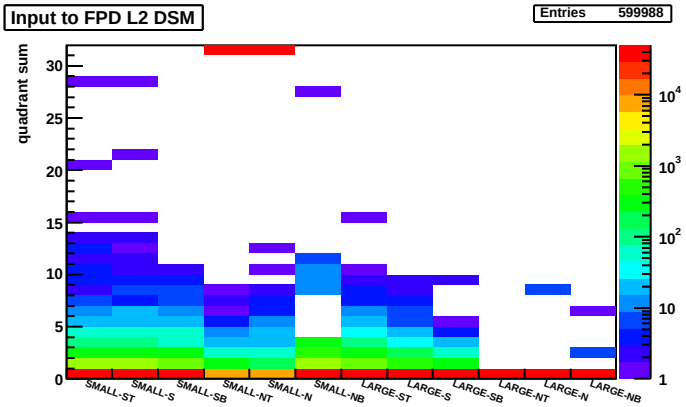

Input to FMS L1 DSM
Entries 344
sumCD - simulated
DSM board

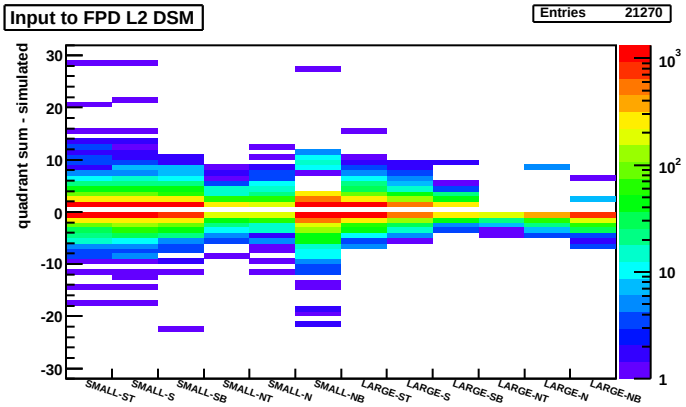

Input to FMS L1 DSM
Entries 599988
sumA
DSM board

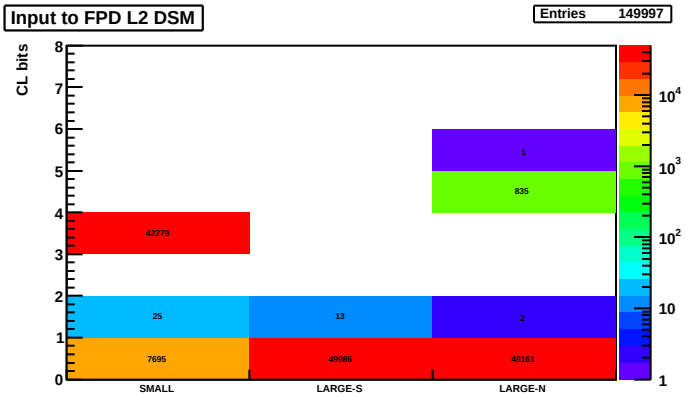

Input to FMS L1 DSM
Entries 340
sumA - simulated
DSM board

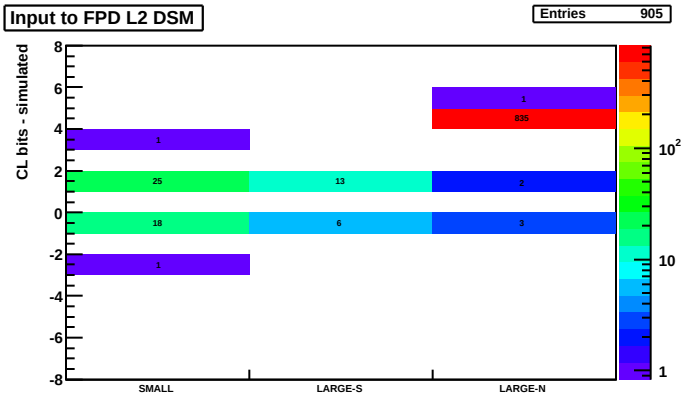

Input to FMS L1 DSM
Entries 600001
FMS L1 HT bits
DSM board

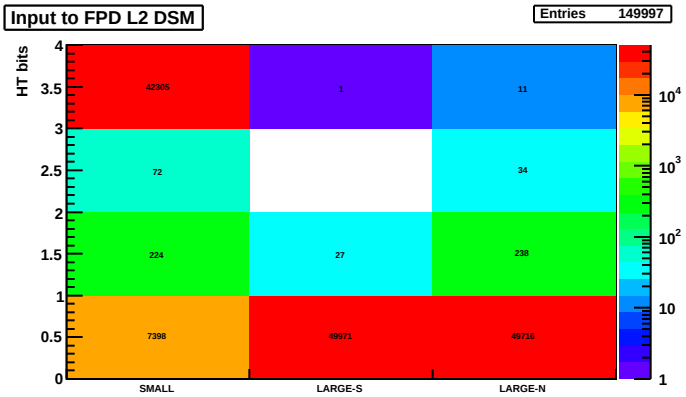

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

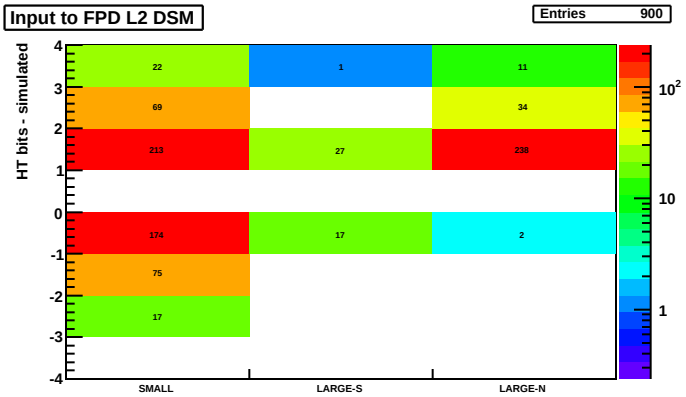

Input to FPD L2 DSM
Entries 599988
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

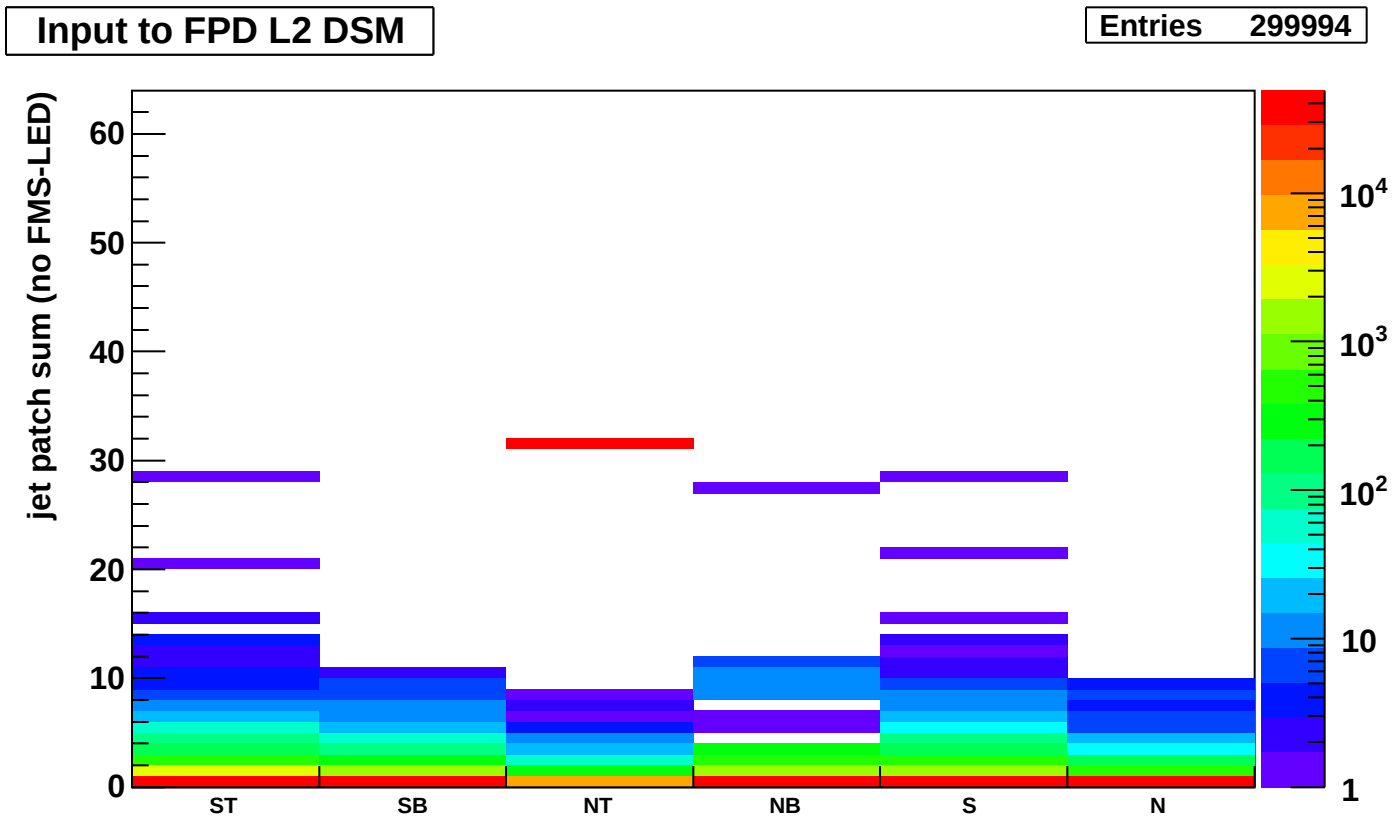

Input to FPD L2 DSM
Entries 21270
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

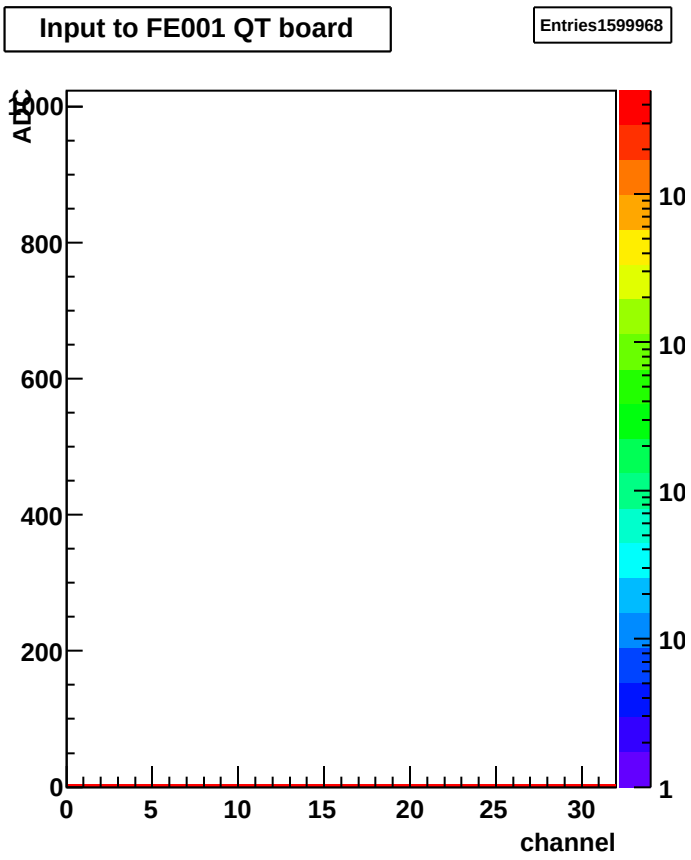

Input to FPD L2 DSM
Entries 149997
CL bits
42279
1
835
25
13
2
7695
49986
49161
SMALL
LARGE-S
LARGE-N

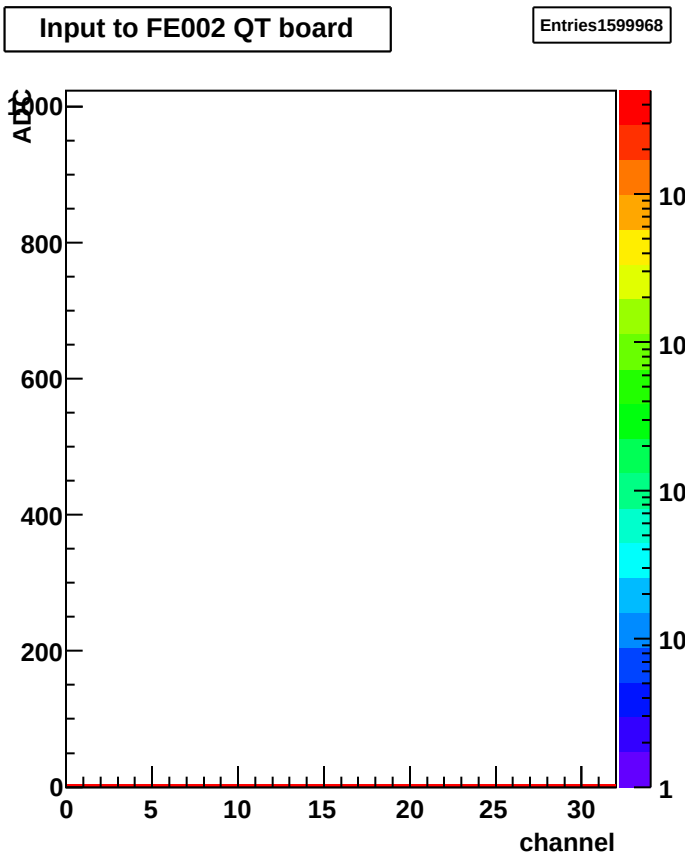

Input to FPD L2 DSM
Entries 905
CL bits - simulated
1
835
1
25
13
2
18
6
3
1
SMALL
LARGE-S
LARGE-N

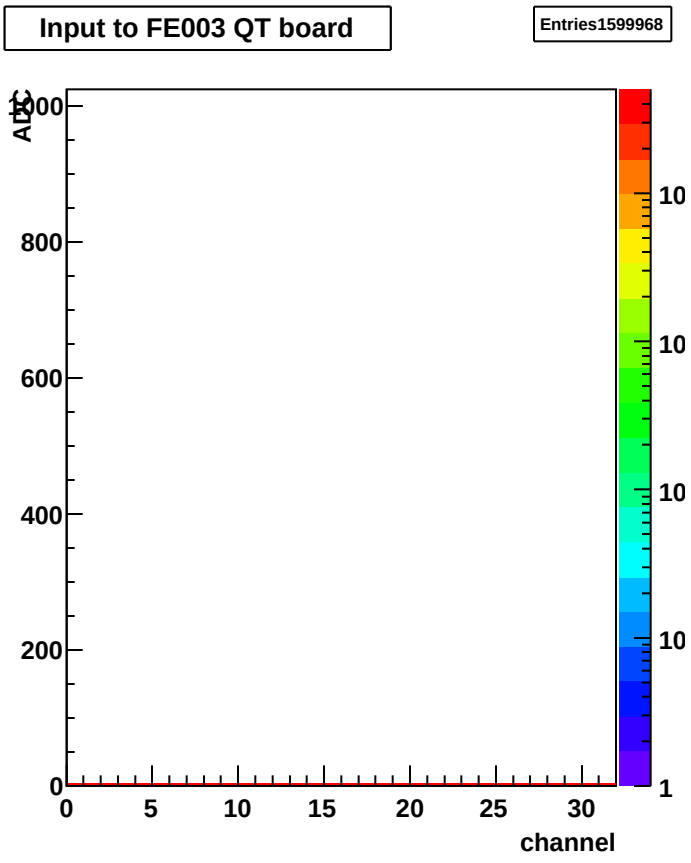

Input to FPD L2 DSM
Entries 149997
HT bits
42305
1
11
72
34
224
27
238
7398
49971
49716
SMALL
LARGE-S
LARGE-N

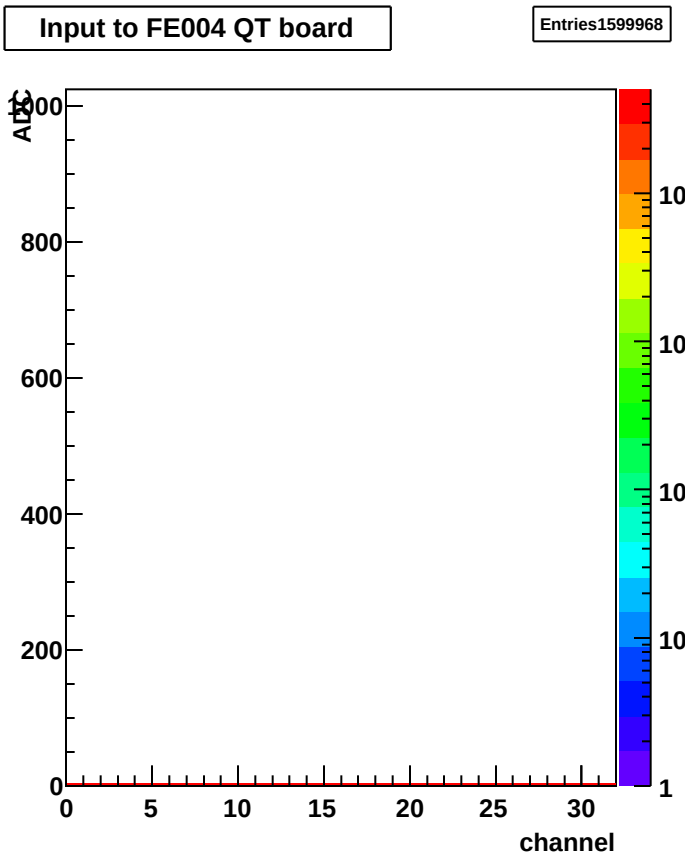

Input to FPD L2 DSM
Entries 900
HT bits - simulated
22
1
11
69
34
213
27
238
174
17
2
75
17
SMALL
LARGE-S
LARGE-N

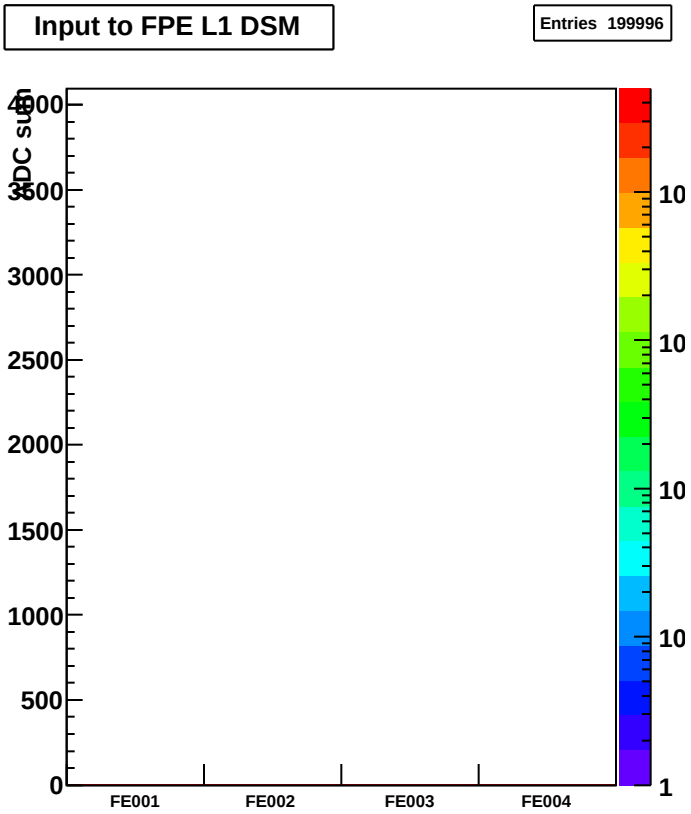

Input to FPD L2 DSM
Entries 299994
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

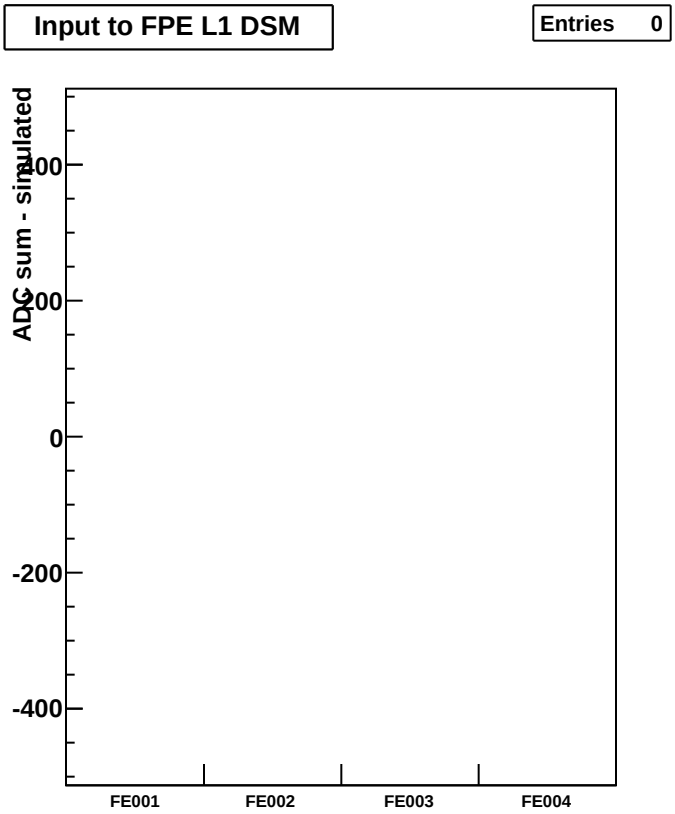

Input to FE001 QT board
Entries1599968
ADC
channel

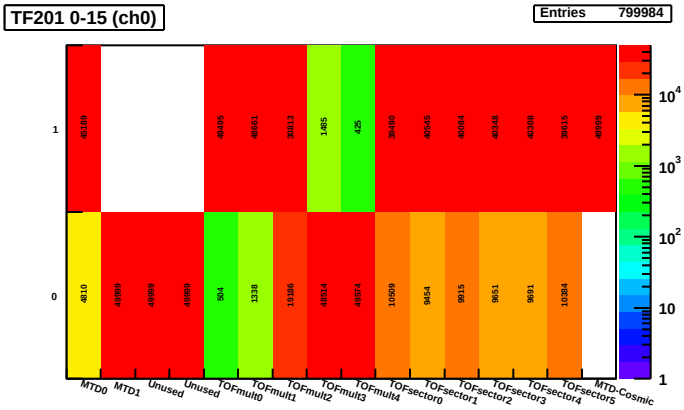

Input to FE002 QT board
Entries1599968
ADC
channel

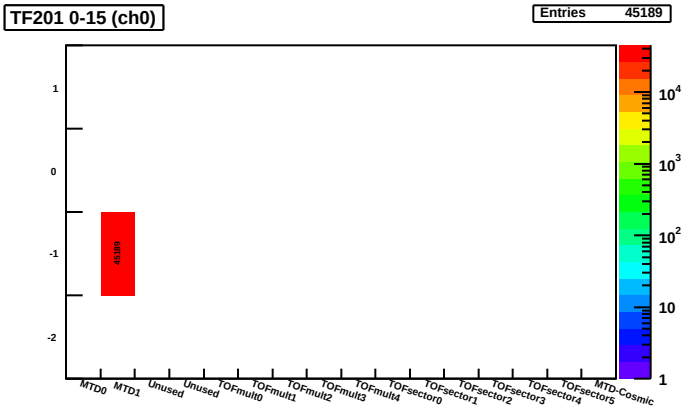

Input to FE003 QT board
Entries1599968
ADC
channel

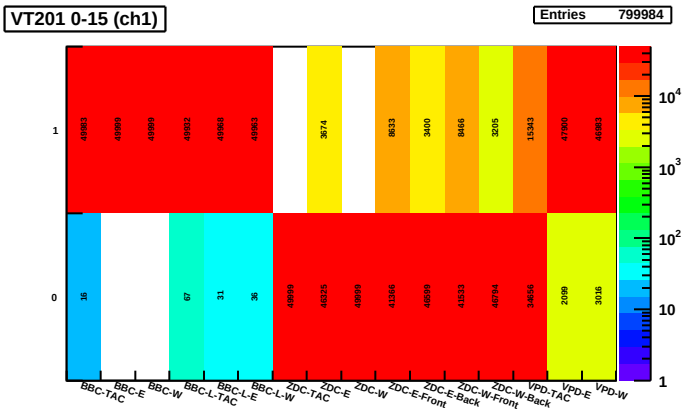

Input to FE004 QT board
Entries1599968
ADC
channel

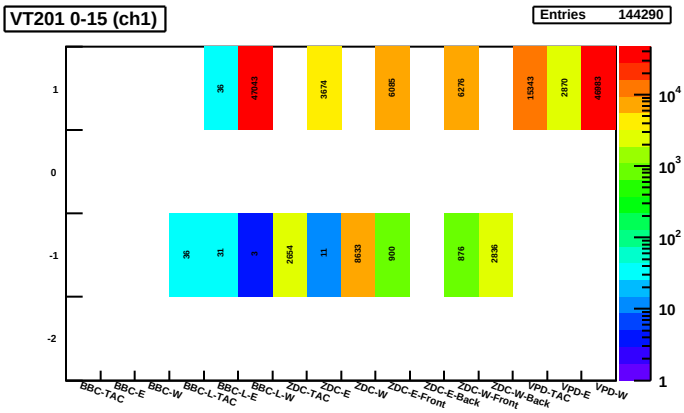

Input to FPE L1 DSM
Entries 199996
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


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


TF201 0-15 (ch0)
Entries 799984
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 45189
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 799984
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 144290
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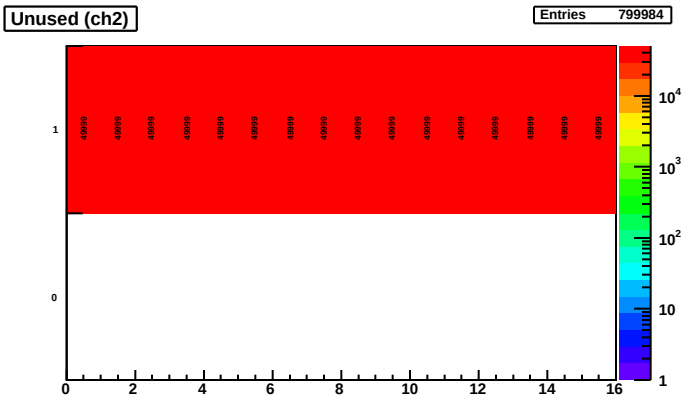
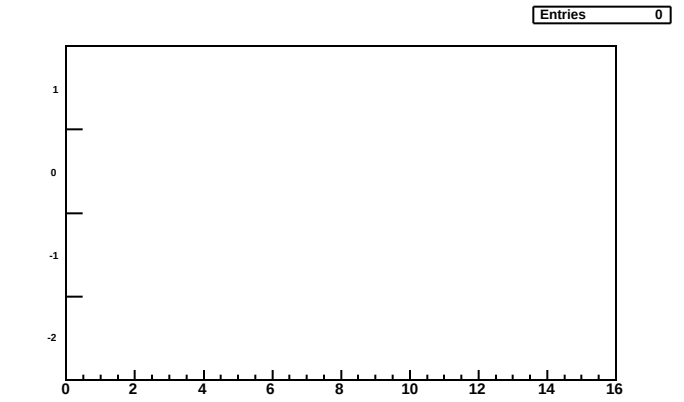
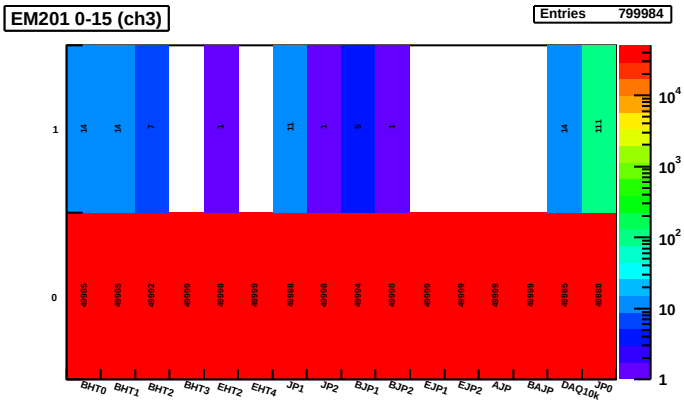
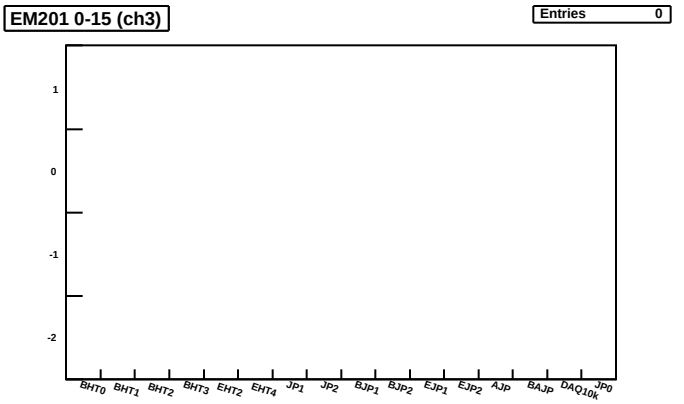
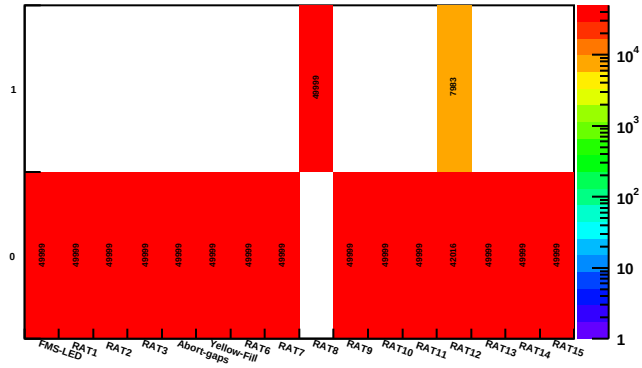

Unused (ch2)
Entries 799984

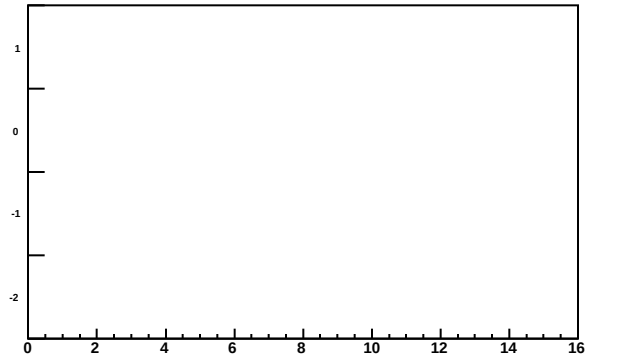

Entries 0


EM201 0-15 (ch3)
Entries 799984
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

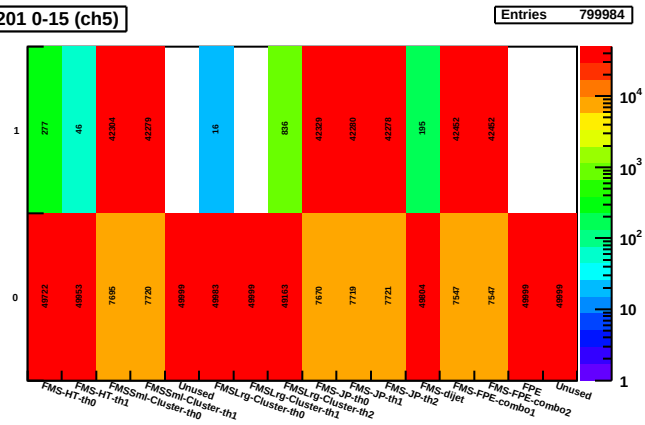

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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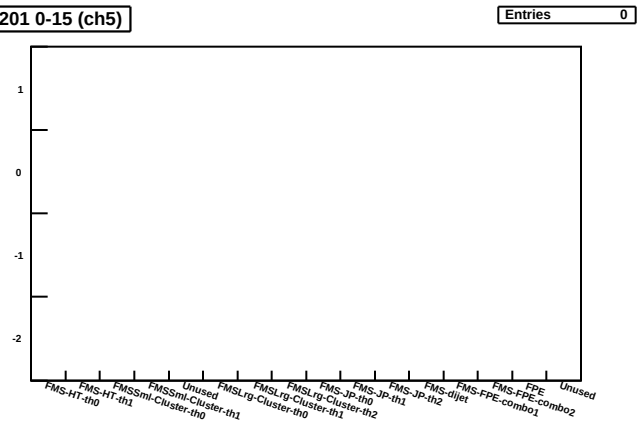
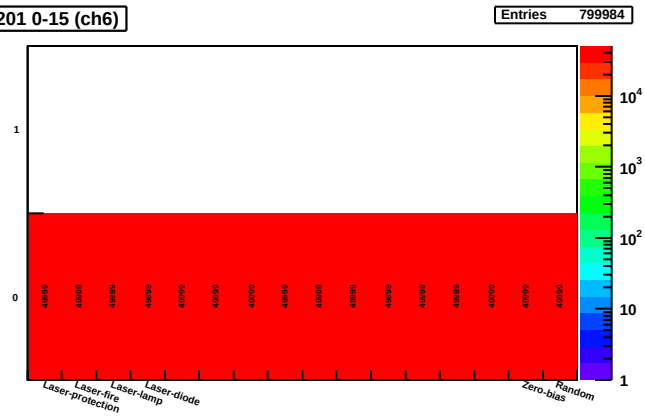
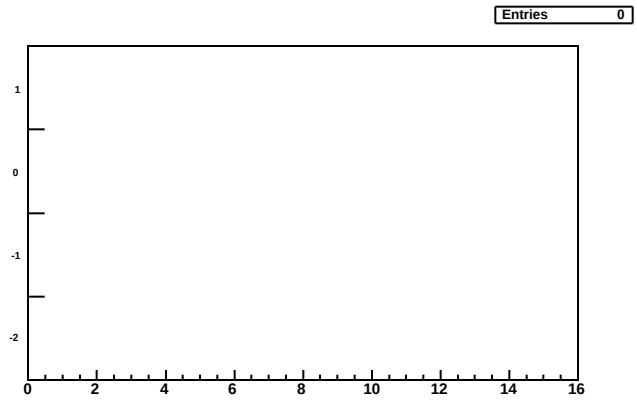
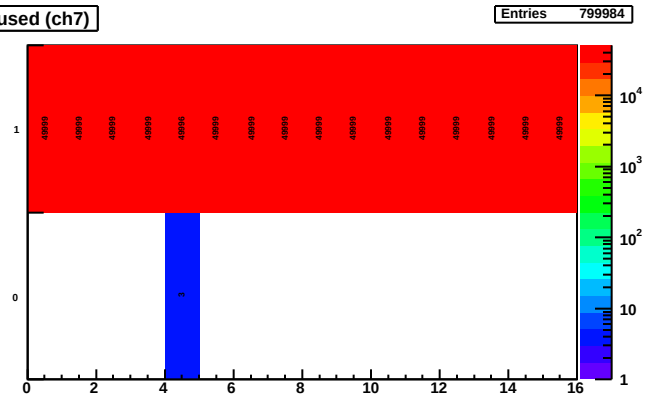
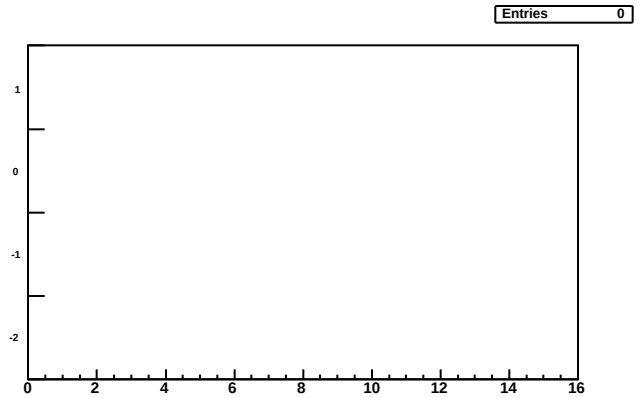


ST201 0-15 (ch6)





Unused (ch7)