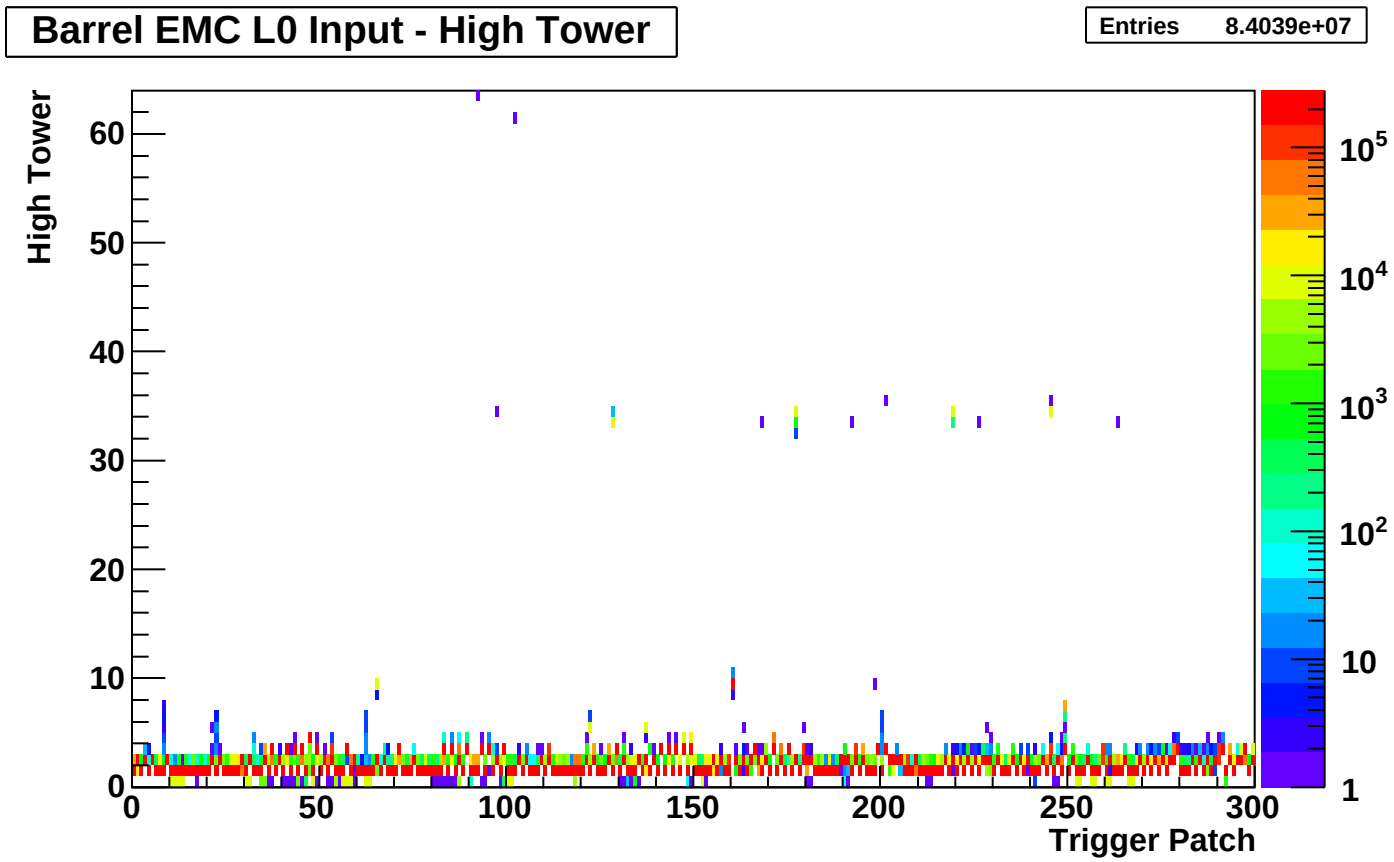
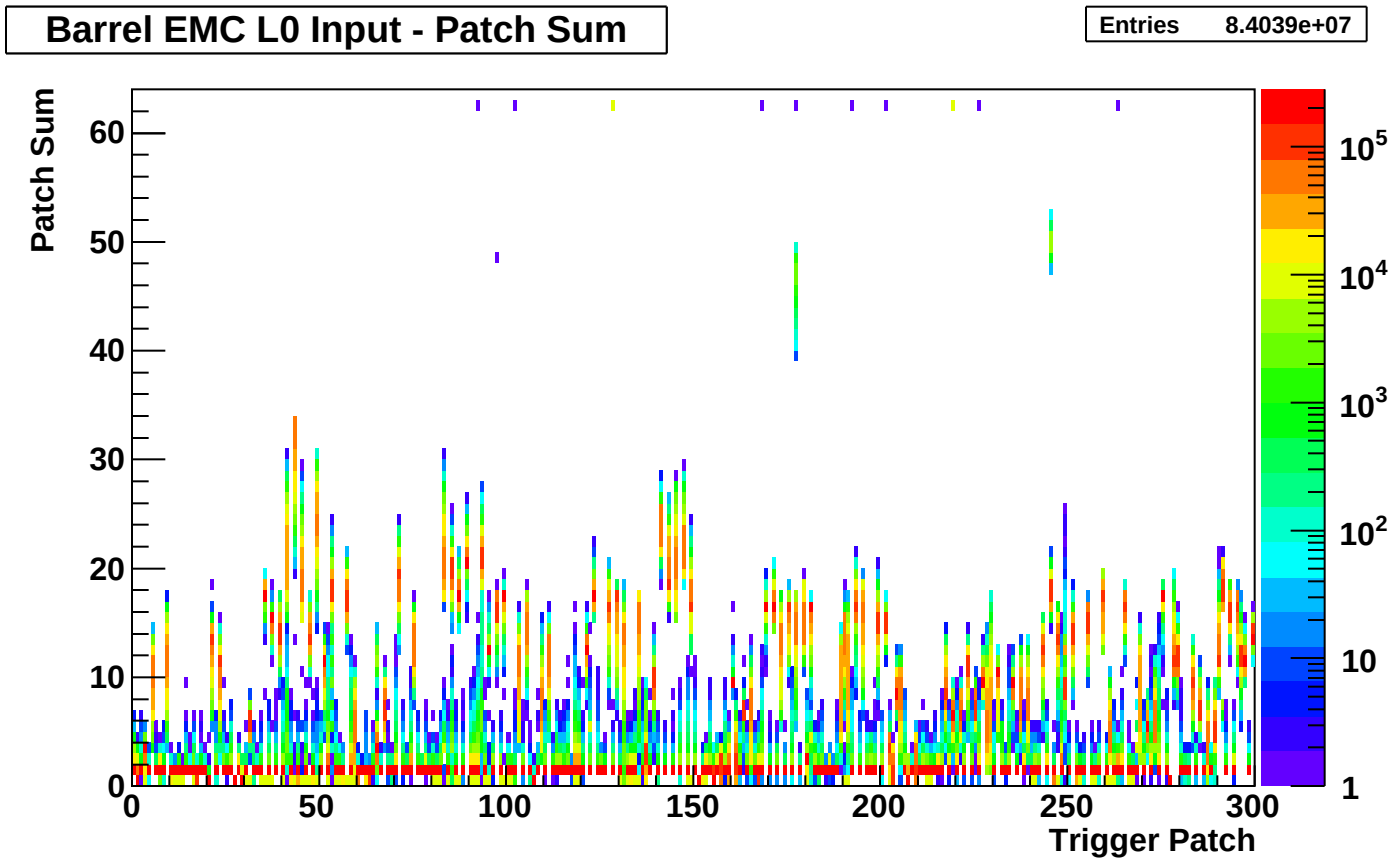
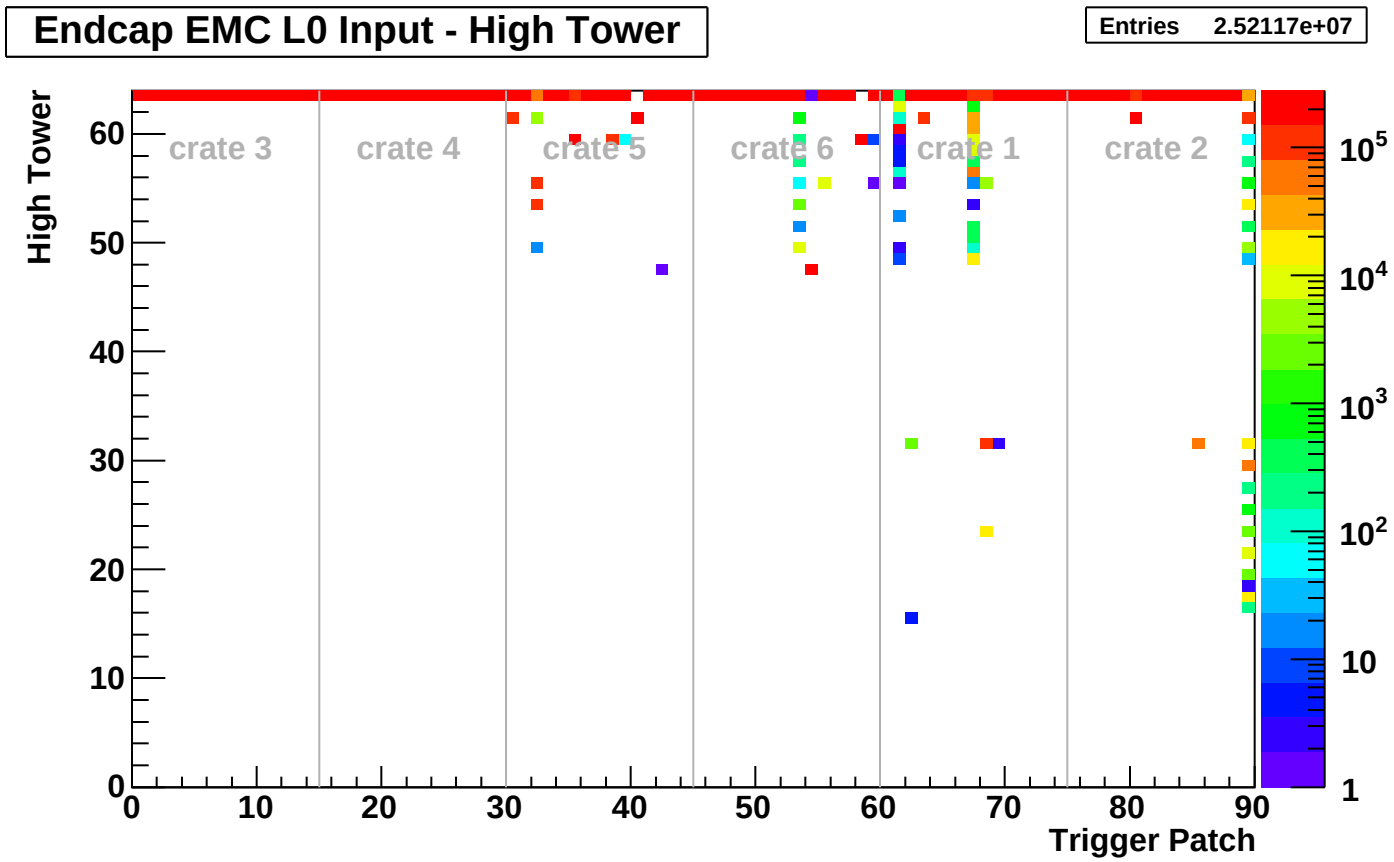
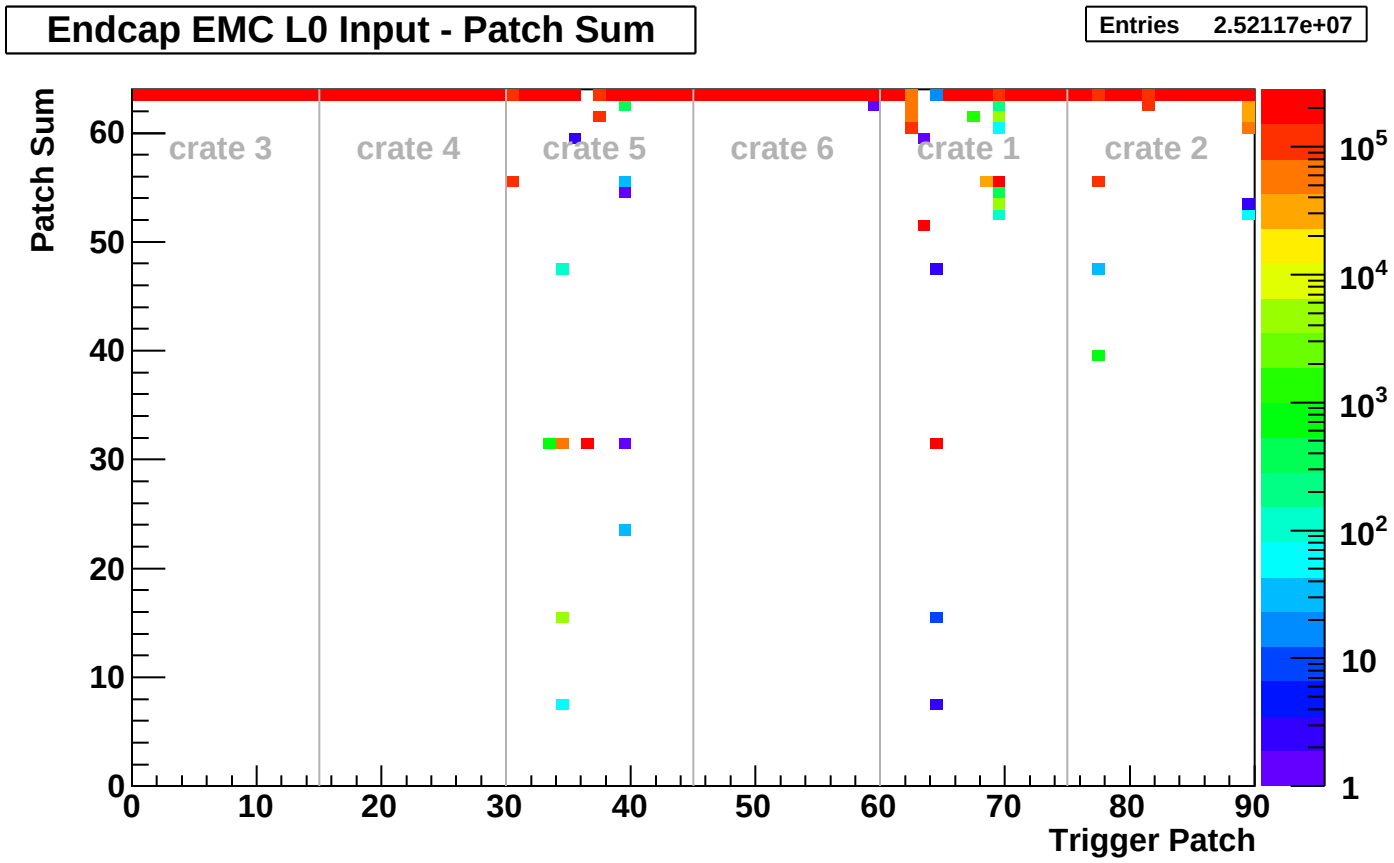
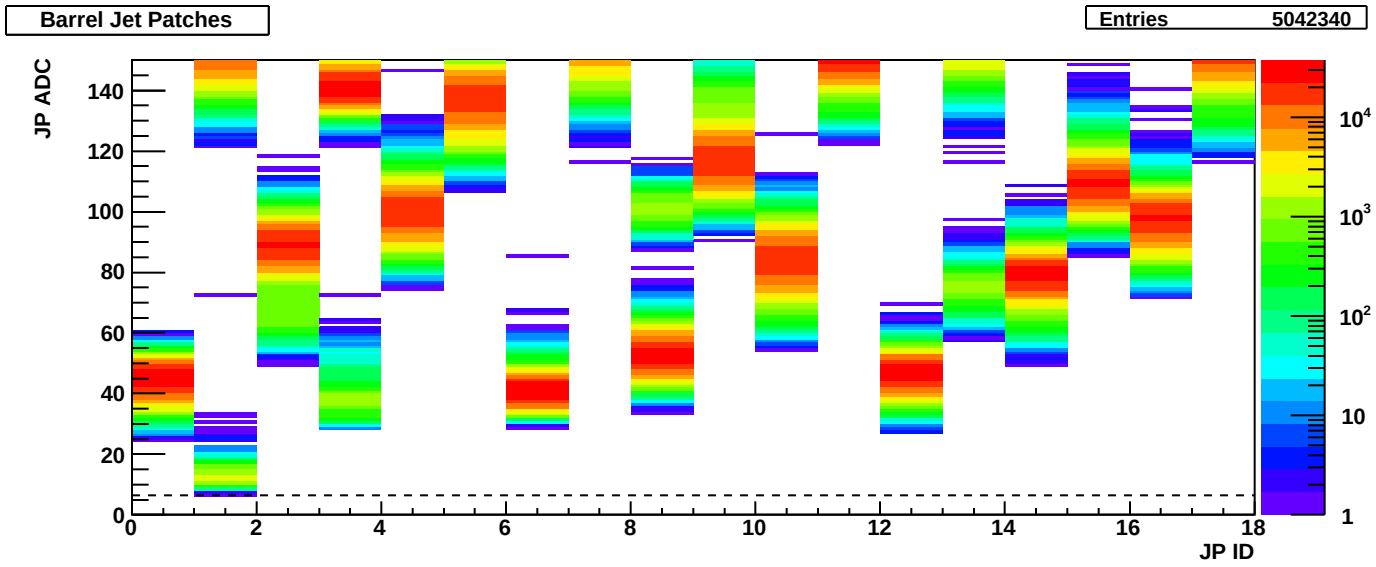
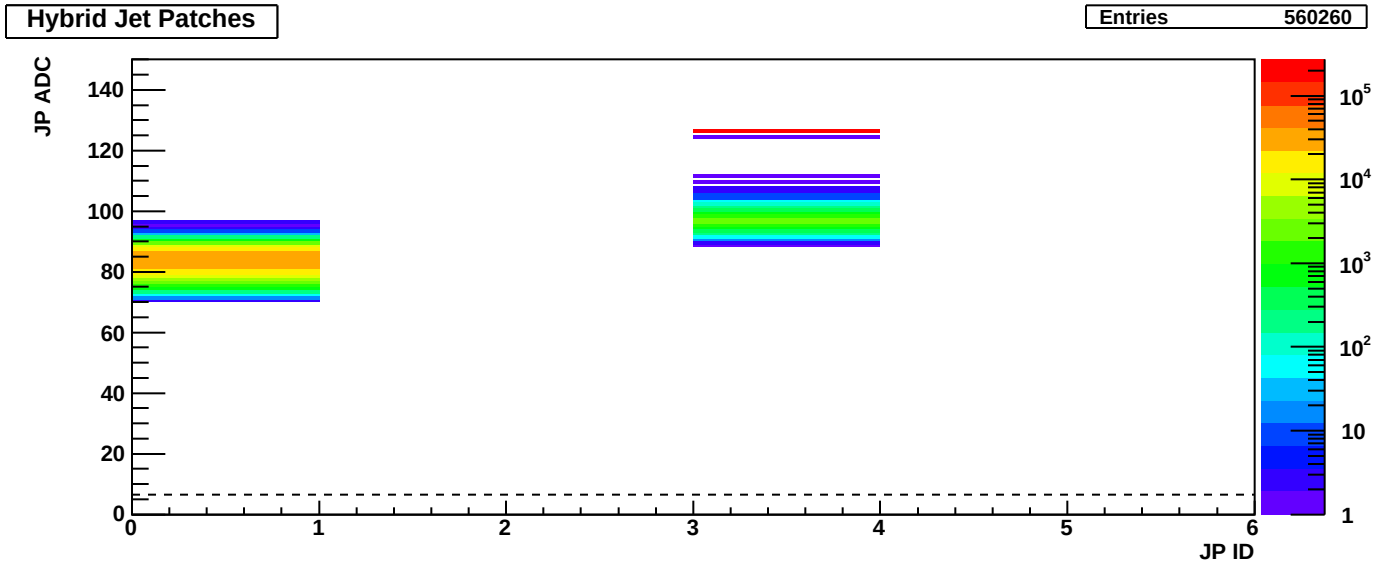

Barrel EMC L0 Input - High Tower
Entries 8.4039e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

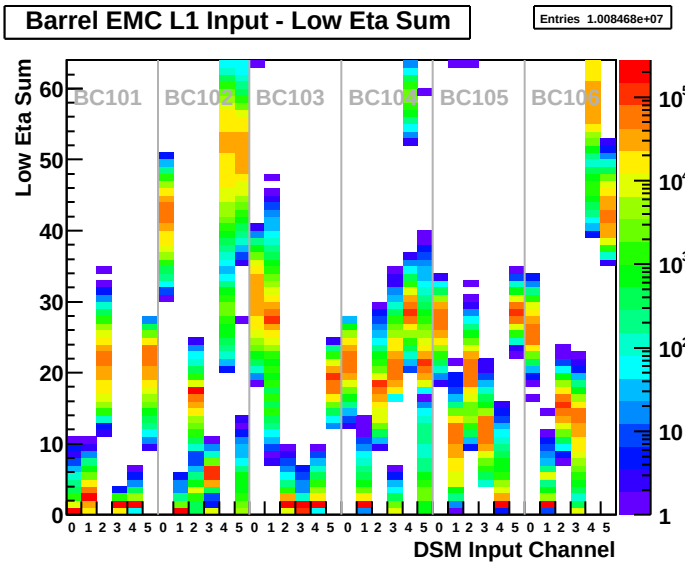

Barrel EMC L0 Input - Patch Sum
Entries 8.4039e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

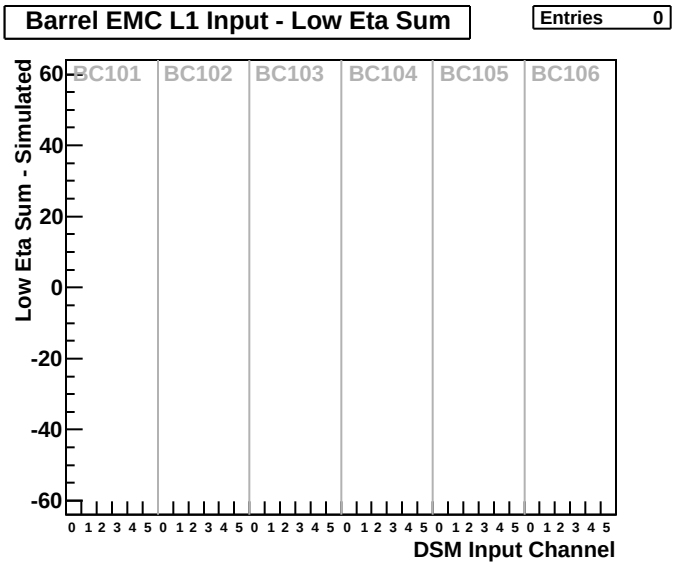

Endcap EMC L0 Input - High Tower
Entries 2.52117e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

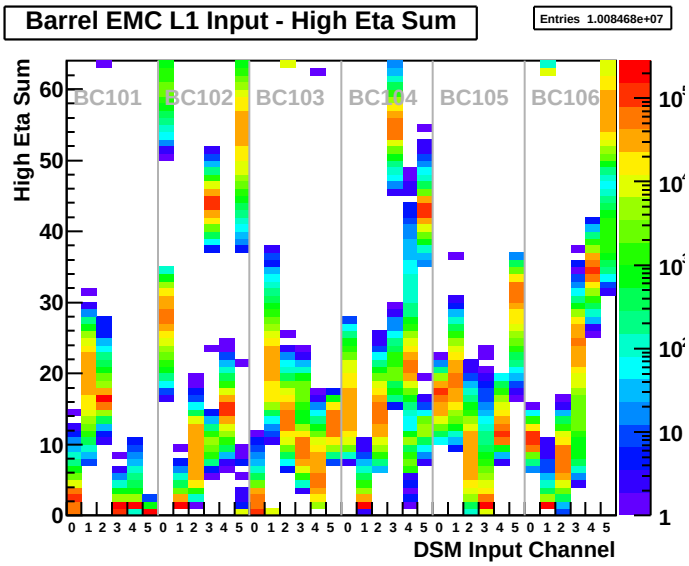

Endcap EMC L0 Input - Patch Sum
Entries 2.52117e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

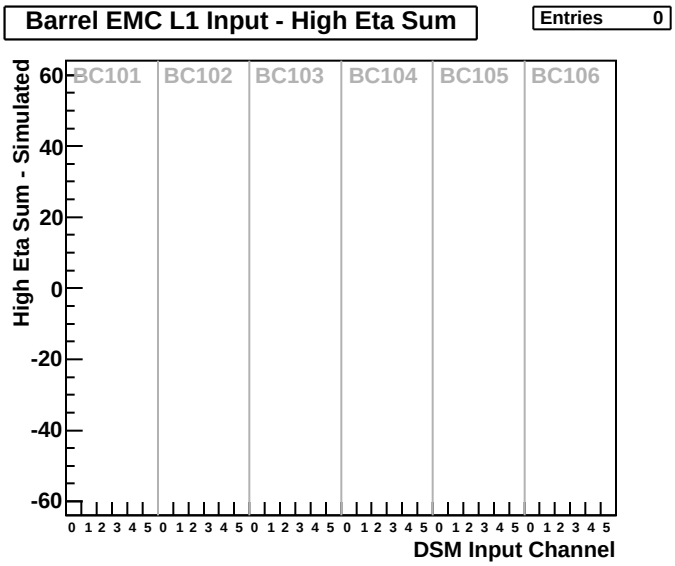

Barrel Jet Patches
Entries 5042340
JP ADC
JP ID

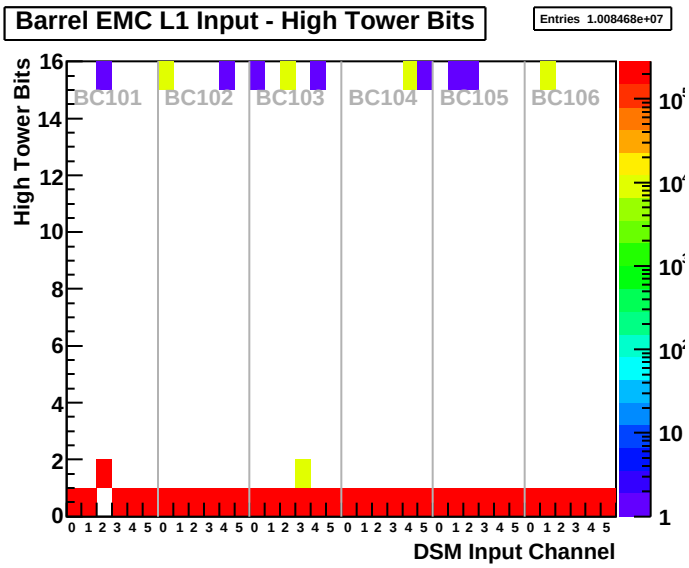

Hybrid Jet Patches
Entries 560260
JP ADC
JP ID

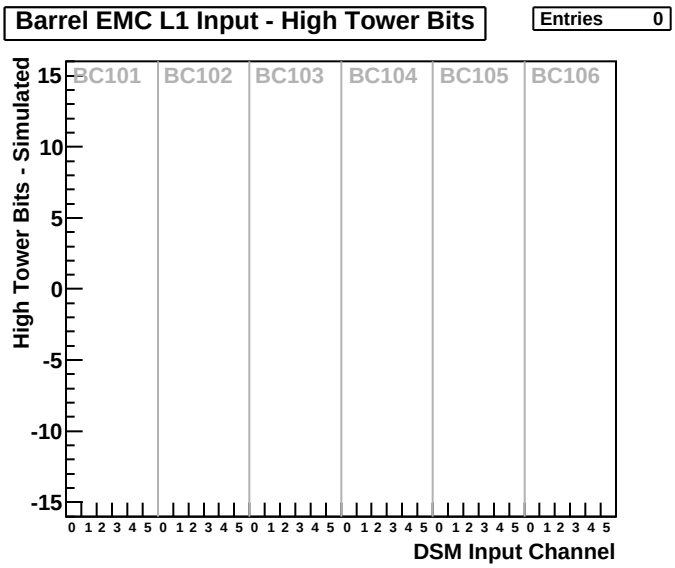

Barrel EMC L1 Input - Low Eta Sum
Entries 1.008468e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

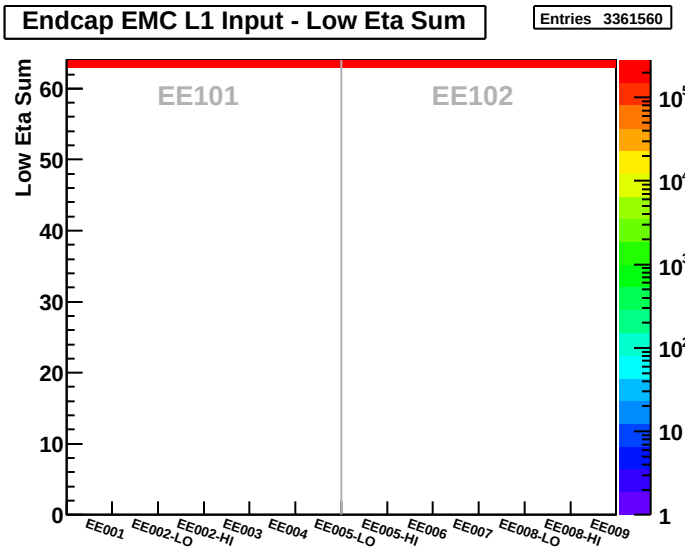

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

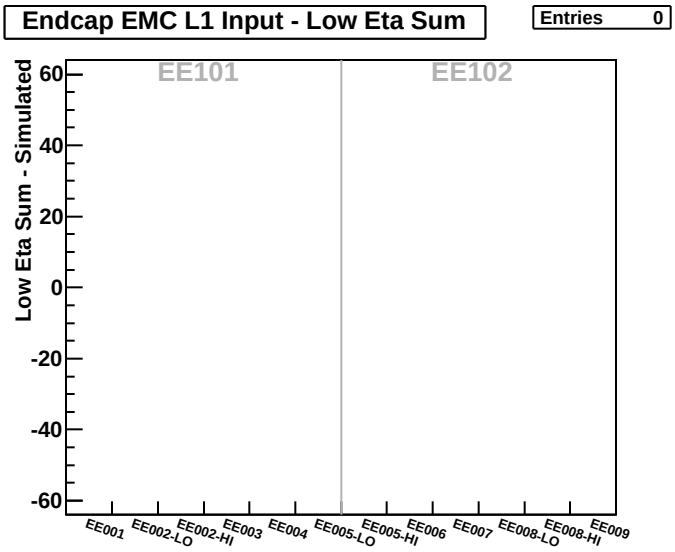

Barrel EMC L1 Input - High Eta Sum
Entries 1.008468e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

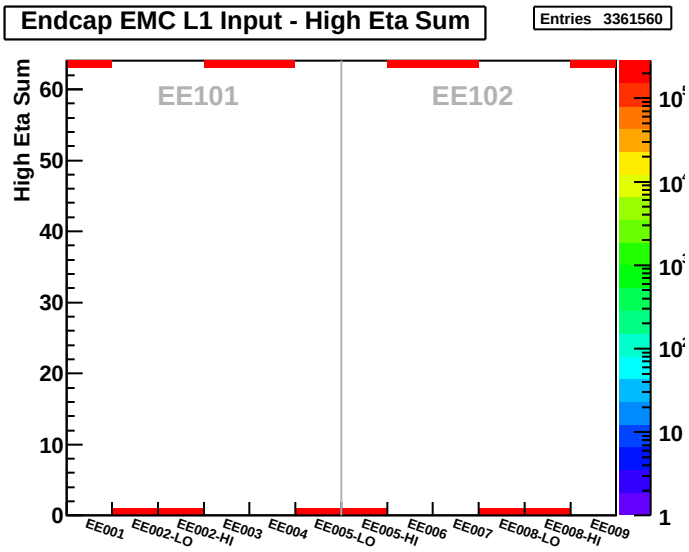

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

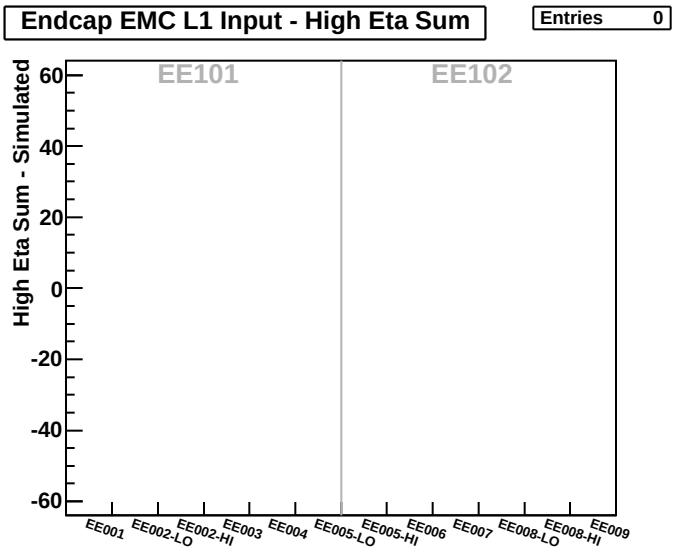

Barrel EMC L1 Input - High Tower Bits
Entries 1.008468e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

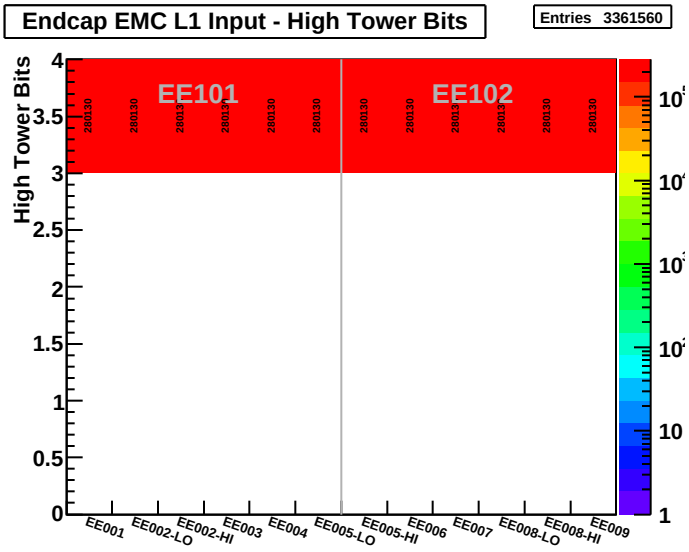

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

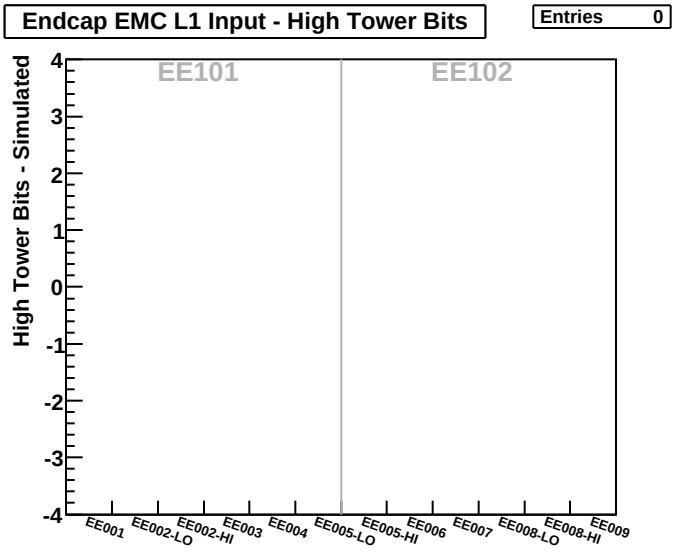

Endcap EMC L1 Input - Low Eta Sum
Entries 3361560
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

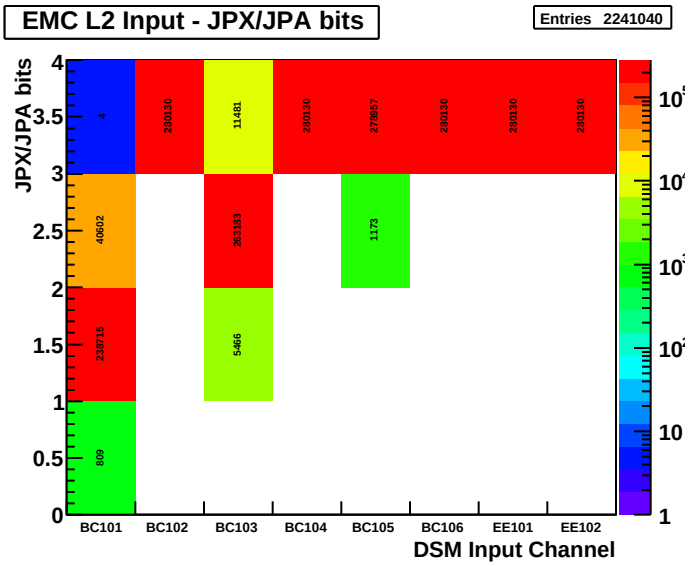

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

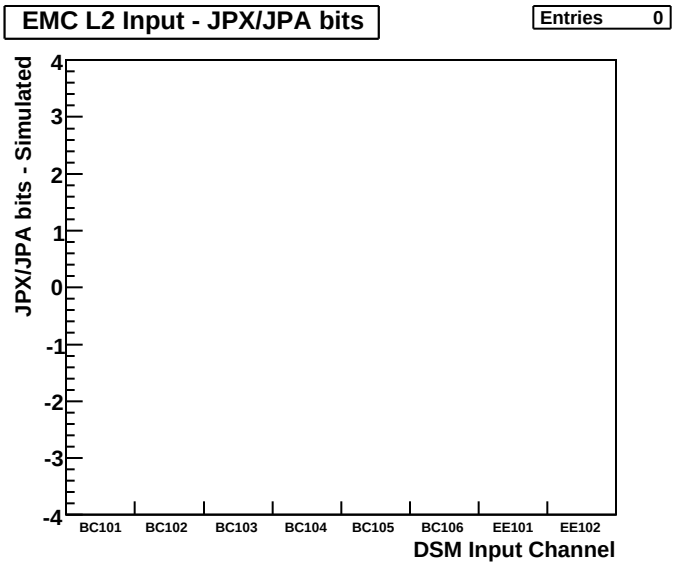

Endcap EMC L1 Input - High Eta Sum
Entries 3361560
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

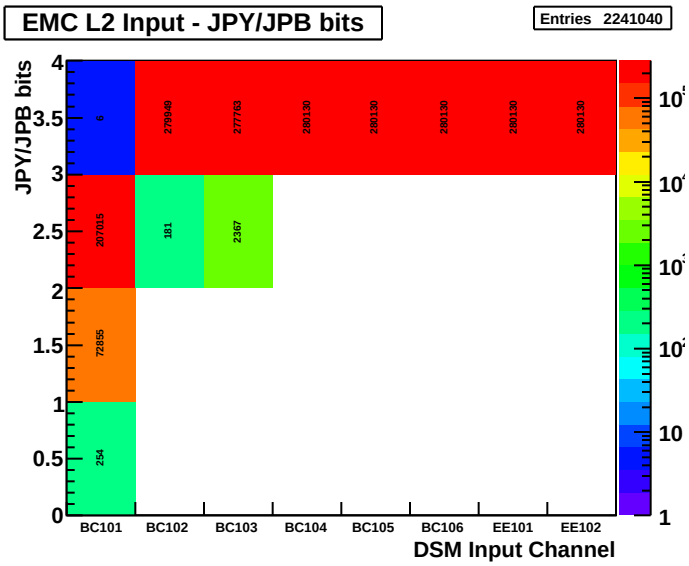

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

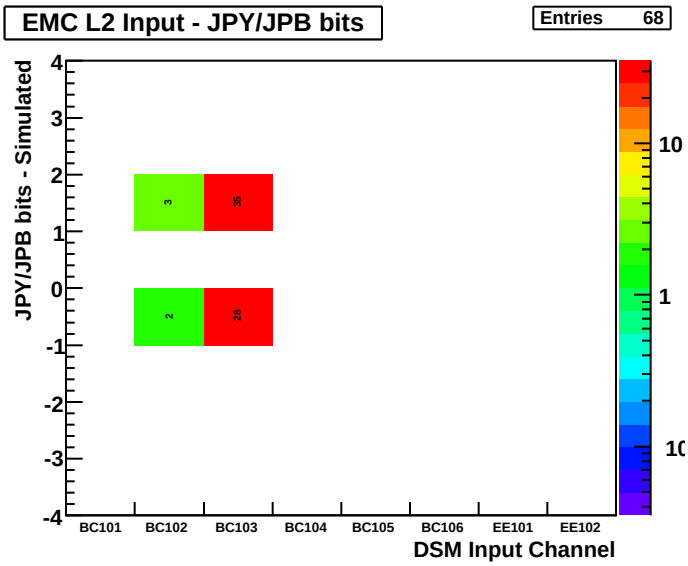

Endcap EMC L1 Input - High Tower Bits
Entries 3361560
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

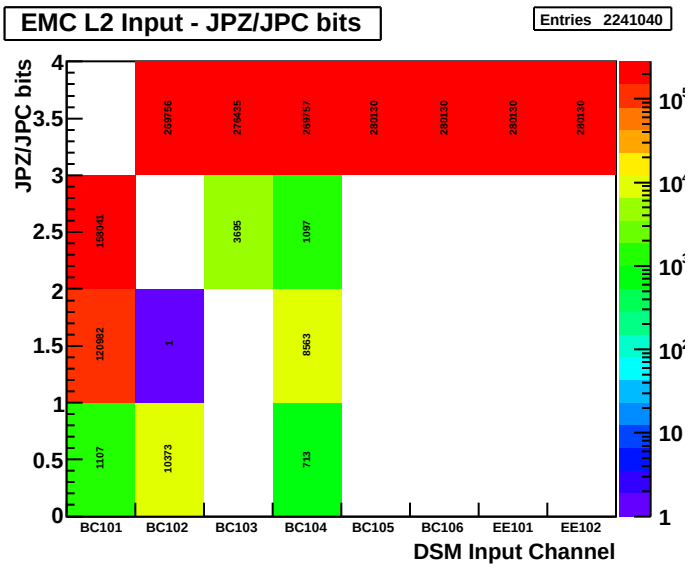

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

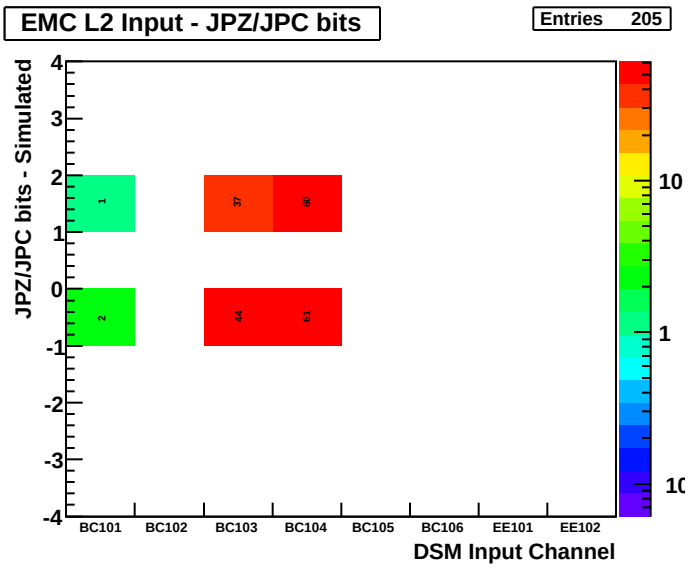

EMC L2 Input - JPX/JPA bits
Entries 2241040
JPX/JPA bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

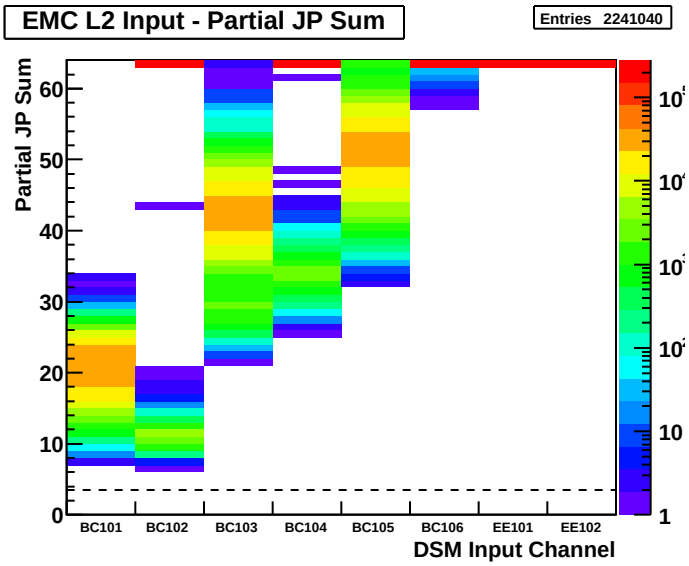

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

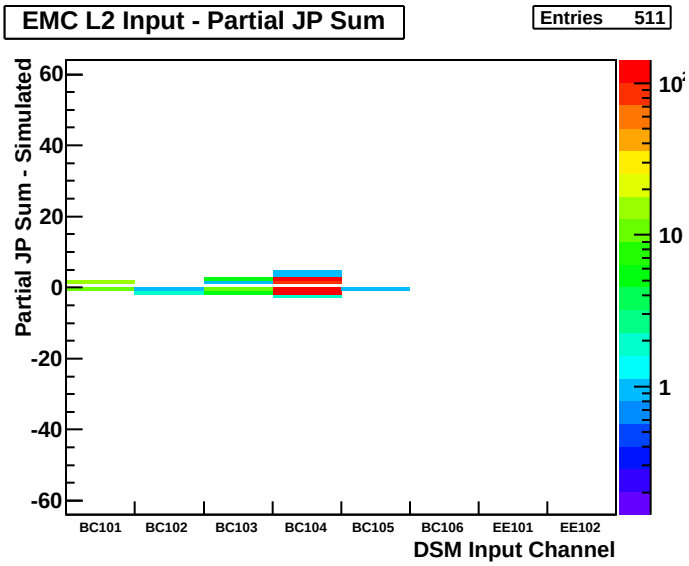

EMC L2 Input - JPY/JPB bits
Entries 2241040
JPY/JPB bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

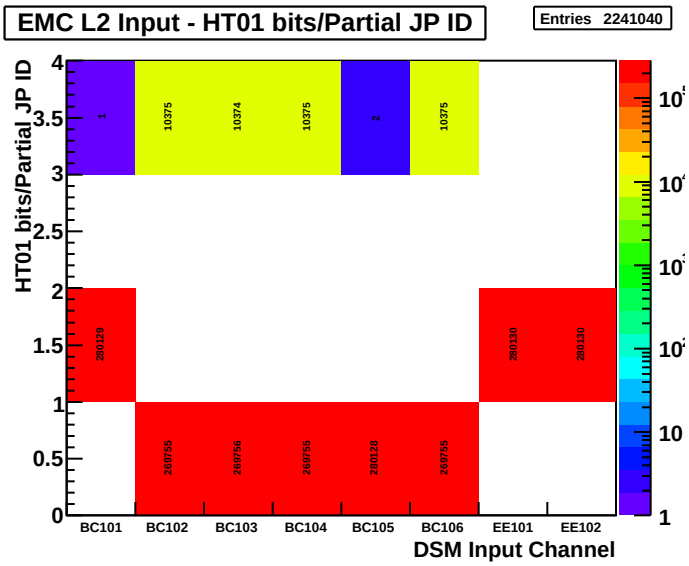

EMC L2 Input - JPY/JPB bits
Entries 68
JPY/JPB bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

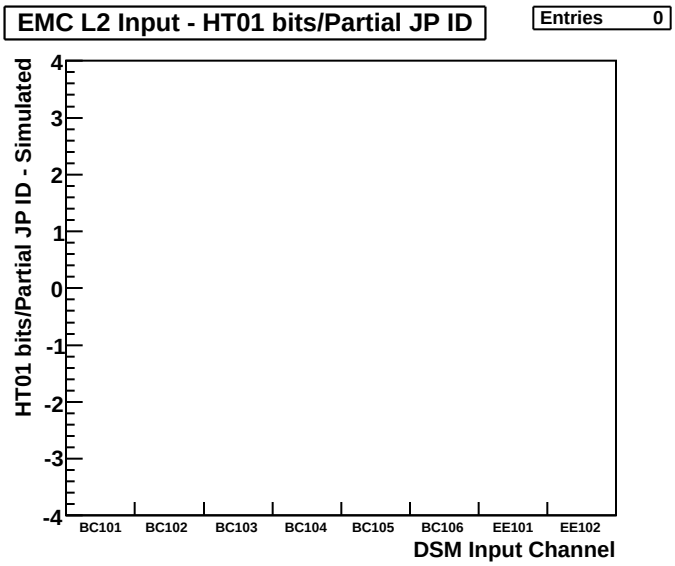

EMC L2 Input - JPZ/JPC bits
Entries 2241040
JPZ/JPC bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

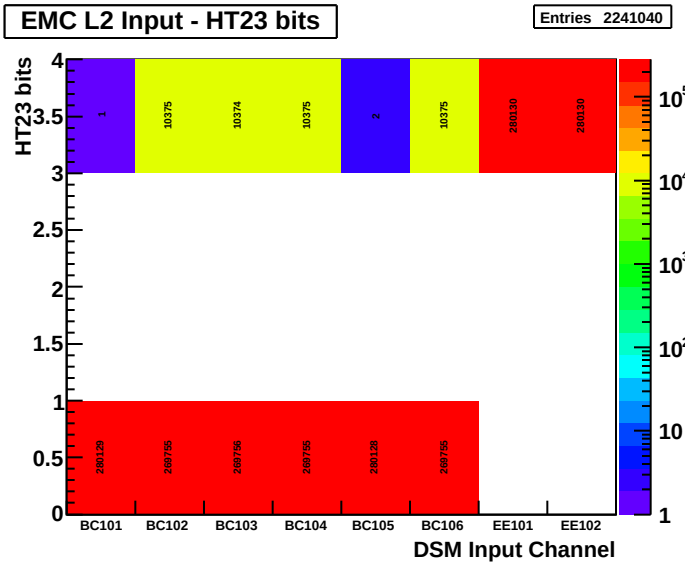

EMC L2 Input - JPZ/JPC bits
Entries 205
JPZ/JPC bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

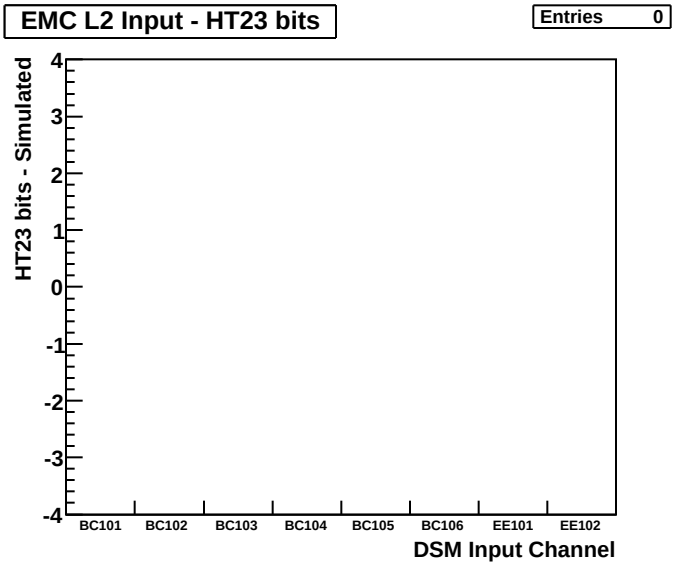

EMC L2 Input - Partial JP Sum
Entries 2241040
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

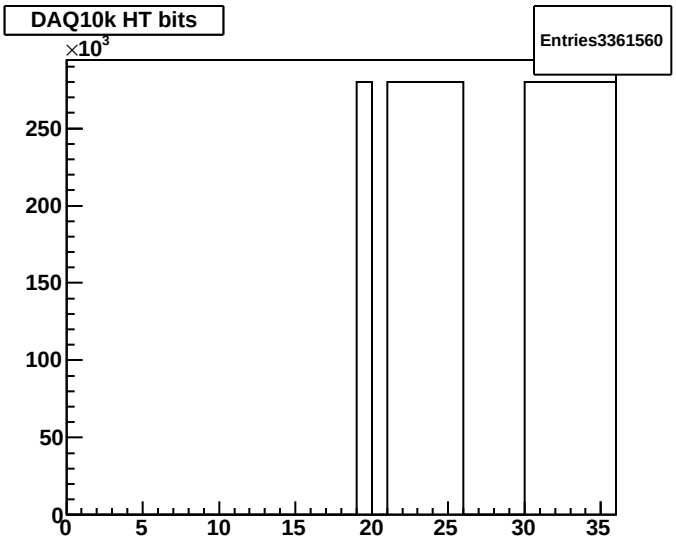

EMC L2 Input - Partial JP Sum
Entries 511
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

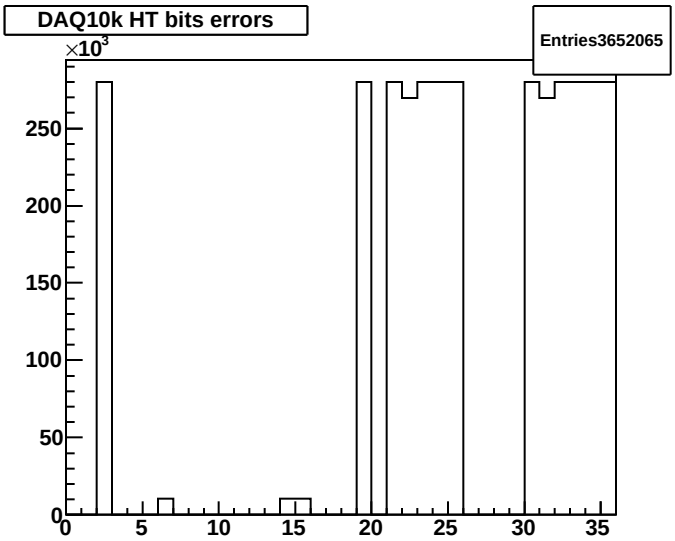

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2241040
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

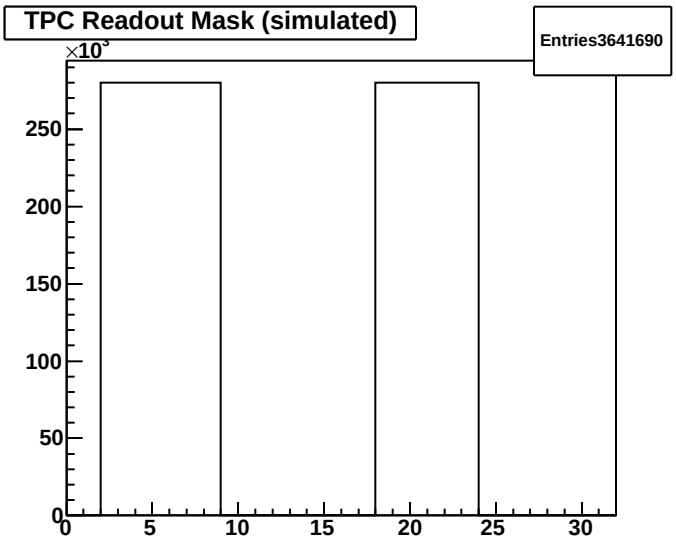

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

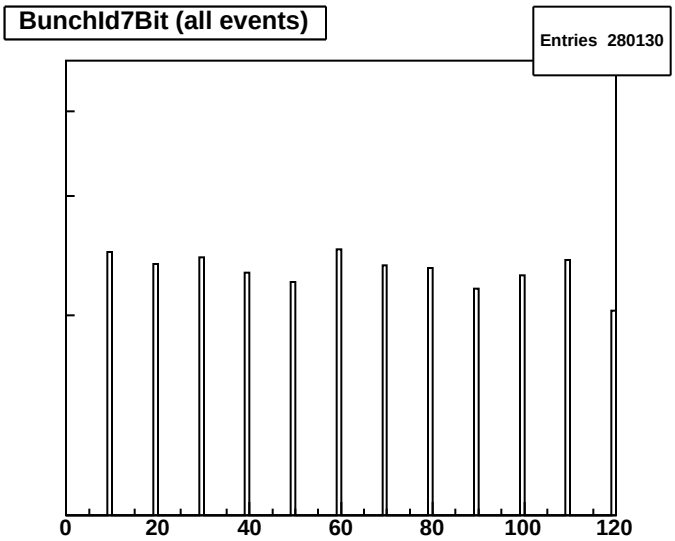

EMC L2 Input - HT23 bits
Entries 2241040
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

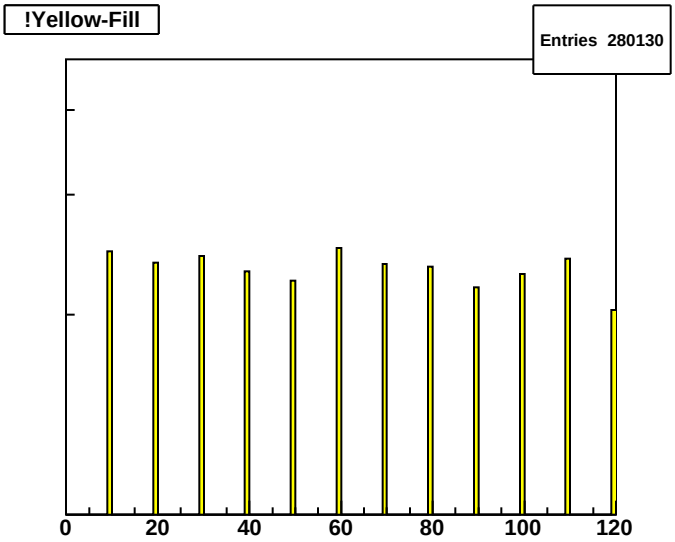

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

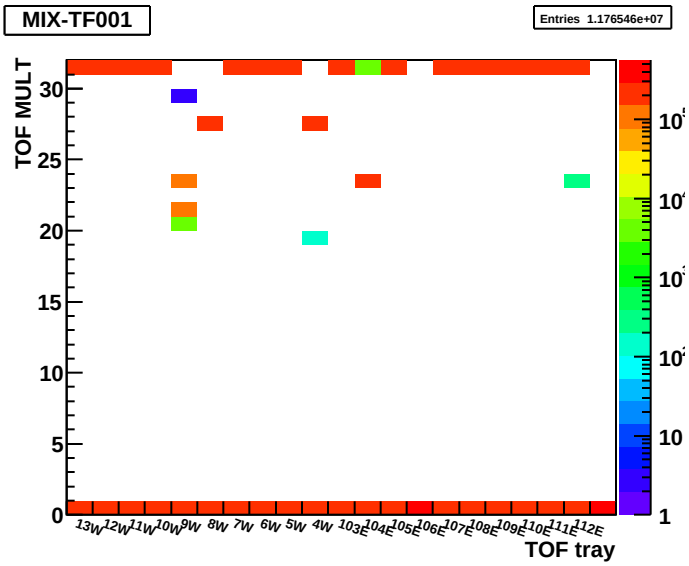

DAQ10k HT bits
Entries3361560
×10^3
250
200
150
100
50
0
0 5 10 15 20 25 30 35

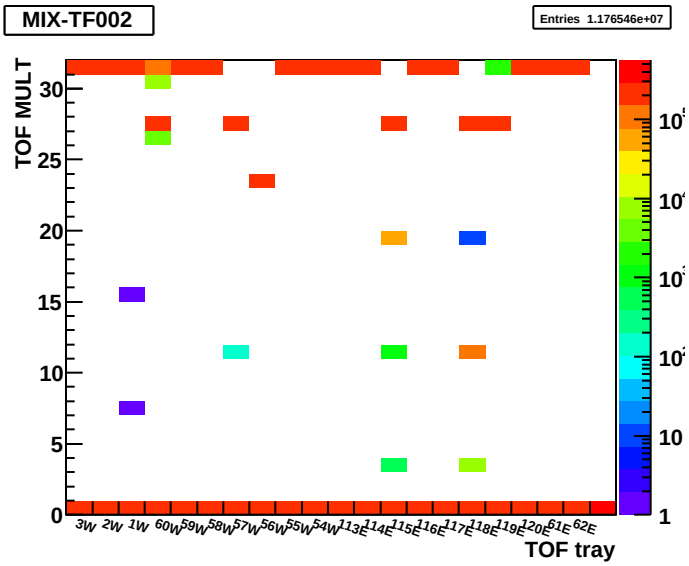

DAQ10k HT bits errors
Entries3652065
×10^3
250
200
150
100
50
0
0 5 10 15 20 25 30 35

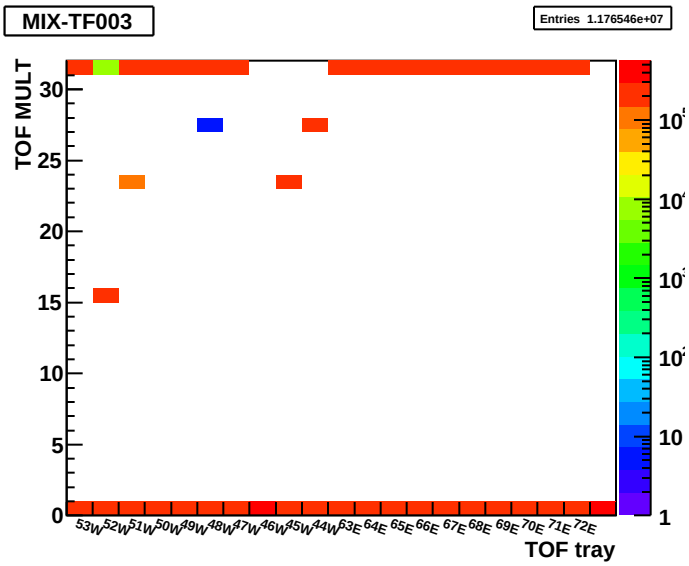

TPC Readout Mask (simulated)
Entries3641690
×10^3
250
200
150
100
50
0
0 5 10 15 20 25 30

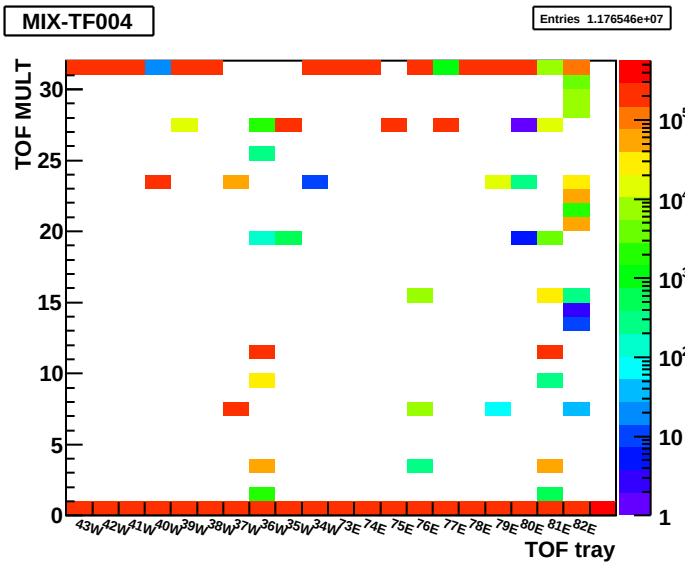

BunchId7Bit (all events)
Entries 280130
0 20 40 60 80 100 120

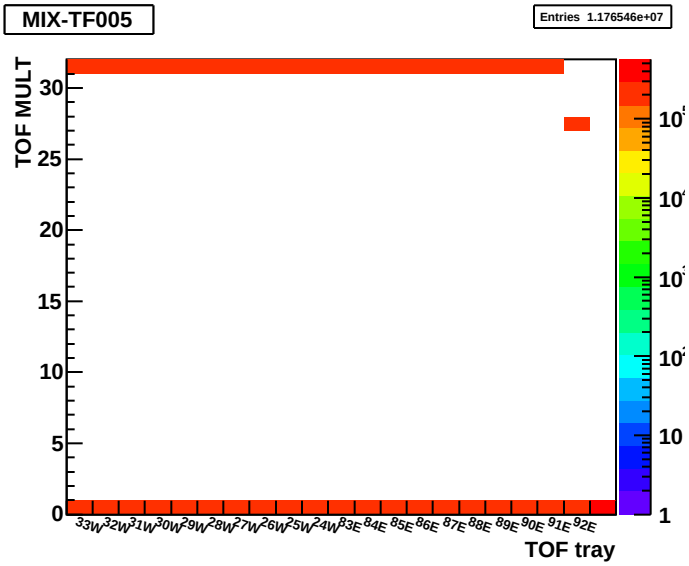

!Yellow-Fill
Entries 280130
0 20 40 60 80 100 120

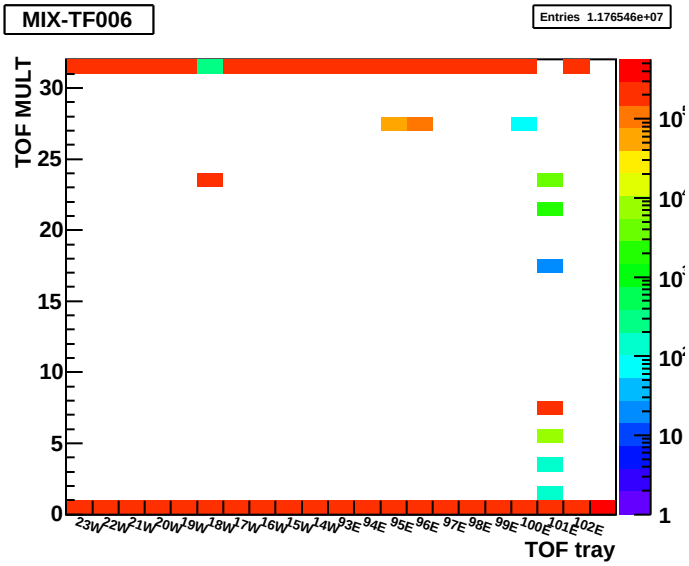

MIX-TF001
Entries 1.176546e+07
TOF MULT
TOF tray

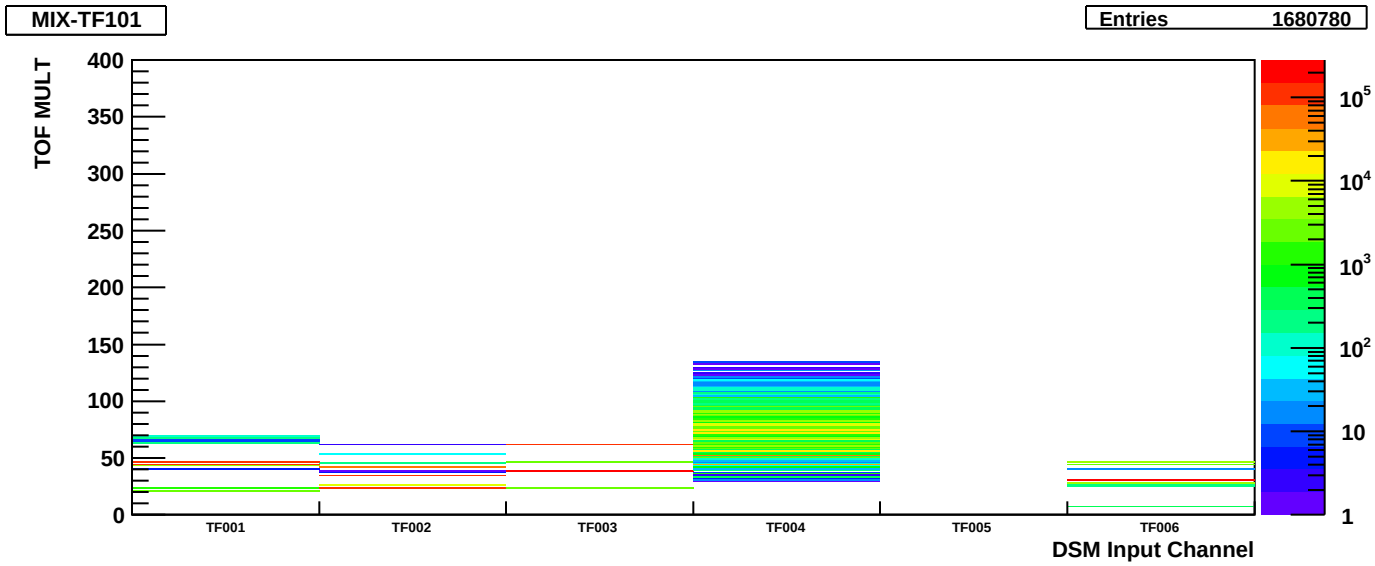

MIX-TF002
Entries 1.176546e+07
TOF MULT
TOF tray

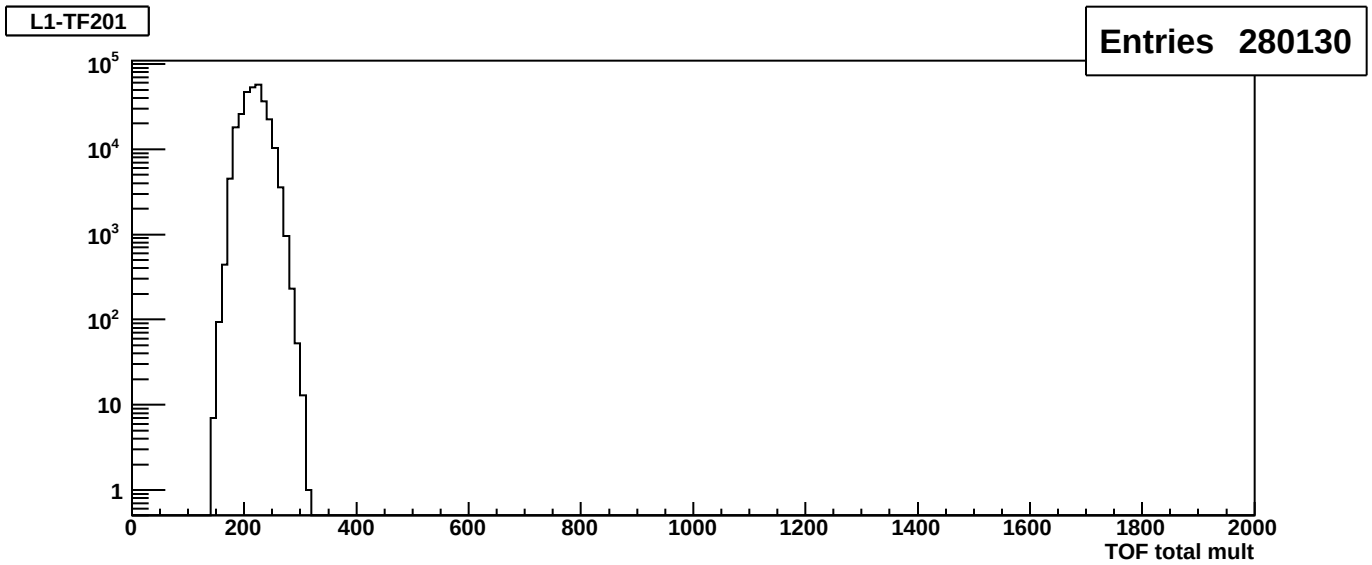

MIX-TF003
Entries 1.176546e+07
TOF MULT
TOF tray

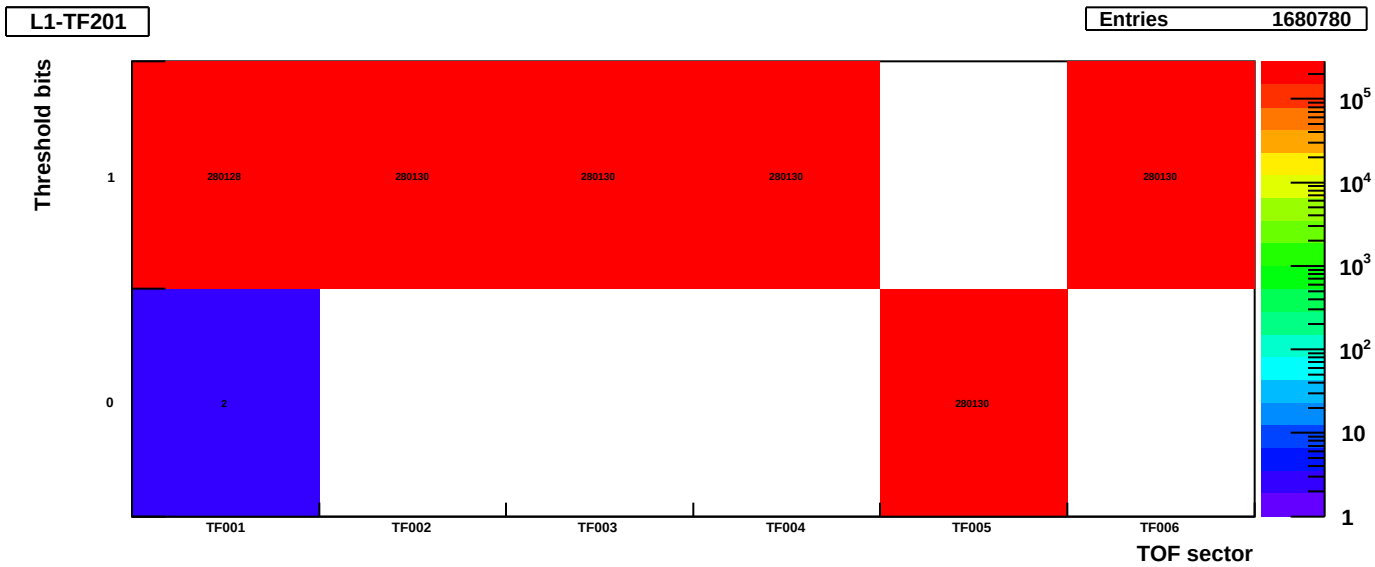

MIX-TF004
Entries 1.176546e+07
TOF MULT
TOF tray

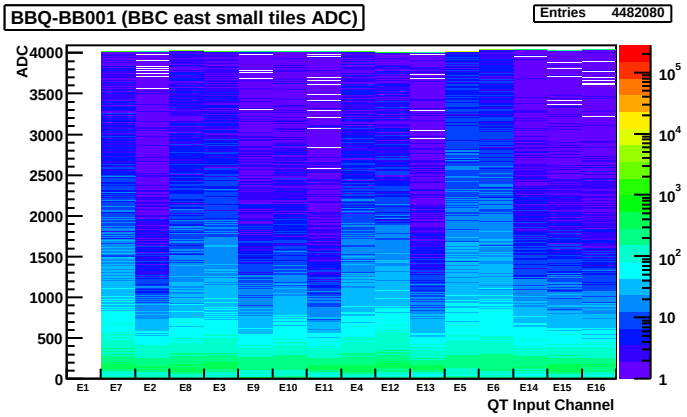

MIX-TF005
Entries 1.176546e+07
TOF MULT
TOF tray

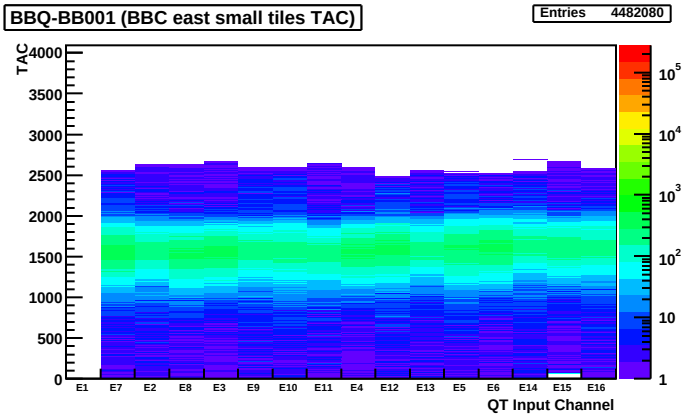

MIX-TF006
Entries 1.176546e+07
TOF MULT
TOF tray

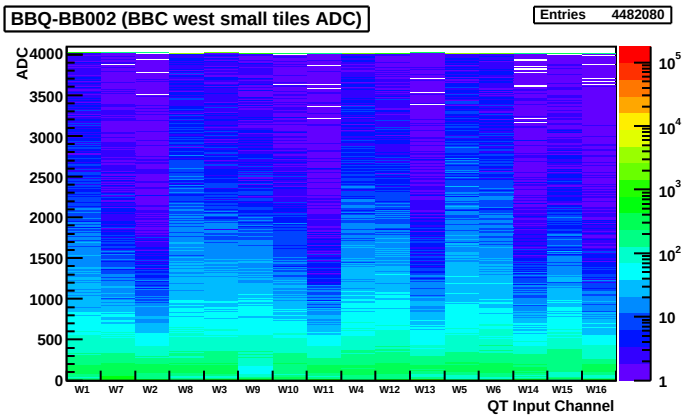

MIX-TF101
Entries 1680780
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
$10^5$
$10^4$
$10^3$
$10^2$
10
1

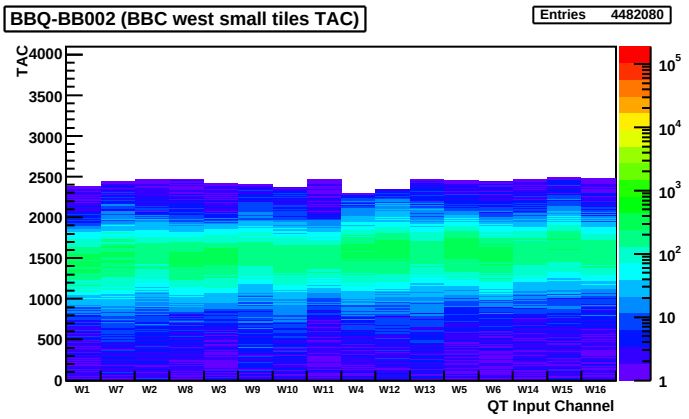

L1-TF201
Entries 280130
$10^5$
$10^4$
$10^3$
$10^2$
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

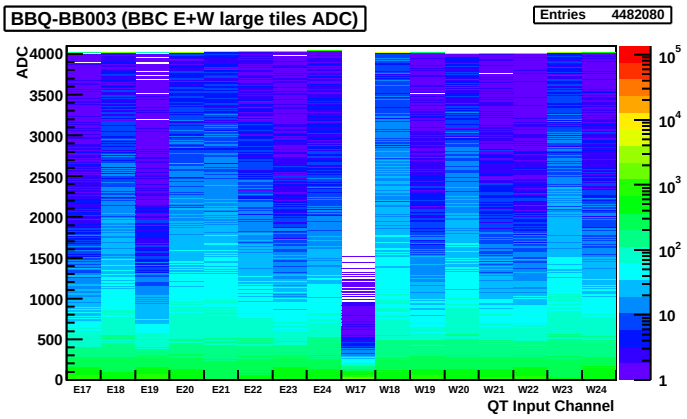

L1-TF201
Entries 1680780
Threshold bits
1
0
280128
280130
280130
280130
280130
2
280130
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
$10^5$
$10^4$
$10^3$
$10^2$
10
1

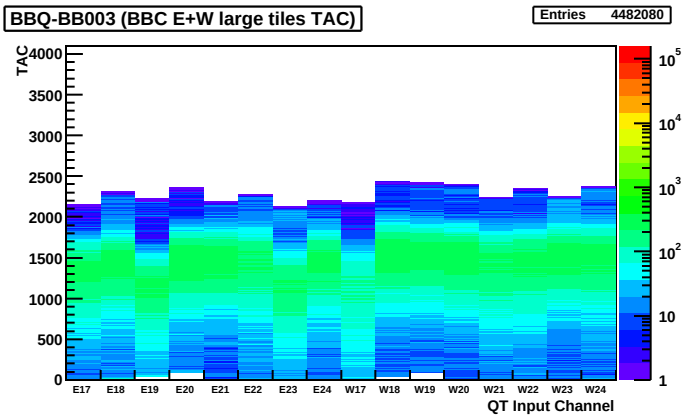

BBQ-BB001 (BBC east small tiles ADC)
Entries 4482080
ADC
QT Input Channel

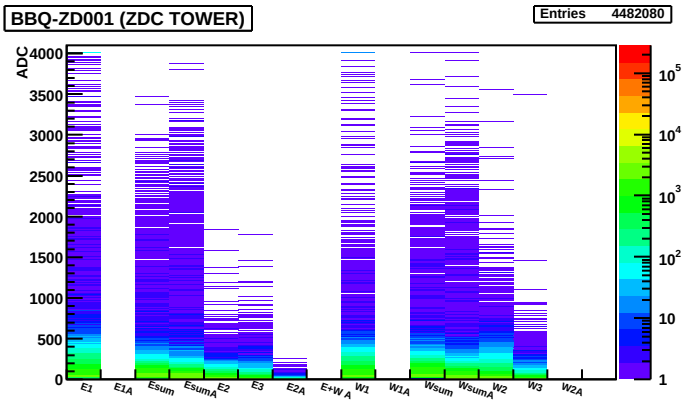

BBQ-BB001 (BBC east small tiles TAC)
Entries 4482080
TAC
QT Input Channel

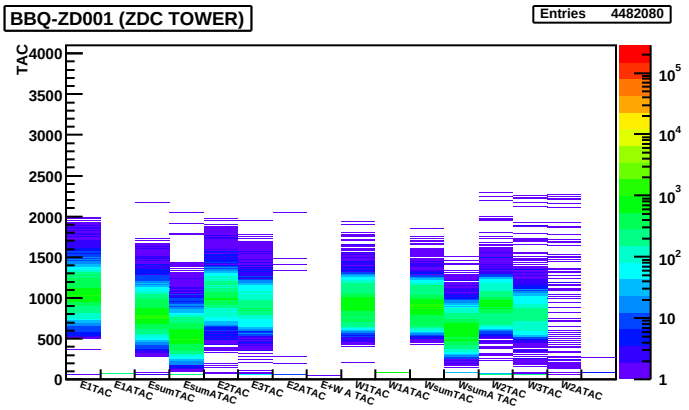

BBQ-BB002 (BBC west small tiles ADC)
Entries 4482080
ADC
QT Input Channel

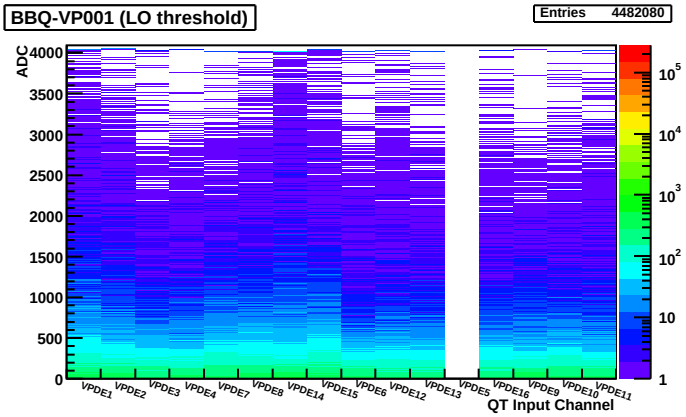

BBQ-BB002 (BBC west small tiles TAC)
Entries 4482080
TAC
QT Input Channel

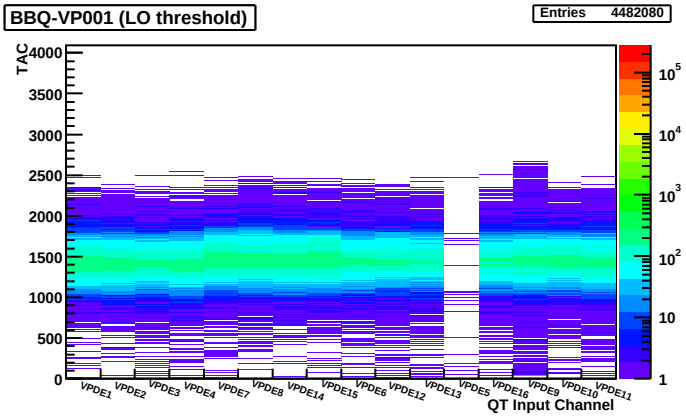

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4482080
ADC
QT Input Channel

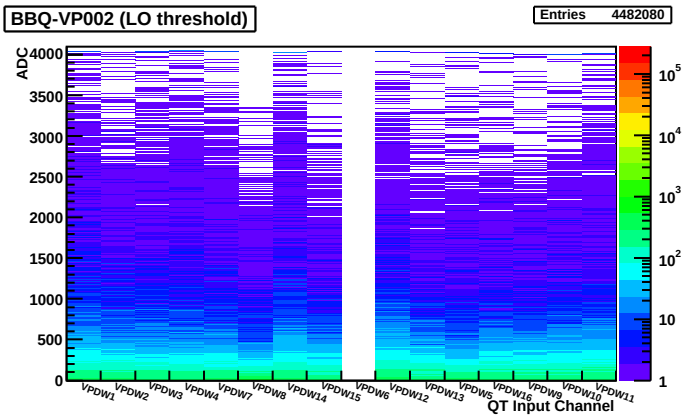

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4482080
TAC
QT Input Channel

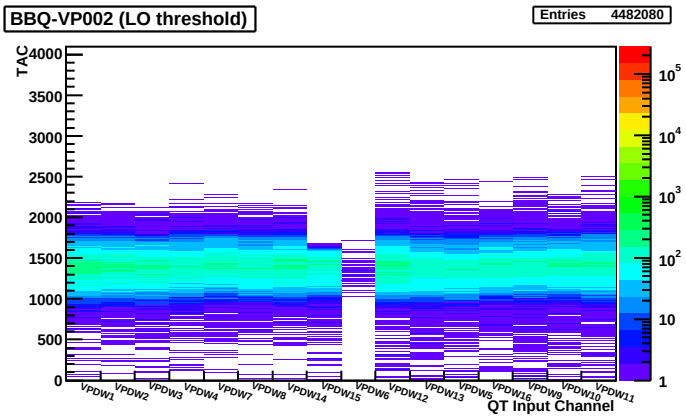

BBQ-ZD001 (ZDC TOWER)
Entries 4482080
ADC

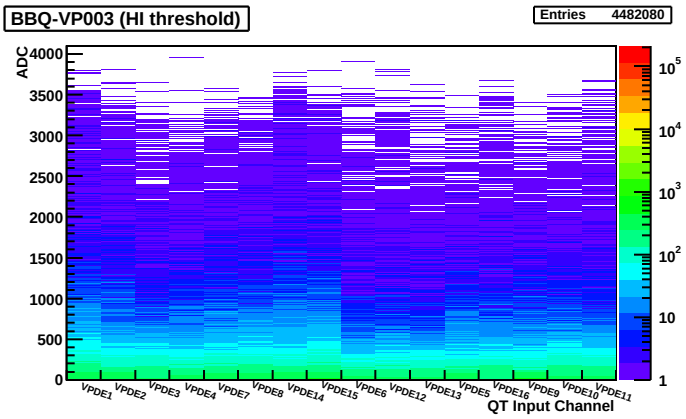

BBQ-ZD001 (ZDC TOWER)
Entries 4482080
TAC

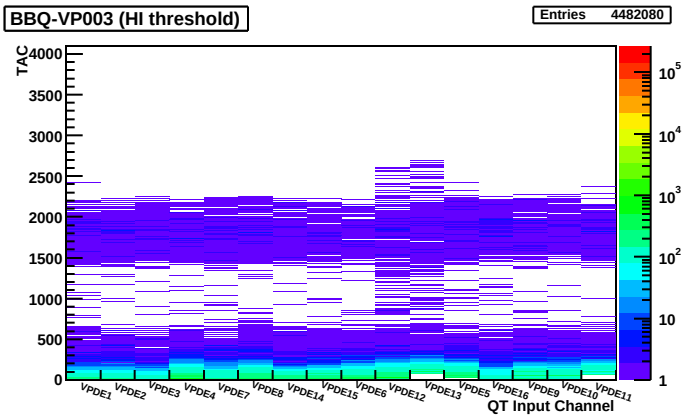

BBQ-VP001 (LO threshold)
Entries 4482080
ADC
QT Input Channel

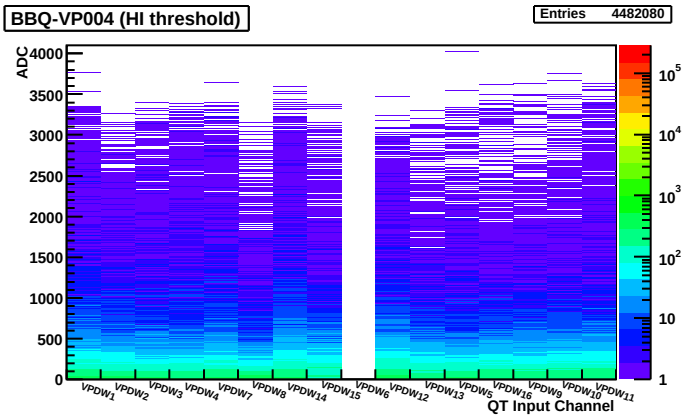

BBQ-VP001 (LO threshold)
Entries 4482080
TAC
QT Input Channel

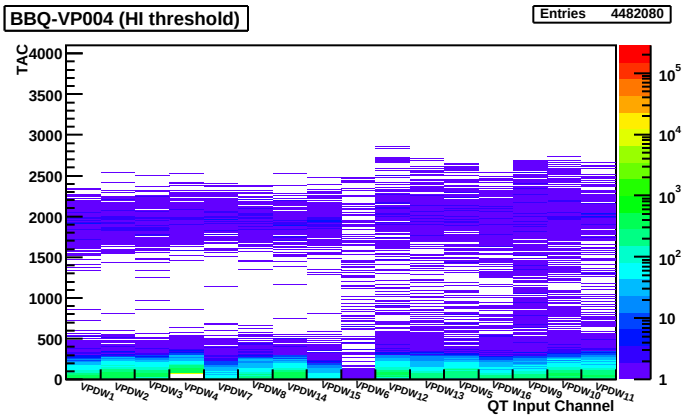

BBQ-VP002 (LO threshold)
Entries 4482080
ADC
QT Input Channel

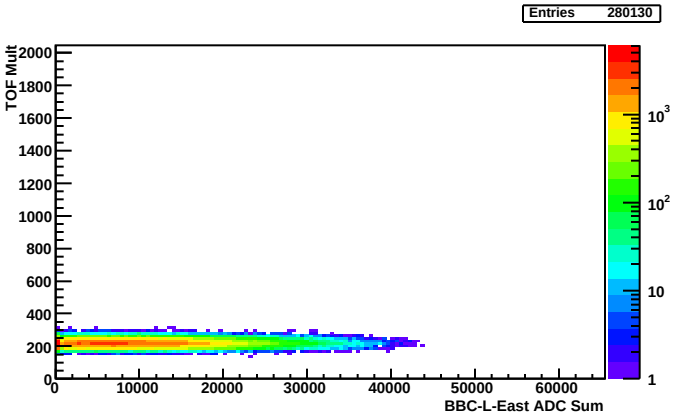

BBQ-VP002 (LO threshold)
Entries 4482080
TAC
QT Input Channel

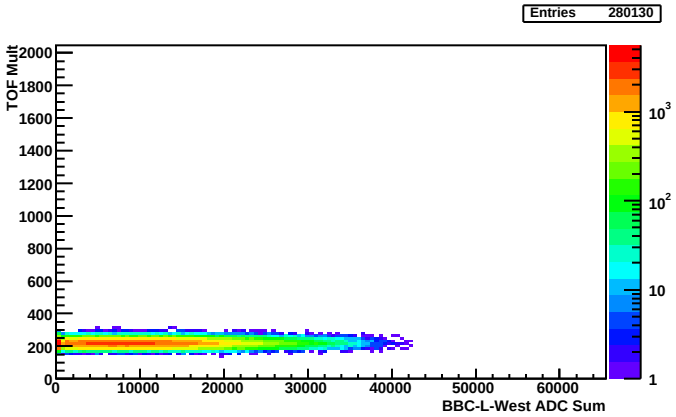

BBQ-VP003 (HI threshold)
Entries 4482080
ADC
QT Input Channel

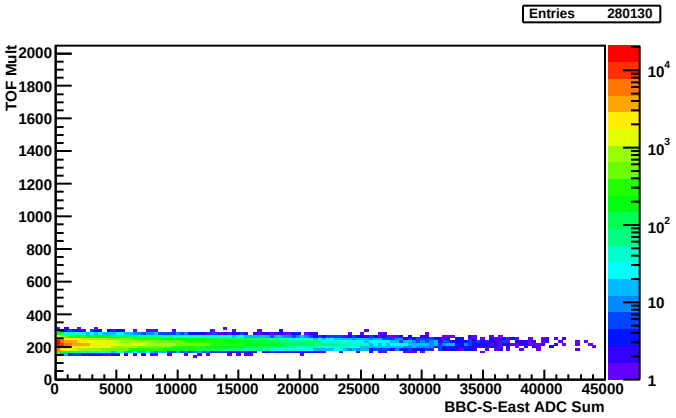

BBQ-VP003 (HI threshold)
Entries 4482080
TAC
QT Input Channel

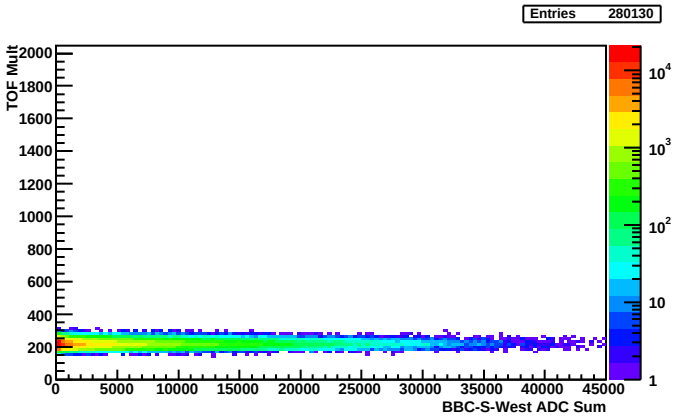

BBQ-VP004 (HI threshold)
Entries 4482080
ADC
QT Input Channel

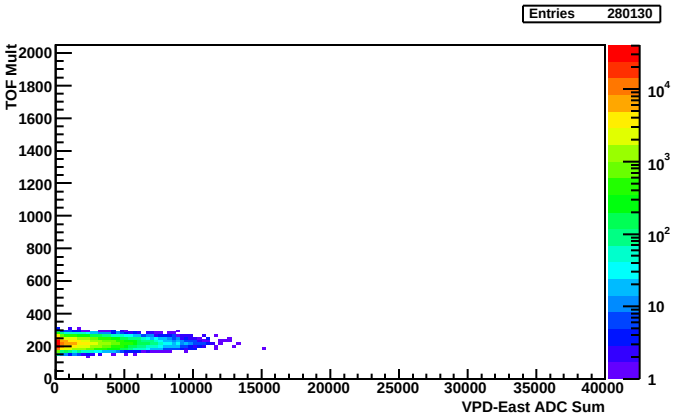

BBQ-VP004 (HI threshold)
Entries 4482080
TAC
QT Input Channel

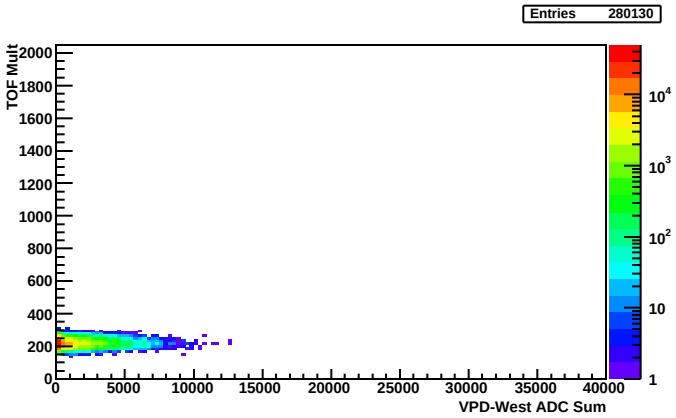

Entries 280130
TOF Mult
BBC-L-East ADC Sum

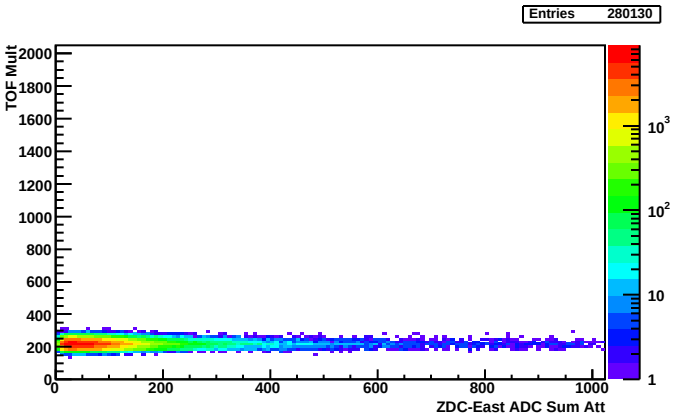

Entries 280130
TOF Mult
BBC-L-West ADC Sum

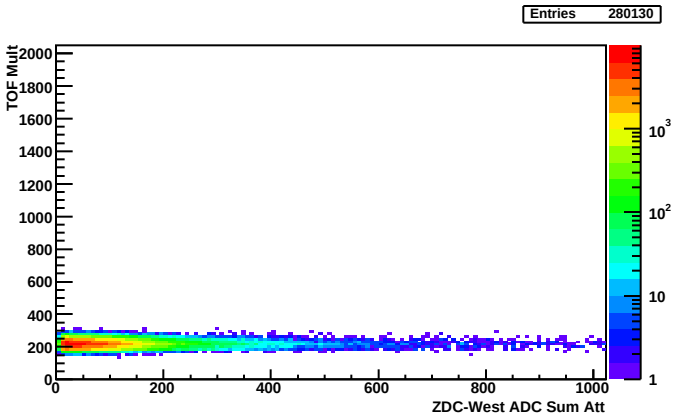

Entries 280130
TOF Mult
BBC-S-East ADC Sum

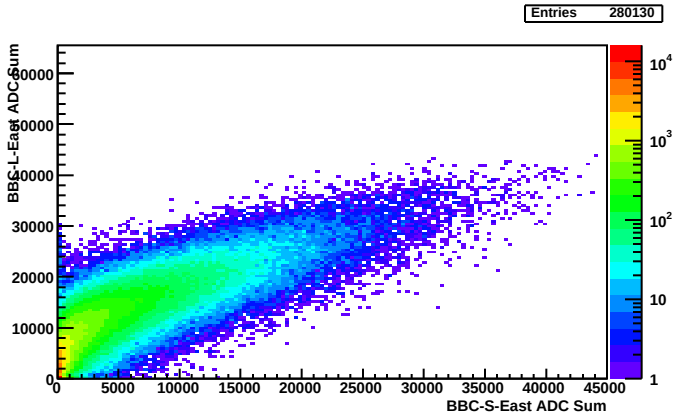

Entries 280130
TOF Mult
BBC-S-West ADC Sum

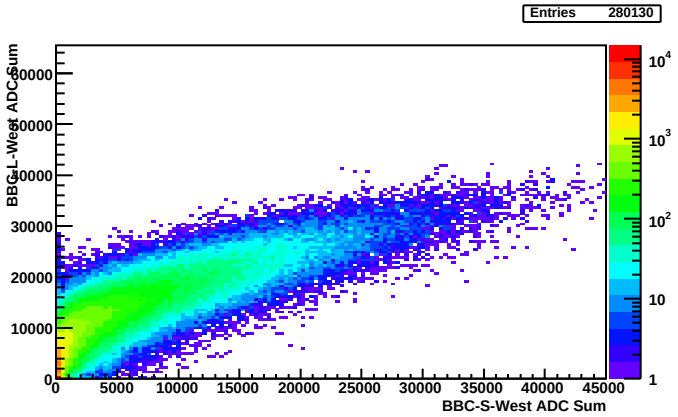

Entries 280130
TOF Mult
VPD-East ADC Sum

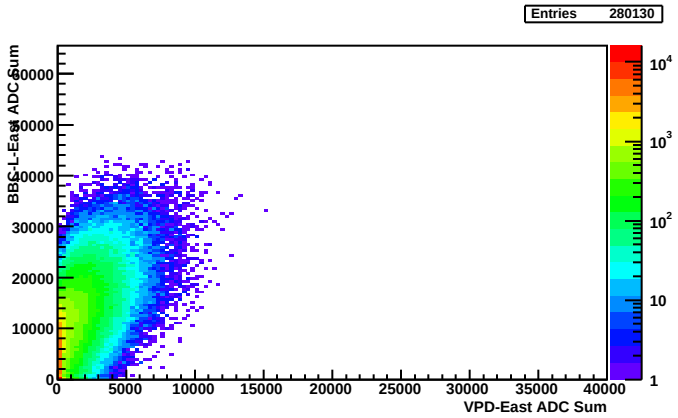

Entries 280130
TOF Mult
VPD-West ADC Sum

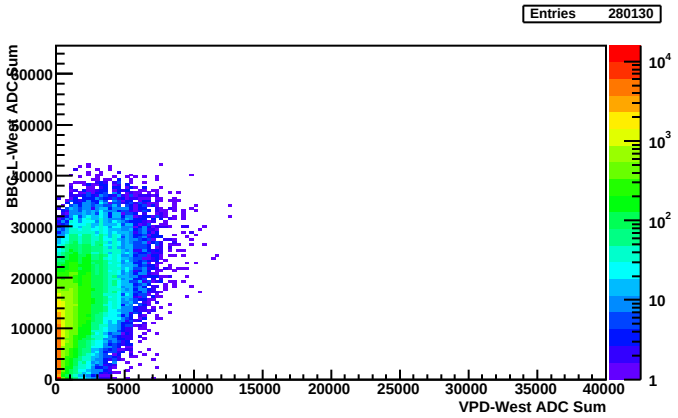

Entries 280130
TOF Mult
ZDC-East ADC Sum Att


Entries 280130
TOF Mult
ZDC-West ADC Sum Att


Entries 280130
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 280130
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 280130
BBC-L-East ADC Sum
VPD-East ADC Sum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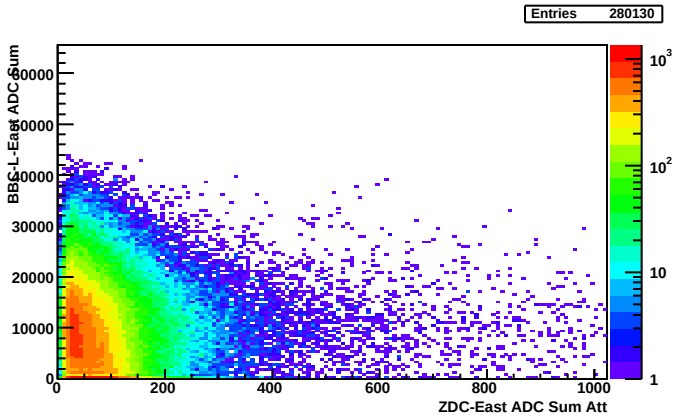
BBC-L-West ADC Sum
VPD-West ADC Sum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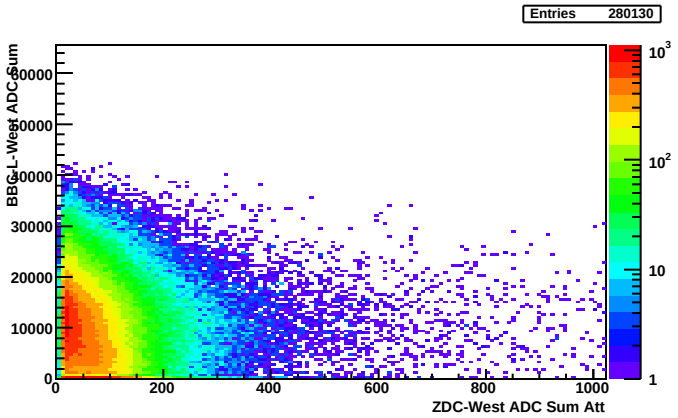
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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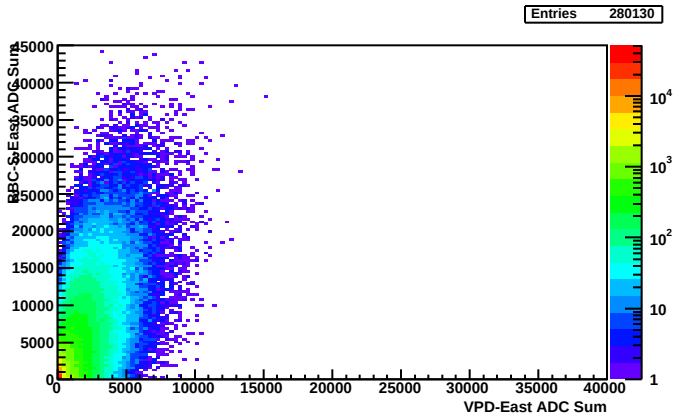
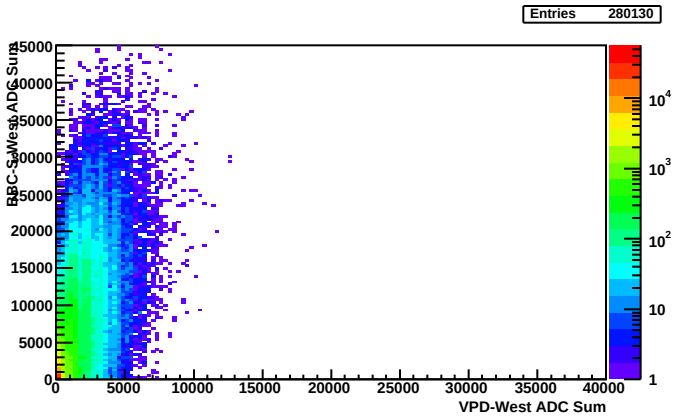
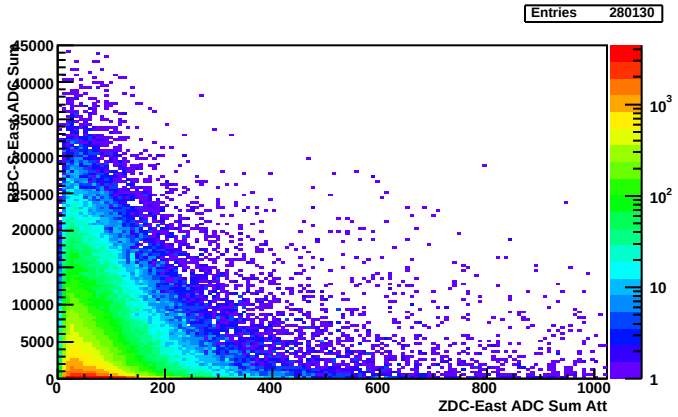
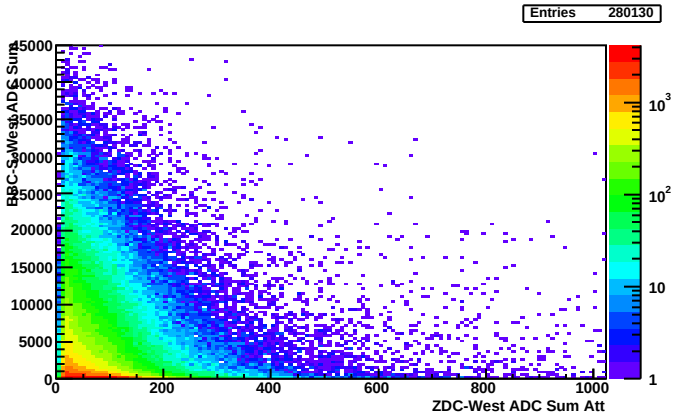
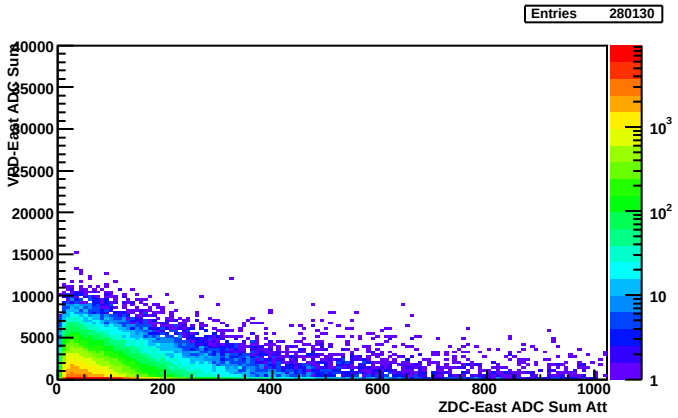
BBC-L-West ADC Sum
ZDC-West ADC Sum Att


Entries 280130
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 280130
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 280130
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 280130
BBC-S-West ADC Sum
ZDC-West ADC Sum Att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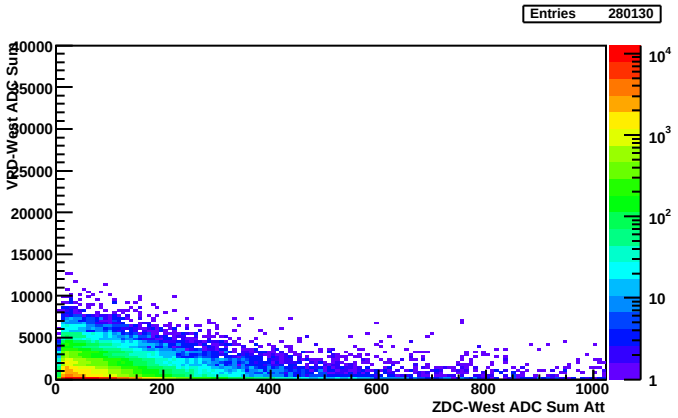
VPD-East ADC Sum
ZDC-East ADC Sum Att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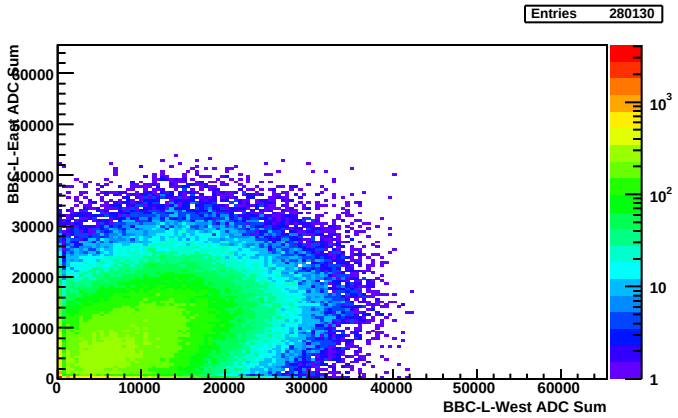
VPD-West ADC Sum
ZDC-West ADC Sum Att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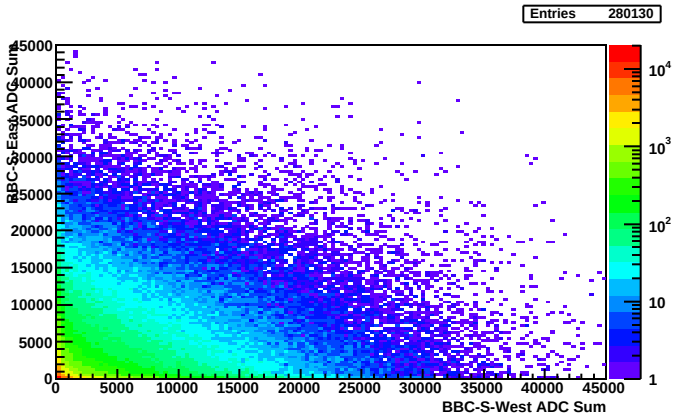
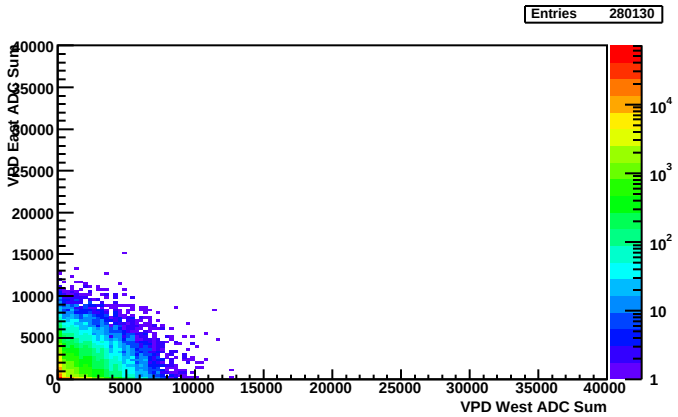
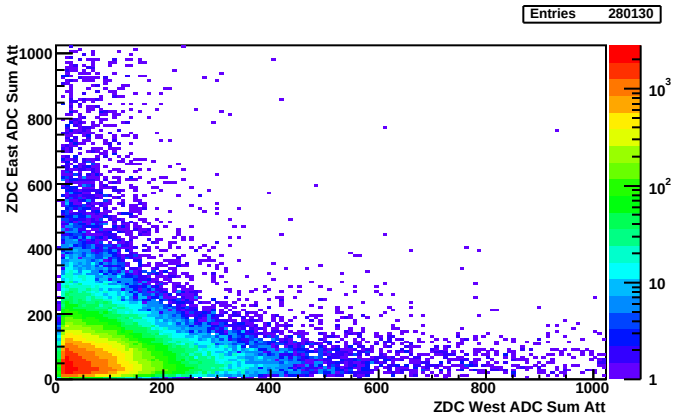
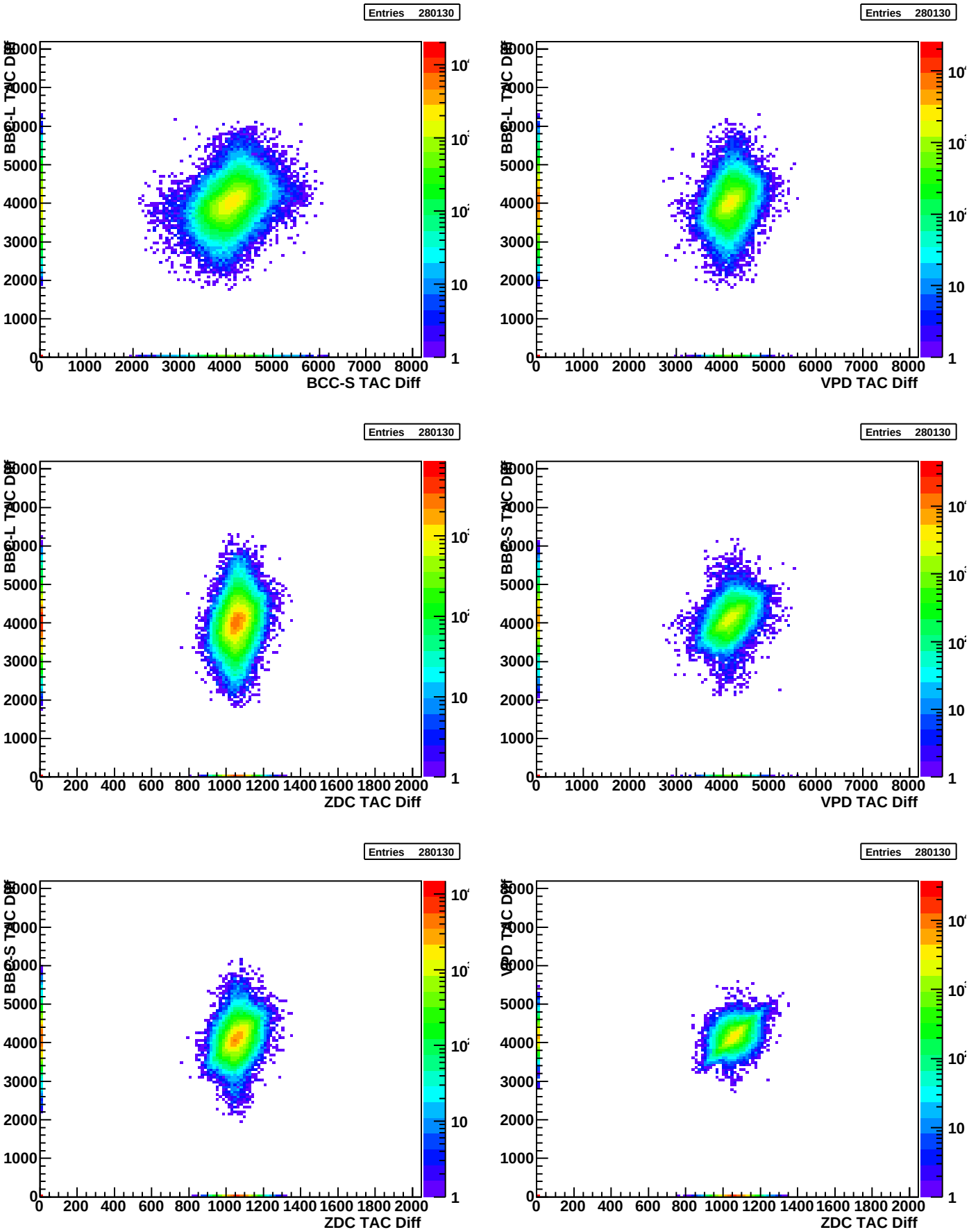
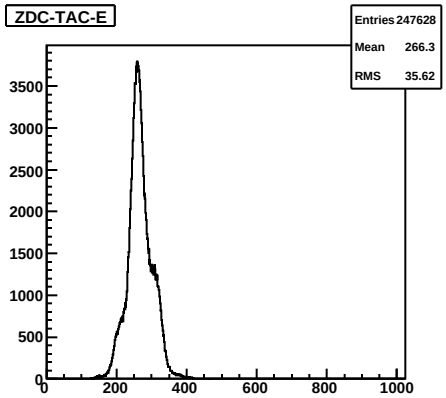
BBC-L-East ADC Sum
BBC-L-West ADC Sum

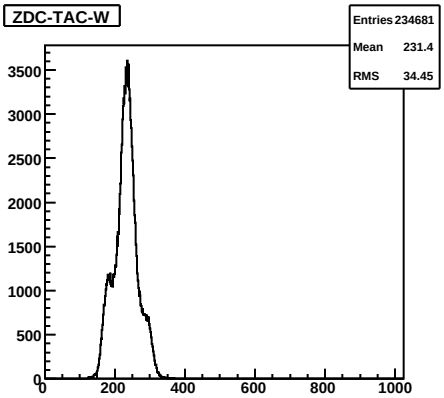

Entries 280130
BBC-S-East ADC Sum
BBC-S-West ADC Sum

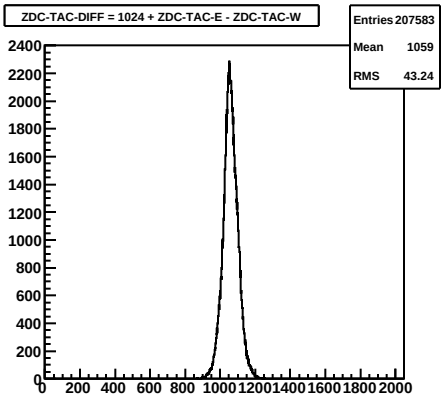

Entries 280130
VPD East ADC Sum
VPD West ADC Sum

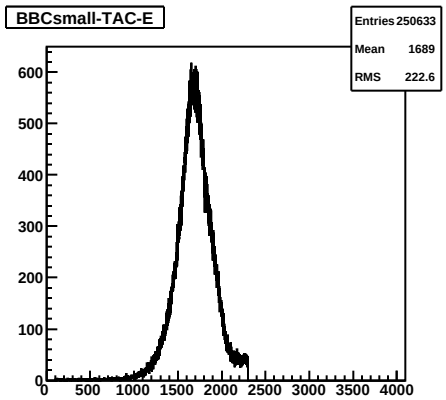

Entries 280130
ZDC East ADC Sum Att
ZDC West ADC Sum Att

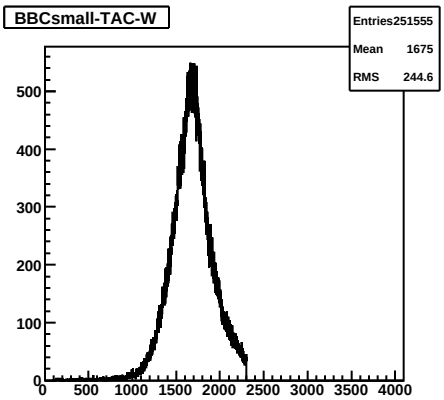

Entries 280130
BBC-L TAC Diff
BCC-S TAC Diff
Entries 280130
BBC-L TAC Diff
VPD TAC Diff
Entries 280130
BBC-L TAC Diff
ZDC TAC Diff
Entries 280130
BBC-S TAC Diff
VPD TAC Diff
Entries 280130
BBC-S TAC Diff
ZDC TAC Diff
Entries 280130
VPD TAC Diff
ZDC TAC Diff

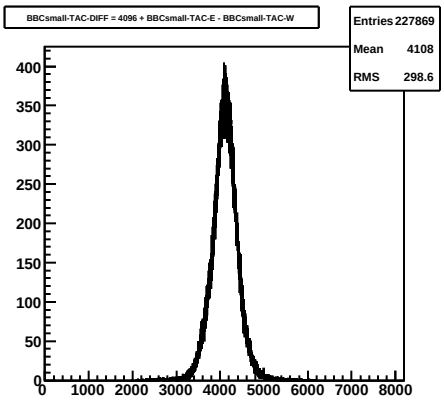

ZDC-TAC-E
Entries 247628
Mean 266.3
RMS 35.62

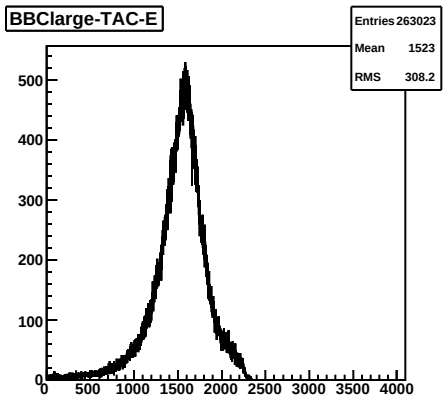

ZDC-TAC-W
Entries 234681
Mean 231.4
RMS 34.45

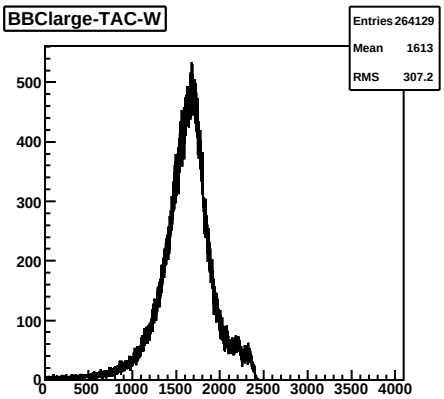

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 207583
Mean 1059
RMS 43.24

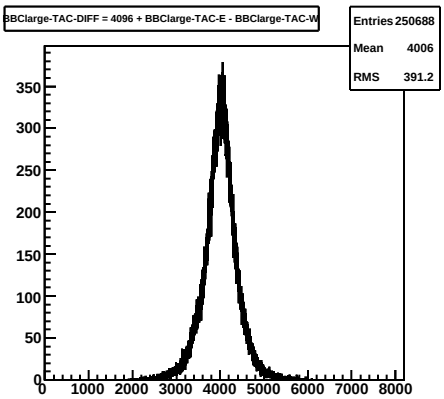

BBCsmall-TAC-E
Entries 250633
Mean 1689
RMS 222.6

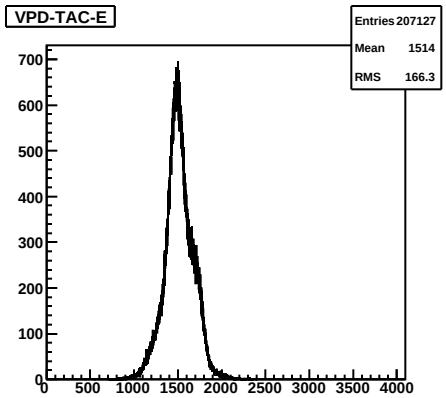

BBCsmall-TAC-W
Entries 251555
Mean 1675
RMS 244.6

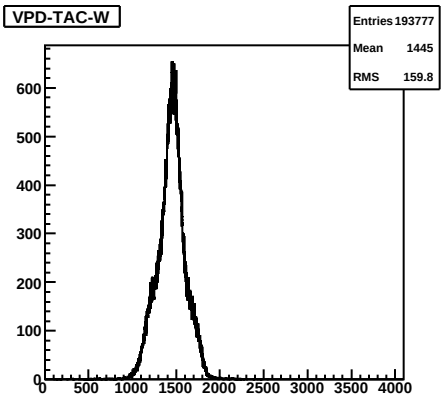

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 227869
Mean 4108
RMS 298.6

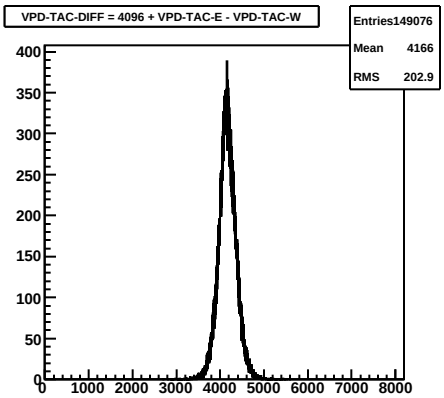

BBClarge-TAC-E
Entries 263023
Mean 1523
RMS 308.2

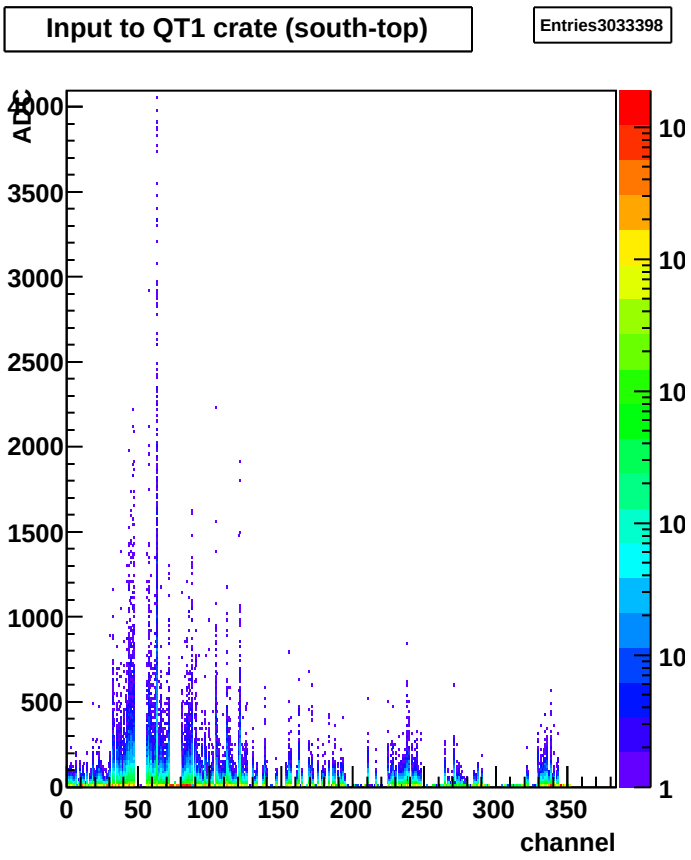

BBClarge-TAC-W
Entries 264129
Mean 1613
RMS 307.2

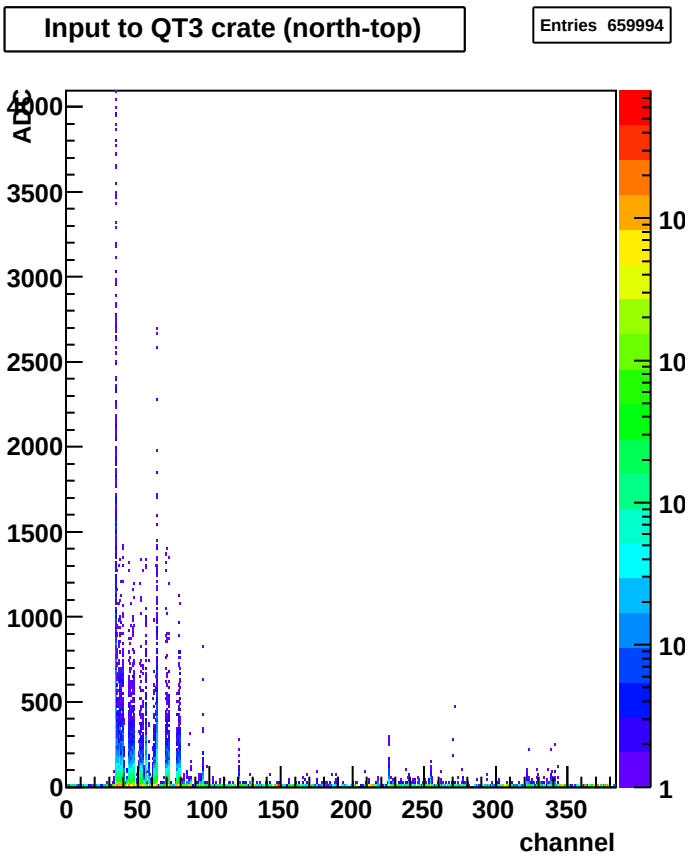

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 250688
Mean 4006
RMS 391.2

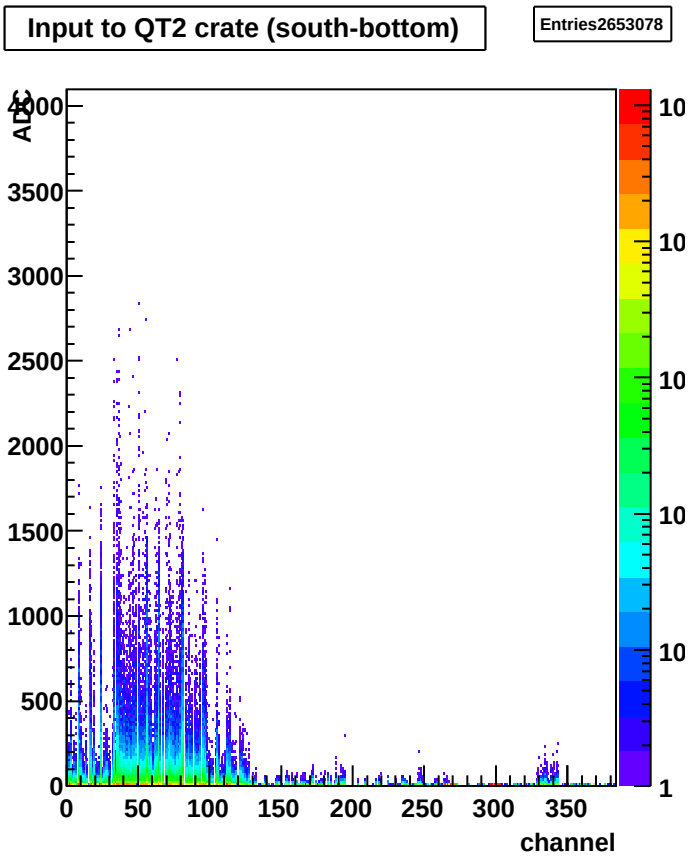

VPD-TAC-E
Entries 207127
Mean 1514
RMS 166.3

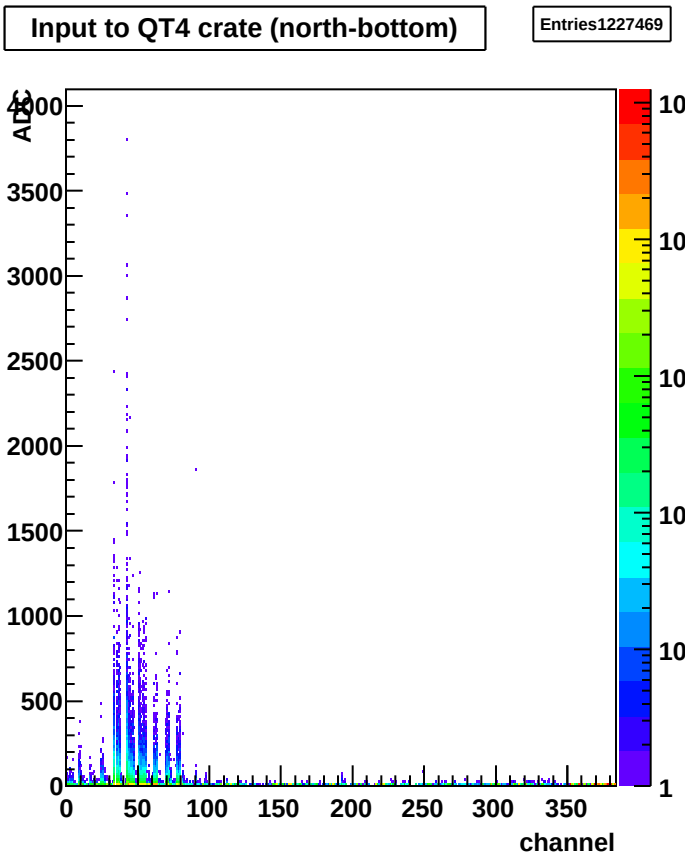

VPD-TAC-W
Entries 193777
Mean 1445
RMS 159.8

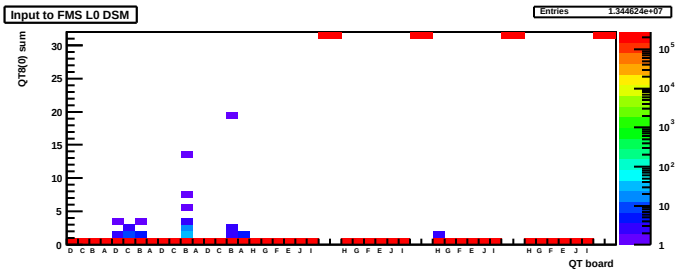

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries149076
Mean 4166
RMS 202.9

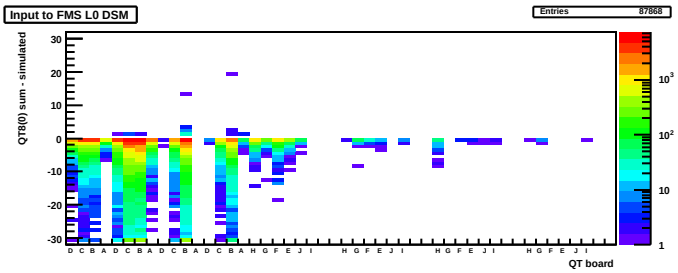

Input to QT1 crate (south-top)
Entries3033398
ADC
channel

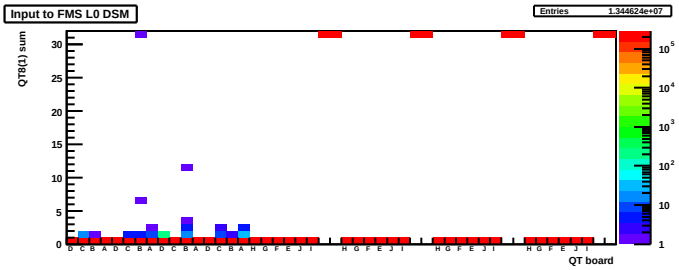

Input to QT3 crate (north-top)
Entries 659994
ADC
channel

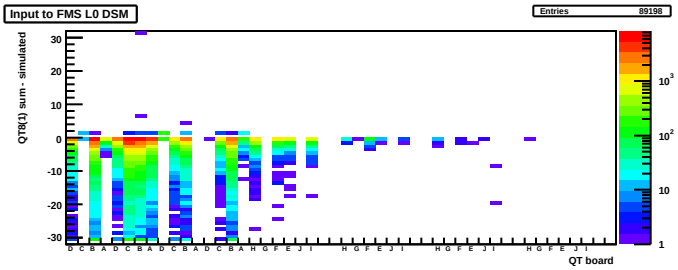

Input to QT2 crate (south-bottom)
Entries2653078
ADC
channel

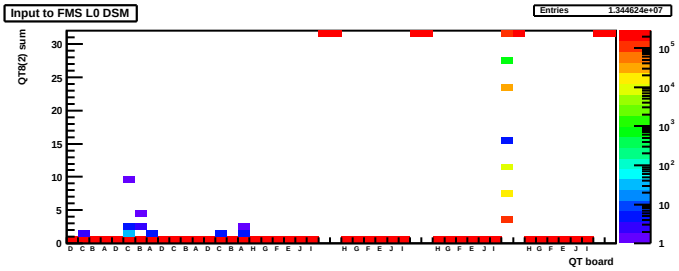

Input to QT4 crate (north-bottom)
Entries1227469
ADC
channel

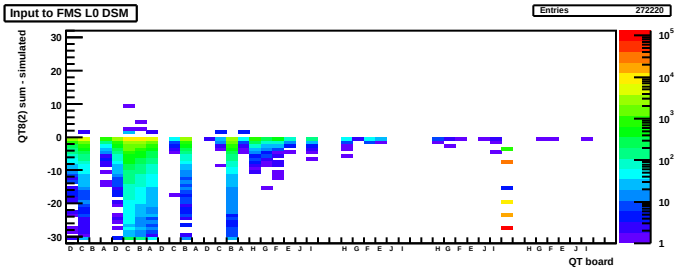

Input to FMS L0 DSM
Entries 1.344624e+07
QT8(0) sum
QT board

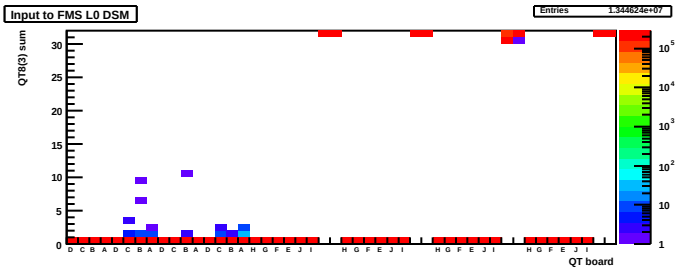

Input to FMS L0 DSM
Entries 87868
QT8(0) sum - simulated
QT board

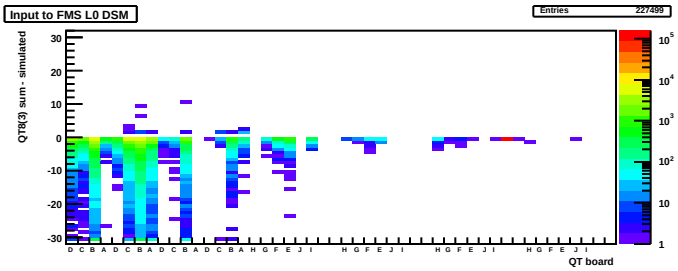

Input to FMS L0 DSM
Entries 1.344624e+07
QT8(1) sum
QT board

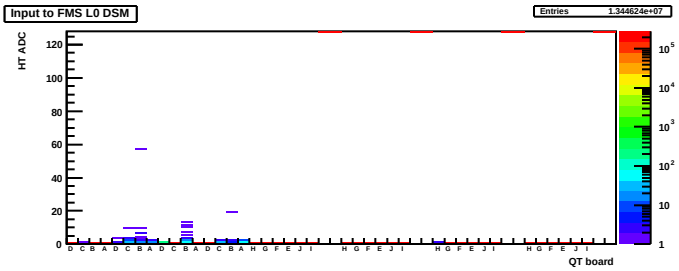

Input to FMS L0 DSM
Entries 89198
QT8(1) sum - simulated
QT board

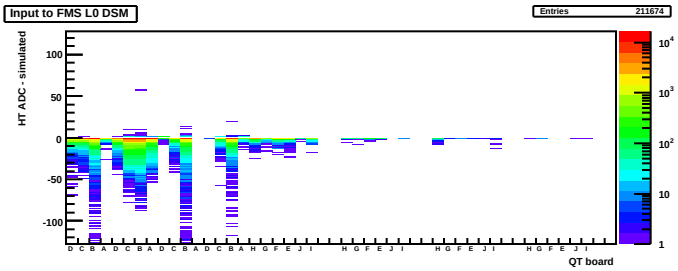

Input to FMS L0 DSM
Entries 1.344624e+07
QT8(2) sum
QT board

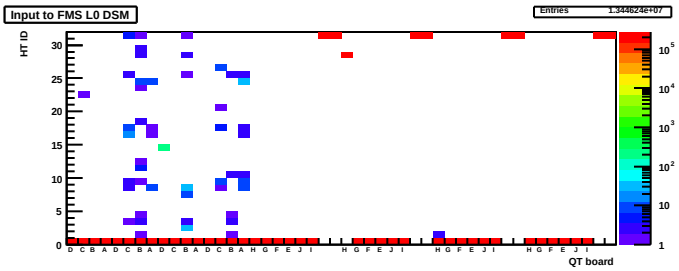

Input to FMS L0 DSM
Entries 272220
QT8(2) sum - simulated
QT board

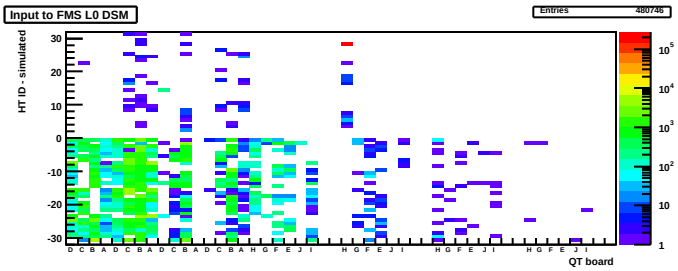

Input to FMS L0 DSM
Entries 1.344624e+07
QT8(3) sum
QT board

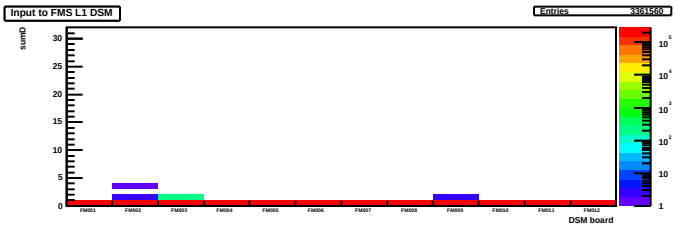

Input to FMS L0 DSM
Entries 227499
QT8(3) sum - simulated
QT board

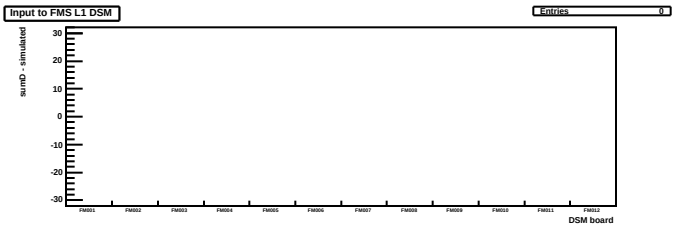

Input to FMS L0 DSM
Entries 1.344624e+07
HT ADC
QT board

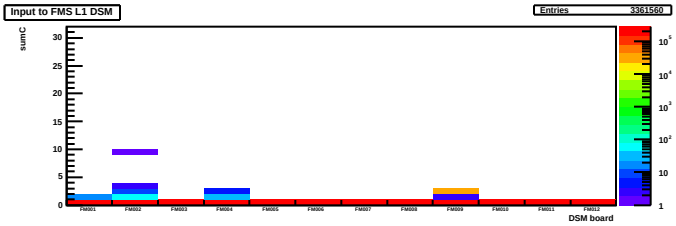

Input to FMS L0 DSM
Entries 211674
HT ADC - simulated
QT board

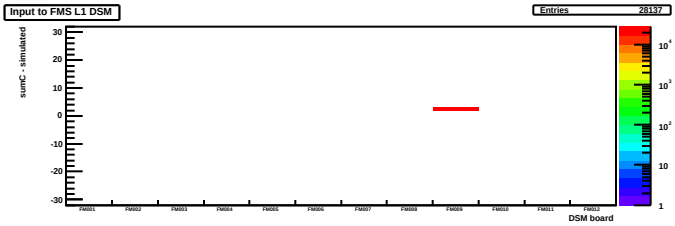

Input to FMS L0 DSM
Entries 1.344624e+07
HT ID
QT board

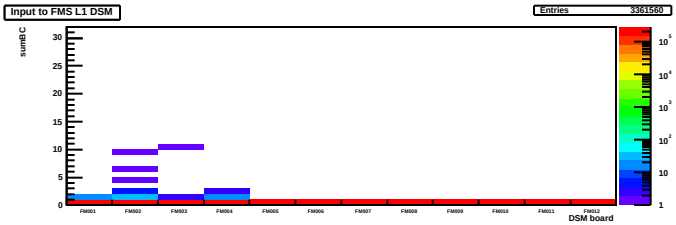

Input to FMS L0 DSM
Entries 480746
HT ID - simulated
QT board

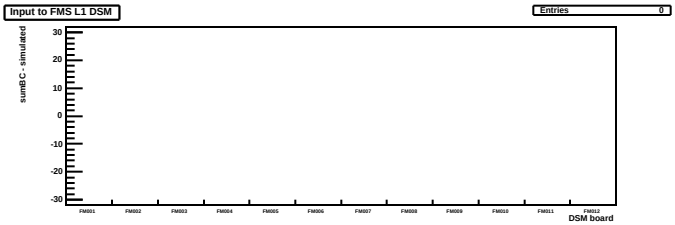

Input to FMS L1 DSM
Entries 3361560
sumD
DSM board

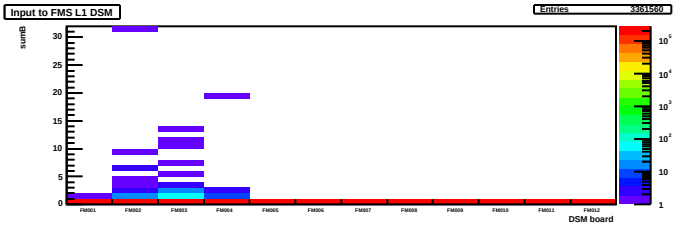

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

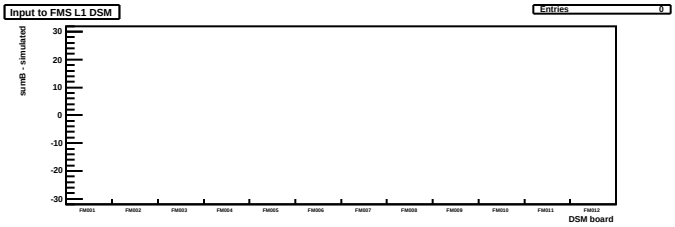

Input to FMS L1 DSM
Entries 3361560
sumC
DSM board

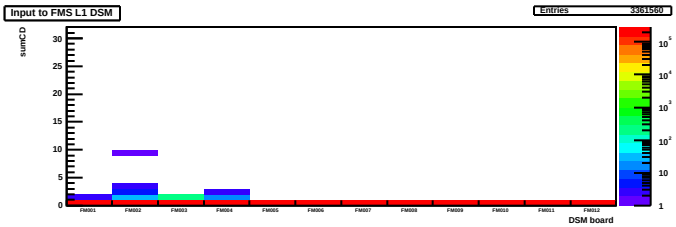

Input to FMS L1 DSM
Entries 28137
sumC - simulated
DSM board

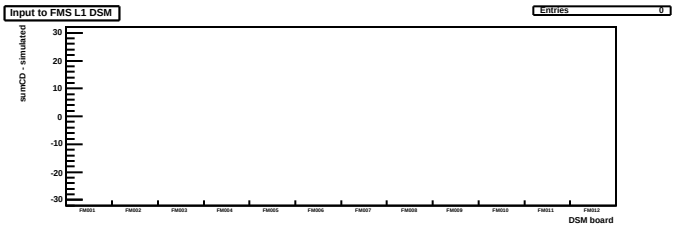

Input to FMS L1 DSM
Entries 3361560
sumBC
DSM board

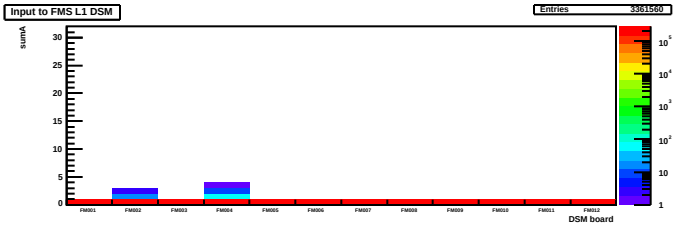

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

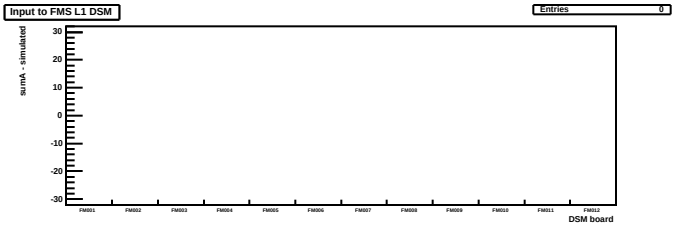

Input to FMS L1 DSM
Entries 3361560
sumB
DSM board

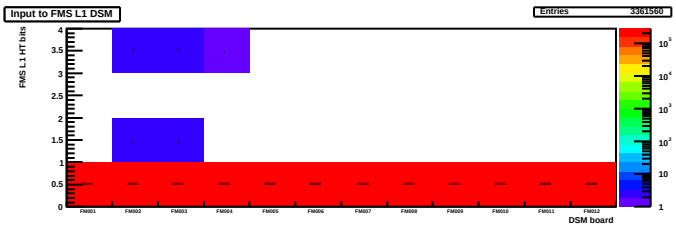

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

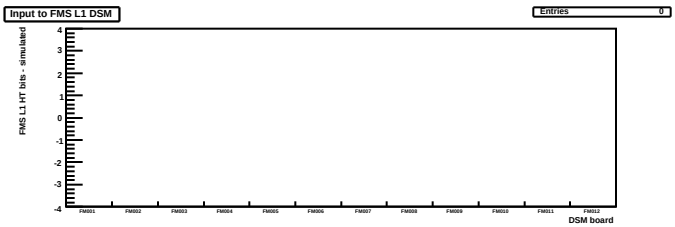

Input to FMS L1 DSM
Entries 3361560
sumCD
DSM board

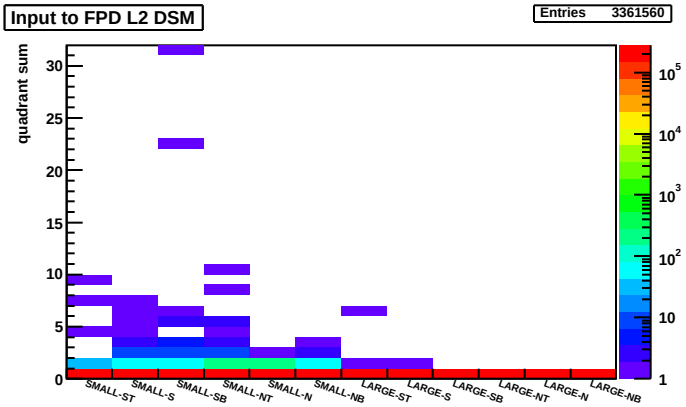

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

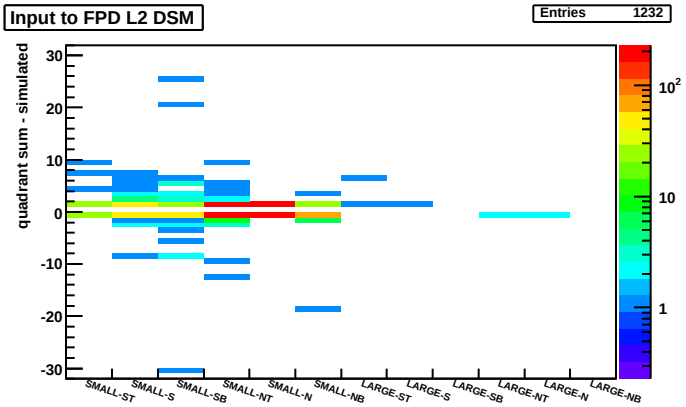

Input to FMS L1 DSM
Entries 3361560
sumA
DSM board

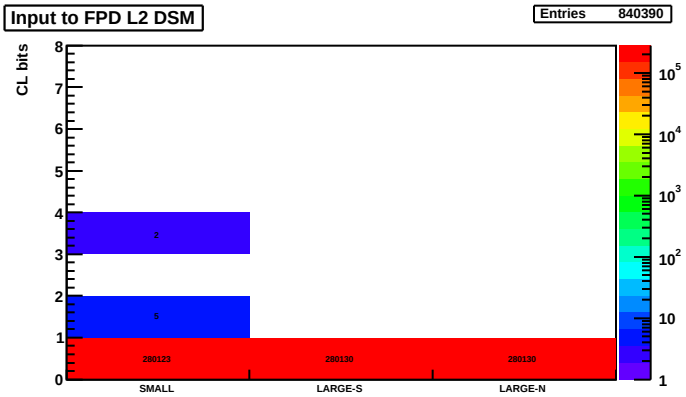

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

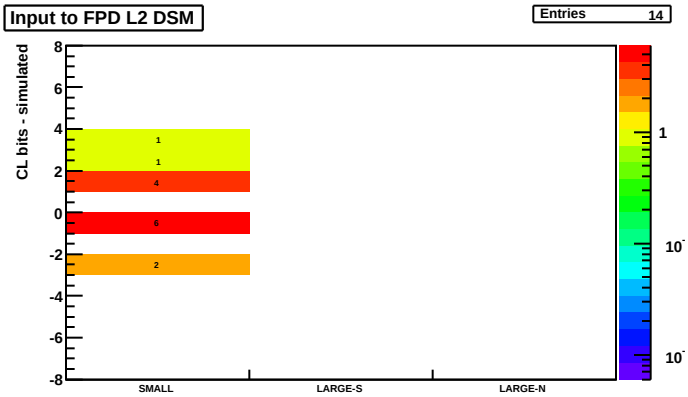

Input to FMS L1 DSM
Entries 3361560
FMS L1 HT bits
DSM board

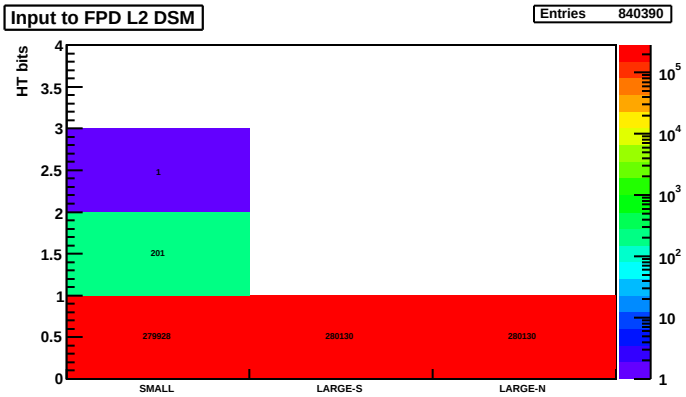

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

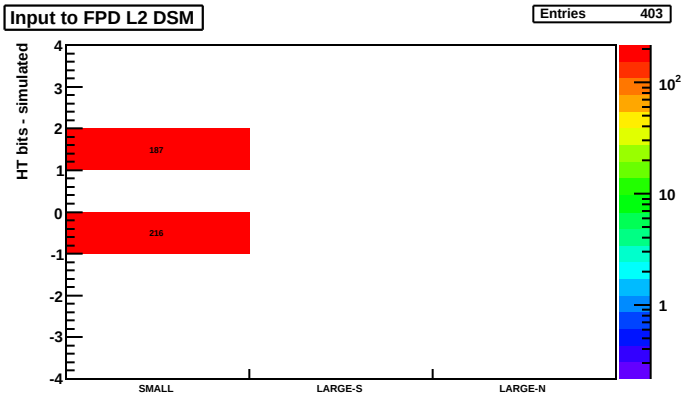

Input to FPD L2 DSM
Entries 3361560
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

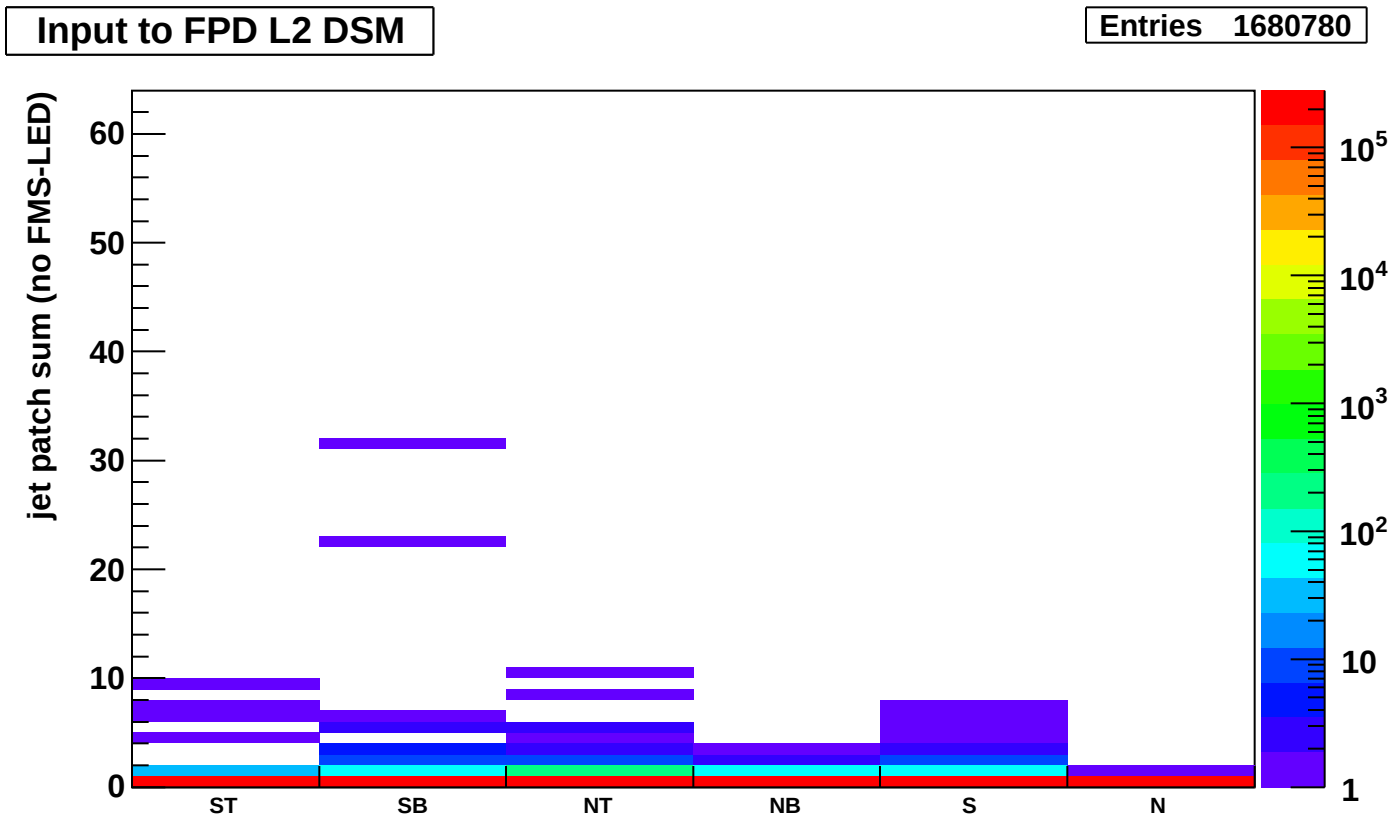

Input to FPD L2 DSM
Entries 1232
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

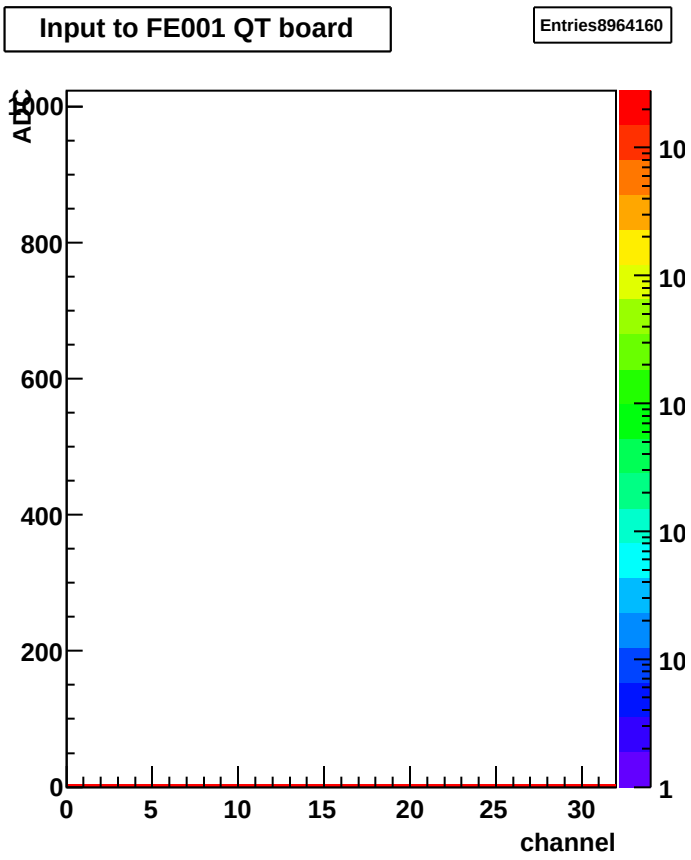

Input to FPD L2 DSM
Entries 840390
CL bits
2
5
280123
280130
280130
SMALL
LARGE-S
LARGE-N

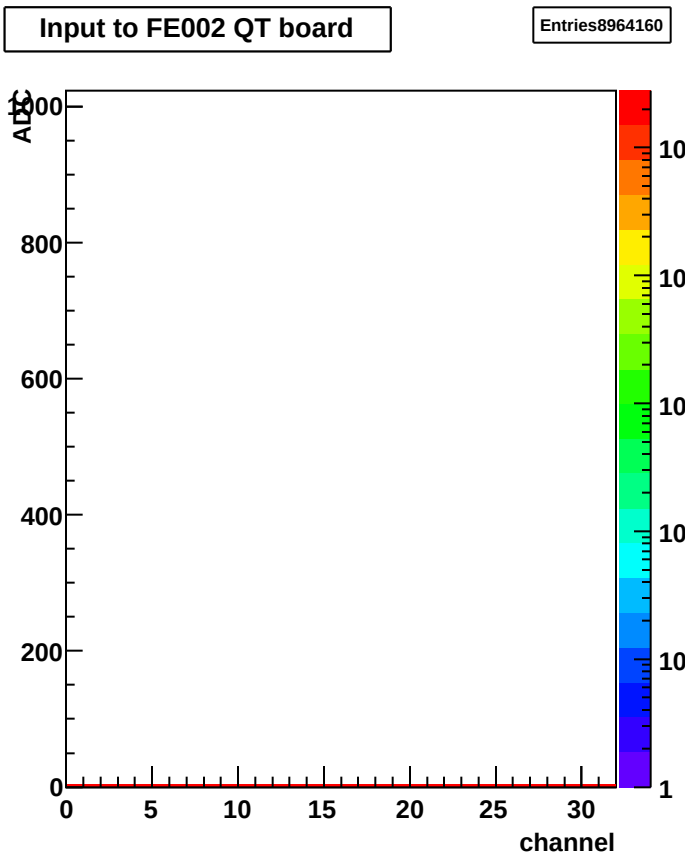

Input to FPD L2 DSM
Entries 14
CL bits - simulated
1
1
4
6
2
SMALL
LARGE-S
LARGE-N

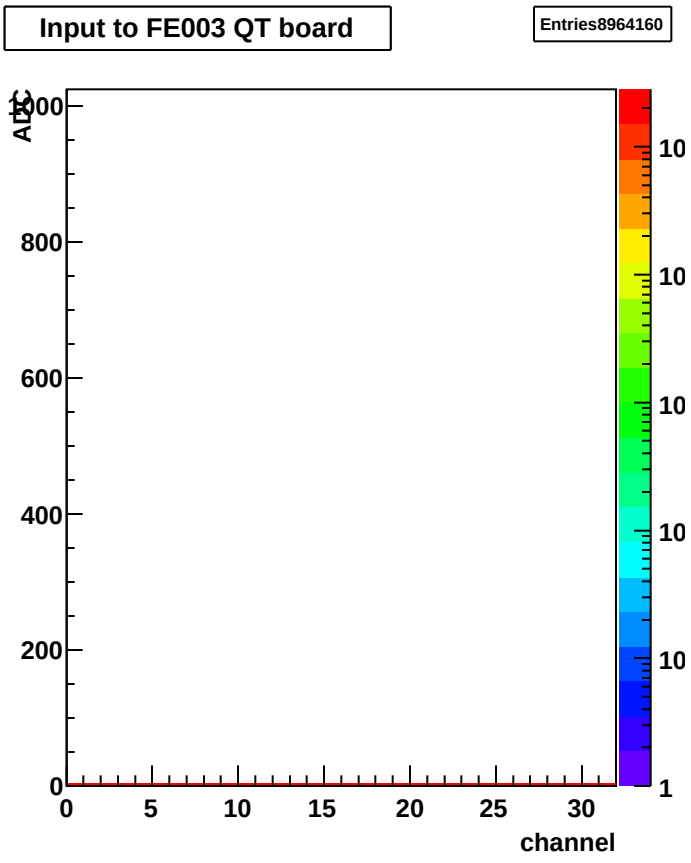

Input to FPD L2 DSM
Entries 840390
HT bits
1
201
279928
280130
280130
SMALL
LARGE-S
LARGE-N

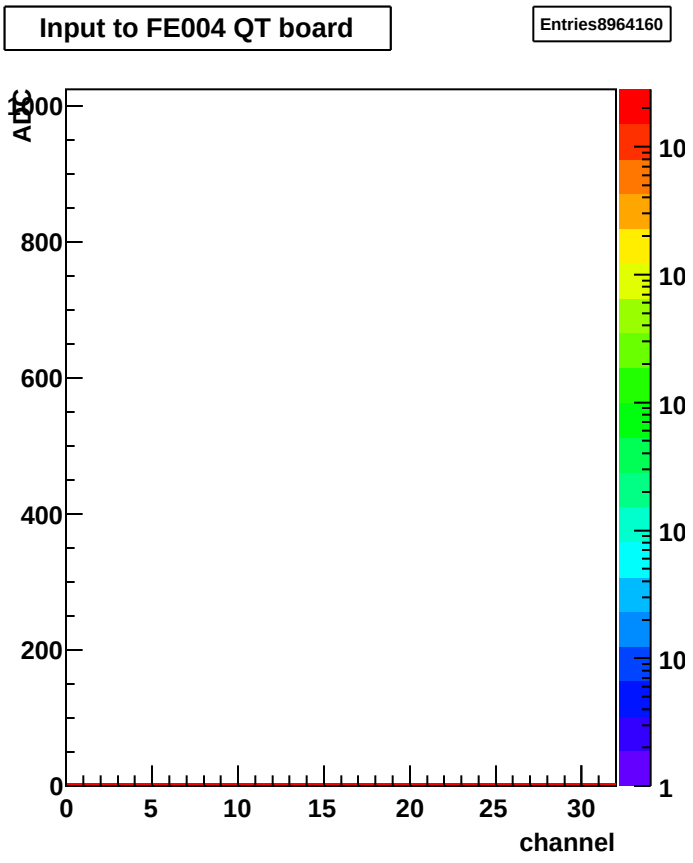

Input to FPD L2 DSM
Entries 403
HT bits - simulated
187
216
SMALL
LARGE-S
LARGE-N

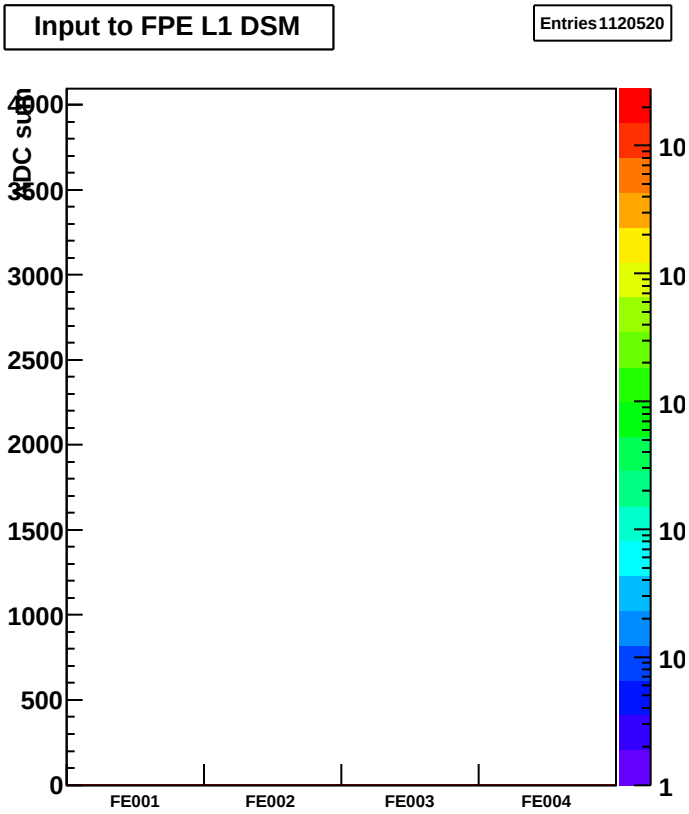

Input to FPD L2 DSM
Entries 1680780
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$
$10^5$

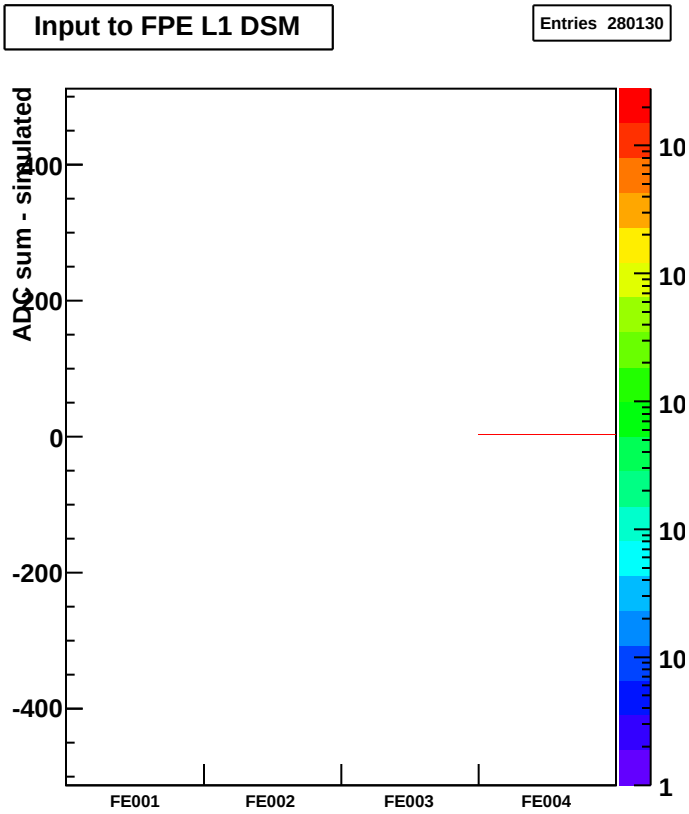

Input to FE001 QT board
Entries8964160
ADC
channel

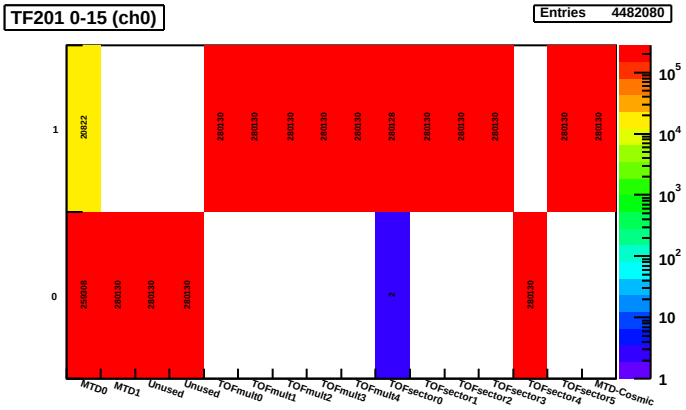

Input to FE002 QT board
Entries8964160
ADC
channel

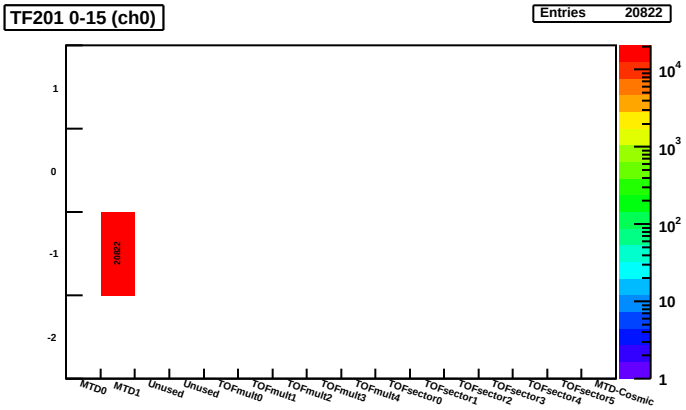

Input to FE003 QT board
Entries8964160
ADC
channel

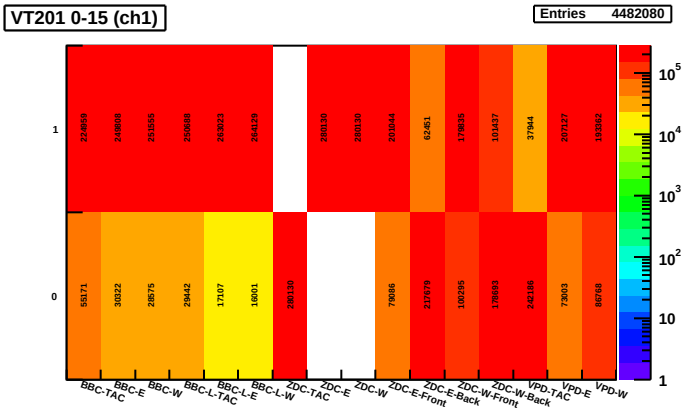

Input to FE004 QT board
Entries8964160
ADC
channel

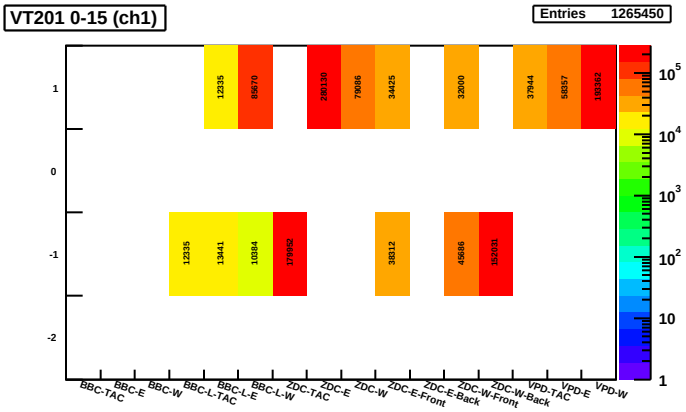

Input to FPE L1 DSM
Entries 1120520
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

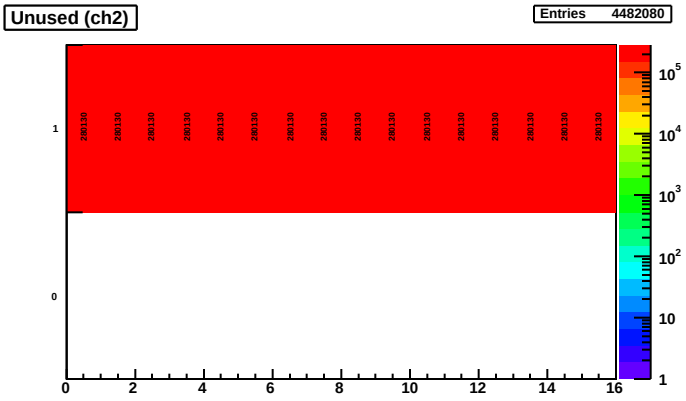

Input to FPE L1 DSM
Entries 280130
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

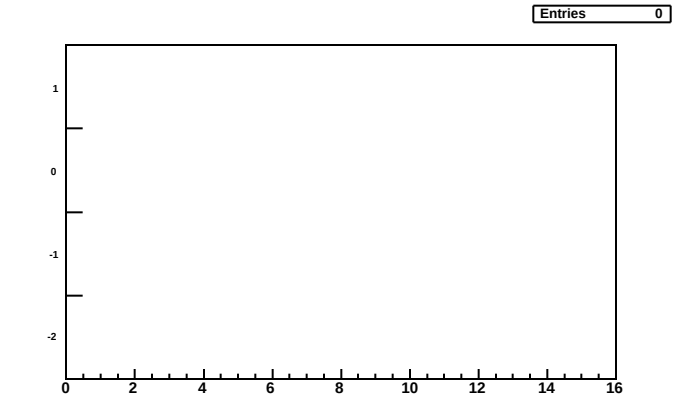

TF201 0-15 (ch0)
Entries 4482080
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

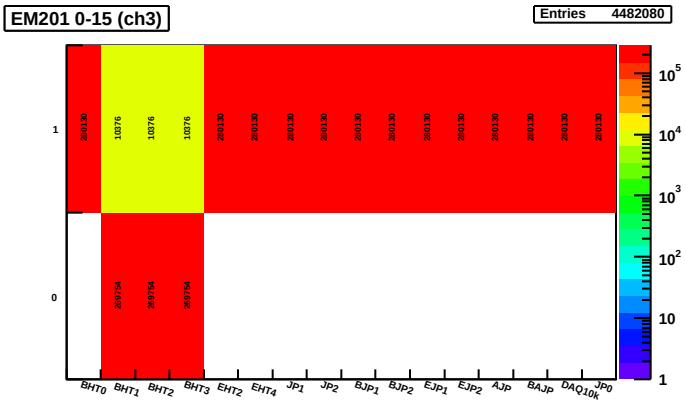

TF201 0-15 (ch0)
Entries 20822
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 4482080
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 1265450
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 4482080


Entries 0


EM201 0-15 (ch3)
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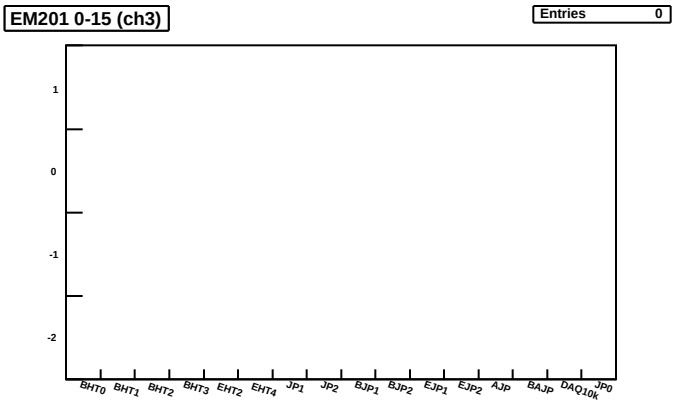
EM201 0-15 (ch3)
Entries 0
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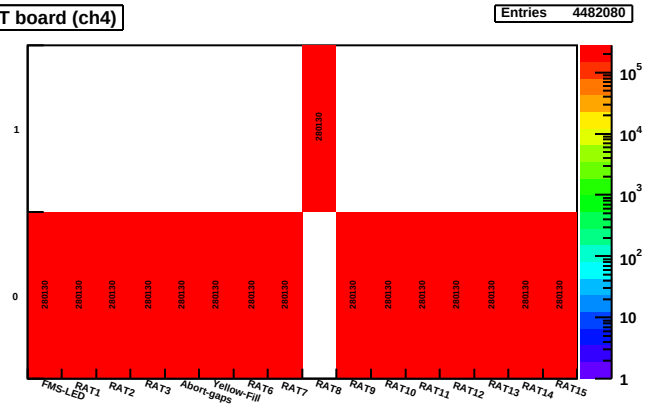
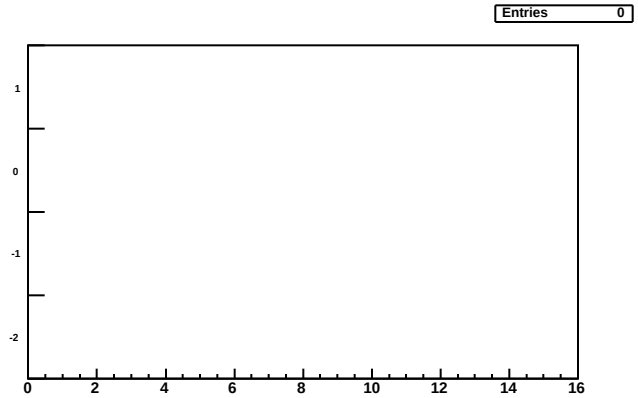
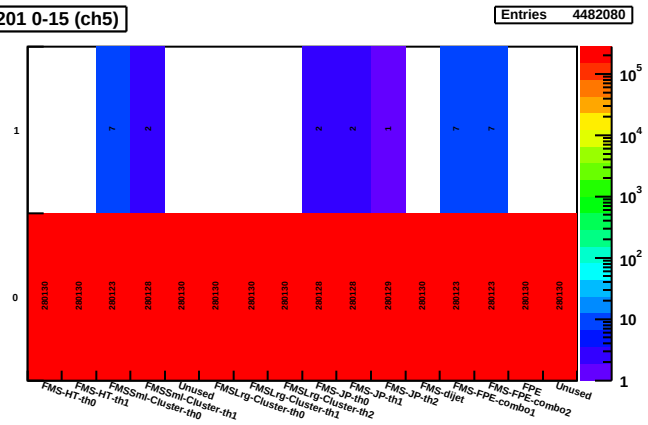
**RAT board (ch4)**

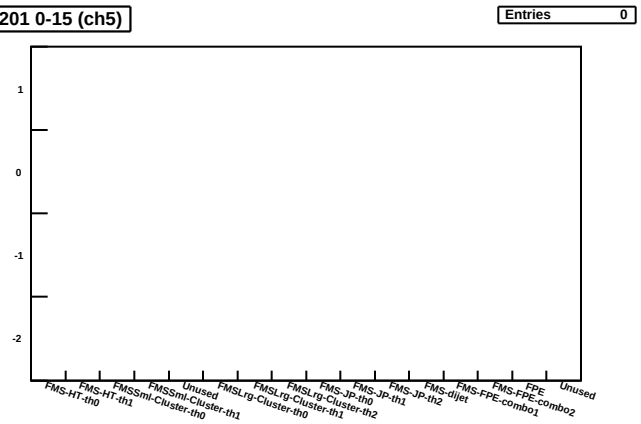


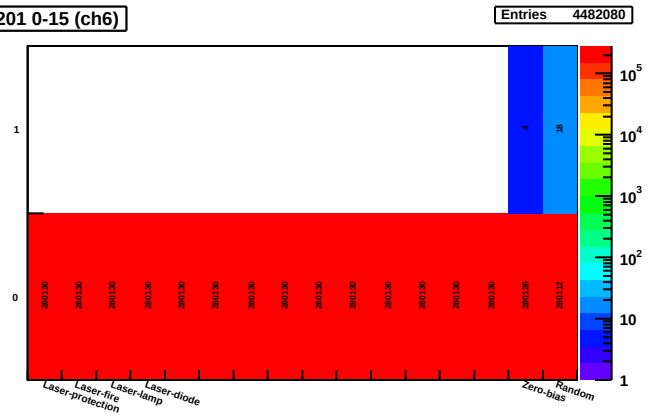

**FP201 0-15 (ch5)**

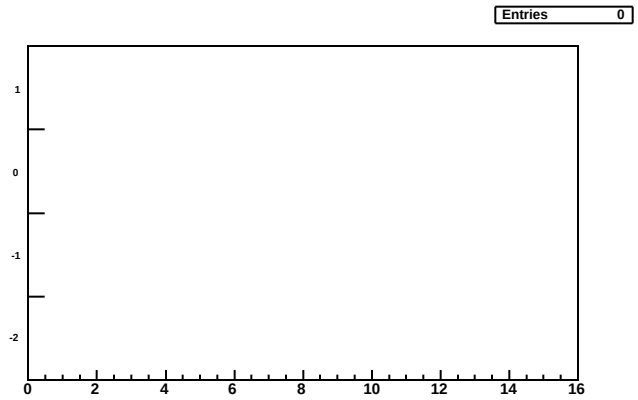


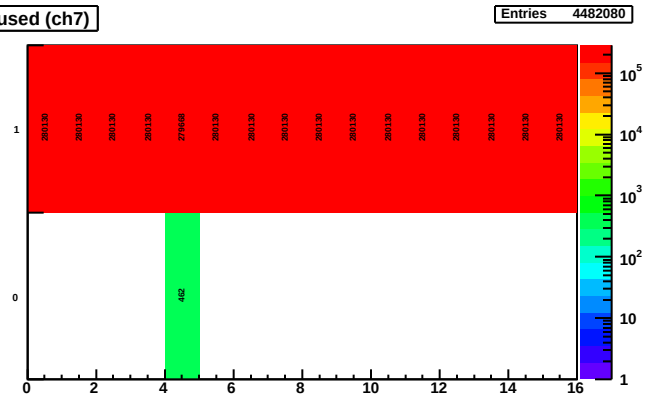
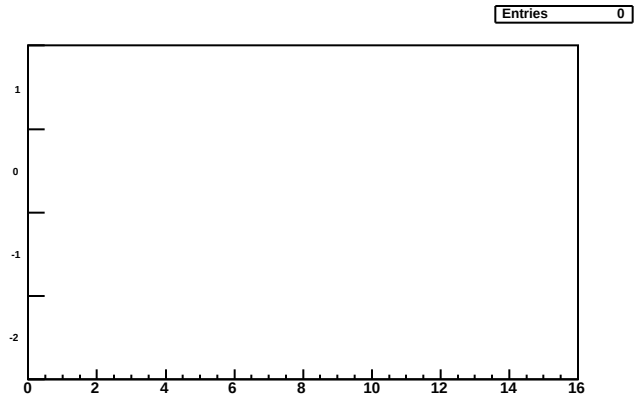

**FP201 0-15 (ch5)**




**ST201 0-15 (ch6)**




**Unused (ch7)**