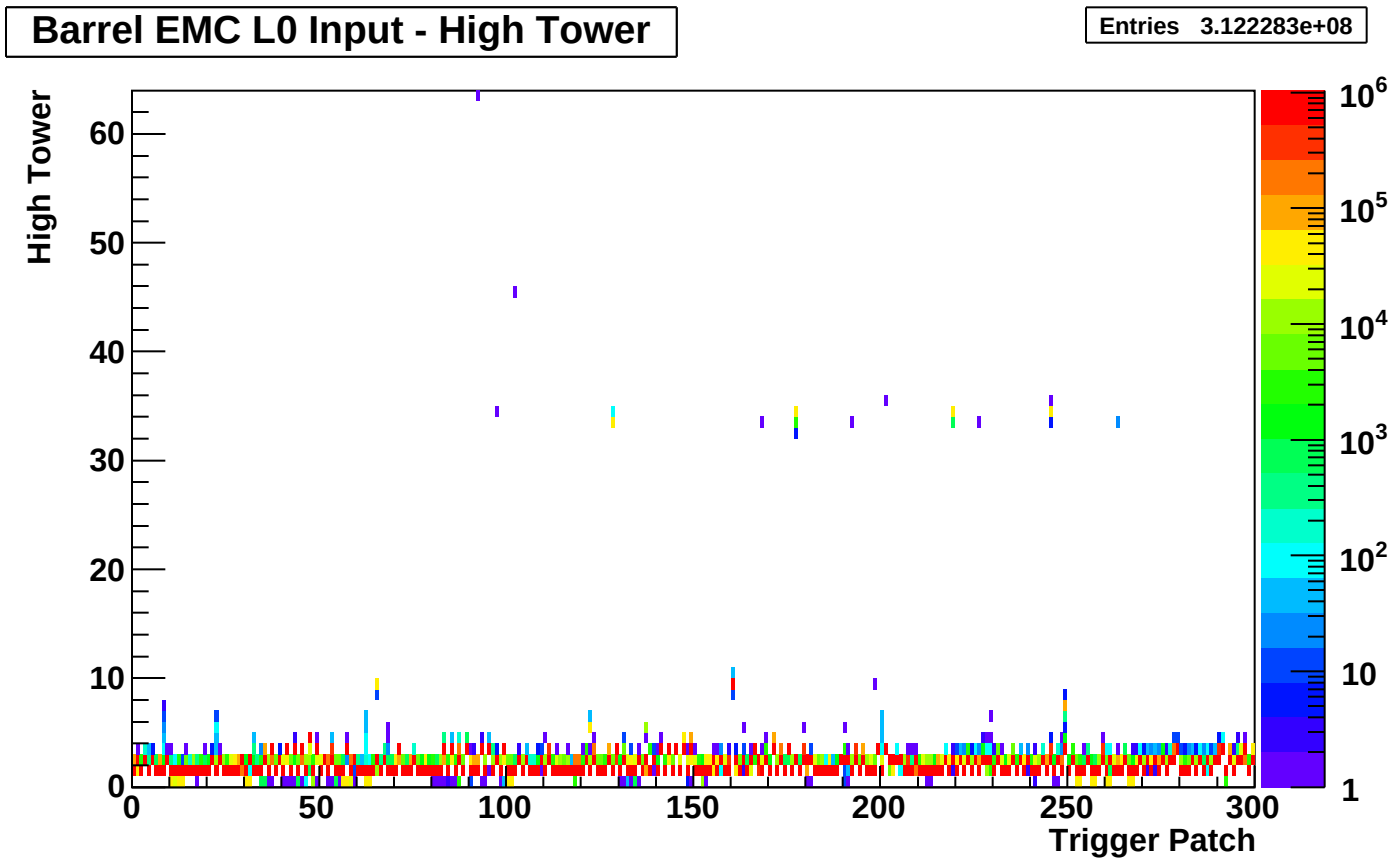
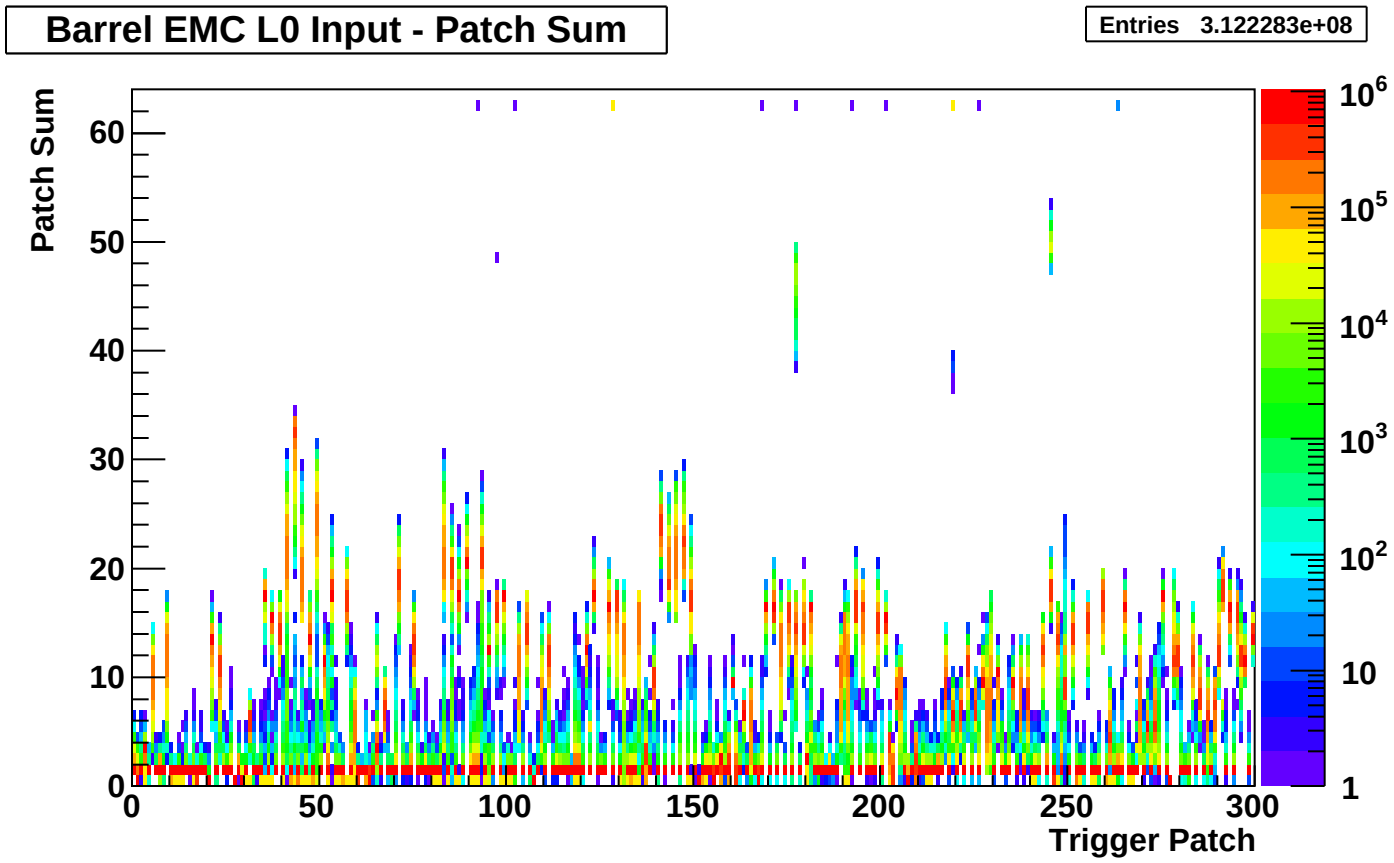
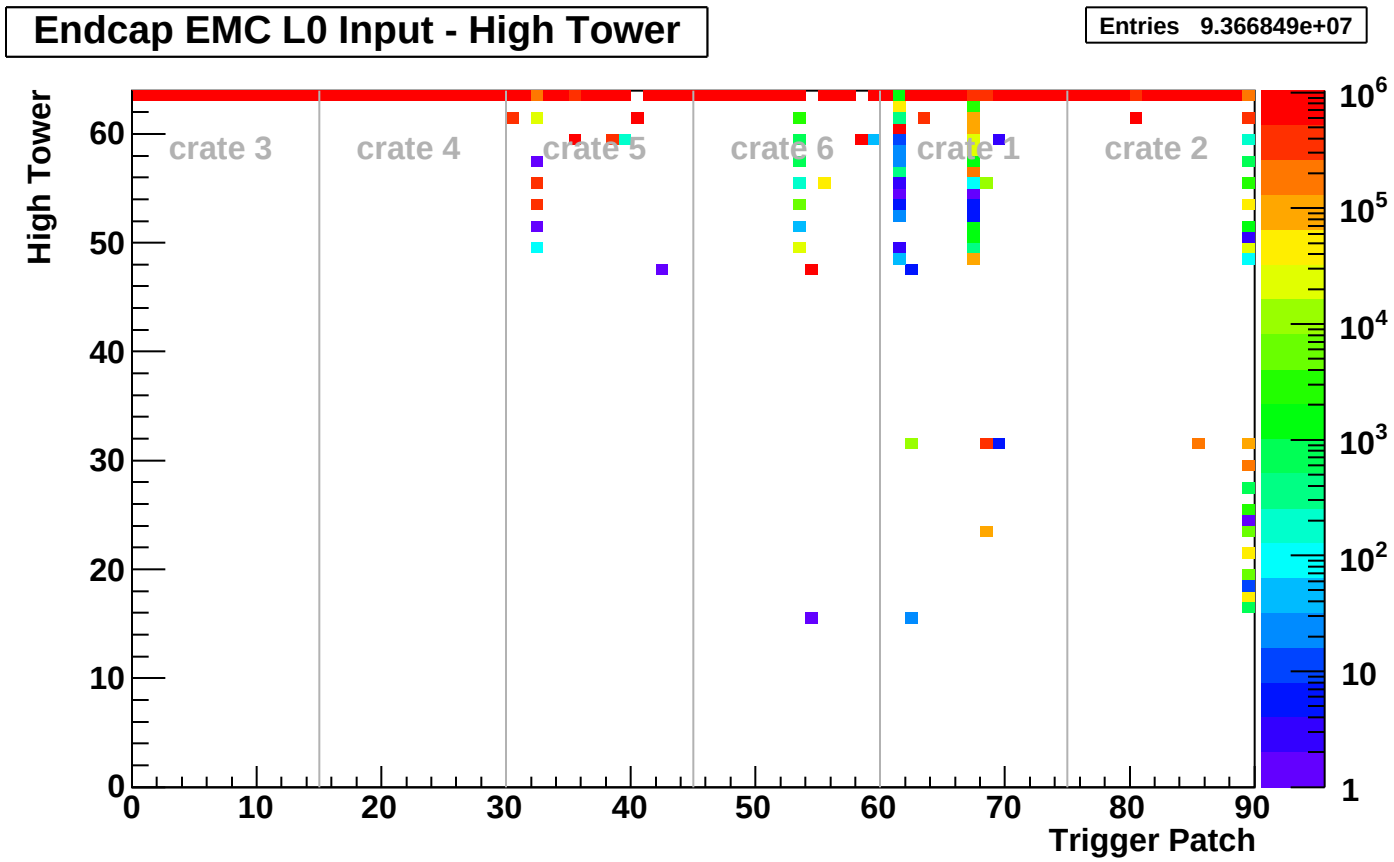
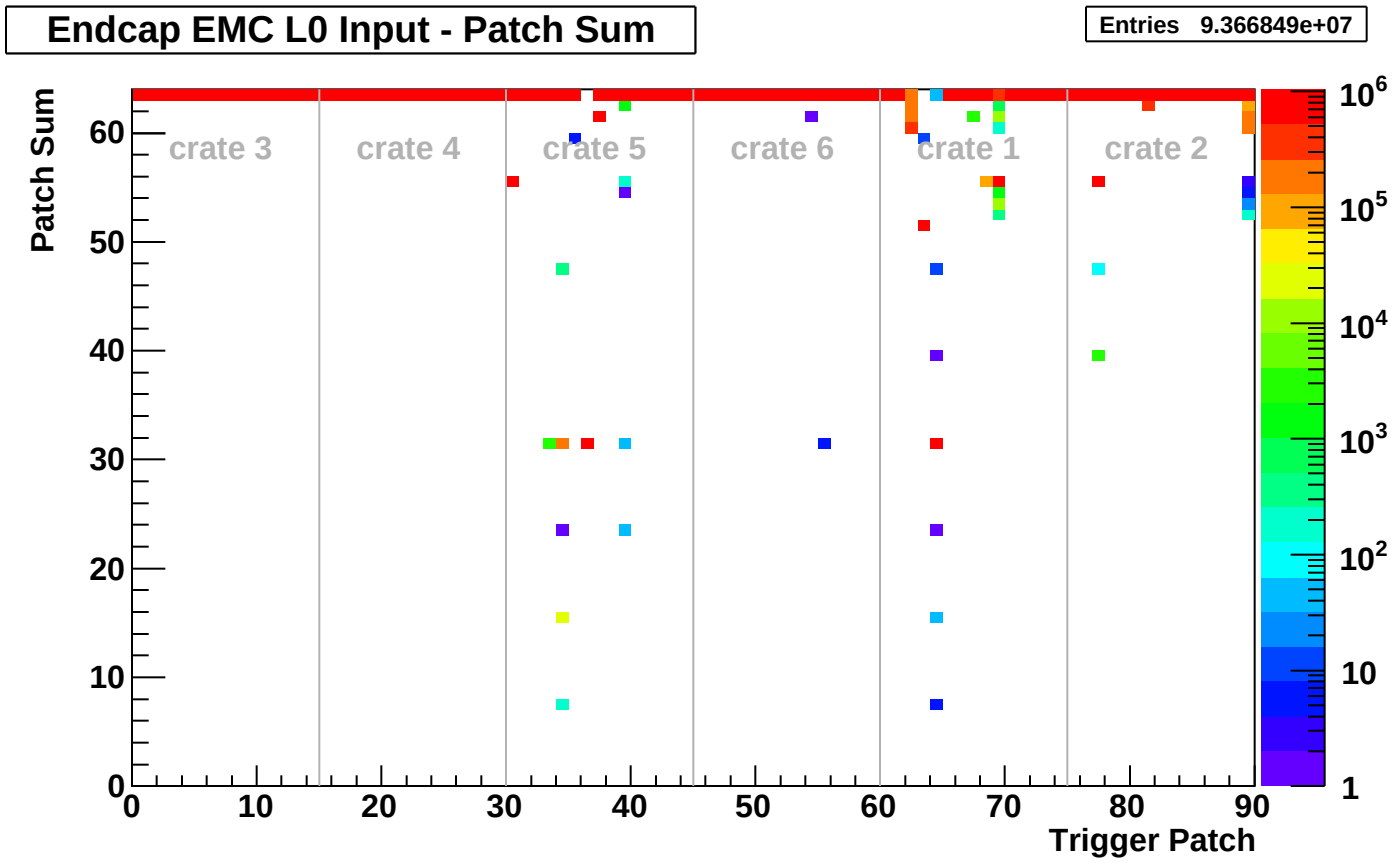
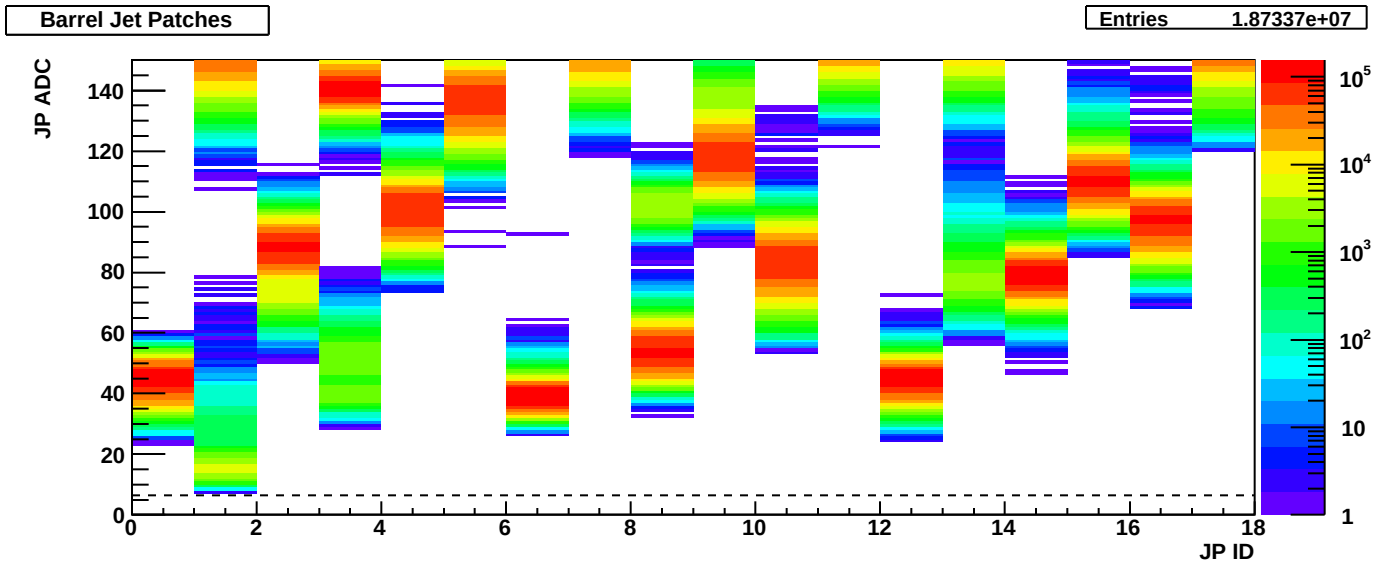
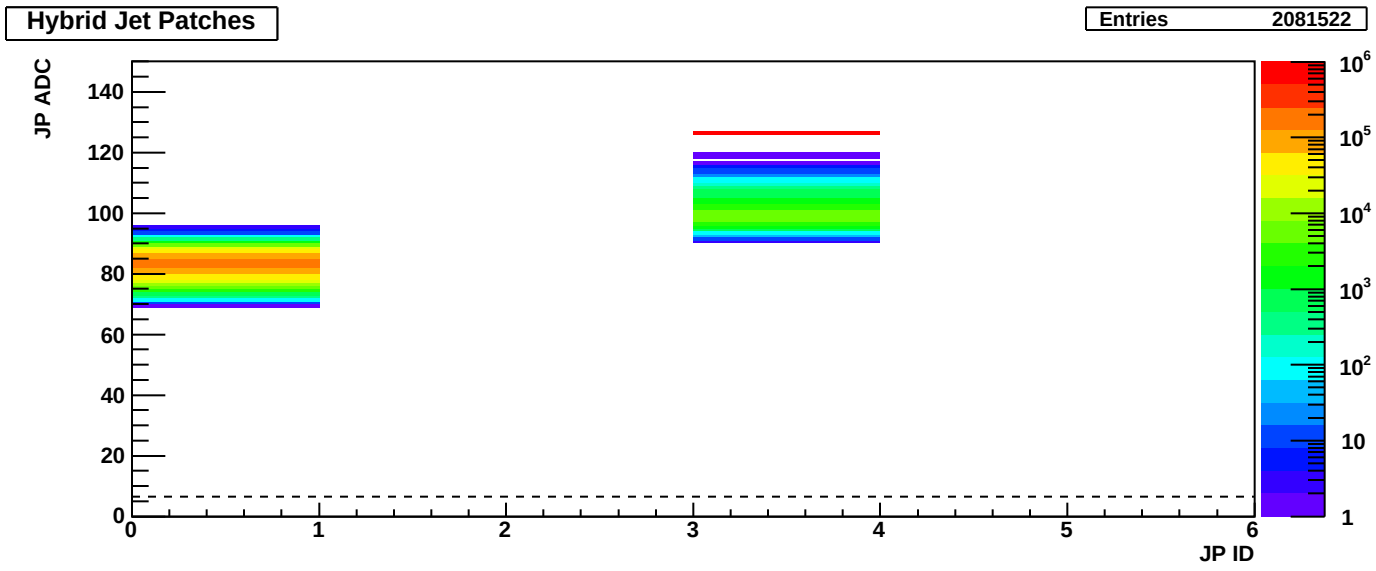

Barrel EMC L0 Input - High Tower
Entries 3.122283e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

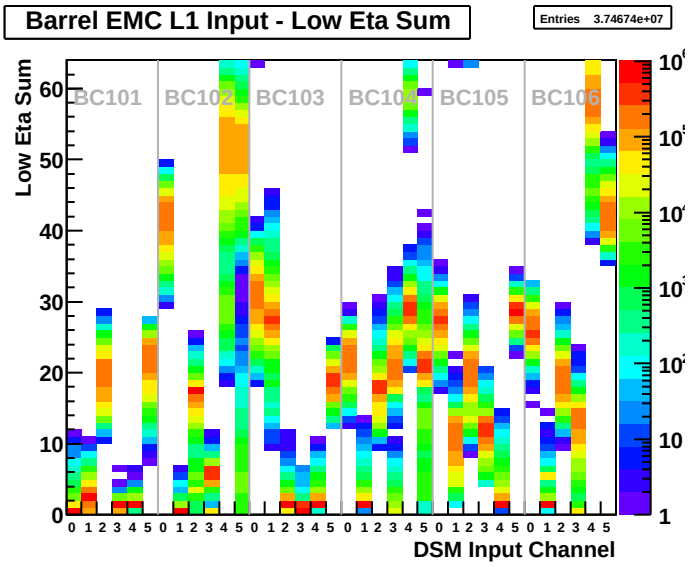

Barrel EMC L0 Input - Patch Sum
Entries 3.122283e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

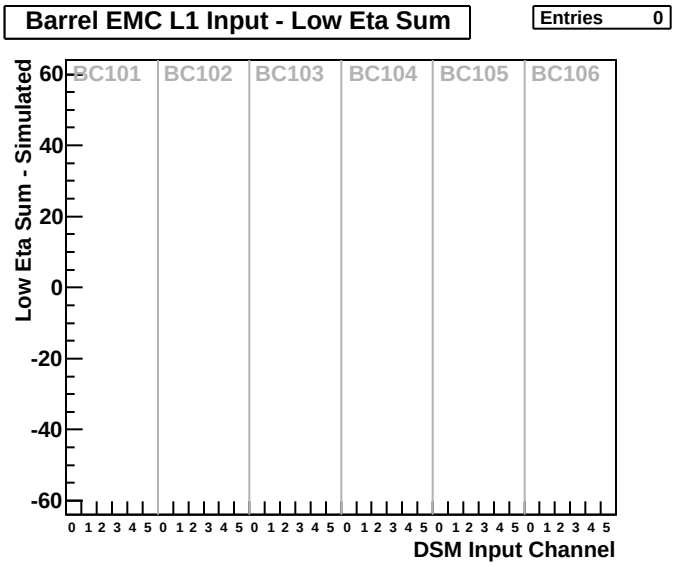

Endcap EMC L0 Input - High Tower
Entries 9.366849e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

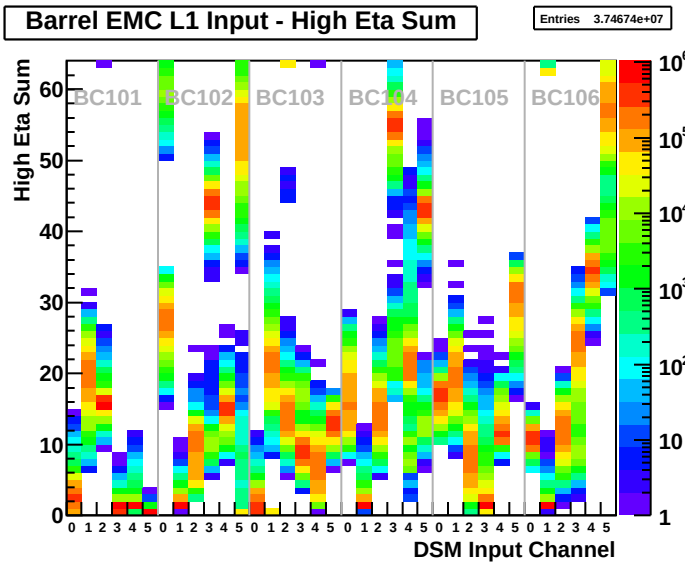

Endcap EMC L0 Input - Patch Sum
Entries 9.366849e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

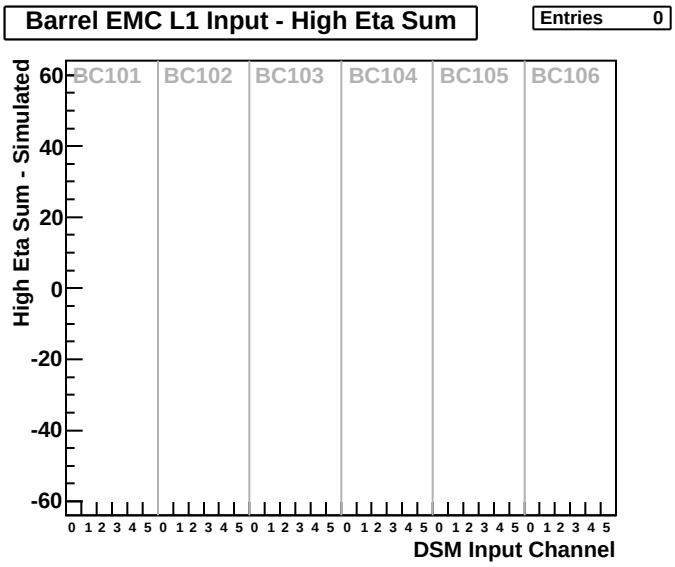

Barrel Jet Patches
Entries 1.87337e+07
JP ADC
JP ID

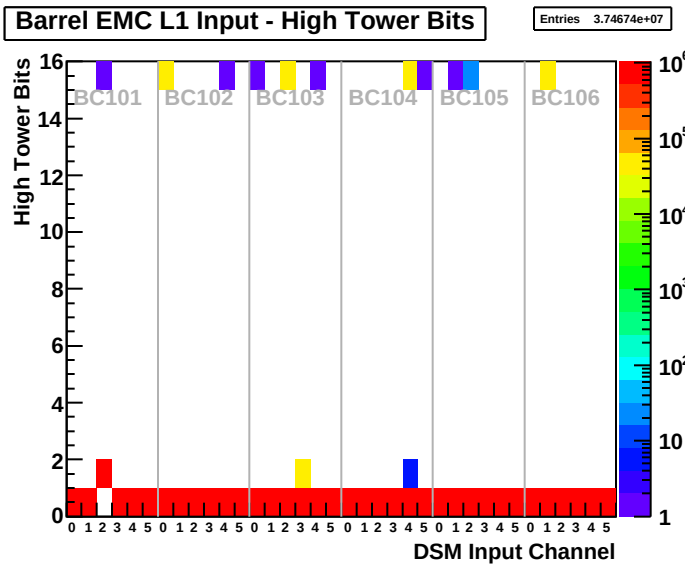

Hybrid Jet Patches
Entries 2081522
JP ADC
JP ID

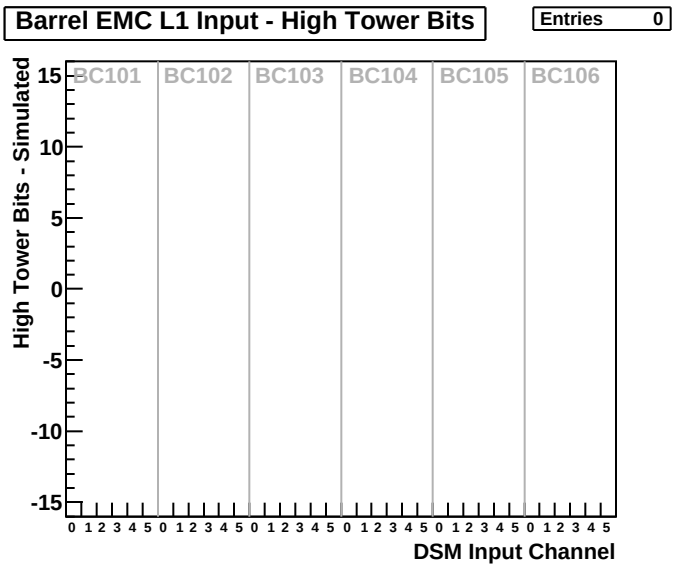

Barrel EMC L1 Input - Low Eta Sum
Entries 3.74674e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

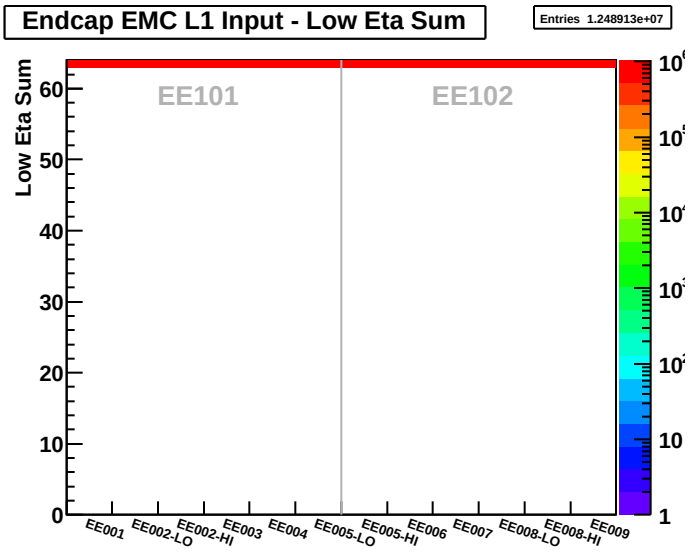

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

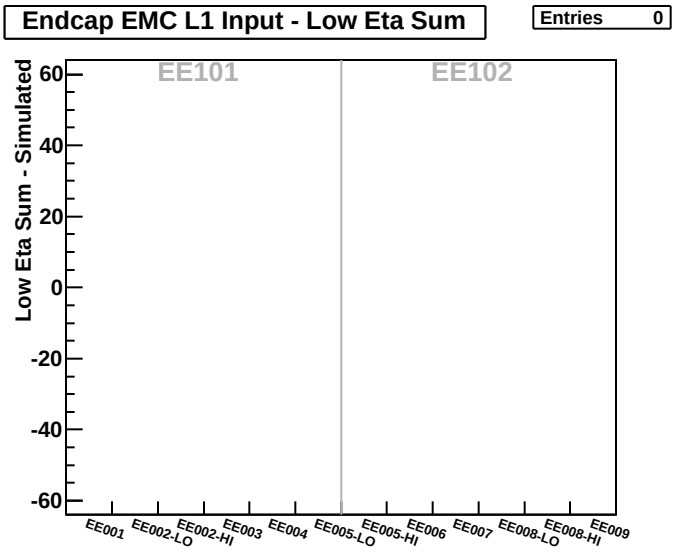

Barrel EMC L1 Input - High Eta Sum
Entries 3.74674e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

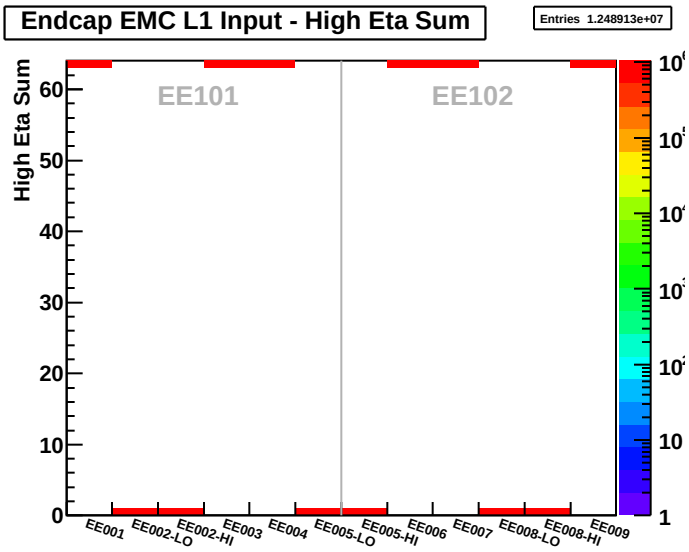

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

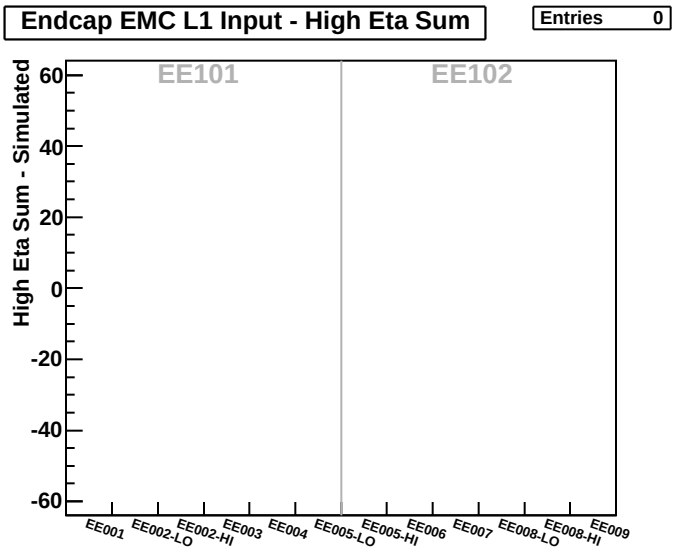

Barrel EMC L1 Input - High Tower Bits
Entries 3.74674e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

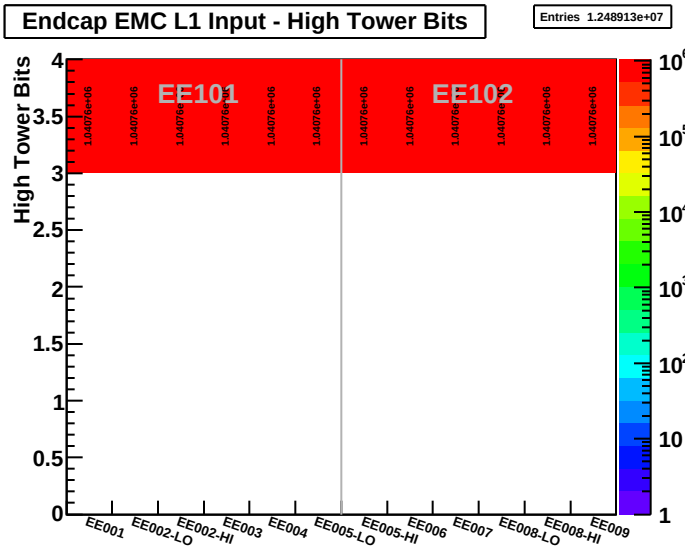

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

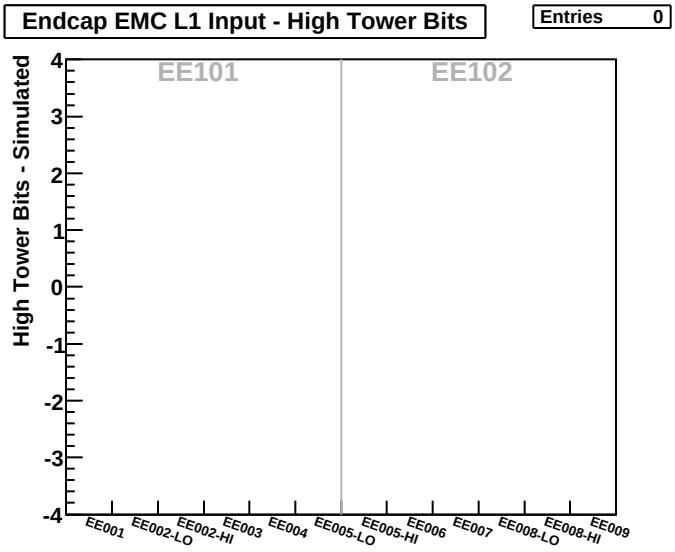

Endcap EMC L1 Input - Low Eta Sum
Entries 1.248913e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

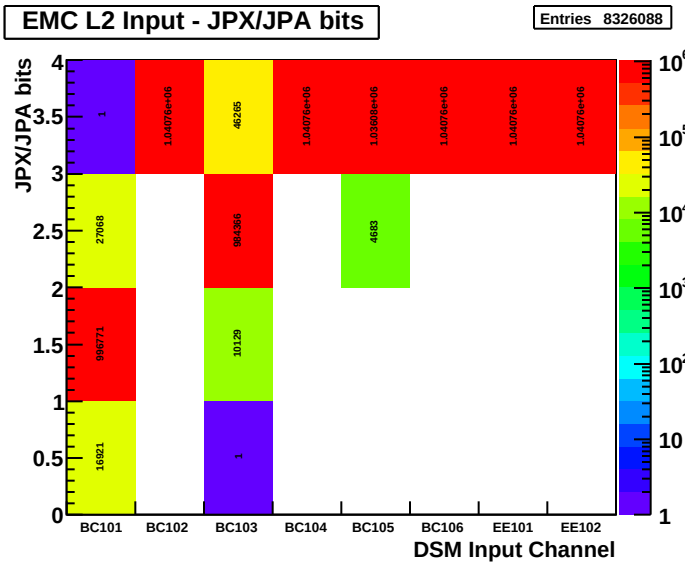

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

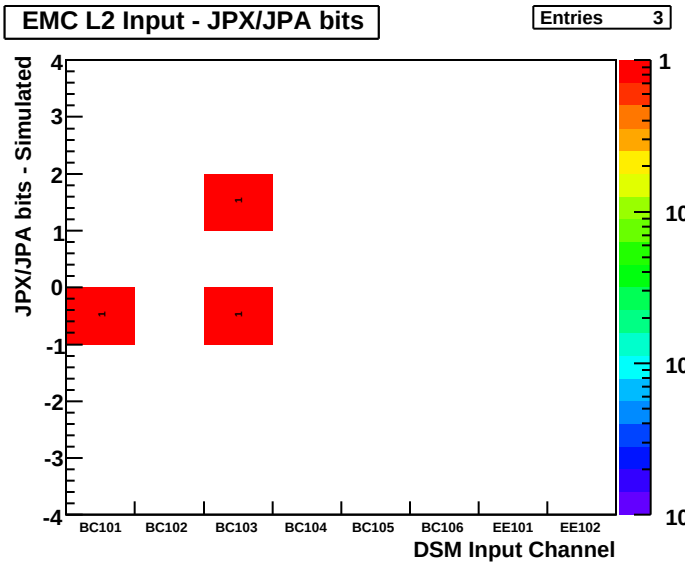

Endcap EMC L1 Input - High Eta Sum
Entries 1.248913e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

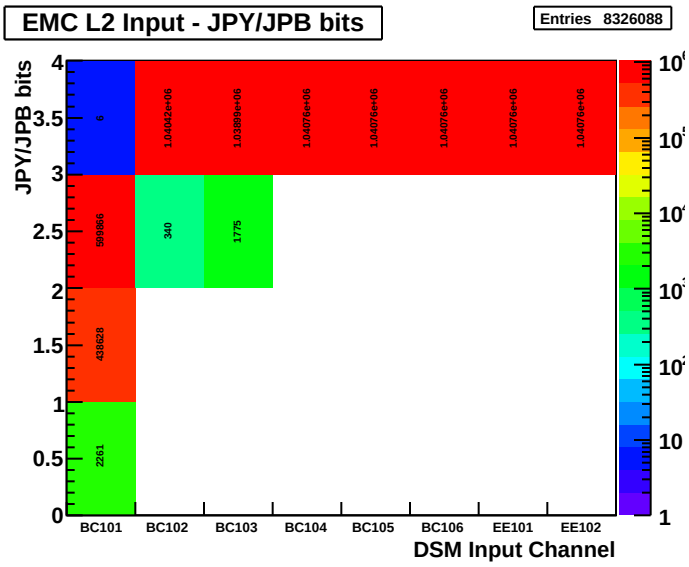

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

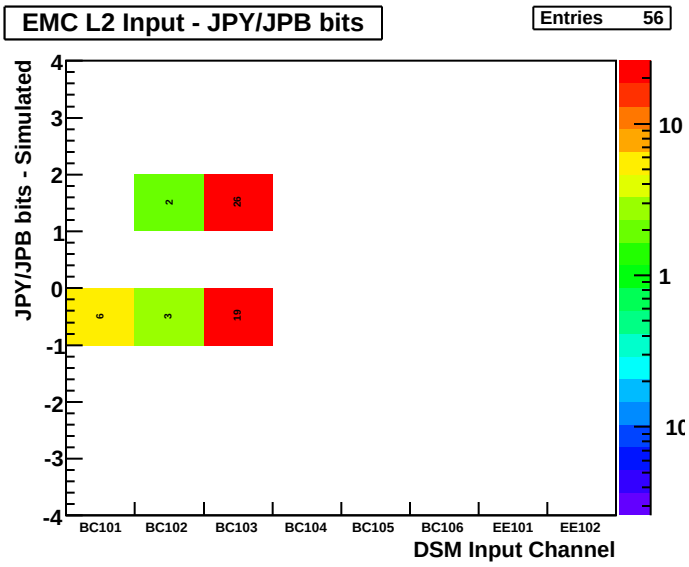

Endcap EMC L1 Input - High Tower Bits
Entries 1.248913e+07
High Tower Bits
EE101
EE102
1.04076e+06
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

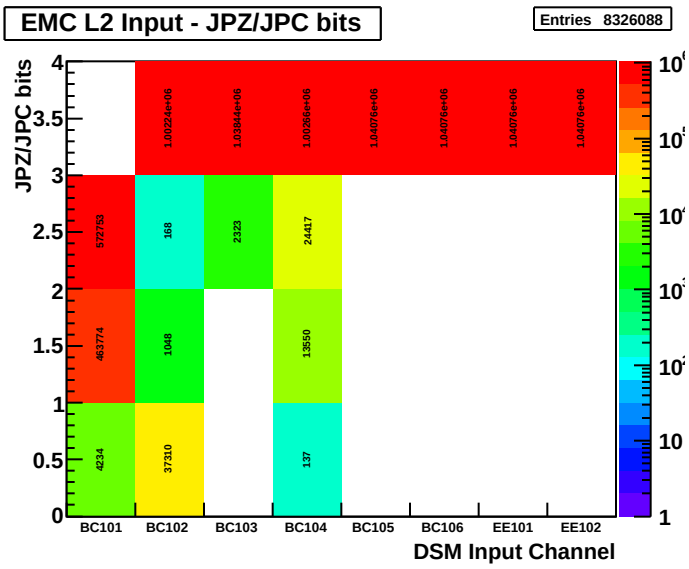

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

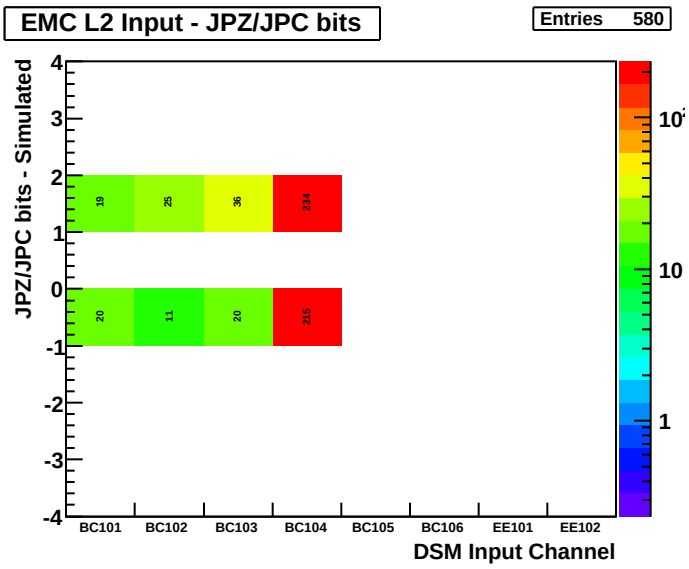

EMC L2 Input - JPX/JPA bits
Entries 8326088
JPX/JPA bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

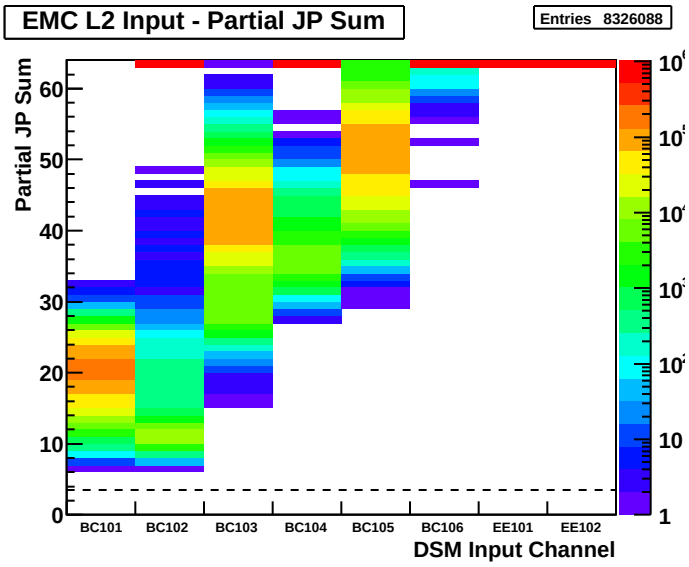

EMC L2 Input - JPX/JPA bits
Entries 3
JPX/JPA bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

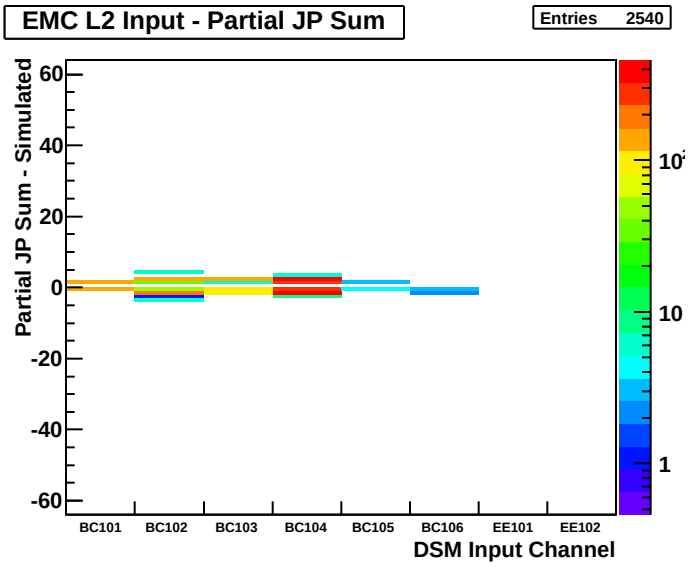

EMC L2 Input - JPY/JPB bits
Entries 8326088
JPY/JPB bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

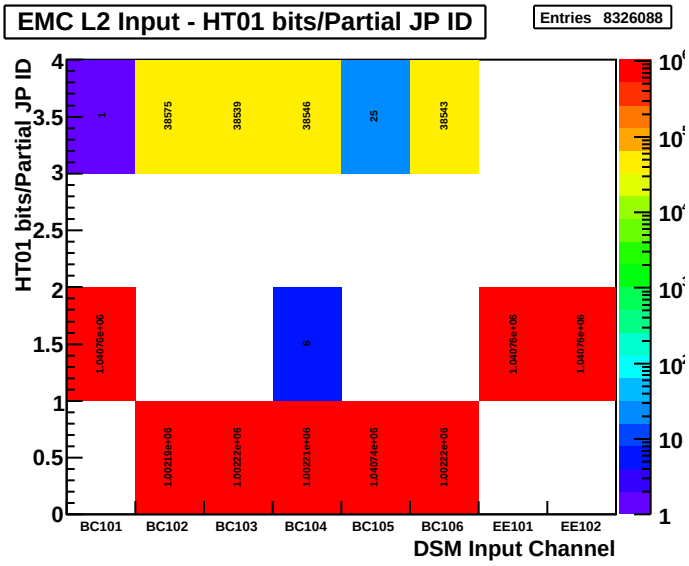

EMC L2 Input - JPY/JPB bits
Entries 56
JPY/JPB bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

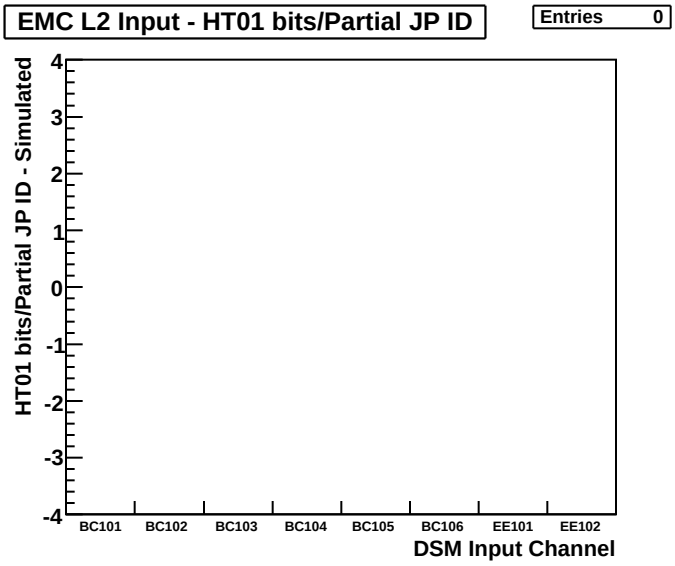

EMC L2 Input - JPZ/JPC bits
Entries 8326088
JPZ/JPC bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

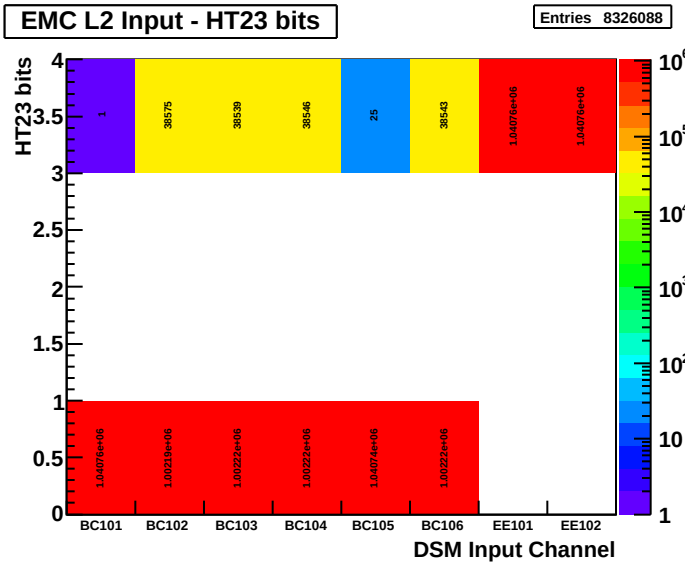

EMC L2 Input - JPZ/JPC bits
Entries 580
JPZ/JPC bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

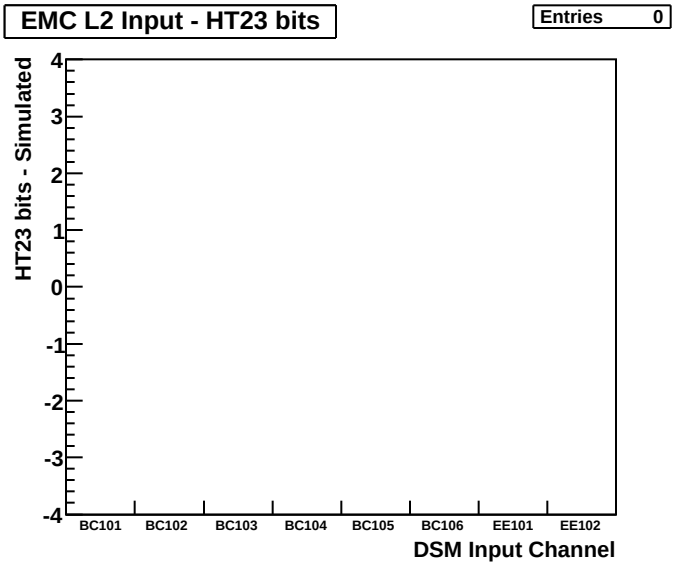

EMC L2 Input - Partial JP Sum
Entries 8326088
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

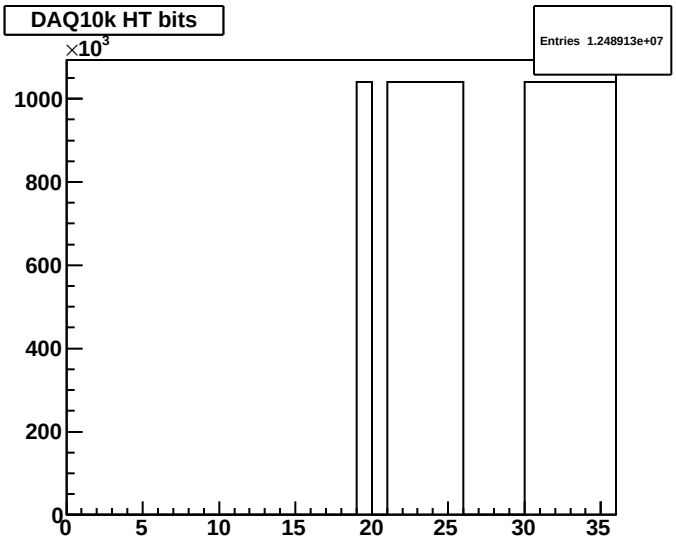

EMC L2 Input - Partial JP Sum
Entries 2540
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

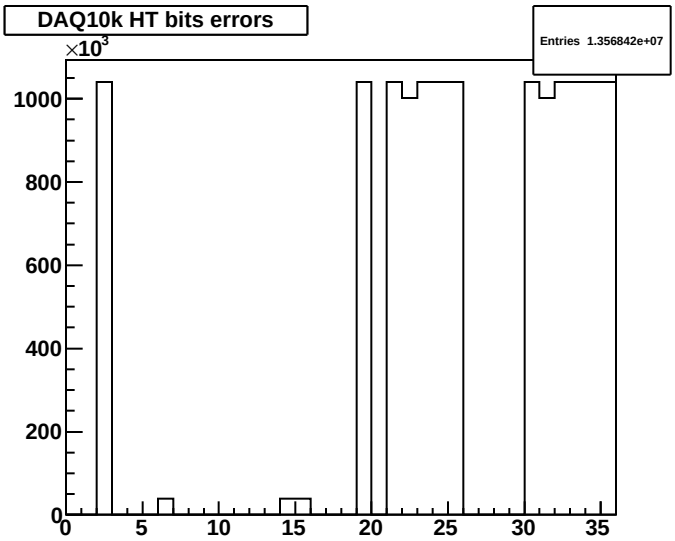

EMC L2 Input - HT01 bits/Partial JP ID
Entries 8326088
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

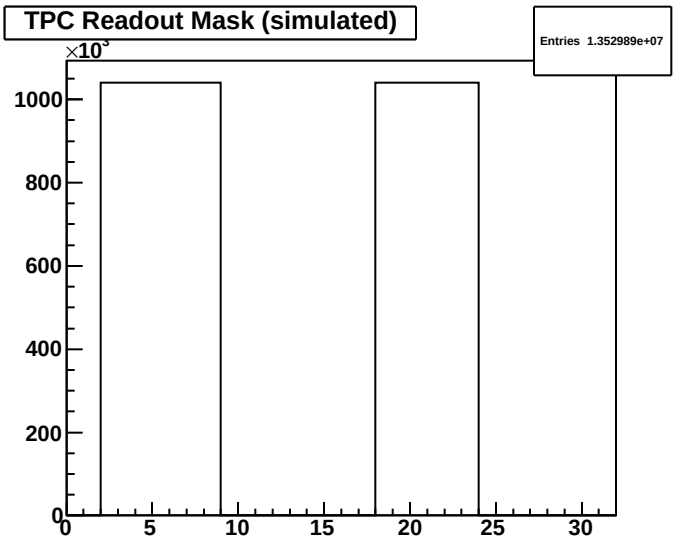

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

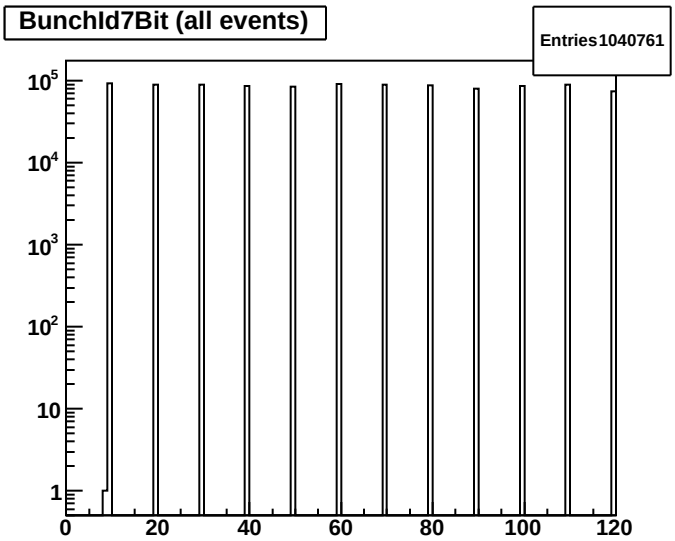

EMC L2 Input - HT23 bits
Entries 8326088
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

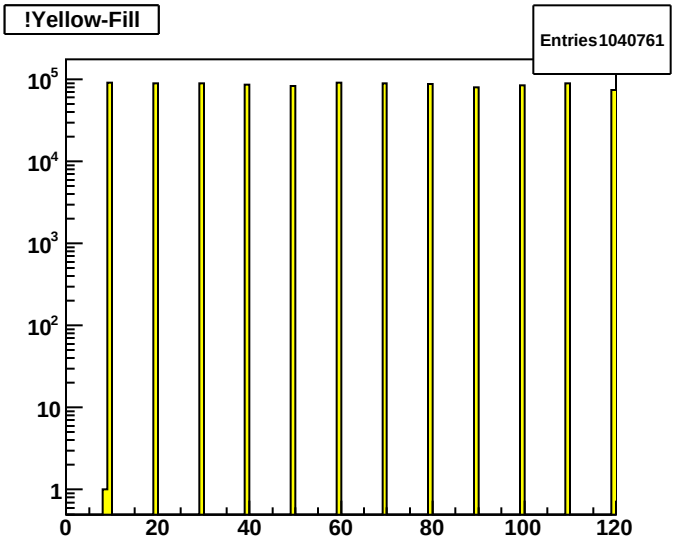

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

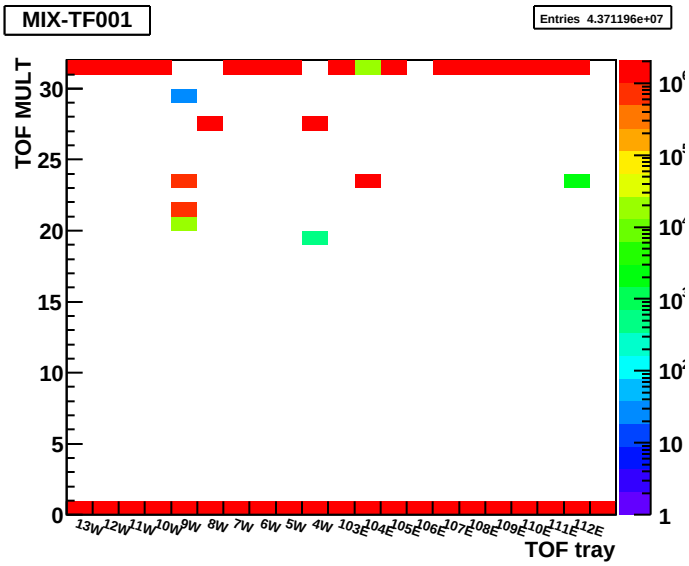

DAQ10k HT bits
Entries 1.248913e+07
×10^3
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

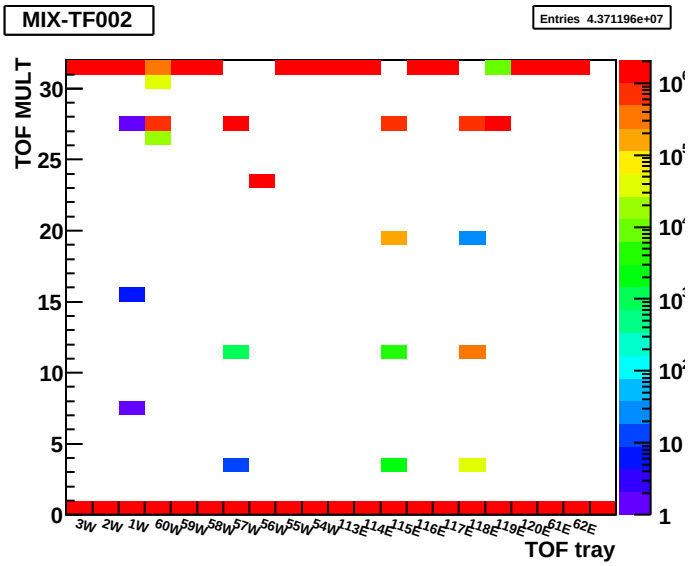

DAQ10k HT bits errors
Entries 1.356842e+07
×10^3
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

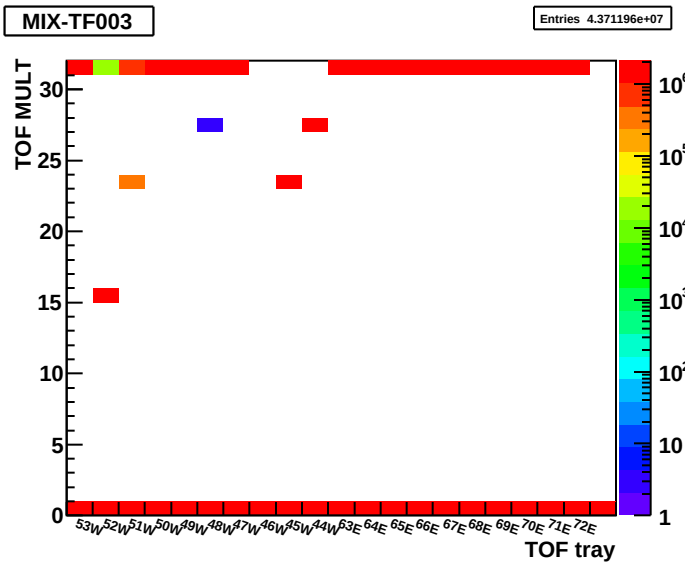

TPC Readout Mask (simulated)
Entries 1.352989e+07
×10^3
1000
800
600
400
200
0
0 5 10 15 20 25 30

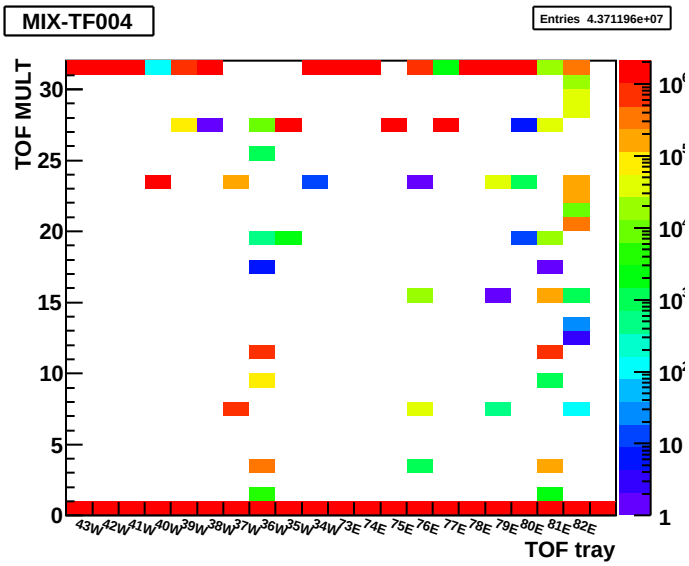

BunchId7Bit (all events)
Entries 1040761
10^5
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

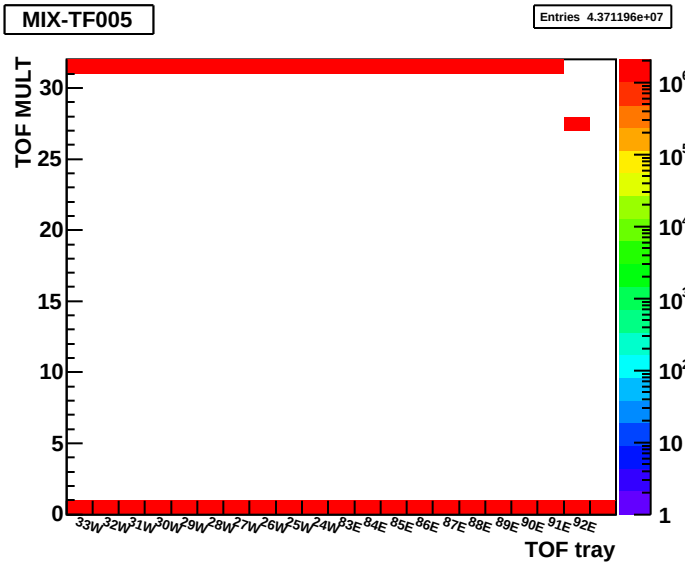

!Yellow-Fill
Entries 1040761
10^5
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

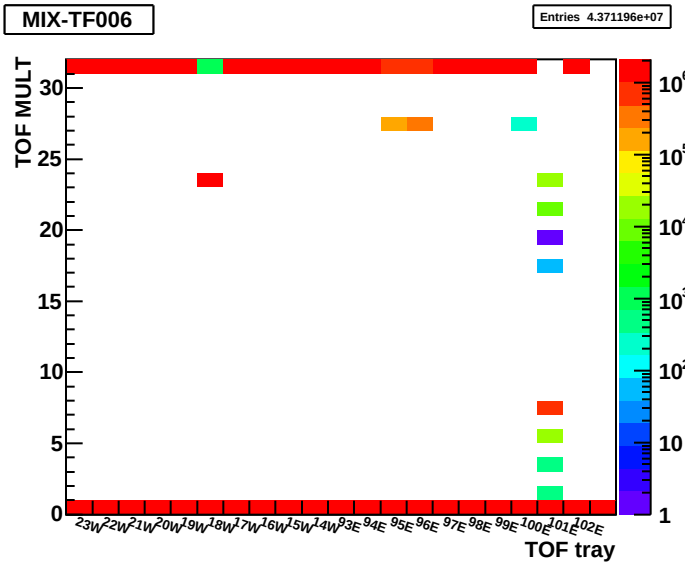

MIX-TF001
Entries 4.371196e+07
TOF MULT
TOF tray

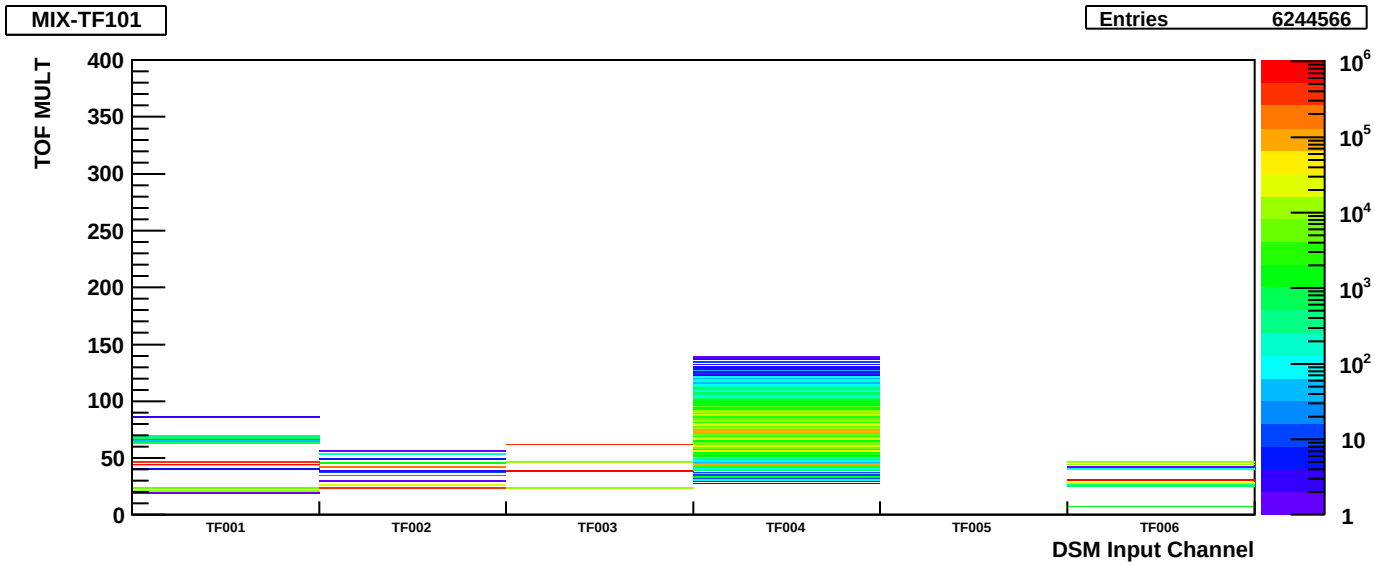

MIX-TF002
Entries 4.371196e+07
TOF MULT
TOF tray

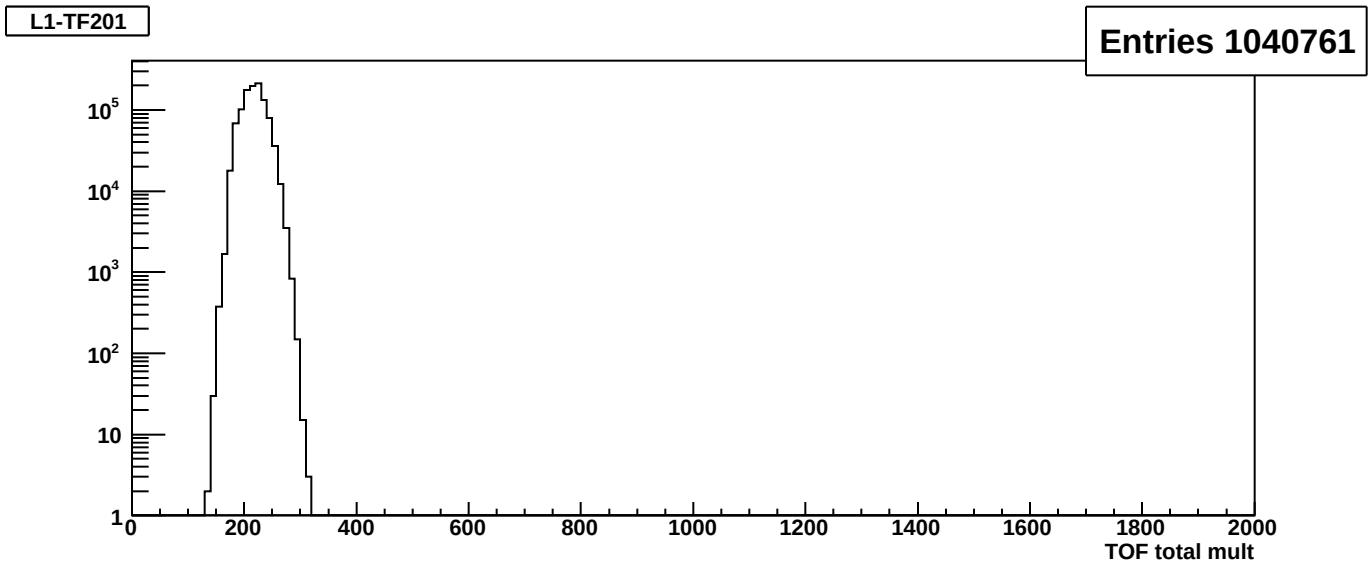

MIX-TF003
Entries 4.371196e+07
TOF MULT
TOF tray

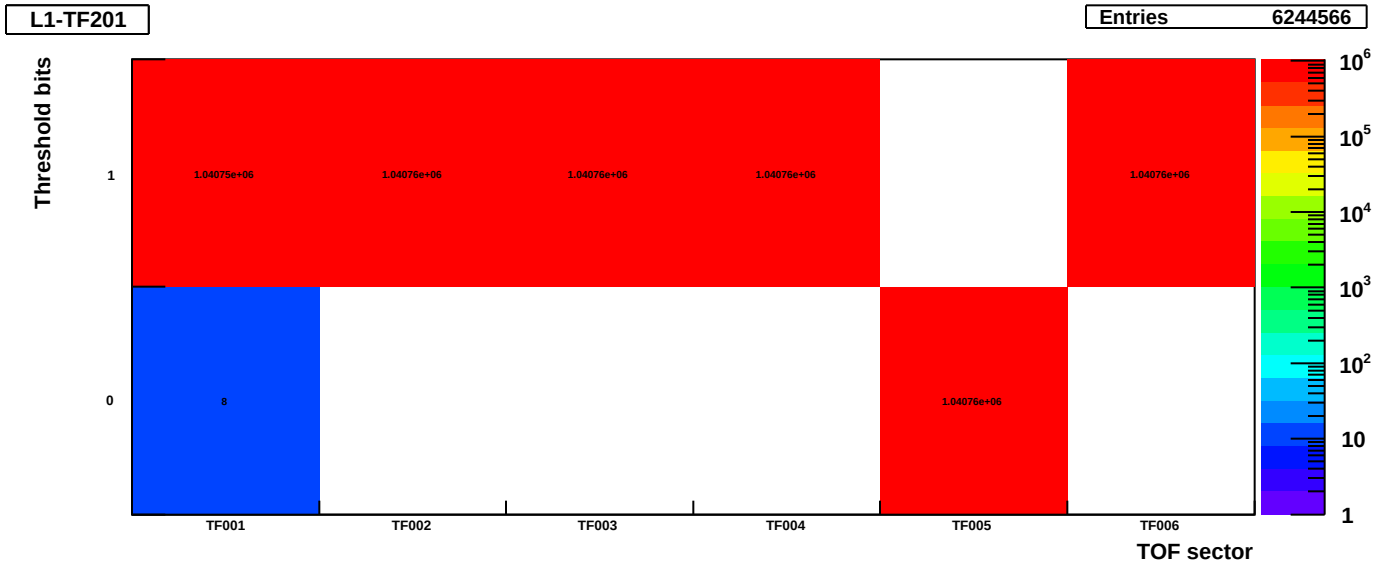

MIX-TF004
Entries 4.371196e+07
TOF MULT
TOF tray

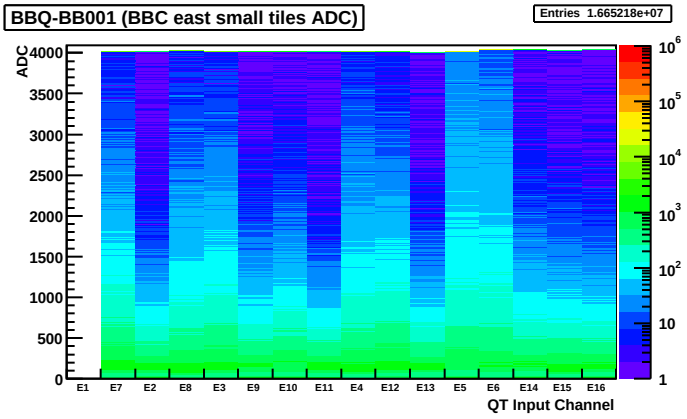

MIX-TF005
Entries 4.371196e+07
TOF MULT
TOF tray

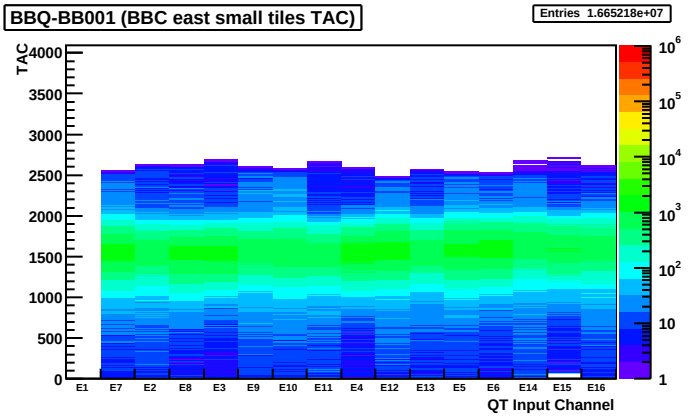

MIX-TF006
Entries 4.371196e+07
TOF MULT
TOF tray

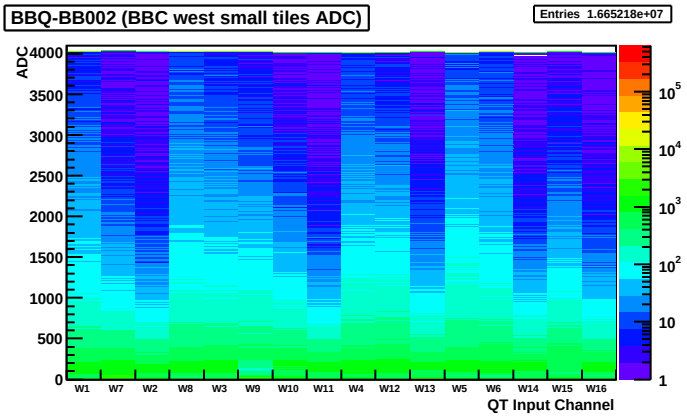

MIX-TF101
Entries 6244566
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^6
10^5
10^4
10^3
10^2
10
1

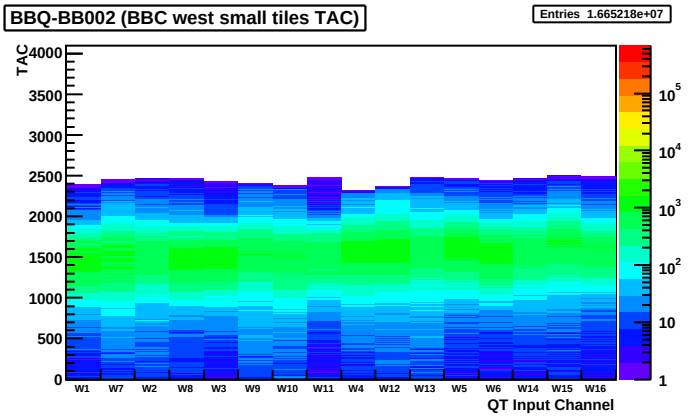

L1-TF201
Entries 1040761
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

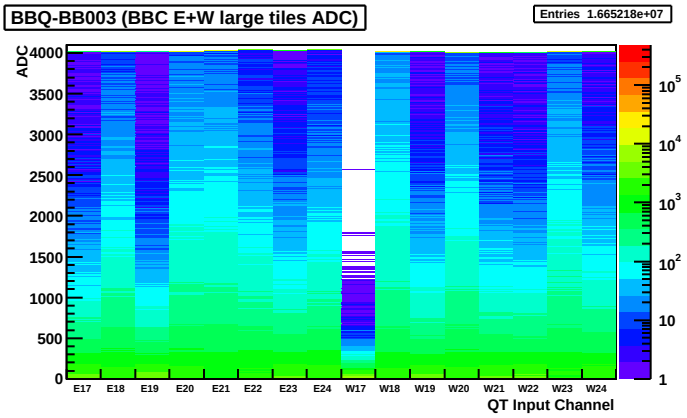

L1-TF201
Entries 6244566
Threshold bits
1
0
1.04075e+06
1.04076e+06
1.04076e+06
1.04076e+06
1.04076e+06
8
1.04076e+06
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^6
10^5
10^4
10^3
10^2
10
1

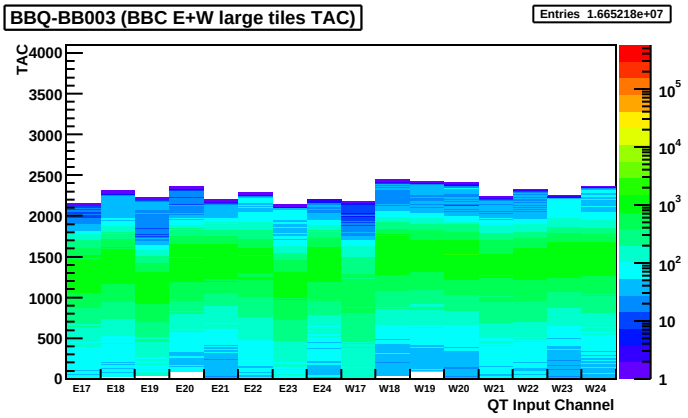

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.665218e+07
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

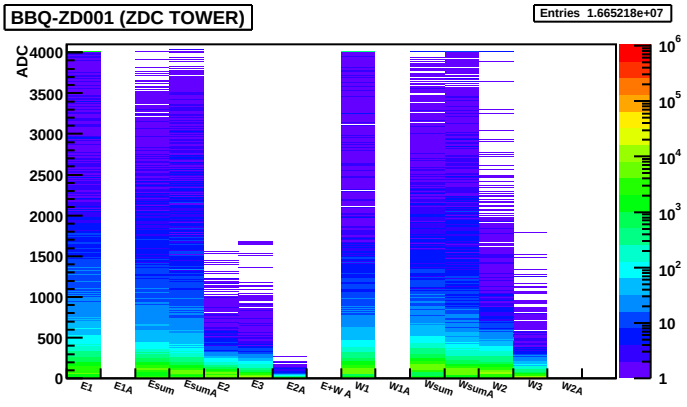

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.665218e+07
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

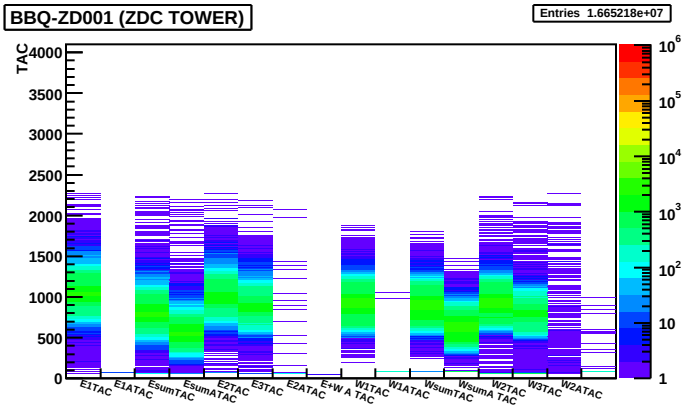

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.665218e+07
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

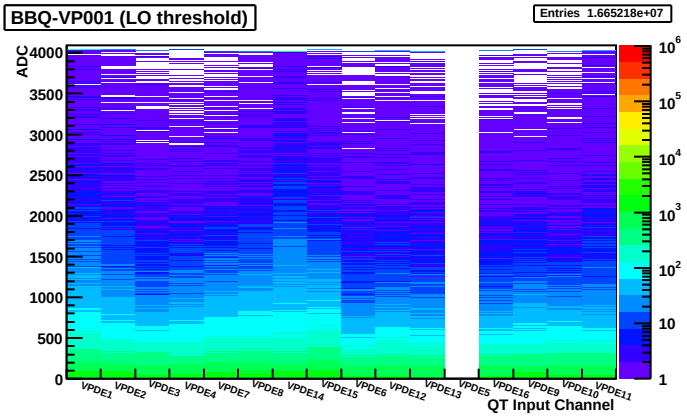

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.665218e+07
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

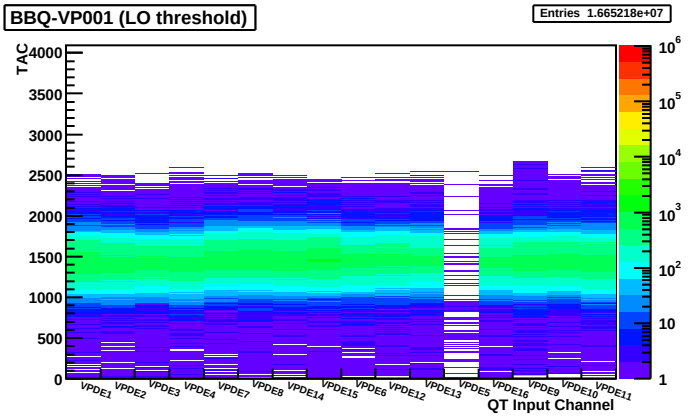

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.665218e+07
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

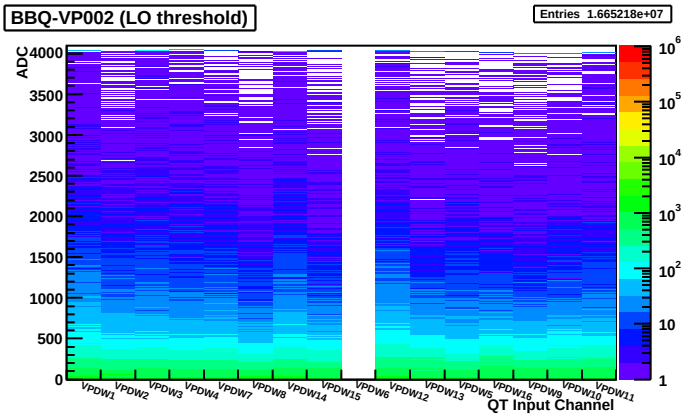

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.665218e+07
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

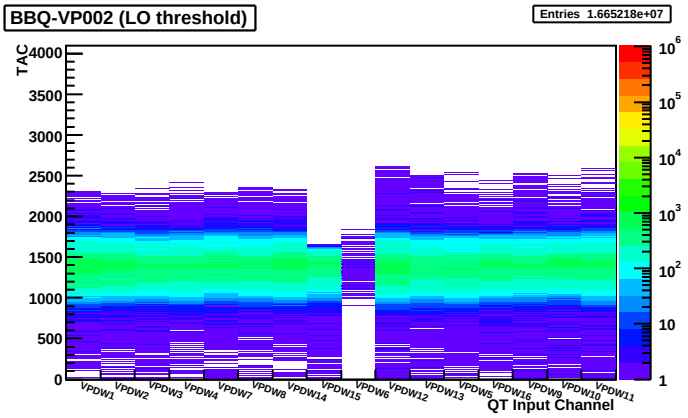

BBQ-ZD001 (ZDC TOWER)
Entries 1.665218e+07
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

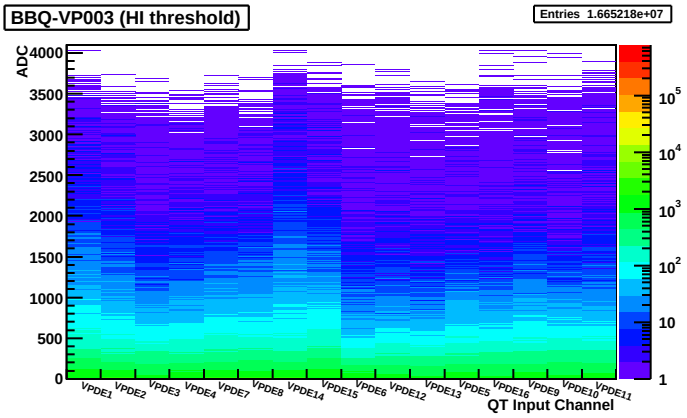

BBQ-ZD001 (ZDC TOWER)
Entries 1.665218e+07
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

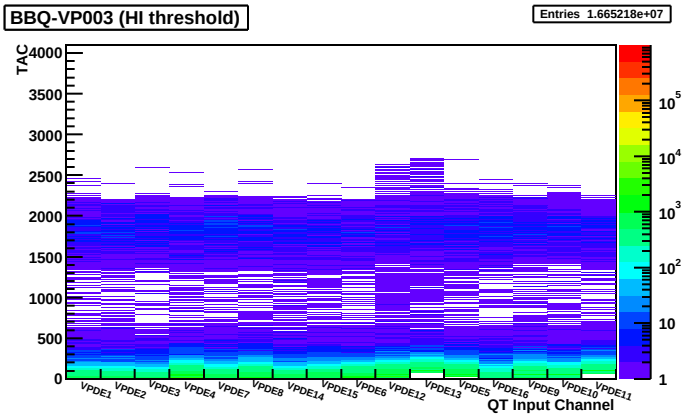

BBQ-VP001 (LO threshold)
Entries 1.665218e+07
ADC
QT Input Channel

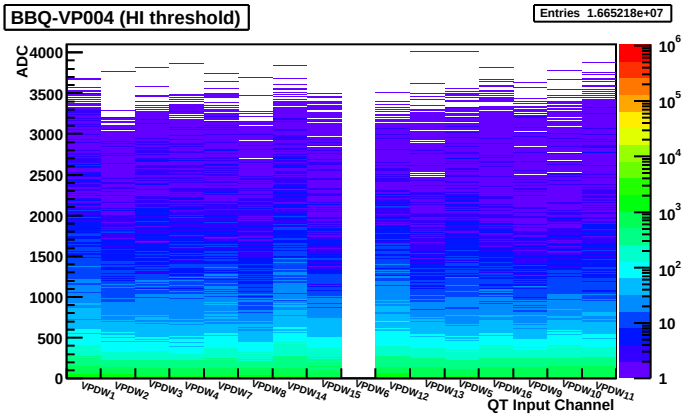

BBQ-VP001 (LO threshold)
Entries 1.665218e+07
TAC
QT Input Channel

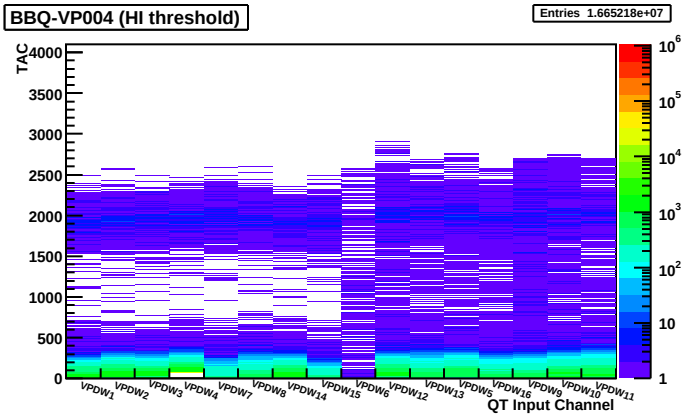

BBQ-VP002 (LO threshold)
Entries 1.665218e+07
ADC
QT Input Channel

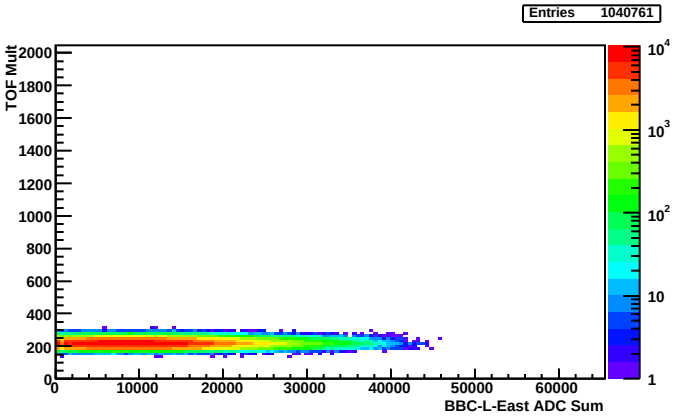

BBQ-VP002 (LO threshold)
Entries 1.665218e+07
TAC
QT Input Channel

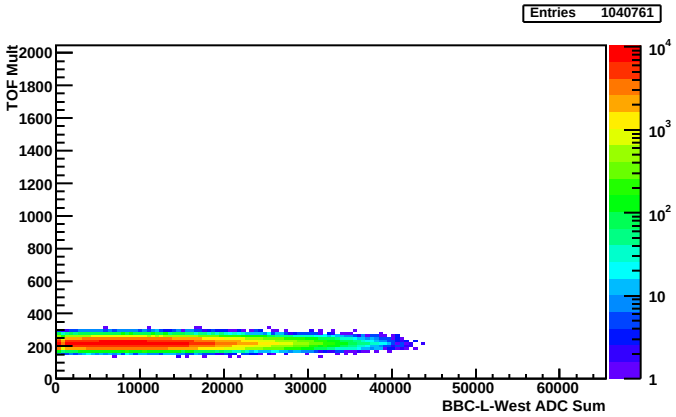

BBQ-VP003 (HI threshold)
Entries 1.665218e+07
ADC
QT Input Channel

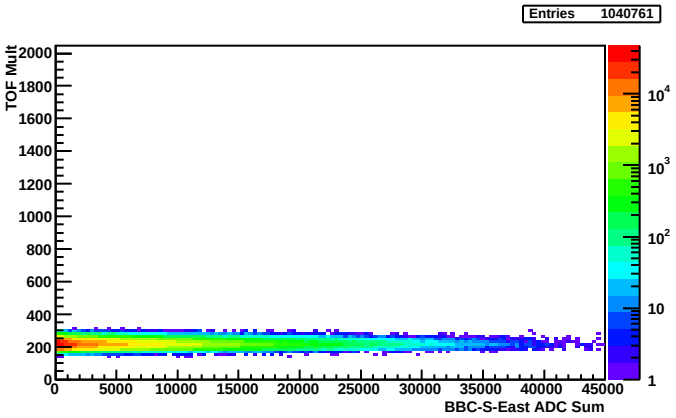

BBQ-VP003 (HI threshold)
Entries 1.665218e+07
TAC
QT Input Channel

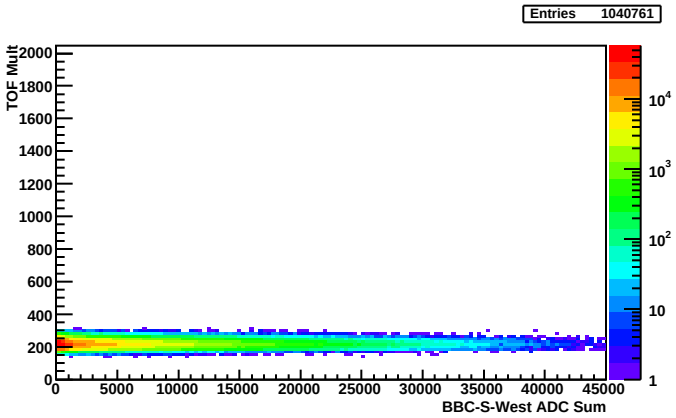

BBQ-VP004 (HI threshold)
Entries 1.665218e+07
ADC
QT Input Channel

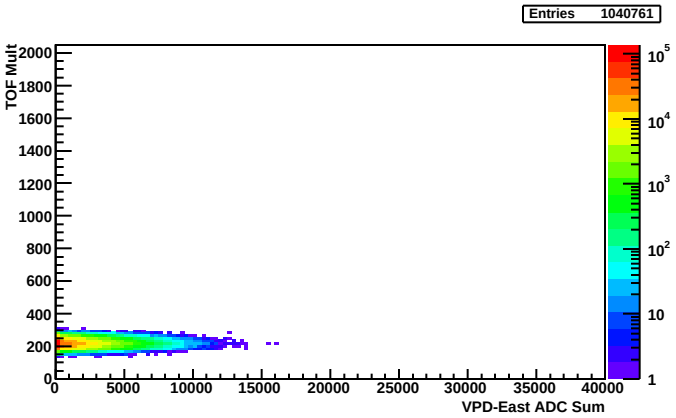

BBQ-VP004 (HI threshold)
Entries 1.665218e+07
TAC
QT Input Channel

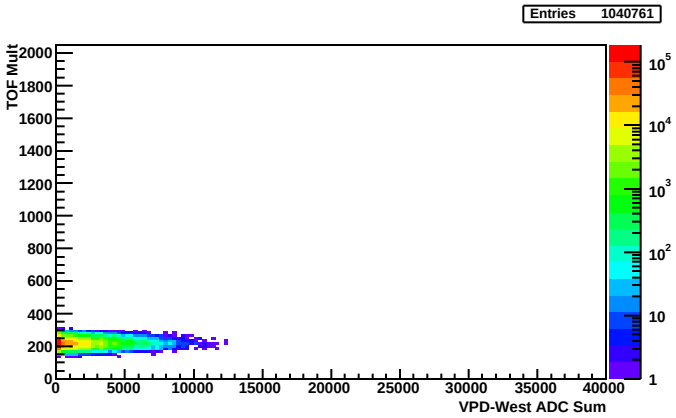

Entries 1040761
TOF Mult
BBC-L-East ADC Sum

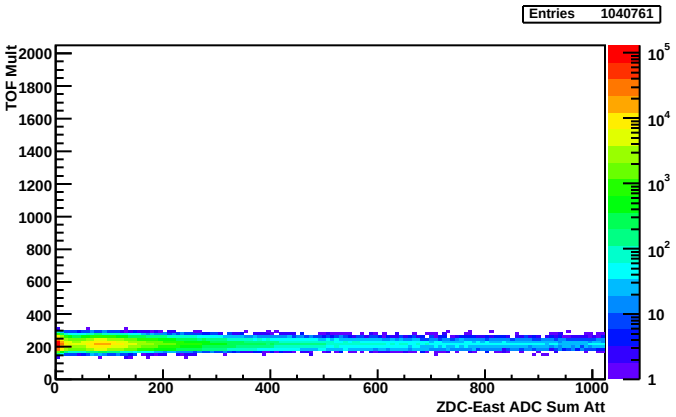

Entries 1040761
TOF Mult
BBC-L-West ADC Sum

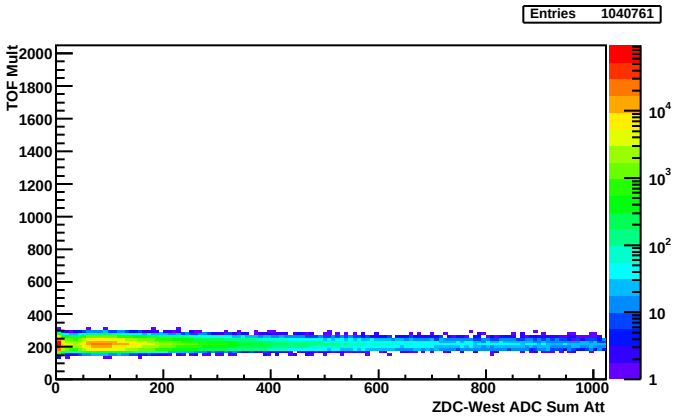

Entries 1040761
TOF Mult
BBC-S-East ADC Sum

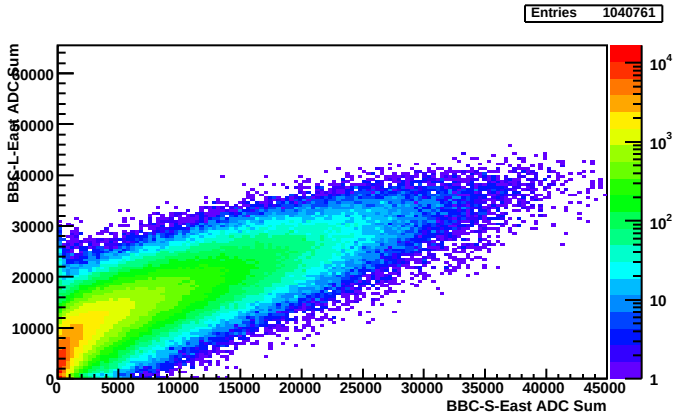

Entries 1040761
TOF Mult
BBC-S-West ADC Sum


Entries 1040761
TOF Mult
VPD-East ADC Sum


Entries 1040761
TOF Mult
VPD-West ADC Sum


Entries 1040761
TOF Mult
ZDC-East ADC Sum Att


Entries 1040761
TOF Mult
ZDC-West ADC Sum Att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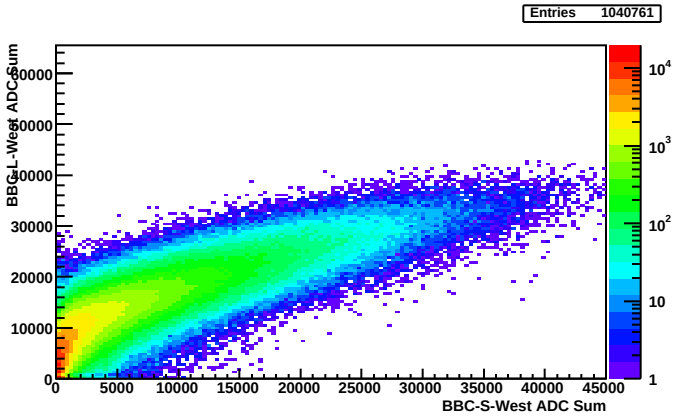
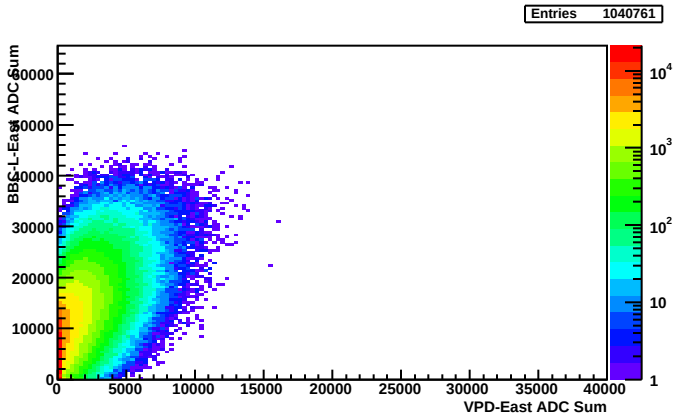
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 1040761
BBC-L-West ADC Sum
BBC-S-West ADC Sum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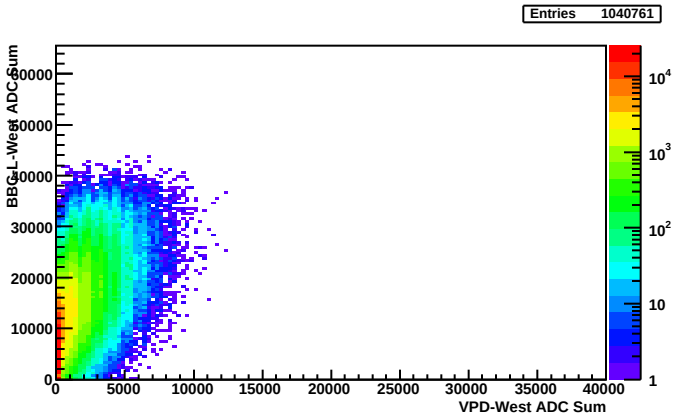
BBC-L-East ADC Sum
VPD-East ADC Sum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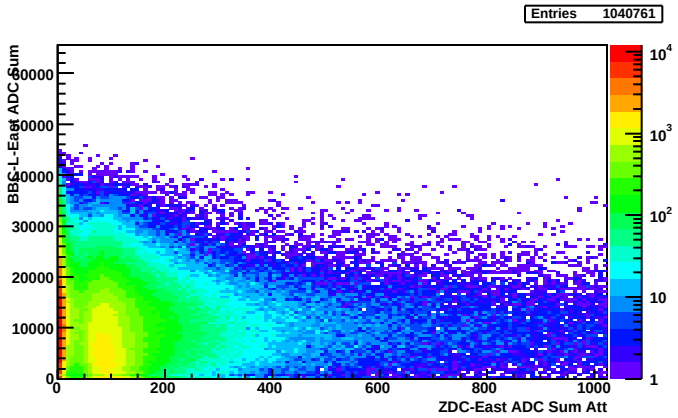
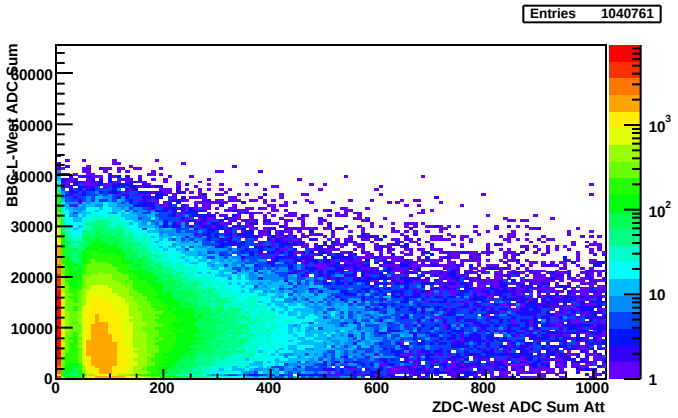
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 1040761
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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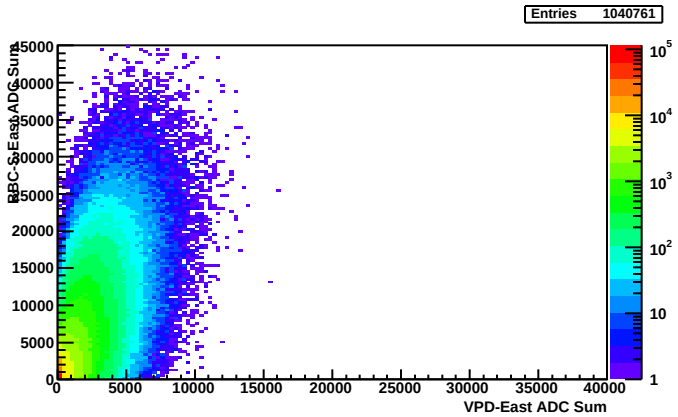
BBC-L-West ADC Sum
ZDC-West ADC Sum Att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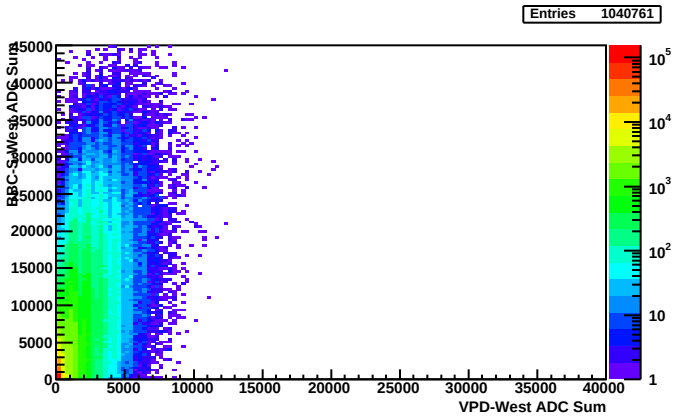
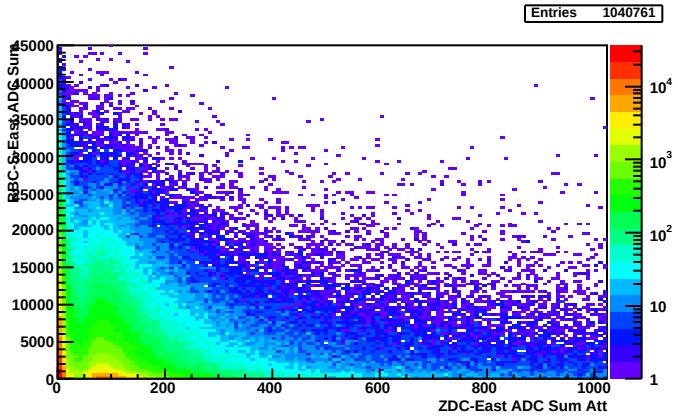
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 1040761
BBC-S-West ADC Sum
VPD-West ADC Sum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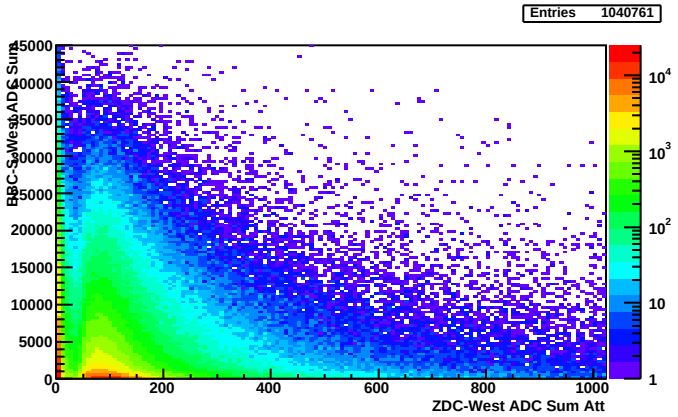
BBC-S-East ADC Sum
ZDC-East ADC Sum Att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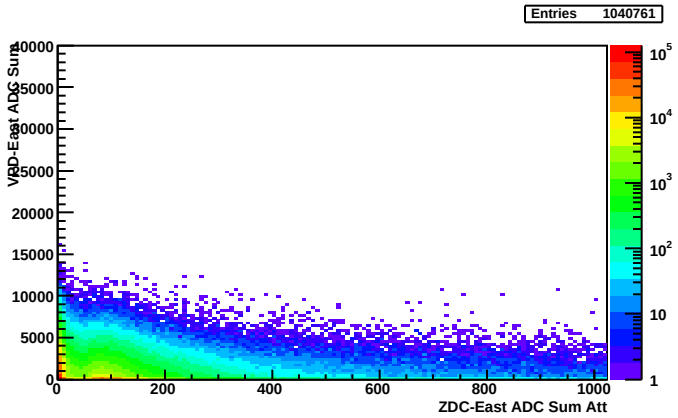
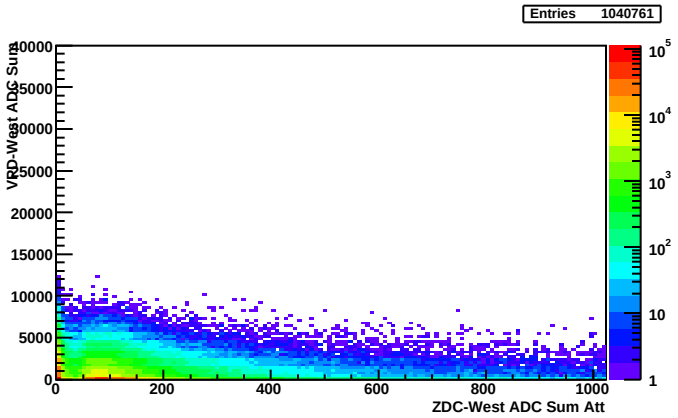
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 1040761
VPD-East ADC Sum
ZDC-East ADC Sum Att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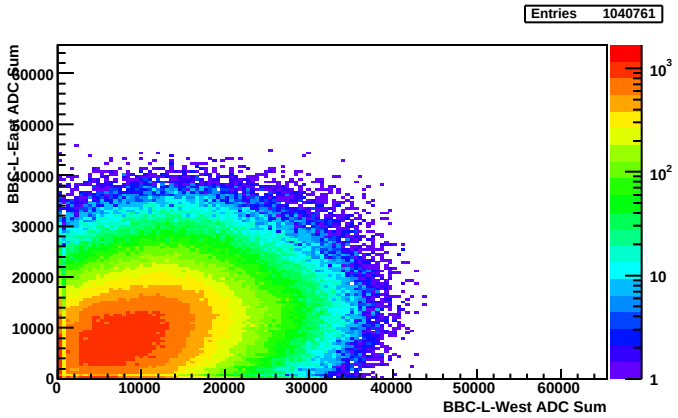
VPD-West ADC Sum
ZDC-West ADC Sum Att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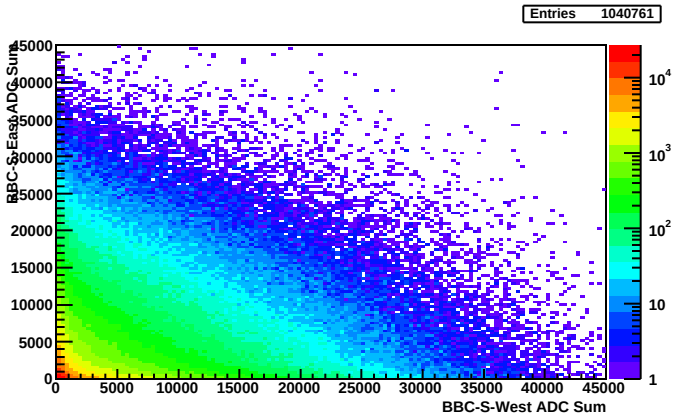
BBC-L-East ADC Sum
BBC-L-West ADC Sum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BBC-S-East ADC Sum
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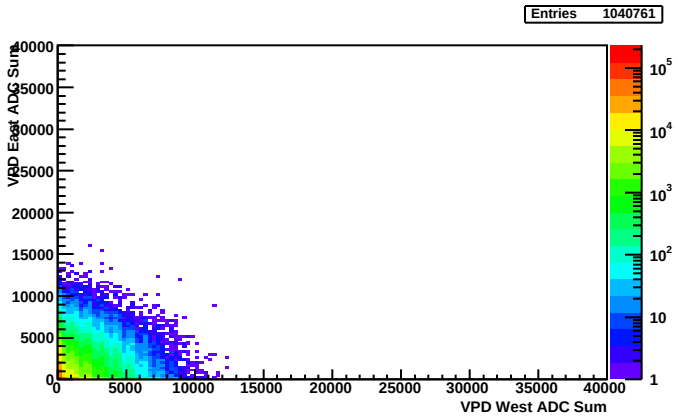
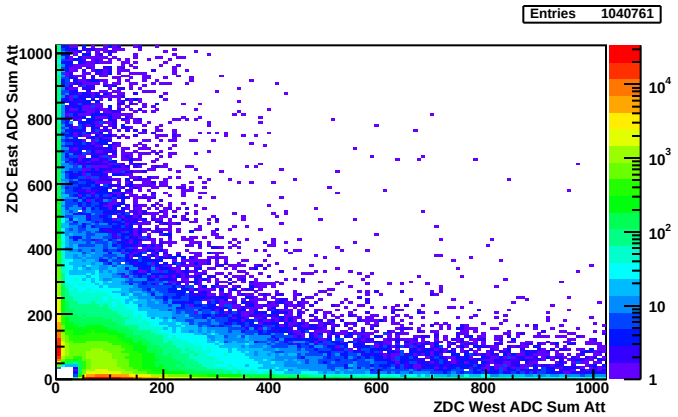
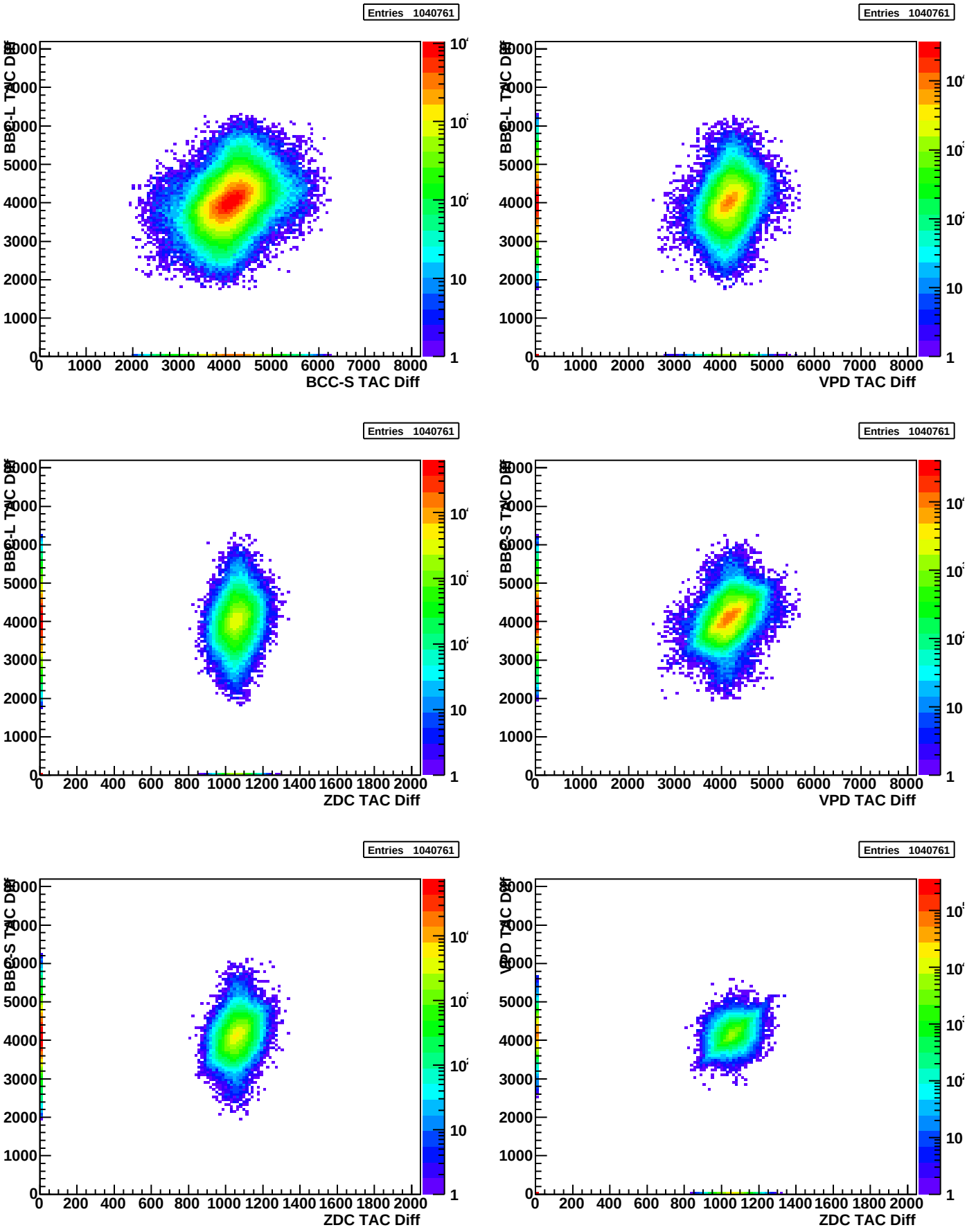

Entries 1040761
VPD East ADC Sum
VPD West ADC Sum


Entries 1040761
ZDC East ADC Sum Att
ZDC West ADC Sum Att


Entries 1040761
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1040761
BBC-L TAC Diff
VPD TAC Diff
Entries 1040761
BBC-L TAC Diff
ZDC TAC Diff
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BBC-S TAC Diff
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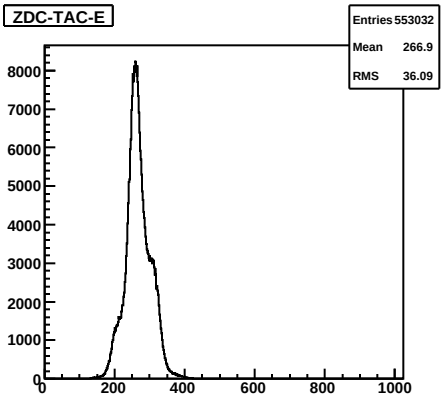
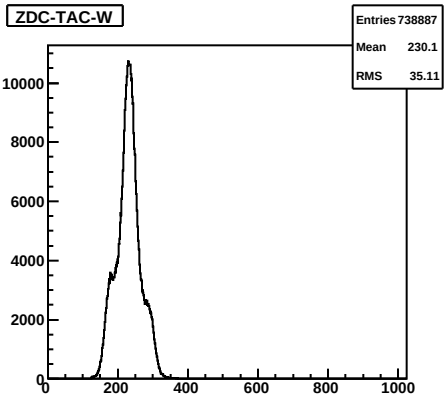
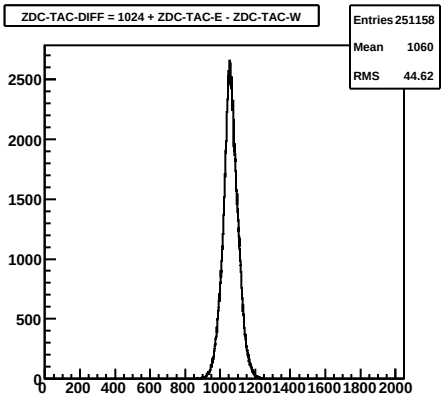
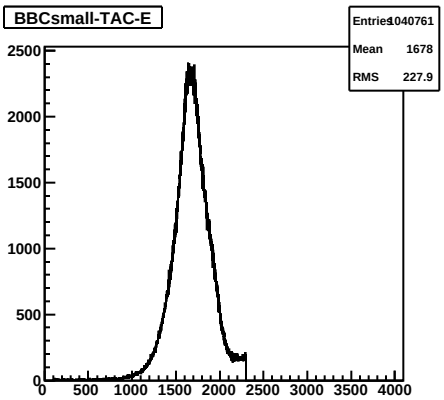
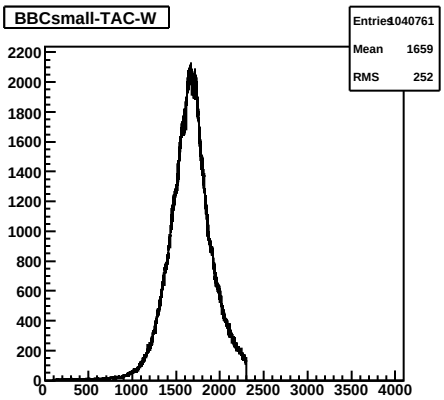
VPD TAC Diff
ZDC TAC Diff

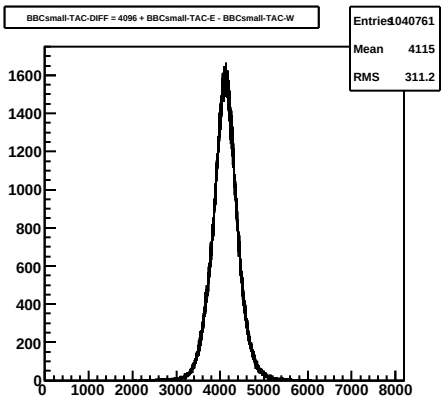

ZDC-TAC-E
Entries 553032
Mean 266.9
RMS 36.09

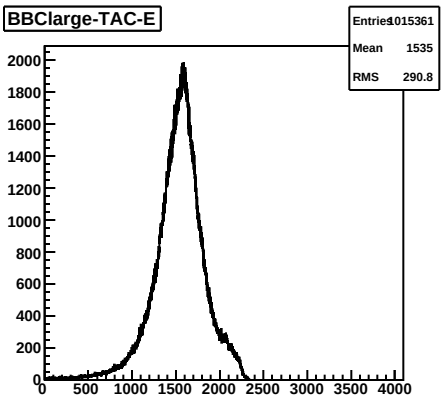

ZDC-TAC-W
Entries 738887
Mean 230.1
RMS 35.11

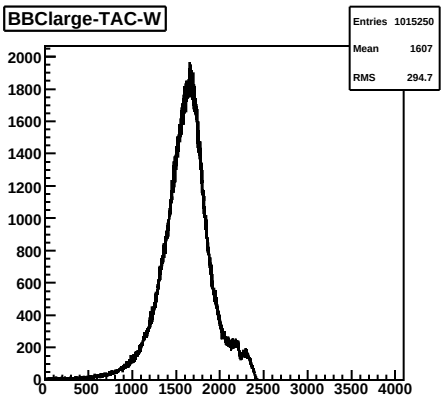

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 251158
Mean 1060
RMS 44.62

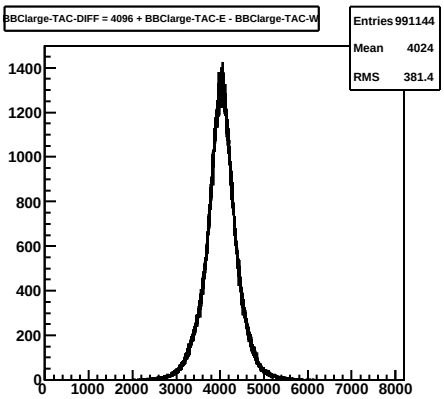

BBCsmall-TAC-E
Entries 1040761
Mean 1678
RMS 227.9

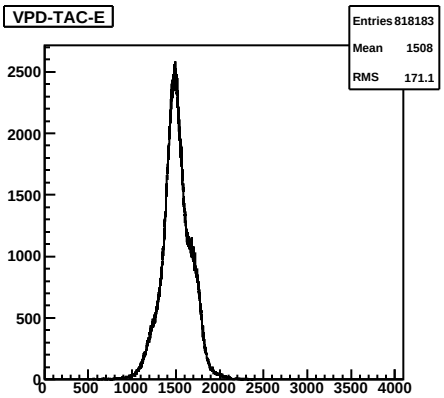

BBCsmall-TAC-W
Entries 1040761
Mean 1659
RMS 252

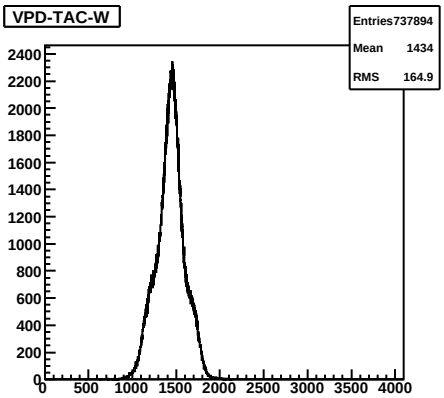

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1040761
Mean 4115
RMS 311.2

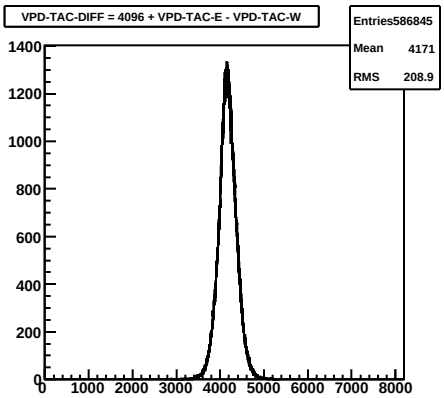

BBClarge-TAC-E
Entries 1015361
Mean 1535
RMS 290.8

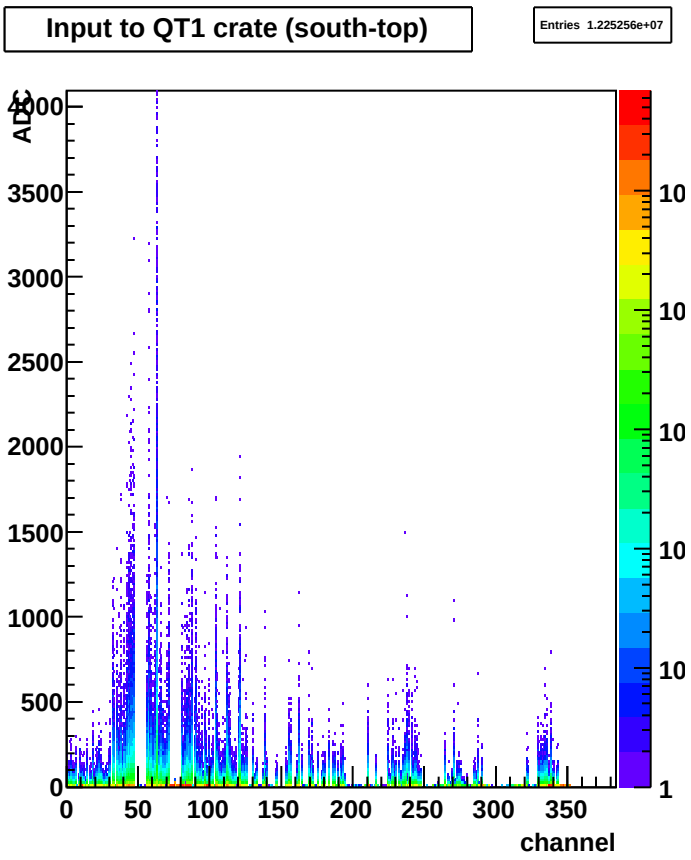

BBClarge-TAC-W
Entries 1015250
Mean 1607
RMS 294.7

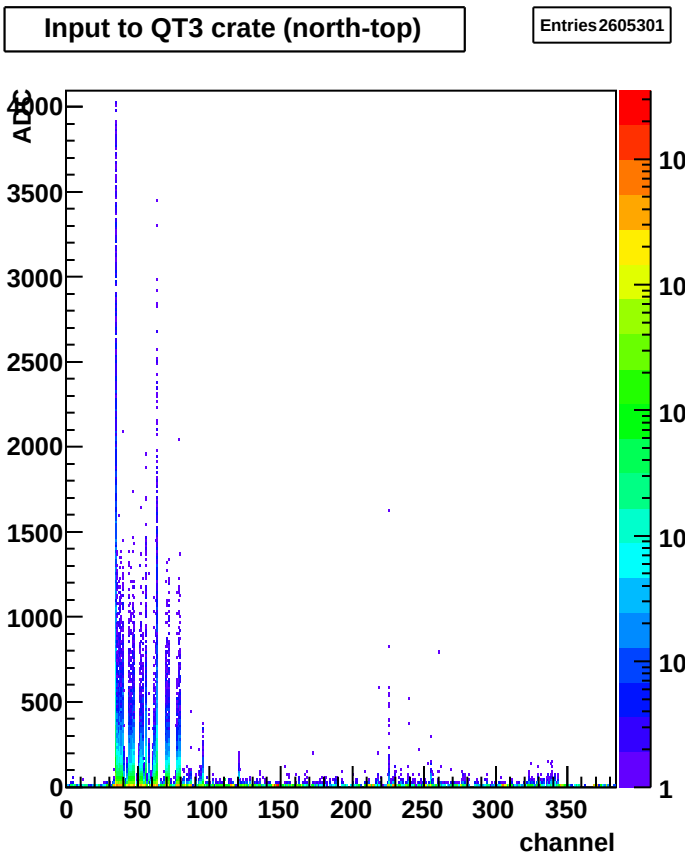

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 991144
Mean 4024
RMS 381.4

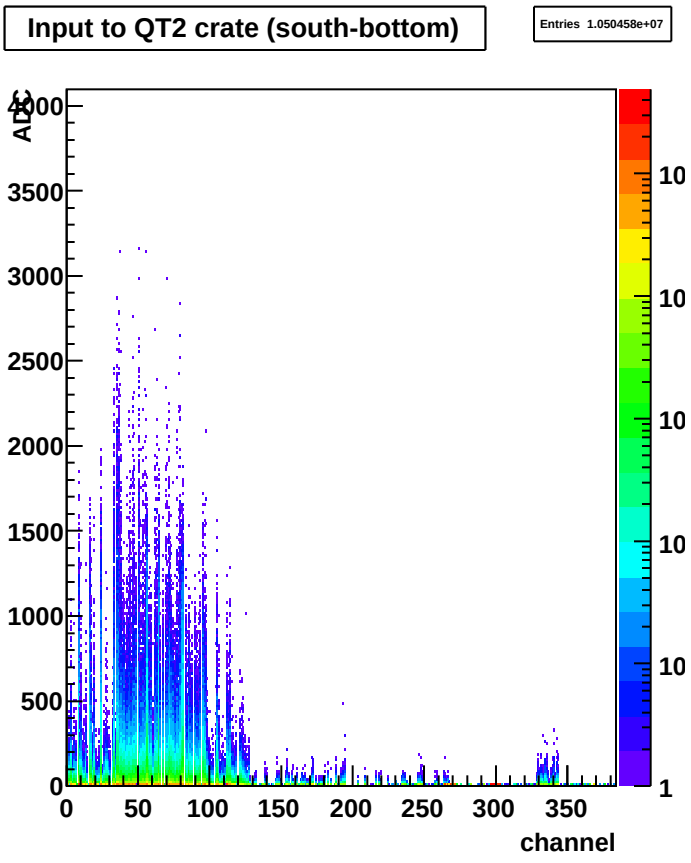

VPD-TAC-E
Entries 818183
Mean 1508
RMS 171.1

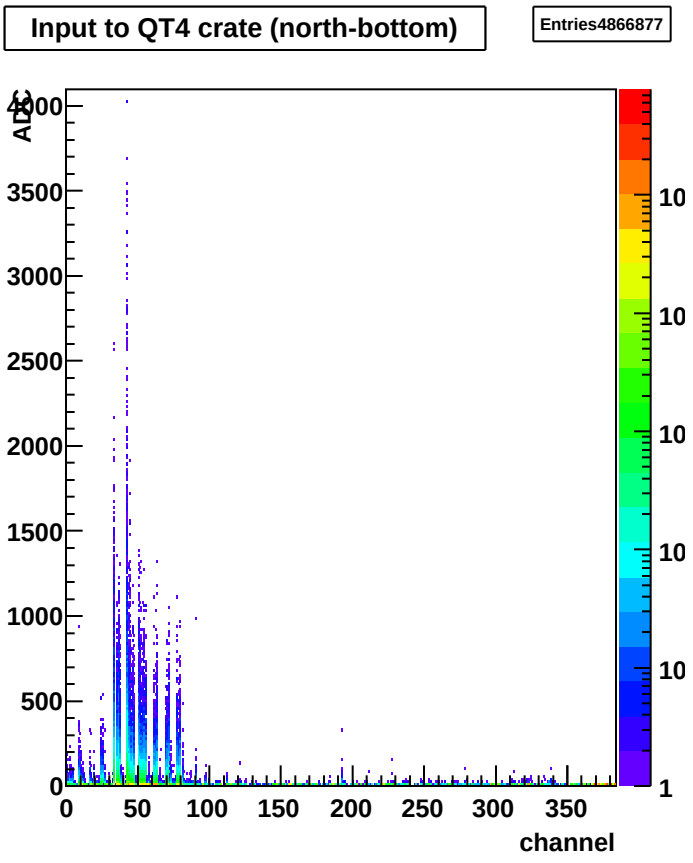

VPD-TAC-W
Entries 737894
Mean 1434
RMS 164.9

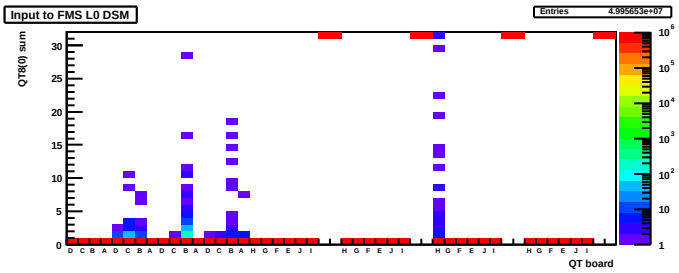

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 586845
Mean 4171
RMS 208.9

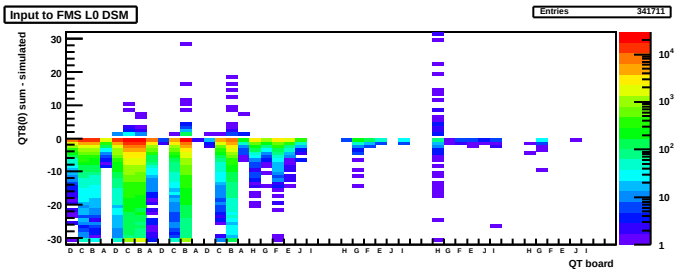

Input to QT1 crate (south-top)
Entries 1.225256e+07
ADC
channel

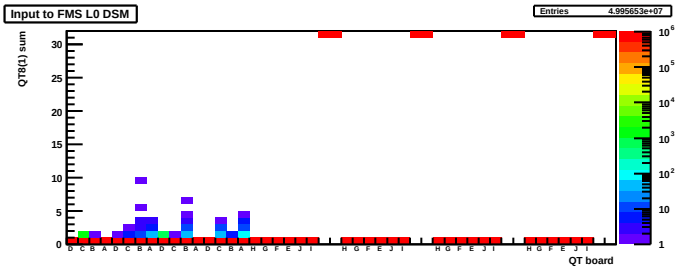

Input to QT3 crate (north-top)
Entries 2605301
ADC
channel

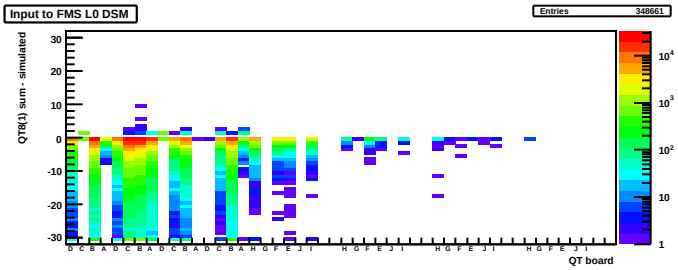

Input to QT2 crate (south-bottom)
Entries 1.050458e+07
ADC
channel

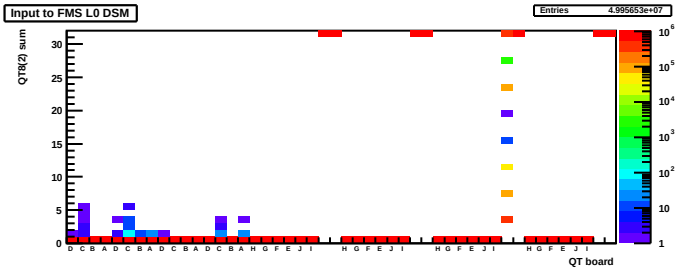

Input to QT4 crate (north-bottom)
Entries 4866877
ADC
channel

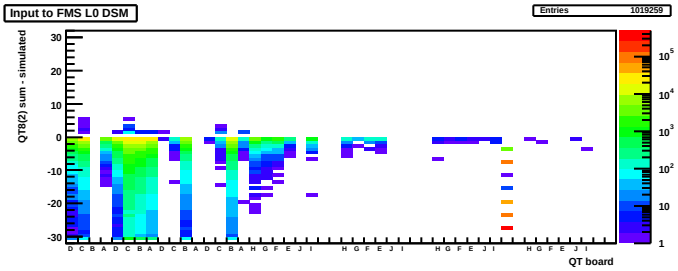

Input to FMS L0 DSM
Entries 4.995653e+07
QT8(0) sum
QT board

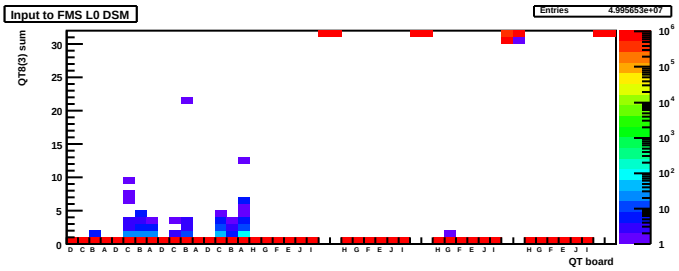

Input to FMS L0 DSM
Entries 341711
QT8(0) sum - simulated
QT board

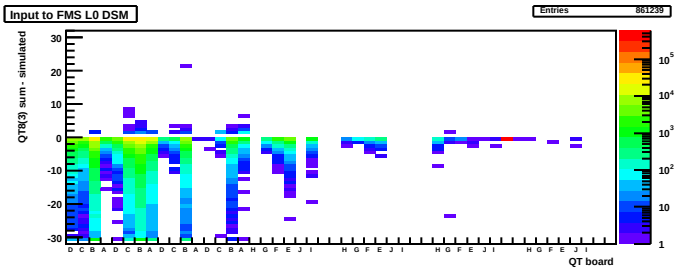

Input to FMS L0 DSM
Entries 4.995653e+07
QT8(1) sum
QT board

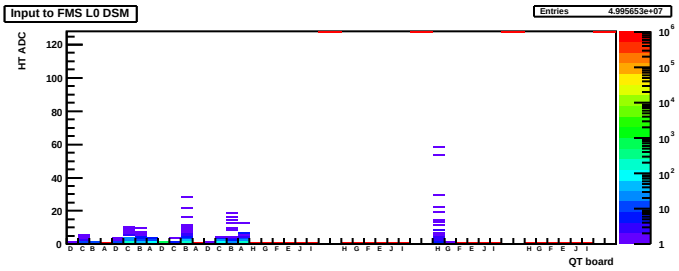

Input to FMS L0 DSM
Entries 348661
QT8(1) sum - simulated
QT board

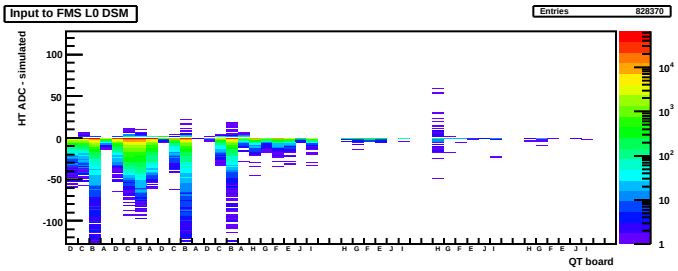

Input to FMS L0 DSM
Entries 4.995653e+07
QT8(2) sum
QT board

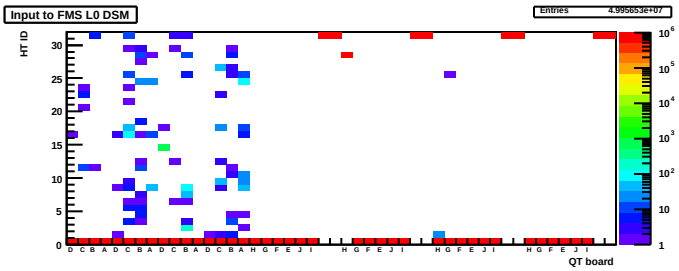

Input to FMS L0 DSM
Entries 1019259
QT8(2) sum - simulated
QT board

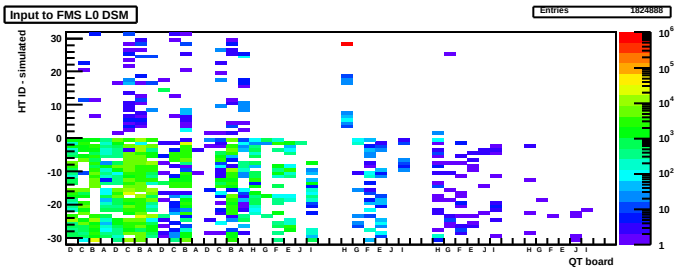

Input to FMS L0 DSM
Entries 4.995653e+07
QT8(3) sum
QT board

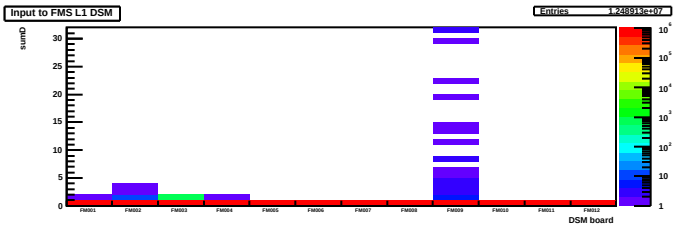

Input to FMS L0 DSM
Entries 861239
QT8(3) sum - simulated
QT board

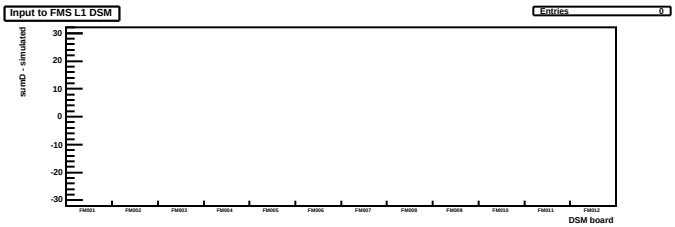

Input to FMS L0 DSM
Entries 4.995653e+07
HT ADC
QT board

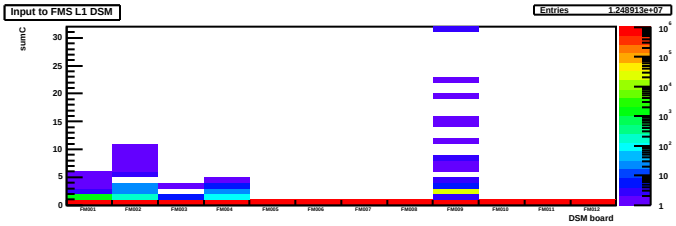

Input to FMS L0 DSM
Entries 828370
HT ADC - simulated
QT board

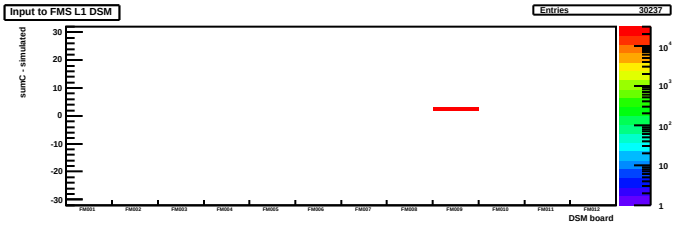

Input to FMS L0 DSM
Entries 4.995653e+07
HT ID
QT board

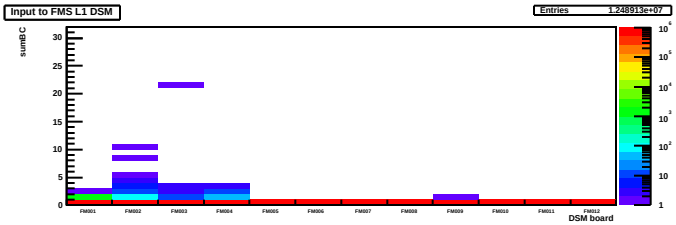

Input to FMS L0 DSM
Entries 1824888
HT ID - simulated
QT board

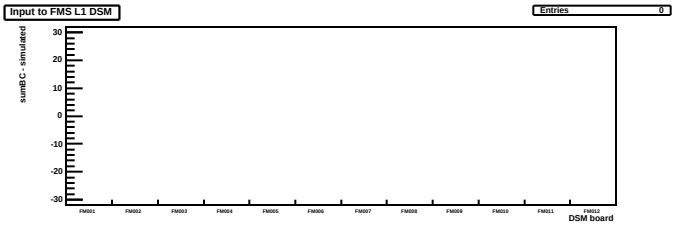

Input to FMS L1 DSM
Entries 1.248913e+07
sumD
DSM board

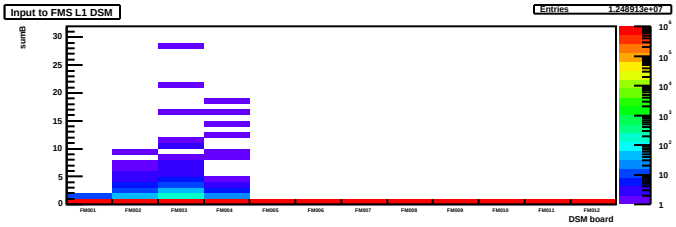

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

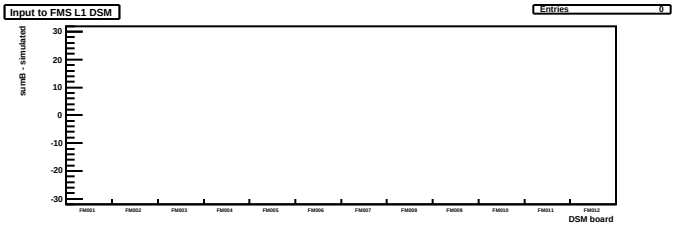

Input to FMS L1 DSM
Entries 1.248913e+07
sumC
DSM board

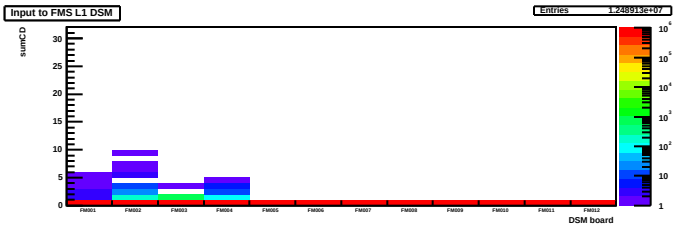

Input to FMS L1 DSM
Entries 30237
sumC - simulated
DSM board

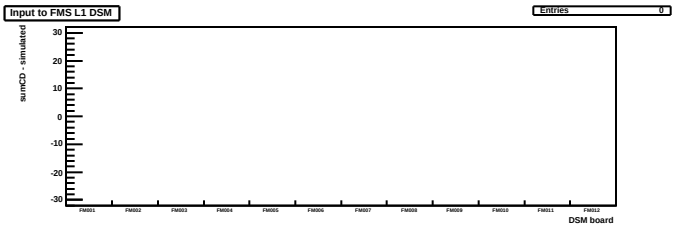

Input to FMS L1 DSM
Entries 1.248913e+07
sumBC
DSM board

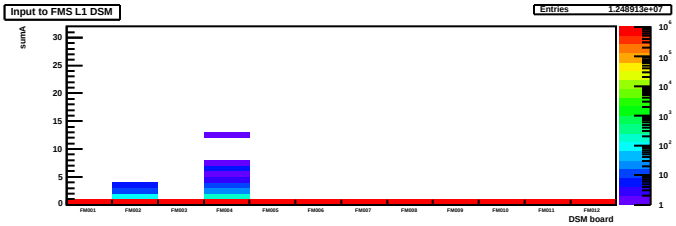

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

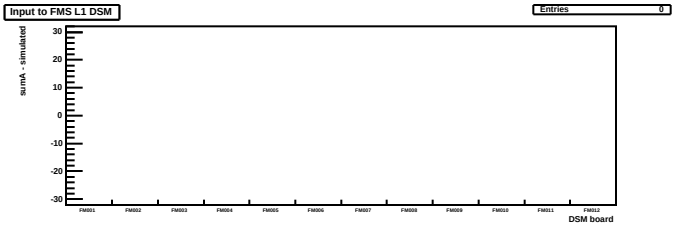

Input to FMS L1 DSM
Entries 1.248913e+07
sumB
DSM board

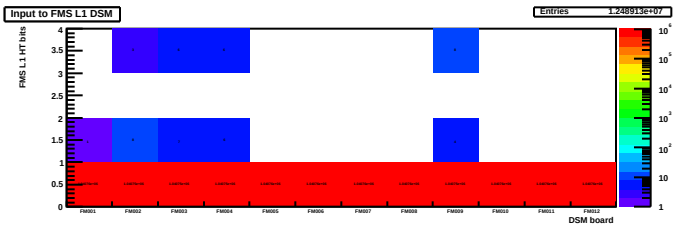

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

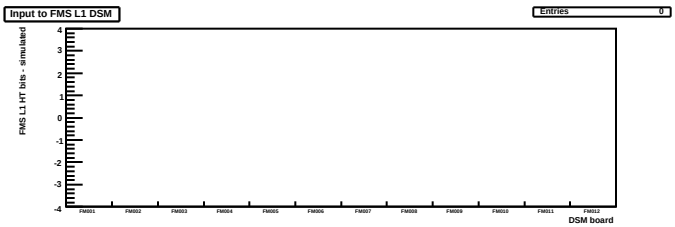

Input to FMS L1 DSM
Entries 1.248913e+07
sumCD
DSM board

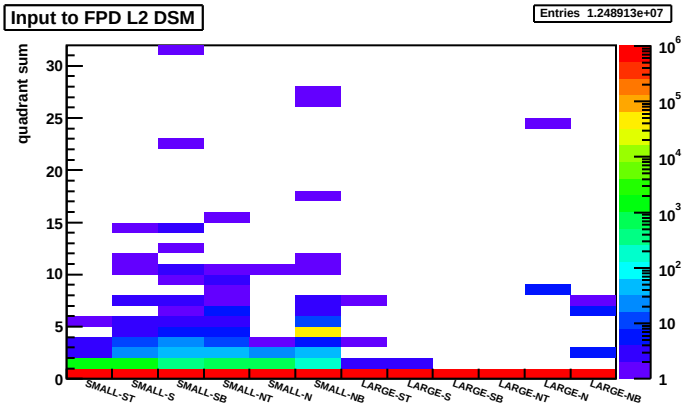

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

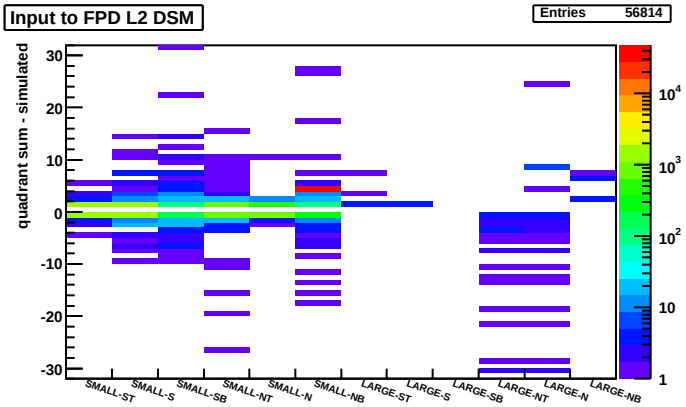

Input to FMS L1 DSM
Entries 1.248913e+07
sumA
DSM board

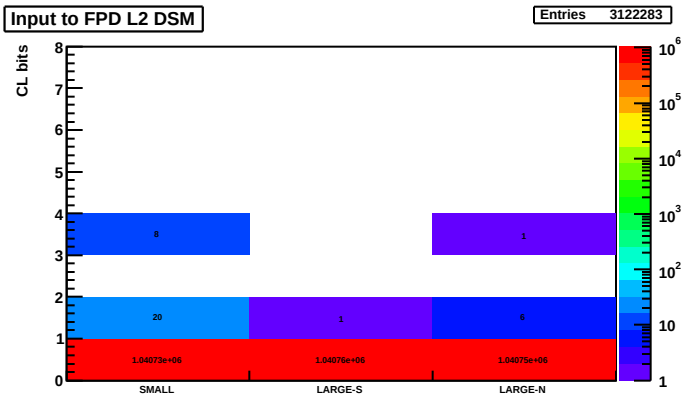

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

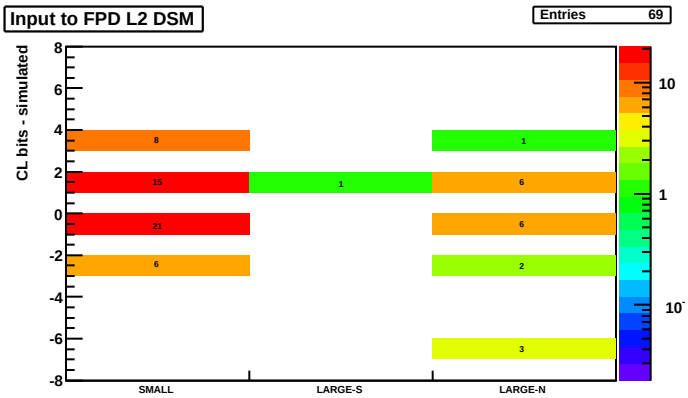

Input to FMS L1 DSM
Entries 1.248913e+07
FMS L1 HT bits
DSM board

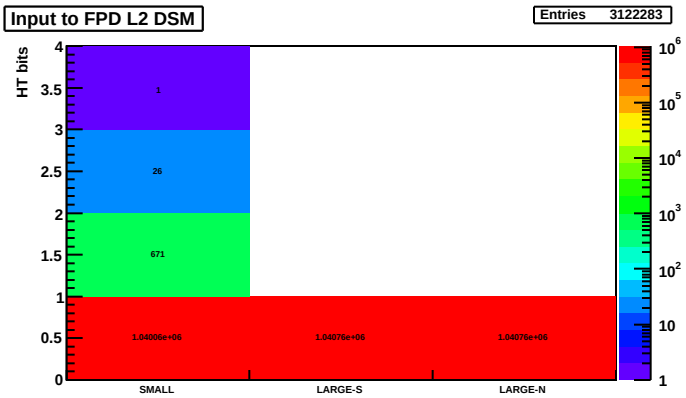

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

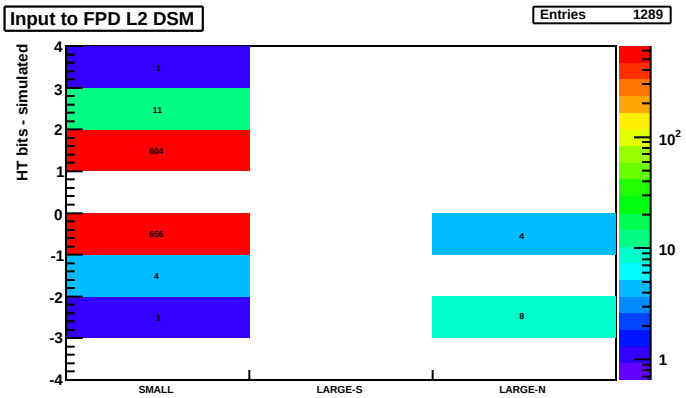

Input to FPD L2 DSM
Entries 1.248913e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

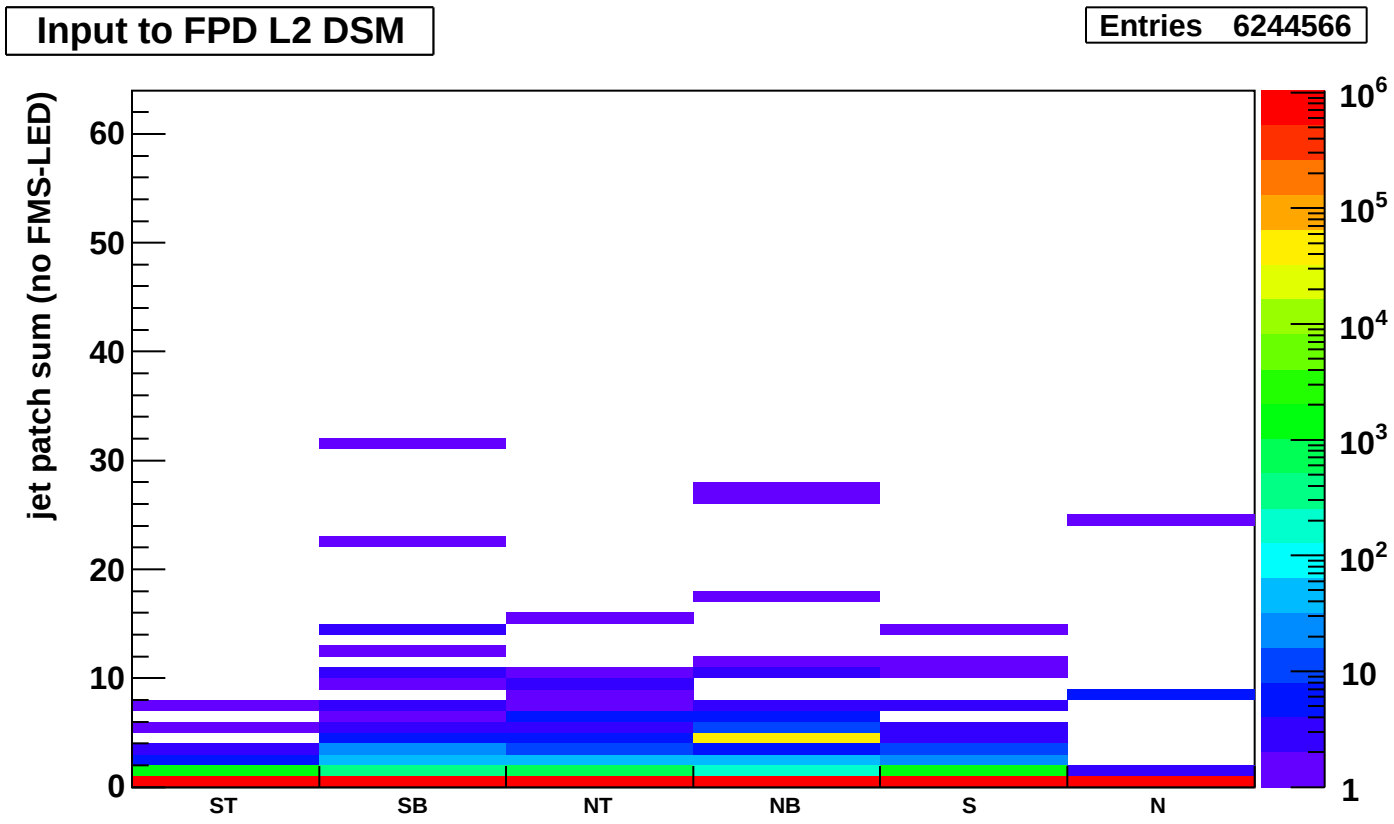

Input to FPD L2 DSM
Entries 56814
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

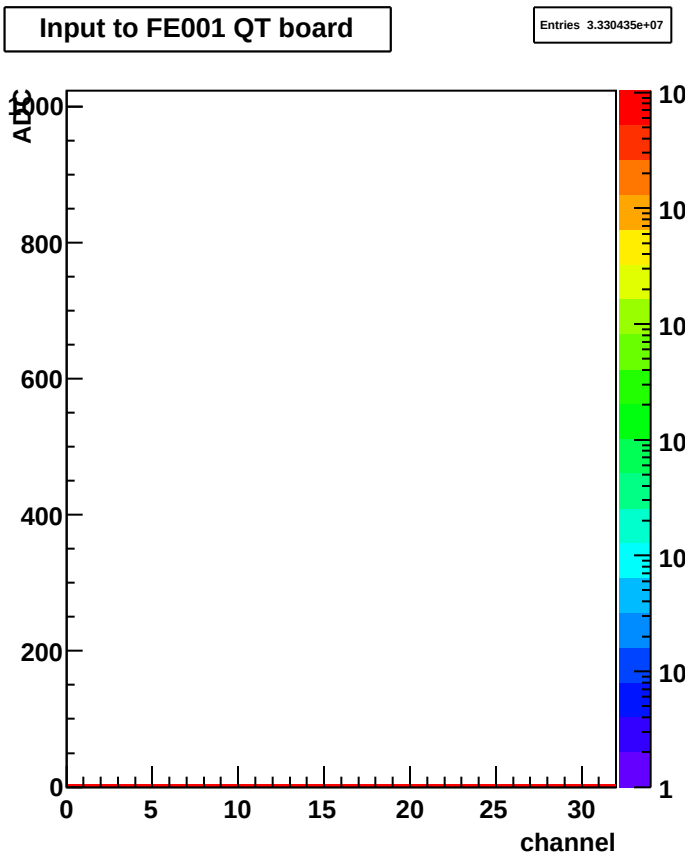

Input to FPD L2 DSM
Entries 3122283
CL bits
8
1
20
1
6
1.04073e+06
1.04076e+06
1.04075e+06
SMALL
LARGE-S
LARGE-N

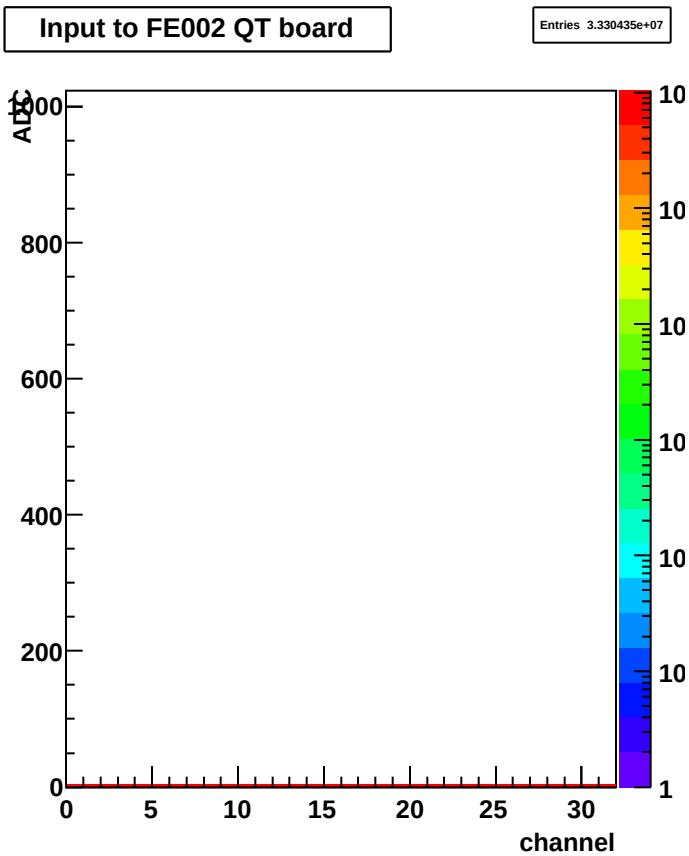

Input to FPD L2 DSM
Entries 69
CL bits - simulated
8
1
15
1
6
21
6
6
2
3
SMALL
LARGE-S
LARGE-N

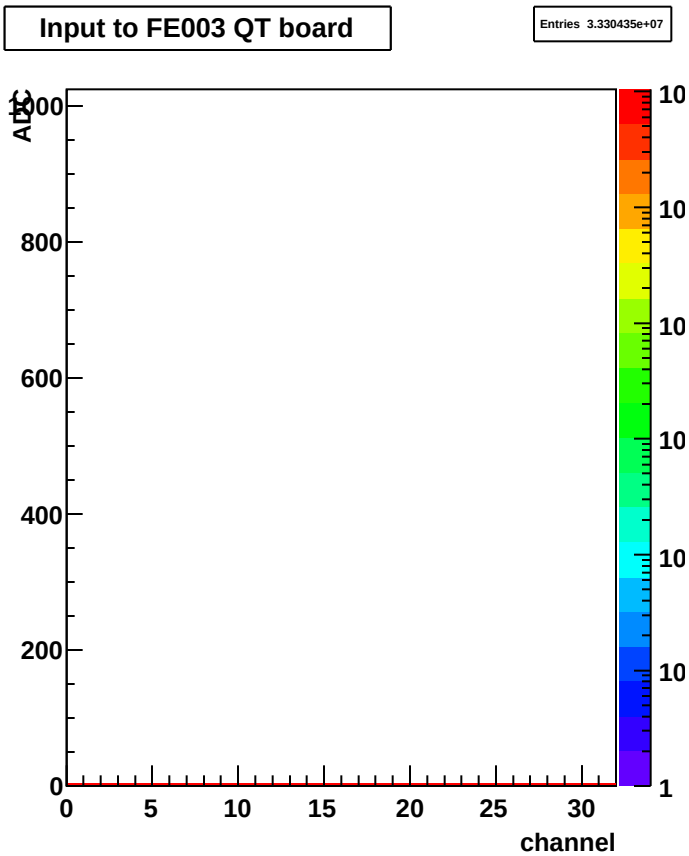

Input to FPD L2 DSM
Entries 3122283
HT bits
1
26
671
1.04006e+06
1.04076e+06
1.04076e+06
SMALL
LARGE-S
LARGE-N

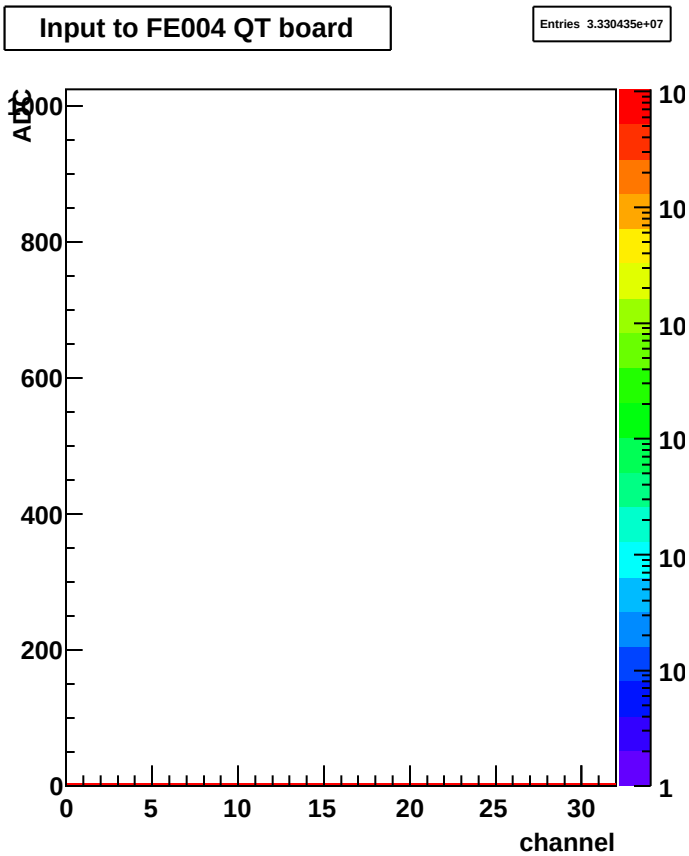

Input to FPD L2 DSM
Entries 1289
HT bits - simulated
1
11
604
656
4
1
4
8
SMALL
LARGE-S
LARGE-N

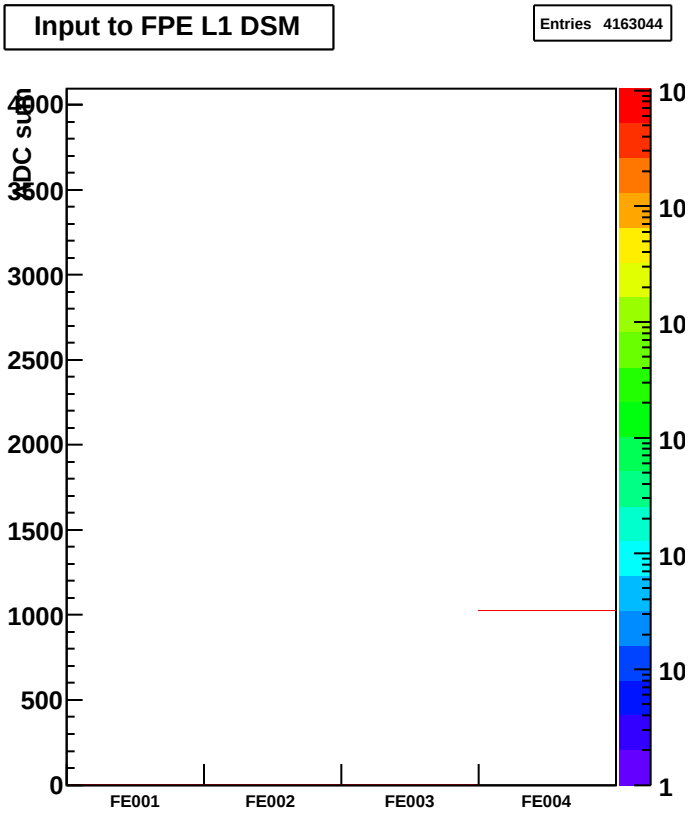

Input to FPD L2 DSM
Entries 6244566
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6

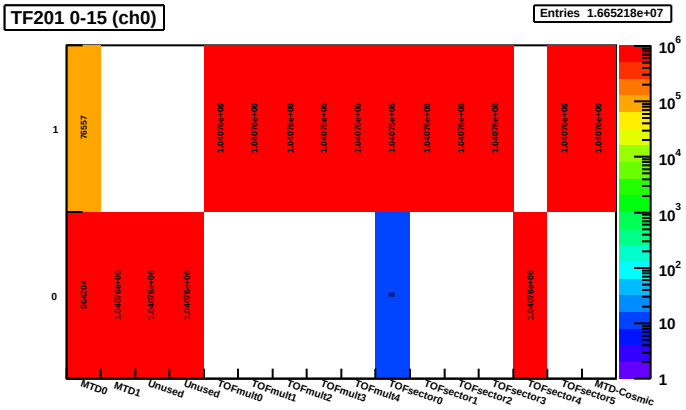

Input to FE001 QT board
Entries 3.330435e+07
ADC
channel

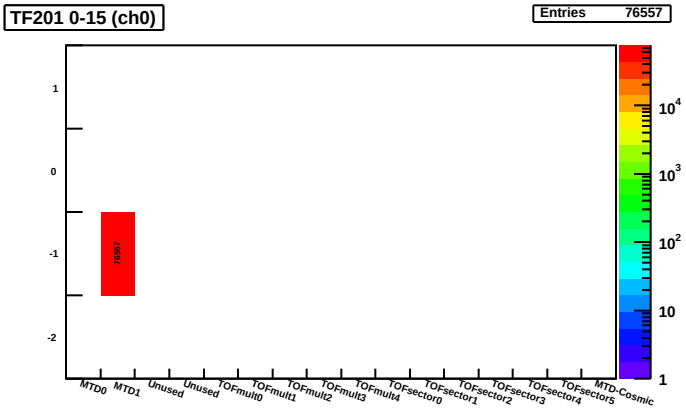

Input to FE002 QT board
Entries 3.330435e+07
ADC
channel

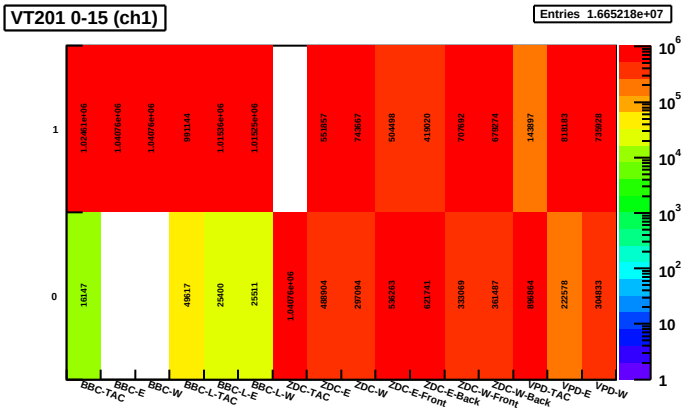

Input to FE003 QT board
Entries 3.330435e+07
ADC
channel

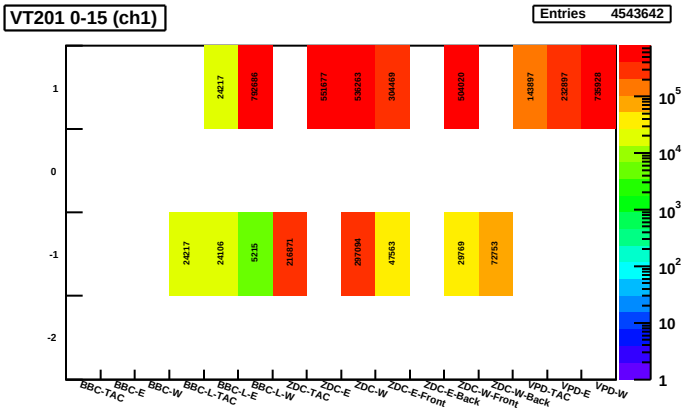

Input to FE004 QT board
Entries 3.330435e+07
ADC
channel

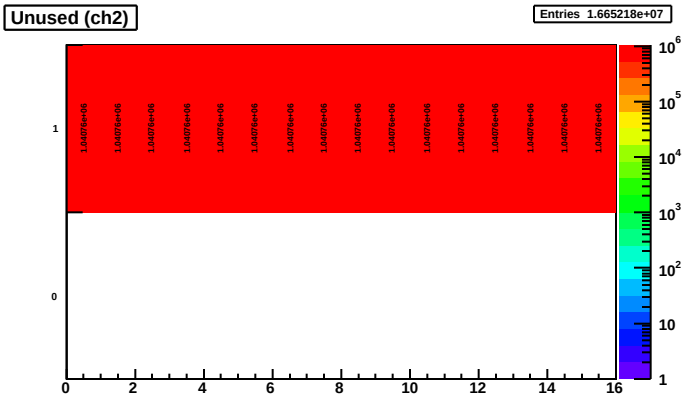

Input to FPE L1 DSM
Entries 4163044
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

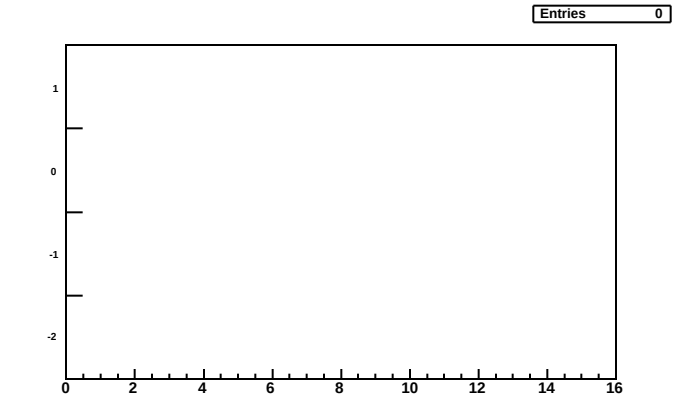

TF201 0-15 (ch0)
Entries 1.665218e+07
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

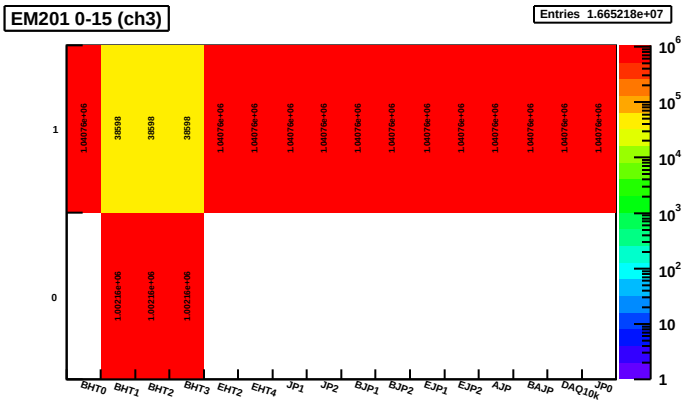

TF201 0-15 (ch0)
Entries 76557
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

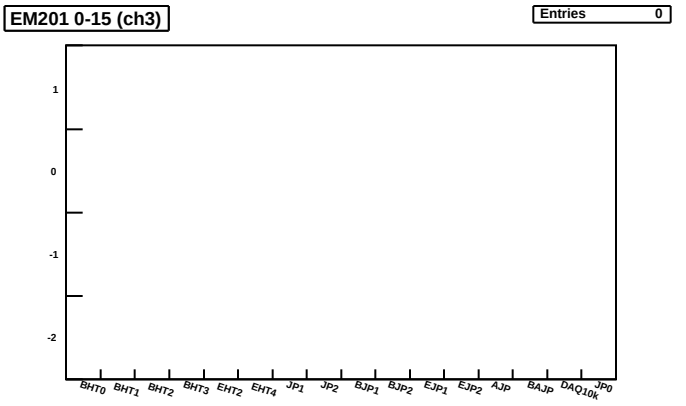

VT201 0-15 (ch1)
Entries 1.665218e+07
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 4543642
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

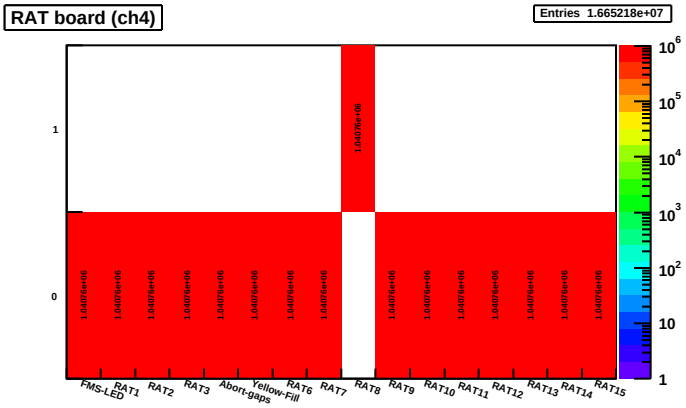

Unused (ch2)
Entries 1.665218e+07

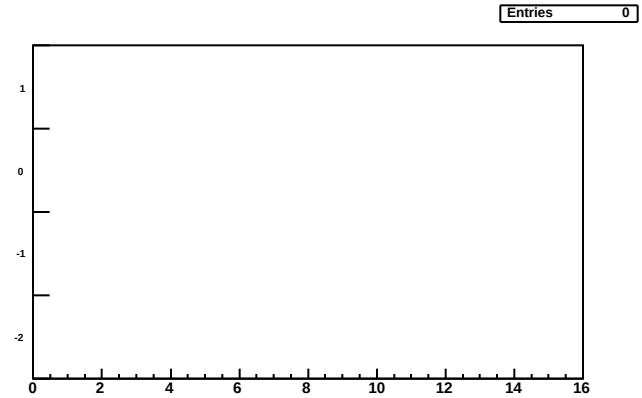

Entries 0


EM201 0-15 (ch3)
Entries 1.665218e+07
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

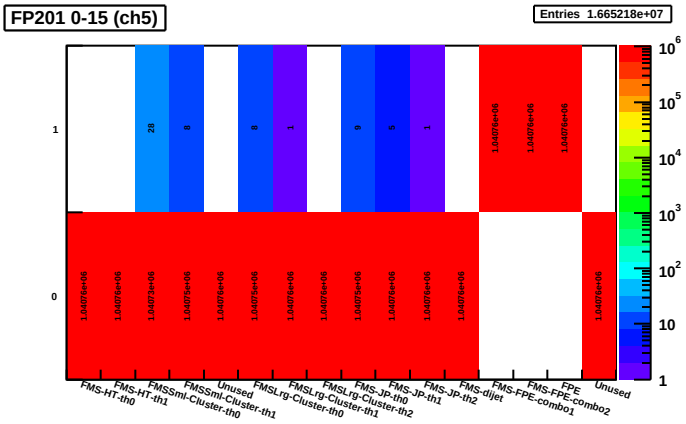

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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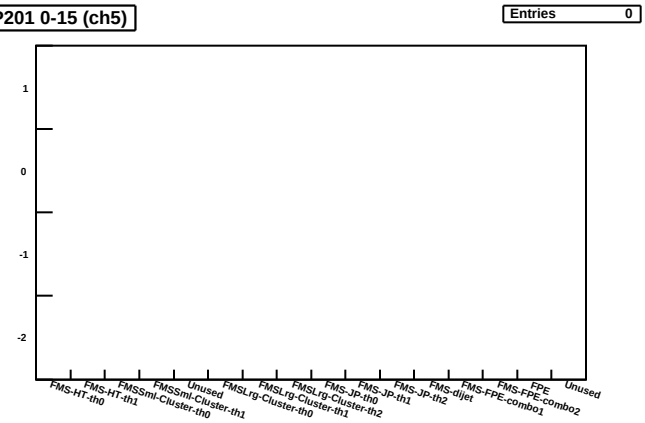
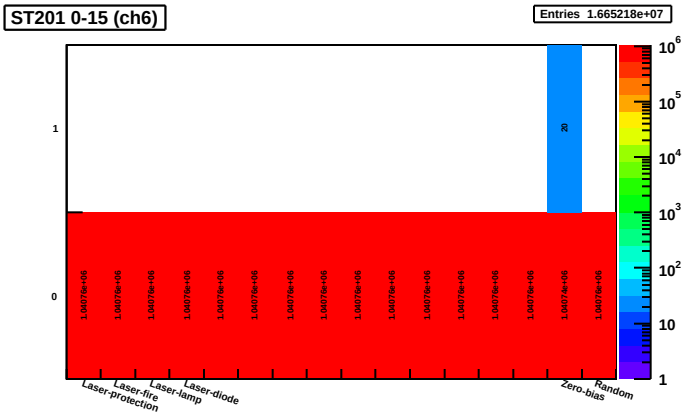
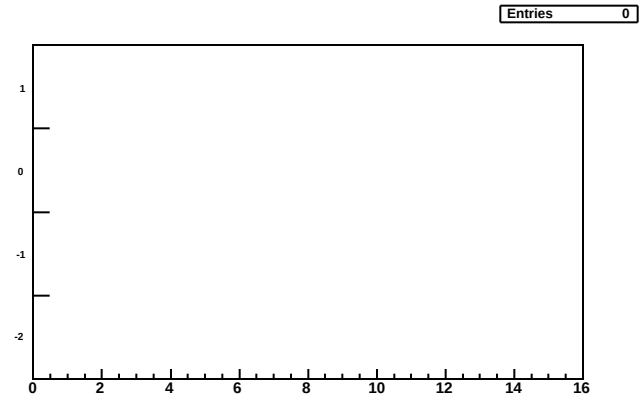
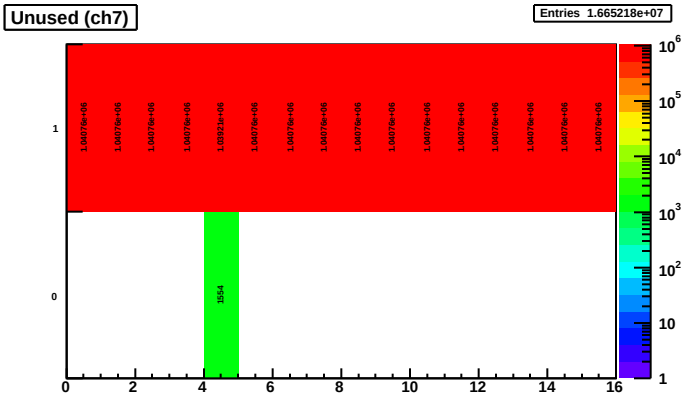
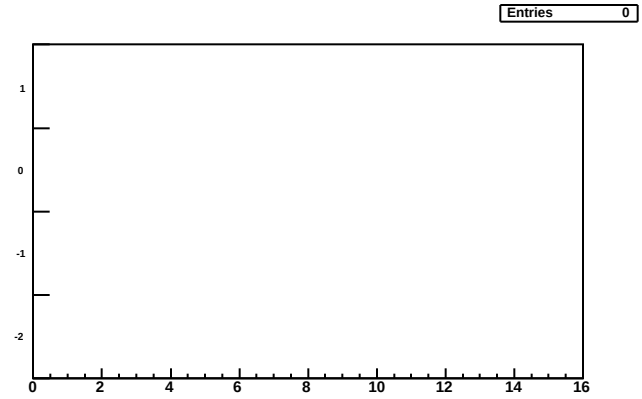


ST201 0-15 (ch6)





Unused (ch7)